

Drakes Bay Oyster Company

17171 Sir Francis Drake Boulevard

Inverness, CA 94937

(415) 669-1149

kevin@drakesbayoyster.com

nancy@drakesbayoyster.com

March 4, 2011

Natalie Gates
DBOC SUP EIS

Re: Supplemental Scoping Information

Dear Natalie,

On January 26, 2011, Cicely Muldoon advised DBOC that there was still time to provide additional scoping comments for the DBOC EIS. During your visit to the DBOC on February 16, 2011, you also indicated that there was still time to provide scoping comments and answers to questions which arose from our meeting. On February 25, 2011, DBOC was notified that all comments must be submitted by March 4, 2011. Thank you for providing this additional time.

We will begin with answering VHB's questions and providing the items delineated in the February 25th email from Brannon Ketchum:

1. *Sales agreement between DBOC and JOC (including information on lease holding interests)* Attached, please find a copy of the asset purchase agreement between Johnson Oyster Company and the Lunny Family (Attachment 1-A). This document contains sensitive information. Please keep it confidential. Please also note that the asset purchase agreement included the RUO, the SUP for the well and the SUP for the septic leach field area. It is important to recognize that these were the only permits that NPS required of JOC. NPS re-issued identical SUPs for the well and septic to DBOC as promised. NPS notified DBOC that another SUP for ancillary use would be required. The JOC SUP for ancillary use (Attachment 1-B) expired in 1997. Since 1997, JOC was not required to have a permit for the ancillary use area, nor were they required to pay any permit fees for this area. NPS told DBOC that this third SUP for ancillary use would be simply put into DBOC's name, exactly the same way that NPS reissued the other two SUPs. Instead, NPS redrafted this ancillary use SUP and provided a draft (Attachment 1-C) to DBOC on May 5, 2005. Please note that in this draft, similar to the ancillary use SUP this is meant to replace, the purpose of the SUP was identical to the RUO – onshore activities and onshore areas only. It should also

be noted that no reference to shellfish, no shellfish conditions and no shellfish restrictions exist in this draft. Similar to the expired SUP this was meant to replace, there is no assertion that Drakes Estero is a part of this SUP. It is also important to note that in this draft, the SUP NEPA compliance was categorically excluded. The EIS should consider the following:

- a. Why is NPS requiring a permit for DBOC that was not required of JOC?
 - i. If DBOC was aware of new, unprecedented restrictions, in a newly required permit, it would have devalued the leasehold interest purchase price.
- b. Why did NPS expand the onshore ancillary use permit to include, for the first time ever, the waters of Drakes Estero?
 - i. What laws and/or policies changed in 2005 that can justify treating JOC and DBOC differently?
 - ii. What laws and/or policies changed in 2005 that can justify the Superintendent's action to first provide a draft SUP that did not include Drakes Estero and later, include it for the first time?
- c. Why did NPS expand its authority in the SUP to impose shellfish conditions and restrictions?
 - i. What laws and/or policies changed that can justify treating JOC and DBOC differently?
 - ii. What laws and/or policies changed that can justify the NPS assertion of this new authority over shellfish cultivation in Drakes Estero which conflict with California Department of Fish and Game leases?
- d. Why did the NPS change the SUP NEPA compliance from categorically excluded, as has always been, to a permit that requires environmental review?
 - i. What laws, policies and/or environmental conditions changed in 2005 to justify this unprecedented elevation of environmental compliance requirements?
- e. JOC was not required to obtain this permit since 1997. NPS then required DBOC to obtain the permit. The radical, unexpected changes in permit conditions imposed by NPS on DBOC caused very lengthy and expensive negotiations. The final SUP contained many conditions and restrictions never before imposed by NPS. DBOC had no choice but to finally sign the SUP in 2008, with the unsubstantiated conditions, or face enforcement action by NPS and pressure from a US Senator for operating without a permit. VHB asked questions about the permit that expired in 1997, the purchase agreement and what permits were referred to in the purchase agreement. VHB would only ask these questions if they were relevant to the EIS. This section is relevant to the EIS in many ways, including the fact that the new conditions and restrictions imposed by NPS, for the first time ever, reduced the economic viability of DBOC, thereby adversely impacting DBOC's ability to contribute cultural and environmental benefits. In other words, due to these NPS restrictions, the human environment will be affected in the following ways: reduced potential for

DBOC to contribute oyster shell for endangered species' habitat restoration projects, reduced efficacy of DBOC interpretive services to PRNS' visiting public and reduced availability of funds for DBOC to make planned building repairs to improve Seashore visitors' experience. The EIS must completely analyze this issue and provide a comprehensive report to the public. All of the above questions need to be addressed in the report.

2. *Locations of water quality monitoring stations (preferably by GPS) and the monitoring data itself.* The water monitoring station locations were provided to you by DBOC on November 15th, 2010. Please see page 43 of attachment 3g, the 2010 Drakes Estero Management Plan. We have attached another copy for your convenience (Attachment 2a). Please contact Gregg Langlois, California Department of Public Health, Environmental Branch, Pre-Harvest Shellfish Unit, for the actual sampling data. DBOC does not keep a record of the water quality monitoring data. Gregg's contact information can be found in the appendix of the 2010 Drakes Estero Management Plan. DBOC does not have GPS coordinates for the sampling station locations. CDPH will have these data.
3. *Santa Barbara student's Master's Degree reports.* This document, 102_Hudson et al. 2008.pdf, was provided to you by Environ. For your convenience, we have attached another copy (Attachment 3a).
4. *Details on the JOC's three (3) special use permits (especially SUP 3 dealing with ancillary use)* The JOC SUP for water from well (Attachment 4a), the JOC SUP for the septic system leach field (Attachment 4b) and the JOC SUP for ancillary use (Attachment 4c) were the three JOC SUPs. In 2005 when DBOC took over the operations of the oyster farm, the well and septic SUPs were current and the ancillary use had been expired since 1997. The NPS promised DBOC that all three SUPs would be transferred into the name of DBOC. In 2005 NPS kept its word on both the water for well SUP (Attachment 4d) and the septic SUP (Attachment 4e). NPS, however, failed to transfer the ancillary use SUP as promised. Instead, after years of negotiations--- causing damaging expense to DBOC---NPS provided the current SUP which was not completed until 2008 (Attachment 4f). Please compare attachment 4c (the expired SUP for JOC) with its replacement (attachment 4f, or the DBOC SUP). At the time that the SUP was finalized in 2008, NPS and DBOC signed a Statement of Principles (SOP) (Attachment 4g) that was to be honored during this NEPA process. NPS has not abided by this signed SOP agreement. (Please refer to VHB question number 1, above, that addresses additional comments and questions regarding the ancillary use SUP.) Since the EIS team has asked multiple questions about the SUPs, the public will expect a comprehensive review, answering all questions, as a part of this EIS. The EIS must also evaluate how the Statement of Principles has or has not been followed – bullet point by bullet point. DBOC spent significant time and money to negotiate the Statement of Principles agreement with the NPS, understanding that a NEPA process might ensue in the future, and the signed SOP agreement should not be ignored.
5. *All GPS boat transit data, as specific as possible (mentioned weekly GPS data downloads and potential GPS data for routes organized by rack/bed number)*

- NPS has accused DBOC of disturbing harbor seals at times and locations where DBOC records show disturbances by DBOC were not possible. In response to these allegations, DBOC, on its own volition and at its own expense, instituted a GPS program. DBOC's two boats now carry GPS units to "track" their courses in Drakes Estero. These data can be used to verify or dispute potential future allegations. NPS has never contacted DBOC to inform us that we have disturbed seals. (In stark contrast, all beef and dairy ranches within the Seashore are called by Seashore dispatch in the event of a cow on the road or an animal where it doesn't belong.) Rather, claims of DBOC seal disturbances have appeared in NPS databases, NPS public testimony and NPS authored newspaper articles. DBOC did not plan to make the GPS records available to the public or the NPS unless it was necessary to prove the whereabouts of a DBOC boat. These data were not designed for any other use. DBOC has already provided you with maps showing GPS tracks of boat usage in Drakes Estero on November 15th, 2010 (Attachments 1b and 1c). How is more detailed GPS data to be used by the EIS process? If DBOC is to submit private, detailed GPS records, the records must be treated securely by VHB. DBOC is concerned about the safety of the data due to the fact that certain PRNS staff---directly involved with the challenged allegations of harm to harbor seals, reports, and other public claims of environmental harm caused by DBOC---is involved in this EIS process.
6. *Engineer's quarterly septic monitoring reports.* DBOC provided you with the quarterly monitoring worksheet on November 15, 2010 (Attachment 3m). DBOC staff is responsible for the quarterly monitoring and providing the monitoring reports to the engineer. Annually, the engineer and a Marin County Environmental Health Services inspector conduct a full inspection of both of the on-site sewage disposal systems. Quarterly septic monitoring data are entered into a data collection spreadsheet (Attachment 6a) for review by the engineer and the County EHS inspector. Annually, the engineer writes a letter to Marin County EHS certifying compliance with the EHS monitoring agreement (provided to you on November 15, 2010, Attachment 3n). The most recent letter from the engineer (Attachment 6b) was prepared last year.
 7. *1998 full size site plans (where new building was proposed) to determine if elevations were incorporated.* DBOC has a full size copy of the 1998 plans to build a new processing plant, a new hatchery, a new garage, new piers and docks for improved access to Drakes Estero, as well as other improvements. We would be happy to bring a copy to headquarters so that you can make copies and we can pick up our originals later. Please let us know if this is acceptable and we will get them to you. The plans do not give finished floor elevations for the buildings that are to be removed. There are, however, some spot elevations taken around the area that would suggest the finished floor elevation of the existing processing plant (where the current retail is conducted) is approx 6'. The designed finished floor elevation (ground floor) for the new structures is 7'.

Additional VHB questions:

11. *How are barges moored, and to what?* Currently, there are no permanent moorings in Drakes Estero. Each barge has its own anchor for occasional use. DBOC rules are to anchor barges in deep water.
12. *Dr. Andy Cohen's tunicate assessment; any Tomales Bay, or other water body, tunicate assessments that were mentioned during the general discussion.* Dr. Andy Cohen, San Francisco Estuary Institute, and Dr. Mary Carman, Woods Hole Oceanographic Institute are nationally recognized experts in non-native marine invasive species. Both are directly quoted in the May 18, 2006 issue of the Point Reyes Light (Attachment 12a). To our knowledge, PRNS scientist Ben Becker is the only person that has ever photographed *Didemnum* on eelgrass. The photo was taken at Tomales Bay. It is recognized that *Didemnum* cannot persist on eelgrass. It is unknown if Dr. Becker tracked this single finding over time. This NPS photo has been used against DBOC, although this phenomenon has not been discovered in Drakes Estero, or, to our knowledge, anywhere else in the United States. Natalie Gates, NPS scientist gave testimony at the May 8, 2007 Marin County Board of Supervisors: "*The imported shellfish can themselves be vehicles for introduction of other invasive species – for example, a protozoan parasite oyster drills, which can impact native oysters; [valadaria?], which is a non-native snail that has been documented in the estero; and most importantly, a colonial tunicate, or a sea squirt, it's name is Didemnum, it has been found on oyster structures in the estero. It is a highly aggressive invasive species that could substantially alter Drakes Estero's ecology forever. And has major ecosystem and financial impacts on the West coast and on the Grand Banks on the east coast. On the Grand Banks the species now completely covers 175 sq km of the sea floor. And when I say it covers the sea floor, I mean it covers it completely - nothing else grows there.*" Natalie told the Board of Supervisors and the public that "The imported shellfish can themselves be vehicles for introduction of other invasive species... and most importantly, a colonial tunicate, or a sea squirt, its name is *Didemnum*." This tunicate exists in most west coast estuaries, including San Francisco Bay, Tomales Bay and Drakes Estero. DBOC has not seen anything in the literature that suggests that *Didemnum* was introduced into Drakes Estero by shellfish aquaculture or, more importantly, that importing shellfish seed or larvae currently pose any additional threat of introduction of *Didemnum* in Drakes Estero where it already exists. By DBOC's knowledge, *Didemnum* has existed in Drakes Estero for decades. From what DBOC knows from staff with 30-plus years of experience in Drakes Estero, there has been extremely little change in the density and distribution of the tunicate for many years. Similarly, this is the case in Tomales Bay. Natalie told the Board of Supervisors and the public that this "aggressive invasive species could substantially alter Drakes Estero's ecology, forever." Natalie compared Drakes Estero to "Grand Banks" where "the species now covers 175 Sq Km of the sea floor." (It actually covers 175 Sq Km of "Georges Bank".) It is widely accepted that the tunicate is found only on hard substrates like the (cultured oysters) in Drakes Estero. The tunicate has not colonized the fine soft substrates in Drakes Estero at all. In Georges Bank, it is well known that the sea bottom is made up of mostly hard substrates, suitable habitat for this invasive tunicate. DBOC has read a significant portion of the literature about *Didemnum*, something the NPS must have done before opining on the subject in a public meeting. DBOC completely disagrees with Natalie Gates' opinion that *Didemnum* [because of DBOC] "could

substantially alter Drakes Estero's ecology, forever". Therefore, DBOC expects that this EIS will disregard NPS statements, allegations or conclusions, which appear to be biased, and rather, the EIS will review published research prepared by those other than NPS.

13. *What is your preferred method for creating access lanes /channel markings?* DBOC uses plastic PVC pipes, pressed into the substrate vertically, to mark channels.
14. *If one of the locations of the water quality sample is on a sand bar, how do you access and take samples on low tide, or is there an alternate sample location?* If a sampling location exists at an intertidal location, samples can only be taken when area is submerged. Depending on the intertidal area, it may or may not be submerged at low tide, depending on the tide.
15. *The attached photos appear to be some sort of cultivation box. Do you know what these are used for? This is what VHB was referring to when it was discussed in the field.* The photos show "cubes" of "French tubes", also know as "oyster sticks". This was a step once used by DBOC in the French tube oyster culture. In the past, DBOC set larvae on the tubes in the outdoor setting tanks and then let the microscopic spat begin to grow on the tubes in the cubes on Bed 7 for a few weeks before hanging the tubes on the racks. DBOC has found this step to be unnecessary, and therefore this step is no longer used. Currently, DBOC brings the tubes directly to the racks following the setting process.

Please let us know if more details are necessary. We will be happy to provide additional information as necessary.

We will provide the additional scoping information tomorrow, March 5th or by Sunday, March 6th, at the latest. Thank you for allowing us the additional time.

Sincerely,

Kevin & Nancy Lunny

CONDITIONS OF THIS PERMIT

1. The permittee shall exercise this privilege subject to the supervision of the Superintendent, and shall comply with all applicable laws and regulations of the area.
2. Damages - The permittee shall pay the United States for any damage resulting from this use which would not reasonably be inherent in the use which the permittee is authorized to make of the land described in this permit.
3. Benefit - Neither Members of, nor Delegates to Congress, or Resident Commissioners shall be admitted to any share or part of this permit or derive, either directly or indirectly, any pecuniary benefit to arise therefrom: Provided, however, that nothing herein contained shall be construed to extend to any incorporated company, if the permit be for the benefit of such corporation.
4. Assignment - This permit may not be transferred or assigned without the consent of the Superintendent, in writing.
5. Revocation - This permit may be terminated upon breach of any of the conditions herein or at the discretion of the Superintendent.
6. The permittee is prohibited from giving false information, to do so will be considered a breach of conditions and be grounds for revocation: [Re: 36 CFR 2.32 (4)].
7. Permittee will comply with applicable public health and sanitation standards and codes.

6. The following provisions constitute Condition 4 in accordance with Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11375 of October 13, 1967.

NONDISCRIMINATION. If use of the resource covered by their permit will involve the employment by the permittee of a person or persons, the permittee agrees as follows:

(a) The Permittee will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The permittee will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Permittee agrees to post in conspicuous places, available to employees and applicants for employment notices to be provided by the Superintendent setting forth the provisions of this nondiscrimination clause.

(b) The Permittee will, in all solicitations or advertisements for employees placed by or on behalf of the Permittee, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(c) The Permittee will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Superintendent, advising the labor union or workers' representative of the Permittee's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, as amended, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Permittee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Permittee will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, as amended, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Superintendent and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Permittee's noncompliance with the non-discrimination clauses of this permit or with any of such rules, regulations, or orders, this permit may be cancelled, terminated or suspended in whole or in part and the Permittee may be declared ineligible for further Government contracts or permits in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, as amended, or by rule, regulation, or order of the Secretary of labor, or as otherwise provided by law.

(g) The permittee will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, as amended, so that such provisions will be binding upon each subcontract or purchase order as the Superintendent may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that in the event the Permittee becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Superintendent, the Permittee may request the United States to enter into such litigation to protect the interests of the United States.

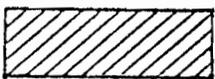
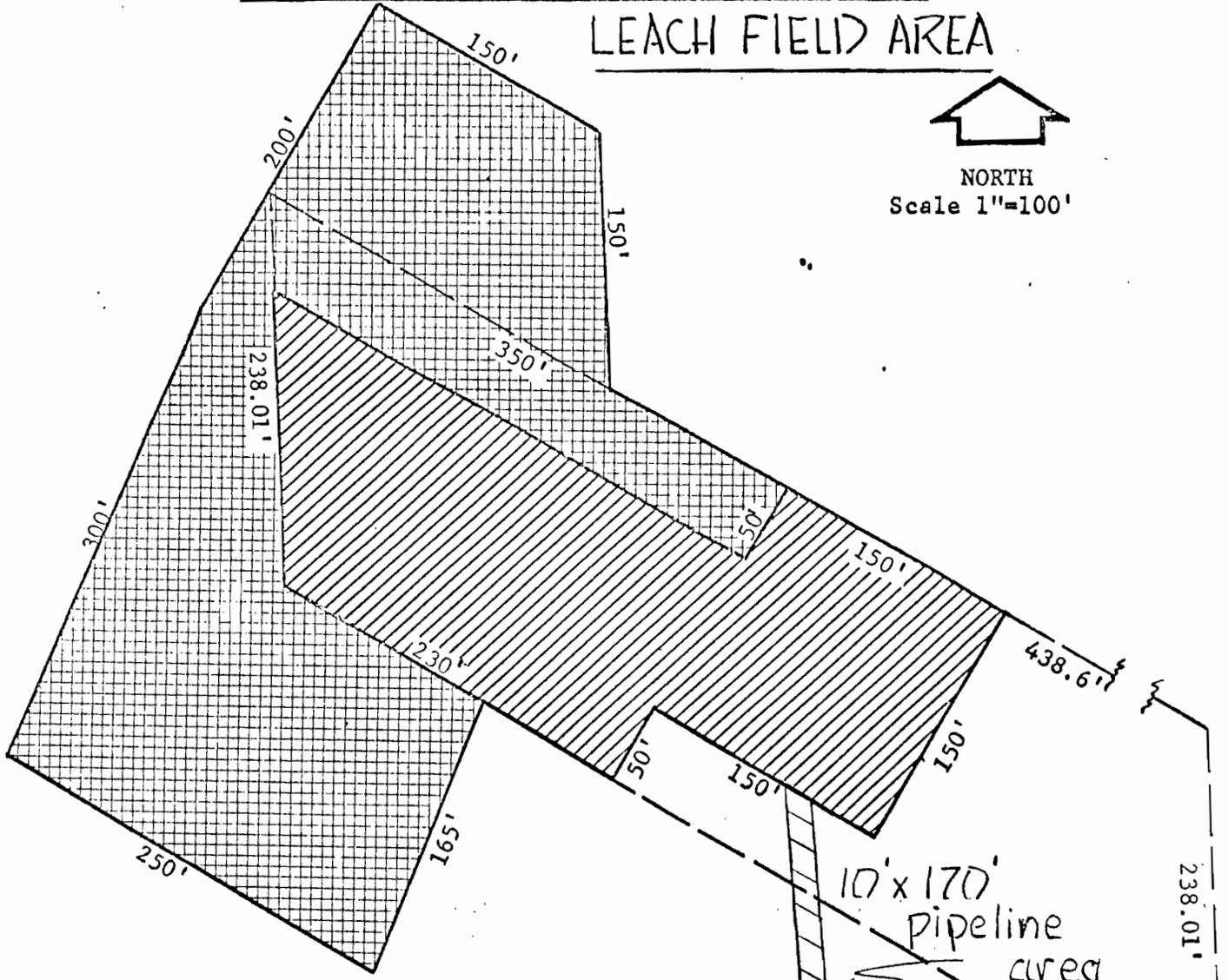
Special Use Permit Continuation Sheet
Permit No. WRO-PORE-6000-306
Page 3

9. The issuance of this permit does not convey any right, title, interest or estate in or to the land covered by the permit.
10. This permit may be reissued for additional periods providing the land is not needed for Park purposes and the permit has not been terminated for a breach of conditions.
11. Permittee agrees to pay the Marin County Possessory Use Tax, if applicable, or other taxes if properly assessed by the County or the State.
12. Permittee agrees to meet State or County environmental requirements and requirements imposed by the California Coastal Zone Conservation Commission.

SEPTIC SYSTEM PIPELINE AND LEACH FIELD AREA



NORTH
Scale 1"=100'



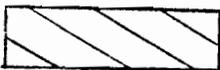
1.5 Ac. Reserved by Johnson Oyster Co.



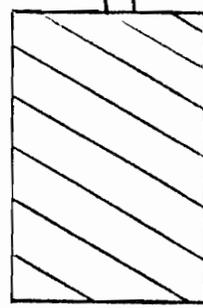
2.2 Ac. Special Use Permit Johnson Oyster Co.



Original boundary Johnson Oyster Co.



0.4 Ac. Special Use Permit Johnson Oyster Co. (Sewage System)



SKETCH

Reserved area and special use permit Johnson Oyster Co. Point Reyes N. S.

Form 10-114
Rev. Jan. 00

UNITED STATES DEPARTMENT OF THE INTERIOR
National Park Service

Special Use Permit

Name of Use: Mariculture

Date Permit Reviewed 2005
Reviewed 20
Reviewed 20
Expires 2010

Permit # MISC-8530-6000-5005
Type Park Code No. #

Long Term

Short Term

Point Reyes National Seashore
Name of Area

Kevin Lunny of Drakes Bay Oyster Compay
P.O. Box 69
17171 Sir Francis Drake Blvd.
Inverness, CA 94937
(415) 669-1209

is hereby authorized during the period from **«LoadInStart» on «BeginDate» to «LoadOutEnd» on «EndDate»** to use the following described land or facilities in the above named area:

Drakes Bay Estero at the Former Johnson's Oyster Site (see attached map)

For the purpose(s) of:

Use of the former Johnson's Oyster Site and access to Drakes Estero for the purpose of processing and selling wholesale and retail oysters, the interpretation of oyster cultivation to the visiting public and residential purposes reasonably incidental thereto, subject to the following.

Authorizing legislation or other authority (RE - DO-53): 16USC1, 1a-1, 3 & 459c; 36 CFR 1-99

NEPA & NHPA Compliance: CATEGORICALLY EXCLUDED EA/FONSI ___ EIS ___ OTHER APPROVED PLANS

PERFORMANCE BOND: Required Not Required Amount \$XX.00

LIABILITY INSURANCE: Required Not Required Amount \$1,000,000.00

ISSUANCE of this permit is subject to the conditions on the reverse hereof and appended pages and when appropriate to the payment to the U.S. Dept. of the Interior, National Park Service of the sum of \$**«TotalPayment»**.

The undersigned hereby accepts this permit subject to the terms, covenants, obligations, and reservations, expressed or implied herein.

PERMITTEE: _____
Signature Organization Date

Authorizing Official: _____
Signature Don L. Neubacher Superintendent Date

Additional Authorizing Official: _____
(if Required) Signature Title Date

CONDITIONS OF THIS PERMIT

1) GENERAL CONDITIONS

- a) The Permittee shall exercise this privilege subject to the supervision of the Superintendent, and shall comply with all applicable laws and regulations of the area.
- b) Damages - The permitted shall pay the United States for any damage resulting from this use which would not reasonably be inherent in the use which the permittee is authorized to make of the land described in this permit.
- c) Benefit - Neither Members of, nor Delegates to Congress, or Resident Commissioners shall be admitted to any share or part of this permit or derive, either directly or indirectly any pecuniary benefits to arise therefrom: Provided, however, that nothing herein contained shall be construed to extend to any incorporated company if the permit be for the benefit of such corporation.
- d) Assignment - This permit may not be transferred or assigned without the consent of the Superintendent, in writing.
- e) Revocation - This permit may be terminated upon breach of any of the conditions herein or at the discretion of the Superintendent.
- f) The permittee is prohibited from giving false information; to do so will be considered a breach of conditions and be grounds for revocation [Re: 36 CFR 2.32(4)]
- g) Permittee will comply with applicable public health and sanitation standards and codes.

2) USE OF PREMISES

- a) Permittee intends to use the Premises for: **the purpose of processing and selling wholesale and retail oysters, the interpretation of oyster cultivation to the visiting public and residential purposes reasonably incidental thereto.** Permitter hereby approves this use and this use only. **No changes to this designated use or addition of retail sale items shall be permitted. No land use beyond the permit boundary is authorized.**
- b) Permittee shall not engage in any activity that may be dangerous or harmful to persons, property, or the Park; that constitutes or results in waste or unreasonable annoyance (including, without limitation, signage, the use of loudspeakers or sound or light apparatus that could disturb park visitors outside the Premises); that in any manner causes or results in a nuisance; or that is of a nature that it involves a substantial hazard, such as the manufacture or use of explosives, chemicals or products that may explode.
- c) The Parties hereby acknowledge and agree that Permittee's covenant that the Premises shall be used as set forth in this Section "Use of the Premises," is material consideration for Permitter's agreement to enter into this Permit. The Parties further acknowledge and agree that any violation of said covenant shall constitute a Default under this Permit and that Permitter may inspect the premises at any time.
- d) Permittee's use of the land is subject to the right of the NPS to establish trails, roads and other improvements and betterments over, upon, or through said premises and further to the use by travelers and others of such roads and trails as well as those already existing. The Permittee understands that occasional park visitors are authorized to walk or hike in the various areas included in this Permit even though no trail is formally established.
- e) Permittee's operations are to be set back on the shore a minimum of 50 feet from the mean high tide mark, excepting that area which is the subject of this permit and that is described in the attached map.
- f) While Permittee is permitted to use and operate watercraft in Drakes Estero for the purpose of conducting daily business operations, no other use of Permittee's watercraft is authorized. No motorcraft may enter the designated wilderness boundary (See attached Map of Designated Wilderness Boundary). Any additional or replacement boat

motors obtained by Permittee must be four stroke motors.

- DOC913
- g) Permittee must avoid disturbance to marine mammals and marine mammal haul-out sites. The Marine Mammal Protection Act includes a prohibition against any act of pursuit, torment or annoyance that has the potential to injure or disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering. (16 USC 1362, 16 USC 1372) The National Oceanic and Atmospheric Administration (NOAA) recommends maintaining a distance of at least 100 yards to avoid disturbance to seals. Permittee will monitor marine mammal populations in Drakes Estero.
 - h) In order to avoid introduction of exotic pests to Drakes Estero only oyster "seed" and not whole oysters may be imported. Seed must be obtained from regions approved by Permittee. At issuance of this permit Washington State is the sole approved region.
 - i) In the interest of public health and safety, due to a lack of adequate parking space and restroom facilities for the public, barbecuing is not permitted in the Special Use Permit Area; visitors may be directed to facilities located at Drakes Beach.
 - j) No discharge into the estuary is permitted. This prohibition includes any discharge from processing facilities.
 - k) In order to ensure public health and safety no Pets, including dogs and cats, shall be permitted in the Special Use Permit Area.
 - l) In order to ensure public health and safety, Permittee will allow all appropriate Federal, State and/ or County agencies; including the United States Department of Health and Human Services, the State of California Department of Health Services, and Marin County Community Development Agency Environmental Health Services, to conduct inspections on a routine basis.
 - m) In order to control invasive species, Permittee will make every effort to ensure that no new species enters the estuary. Permittee will remove the invasive tunicate *Didemnum vexillum* where found (oyster racks, equipment and other features) in an effort to control population and slow spread.

3) CONSTRUCTION OF IMPROVEMENTS OR ALTERATIONS

- a) Permittee may only make those Improvements or Alterations to the Premises that relate to Permittee's use of the Premises as specified in Item 2, "Use of the Premises."
- b) Permittee shall not undertake any Improvements or Alterations to the Premises (including temporary equipment or facilities) without the prior written approval of Permittee.
- c) As a prerequisite to obtaining approval for Improvements or Alterations, Permittee, at Permittee's sole cost and expense, shall submit design plans and any other relevant data for Permittee's approval.
- d) Construction of Improvements or Alterations by Permittee shall be performed in accordance with all Applicable Laws and approved design plans and shall be undertaken and completed at Permittee's sole cost and expense.
- e) Permittee shall, upon request, furnish Permittee with a true and correct copy of any contract, and any modification or amendment thereof, with Permittee's contractors, architects, or any other consultants, engaged in connection with this Permit.
- f) Any Improvements or Alterations undertaken by Permittee shall be performed in a good and workmanlike manner and with materials of a quality and standard acceptable to Permittee. Permittee shall also construct, install and maintain equipment and any construction facilities on the Premises in a safe and orderly manner.
- g) Permittee shall not construct any Improvements or Alterations outside the boundaries of the Premises.

h) Permitter in its discretion is entitled to have on the Premises at any time during the construction of Improvements or Alterations an inspector or representative who shall be entitled to observe all aspects of the construction on the Premises.

i) Environmental compliance required for any project will be at Permittee's sole cost and expense.

j) All lumber utilized at the site will be processed in compliance with current laws and regulations regarding wood treatments. This includes lumber utilized in assembly of oyster racks.

4) TREATMENT OF REFUSE

a) Refuse shall be promptly removed from within the boundaries of Point Reyes National Seashore and shall be disposed of in accordance with Applicable Laws.

b) Areas in Drakes Estero must be kept free of debris associated with oyster production operations including wood from racks, unused oyster bags, etc.

5) PESTICIDE AND HERBICIDE USE

a) The National Park Service utilizes Integrated Pest Management ("IPM") to treat pest and vegetation problems. The goal of IPM is to use the least-toxic, effective methods of controlling pests and vegetation. Except for normal household purposes, Permittee shall not use any pesticides that do not comply with the IPM program. To this end, Permittee shall submit in writing to Permitter, a request for the use of pesticide(s) or herbicide(s) and shall not use any pesticide(s) or herbicide(s) until Permittee has received an express written authorization therefor from Permitter.

b) Permittee shall manage, treat, generate, handle, store and dispose of all pesticides and herbicides in accordance with Applicable Laws, including reporting requirements.

6) FIRE PREVENTION AND SUPPRESION

a) Permittee and its employees, agents, and contractors shall, in Permittee's use and occupancy of the Premises, take all reasonable precautions to prevent forest, brush, grass, and structural fires and shall, if safety permits, assist the Permitter in extinguishing such fires on the Premises.

7) EXCAVATION, SITE AND GROUND DISTURBANCE

a) Permittee shall not cut, remove or alter any timber or any other landscape feature; conduct any mining or drilling operations; remove any sand, gravel or similar substances from the ground or watercourse; commit waste of any kind; or in any manner change the contour or condition of the Premises without the prior written approval of the Permitter. Except in emergencies, Permittee shall submit requests to conduct such activities in writing to the Permitter not less than sixty (60) days in advance of the proposed commencement date of any such activities.

b) If approval is granted, Permittee shall abide by all the terms and conditions of the approval, including provision pertaining to archaeological resources.

c) No disturbance of any kind may occur in the vicinity of a known Archeological Site.

8) NONPOINT SOURCE POLLUTION

a) The Permittee shall comply with all Applicable Laws regarding non-point source pollution (including the protection of beneficial uses of waters as designated by the State of California). Further, Permittee's use and occupancy of the Premises shall be designed to minimize, to the greatest extent feasible, non-point source pollution within National Park Service boundaries or on adjacent lands.

9) TREE AND VEGETATION REMOVAL

- a) The Permittee may not remove tree(s) or vegetation unless expressly approved in writing by the Permitter. The Permittee shall provide specific plans to the Permitter for desired tree(s) and vegetation removal during the annual meeting or in writing during the term of this Permit.
- b) Removal of exotic invasive vegetation such as thistles, trimming and vegetation removal around structures, and mowing of approved areas is permissible.

10) WILDLIFE PROTECTION

- a) Wildlife is an integral part of Point Reyes National Seashore and must be managed in accordance with NPS legislation, Code of Federal Regulations, and NPS Policies (NPS Management Policies 2001).
- b) Permittee shall not engage in any activity that purposely causes harm or destroys any wildlife. Marine mammal populations may not be disturbed. The Marine Mammal Protection Act includes a prohibition against any act of pursuit, torment or annoyance that has the potential to injure or disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering. The National Oceanic and Atmospheric Administration (NOAA) recommends maintaining a distance of at least 100 yards in order to avoid disturbance to seals. (See also item 2 use of premises above).
- c) On a case by case basis, the Permitter will evaluate incidences of depredation and choose a course of action. The nature of the course of action will be determined by extent and frequency of the damage, the wildlife species, and park-wide management objectives.

11) INSURANCE

- a) Permittee shall purchase the types and amounts of insurance described herein before the Commencement Date of this Permit unless otherwise specified. At the time such insurance coverage is purchased, Permittee shall provide Permitter with a statement of Permittee insurance describing the insurance coverage in effect and a Certificate of Insurance covering each policy in effect as evidence of compliance with this Permit.
- b) Permittee shall also provide the Permitter thirty (30) days advance written notice of any material change in the Permittee's insurance program hereunder.
- c) Permitter shall not be responsible for any omissions or inadequacies in insurance coverage or amounts in the event such coverage or amounts prove to be inadequate or otherwise insufficient for any reason whatsoever.
- d) From time to time, as conditions in the insurance industry warrant, the Permitter reserves the right to revise the minimum insurance limits required in this Permit.
- e) All insurance policies required by this Permit shall specify that the insurance company shall have no right of subrogation against the United States or its employees, or shall provide that the United States is named as an additional insured.
- f) All insurance policies required herein shall contain a loss payable clause approved by the Permitter which requires insurance proceeds to be paid directly to the Permittee without requiring endorsement by the United States. Insurance proceeds covering any loss of the Premises but not used to replace such losses shall be promptly paid by Permittee to Permitter. The use of insurance proceeds for the repair, restoration or replacement of the Premises shall not give any ownership interest therein to Permittee.
- g) Public Liability: The Permittee shall provide Comprehensive General Liability Insurance against claims arising from or in association with Permittee's use and occupancy of the Premises. Such insurance shall be in the amount commensurate with the degree of risk and the scope and size of such use and occupancy, but in any event, the limits of such insurance shall not be less than \$ 1,000,000.00 per occurrence covering both bodily injury and

property damage. If claims reduce available insurance below the required per occurrence limits, the Permittee shall obtain additional insurance to restore the required limits. An umbrella or excess liability policy, in addition to a Comprehensive General Liability Policy, may be used to achieve the required limits.

- h) **Property Insurance:** At a minimum, the Permittee shall be required to purchase Basic Form Actual Cash Value (replacement cost less depreciation) insurance coverage for all residences on the Premises. Within thirty days of issuance of the Permit, the Permittee shall be required to have the specified level of insurance in place. The Permittee shall, in the event of damage or destruction in whole or in part to the Premises, use all proceeds from the above described insurance policy to repair, restore, replace, or remove those buildings, betterments or improvements determined by the Permitter, in Permitter's sole discretion, to be necessary to satisfactorily discharge the Permittee's obligations under this Permit.
- i) Permittee shall also obtain the following additional coverage:
 - i) **Automobile Liability** - To cover all owned, non-owned, and hired vehicles in the amount of \$300,000.00.
 - ii) **Workers' Compensation** - The amount shall be in accordance with that which is required by the State of California.

12) INDEMNITY

- a) Permittee shall indemnify, defend, save and hold Permitter, its employees, successors, agents and assigns, harmless from and against, and reimburse Permitter for, any and all claims, demands, damages, injuries, losses, penalties, fines, costs, liabilities, causes of action, judgment and expenses incurred in connection with or arising in any way out of this Permit: the use of occupancy of the Premises by Permittee or its officers, agents, employees, or contractors; the design, construction, maintenance, or condition of any Improvements or Alterations; or any accident or occurrence on the Premises or elsewhere arising out of the use or occupancy of the Premises by Permittee or its officers, agents, employees, or contractors.
- b) Permittee's obligations hereunder shall include, but not be limited to, the burden and expense of defending all claims, suits and administrative proceedings (with counsel reasonably approved by NPS), even if such claims, suits or proceedings are groundless, false or fraudulent, and conducting all negotiations of any description, and paying and discharging, when and as the same become due, any and all judgments, penalties or other sums due against the United States.
- c) Permitter agrees to cooperate, to the extent allowed by law, in the submission of claims pursuant to the Federal Tort Claims Act against the United States by third parties for personal injuries or property damage resulting from the negligent act or omission of any employee of the United States in the course of his or her employment.
- d) This Item 12 shall survive any termination or revocation of this Permit. The provisions of Item 11 (Insurance) of this Permit shall not limit in any way Permittee's obligations under this Item (12).

13) PROPERTY INTEREST

- a) Title to real property and improvements thereon, including any improvements or alterations constructed by Permittee, shall be and remain solely in Permitter.

14) RENTS, TAXES AND ASSESSMENTS

- a) The annual rental rate for this Permit shall be established by Permitter.
- b) The annual rent under this Permit is payable in advance on a semi-annual basis. Therefore, Permittee hereby agrees to pay fifty percent of the annual rate on or before June with the remaining fifty percent payable on or before December of each year during the Term.
- c) Permittee shall pay the proper Agency, when and as the same become due and payable, all taxes, assessments, and similar charges which, at any time during the Term of this Permit, are levied or assessed against the

Premises.

- d) Rents due hereunder shall be paid without assertion of any counterclaim, setoff, deduction or defense and without abatement, suspension, deferment or reduction.

15) CYCLIC MAINTENANCE

- a) Permittee shall perform all Cyclic Maintenance in accordance with the Provisions of this Permit and at Permittee's sole cost and expense. Permittee is responsible for the maintenance of all fences, buildings, and other improvements upon the Premises. All improvements and facilities used and occupied by Permittee shall at all times be protected and maintained in a safe, sanitary and sightly condition.
- b) Specific maintenance requirements may be negotiated with Permittee each year as outlined in Item 17 (Annual Meeting).
- c) Docks and Fences must be in good repair. Abandoned fences and other decrepit improvements shall be removed from the Premises and shall be disposed of outside the Park or as directed by Permitter after review and approval by the NPS Historian.
- d) Lighting of the Premises must be redesigned to protect and preserve the night sky and minimize light pollution in Drakes Estero.
- e) Service roads shall be maintained in a safe condition and no new roads or truck trails shall be established without prior written permission of the Permitter.
- f) Existing water reservoirs shall be maintained in a safe and secure condition to prevent washouts and erosion and no new reservoirs shall be constructed or established without prior written approval of the Permitter.
- g) Permittee shall maintain the water, well, pump and all pipelines from the main line to the main structures within the Premises. Permittee shall replace or repair any damage or loss of the water system within the Premises.
- h) Permittee shall be responsible for removing slash buildup around fences or other facilities within the Premises so as to prevent fire and egress hazards. Permittee shall also be responsible for removing litter and trash from the Premises.

16) COMPLIANCE WITH APPLICABLE LAWS: NEPA, NHPA

- a) **General Compliance:** As provided for in this permit, Permittee at its sole cost and expense shall promptly comply with all Applicable Laws. Permittee shall immediately notify Permitter of any notices received by or on behalf of Permittee regarding any alleged or actual violation(s) of or non-compliance with Applicable Laws. Permittee shall, at its sole cost and expense, promptly remediate or correct any violation(s) of Applicable Laws.
- b) **National Environmental Policy Act and National Historic Preservation Act:** Where activities undertaken by Permittee require the preparation of compliance documents pursuant to the National Environmental Policy Act ("NEPA") or the National Historic Preservation Act ("NHPA") ("Compliance Activity"), Permittee shall supply all necessary information to Permitter and any Agency in a timely manner. If Permitter determines that the Compliance Activity is warranted, Permitter will prepare NEPA or NHPA documents as appropriate. Permittee shall not implement any aspect of the Compliance Activity until all applicable NEPA and NHPA requirements have been met.

17) ANNUAL MEETING

- a) The Parties shall meet annually in XX of each year during the Term of this Permit for the purposes of discussing and resolving issues of mutual concern and ensuring that Permittee is complying with the Provisions of this Permit. Any proposed changes or modifications to this Permit which are required in order to meet National Park Service requirement or objectives shall be discussed and negotiated at the Annual Meeting. If National Park Service

requirements or objectives require prompt attention, Permitter may reasonably change the date for the Annual Meeting.

18) PENALTY

- a) At the option of the Permitter, Permitter may, in lieu of voiding and terminating this Permit, assess a penalty of \$500.00 per day for any failure by Permittee to keep and perform any of the Provisions of this Permit. In such case, Permittee shall be given notice in writing of a grace period (of from one to thirty days) to remedy the situation before a penalty will be assessed. Payment of any penalty under this provision shall not excuse Permittee from curing the Default. This provision shall not be construed as preventing Permitter from issuing citations or initiating enforcement proceedings under Applicable Laws.

19) TERM

- a) Six months prior to the Expiration Date of this Permit, this Permit, or a similar permit, may be offered to Permittee for an additional period of two years.
- b) If a subsequent permit is not entered into prior to the Expiration Date, the Provisions of this Permit regarding Permittee's obligations to surrender and vacate the Premises shall apply.
- c) Permittee and Permitter acknowledge and recognize that extension of this permit is not authorized beyond the expiration of the Reservation of Use and Occupancy in 2012.

20) SURRENDER AND VACATE THE PREMISES, RESTORATION

- a) On the Termination Date of this Permit, Permittee shall surrender and vacate the Premises, remove Permittee's Personal Property therefrom, and remove any Improvements or Alterations identified by Permitter. Subject to the approval of the Permitter, Permittee shall also restore the Premises to a condition at least equal to that existing at the time this Permit was entered into, normal wear and tear excepted. If Permittee does not remove Permittee's Personal Property, said Improvements or Alterations, then, at Permitter's option, these items shall either become the property of Permitter without compensation there for, or Permitter may cause them to be removed and the Premises to be repaired at the expense of the Permittee, and no claim for damages against Permitter, its employees, agents or contractors shall be created or made on account of such removal or repair work.

UNITED STATES DEPARTMENT OF THE INTERIOR
National Park Service
Special Use Permit

Name of Use Leachfield

Date Permit Reviewed 2002 05/08
Reviewed 20 ___
Reviewed 20 ___
Expires 2006 11/30

Long Term

Short Term ___

Permit # MSC 8530-6000-2011
Region Park Type No. #

POINT REYES NATIONAL SEASHORE
Name of Area

Johnson's Oyster Company of P. O. Box 69, Inverness, CA 94937 (415) 669-1149
Name or Permittee Address Phone

is hereby authorized during the period from (Time 12:01 am day 01 Month December, 2001), through (Time 11:59 pm day 30 Month November, 2006), to use the following described land or facilities in the above named area:

A parcel approximately one (1) acre in size and a four (4) foot-wide underground pipeline route connecting to the Johnson's Oyster Company's processing facilities, as shown on the attached map, "Site Map." The base fee (established in 1999) of \$350.00 has been adjusted utilizing the Inflation Calculator to adjust the annual fee to \$368.00. An annual billing schedule of \$368.00 will be established.

For the purpose(s) of: Continuing the use and maintenance of a sewage pipeline and sewage leachfield (previously authorized by Permit # MSC 8530-00-0003) to service the operation and facilities companion to the reservations and state tidelines lease issued to Johnson's Oyster Company.

Authorizing legislation or other authority (RE - DO-53): 16 U.S.C. §§ 1, 1a-1, & 3

NEPA Compliance: CATEGORICALLY EXCLUDED EA/FONSI ___ EIS ___ OTHER APPROVED PLANS ___

PERFORMANCE BOND: Required ___ Not Required Amount \$ ___

LIABILITY INSURANCE: Required Not Required ___ Amount \$ 500,000.00 per occurrence.

ISSUANCE of this permit is subject to the conditions on the reverse hereof and appended pages and when appropriate to the payment to the U.S. Dept. of the Interior, National Park Service of the sum of \$ 1,840.00.

The undersigned hereby accepts this permit subject to the terms, covenants, obligations, and reservations, expressed or implied herein.

PERMITTEE JOHNSON OYSTER COMPANY
Tom Johnson Signature 8-28-02 Date

Authorizing Official Don L. Neubacher Signature Don L. Neubacher Superintendent 8/29/02 Date

Additional Authorizing Official (if Required) _____ Signature _____ Title _____ Date _____



United States Department of the Interior

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



L1425
Tract 02-106 PORE

July 2, 2007

Mr. Kevin Lunny
dba. Drakes Bay Oyster Company
17171 Sir Francis Drake
Inverness, CA 94937

Dear Kevin:

This document will serve as a "Letter of Authorization" further extending the terms and conditions contained in Special Use Permit MSC-8530-6000-2010 regarding the well and water system located at the current Drakes Bay Oyster Company Site. This Special Use Permit expired on June 30, 2006 and was previously extended by a "Letter of Authorization" dated June 16, 2006.

The terms and conditions of MSC-8530-6000-2010 are hereby extended for an additional period of one year until July 1, 2008 or until such time as a Special Use Permit addressing Drakes Bay Oyster Company operations and use of non-reserved portions of Tract 02-106 is issued, whichever occurs first. Contingent upon successful resolution of remaining issues between the National Park Service, the California Coastal Commission and Drakes Bay Oyster Company, future Special Use Permits associated with the site will either be combined into a single document or issued for a concurrent period.

For the period of this letter the annual fee of \$2,925.00 will remain unchanged and the current quarterly billing schedule of \$731.25 will be continued. If you have questions or concerns regarding this "Letter of Authorization," contact Kevin McKay, Special Park Uses Coordinator, at (415) 464-5111.

Sincerely,

Don L. Neubacher
Superintendent



United States Department of the Interior

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



L1425
Tract 02-106 PORE

February 6, 2007

Mr. Kevin Lunny
dba. Drakes Bay Oyster Company
17171 Sir Francis Drake
Inverness, CA 94937

Dear Kevin:

This document will serve as a "Letter of Authorization" extending the terms and conditions contained in Special Use Permit MSC-8530-6000-2011 and the Letter of Authorization dated December 30, 2005 regarding the leach field and septic system located at the current Drakes Bay Oyster Company and former Johnson's Oyster Company Site. The Special Use Permit expired on November 30, 2006. The terms and conditions are extended for a period of one year until November 30, 2007 or until such time as a Special Use Permit addressing Drakes Bay Oyster Company operations and use of non-reserved portions of Tract 02-106 is issued, whichever occurs first. We intend to coordinate the Special Use Permits associated with the site to be issued on the same calendar schedule however, issuance of the Special Use Permits are contingent upon successful resolution of issues with the National Park Service and the Coastal Commission.

The annual fee of \$368.00 that was established on December 1, 2001 has been adjusted for inflation to \$419.00. This adjustment was calculated utilizing the Bureau of Labor Statistics, Consumer Price Index, inflation calculator. An annual billing schedule of \$419.00 will be established.

If you have questions or concerns regarding this Letter of Authorization, contact Kevin McKay, Special Park Uses Coordinator, at (415) 464-5111.

Sincerely,



Don L. Neubacher
Superintendent

Drakes Bay Oyster Company

Main Septic System

Date:	Qtr 1 11/30/09	Qtr 4 09 1/15/10	Qtr 1 10 3/16/10	Qtr 2 10 6/15/10	Qtr 3 10 12/16/2010
Clean Zable Filters	X	X	X	X	X
Check Solids Level in Septic Tanks	X	X	X	X	X
Septic Tanks Pumped?	N	N	N	Y	N
Check Audible and Visual Alarm - Pump #1	X	X	X	X	X
Check Event Counter - Pump #1		10988	11098	11334	11548
Check Elapsed Time Meter - Pump #1		10067	10110	10208	10294
Average GPD Pump #1		632.24	394.57	649.00	388.02
Check Audible and Visual Alarm - Pump #2	X	OK V/NO A	OK V/NO A	OK V/NO A	OK V/NO A
Check Event Counter - Pump #2		2618	2638	2673	2739
Check Elapsed Time Meter - Pump #2		4515	4518	4536	4547
Average GPD Pump #2		27.76	71.74	96.25	119.67
Total GPD		660	466	745	508
Switch Diversion Valve to Zone #				4	1
Check Liquid Level in Active Leachfield Zone (Inches)					3
Leachline #1	0	0	14.5	0	0
Leachline #2	0	0	14	0	0
Leachline #3	0	0	14	0	0
Leachline #4	0	0	0	0	0
Leachline #5	0	0	0	0	FLOODED
Leachline #6	0	0	0	0	0
Leachline #7	0	0	0	0	11.5
Leachline #8	0	0	0	0	3.5
Leachline #9	0	0	0	0	0
Leachline #10	0	0	0	0	1/4"
Leachline #11	0	0	0	0	0
Leachline #12	0	0	0.5	0	1/8"
Leachline #13	15	0	2	5.5	1"
Leachline #14	3	0	1.75	1.5	1"
Leachline #15	0	0	1	0	1"
Leachline #16	0	0	2	0	1.5"
Leachline #17	0	0	0	0	0.5
Leachline #18	0	0	2	0	1
Leachline #19	0	15	0	0	0.5
Leachline #20	0	0	0	0	1
Leachline #21	0	0	0	0	1
Leachline #22	0	0	1	0	1
Leachline #23	0	0	1	0	0.5
Leachline #24	0	0	2	1.25	3

Oyster Wash Septic System

Date:	11/30/09	1/15/10	3/16/10	6/15/10	12/16/10
Clean Zable Filter	X	X	X	X	X
Check Solids Level in Septic Tank	X	X	7	10	7
Septic Tank Pumped?	N	N	N	Y	N
Check Audible and Visual Alarm - Pump #3	X	X	X	X	X
Check Event Counter - Pump #3		744	792	997	1104
Check Elapsed Time Meter - Pump #3		542	559	592	610
Average GPD Pump #3		215.89	146.09	478.33	164.62
Check Operation of Hydrotech Valve	X	X	X	X	X
Purge Distribution Lines		X	X	X	X
Check Liquid Level in Leachfield					

DOC913

Check Liquid Level in Zone 1A	0	0	1.5	0	0
Check Liquid Level in Zone 1B	3	0	7.5	7	3
Check Liquid Level in Zone 2A	0	2	8	0	7.5
Check Liquid Level in Zone 2B	2	0	0	0	0
Check Liquid Level in Zone 3A	0	2	2.5	0	5
Check Liquid Level in Zone 3B	0	3	8	0	8
Check Liquid Level in Zone 4A	0	5	3.5	3	4
Check Liquid Level in Zone 4B	3	0	0	0	0

Pump # 3 temporary calc's to determine GPD without dose counter:

Notes:

Liquid level in monitoring wells are listed starting from uppermost leachline in active zone to the lowest, separated by commas

Missed (or lost) record for 2nd Qtr 06

Dose counter still broken for pump #3 - GPM calculated by using elapsed time X actual pump output. Counter was replaced on 01/24/08, but still not working - needs to be repaired - may be bad panel or relay

Slightly higher liquid levels in oyster wash leachfield during wet months

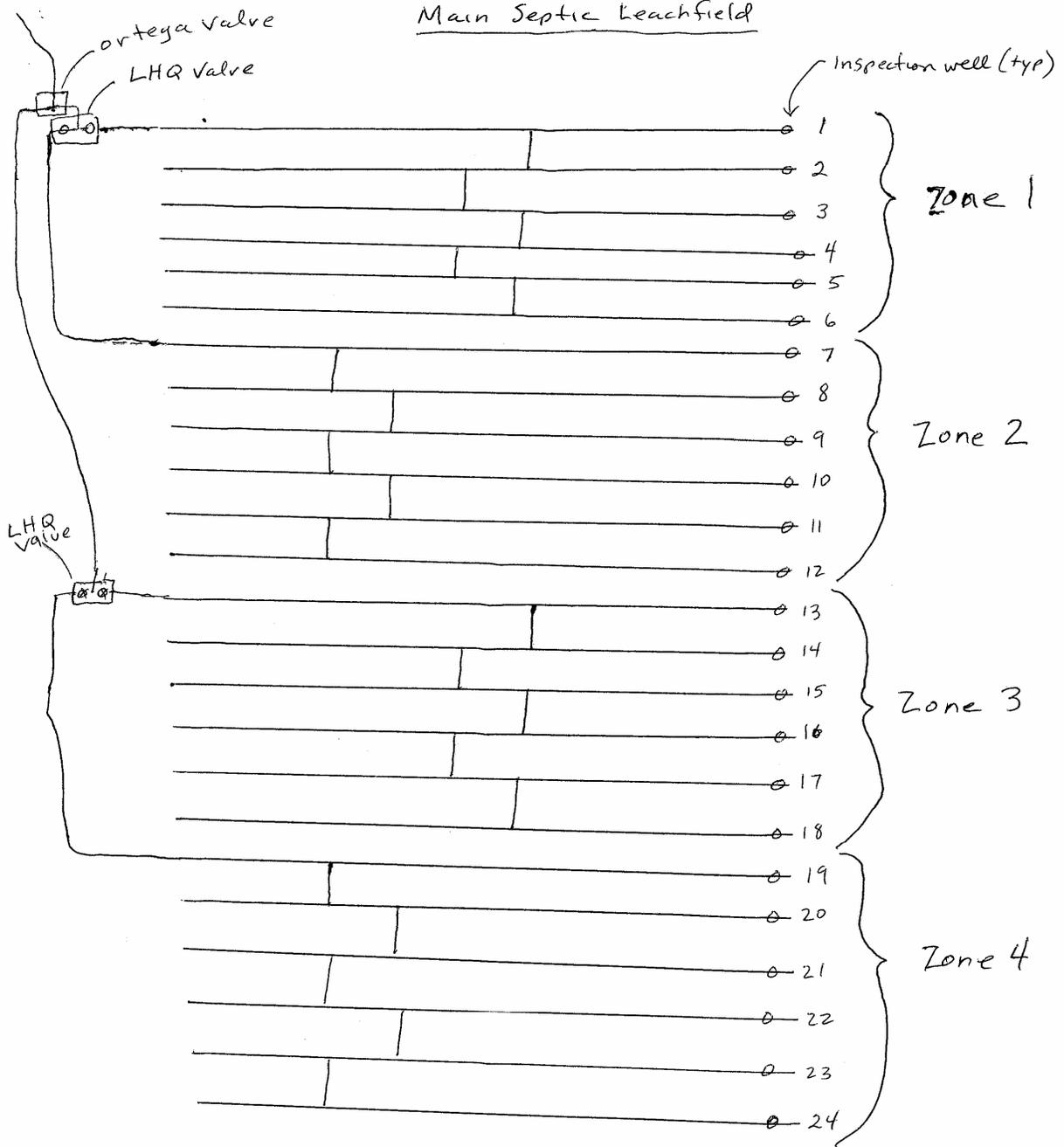
Very low utilization of main leachfield - only 4 out of 24 - 100' leachlines are being utilized - effluent has never even reached the first serial overflow in any of the four zones.

Pump #3 Alarm failed during test on 01/24/08 - alarm stayed on after activating alarm float - may be related to dose counter failure? Repair for both is scheduled.
03/31/09 - noticed pump #2 for main septicis not pumping. Schedule repair

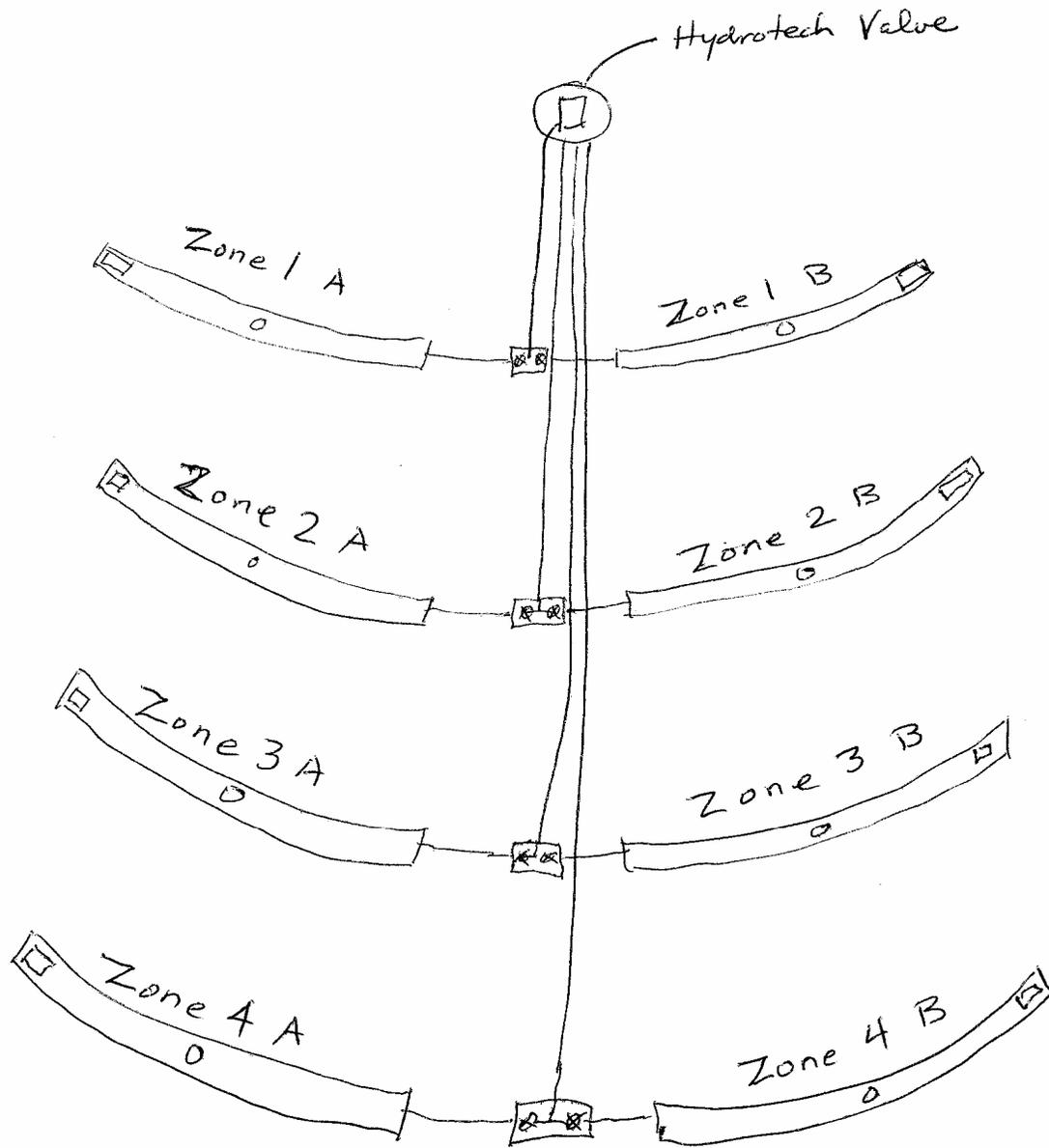
Pump #3 Alarm repaired - float replaced on 4/5/09
Repaired broken conduit connecting junction boxes in sump #1 and sump #2 on 04/06/09
Pump #2 - purchased new pump on 5/3/09 - not yet installed as of 5/26/09 monitoring

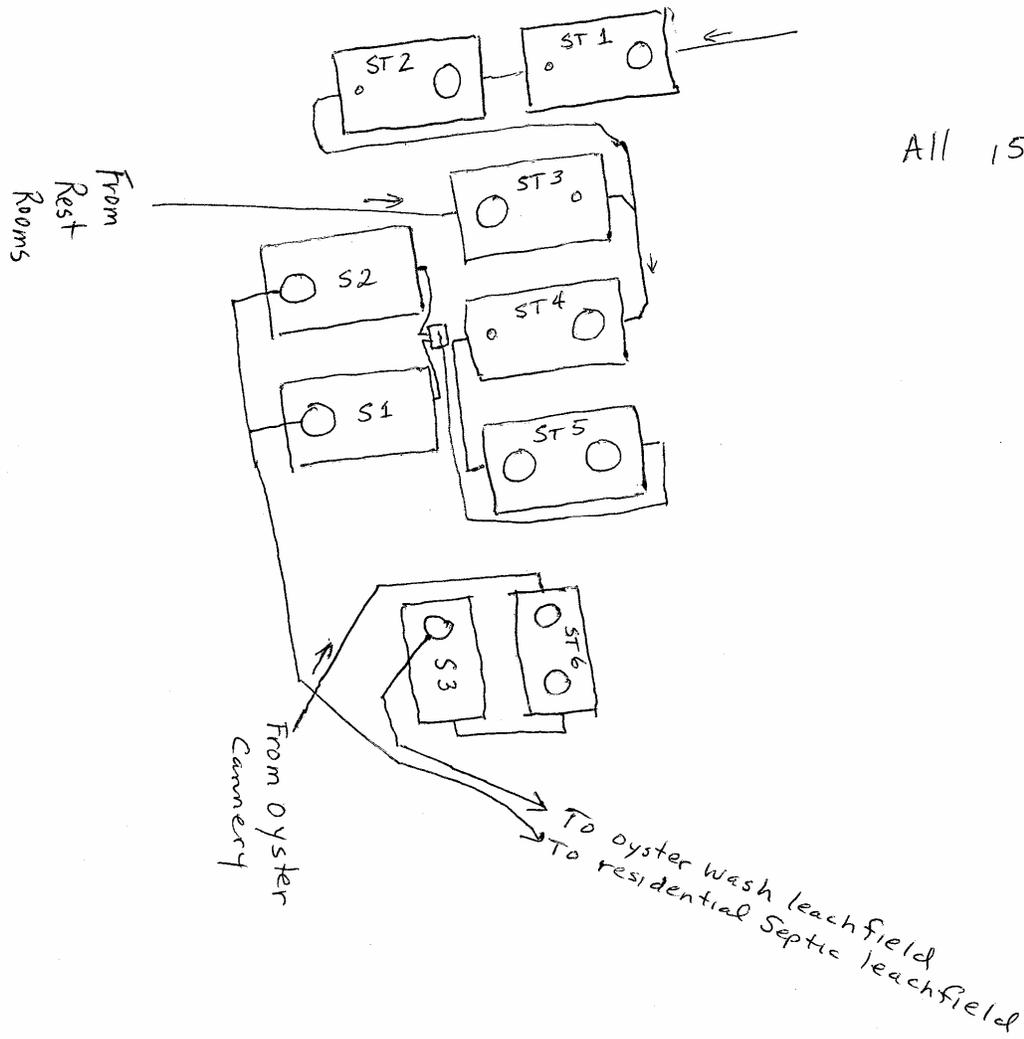
Pump #2 - Replaced on 8/15/2009- installed by Jorge Jr. Column M, all values were zero except line 12 and 16 until numbers on lines 10, 11, 14, 15 were entered on 1/5/09

Main Septic Leachfield



Oyster Wash Leachfield Infiltrator System





All 1500 gal Tanks



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Drakes Bay Oyster Company has little impact on estero

Peter Jamison
2007-06-15

A century of oyster farming has had much less impact than scientists expected on the ecosystem of Drakes Estero in the Point Reyes National Seashore, according to studies completed in the last two years and funded by the National Park Service.

Researchers from the University of California at Davis and Park Service employees carried out the two studies, which have not been published and were obtained by The Light this month. Their findings shed new light on a controversy that has gripped West Marin since February, when it was revealed that the Park Service plans to close the oyster farm and convert the estuary to wilderness in 2012.

The oyster operation has no statistically significant effects on the estuary's water quality, fish, and eelgrass, the studies reveal. The most notable impact measured was the introduction of a non-native "fouling" organism that can accumulate over time on the oysters and racks. The soft-bottomed Estero is otherwise unwelcoming to the species, which only attaches to hard surfaces.

Researchers used nearby Estero de Limantour, a wilderness area where no oyster farming takes place, as a control to measure the effects of oyster cultivation on Drakes Estero.

Scientists at first hypothesized that the oyster farm was harming the estuary. Marine biologist Jesse Wechsler began his research on fish with the following prediction: "Because studies have shown that bivalve mariculture can affect the biological, physical, and chemical characteristics of an aquatic ecosystem, I hypothesized that adjacent to the Drakes Estero oyster racks: (a) fish species diversity would be reduced, (b) fish abundance would be reduced, (c) fish species richness would be decreased, and (d) a few tolerant species would dominate the fish community."

However, after four years of research, he concludes, "I found no statistically significant differences in fish abundance or species richness among the sampling locations, which indicated that the oyster farm had not exerted a noticeable effect on the ichthyofauna of Drakes Estero."

Studies' origins

Wechsler's study led to his master's thesis from UC Davis in 2004. He is now an aquatic scientist with Kleinschmidt Energy and Water Resource Consultants in Maine.

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The other study, authored by UC Davis professor Deborah Elliott-Fisk and National Seashore Chief Scientist Sarah Allen, is wider in scope. It incorporates Wechsler's work and that of two other graduate students, Angie Harbin and David Press (Press is now an employee of the Park Service). Allen said that while she helped design the study, it was Elliott-Fisk who wrote the final report.

National Seashore ecologist Ben Becker also helped design and execute the studies. The Park Service paid \$50,000 to fund the effort.

The studies began in the late 1990s, when the farm was still run by Tom Johnson, whose father, Charlie, had founded the Johnson Oyster Company in 1957. Before that, other companies had grown oysters in Drakes Estero, beginning in the late nineteenth century.

The Johnsons grew oysters on V-shaped wires that hang from wooden racks in the upper estuary. Wechsler counted 85 oyster racks in Drakes Estero, only 38 of which were used at the time of his study.

Organic beef rancher Kevin Lunny bought the oyster farm last year, renaming it Drake's Bay Oyster Company. He has continued the Johnsons' signature "hanging cultch" technique of growing oysters, and says that today a large number of the racks are still unused.

More fish species near oyster racks

Wechsler's study, which focused on fish life, found that the hanging lines of oysters actually increase the richness and diversity of fish species by providing habitat.

His study states, "Because species richness and diversity were greatest in the samples taken adjacent to the oyster racks, it is likely that the physical structure associated with the oyster mariculture facility has enhanced habitat complexity, thereby providing additional resources (e.g., cover and feeding opportunities) for fish."

Wechsler notes that although he found no difference in species richness, diversity, or abundance between Drakes Estero and Estero de Limantour, the fish community in and around the oyster racks did appear to have changed to favor crevice-dwelling fish and their predators — that is, fish capable of taking advantage of the habitat provided by the oysters.

On the basis of Harbin's research, Elliott-Fisk suggests that there might be fewer species of mud-dwelling invertebrates (such as crabs, clams, snails and mussels) directly beneath the oyster racks. However, the research on this point is inconclusive, she notes, and "more collection of data will be necessary to draw more meaningful conclusions."

The study does not analyze the oyster farm's effects on harbor seals or birds.

Eelgrass and water

Environmental activists have in the past worried that the oyster farm chokes out the eelgrass beds spread across the floor of Drakes Estero by blocking sunlight.

The larger study written by Elliott-Fisk states, "We found the oyster racks to have no pronounced impacts on the eelgrass beds, which existed both under and away from the racks as an incredibly rich habitat type."

The study also reveals that almost a century of intensive oyster farming has not diminished the water quality of Drakes Estero. Any pollution of the estuary from oyster feces is far outweighed by decomposing eelgrass, the report states.

Elliott-Fisk cautions that the water samples on which the conclusions are based were "limited," and suggests a further, more thorough study of water quality.

Kevin Lunny, who bought the oyster farm from the Johnson family last year, said that the studies confirmed his prior belief that his oyster farm plays a positive role in the estuary's ecosystem.

"There's no way else to interpret that data than that it's helping the environment," he said. "It was interesting to see this, especially when the researcher goes in with the hypothesis that the oysters are going to have a negative impact."

Still "negative impact," park scientists say

National Seashore scientist Allen takes a different view of the studies' findings.

"It was a negative impact," she said in an interview this week, noting the presence of the non-native fouling organism discovered in Drakes Estero, but not in Estero de Limantour, by researcher David Press. Oysters and racks are "providing a substrate for an organism that normally wouldn't be able to exist in the place," she said.

The fouling organism is known as *Didemnum Sp.*, commonly referred to among biologists as a "sea squirt" (the term "fouling" was coined by sailors, who said that such species "fouled" the hulls of ships).

An aggressive, non-native species that was first observed in North America in the late 1980s, *Didemnum* is a pellucid muck that resembles fiberglass and can coat hard surfaces such as dock pilings, the hulls of boats, and shellfish. It is widespread in both Tomales and San Francisco Bays, and could have hitchhiked into Drakes Estero on the hull of a boat or on the shells of imported oysters.

Andy Cohen, director of the Biological Invasions Program at the San Francisco Estuary Institute, said that *Didemnum* can only grow on hard surfaces. Since the bottom of Drakes Estero is soft sand and mud, he said, the organism is more likely to affect Lunny's oysters than any other marine life in the estuary.

"I wouldn't think that this is a big threat to the natural environment," he said. "Within Drakes Estero, the problem is probably more how it's going to affect the actual oyster operation."

Lunny says that although he has noticed *Didemnum* on his oysters or racks, "it hasn't posed a problem" yet. Allen said that she has observed it at Bull Point, one of the estuary's few pieces of rocky shoreline. She worries that the organism could spread to eelgrass in the estuary.

However, Dr. Mary Carman, who researches *Didemnum* at the Woods Hole Oceanographic Institute, said that she has found through experiments that the organism will not successfully grow on eelgrass. The organism can cling to eelgrass blades for about 10 days before sloughing off, she said, because the grass secretes a protective acid. She has never known *Didemnum* to harm eelgrass in the wild, she said.

What next?

The two studies differ markedly in their suggestions for future management of the estuary. Elliott-Fisk concludes that it "only seems appropriate" to remove the oyster racks and transform Drakes Estero to wilderness, under the guidelines set by the 1976 Phillip Burton Wilderness Act, which designated the estuary as a potential wilderness area.

Wechsler, in contrast, envisions "a cooperative effort" between the National Seashore and the oyster farm to begin harvesting Olympia oysters, which are native to the California coast. Lunny currently

uses non-native Pacific oysters.

"The continued production of oysters will likely continue to bolster the condition of the fish community in the Estero by enhancing habitat complexity and feeding opportunities," Wechsler writes. "A transition to native Olympia oyster culture could serve the needs of both organizations."

West Marin's environmental community is divided among those who favor transforming the estuary to wilderness and those who see Lunny's oyster operation as a model of sustainable food production that should be allowed to stay.

Gordon Bennett, chair of the Marin chapter of the Sierra Club, said the studies don't change his opinion that the oyster farm should close in 2012. Although Lunny is known for his environment-friendly approach to aquaculture, the oyster farm could eventually fall into other hands if its lease is continued beyond 2012, Bennett said.

"If [Lunny's] operation breaks the Wilderness Act, then the concern is that the oyster operation may never go away," Bennett said. "Kevin is not immortal, and at some point the oyster operation is going to change hands. You cannot depend on there being a good operator all the time."

Lunny wonders whether the legislators who made Drakes Estero a potential wilderness would make the same decision after viewing the scientific data in the two reports.

"Did Congress fully understand in 1976 when they made Drakes a potential wilderness that we no longer have a native oyster, that this non-native is providing ecological services, and that those non-native species cannot exist without management?"

Note: This article was originally published on May 18, 2006 and is republished due to its relevance.

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