

STATE OF MAINE  
DEPARTMENT OF MARINE RESOURCES  
Experimental Aquaculture Lease Application

JOSEPH PORADA  
Docket # 2006-18E,  
2006-19E,  
2006-20E

22 June 2007

**FINDINGS OF FACT,  
CONCLUSIONS OF LAW, AND DECISION**

On 20 June 2006, Joseph Porada applied to the Maine Department of Marine Resources (“DMR”) for three experimental 3-year aquaculture leases on three contiguous 2-acre sites located in the coastal waters of the State of Maine, in the Town of Trenton in Hancock County, for the purpose of cultivating *Mercenaria mercenaria* (quahogs, littleneck, and cherry stone clams) using bottom culture techniques. The applications were accepted as complete on 28 June 2006 and later amended on 18 September 2006. No party intervened in this case. A public hearing on these applications was held on 23 April 2006, in Trenton.

**1. THE PROCEEDINGS**

The evidentiary record before the Department regarding this lease application includes 12 exhibits introduced at the hearing (see exhibit list appended), a number of written comments submitted by mail before the close of the record, and the record of testimony at the hearing itself. Testimony was given at the hearing by: the applicant, Joseph Porada; DMR’s Aquaculture Environmental Coordinator, Jon Lewis; the representative of the Army Corps of Engineers, LeeAnn Neal; and several members of the public: Charlie Phippen, David Dunton, Nick Vachon, Brian Beal, Bill LaBelle, Jessie Leach, and Fred Stoddard. Each witness who testified was sworn and subject to questioning by the Department, the applicant, and members of the public. Other members of the public asked questions of witnesses but did not offer sworn testimony. The hearing was recorded by DMR.

DMR and the Army Corps of Engineers were the only government agencies that offered testimony. Notices and copies of the application and DMR site report were sent to numerous other state and federal agencies, including, but not limited to, the U.S. Coast Guard, the National Marine Fisheries Service, the Maine Department of Inland Fisheries & Wildlife, the U.S. Environmental Protection Agency, and the Maine State Planning Office, as well as to a number of

educational institutions, aquaculture and environmental organizations, the Town of Trenton, members of the Legislature, representatives of the press, and private individuals.

In addition to the testimony and exhibits from the hearing, DMR received 15 letters regarding the project prior to the close of the hearing record; they are included in the record and accorded appropriate weight, given their status as unsworn statements not subject to questioning. The evidence from all of these sources is summarized below. [NOTE: The reference (Smith/Jones) means testimony of Smith, being questioned by Jones.]

## 2. DESCRIPTION OF THE PROJECT

### The Project

According to the application and his testimony at the hearing, Mr. Porada's experimental aquaculture project consists of stocking juvenile quahogs in a variety of configurations on the bottom of three 2-acre sites in subtidal waters in Goose Cove, Trenton. A wild population of quahogs already exists in the cove; Mr. Porada and one or two other people harvest them commercially, and several people harvest them recreationally. Mr. Porada testified that he is working with Dr. Brian Beal of the University of Maine at Machias and the Downeast Institute for Applied Marine Research and Education to undertake the experiment (Porada direct).

Mr. Porada testified that he has harvested wild quahogs in Goose Cove for a number of years, and that at his present rate he will deplete the stock of quahogs in the cove within two years to the point at which commercial harvesting will no longer be feasible. The purpose of the experiment, according to Mr. Porada and Dr. Beal, is to evaluate various methods of culturing quahogs in Goose Cove using seed produced from Goose Cove quahogs and raised in the Downeast Institute's hatchery.

Mr. Porada collected quahogs from the cove for brood stock, which was conditioned in the hatchery. The quahogs spawned successfully in the hatchery in 2006, and the surviving larvae were reared and overwintered at the hatchery for planting on the lease sites in the spring of 2007. This process in itself is ground-breaking, according to Dr. Beal, as no one has previously overwintered quahogs using the techniques employed in this project; being able to raise and overwinter juveniles for planting in the spring will significantly reduce the high mortality rate that now impedes the development of cultured quahogs. The goal of the project is to establish a hatchery source of seed quahogs and a method for culturing them that will be simple, inexpensive, and adaptable to sites along the Maine coast and elsewhere, in order to provide more options for people interested in undertaking aquaculture projects (Porada direct; Beal direct).

### The Technique

The technique to be employed on the lease sites, according to the application and Mr. Porada's testimony, is simple. The three sites have common borders between them; each site

measures 416 ft. east to west by 208 ft. north to south, according to the DMR site report prepared by Mr. Lewis (Exhibit 3, p. 2). The westernmost site is site 1 (Docket # 2006-18E), the middle site is site 2 (2006-19E), and the easternmost site is site 3 (2006-20E) (Exhibit 3, p.3). Bottom conditions vary slightly among the sites, from softer mud to the west to firmer substrate on the east (Porada, direct). Quahogs will be planted directly on the sites, in varying densities, to investigate the optimum conditions for growth under the varying site and stocking conditions.

On each of sites 2 and 3, plastic netting of ¼" mesh in 14' x 20' sheets will cover 50 alternating rectangular subsections in a checkerboard pattern for a period of time to deter predators until the clams reach ½" in thickness (harvestable size is 1"). The nets will float 4" to 5" above the bottom by means of halves of buoy toggles attached to the middle of each net. Mr. Porada originally proposed to stake the nets in place with 12" stakes, but Mr. Lewis observed in the site report that the stakes might pose a hazard to boats navigating the shallow waters below half-tide (Exhibit 3, p.3). At the hearing, Mr. Porada testified that he plans to bury the edges of the nets in the mud to hold them in place, making adjustments as necessary if nets become dislodged. Sites 2 and 3 will have 30-50% of their surface covered by netting while it is in place. Nets will be visible only on about one-third of all tides, those of .3 feet or less; the netting tears easily if caught on an object (Porada/Robinson).

Mr. Porada plans to mark the boundaries of the lease sites with 8-10 lobster buoys anchored with head twine (a light string that is easy to untangle) to buoy spindles buried horizontally 6-8" deep in the mud. Mr. Porada testified that he is willing to use buoys in any color that is unobtrusive, although they need to be visible both to boats and to other harvesters working in the area (Porada direct).

### Operations

Operations at the sites will consist of maintenance and harvesting, all by hand; no power equipment will be used. Mr. Porada testified that he expects to work at the site between one and four times a week, possibly with one other person. He will not work on the site at night. He will harvest quahogs with either a hand rake, a bull rake, or by pulling them up by hand, wearing rubber gloves. Harvesting will be done from April to December, and possibly longer into the winter, if no ice forms in Goose Cove. Mr. Porada will gain access to Goose Cove by boat from public landings at either Trenton or Pretty Marsh; he may arrange for access over adjacent land by permission of the landowner, but he has not done this yet (Porada/Robinson; Porada/Lewis).

Mr. Porada testified that he will plant 500,000 to 750,000 quahog seeds on the three lease sites. He hopes to make part of his living from the cove until the lease quahogs are large enough to support his harvest requirements, and so he plans to continue harvesting quahogs in the rest of Goose Cove while the juveniles grow on his experimental sites. He will rotate 3 year class sizes of quahogs among the lease sites, and he will diminish his harvesting in the rest of Goose Cove as the seedlings begin to reach harvestable size. He testified that the fastest-growing

quahogs can reach 1" harvestable size in 3 years, though it usually takes 3-5 years for this to happen.

### Site

The site in Goose Cove is unique, Mr. Porada explained, because it has a flat mud bottom that stays warmer longer in the fall; warm, shallow water; a southern exposure; few crabs; little eel grass; and no occurrences to date of red tide. The water in most of the cove is classified as open to shellfish harvesting by DMR, although a portion of the northernmost part is closed because of pollution. There are virtually no aquatic plants on the site. Bloodworms and sandworms are common, though not at commercially harvestable levels; quahogs are "moderately abundant", soft shell clams exist at some distance away from the lease sites, and mussels are common. The only current is the rise and fall of the tide, which runs north-south; the shoreline is "rocky over clay with some areas of gravel and cobble", and the adjacent upland is field and forest areas with houses along the shore (Exhibits 2-A, 2-B, and 2-C, p. 4).

Mr. Lewis noted in the site report that water depths on the sites range from zero at low water (on tides below mean low) to 8-10 ft. at high water. At mean low water, all of the sites are submerged. He noted that the bottom is likely to shift over time and that "Navigational charting in Goose Cove is not of high resolution"; therefore, he and Mr. Porada visited the site at the time of low water on a 0.0' tide (i.e., at mean low tide) and "walked the shoreline collecting location coordinates using a WAAS GPS unit." North winds of 15 knots pushed the water farther offshore than would be the case on a calm day, so that the "extent of the low water mark would have been conservatively estimated on that day", according to the site report. Based on these observations, Mr. Lewis plotted the boundaries of the lease sites (Exhibit 3, p. 3) and allowed an additional buffer of between 30 and 50 feet (Phippen/Lewis). Mr. Lewis testified that because this is an application for an experimental lease, he did not make a videotape of the sea floor on the lease sites, although he inspected them, both on 13 December 2005 and on 24 July 2006. His description of the sites agrees with that in the application.

### 3. STATUTORY CRITERIA

Approval of experimental aquaculture leases is governed by 12 M.R.S.A. §6072-A. This statute provides that an experimental lease of 2 acres or less for up to 3 years may be granted by the Commissioner of DMR if s/he determines that the project will not unreasonably interfere with the ingress and egress of riparian owners; with navigation; with fishing or other uses of the area, taking into consideration and number and density of aquaculture leases in an area; with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna; or with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments. The Commissioner must also

determine that the applicant has demonstrated that there is an available source of organisms to be cultured for the lease site.

#### A. Riparian Access

There are some 45 riparian owners within 1,000 ft. of the lease sites, because Goose Cove is broad and shallow and property lines are treated as extending to the mean low water mark, which is slightly inshore of the lease boundaries. The application notes that only one mooring was observed in the cove, about 1800 ft. from the proposed lease sites and above the half-tide line. There is no general navigation channel in the area, as the bottom is relatively flat, and “there is minimal ingress and egress for recreation by kayak and canoe” (Exhibits 2-A, 2-B, and 2-C, p. 3).

The site report notes that docks and moorings observed on 24 July 2006 were 1110 ft. northeast of the lease sites and that access would not be impeded by the sites, except by nets during mid-tide, when water would be deep enough for vessels to cross the nets, but shallow enough for propellers or keels to snag them.

Mr. Phippen objected to the delineation of mean low water and the locating of the lease sites by Mr. Lewis and Mr. Porada; he testified that the designation of mean low water as it appears on NOAA chart 13316, 22<sup>nd</sup> edition, should control the determination of where the mean low water mark lies. Given that location on the chart, he said, the lease sites are in the intertidal zone, and could require written permission from riparian owners. He agreed with Mr. Lewis that the tidal flats in Goose Cove do move over time but stated that he had not observed such changes.

Mr. Lewis said in the site report that the NOAA charts “are not of high resolution”. At the hearing he noted that the flats in Goose Cove change over time and that actually walking the sites at mean low water and locating the lease boundaries with a GPS unit is much more accurate than relying on the NOAA chart.

#### Findings of Fact Regarding Riparian Access:

Based on the evidence presented, it appears that riparian access will not be impeded by the operations on the lease sites, as any docks and moorings are over 1,000 feet away, and there is no navigational channel, so boaters are free to navigate where they choose. The proposed lease sites would occupy only a small portion of the waters of Goose Cove. Marking the sites to show their location, as discussed in the section on navigation, below, should be adequate warning to boaters of the presence of the aquaculture operations.

I take official notice, pursuant to DMR Rule 2.30 (2)<sup>1</sup>, of NOAA’s internet URL site: <http://ocsddata.ncd.noaa.gov/OnLineViewer/>. The site shows Chart 13316 and indicates that the bathymetric data on which the Goose Cove portion of the chart is based on was collected prior to

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<sup>1</sup>See section 9, below, for text of rule and notice to parties of the opportunity to contest the facts noticed.

the year 1900. This information adds weight to Mr. Lewis's contention that the most accurate way to find the mean low water mark in Goose Cove is to observe the water line in the cove on a mean low tide, which is what he did. His plotting of the location of the lease sites using this method with GPS appears to be more accurate than using the NOAA chart based on information gathered a century or more ago. He testified that his plotting was conservative, given the offshore wind at the time and his addition of a buffer strip. Based upon this evidence, I find that the lease sites are properly located in the subtidal area of Goose Cove.

Therefore, I find that the aquaculture activities proposed for these sites will not unreasonably interfere with the ingress and egress of any riparian owner.

### B. Navigation

Ms. Neal testified that the Army Corps of Engineers had no concerns regarding navigation issues, provided Mr. Porada marks the lease sites in accordance with Coast Guard and DMR requirements. Mr. Lewis raised a question in the site report about the adequacy of the anchors for the marker buoys which appears to have been answered by Mr. Porada's testimony about burying a buoy spindle horizontally 6"-8" deep in the mud to serve as an anchor. Mr. Lewis also discussed in the site report the need to mark the sites clearly so that other harvesters would be able to identify the area from which they may not take quahogs (Lewis/Porada). Mr. Phippen, a former Coast Guard officer with experience in establishing aids to navigation, recommended using "a unique floating object" to mark the lease site and avoiding the use of red or green buoys that might be confused with official navigational displays. He also noted that the Coast Guard's Private Aids to Navigation (PATON) program would provide guidance on navigational marking (Lewis/Phippen).

David Rand, a riparian owner who asked questions at the hearing but did not testify under oath, indicated that he wanted buoys to be inconspicuous so as not to be noticeable in his view. Fred Stoddard, another riparian owner with a boat in Goose Cove, requested buoys in fluorescent orange, to be highly visible for boaters; he suggested as a compromise using orange buoys in summer and darker colors during the remainder of the year.

Mr. Porada testified that kayaking and boating over the lease sites is acceptable and that he did not request any restrictions on navigation (Porada, direct).

### Findings of Fact Regarding Navigation

No restrictions on boating are requested by the applicant. The only structures on the lease site are the marker buoys and the nets suspended 4"-5" above the bottom. In the event that a vessel navigating in very shallow water snags a net, the plastic mesh will easily tear, as Mr. Porada demonstrated at the hearing. The buoys lines likewise are thin and easy to untangle. The buoys and nets do not appear to pose an unreasonable impediment to navigation in Goose Cove,

particularly as the required marking will alert boaters to the presence of the sites, and there is ample room to navigate around them.

The issue of marking the sites is clarified by DMR Rule 2.80, Marking Procedures for Aquaculture Leases.<sup>2</sup> Lease marker buoys, when required (and they will be required in this case), must be deployed at the lease corners and along boundaries exceeding 100 yards long and must display the words “SEA FARM” in letters at least 2” high in a color contrasting to the color of the buoy. Lease sites must also be marked in accordance with Coast Guard PATON standards and requirements.

The only issue left unresolved is thus the color and form of the buoys. DMR rules on visual impact of aquaculture projects do not apply to experimental aquaculture leases. When visual impact is considered in cases involving standard leases, it is the visual impact of the project as seen from the water, not from the land, that is the focus of inquiry. One purpose of DMR marking rules for aquaculture lease sites is to delineate the sites so that people on the water in the vicinity know that an aquaculture operation is taking place there and that certain activities on the site may be prohibited or unwise.

Marking the lease boundaries also aids DMR Marine Patrol in inspecting the site and enforcing the laws relating to it, including verifying that the corners are located according to the coordinates designated in the lease. DMR marking buoys are not intended as navigational aids; those are designated and required by the Coast Guard under the PATON program. They do, however, serve to alert boaters to the presence of a “Sea Farm”, so that vessels may choose to avoid the site.

Thus, Mr. Porada’s choice of buoy form and color should be guided by the goals of making the buoys easily visible and identifiable, while differentiating them from any navigational markers required by the Coast Guard.

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<sup>2</sup> **2.80 Marking Procedures for Aquaculture Leases**

1. When required by the Commissioner in the lease, aquaculture leases shall be marked with a floating device, such as a buoy, which displays the lease identifier assigned by the Department and the words SEA FARM in letters of at least 2 inches in height in colors contrasting to the background color of the device. The marked floating device shall be readily distinguishable from interior buoys and aquaculture gear.
2. The marked floating devices shall be displayed at each corner of the lease area that is occupied or at the outermost corners. In cases where the boundary line exceeds 100 yards, additional devices shall be displayed so as to clearly show the boundary line of the lease. In situations where the topography or distance of the lease boundary interrupts the line of sight from one marker to the next, additional marked floating devices shall be displayed so as to maintain a continuous line of sight.
3. When such marking requirements are unnecessary or impractical in certain lease locations, such as upwellers located within marina slips, the Commissioner may set forth alternative marking requirements in an individual lease.
4. Lease sites must be marked in accordance with the United State’s Coast Guard’s Aids to Private Navigation standards and requirements.

Therefore, I find that the aquaculture activities proposed for these sites will not unreasonably interfere with navigation, provided that the site is marked according to DMR and U.S. Coast Guard requirements.

### C. Fishing & Other Uses

Shellfish harvesting is the main type of fishing in Goose Cove. The application states that quahog harvesting, both recreational and commercial, occurs on a “limited/occasional” basis. There are no soft shell clams near the proposed lease sites, though some occur nearer shore in a closed area. Mussels grow at the edge of the lease sites but are not harvested commercially and are rarely, if ever, harvested at all (Exhibits 2-A, 2-B, and 2-C, p. 3).

Mr. Porada is the “most regular and primary harvester” on 100-150 acres of harvestable flats in Goose Cove. He states in the application, “I use the area 1 to 3 times per week depending on the season. The other harvester is there less than once per week. It is rare to see anyone else harvesting, commercial or recreational” (Ibid). These statements were affirmed by the local DMR Marine Patrol Officer, Troy Dow (Exhibit 4).

Mr. Porada requests exclusive use of the lease areas with regard to shellfish harvesting, worm digging, and any activities that could disturb the substrate and cause siltation damage to the small growing quahogs. He requests also that these activities “be restricted within and around the site within a reasonable distance” (Exhibits 2-A, 2-B, and 2-C, p. 4). He has no objections to finfishing and boating on the lease sites.

Much of the public testimony at the hearing focused on the concerns of recreational and commercial quahog harvesters that 6 acres of quahog flats in Goose Cove would be off-limits to harvesting if the leases are granted. The witnesses objected to privatizing a public resource, noting that Mr. Porada intends to continue to harvest quahogs in the remainder of the cove, besides having exclusive access to those on the lease sites. Mr. Phippen argued that the experiment should be conducted in an area where no quahogs currently exist. Mr. Vachon testified that privatizing 6 acres of the flats would increase the commercial harvesting pressure on the remaining areas and push recreational users out to marginal areas. Mr. LaBelle stated that he felt it was wrong to close off areas to commercial diggers in order to conduct an experiment.

Mr. Dunton is the other commercial harvester who digs quahogs in Goose Cove. He testified that he has worked in the cove for 25 years, and it is his last harvestable area, the only place he can still dig quahogs, and he does not want to lose it. He harvested some quahogs from the proposed lease sites in the fall of 2006, he said, although they were scarce there. He acknowledged in response to Mr. Porada’s questioning that he could have harvested an equal number of quahogs from elsewhere in Goose Cove, but he is skeptical of the experiment and opposed to any infringement on his ability to harvest in the cove (Dunton, direct; Dunton/Porada).

Dr. Beal testified to the significance of the experiment and its potential benefits to quahog harvesters. The spawning and overwintering techniques have already been successful, and this work has the potential to benefit aquaculturists all along the eastern seaboard. Now the task is to see whether different techniques of seeding quahogs will attract wild spat and increase the population of quahogs in Goose Cove. The field experiment is a rigorous one, Dr. Beal said, designed to be statistically powerful, with its results eventually to be published in peer-reviewed scientific journals and disseminated in manuals for growers and other lay people (Beal, direct; Beal/Leach).

Dr. Beal stressed the experimental nature of the work, noting that it is unknown whether the techniques will succeed in Goose Cove or anywhere else. He and Mr. Porada and others have applied for a grant to experiment with seeding quahogs in areas where they do not already exist, and Mr. Porada offered to give seed to Mr. Phippen and to others to try this on their own (Beal/Porada).

Dr. Beal observed that he thinks it unlikely that the spawn of Goose Cove quahogs in the wild is settling and growing in Goose Cove; given that the larval quahogs drift with the ocean currents for 3 to 4 weeks before settling to the sea bottom to grow, he speculated that they would be carried away from the cove, perhaps seeding a site somewhere to the west of Trenton. Likewise, he noted, quahog seed maturing in Goose Cove likely originates from sites eastward along the coast (Beal/Dunton).

Mr. Leach testified that he raises oysters on the Bagaduce River, that without aquaculture there would be no oysters grown in Maine, and that now many growers are making money raising oysters. With wild fisheries declining, he contended, aquaculture is needed, and Mr. Porada's experiment will help other commercial harvesters, if it succeeds.

Mr. Dunton observed that when he began harvesting in Goose Cove, many large quahogs over 3" in thickness existed there, but that they have declined in numbers over the years and what is harvested today are mainly 1" and 2" quahogs. He and Mr. Porada agreed that the largest quahogs are the most prolific spawners and that they do not harvest them, but leave them in place in the cove to reproduce.

There are no other aquaculture sites in Goose Cove. According to DMR records, 3 bottom mussel leases are located approximately 3 miles east of the proposed sites, and 2 suspended mussel leases are located approximately 6 miles to the west; all of these aquaculture leases are located in water bodies well outside of Goose Cove.

#### Findings of Fact Regarding Fishing & Other Uses

Quahogs in Goose Cove are evidently being harvested at unsustainable rates, so that the resource will soon be too scarce to support commercial diggers, particularly Mr. Porada and Mr. Dunton. If the experimental leases are granted to Mr. Porada, 6 acres of flats which are under water for 2/3 of all tides will be off-limits to all harvesters except Mr. Porada. What impact this

will have on the availability of quahogs in Goose Cove over the next 3 years is unclear, though it will likely be relatively small, given the 100-150 acres of harvestable area in the cove as a whole. Nevertheless, some unknown number of quahogs will be unavailable to Mr. Dunton and to the various recreational harvesters, and so there will be some interference with shellfish harvesting in Goose Cove.

If the leases are not granted, and if Mr. Porada continues to harvest at his present rate, he and Mr. Dunton may well face the loss of the resource that they have depended upon. The experiment is not a guarantee of improvement, but it offers a chance to gain new knowledge that could help to enhance the quahog populations in Goose Cove and elsewhere and possibly support new opportunities for commercial quahog production.

Given that a significant amount of harvestable bottom would remain in the area, even with the leases in place, and that the loss of fishing area is relatively small, especially when compared to the potential for these lease sites to contribute to a restoration of the quahog resource in the cove, the interference with fishing does not appear to be unreasonable.

DMR does not have legal authority to place limitations on activities in areas outside the lease sites, so Mr. Porada will have to create his own buffer zones within the lease areas to protect against siltation. It is reasonable, however, to grant him exclusive use of the sites for shellfish harvesting, in order to prevent disturbance of the substrate within the lease boundaries and possible damage to the seedling quahogs. Finfishing and boating will be allowed on the sites.

As there are no other aquaculture sites in Goose Cove and the nearest sites are several miles away, the proposed sites would not interfere with other aquaculture projects.

Mr. Porada is required to submit annual reports to DMR on the results of his scientific and commercial research, pursuant to Title 12 MRSA §6072-A (17-A) (C).

Therefore, considering the number and density of aquaculture leases in the area, I find that the aquaculture activities proposed for these sites will not unreasonably interfere with fishing or other uses of the area.

#### D. Flora & Fauna

According to both the site report and the application, there is little fauna, and almost no flora, on the lease sites. Mussels are common; quahogs are moderately abundant; there are soft-shell clams elsewhere in the cove, but not on the sites; there are a few green crabs; and bloodworms and sandworms are common (Exhibits 2-A, 2-B, and 2-C, p. 4).

Exhibit 5, presented by Mr. Porada at the hearing, is a letter from Thomas L. Schaeffer of the Maine Department of Inland Fisheries and Wildlife. He states that the lease lies “within an area designated as Significant Wildlife Habitat under the Natural Resources Protection Act as a Tidal Waterfowl-Wading Bird Habitat.” Mr. Schaeffer also notes that should predation of quahogs by birds or “other aquatic furbearers” become an issue, MDIF&W should be contacted

about alternatives to deal with the problem, as the agency is responsible for management of certain wildlife.

Mr. Dunton testified that he has seen gulls doing more damage to quahogs than any human harvester, and that a variety of birds feeds on quahogs in Goose Cove (Dunton, direct). Mr. Porada testified that he intends not to affect any wildlife near the sites, and that he will watch closely to make sure birds are not tangled in the nets, although he noted that MDIF&W did not appear to be concerned about this, as the nets are a very small mesh and would be partly buried in the mud (Porada/Vachon).

#### Findings of Fact Regarding Flora & Fauna

From the evidence presented, it appears that the only potential impact of the lease operation upon wildlife is the possibility that birds and “aquatic furbearers” may prey on the quahogs and need to be controlled, in which case MDIF&W has requested Mr. Porada to contact them to discuss alternative methods. Mr. Dunton’s testimony shows that predation by birds is a distinct possibility. Predation may also occur by species under the jurisdiction of the US Fish and Wildlife Service, so Mr. Porada should contact them as appropriate for the species in question.

No resident population of flora or fauna is designated “ecologically significant”, although several witnesses testified that the quahogs themselves are unusual to find in the area, so far downeast.

The project is so minimal in its intrusion into the natural environment that it appears likely to have little if any effect on the flora and fauna of Goose Cove, other than, it is hoped, to enhance the existing quahog population. Therefore, I find that the aquaculture activities proposed for these sites will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.

#### E. Public Use & Enjoyment

The site report notes that there are no public facilities (government-owned beaches, parks, or docks) within 1,000 feet of the proposed lease sites.

#### Findings of Fact Regarding Public Use and Enjoyment:

There being no such public facilities within 1,000 feet of the proposed lease sites, I find, therefore, that the aquaculture activities proposed for these sites will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments.

#### F. Source of Organisms

Mr. Porada testified that as part of the overall research project, he collected 150 quahogs from the site in December, 2005, which he characterized as “fast growers” that grew to 1” in 2-3

years; these composed the brood stock that was conditioned and which spawned at the Downeast Institute for Applied Marine Research & Education, 37 Wildflower Lane, in Beals, Maine. The larval quahogs were fed until July, 2006, and were then put out in trays in a cove near the Institute or planted in the cove to grow until winter. They were overwintered in circulating water in the Institute's hatchery, and these are the seed quahogs that will be used on the proposed lease sites. Mr. Porada testified that he used local stock to avoid hybridizing or weakening the local strain of quahogs (Porada/Robinson).

#### Findings of Fact Regarding Source of Organisms

The organisms to be grown on the proposed sites have been obtained from brood stock collected from the site and reared in the hatchery at the Downeast Institute in Beals, Maine. Therefore, I find that the applicant has demonstrated that there is an available source of *Mercenaria mercenaria* to be cultured for the lease site.

#### 4. CONCLUSIONS OF LAW

Based on the above findings, and taking into consideration the number and density of aquaculture leases in the area, I conclude that:

1. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.
2. The aquaculture activities proposed for this site will not unreasonably interfere with navigation, provided that the lease site is marked in accordance with U.S. Coast Guard and DMR requirements. The marking buoys must be of an easily visible form and color and comply with the requirement of DMR Rule 2.80, so that the site is readily identifiable by other harvesters in the vicinity, by boaters, and by Marine Patrol. The buoy color must be significantly different from whatever buoys the Coast Guard may require for navigational marking purposes and must not resemble navigational buoys. The buoys may be lobster buoys or some other buoy-like floating object. Vessels may navigate across the lease sites.
3. The aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area. Finfishing shall be allowed on the open areas of the lease sites.
4. The aquaculture activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna. In the event that predator control is requested to deter birds or aquatic fur-bearing animals, Mr. Porada shall consult the Maine Department of Inland Fisheries and Wildlife or the US Fish and Wildlife Service, as appropriate for the species in question, as to the methods to be employed.
5. The aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments.

6. The applicant has demonstrated that there is an available source of *Mercenaria mercenaria* to be cultured for the lease site.

Accordingly, the evidence in the record supports the conclusion that the proposed aquaculture activities meet the requirements for the granting of an aquaculture lease set forth in 12 M.R.S.A. §6072-A.

5. DECISION

Based on the foregoing, the Commissioner grants the three requested leases of 2 acres each to the applicant for 3 years from the date of this decision for the purpose of cultivating *Mercenaria mercenaria* using bottom culture techniques. The applicant shall pay the State of Maine rent in the amount of \$100.00 per acre per year. The applicant shall post a bond or establish an escrow account pursuant to DMR Rule 2.40 (2) (A) in the amount of \$5,000.00, conditioned upon his performance of the obligations contained in the aquaculture lease documents and all applicable statutes and regulations.

Dated: \_\_\_\_\_

\_\_\_\_\_  
**George D. Lapointe (Commissioner)**  
**Department of Marine Resources**

6. CONDITIONS TO BE IMPOSED ON LEASE

The Commissioner may establish conditions that govern the use of the lease area and impose limitations on aquaculture activities, pursuant to 12 MRSA §6072-A (15)<sup>3</sup>. Conditions are designed to encourage the greatest multiple compatible uses of the lease area, while preserving the exclusive rights of the lessee to the extent necessary to carry out the purposes of the lease. The following conditions shall be incorporated into the lease:

1. The lease sites shall be marked in accordance with the requirements of DMR Rule 2.80. Marking buoys shall be of an easily visible form and color so that the sites are readily identifiable by other harvesters in the vicinity, by boaters, and by Marine Patrol. The buoy color must be significantly different from whatever buoys the Coast Guard may require for navigational

<sup>3</sup> 12 MRSA §6072-A (15) provides that:

“The commissioner may establish conditions that govern the use of the leased area and limitations on the aquaculture activities. These conditions must encourage the greatest multiple compatible uses of the leased area, but must also address the ability of the lease site and surrounding area to support ecologically significant flora and fauna and preserve the exclusive rights of the lessee to the extent necessary to carry out the lease purpose. The commissioner may grant the lease on a conditional basis until the lessee has acquired all the necessary federal, state and local permits.”

marking purposes and must not resemble navigational buoys. The buoys may be lobster buoys or some other buoy-like floating object.

2. Boating is permitted on the sites.
3. The lessee shall have exclusive use of the sites for all shellfishing activities.
4. In the event that predator control is required to deter birds or aquatic fur-bearing animals, the lessee shall consult the Maine Department of Inland Fisheries and Wildlife or the US Fish and Wildlife Service, as appropriate for the species in question, as to the methods to be employed.
5. If private property is used for access to the lease sites, written permission from the owner must be obtained by the lessee and provided to DMR, pursuant to rule 2.64(2)(C)(6).

#### 7. REVOCATION OF LEASE

The Commissioner may commence revocation procedures if he determines that substantial aquaculture has not been conducted within the preceding year or that the lease activities are substantially injurious to marine organisms. If any of the conditions or requirements imposed in this decision, in the lease, or in the law is not being observed, the Commissioner may revoke the aquaculture lease.

#### 9. LIST OF EXHIBITS

- 1-A. Case File 2006-18E
- 1-B. Case File 2006-19E
- 1-C. Case File 2006-20E
- 2-A. Application 2006-18E
- 2-B. Application 2006-19E
- 2-C. Application 2006-20E
3. DMR Site Report
4. Marine Patrol "Statement in Evidence of Existing Uses" dated 24 January 2007
5. Letter from Maine Dept. of Inland Fisheries & Wildlife, signed by Thomas L. Schaeffer and dated 15 February 2007
6. NOAA Chart #13316, 19<sup>th</sup> edition, showing mean low water and proposed lease sites
7. Map of Goose Cove, enlarged, with Mean Low Water and lease sites marked by Jon Lewis and Joseph Porada using GPS
8. Joseph Porada's Opening Statement, read at the hearing

10. NOTICE OF INTENT TO TAKE OFFICIAL NOTICE

According to DMR Rule 2.31(2)<sup>4</sup>, I take official notice of the NOAA URL site on the internet at NOAA's URL address: <http://ocsddata.ncd.noaa.gov/OnLineViewer/> and of the information therein that show that the data for the charting of Goose Cove on NOAA chart 13316 was gathered in or before 1900. These facts are hereby deemed to be included in the hearing record. Any party to this case may contest the substance or materiality of these facts.

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<sup>4</sup> 2. The presiding officer may take official notice of any facts of which judicial notice could be taken, and in addition may take official notice of general, technical, or scientific matters within the Department's specialized knowledge as well as statutes, regulations and non-confidential agency records. When facts are noticed officially, the presiding officer shall state the same during the hearing or otherwise notify all parties and they shall be able to contest the substance or materiality of the facts noticed. Facts officially noticed shall be included and indicated as such in the hearing record.