

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
Standard Aquaculture Lease Application
Docket # 2006-17
1 May 2007

MAINE CULTURED MUSSELS, INC., and
ERICK SPENCER SWANSON D/B/A
MUSSEL BOUND FARMS

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

1. INTRODUCTION AND STATUTORY FRAMEWORK

On May 17, 2006, the Department of Marine Resources (“DMR”) received an application from Maine Cultured Mussels, Inc. and Erick Spencer Swanson d/b/a Mussel Bound Farms for an ten-year aquaculture lease on 51.42 acres in the coastal waters of the State of Maine, located in Blue Hill Bay, east of Long Island in the town of Blue Hill, Hancock County, Maine, for the purpose of cultivating blue mussels (*Mytilus edulis*) using suspended culture techniques. After review and amendment, the application was accepted as complete on June 7, 2006. Intervenor status was granted to Friends of Blue Hill Bay (“FOBHB”). A public hearing on this application was held on February 26, 2007, in Blue Hill.

Approval of aquaculture leases is governed by 12 M.R.S.A. §6072. This statute provides that a lease may be granted by the commissioner of DMR if s/he determines that, taking into consideration the number and density of aquaculture leases in an area, the project will not unreasonably interfere with the ingress and egress of riparian owners; with navigation; with fishing or other uses of the area; with significant wildlife habitat and marine habitat or with the ability of the site and surrounding marine and upland areas to support ecologically significant flora and fauna; or with the public use or enjoyment within 1,000 feet of a beach, park, docking facility or certain conserved land owned by the Federal Government, the State Government, or a municipal governmental agency. 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; that the lease will not result in an unreasonable impact from noise or lights at the boundaries of the lease site; and that the lease will be in compliance with visual impact criteria adopted by the commissioner relating to color, height, shape and mass.

2. THE EVIDENCE

The evidentiary record before the Department regarding this lease application includes 12 exhibits introduced at the hearing (see exhibit list appended), written comments submitted before and at the hearing, plus the record of testimony at the hearing itself. Sworn testimony was given at the hearing

by the applicants' agent, Erick Swanson; DMR's Aquaculture Environmental Coordinator, Jon Lewis; the applicant, Erick Spencer Swanson; the intervenor, FOBHB, by Donald Eley; and several members of the public: Daniel Pert, John Roberts, John Vickery, Dorothy Hayes, Rob Bauer, and Earl Nordberg. A representative of Acadia National Park submitted written comments.

No other government agencies testified, although notices and copies of the application and DMR site report were sent to numerous state and federal agencies, including, but not limited to, the U.S. Army Corps of Engineers, the U.S. Coast Guard, the National Marine Fisheries Service, the Inland Fish and Wildlife Service, 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, members of the Legislature, representatives of the press, and private individuals.

At the hearing, Mr. Swanson described his proposed project and noted some changes and additions since the application was filed. Mr. Lewis presented his site report. Erick Spencer Swanson testified that he signed the lease application. Mr. Eley presented preliminary findings of FOBHB's Use Inventory Study and testified about his organization's opposition to the lease application. The members of the public who testified all opposed the project. Each witness was subject to questioning by the Department, the applicant, the intervenor, and members of the public, and many, though not all, were, in fact, questioned by one or more of these entities.

In addition to the testimony and exhibits from the hearing, DMR received 27 letters from FOBHB members opposing the project. Two members of the public who testified and were available for questioning also submitted written statements (Earl Nordberg and John Vickery). The 24 letters received before the record closed on February 26 are included in the record and accorded appropriate weight given their status as unsworn statements not subject to questioning. The 3 letters received after the record closed are not included in the record but were acknowledged and are retained in a separate file.

The evidence from all of these sources is summarized below. [NOTE: The reference (Smith/Jones) means, testimony of Smith, being questioned by Jones.]

A. Description of Project

1. Applicants. Erick Swanson testified that he represents the applicants and prepared the application, although he, himself, is not the applicant (Swanson direct). He and the intervenor stipulated at the close of the hearing that he was authorized to represent Maine Cultured Mussels, Inc. ("MCM"), which is wholly owned by his wife, Susan Swanson, as sole shareholder. He was accompanied at the hearing by his son, Erick Spencer Swanson, doing business as Mussel Bound Farms ("MBF"). No partnership or other type of agreement exists between Maine Cultured Mussels, Inc. and Erick Spencer Swanson; they are simply co-applicants (Swanson/Mills).¹

Mr. Swanson testified that he serves as the principal manager and operator of MCM and is an employee of the firm; that no document governs his relationship to the company; and that he will draw a salary once the business permits it. He has developed the company's operating plan, he stated, but he has

¹ The case file, Exhibit 1, contains a printed copy of an e-mail exchange between Mr. Swanson and the Aquaculture Hearings Officer, in which he asks if he can apply with two lessees and states that "There is no partnership agreement nor do we plan to form one." The Hearings Officer responded, "You can have joint leaseholders who have not formed a partnership, so you can just list them both, but include the corporate info for MCM."

not submitted it to DMR, as it is proprietary, and he declined to show it to the attorney for the intervenor (Swanson/Mills).

2. The Application Process: MCM is a “family business”, Mr. Swanson said, in which his son wanted to participate by placing some equipment on one of its leases; however, MCM could not legally sublet a portion of its leasehold to him. Erick Spencer Swanson then considered applying for his own lease of 13 acres off Long Island; he attended a preapplication meeting with the Town of Blue Hill on 13 October 2005 and held a public scoping session on 21 November 2005 on that premise, Mr. Swanson stated. MCM was also considering applying for a lease in the same area; after the scoping session, Mr. Swanson testified, the Swansons decided to combine the two undertakings into one larger lease with two co-applicants, as this would be less costly in fees than making two separate applications (Swanson/Schatz).

The joint application was filed for a site of 51.42 acres. After its usual site review was completed, DMR scheduled a public hearing for 11 October 2006 but postponed it after learning of public concern about the change in size of the proposed lease since the scoping session. DMR held a public informational meeting on 24 October 2006 to allow the applicants to present and discuss the application for the larger site in advance of the public hearing. The public hearing was then scheduled for 17 January 2007, cancelled because of a misprint in the newspaper notice, and rescheduled for and held on 26 February 2007 (Exhibit 1).

3. The Proposed Project: In summary, the application describes the project as an array of buoys and lines moored to the sea bottom with 4,000-lb. concrete anchors. The 380-ft. back lines are laid out parallel to one another in two parallel rows over the site, which measures 1400 ft. x 1600 ft. From these back lines hang 4800-ft. grow ropes (the “long lines”), suspended in 45-ft. loops; the mussels grow on these looped lines, which are periodically pulled up for harvest or re-stocking. (For a more detailed description of the overall layout of the project, see paragraph 2A4 below, “Lines & Buoys”.)

Harvesting at the site will occur two or three days each week, all year; a service barge hauls up the back lines, and the grow lines are then pulled up and the mussels removed (or re-stocked). Harvested mussels are processed (de-clumped, de-byssed, washed, and graded) on a processing barge off the site; the cleaned mussels are taken to shore for bagging and delivery to market. The applicants anticipate annual production of 300,000 to 450,000,000 pounds of mussels. (Exhibit 2, Sec. 3)

Mr. Swanson testified that this mussel culture program is adapted from a technique developed by the University of New Hampshire (UNH), which he revised to use the fewest number of surface buoys possible, both to avoid collisions with vessels and to avoid attracting ducks, which prey on mussels (Swanson direct). The application states: “The technology has been developed by the Cooperative Institute for New England Mariculture and Fisheries’ Open Ocean Aquaculture Project at the University of New Hampshire....The submerged longline system described above has been successfully tested...in open ocean conditions, subject to 30-foot seas and severe weather conditions, conditions far more severe than the proposed Long Island site will experience.”

Mr. Swanson testified that he employs this same technology on MCM's lease site at Tinker Island in Blue Hill Bay, where it has "worked well for the past two years on a site that is more exposed than the Long Island site" (Bauer/Swanson).

Mr. Eley of FOBHB testified that the UNH method is still "experimental", that it was developed for deep water offshore, that this site is closer to shore, and that he wanted the process "proven" for use in Blue Hill Bay before the lease is granted (Eley direct).

4. Lines and Buoys:

The array of lines and buoys that compose the framework on which the mussels grow is described in the application. (Exhibit 2, sec. 2) At the hearing, Mr. Swanson testified that he plans to use fewer back lines than described in the application and to submerge most of the buoys, resulting in substantially fewer buoys visible at the surface than the application indicates.

The application depicts a maximum of 60 back lines, each 380 feet long, submerged about 30 feet below the sea surface at low water. The "long lines" on which the mussels grow are 4,800 ft. long and are suspended from the back lines above the sea bottom in 45-ft. loops.

The two ends of every back line are each moored to a concrete anchor on the sea bottom; each back line is held afloat underwater by seven flotation buoys on the sea surface. These flotation buoys keep the back line from sinking under the weight of the mussels growing on the suspended long lines. According to the application, the flotation buoys are either 45-gallon blue plastic buoys approximately 42" high by 30" diameter or clusters of six 16" round yellow plastic buoys. The two anchors to which each back line is moored will be marked with two vertical "tag lines", each attached to a 16" yellow, red, or blue plastic marker buoy at the surface. (Exhibit 2, Sec. 2) The site report states that this is similar to the array at MCM's existing lease off Tinker Island, farther down the bay; Mr. Lewis calculates that the total number of surface buoys would be between 420 and 1,920. (Exhibit 3, p.6)

At the hearing, however, Mr. Swanson testified that he now plans to use 44 to 50 back lines, instead of 60, and to submerge five of the seven flotation buoys on each line some 30 ft below the surface. Clusters of 16" buoys will not be used. Flotation buoys will be the blue 45-gal. type; two will be visible on the surface and five will be submerged. This will result in a maximum of 200 buoys, two blue and two yellow per line, being visible at the surface, unless mussel seed ("spat") collection is occurring. (Swanson/Tukey) These buoys will not be lighted.

Between late June and early September, according to the application and Mr. Swanson's testimony, 8 or 10 of these back lines may have their long lines removed and be raised to as high as 2-3 feet below the surface to collect naturally-occurring mussel spat from the surrounding water. All the back lines that are raised for use as spat lines will be adjacent to and near the shoreward side of the lease site and will take up approximately one-sixth of the area of the site. They will be marked with 16" yellow buoys every 25-50 ft., or between 7-15 additional yellow marker buoys per line, an increase of 56-150 buoys on 1/6 of the site. Mr. Swanson testified that he hopes to do all his spat collecting at his Hardwood Island site, but that this would be the layout, should he collect at the Long Island site (Swanson/Robinson).

5. Vessels, lights, & structures: Surface vessels will work at the site seven days a week, but, according to the application, no vessels or barges will be moored or dedicated to the site. The service vessel used for harvesting will be a 36-ft. steel barge now used by MCM at its other sites. A fishing vessel of approximately 45 ft. will also be used on the site. The application states, "Vessel use on the site for harvesting is expected to be 3 hours two days per week. Servicing the lines is expected to require 30 hours per week. Harvesting and service work will take place 52 weeks per year, weather permitting. There will be no lights or buildings; the only visible equipment will be buoys and lines." (Exhibit 2, Sec. 2)

6. Anchors: Mr. Swanson testified that he has designed the anchors for the site, which he developed originally by working over 14 years in collaboration with salmon farm engineers from Norway and Maine. He will fashion the anchors out of reinforced concrete; they will weigh 2 tons apiece. He redesigned the anchors for this site, built them, and tested them by towing them behind a barge to see what force they would withstand. He also tested the anchors to determine the appropriate scope to use on the anchor lines.

Mr. Swanson testified that he built and tested five different models in order to obtain a model that was successful for his purposes. While he had no written material to present on the anchor design, he testified that he based his design on the scope of the anchor line and the resistance of the mussels' weight on the lines, as these are the two critical factors in designing the anchors. He tried different scope, weights, and fluke designs until he made an anchor that would hold. He stated that he designed the anchors at home on his computer and that the design is proprietary ((Swanson/Mills).

7. Bond: As he noted in the application, Mr. Swanson said that MCM has a \$25,000 bond which is allocated in \$5,000 increments to its existing lease sites at Hardwood Island and Tinker Island; if this lease is granted, the same amount would be allocated to the Long Island site. Mr. Swanson stated that the bond is left over from his family's time in the salmon aquaculture business and has since been transferred to the mussel enterprises (Swanson/Schatz).

B. Site Report

Jon Lewis, the DMR Aquaculture Environmental Coordinator, summarized the findings of the Site Report he and DMR Scientist Marcy Nelson prepared after their review of the proposed lease site. They visited the site on 24 July 2006 and surveyed the sea bottom with an underwater camera. Water depth is estimated at 100-150 ft. at mean low water. Tidal ebb and flow is in a north-south direction. The corners of the lease were not marked on the date of the visit, but Mr. Lewis located them using GPS instruments and measured the courses and distances of the lease boundaries, as well as distances to shore. His other findings are noted below, according to topic. He apologized to the Blue Hill Harbormaster, Denny Robertson, for misspelling his name in the site report.

According to the Site Report, there are four mussel aquaculture lease sites in Blue Hill Bay proper. No leases exist within one nautical mile of this proposed site; one site within 2 nautical miles had proposed an expansion at the time the report was written. Outside of Blue Hill Bay, three salmon farms are located near Swan's Island, more than 10 nautical miles from the proposed site. Most finfish leases

are located in Hancock and Washington counties; according to the report, “The greatest concentration of shellfish leases exists in the Damariscotta River region.” (Exhibit 3, p. 7)

C. Riparian Access

Only one riparian owner within 1,000 feet of the proposed lease site was identified, and he was duly notified of all the proceedings. His land, however, has been placed under a conservation easement to the National Park Service and is now overseen by Acadia National Park (Exhibit 1). According to the application, the east side of the island is used only by recreational users who come by boat and land on that side of the island, which is over 900 ft. from the western boundary of the proposed lease. Island residents’ access is from the southeastern end of the island and is not affected by the proposed lease. (Exhibit 2, Sec. 6)

According to the DMR site report, the minimum distance from Long Island to the lease site is 945 ft.; the island’s eastern shore is undeveloped; no docks or moorings exist within the vicinity of the lease, and the lease activities “will not interfere with riparian ingress and egress”. “Long Island is a recreational destination for boaters and kayakers. Swimming and camping are also known activities along the eastern shore. With greater than 900 feet of navigable waters between Long Island and the proposed lease area, access will remain unrestricted.” (Exhibit 3, p. 5)

The case file (Exhibit 1) contains a letter dated 16 February 2007 from David Manski, Chief of Resource Management, Acadia National Park, National Park Service (NPS), U.S. Dept. of the Interior, stating that NPS holds a conservation easement on Long Island adjacent to the proposed lease site. Mr. Manski states that “our primary concern is on the potential for increased noise, light, and debris pollution above existing conditions.” He requests that DMR consider three issues in this proceeding:

(1) prohibiting the use of propane cannons or similar loud noise-making devices to scare away eider ducks at the lease site; (2) requiring the lessees promptly to collect lease materials and debris that wash ashore on Long Island and to notify NPS of incidents that may result in any materials or substances washing ashore; and (3) emphasizing that no activities connected with the lease operation be conducted on the shore of Long Island, such as storage or cleaning of equipment, or any other lease-related activities. Mr. Manski noted that NPS had previously negotiated two written agreements with Mr. Swanson on these topics at other lease sites and would be willing to do so in this case.

As noted below in Section J (Noise), Mr. Swanson testified that he has a new method of predator control and that the propane cannon has been discontinued and will not be used on this lease site. He testified that he will promptly retrieve any debris from his site that washes ashore on Long Island and that such debris would only consist of buoys. He testified that he had no intention of doing work on the shore of Long Island. He stated that he had no objection to a condition in the lease requiring him to enter into an agreement with the National Park Service to notify them promptly of any condition or event at this site that might threaten the shore of Long Island. (Swanson/Robinson)

D. Navigation

1. Navigability & Vessel Traffic: The application states that “Boat traffic is normally light and seasonal. Site is out of the main boat traffic; only limited commercial lobster fishing along inner shore.

Recreational use is primarily for sailing, boating and sea-kayaking during summer; no large vessel traffic has been observed.” (Exhibit 2, sec. 6b1)

The application also states: “From mid April through late July the west side of the lease may deploy spat collection lines near the surface. These will be clearly marked with yellow buoys. Vessels with keels and prop cages can pass over these lines without difficulty, but sailing vessels and deep draft vessels with open props must avoid these lines. Once spat fall is over the lines will be submerged 20 feet below the surface and all vessels may safely navigate the area.” (Exhibit 2, section 6b2)

Mr. Swanson testified that he adapted the UNH culture technique in part to minimize the number of surface buoys and hence the risk of collision with passing vessels. He uses plastic buoys that will not damage vessels if they collide. He has experience using such buoys at his lease site at Tinker Island, farther down Blue Hill Bay. He testified that the production lines will be submerged 30 ft. below the surface, and only the spat collecting lines will be near the surface seasonally. He stated that he has deployed spat lines at the 50-acre Tinker Island site for the past two years, and no vessels have collided with the buoys which mark the lines. (Swanson/Hayes)

Mr. Lewis states in the site report: “There is ample room for navigation around the proposed lease. A minimum of 920 feet of navigable waters remain between the western boundary of the proposed lease site and Long Island. There remains a minimum of one mile of navigable waters between the eastern boundary of the proposed lease and Western Point on Bartlett Island.” (Exhibit 3, p. 5)

Mr. Lewis noted that on the day of his site visit in late July, he observed 5 sailboats in the area sailing north to south “well outside the eastern boundary of the proposed lease.” He noted that the “abundance of buoys and lines” proposed to be deployed on the site would limit vessel traffic across the site, although at the hearing Mr. Swanson testified that he would deploy many fewer buoys than originally described in the application, as noted above.

The site report says that the Blue Hill Harbormaster “indicated that the proposed lease should ‘not be a hindrance to navigation’, nor is the area traditionally used for storm anchorages.” The Harbormaster stated that “he could see ‘no safety issues as long as the applicant maintains what he would be required to maintain on the site.’” (Exhibit 3, p. 8)

Mr. Roberts testified that he sails a boat with a 4’ draft in the bay and that he would have problems with the lease obstructing his course while tacking up or down the bay. (Roberts direct) Mr. Nordberg said the lease site would be an impediment to sailing vessels coming up and down the bay and that it should be indicated on charts and marked by lighted buoys. (Nordberg direct)

Mr. Eley stated that the area was heavily used for commercial fishing, sailing, and recreational motorboating and fishing; he said his evaluation was subjective, but that “there are quite a few boats”, and boat use in the bay has increased since the easement on Long Island was acquired by the National Park Service. He also testified that the “prudent mariner” route as shown on a navigational chart of Blue Hill Bay (Exhibit 7) crosses the proposed lease site. No further evidence was presented on the derivation or authority of the “prudent mariner” route. (Eley direct)

Mr. Eley testified that the buoys at lease sites are hard to navigate around and don’t show up on radar. (Eley direct) In his Power Point presentation, he showed a color photograph showing round yellow buoys scattered over the sea surface and titled “NAVIGATIONAL HAZARD HARDWOOD ISLAND SITE”.

(Exhibits 8, 9, and 12) Mr. Swanson stated that the photograph showed buoys deployed for spat lines for collecting mussel seed at another lease site and that the production lines and buoys at the Long Island site would be submerged.

2. Marking the Lease Site: Mr. Swanson testified that he was charged in December, 2006 with failing to mark the corners of one of his existing lease sites. (Exhibit 4) He stated that the corners had been duly marked, but that buoys were moved in a severe winter storm; that DMR Marine Patrol ordered him to reposition them within three days; that because of the press of work and bad weather he failed to do so within the time limit; and that he was charged with a “violation of mussel rule, Chapter 12”, to which he pled guilty and paid a fine. (Exhibit 4) (Swanson/Mills)

On 21 January 2007, Mr. Swanson notified DMR that he had checked the corner markers on the proposed lease site, which are 16-inch yellow floats, and that they all were in place. (Exhibit 1, copy of e-mail in file.) Mr. Lewis testified that Coast Guard requirements for marking lease sites vary case by case and that DMR enforces its own marking requirements. (Lewis/ Mills) Mr. Eley testified that another mussel lease in the vicinity is marked with spar buoys and a lighted radar reflector. He said that “DMR needs to get a handle on (marking) requirements and not wait for the Coast Guard,” but he did not make recommendations as to how the site should be marked. (Eley direct)

E. Fishing and Other Uses

1. Existing Fishery: In describing marine resources in the area of the lease site, the application says: “There are no known currently existing shellfish beds, fish migration routes, or submerged vegetation beds in the immediate vicinity of the proposed site. Old shellfish bed maps do show scallops in the area, however, local divers and scallop fishermen report that these beds were depleted years ago and have never recovered.” The area is classified by the DMR as being open to the harvest of shellfish. (Exhibit 2, section 5)

Mr. Swanson testified at the hearing that he monitored the site for two years, tracking the movement of lobsters, and he sited the proposed lease in an area not fished for lobster. (Swanson direct) Mr. Lewis testified that, from observing the area on his 10-12 visits between April and November over the past 7-8 years, lobstering takes place inshore of the 60-ft. depth contour, between the lease site and the east shore of Long Island. He saw approximately 100 lobster buoys inshore of the 60-ft. depth contour during his site visit, he said, whereas he observed only one or two within the boundaries of the site. Mr. Lewis noted that, while he interviews lobstermen whom he sees on the water during his site visit, DMR policy is not to survey them individually, because the scoping session and public hearing process provide the opportunity for affected individuals to provide relevant information to DMR. He observed that some lobstermen have told him that, because lobsters migrate around the bay, they would catch the same lobsters near the lease site instead of on it. (Lewis/Pert)

Mr. Pert, a lobsterman with 32 years of experience fishing year-round in Blue Hill Bay, disagreed with this last statement, saying that “You can’t expect to see traps if there are no lobsters”, that “you have to fish where they are”, and that, “if they’re not there this year, they could be [there] later. It’s foolish to say you could move and catch lobsters elsewhere.” Mr. Pert said that he had been displaced by the mussel lease sites in Blue Hill Bay and that his industry has changed dramatically, with new expenses and

restrictions; he also observed that while there had been very few traps set around Tinker Island before MCM's mussel operation there, "now there are traps all around it" and the fishing is good there, although he did not think it was because of the mussel farm. (Pert direct)

When asked how many traps he sets within the lease area, Mr. Pert replied that he fishes 20 – 30 traps there between September and mid-November and that 4-6 others fish there, as well. He stated that the lobster fishery starts inshore and moves farther down Blue Hill Bay. (Pert/Robinson) Mr. Eley also stated that the area around the lease site is fished as the lobsters move up and down the bay through the seasons. (Eley direct)

The DMR Site Report notes that at the time of the site visit on 24 July 2006, "numerous lobster trap buoys were observed in nearshore waters between the eastern shore of Long Island and the proposed lease site. No fishing of any type was observed within the boundaries of the lease area...some lobster fishing is expected to occur within the general area of the proposed lease site during late summer and fall months. Scallop dragging may also occur within the general area although no scallops were observed during the video transect and the soft bottom seems unlikely to support a large scallop population. No species of economic importance were documented..." (Exhibit 3, p. 4)

The report notes that the DMR Marine Patrol officer for the area advised DMR staff that peak lobster fishing time in the area is from July through September, so that would be "an opportune time to visit the proposed lease and document fishing activities." (DMR staff visited the site on July 24, 2006.) The report cites the officer as saying that "13-15 lobster fishers use the area regularly. There is minimal scalloping and striped bass/recreational fishing in the area." Finally, the site report notes the comments of the Blue Hill Harbormaster, who "was very familiar with the Long Island area and said that historically the whole area had been used for activities such as herring weirs, boat yards, and schooner loading although most of the activity took place on the southern parts of the island. [He] indicated that most lobstering occurs inshore of the proposed lease area and that historically there was some scallop dragging in the area – although that activity is infrequent now." (Exhibit 3, p. 8)

2. Exclusivity of use: Section 6b2 of the lease application asks the applicant to describe "the degree of exclusive use required by the proposed lease and the impact on existing or potential uses of the area." In response, Mr. Swanson states that he chose the site because it was an area without apparent lobsters or crabs. He believes fishing to be incompatible with the array of lines at the site, being concerned at the likelihood of entanglements and dislodging mussels from the lines. He expects that a crab population may develop in the future, as they will be attracted to the mussels that do drop off the lines.

Because of this incompatibility, the application requests that "fishing be restricted to outside the culture area when mussels are growing." The growout lines will be removed as the harvest occurs, leaving only the back line and "eliminating the entanglement problem." Where mussels have been harvested, crab fishing could take place; "a method of identifying those areas that have been harvested will be developed and made available to those who wish to fish there." (Exhibit 2, section 6b2)

The site report similarly notes "Given the high density of lines proposed...fishing with fixed gear will be precluded within the boundaries of the lease. Fixed gear could be placed between backlines,

however, this might not be considered a viable option by fishermen due to the risk of entanglement.” (Exhibit 3, p. 4) Asked if he would set lobster traps between mussel lines at the Hardwood I. or Tinker I. sites, Mr. Pert testified that he would not, because of the potential for tangling his gear in the lines. (Pert/Lewis)

F. Habitat, Flora & Fauna

1. Site Characteristics: Mr. Swanson testified that he chose the site proposed for this lease after monitoring it for two years. He tracked the movement of lobsters around the site and located the boundaries to avoid areas fished for lobster. (Swanson direct) Water depth at the site is 100’ to 180’, with a mud bottom. The site is protected from the west and has adequate current flow and temperature for mussels to reproduce, according to Mr. Swanson. He testified that fishermen he spoke with told him to place his site in the proposed area, as there are few fish and little fishing in the vicinity. (Swanson/Robinson)

The application states: “The proposed lease site consists of sediment bottom, soft, oxic (light brown in color). Bottom generally flat and featureless with occasional to locally numerous burrows and depressions in bottom. Maximum mid water column current speed is 15 cm/sec with an average speed of 7 cm/sec. Tidal range is 10.5 feet and flow directions are flood north, ebb south. No flora observed. Observed organisms are occasional shrimp, rare or occasional sea stars, unidentified fish and eel-like fish, and rock crab (rare).”

Mr. Lewis testified that little flora or fauna appear on the site. His site report (Exhibit 3) confirms Mr. Swanson’s description: “The benthic ecology within the boundaries of the ...site and surrounding area can best be characterized as that of a soft-mud, highly depositional, area. Species diversity was low...lobster burrows were commonly observed...however, no lobsters were seen....the proposed activities are not expected to hinder the ability of the area to support existing epibenthic flora and fauna.” (Exhibit 3, DMR Site Report, p. 3) The site is a very depopulated area in terms of sea life, Mr. Lewis stated.

The site report also notes that “there are no essential or significant wildlife habitats in the vicinity of the proposed lease site.” (Exhibit 3, p. 9)

2. Water Quality: John Vickery, a member of the public opposed to the application, testified about his concern that the proposed mussel farm might deposit organic matter into the water and degrade the water quality of the Bay. He cited the Pettigrew-Townsend Report (Exhibit 6) and its description of flushing rates and water mixing in Blue Hill Bay, to support his concern that organic waste from the lease site might not be sufficiently diluted or washed away. (Vickery direct)

In reply, Mr. Lewis noted that the Pettigrew-Townsend report had been prepared in response to proposals to conduct salmon aquaculture in the Bay. Mr. Lewis explained that unlike salmon, filter-feeding shellfish such as mussels are net *removers* of organic matter, nutrients, and oxygen from sea water; they do not contribute any substances to the water that were not there initially. Salmon produce organic matter in the form of feces, while mussels do not; their pseudo-feces consist only of materials that they filtered out of the surrounding water. Mr. Lewis noted that some authorities consider that mussels

improve water quality by feeding on algae and removing excess nitrogen contributed by human sewage and other activity. (Vickery/Lewis)

In further response to Mr. Vickery's statements about low levels of dissolved oxygen (DO), Mr. Lewis said that the Pettigrew-Townsend Report referred to low levels of DO in sea water as causing problems for farmed salmon; these low DO levels occur, however, in much lower, colder strata of water than those where the mussels will be grown at the Long Island site. Mr. Lewis stated that he has not seen excessive removal of oxygen from the water near high-density mussel rafts, although in theory the potential exists for this to happen; but long-line mussels are a lower-density operation and are suspended well above the low-DO-water strata, so oxygen depletion is not an issue for this kind of aquaculture operation. (Vickery/ Lewis)

Mr. Lewis stated that the greatest potential for pollution of the sea water at the lease site comes from the drop-off of the mussels themselves, falling off the lines and landing on the sea bottom. He noted, however, that long-line mussel operations are unlikely to overload the sea bottom with organic debris. On the proposed site, mussels that fall off the long lines would sink in the soft mud bottom and smother. Eventually, Mr. Lewis said, if enough mussels dropped, the bottom might firm up and become a thriving mussel bed. Even if an entire line fell to the bottom, it would be buried in the mud, so it would take an enormous amount of drop-off on this site to change the nature of the bottom. (Lewis direct)

3. DMR Water Quality Sampling: In response to public questions and comments about potential water pollution from Union River Bay contaminating the lease site, Mr. Lewis stated that the DMR conducts a statewide sampling program in accordance with Federal regulations to test for fecal coliform bacteria; if the area around the lease site is classified as closed to shellfish harvesting, that closure applies to the lease site, as well. He testified that the site is far enough from the Union River that the DMR water quality monitoring group was not concerned about pollution from that source affecting the proposed mussel farm. The DMR also monitors for the organisms that cause paralytic shellfish poisoning (PSP); no harvesting would be allowed if the area were closed because of PSP. (Lewis/Mills) Mr. Swanson testified that during PSP season he submits weekly water samples to DMR for testing. (Swanson/Johnson)

The site report states that "The area of the proposed lease is classified as open/approved to the harvest of shellfish." (Exhibit 3, p. 6) The report cites a member of DMR's Biotoxin Monitoring Group as saying that "Blue Hill Bay rarely has exhibited toxic scores for PSP." (Exhibit 3, p. 7)

4. Mussel Spat: In response to questions about the amount of spat that a long-line mussel farm would produce, compared to natural mussels beds on the bottom, Mr. Lewis stated that the density of mussels in natural bottom beds is much higher than on suspended lines, so less spat would be produced on this proposed lease site than for a comparable area of bottom-cultured mussels. Mr. Lewis did not consider spat production from the site as upsetting the ecological balance in the vicinity of Long Island. (Lewis/Bauer) In fact, he stated, capturing the spat on lines and culturing it on lease sites prevents it from drifting elsewhere and eventually removes the adult mussels from the ecosystem entirely. (Bauer/Lewis)

Mr. Bauer and Mr. Pert both testified that mussels are abundant in the bay, sometimes causing problems by weighing down gear that they attach to. Mr. Pert stated that formerly there was very little mussel growth on lines and buoys, but now in BHB mussels collect on everything, sinking buoys and lines. (Pert/Swanson) Mr. Lewis said that mussels are “all over the bay”, and that this was a problem on salmon pens in the bay between 1997 and 1999, before mussel farming started.

5. *Beggiatoa* Matting: Mr. Lewis was asked about *Beggiatoa* matting, which he described as a bacterium that grows in areas with heavy organic loading and low oxygen levels, appearing as a white, mold-like substance, often found under salmon farms and occasionally under mussel rafts, though not necessarily as a consequence of mussel drop-off. Mr. Lewis stated that the risk of *Beggiatoa* developing on this long-line lease site is substantially less than at a mussel raft site, where the risk of *Beggiatoa* is still substantially less than at a salmon farm. When *Beggiatoa* occurs, he said, species diversity is reduced as life forms that can move away do so and the remaining ones are smothered. He stated that, in his opinion, the risk of *Beggiatoa* developing on the MCM/MBF site is very small.

G. Public Use

The case file (Exhibit 1) contains a letter dated 16 February 2007 from David Manski, Chief of Resource Management, Acadia National Park, National Park Service (NPS), U.S. Dept. of the Interior, stating that NPS holds a conservation easement on Long Island adjacent to the proposed lease site.

H. Source of Organisms

Mr. Swanson testified that he has seed available at his other sites near Hardwood Island and Tinker Island and that either place, as well as the Long Island site itself, could supply spat for this project. (Swanson/Mills)

I. Light

The application states that no lights will be required and that it would be “very unusual to work beyond normal daylight hours”, something that might only happen if a vessel broke down and work had to be done late in the day to meet an order deadline. (Exhibit 2, sec. 3b5) The site report cites this statement, noting only the possibility that the Coast Guard may require navigational aids that could include lights. (Exhibit 3, p. 6)

J. Noise

1. Predator Control: Mr. Swanson stated that he will control preying eider ducks and other predators at the site by using underwater noise devices consisting of recordings of his boat chasing ducks away. He testified that this technique was effective and that he has discontinued use of the propane cannon that had been the subject of a charge against him which is pending in Ellsworth District Court (Exhibit 5). He stated that his new management plan for predator control is working at his other sites and that no noise devices will be used at the surface. (Swanson/Robinson)

Mr. Lewis testified that underwater acoustic devices with decibel levels much higher than Mr. Swanson's device are used on salmon farms to deter seals, and that the National Marine Fisheries Service has said that such devices are unlikely to cause harm to marine life. Since Mr. Swanson's duck-deterrent devices are much quieter, Mr. Lewis's opinion is that they pose even less chance of harm. He noted that predation by eiders is a chronic issue for long-line mussel farms and for mussel rafts without predator nets. (Lewis/Mills) (See also discussion of noise under section H. Public Use.)

2. Site Work: According to the application, "Service equipment will operate off of the vessel hydraulic system. The service vessel is equipped with normal engine silencers." (Exhibit 2, sec. 3b3) The DMR site report states "Department staff have, on several occasion, observed this barge while in operation. While audible on the water, noises produced from the barge are unlikely to be any louder than those emanating from other fishing vessels in the area." (Exhibit 3, p. 5)

L. Visual Impact

Mr. Swanson testified that: there would be no buildings or structures on the site, only buoys and lines; with 44-50 lines, and 4 visible buoys per line, the total number of visible buoys would be approximately 200 over the 52 acre-site; of these, half would be blue, 45-gallon, plastic buoys measuring 3 ½ feet high and 30 inches in diameter and half would be yellow, round, 16" buoys; at times of spat collection, sometime between spring and fall, additional 16" yellow buoys at 25-50-ft. intervals would mark 8 to 10 back lines of 380 ft. each submerged 2-3 feet down on the western 1/6 of the site. (Swanson/Robinson)

The site report notes that "there will be no rafts, bags, net-pens, or buildings associated with the lease" and notes that the original buoy array described in the application results in "a total of 420-1920 buoys covering 52 acres." As noted above, however, Mr. Swanson's testimony indicates that the number of visible buoys will be greatly reduced, to about 200, with an additional 56-150 buoys on about 1/6 of the site during spat collection.

L. Public and Intervenor Opposition

The Intervenor, Friends of Blue Hill Bay, was represented by Donald Eley, its president, and by its attorney, Sally Mills, Esq. Mr. Eley summarized his group's opposition to the proposed lease using a series of computer-projected slides (Exhibits 8, 9, 10, 11, and 12) that accompanied his testimony. He also presented preliminary information from a study of Blue Hill Bay that his group is conducting, called a Use Inventory Study. Because of equipment malfunctions, the presentation was viewed by the audience on a laptop computer instead of a larger screen. Copies of the presentation on paper and compact disc were submitted as exhibits and given to Mr. Swanson at the time Mr. Eley testified. Mr. Swanson was offered additional time, including a recess in the hearing, to review the presentation before asking questions of Mr. Eley, but he declined the offer.

Specific evidence presented by FOBHB regarding the proposed lease is summarized by topic above. Mr. Eley testified about the group's Use Inventory Study, saying it was modeled on the recent DMR-sponsored Bay Management Study of Muscongus Bay, with charts prepared by the Quebec-Labrador Foundation, which also prepared the charts for the Muscongus Bay study. FOBHB has

designed, funded, and implemented the project, and most of the data-gatherers are FOBHB volunteers. The project is not yet complete. It includes 23 charts so far, depicting various uses and activities on Blue Hill Bay, such as sailing, sailing races, recreational activities, fishing, kayaking, water quality monitoring points, cemeteries and churches, historic sites, point sources of pollution, and aquaculture lease sites, among others. Sources of information include interviews with fishermen, kayak guides, and FOBHB “key stakeholders”, as well as data produced by various state agencies and other groups. Mr. Eley stated that FOBHB “wants an on-going dialogue that fosters collaboration and community involvement” to “manage the bay collaboratively”. They want “local control to manage local waters.”

Mr. Eley testified that his organization is concerned about the number and density of mussel leases in Blue Hill Bay. Aside from the proposed site, he testified that 4 leases exist for the following sites in the Bay, as shown in DMR records: MCM off Tinker Island – 51.4 acres, MCM off Hardwood Island – 15 acres; Gray Mussel Farm off Long Island - 6 acres, and Evan Young off Hardwood Island – 2.3 acres (Eley direct).

All of the members of the public who testified at the hearing and/or submitted written statements opposed the lease. Most were members of the intervenor, Friends of Blue Hill Bay. Factual evidence presented by the public is summarized above, by topic; much of their testimony consisted of arguments against the lease, rather than factual evidence; it is summarized as follows:

The numerous buoys and lines at the lease site will interfere with boating, especially sailing; there is too much aquaculture in the bay already; this is unnatural development, aesthetically unpleasing, too big, and it will spoil the beauty of the bay, which is a precious natural resource; the mussel farm will create a negative effect on water quality and other fisheries, particularly lobstering; it is inappropriate to privatize a public resource in this way; there will be no clear economic benefit from the project; and any economic benefit will be private, not public.

3. FINDINGS OF FACT

A. Public and Intervenor Opposition

DMR values the contribution of members of the public to this public hearing process; their oral and written comments have been considered carefully, along with all the evidence of record. Objections raised by the public witnesses and commenters and by the intervenor that relate to the specific lease criteria are addressed in the appropriate sections of the findings below.

B. Financial and Technical Capacity/Completeness of Application

The intervenor, FOBHB, pursued a line of questioning of Mr. Swanson regarding his technical expertise, the applicants’ financial capacity, their organizational structure, and related topics. When the Hearing Examiner questioned the relevance of these subjects, FOBHB argued that these topics are relevant to the issue of the applicants’ technical and financial capacity to undertake the project, which DMR requires to be shown on the application.

The Hearing Officer ruled: (1) that DMR already determined that the applicants possessed the requisite technical and financial capacity to carry out the project when the application was declared

complete, and (2) that absent a showing that a lack of such capacity exists and will affect the lease criteria, this matter is not properly at issue in this hearing, having been already decided and not being one of the criteria for granting a lease once the application has been accepted by DMR.

FOBHB was instructed that it could make an offer of proof involving specific information regarding technical and financial capacity as they affect the statutory lease criteria, but not on the issue of the completeness of the application *per se*. The intervenor objected to this ruling, did not make an offer of proof, and in closing argument continued to challenge the completeness of the application. The objection was preserved.

Under the statutory scheme for granting standard aquaculture leases, the DMR commissioner is directed to: "...review the application and set a hearing date if the commissioner is satisfied that the written application is complete, the application indicates that the lease could be granted and the applicant has the financial and technical capability to carry out the proposed activities." 12 MRSA §6072 (5)

DMR Rule 2.10(4), which implements the statute, provides that DMR must "Determine whether the application is complete, containing sufficient information in which a decision regarding the granting of the application may be taken"; if incomplete, it is returned to the applicant with an explanation of what is needed. Once the application is complete, "the commissioner will make a determination whether the application could be granted and whether the applicant has the financial and technical capability to carry out the proposed activity." If both determinations are affirmative, a hearing is scheduled. If either is negative, the applicant is notified and "no further Department action on the application is required."

After the public hearing, the commissioner may grant the lease if, taking into consideration the number and density of aquaculture leases in the area, it meets the criteria enumerated in statute (12 MRSA §6072 (7-A) and defined further in DMR Rules (Regulation 2.37). These criteria address the impact of the lease operation on the surrounding ecosystem and on human activities; they include riparian access, navigation, fisheries and other uses, significant natural habitat, use and enjoyment of public lands, source of organisms to be cultured, noise, light, and visual impact.

This application was deemed complete by DMR on June 7, 2006, indicating that DMR was satisfied that the applicants possess the necessary financial and technical capability to operate the project. Thus, inquiry into these capabilities is not properly the subject of the hearing, unless it is demonstrated that a lack of them exists and results in failure by the applicants to satisfy the lease criteria.

FOBHB argues that the application should be denied because it is deficient on its face in a number of ways. It does not connect those alleged deficiencies to the lease criteria. Its argument is that the applicants lack the technical and financial capacity to operate the project, and that Mr. Swanson is not a good steward of public resources. I evaluate these contentions here, based first on the information available to DMR at the time the application was declared complete; and, second, based on the evidence in the record regarding whether there has been a showing that any of these alleged deficiencies affects any of the criteria for considering whether to grant the lease.

1. Partnership agreement: *The intervenor argues that Maine Cultured Mussels and Erick Spencer Swanson must have some relationship, but no written partnership agreement or other formal document was submitted.*

DMR Rule 2.12 requires certain information to be disclosed in the lease application if a partnership is applying for a lease. No partnership information was supplied with the application of MCM and MBF, although all required corporate information was supplied with respect to MCM. This was consistent with the communications between the Hearings Officer and Mr. Swanson before the application was filed, when Mr. Swanson inquired about applying with two lessees, saying “There is no partnership agreement nor do we plan to form one”, and the Hearings Officer responding, “You can have joint leaseholders who have not formed a partnership so you can just list them both, but include the corporate information for MCM.” (See section 2A1, above) Thus, when the application was received and reviewed, it was consistent with the prior communication between Mr. Swanson and the Hearings Officer, reflecting two lessees, the corporation (MCM) owned by Mrs. Swanson and the sole proprietorship (MBF) owned by her son. Not only was no partnership formed, there was an explicit statement that no plan existed to form one.

The language in the rule regarding partnership and corporate applicants appears to be aimed at securing complete disclosure of the identities of the people involved in a lease application, their ownership shares in the proposed project, their current and past interests in aquaculture leases, and their record of violations of environmental and marine resources laws, if any. This information was supplied in the application with respect to MCM, which is wholly owned by Mrs. Swanson. With respect to MBF and Erick Spencer Swanson, the application states “Spencer Swanson has no existing lease interest.” Since he is listed on the form as an individual doing business as Mussel Bound Farms, there appear to be no other people involved in the application with him, except MCM, which is owned by his mother and represented by his father as general manager. Thus, the people involved in the project are a family group of three people, all of which is reflected in the application.

The Law Court, in *John Nagle Co. v. Dennis Gokey*, 799 A.2d 1225 (Me., 2002), discussed the issue of whether a partnership exists as follows:

“The Maine Partnership Act defines a partnership as ‘an association of 2 or more persons...to carry on as coowners [sic] a business for profit....’ 31 MRSA §286 (Supp.2001). We have stated that ‘the right to participate in control of the business is the essence of co-ownership.’ *Dalton v. Austin*, 432 A.2d 774, 777 (Me. 1981). Nonetheless, whether a partnership has been formed is a fact intensive inquiry in which no one factor alone is determinative.’ *Id.* ‘Evidence relevant to the existence of a partnership includes evidence of a voluntary contract between two persons to place their money, effects, labor, and skill, or some or all of them, in lawful commerce or business with the understanding that a community of profits will be shared.’ *Id.*

In this case, the application contains no evidence of any contract between the applicants, nor does it indicate how the profits of the business will be shared, or what the applicants’ respective roles in the business will be.

Nothing in DMR’s Aquaculture Lease Regulations prohibits multiple applicants. The information DMR had at the time it reviewed the application was that the applicants were a corporation owned by Mrs. Swanson and her son as an individual proprietor, and that no partnership agreement was planned. No other information exists in the application that might give rise to a finding that a partnership exists. DMR declared the application complete without a partnership agreement, and this appears reasonable given the information before it at the time. Therefore, I find that the application is not deficient for failure to provide a copy of an agreement between the applicants.

Evidence presented at the hearing (see 2A 1 & 2, above) corroborated this information. Mr. Swanson testified that no partnership exists between MCM and MBF. Erick Spencer Swanson testified that he signed the lease application as a co-applicant. Mr. Swanson stated that his son wanted to put some equipment on MCM's lease, but because MCM could not legally sublet a portion of its lease to him, he started the process to apply for his own lease. Eventually, MCM and MBF decided to join as co-applicants on one lease. There is no evidence in the record about how the co-applicants will operate the lease as between them, nor about the division of any profits; all the testimony focused on the overall project, which Mr. Swanson will implement as general manager. Thus, with the hearing held and the record closed, there is no additional information that would support a finding that a partnership exists between the applicants.

Even if that were not the case, the intervenor has not demonstrated any effect on the lease criteria should a partnership agreement be found to be wanting.

2. Identity of the applicant: *The Intervenor argues that it is unclear who the applicant is.*

The applicants are clearly identified in the application. See the foregoing paragraph. DMR declared the application complete. Therefore, I find that the application is not deficient for failure to identify the applicant.

At the hearing, Erick Swanson testified that he is not the applicant, but that he represents the applicants; he and the intervenor stipulated that he was duly authorized by MCM to act on its behalf. The intervenor has not shown that this issue affects the lease criteria.

3. Technical capacity: *The Intervenor argues (a) that the applicants and Mr. Swanson have not documented their technical capacity to undertake this project, and (b) that Mr. Swanson has mismanaged sites in the past and is not qualified to manage this one.*

a. Documentation: DMR Rule 2.10(3)(5) states: "The applicant shall submit a resume´ or other documentation as evidence of technical expertise and capability to accomplish the proposed project." The application form states: "7. TECHNICAL CAPABILITY Provide information regarding professional expertise such as a resume´ and documentation of technical expertise and practical experience necessary to accomplish the proposed project."

In response, the applicants wrote: "Erick Swanson – will serve as the principal manager of the proposed project and will be responsible for all aspects of the operation of the facility. Mr. Swanson was president of the Penobscot Salmon Company in Franklin, Maine, a vertically integrated salmon farming operation from 1989 to 1991. He sold his interest in that company in 1991 to found Trumpet Island Salmon Farm, Inc., a State of Maine corporation incorporated in 1991. Mr. Swanson has developed the Maine Cultured Mussel operating plan and technical aspects of adapting submerged longline mussel culture to this area." (Exhibit 2, sec. 7) No evidence was presented at the hearing that challenged accuracy of these statements.

The intervenor argues that no documentation of Erick Swanson's expertise in mussel farming or in this type of mussel farming was provided, nor is there documentation of the applicants' technical expertise; that Mr. Swanson has no degree or certificate from the University of New Hampshire to

indicate that he has been trained to use this technique of mussel farming; that therefore, he has no technical expertise and is “not the right man for the job”; and that there is no contract between the applicants and Mr. Swanson and no capacity of the applicants to manage the site themselves. Further, FOBHB wants Mr. Swanson’s method of mussel-raising “proven as an acceptable process” for Blue Hill Bay before a new lease is granted. This is an experimental method designed for offshore use, they contend, and Long Island is an inshore site.

At the time the application was deemed complete, DMR had before it the statements in the application regarding technical capability, as well as years of experience in evaluating lease applications from Mr. Swanson for both finfish and shellfish projects. It knew that MCM held a longline mussel lease at Tinker Island similar to the one proposed for Long Island and that it also raised mussels at Hardwood Island.

There is no specific legal requirement that the technique be “proven”, as FOBHB contends. The provisions in the statute requiring the commissioner to find that the application is “complete”, that the lease “could be granted”, and that the applicants have the financial and technical capacity to carry out the proposed project, taken together, allow DMR to assess the likelihood that a new technique will be successful before the case is scheduled for a public hearing.² In this case, the fact that Mr. Swanson has considerable aquaculture experience, that he is already raising mussels at Hardwood and Tinker Islands, and that the longline technique has been used at Tinker Island for two years, as well as having been tested by UNH, all support the conclusion that he has the requisite technical capability to carry out the project.

The fact that there is no employment or other contract between Mr. Swanson and the applicants carries no weight. No such contract is required by statute or rule. The applicants are free to hire anyone they wish to work for them, and they need not be qualified to do the work themselves, as long as they provide satisfactory evidence that they have the technical capacity to do the work through whatever employment arrangements they choose to make. Here, that evidence was provided through the qualifications of Erick Swanson as general manager of the project.

DMR declared the application complete. Therefore, I find that the application is not deficient for failure to document the applicants’ technical capacity to undertake this project.

At the hearing, Mr. Swanson testified that he has successfully employed the UNH method for the past two years at the Tinker Island site, where conditions are more severe than those at the proposed Long Island site. No contrary evidence was presented. Clearly, Mr. Swanson is an experienced aquaculturist with specific experience using the technique proposed here at a site in the same bay with more challenging conditions. If the longline technique can succeed there, it seems logical that it can also succeed at the Long Island location. The intervenor has not shown that this issue affects the lease criteria.

b. Mismanagement: FOBHB contends that leaseholders “must be able to prove they can be good stewards of the public resource,” and that Mr. Swanson failed to do this, as evidenced by the fact that there are two court charges against him for violations of aquaculture lease regulations. Mr. Eley also alleged that Mr. Swanson had left gear abandoned on the bottom at a lease site, including “rope, pipe, and

²A limited-purpose aquaculture lease is available for a shorter term (3 years), a smaller site area (2 acres), and a lower application fee (\$100) than a standard lease, to allow aquaculturists to experiment with sites, species, and methods.

gear” on the bottom of “an old salmon lease”, but no specific lease site was mentioned. FOBHB argues that “Nothing in this lease application or in past action by MCM demonstrates to the community that there is a commitment to stewardship of the Bay.”

Unlike the previous arguments, this one does not allege a deficiency in the application but is based on evidence produced at the hearing which the intervenor asserts indicates that Mr. Swanson is unfit to hold an aquaculture lease. The two court charges are discussed below under Navigation and Noise, respectively.

The allegations that Mr. Swanson abandoned gear on a lease site and therefore is unfit to receive an aquaculture license are based on unconvincing evidence. Although Mr. Eley stated that Mr. Swanson had left gear on an unspecified salmon lease site (Eley/Swanson), Mr. Swanson testified that a discontinued salmon site of his is in excellent condition now and that DMR is satisfied with it. (Swanson/Schatz) Other references at the hearing to alleged mismanagement by Mr. Swanson took the form of arguments but did not provide any factual evidence.

I take official notice, pursuant to DMR regulation 2.31, of my decision in 2003 to renew the lease for Trumpet Island Salmon Farm, on its site east of Hardwood Island, in Blue Hill Bay, a lease owned and operated by Mr. Swanson from 1993–2005 for finfish and transferred in 2005 to MCM for mussels. The decision notes that there had previously been various problems at the finfish site, all of which Mr. Swanson addressed and corrected, so that Mr. Lewis testified at the hearing that the lease site “is a success”.³

Therefore, I find no evidence of mismanagement of other lease sites that indicates that the applicants lack the technical capacity or are otherwise unfit to operate this proposed lease. The intervenor has not shown that this issue affects the lease criteria.

4. Documentation of equipment: The Intervenor argues that there is no documentation of the equipment to be used on the lease site.

DMR Rule 2.10(3)(K) states in part: “Equipment. The applicant shall submit detailed specifications on all gear, including nets, pens, and feeding equipment to be used on the site. ...this information shall include documentation that the equipment is the best available technology for the proposed activity....Documentation shall include both plan and cross-sectional views and either schematic or photographic renderings of the generalized layout of the equipment as depicted from two vantage points on the water.”

This rule is the basis for the DMR application form for a standard aquaculture lease for suspended aquaculture. Rule 2.10(1) provides: “Form. Aquaculture lease applications shall be submitted on forms prescribed by the commissioner and shall contain all information required by applicable statutes, regulations in Chapter 2 and by the commissioner for the consideration of the aquaculture project.” The form requires a number of schematic and cross-sectional views of the proposed layout, labeled with dimensions and materials. Since DMR drafted and promulgated both the rule and the form,

³ See In the Matter of Trumpet Island Salmon Farm, standard lease renewal, 2003, available at www.maine.gov/dmr/aquaculture/aqualease/decision.htm. FOBHB was an intervenor in the case.

presumably the information about equipment requested by the form is considered by DMR to be consistent with what the rule requires. Thus, the schematic and cross-sectional drawings of the layout, labeled with dimensions and materials, constitute “documentation that the equipment is the best available technology for the proposed activity.”

All of this required information is contained in the MCM/MBF application (Exhibit 2), clearly drawn and labeled to show the nature, size, and layout of the equipment, which consists of lines, buoys, and anchors. DMR declared the application complete. Therefore, I find that the application is not deficient for failure to document that the equipment is the best available technology for the project.

At the hearing, counsel for the intervenor asked Mr. Swanson if he had provided documentation that his equipment was the best available technology, and he answered that he had not. The issue was not clarified or pursued, except for a statement by counsel in her closing argument objecting to the applicants’ failure to document the equipment on the site. Presumably, the provisions discussed above are what was referred to, but that is not clear. Regardless of what Mr. Swanson understood by the question, a review of the application itself makes it clear that all requirements in this regard were met. The intervenor has not shown that this issue affects the lease criteria.

5. Scale of maps: The Intervenor argues that there is no scale on the maps in the application, as the regulations require.

Section 1a of the application form requires a “vicinity map” and states: “Use a NOAA chart or USGS Topographic map to show the waters and shorelands within the general vicinity of the lease tracts depicting the lease area.” A copy of the NOAA chart for Blue Hill Bay is attached, with the lease site marked; no scale is specifically required, and none is shown on the map.

Section 1b of the application form requires a plan view of the project marked on a chart or topographic map with seven criteria for describing the lease, one of which says “include scale used”. Here two enlargements of the NOAA chart are used, with the lease site marked, among other items, but without any scale.

DMR declared the application complete without the required scales.

At the hearing, Mr. Swanson acknowledged that the maps did not show scales. The intervenor has objected to the granting of the lease because of the failure to satisfy this requirement but has not shown how this omission relates to the criteria for granting the lease. While the lack of a scale on the maps is a potential inconvenience to those reviewing the application, it does not appear to have hampered the analysis and review of the proposed project by DMR staff, and no evidence was presented to show that it hampered anyone else or affected the proposed project in any way. The intervenor has not shown that the lack of a scale affected the lease criteria.

Therefore, I find that, while no scale is provided as required in section 1b of the application, the omission has not affected any of the criteria for granting the lease, and the objection is without merit.

6. Financial capacity: The intervenor argues that there is no evidence of the financial capacity of the applicants to undertake this project.

The application form refers to DMR Rule 2.10(3), which states in part “I. Financial Capacity. The applicant shall provide information showing, to the satisfaction of the Department, that it has obtained all of the necessary financial resources to operate and maintain all aspects of the proposed aquaculture activities.” The Rule goes on to give examples of “acceptable documentation” of financial capacity, including “(3) copies of bank statements or other evidence indicating availability of the unencumbered funds.”

The applicants state, in the application, “The applicant will fund the proposed project. A letter from MCM’s bank stating [*sic*] has the financial capacity to complete the project is attached.” That letter states: “In our opinion, Maine Cultured Mussels, Inc. and owner Susan Swanson have the financial capacity to fund the \$131,000 for a cultured mussel operation as outlined in their Long Island lease application under section 8.b.”

Since DMR declared the application complete, it was clearly satisfied that the applicants’ statement and their bank’s letter were adequate evidence that they have the financial capacity to undertake the proposed project. The intervenor argues that while the bank’s letter refers both to MCM and to its owner, Susan Swanson, Mrs. Swanson herself is not an applicant, and her personal financial capacity is not relevant, because her personal assets would not be available (presumably to the corporation) in the event of an accident.

The Bank’s letter does not make it clear if MCM on its own can provide the sums needed for the project, should Mrs. Swanson choose not to make her personal assets available. Mrs. Swanson is a co-applicant with her son, however, and her husband is the general manager of the project, so the likelihood appears remote that she would not contribute to the project as necessary from any of her personal assets. DMR declared the application complete. Therefore, I find that the application is not deficient on its face for failure to document financial capacity.

The intervenor has not shown that this issue affects the lease criteria.

7. Bond: The intervenor argues that DMR regulations require documentation of the bond, and there is none.

The application form for a standard lease requires documentation that the applicant has read the regulations regarding lease requirements and that upon issuance of a lease, the lessee will obtain a bond or open an escrow account in the required amount. The applicant stated in the application that a \$5,000 bond exists for the MCM lease.

The application was accepted as complete with this response in it. DMR knew that MCM had other leases and bonds, so it was reasonable to assume that the applicants were familiar with the regulations regarding lease requirements, although this was not explicitly stated. In fact, the application went beyond the requirements by stating that the bond already exists, demonstrating that the applicants have the requisite knowledge. DMR declared the application complete. Therefore, I find that the application is not deficient for failure to document the performance bond.

At the hearing, Mr. Swanson explained that he has a \$25,000 bond left from his salmon aquaculture business and that he allocates it in \$5,000 increments to each of the mussel leases. He

testified that the bonding company sends documentation to DMR. The intervenor has not shown that this issue affects the lease criteria.

8. Operating Costs: *The intervenor argues that the application does not list the full extent of operating costs, including salaries and insurance.*

DMR Rule 2.10(3)(I) states, in part: “Each applicant shall submit accurate and complete cost estimates of the planned aquaculture activities.” The application states, under section 8b, “Provide documentation of accurate and complete cost estimates of the proposed aquaculture activities.” In response to this requirement, the applicants stated the following in the application:

“The initial 25 grow lines with mussels socked and 15 spat collection lines will have been deployed prior to the hearing for this lease by Acadia Aquaculture. The culture equipment and service vessel is owned by the applicant. The cost for the mussel culture equipment deployed on this site is as follows:

4000 lb concrete anchors	120 anchors	\$ 12,000
Back line and mooring lines	60 lines	22,000
Mussel grow rope/spat lines	60 lines	18,000
Floats	16 inch and 45 gallon	<u>75,000</u>
		\$131,000

Operating cost for Maine Cultured Mussels to bring seed socked to market is \$20,000. Once the seed reaches market size operating costs will be funded from cash flow from weekly harvesting and sales.”

The requirement to provide cost estimates is contained in the section of the rule regarding financial capacity, 2.10 (3) (I). The first sentence of that section states: “The applicant shall provide information showing, to the satisfaction of the Department, that it has obtained all of the necessary financial resources to operation and maintain all aspects of the proposed aquaculture activities.”

DMR accepted the application as complete, so it was satisfied that the requirement had been met. The rule does not specify the components of “accurate and complete cost estimates” and does not explicitly require information on salaries and insurance. DMR declared the application complete. Therefore, I find that the application is not deficient for failure to fully list operating costs, including salaries and insurance.

The intervenor has not shown that this issue affects the lease criteria.

9. Source of stock: *The intervenor argues that no address is given for the source of mussel seed stock.*

DMR Rule 2.10 (3)(B) requires “A list of the species to be cultivated and a description of the proposed source(s) of organisms to be grown at the site...The applicant shall identify the source of organisms to be cultured for the lease site.”

The application form asks for “Name and address of the source of seed stock, juveniles, smolts, etc., to be cultivated.”

The applicants state in response: “Collection of mussel spat on the lease or from other locations on Blue Hill Bay.”

The source of the organisms is clear on the face of the application. The stock is wild, not cultured in a hatchery, so there is no “address” beyond the designation Blue Hill Bay. DMR declared the application complete. Therefore, I find that the application is not deficient for failure to provide an address for the source of mussel seed stock.

Mr. Swanson testified that he plans to collect spat at the MCM site at Hardwood Island and perhaps some at Long Island (Swanson/Robinson), possibly at the Tinker Island site, and that all seed will come from his own lease sites. (Swanson/Mills)

The intervenor has not shown that this issue affects the lease criteria.

10. Process: *The intervenor argues that the pre-hearing process in this case was deficient.*

Counsel for the intervenor argues that the application is different in size from that presented in the pre-application meeting and the scoping session; that no pre-application meeting or scoping session was held for the project at the size now proposed; that the public information meeting that DMR held is not a substitute, and that therefore the lease should not be granted.

The policy purpose of pre-application meetings and scoping sessions is not only to inform municipalities and the public about the nature of the project that the applicant is considering, but also to elicit more information for the applicant from the public about the proposed site. It is to be expected that the application itself, which is submitted to DMR only after the pre-application meeting and the scoping session have occurred, may differ in some ways from the initial proposal. In this case, the project changed from a 13-acre lease for Erick Spencer Swanson to a 51.42-acre lease for him in conjunction with MCM.

The structure of the lease application process places the pre-application meeting and the scoping session ahead of the actual application; once the application is received, the process moves on toward the public hearing. The statute and rules make no provision for altering the process when an application differs from the proposal previously presented to the public. To repeat the pre-application meeting and scoping session, as the intervenor proposes, would move the process backward and call into question the status of the application. Here, DMR followed a practical and effective policy geared to carry out the intent of the statutory scheme.

After the give-and-take of the pre-application meeting and the scoping session, the public’s interest in the pre-hearing process is to receive notice of the application that is complete enough and timely enough to enable it to present further information to DMR, either by submitting written comments, by testifying and questioning witnesses at the hearing, or by formally intervening in the case. Here, simply following the normal procedures would have served to do this and would have met all legal requirements. The public information meeting was added in order to alert the public to the change in the proposed lease site. The public was thus given more than ample notice of the nature of the application and its increased size and additional applicant, three months in advance of the originally scheduled hearing and four months ahead of the actual hearing date.

Vigorous public participation occurred in the hearing and the associated process: some 27 letters and statements were submitted to DMR, six members of the public testified at the hearing, more questioned the various witnesses, and FOBHB intervened. No evidence was presented that notice to the public was inadequate. Therefore, I find that the process in this case was not deficient, that the public

information meeting was appropriate, though not legally required, and that the public received adequate and timely notice of the hearing.

C. Riparian Access

The lease site at its closest point is 945 ft. from the eastern shore of Long Island. This land is owned by a single, non-resident owner and is subject to a conservation easement held by the National Park Service and administered by Acadia National Park. Thus, the Park Service is a riparian owner within 1,000 of the proposed lease (DMR Rule 2.05(1)(C)), and the commissioner must find that the proposed lease will not unreasonably interfere with the ingress and egress of NPS (12 MRSA §6072 (7-A)(A)).

The eastern shore of Long Island has no moorings or docks. Users of the Park Service property come by boat or kayak to camp and swim along the shore. Given that there is at least 920 feet of navigable water between the lease, at its closest point, and the shore of Long Island, there is adequate room for ingress and egress by these vessels.

The Park Service has requested that the lease holders be required to promptly collect any debris or materials from the lease site that wash ashore on Long Island, that the lease holders notify NPS of incidents at the lease site that may result in such debris or materials washing ashore, and that no activities connected with the lease operation be conducted on the shore of Long Island. Mr. Swanson agreed to these requests.

Therefore, I find that this proposed lease will not unreasonably interfere with the ingress and egress of riparian owners. As a condition of this lease, the applicants must enter into an agreement with the National Park Service regarding prompt cleanup of lease materials from the property, prompt notification of the National Park Service of incidents that may result in debris or materials washing ashore on the property, and agreeing not to conduct any lease-related activities on the shore of the property.

D. Navigation

1. Navigation: Water depth at the site is 100-150 ft. Some 920 feet of navigable water lie between the site and Long Island to the west; a mile of deep, open water lies between the site and the nearest land to the east. There is, as the site report says, ample room to navigate around the site. The Blue Hill Harbormaster concurs.

The site itself is another matter. Mr. Swanson has dramatically reduced the number of surface buoys compared to the original description in the application, so that now the estimate is for approximately 4 buoys per acre (200 total) to be in place at the site for production growing. The back lines, long lines, and floatation buoys will be deeply submerged at about 30 ft. below the surface. When spat collection occurs, an additional 56-150 buoys will be placed on the westward one-sixth of the site, marking the collection lines that lie temporarily 2-3 feet below the surface.

It is clear that navigation will be impeded within the lease boundaries to varying degrees at different times of year. Small boats, including kayaks, can navigate the lease site without difficulty. Boats with keels and propellers will certainly need to avoid the spat lines and presumably would use caution in crossing the site at all times, although the reduced number of buoys should substantially improve navigability. The amount of space surrounding the lease site allows boats of all types ample room to

navigate at all times. The impeded area is a very small fraction of the area of the bay, and it does not obstruct access to the Long Island shore or to any docks or moorings.

It is also clear from Exhibit 7 that a straight line marked on the chart between two navigational buoys crosses the lease site. Mr. Eley referred to this as the “prudent mariner route”, but no evidence was presented to explain who designates such routes or by what process, other than by drawing lines across navigable waters to connect buoys or other markers. So much navigable water exists around the lease site that mariners should have no difficulty in moving around the bay, even when the lease site is fully operational.

2. Marking: The case file (Exhibit 1) contains correspondence from Mr. Eley complaining about inadequate markers at one of Mr. Swanson’s other lease sites. At the hearing, Mr. Eley indicated his disapproval of DMR marking requirements but did not make specific suggestions for improvement. The proposed lease site was properly and timely marked before the hearing. FOBHB also contends that Mr. Swanson’s conviction for violation of DMR marking requirements is evidence of his mismanagement of another lease site and of his unfitness to operate this proposed lease.

Mr. Swanson was fined in December, 2006 for failure to promptly replace markers at another lease site (Exhibit 4); his explanation of the situation was persuasive, and it does not appear from the evidence presented in this case that inadequate marking is typical at the sites he manages. Nevertheless, it will be a condition of and a provision in this lease that the site be marked in accordance with DMR rules⁴ and with Coast Guard requirements, including those for Private Aids to Navigation. In particular, compliance with DMR Rule 2.80 (2) will likely mean a slight increase in the number of surface buoys at the site, albeit of a different color, in order to maintain a continuous line of sight along the boundaries of the lease.

Therefore, I find that the proposed lease will not unreasonably interfere with navigation. The provisions of DMR Regulation 2.80 shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself.

⁴ **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.

E. Fishing & Other Uses

According to the evidence, the lease site itself is not a significant fishing ground, which is why Mr. Swanson chose this location. Scallop dragging is infrequent or non-existent. Lobstering occurs regularly inshore of the site, along the 60-ft. contour; as lobsters move up and down the bay, the lobstermen follow. Four to six lobstermen may set traps in the vicinity of the site in the fall. Some recreational fishing occurs in the area. The one lobsterman who testified said he would not set traps between the lines at MCM's other mussel sites, because of the risk of tangling his gear in the lines.

The applicants request that fishing be restricted to outside the culture area when mussels are growing, in order to avoid entangling gear in the growout lines and dislodging mussels. Mr. Swanson believes entanglement will not be a problem once the mussels are harvested and the growout lines removed; he believes that crab fishing could then take place in the area. He proposes to develop a method to identify areas that have been harvested and make it available to those who wish to fish there, and this will be made a condition of the lease, to the extent it is practicable to implement once the lease is in operation.

It is clear from the evidence that lobstering is the only significant fishery in the area and that most of this activity occurs off the lease site, closer to the Long Island shore. Nevertheless, to the extent that lobster fishermen may have set traps on the lease site from time to time, if the lease is granted they will be displaced from that particular area for much or all of the time. The question is whether this interference with the lobster fishery is unreasonable. Given the evidence that most lobstering is done inshore of the lease site and that lobstermen follow the lobsters as they move up and down the bay, it does not appear that excluding fishing from this 51.42-acre site constitutes unreasonable interference, considering the overall size of the bay.

FOBHB and some public witnesses asserted that the bay is "maxed out" with too many leases, and it noted the four existing leases and their size and general location. All are mussel sites, two with rafts and two with long lines.

The evidence shows that there is ample room to navigate on either side of the Long Island site, and that the impact on fishing and other uses is not unreasonable, as discussed above. The size of Blue Hill Bay as estimated in two different DMR studies, of which I hereby take official notice pursuant to DMR Rule 2.31, is 47,000 to 60,000 acres.⁵ Aquaculture occupies a tiny fraction of Blue Hill Bay, with three sites of 15 acres or less and one site of just over 50 acres, widely dispersed across the bay. The current lease sites cover 74.4 acres. If the proposed Long Island site is approved, the total would be 126.12 acres.

Therefore, I find that the proposed lease will not unreasonably interfere with fishing or other uses of the area, considering the nature and density of aquaculture leases in the bay. The lease shall contain a

⁵ 47,000 acres: DMR Scientist Marcy Nelson (personal communication), from an aquaculture scaling project by her in 2000, setting the bay's outer limit at a line between Flye Point on the west to Reed Point on the east. 60,000 acres: Jon Lewis, DMR-AEC (personal communication), study of nitrogen loading by DMR Scientist John Sowles, setting the bay's outer limit between Naskeag Point on the west and Lopaus Point on the east. FOBHB in their Use Inventory Study, Exhibits 8-12, sets the outer limit considerably farther south, along the northern shore of Swan's Island easterly to Bass Harbor Head, thus increasing the acreage of the bay and reducing the proportion used for aquaculture leases.

condition that the applicants report to DMR annually, describing the notification procedure they have developed to allow limited fishing in harvested areas, how this notice has been communicated to local fishermen, and the nature and extent of other fishing activity on the lease site.

F. Significant Habitat, Flora & Fauna

The site is minimal in terms of flora and fauna. The bottom is soft mud, the current is adequate for mussel farming, there is little fishing on the site, and the area is virtually depopulated in terms of marine life. No essential or significant wildlife habitat exists in the vicinity. No invasive tunicates or Beggiatoa exist on the site.

The mussel farm is unlikely to affect the water quality of the area, nor is it likely to affect the sea bottom. Mussels are net removers of organic matter in the sea water, and they filter out algae and contaminants as they feed, improving water quality. Long line mussel farming involves a much lower density of mussels than raft farming does, so oxygen depletion is not likely to occur from this project. Some drop-off of mussels is to be expected, but they will sink in the soft mud. It would take a huge amount of drop-off to change the character of the bottom, and if this happened, the result would most likely be a thriving mussel bed instead of a desolate mud bottom.

DMR monitors water quality and toxic organisms all along the coast; the lease area is open to the taking of shellfish, and pollution from the Ellsworth sewer plant in Union River Bay is not of concern at the lease site. If toxic organisms are detected through sampling by Mr. Swanson or by DMR, harvesting will be prohibited until the samples are clear.

The question of the source, quantity, and cyclical nature of mussel spat in Blue Hill Bay was raised but not definitively addressed. There is no evidence that mussel farms contribute to excess levels of spat and mussels, if and when they do occur.

Beggiatoa is not present on the lease site, and the risk of it occurring there is very small, as it is unlikely that enough mussels would drop off in a concentrated area to create biological conditions that foster growth of this organism.

Therefore, I find that the proposed lease will not unreasonably interfere with significant wildlife habitat and marine habitat or with the ability of the lease site and surrounding marine and upland areas to support ecologically significant flora and fauna.

G. Public Use & Enjoyment

This criterion for approving an aquaculture lease requires the commissioner to find that the lease “does not unreasonably interfere with public use or enjoyment within 1,000 feet of a beach, park, docking facility owned by the Federal Government, the State Government or a municipal governmental agency or certain conserved lands.” “Conserved lands” means “land in which fee ownership has been acquired” by one of these governments in order to “protect the important ecological, recreational, scenic, cultural or historic attributes of that property.”

The eastern shore of Long Island is 945 feet from the lease site at its closest point. Because the land is privately owned and the subject of a conservation easement held by the National Park Service, it does not meet the requirements of this criterion, as the NPS does not own the land in fee. To the degree

that the impact of the proposed lease on this land can be considered in this case, it is done in section D, Riparian Access.

Therefore, I find that the proposed lease will not unreasonably interfere with the public use or enjoyment within 1,000 feet of a beach, park, docking facility or certain conserved land owned by the Federal Government, the State Government, or a municipal governmental agency.

H. Source of Organisms

DMR Rule 2.37 (1)(A)(6) requires the commissioner to consider the source's biosecurity, sanitation, and applicable fish health practices. The mussel seed stock will come from the waters of Blue Hill Bay and be collected at the MCM lease sites at Hardwood and Tinker Islands and possibly also at the Long Island site. No evidence was presented to indicate any problems whatsoever with these sources.

Therefore, I find that the applicant has demonstrated that there is an available source of organisms to be cultured for the lease site.

I. Light

The evidence shows that no artificial light is expected to be used at the lease site, except in an emergency or if the Coast Guard requires lighted navigational aids. DMR Regulation 2.37(1)(A)(8) applies to operations at the lease site and will be incorporated into the lease provisions.

Therefore, I find that the proposed lease will not result in an unreasonable impact from light at the boundaries of the lease site. The provisions of DMR Regulation 2.37(1)(A)(8) shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself.

J. Noise

DMR Regulation 2.37(1)(A)(9) lists the rules regarding noise that apply to the "routine operation of all aquaculture facilities". These rules will apply to operations at the proposed lease site and will be incorporated into the provisions of the lease itself.

The National Park Service, owner of the easement on the eastern shore of Long Island, within 1,000 feet of the proposed lease, has requested that DMR prohibit the leaseholders from using propane cannons or similar loud noise-making devices to scare away eider ducks at the lease site.

The intervenor, FOBHB, has contended that Mr. Swanson's use of a propane cannon on another lease site, which is the subject of a pending public nuisance charge against him (Exhibit 5), is evidence of his mismanagement of another lease site and of his unfitness to operate this proposed lease.

The charge against Mr. Swanson was pending at the time the record closed and had not been adjudicated. It apparently arose as a result of Mr. Swanson's use of a propane cannon to ward off eider ducks from his lease sites, a practice he testified he has discontinued and will not employ at the Long Island site. Mr. Swanson informed DMR of the situation and of his plan to institute alternative measures; DMR is aware that its noise regulations do not directly address this issue. While Mr. Swanson's action may have understandably provoked complaints, he has remedied the situation and vowed not to repeat it, and this action weighs in his favor.

Therefore, I find that the proposed lease will not result in an unreasonable impact from noise at the boundaries of the lease site. The provisions of DMR Regulation 2.37(1)(A)(9) shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself.

K. Visual Impact

The evidence shows that the visual impact of this project overall will be extremely limited. Buoys will mark the four corners of the lease and outline the boundaries of the 1400 ft. x 1600 ft. site at 100-ft. intervals to maintain a line of sight, according to DMR marking regulations. Other buoys or markers may be required by the Coast Guard.

The site has no structures, no permanently moored vessels, and no equipment. Besides the marking and navigation buoys, only the surface buoys will be visible, and they will be approximately 100 45-gal. blue buoys and approximately 100 16" round yellow buoys, or about 4 buoys per acre. If spat collection is undertaken at the Long Island site, 56-150 additional buoys will mark the shallow lines on the western one-sixth of the site, so the visual impact on that area (about 8.5 acres) will be greater, involving 11-28 buoys per acre for about one-third of the year. This buoy array will be substantially less than that at Tinker Island, according to Mr. Swanson.

Those affected by the visual impact of the lease site will likely include recreational users of Long Island, nearly 1,000 ft. to the west, and any boaters who pass within view of the site. DMR Rule 2.37(1)(A)(10), which contains standards for minimizing visual impact at lease sites, notes that "The color of equipment, such as buoys, shall not compromise safe navigation or conflict with US Coast Guard Aids to Private Navigation standards." The rule will apply to operations at the lease site and will be incorporated into the lease provisions.

Therefore, I find that the proposed lease will comply with the visual impact criteria contained in DMR Regulation 2.37(1)(A)(10). DMR Regulation 2.37(1)(A)(10) shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself.

4. CONCLUSIONS OF LAW

Based on the above findings, 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. As a condition of this lease, the applicants must enter into an agreement with the National Park Service regarding prompt cleanup of lease materials from the property, prompt notification of the National Park Service of incidents that may result in debris or materials washing ashore on the property, and agreeing not to conduct any lease-related activities on the shore of the property;

2. The aquaculture activities proposed for this site will not unreasonably interfere with navigation, as long as the lease site is marked in accordance with U.S. Coast Guard and DMR requirements. The provisions of DMR Regulation 2.80 shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself;

3. The aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area. The lease shall contain a condition that the applicants report to DMR annually, describing the notification procedure they have developed to allow limited fishing in harvested areas, how this notice has been communicated to local fishermen, and the nature and extent of other fishing activity on the lease site;

4. The aquaculture activities proposed for this site will not unreasonably interfere with significant wildlife habitat and marine habitat or with the ability of the lease site and surrounding marine and upland areas to support ecologically significant flora and fauna;

5. The aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of a beach, park, docking facility or certain conserved land owned by the Federal Government, the State Government, or a municipal governmental agency;

6. The applicant has demonstrated that there is an available source of blue mussels to be cultured for the lease site;

7. The aquaculture activities proposed for this site will not result in an unreasonable impact from noise at the boundaries of the lease site. The provisions of DMR Regulation 2.37(1)(A)(9) shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself;

8. The aquaculture activities proposed for this site will not result in an unreasonable impact from light at the boundaries of the lease site. The provisions of DMR Regulation 2.37(1)(A)(8) shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself; and

9. The aquaculture activities proposed for this site will comply with the visual impact criteria contained in DMR Regulation 2.37(1)(A)(10). DMR Regulation 2.37(1)(A)(10) shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself.

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

5. DECISION

Based on the foregoing, the commissioner grants the requested lease of 51.42 acres to the applicants for 10 years from the date of this decision for the purpose of cultivating blue mussels (Mytilus edulis) using suspended culture techniques. The applicants 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 in the amount of \$5,000 conditioned upon their performance of the obligations contained in the aquaculture lease documents and all applicable statutes and regulations.

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. 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 aquaculture law.

The following conditions are placed on this lease:

1. The leaseholders must enter into an agreement with the National Park Service regarding (a) prompt cleanup of lease materials from the property, (b) prompt notification of the National Park Service of incidents that may result in debris or materials washing ashore on the property, and (c) refraining from conducting any lease-related activities on the shore of the property. The agreement shall be entered into within six months from the date of this decision, and a copy of the agreement shall be provided to the Aquaculture Hearings Officer. The leaseholders shall not access Long Island in connection with the aquaculture activities, other than to clean up any errant gear that may wash ashore on the Island.

2. The leaseholders shall mark the lease in accordance with Coast Guard regulations and the provisions of DMR Regulation 2.80. DMR Regulation 2.80 shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself. A copy of the Coast Guard marking requirements shall be provided to the Aquaculture Hearings Officer within six months of the date of this decision.

3. The leaseholders shall report to DMR annually, on the anniversary of the lease date, describing the notification procedure they have developed to allow limited fishing in harvested areas, how this notice has been communicated to local fishermen, and the nature and extent of other fishing activity on the lease site.

4. The provisions of DMR Regulation 2.37(1)(A)(9) (Noise) shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself.

5. The provisions of DMR Regulation 2.37(1)(A)(8) (Light) shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself.

6. The provisions of DMR Regulation 2.37(1)(A)(10) (Visual Impact) shall apply to the operation of this lease and shall be incorporated into the provisions of the lease itself.

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.

7. APPENDIX

A. List of Exhibits

1. DMR case file
2. Application
3. DMR site report
4. Docket Record, Ellsworth District Court, Docket No. ELLDC-VI-2006-00851 [intervenor's exhibit]
5. Docket Record, Ellsworth District Court, Docket No. ELLDC-VI-2006-00859 [intervenor's exhibit]
6. Pettigrew-Townsend Report (on file at DMR) [by stipulation]

7. Navigation chart for Long Island and vicinity in Blue Hill Bay, chart book cover, and chart key [intervenor's exhibit]
8. Compact disc containing Use Inventory Project outline and Intervenor's testimony [intervenor's exhibit]
9. Compact disc containing charts produced for Use Inventory Project [intervenor's exhibit]
10. Paper summary of Use Inventory Project [intervenor's exhibit]
11. Paper copy of Power Point presentation of Use Inventory Study [intervenor's exhibit]
12. Paper copy of Power Point presentation of intervenor's testimony in opposition to the lease application [intervenor's exhibit]

B. Notice of Intent to Take Official Notice

NOTICE TO PARTIES OF INTENT TO TAKE OFFICIAL NOTICE AND OF OPPORTUNITY TO CONTEST THE SUBSTANCE OR MATERIALITY OF THE FACTS NOTICED.

I take official notice, pursuant to DMR regulation 2.31, of the following facts:

1. The language in the decision in 2003 to renew the lease for Trumpet Island Salmon Farm, east of Hardwood Island, in Blue Hill Bay, regarding the improvement in the condition of the lease site. *See* In the matter of the Application of Trumpet Island Salmon Farm for Renewal of an Aquaculture Lease Located East of Hardwood Island in Blue Hill Bay, Tremont, Hancock County, Maine; March, 2003, page 6.
2. The calculation of the area of Blue Hill Bay contained in two DMR documents, an aquaculture scaling study by DMR Scientist Marcy Nelson, prepared in 2000 (47,000 acres), and a nitrogen loading study of Blue Hill Bay done by DMR Scientist John Sowles (60,000 acres).

A party to this case may contest the substance or materiality of the facts noticed by notifying the Aquaculture Hearings Officer within the comment period allowed the parties for review of this decision.

Rule 2.31

DMR Rule 2.31 (1): "...The Department's experience, technical competence and specialized knowledge may be utilized in the evaluation of all evidence submitted."

2.31 (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."