

STATE OF MAINE

DEPARTMENT OF MARINE RESOURCES

IN THE MATTER OF THE APPLICATION OF)	
MAINE CULTURED MUSSELS, INC. FOR AN)	FINDINGS OF FACT,
AQUACULTURE LEASE LOCATED EAST OF)	CONCLUSIONS OF LAW
TINKER ISLAND, TREMONT, HANCOCK)	AND DECISION
COUNTY,MAINE)	

On March 18, 2005 Maine Cultured Mussels, Inc. of Mt. Desert, Maine applied for an aquaculture lease totaling 53.4 acres in the coastal waters of the State of Maine, located east of Tinker Island in Blue Hill Bay, Tremont, Hancock County, Maine. The applicant requested the lease for a term of ten (10) years for the purpose of cultivating blue mussels (Mytilus edulis) using suspended culture techniques. The application was accepted as complete on March 30, 2005. A public hearing on this application was held on June 27, 2005 at 6:30 p.m. in Tremont.

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 the Department of Marine Resources (DMR) if it is determined 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; navigation; fishing or other uses of the area; significant wildlife habitat and marine habitat or the ability of the site and surrounding marine and upland areas to support ecologically significant flora and fauna; or 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.

**Evidence Introduced Concerning the Nature
and Impact of the Proposed Lease**

The evidentiary record before the Department regarding this lease application includes the Department file (Exhibit 1), including the application (Exhibit 2) and the Department site report (Exhibit 3), and the record of the June 20, 2005 public hearing. At the public hearing, testimony was given by Erick Swanson, the principal manager of the proposed project, and Jon Lewis, the Department's Aquaculture Environmental Coordinator.

According to the application and Mr. Swanson's testimony, the proposed lease is sought to raise blue mussels on a lease site totaling 53.4 acres, for a lease term of ten (10) years. The applicant testified that he currently operates an aquaculture lease in the same location, owned by Acadia Aquaculture. That lease was originally granted for salmon aquaculture, but was recently amended to allow for mussel culture. The proposed lease seeks to reconfigure the exiting lease into a rectangular shape to better accommodate long-line mussel culture. According to the application, Acadia Aquaculture will terminate its lease upon the approval of a lease for Maine Cultured Mussels in the same location.

According to Mr. Swanson, the proposed lease activities would consist of growing mussels on submerged long lines. He testified that he has consulted with the University of New Hampshire in designing a long-line system similar to the system developed by the University in its Open Ocean Aquaculture Program. The proposed lease site would contain a maximum of 60 back lines, in two rows of 30. The back lines would be submerged 20 feet from the surface and would be spaced 60 feet apart. The long lines would be suspended from the back lines in 45-foot loops. According to Mr. Swanson, the lines would be moored using 4,000 lb. concrete blocks. The blocks have been tested and have demonstrated 3,000 lbs. of holding power, which is more than is needed to support the lines. In addition to the long lines, Mr. Swanson testified that there would also be spat collection lines on the proposed lease site. The spat collection lines would be located in the western portion of the proposed lease site. They would be 3 feet below the surface from mid-June to late July, and submerged 20 feet below the

surface the remainder of the year. The long lines would be marked with a red pick-up buoy and a yellow buoy at the end of each line. From June through July, the spat collection lines would be marked with buoys every 15 feet because they would be near the surface. Mr. Swanson testified that currently, there are 19 long lines on the Acadia Aquaculture lease site. Because the lease is new, he has marked the anchors and lines with yellow buoys in order to alert mariners. In the future, he plans on using fewer buoys.

According to the application, the site would be serviced initially with a 36-foot service barge. The long lines would be serviced by raising the back line to the surface and hanging it over two star wheels on the port side of the service vessel. The vessel can then power itself forward or aft using the star wheels to position itself on the back line. The long lines can then be accessed for harvesting, seeding or maintenance. Harvesting would take place 2-3 days per week. The market size mussels would be removed from the long lines and processed off-site. Seeding the long lines with mussel spat would be an ongoing process throughout the year. According to the application, first year production is estimated to be 500,000 lbs, and second year full production is anticipated to be 1 million lbs. All seed mussels would be obtained from the wild. Mr. Swanson testified that he currently collects mussel spat on a salmon farm located east of Hardwood Island in Blue Hill Bay and he has spat collection lines located on the Acadia Aquaculture lease. He stated that he will likely use the Hardwood Island site in the future for spat collection, as well as other possible locations in the bay.

According to the application, no equipment or vessels would be moored at the lease site. The service vessel is equipped with normal engine silencers and the service equipment would operate off the vessel hydraulic system. Additionally, the applicant does not plan to use lighting at the lease site other than required navigational lighting. All long lines would be submerged, and thus not visible. The buoys used to mark the lines would be either yellow or red in order to alert others of the lines' locations.

In accordance with Department regulations, 2.10(3), the applicant provided an environmental characterization of the proposed lease area. Because Mr. Swanson previously

applied for an aquaculture lease to raise salmon in the same location, he was able to provide the environmental baseline that was prepared for the prior application. According to the environmental baseline, flora observed in the area of the proposed lease includes a rare occurrence of kelp and an unidentified filamentous weed. Fauna observed includes an abundance of vein shrimp, mysid shrimp, and mud shrimp, and a rare occurrence of common sea stars, rock crabs, ocean pout, rock gunnel, and silver-banded anemones. The observed sea floor was composed of soft silt over marine clay throughout with occasional burrows. The granulometry data indicates fine sand and clay throughout. The current data collected over a seven-day period at three different depths indicated a surface speed of 7.8-26.5 cm/sec, mid-depth speed of 2.3-16.0 cm/sec, and bottom speed of 3.0-14.9 cm/sec. Additionally, the proposed lease site is not located within an Essential Wildlife Habitat.

According to the application, the proposed lease site is located over 1,000 feet from Tinker Island. The applicant will not be using the island to access the lease, nor is the lease area used by the landowners to access the island. According to the application, Tinker Island is accessed by recreational users on the eastern side and the residents of the island access the island on the southern end. According to the application, boat traffic in the area of the proposed lease is light and seasonal. Recreational use is primarily sailing, boating and kayaking. According to the application, all vessels can safely navigate over the submerged long lines. With regard to the spat collection lines in June and July, the application states that vessels with keels and prop cages can pass over the lines, but sailing vessels and deep draft vessels with open props must avoid the spat collection lines when they are closer to the surface. Additionally, according to the application, there is limited lobster fishing along the inner shore of Tinker Island. Mr. Swanson testified that there were currently 2-3 lobster traps in the western portion of the proposed lease site, but the majority of traps are located closer to shore.

The Department's Aquaculture Environmental Coordinator (AEC) conducted site visits at the proposed lease area on September 10, 2002, September 24, 2004, November 12, 2002, and April 19, 2005. During the site visits in 2002, an underwater video camera was used to

document the bottom characteristics and local flora and fauna. In the 2005 visit, an underwater Remote Operated Vehicle (ROV) was used to collect video footage of the proposed lease area. The AEC created a site report summarizing the information obtained during the site visits and provided testimony regarding the site report at the public hearing. According to the report and the AEC's testimony, the proposed site is located approximately 1,103 feet east of Tinker Island, in water depths ranging from approximately 105-151 feet. The bottom topography of the proposed lease site is uniformly flat and is comprised of very soft sediments. According to the AEC's report, currents are primarily tidally driven in a north/south direction along the shore of Tinker Island, however, wind driven swells and upper surface layer mixing of the water column does occur. According to the AEC's report, the maximum mid-water current velocity at the proposed lease site is 15 cm./sec.

Local fauna observed at the proposed lease site includes a common occurrence of mysid shrimp, sand shrimp and sea stars, several wry-mouth eel burrows, and occasional rock crabs. Additionally, according to the report, the proposed lease site is not located within an Essential or Significant Habitat. However, there is an eagle's nest located on Tinker Island, approximately $\frac{3}{4}$ mile from the proposed lease site. According to Scott Lindsay of the Department of Inland Fisheries and Wildlife, the shoreline of Tinker Island should not be used for lease-related activities, due to the presence of the nest. According to the AEC, the proposed activities are not expected to interfere with the ability of the area to support existing flora and fauna, due to the relative scarcity of species. Ecological change that should be expected includes a hardening of the bottom due to the drop-off of mussels. The drop-off will likely attract opportunistic species such as stars, crabs, worms, and potentially urchins and lobsters.

According to the AEC, the proposed activities will not interfere with navigation or riparian ingress and egress. No moorings were observed within the boundaries of the proposed lease area during the site visits. Tinker Island is mostly undeveloped, with a single residence located on the southern end of the island. According to the AEC, the proposed lease site is located a minimum of 1,100 feet from the shore of Tinker Island. Additionally, there is approximately 1

mile of navigable water between the northeastern boundary of the proposed lease site and the Red Nun 6 located off the southwestern tip of Hardwood Island; approximately 1.75 miles of navigable waters due east of the proposed site; and 1 mile of navigable waters between the proposed lease site and Red Nun 8 located off the northern tip of Tinker Island. The majority of traffic passes to the east of the proposed lease site. The AEC noted in his report that, except for spat collection lines during June and July, all lines will be submerged a minimum of 20 feet below the water surface, allowing for safe passage of vessels through the proposed lease site.

According to the AEC's report, on September 10 and 24, 2002, approximately 50 lobster trap buoys were observed along the western boundary of the proposed lease site. The majority of the lobster buoys were observed between the 100-foot contour line and the eastern shore of Tinker Island. On November 12, 2002, most of the lobster trap buoys had been removed. The majority of effort has been documented to the southwest of the proposed lease site. Extremely soft sediments within the proposed lease area are expected to be prohibitive to the placement of lobster traps. According to the AEC's report, the nearest aquaculture lease site, other than the Acadia Aquaculture site in the same location, is operated by Mr. Swanson and is located 1.75 miles northeast of the proposed lease site. According to the AEC's report the proposed lease is located in an area classified as open for the harvest of shellfish by the Department's Water Quality Division.

Maine Coast Heritage Trust ("MCHT"), the owners of the northern 230 acres of Tinker Island submitted written comments regarding the application. They stated that the application outlines an operation with little or no apparent visual impact, no lights and minimal noise. However, MCHT expressed a concern regarding the potential for debris from the lease site to wind up on the shores of Tinker Island. They requested that the applicant be required to promptly remove all trash and debris from the lease site that washes ashore Tinker Island.

Findings of Fact

The proposed lease site is located 1,103 feet east of Tinker Island. There are no moorings or docks located in the area of the proposed lease. The proposed lease area is not used to access Tinker Island. Residents of the island access the island on the southern end. Based on this evidence, I find that the lease will not unreasonably interfere with the ingress and egress of riparian owners.

The proposed lease site is located in water depths ranging from 105-151 feet. There is approximately 1 mile of navigable water between the northeastern boundary of the proposed lease site and the Red Nun 6 located off the southwestern tip of Hardwood Island; approximately 1.75 miles of navigable waters due east of the proposed site; and 1 mile of navigable waters between the proposed lease site and Red Nun 8 located off the northern tip of Tinker Island. The majority of traffic passes to the east of the proposed lease site. Vessels will be able to safely pass over the submerged long lines. During June and July, when the spat collection lines are closer to the surface, they will be visibly marked so as to alert mariners of their location. Based on this evidence, I find that the lease will not unreasonably interfere with navigation.

Limited lobster fishing is expected within the area of the proposed lease site due to the extremely soft sediments. The majority of lobster fishing in the area occurs between the 100-foot contour line and the eastern shore of Tinker Island. Other uses of the area include sailing, recreational boating and kayaking. There is sufficient open water surrounding the proposed lease site in which to recreate. The nearest existing aquaculture lease is located 1.75 miles northeast of the proposed lease site. The area of the proposed lease is classified as "open" for the harvest of shellfish. Based on this evidence, I find that the proposed lease will not unreasonably interfere with fishing or other uses of the area.

The bottom of the proposed site is comprised of very soft sediments. Currents are primarily tidally driven in a north/south direction along the shore of Tinker Island and are estimated to be approximately 15 cm./sec. at mid-depth. Local flora and fauna includes kelp,

mysid shrimp, sand shrimp, sea stars, wry-mouth eel burrows, and rock crabs. The proposed site is expected to attract opportunistic species, such as crabs and sea stars, and potentially urchins and lobsters, which will take advantage of the mussel drop-off from the rafts. The proposed lease site is not located within an Essential or Significant Habitat. However, there is an eagle's nest located on Tinker Island, approximately $\frac{3}{4}$ mile from the proposed lease site. Due to the presence of the eagle's nest, the shoreline of Tinker Island shall not be used for lease-related activities. Based on this evidence, I find that the proposed activities will not unreasonably interfere 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.

All seed mussels will be obtained from the wild, using spat collection lines. Based on this evidence, I find that there is an available source of blue mussels.

The proposed lease site is not located within 1,000 feet of any public beaches, parks, docking facilities, or conserved land. Based on this evidence, I find that the proposed lease site activities will not unreasonably interfere with 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 site would be serviced with a 36-foot service barge equipped with engine silencers. The service equipment would operate off the vessel hydraulic system. No equipment or vessels would be moored at the lease site. The applicant does not plan to use lighting at the lease site other than required navigational lighting. I find that the proposed lease will not result in an unreasonable impact from noise or lights at the boundaries of the lease site.

All long lines would be submerged, and thus not visible. The buoys used to mark the lines will be either yellow or red in order to alert navigators and allow for safe navigation of the area. I find that the proposed lease will comply with visual impact criteria.

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;
2. The aquaculture activities proposed for this site will not unreasonably interfere with navigation;
3. The aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area;
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 site and surrounding marine and upland areas to support ecologically significant flora and fauna;
5. The applicant has demonstrated that there is an available source of blue mussels;
6. The aquaculture activities proposed for this site will not unreasonably interfere with 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;
7. The aquaculture activities proposed for this site will not result in an unreasonable impact from noise or lights at the boundaries of the lease site; and
8. The aquaculture activities proposed for this site will be in compliance with visual impact criteria.

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.

Decision

Based on the foregoing, the Commissioner grants the applicant's requested aquaculture lease of 53.4 acres from the date of this decision for the purpose of cultivating blue mussels (Mytilus edulis) using suspended culture techniques. The applicant shall pay the State of Maine rent in the amount of \$100.00 per acre per year. The applicant shall post a bond or establish an escrow 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.

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) navigation and recreational boating shall be allowed on the open areas of the lease;
- (2) the lease area shall be marked in accordance with U.S. Coast Guard and Department of Marine Resources regulations Chapter 2.80. Such markings shall be sufficient to alert mariners as to the location of the long lines and spat collection lines; and
- (3) the leaseholder shall not use the shore of Tinker Island, above the low water mark, in relation to the aquaculture activities, and shall remove all debris resulting from the lease operations from the surrounding waters and shores.

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 are not being observed, the Commissioner may revoke the aquaculture lease.

Dated: _____

George D. Lapointe (Commissioner)
Department of Marine Resources