

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
Experimental Aquaculture Lease Application
Suspended culture of kelp, west-southwest of Indian Point,
Great Chebeague Island, Casco Bay

Ocean Approved, LLC
Lease CAS-CHEB
Docket # 2011-19E
February 8, 2012

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Ocean Approved, LLC, a Maine limited-liability corporation, applied to the Department of Marine Resources (“DMR”) for a 3-year experimental aquaculture lease on 3.03 acres located in the coastal waters of the State of Maine, west-southwest of Indian Point, Great Chebeague Island, in Casco Bay in the Town of Chebeague Island in Cumberland County, for the purpose of cultivating sugar kelp, (*Saccharina latissima*), horsetail kelp (*Laminaria digitata*), and winged kelp (*Alaria esculenta*), using suspended culture techniques. DMR accepted the application as complete on August 24, 2011. Because five or more requests for a hearing on this experimental lease were received during the advertised comment period, a public hearing on this application was held on Chebeague Island on December 19, 2011. Three parties intervened in this case: the Town of Chebeague Island, Ernest Burgess, a lobsterman from Chebeague Island, and the Indian Island Company, a property owner on Chebeague Island.

1. THE PROCEEDINGS

Notices of the hearing and copies of the application and DMR site report were sent to numerous state and federal agencies for their review, as well as to a number of educational institutions, aquaculture and environmental organizations, the Chebeague Island Harbormaster, members of the Legislature, representatives of the press, riparian landowners, and other private individuals. Notice of the hearing was published in the *Portland Press Herald* on November 17 and December 8, 2011 and in the *Commercial Fisheries News* December, 2011 edition.

The evidentiary record before the Department regarding this lease application includes eight exhibits introduced at the hearing (see exhibit list below), written comments submitted by mail, and the record of testimony at the hearing itself. Sworn testimony was given at the hearing by: Tollef Olson and Paul Dobbins, representing the applicant (also referred to as “the applicants”); DMR’s Aquaculture Environmental Coordinator, Jon Lewis; Eric Dyer, Town Administrator for the Town of Chebeague Island, an intervenor; Ernest Burgess, an intervenor; and several members of the public: Beth Howe, Robert Ernest, Claire Ross, Jeff Putnam, Colleen Francke, Lee Bowman, Bill Jordan, Beverly Johnson, Sean Mahoney, Jason Garlock, and John Wilson.

The intervenor Indian Island Company was not represented at the hearing. In his application for intervenor status for the Company, Robert Halpin wrote:

The Indian Island Company is generally supportive of the application based on the proposed design functioning as planned. If problems arise and the design does not function as designed, we would benefit from Intervenor standing. Many of our vessels draw 6' of depth. We are mainly concerned that the design depth of the kelp line (7') may not work as planned (CF, Intervenor application of Indian Island Company dated 11-29-11).

At the hearing, Mr. Olson and Mr. Dobbins described the proposed project. Mr. Lewis presented his site report. The intervenors and the public witnesses presented their concerns about the project. Each witness was sworn and subject to questioning by the Department, the applicant, and members of the public. The hearing was recorded by DMR. The hearing officer was Diantha Robinson.

In addition to the testimony and exhibits from the hearing, DMR received two letters supporting the project and two letters either opposing the project or expressing concerns about it prior to the close of the hearing record; they are included in the record and accorded appropriate weight, given their status as unsworn statements not subject to questioning. The evidence from all of these sources is summarized below.¹

LIST OF EXHIBITS²

1. Case file, # 2011-19E
2. Application, signed and dated 7-1-11
3. DMR site report, dated 11-4-11
4. Document (multiple un-numbered pages), "Existing Use Evidence, Ocean Approved, LLC", containing the applicant's PowerPoint slides, most of which were shown at the hearing. Time was made available during the hearing for the public to examine this exhibit.
5. Document, Prepared Testimony of Eric Dyer for the Town of Chebeague Island, 3 pages
6. Chart, enlarged portion of NOAA chart #13290 titled "Chebeague Island/Proposed Special Anchorages".
7. Document, "Lobstering statistics Zone F", one page.
- 8 A. Town of Chebeague Island Comprehensive Plan, excerpt with note "Adopted June, 2011", pp. 117-143.

¹The reference (Smith/Jones) means testimony of Smith, being questioned by Jones.

² Exhibits 1, 2, and 3 are cited below as: Case file – "CF"; Application – "App"; site report – "SR". Other exhibits are cited by number.

8 B. Excerpt from Chebeague Island Annual Town Meeting minutes for June 5, 2010, pp. 1, 25, 29; re: requesting U.S. Coast Guard to establish a Special Anchorage Area in certain waters along the coast of Chebeague Island, 3 pages.

2. DESCRIPTION OF THE PROJECT

Proposed Operations

Mr. Olson testified that while kelp culture is an international industry worth \$5 billion per year, the United States has only one kelp farm, which he started in Casco Bay in 2009, off Little Chebeague Island. He said that his company is working to develop standard methods for growing kelp in Maine on a yearly cycle that would complement that of the lobster industry, growing a crop for harvest between fall and spring. Mr. Olson said that he hopes kelp aquaculture will become an attractive supplemental fishery for lobstermen in the seasons when they are not actively lobstering (Olson, testimony).

Mr. Dobbins testified that the purpose of the experimental lease is to “determine the optimum growth, seeding, and harvest periods” for the three species of kelp his company proposes to grow, all of which are native to Casco Bay. Using a grant from the National Oceanic and Atmospheric Administration (NOAA), Ocean Approved has developed the nursery technology to produce kelp seed to be grown out on its lease sites. This proposed lease and a companion lease proposed for the waters southwest of Jewell Island in Casco Bay (Docket # 2011-20E), are intended by the company to be used to experiment and determine the type of site and methods most suitable for cultivating each of the three kelp species (Dobbins, testimony).

Mr. Dobbins testified that this experiment is commercial in nature. Once the experiments are completed, the company plans to publish a “how to” manual describing the results of both the nursery and grow-out research “to encourage the development of kelp cultivation in the U.S.” (Exhibit 4, p. 2). Mr. Dobbins noted that more kelp growers will be needed to develop a viable kelp industry in Maine with the support systems and markets that such an industry requires (Dobbins, testimony).

The proposed operation, as shown on pages 18 and 19 of the application, consists of nine 1,050-ft. growout lines strung horizontally ten feet apart at a depth of seven feet below the surface, which the applicants have determined is the optimum depth for growing kelp. Mooring balls at the ends of each line will be connected by 3/8-inch mooring chain to 1,500-lb moorings. Weighted buoys will be attached to each line at 100-ft. intervals to maintain the lines at the optimum depth as the kelp grows. The applicants will experiment to determine if the buoys can be spaced farther apart for less cost, while still maintaining the kelp lines at the optimum depth (Dobbins, testimony).

According to the application, the long lines will be seeded during late spring and fall. Kelp grows best in winter, with low light and cooler temperatures, Mr. Dobbins testified. He

noted that more nitrogen is available in colder waters and that kelp, an ancient plant species, is adapted to growing at a time of year when it has little competition from other marine species. The rate of growth will be monitored and the “wet weight yield per meter of long line” will be calculated when the kelp is harvested. “Data from spring and fall plantings will be compared over a 3 year period with data from other sites” (App 7). Yields may be affected by shading, currents, and temperature (Dobbins, testimony).

For purposes of the experiment, the kelp lines will be deployed year-round, Mr. Dobbins said, although it is possible that lines might be removed in order to measure yields or if the kelp stops growing. The experiment needs to determine yields and the effects of different conditions on growth, as well as investigate the extent to which growth of kelp might occur beyond the normal commercial harvest time (Dobbins/Robinson).

Seeding the long lines is expected to take no more than two days each planting season (spring, fall, and winter), using small skiffs. The application describes other site activities as follows:

“Harvest is quick and efficient, and takes place in late fall and spring. It consists of bringing the long line onto the boat and removing the kelp with a small knife as the boat moves down the line. Husbandry for the site will include weekly or bi monthly trips to the site (season dependent) for plant sampling, data capture, and structure inspection/maintenance” (App 11).

Mr. Dobbins testified that the applicants will not use the shore of Little Chebeague Island or Great Chebeague Island for access to the site; all access will be gained from the mainland to the west. Should the kelp gear become tangled with other gear, such as lobster gear, the applicants will follow standard practice, which is to disentangle and reconnect the gear to keep it intact. They will monitor the nearby shore year-round for the presence of any loose gear from the site and will clean up any such gear as soon as possible. They will check the site frequently to ensure that gear is properly deployed and maintained (Dobbins/Clement). Mr. Dobbins noted that it is in Ocean Approved’s “commercial interest” to maintain the growout lines at the optimum depth of 7 ft. below the surface, which they will do to the best of their ability (Dobbins/Dyer). Other details of the proposed operation are described in the sections below.

Site Characteristics

The proposed lease site is a rectangular tract measuring 120 ft. by 1100 ft. located west-southwest of Great Chebeague Island, one of the largest islands in Casco Bay. Water depths at the site range from approximately 21.5 ft. to 23.5 ft. at mean low water; the mean tidal range is 9.1 ft. (SR3).

Mr. Dobbins described the DMR water quality classification of the site and surrounding area as “unrestricted”, meaning that the area is currently open to shellfish harvesting without any

limitations caused by bacterial pollution. Although kelp is not a filter-feeding organism like shellfish and is not subject to harvesting restrictions based on bacterial pollution, Mr. Dobbins said it is important to Ocean Approved that the company be able to advise consumers that their products come from unpolluted waters. Kelp is a bioaccumulator of heavy metals, Mr. Dobbins noted, and the company wants to be able to say it is grown in unrestricted waters (Dobbins, testimony).

According to the Department's site report, the coordinates listed in the application, intended to describe a site of 120 ft. by 1100 ft., or 3.03 acres, actually describe a site of 4.56 acres. Experimental leases are limited in size to 4 acres by law. The site report notes that the Department can develop corrected coordinates to describe a site of the size the applicants are seeking, up to 4 acres (SR3).

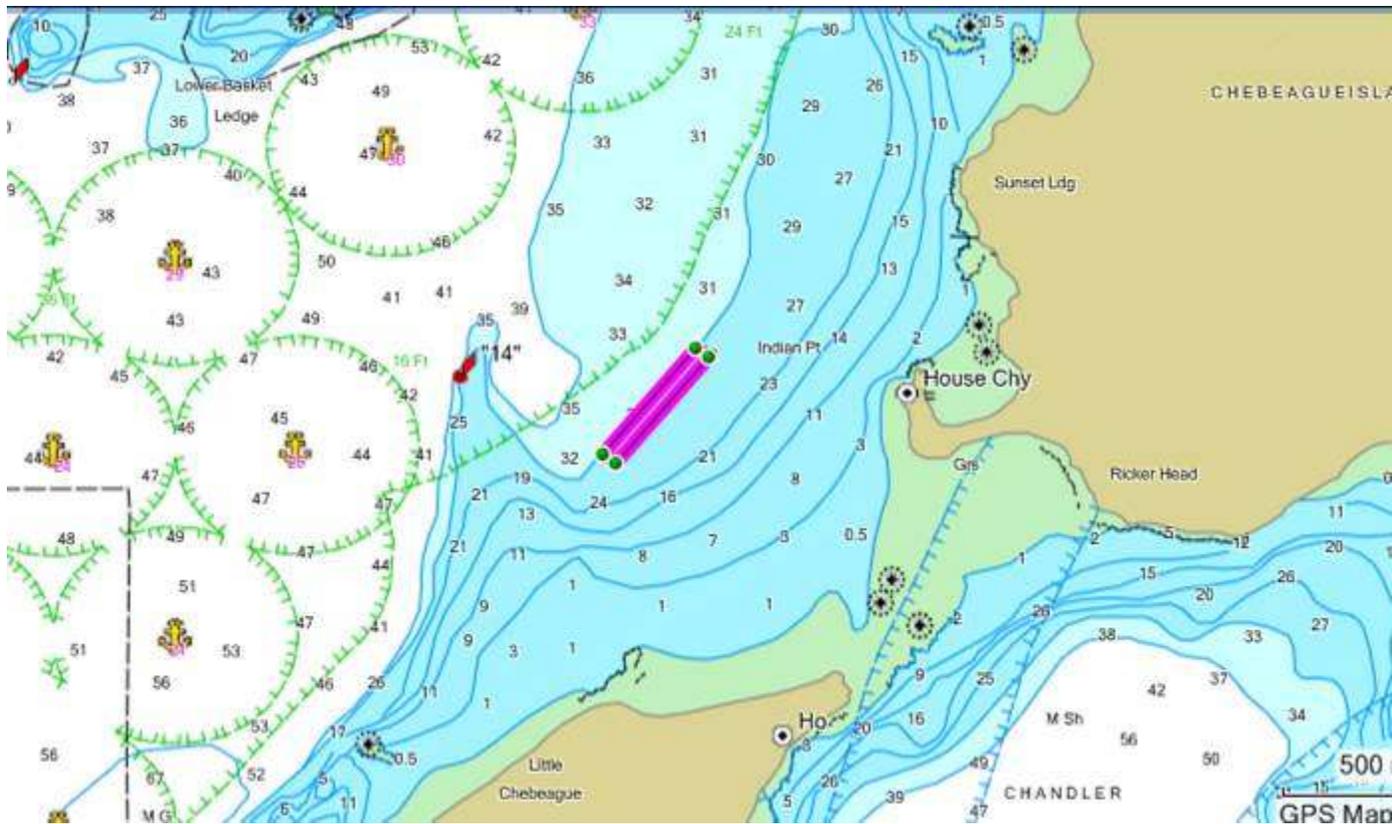
Mr. Dobbins testified that he had discussed this with Mr. Lewis before the hearing and that Ocean Approved wishes to maintain a site size of 3.03 acres, or one hectare, configured in a rectangle 120 ft. by 1100 ft. The rest of the world uses hectares, not acres, Mr. Dobbins said, and the company wants to be able to compare results at the proposed lease site with those of other kelp farms around the world (Dobbins/Robinson). Mr. Olson testified that the applicants want to maintain the northeast corner coordinates as originally specified in the application and adjust the other corners when the coordinates are revised (Olson/Lewis). Mr. Lewis said that this would reduce the size of the site by approximately one-third, moving the southwest corner and the southern boundary northward by about 400 ft. as compared to the locations shown in the application and the site report (Lewis, testimony).

The revised coordinates are:³

NE: same:	43° 43' 21.100" N	
	70° 08' 46.300" W	thence 1,100 feet at 218° True to:
SE:	43° 43' 12.539" N	
	70° 08' 55.522" W	thence 120 feet at 308° True to:
SW:	43° 43' 13.269" N	
	70° 08' 56.810" W	thence 1,100 feet at 038° True to:
NW:	43° 43' 21.829" N	
	70° 08' 47.588" W	thence 120 feet at 128° True to NE:

The revised site as plotted on the NOAA chart for the area appears as follows:

³ See CF, email from Jon Lewis to Diantha Robinson, Jan. 4, 2011, 1:36 pm



The distance from the northeast corner of the proposed lease site to the nearest intertidal shore (Indian Point on Chebeague Island to the east) is 1,312 ft. The distance from the northeast corner to the Indian Island Co. dock at Indian Point is 1,330 ft. (Coordinates for the northeast corner of the revised site remain the same as in the application and site report.) The distance from the southwest corner of the site to Nun "14" as recalculated using the new coordinates is 1,223 ft.

Mr. Dobbins testified that even though the water depths at the site were shown by the site report to be somewhat less than those listed in the application (23 ft. vs. 30 ft.), the applicant's intent is to maintain the kelp lines seven feet below the water's surface, regardless of the water depth beneath the lines (Dobbins/Clement).

3. STATUTORY CRITERIA & FINDINGS OF FACT

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

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

A. Riparian Access

The site report notes:

On October 3, 2011 there were no nearby docks or moorings with which the proposed activities might interfere. The nearest mooring associated with Indian Point was approximately 1,000[feet] to the east of the proposed northeastern corner. Access to the Indian Point dock, located 1,300 feet from the proposed lease would not be restricted as there is more than adequate room to approach the dock from the north and the south.

Riparian landowners are defined in statute and rule as those owners of shorefront land located within 1,000 ft. of a proposed lease site. In this case, the lease site is farther than 1,000 ft. from land, so there are no riparian owners.

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

B. Navigation

The site report assesses the location of the proposed lease with respect to navigation as follows:

The east side of the main navigational [channel] between Lower Basket Island and Great Chebeague and Little Chebeague Islands is defined by buoys 12, 14, and 16. The southwestern corner of the proposed lease is located approximately 1,100 feet [1,223 feet, using revised coordinates] from this channel. Navigation in the vicinity of the proposed lease would likely consist of vessels travelling to the Indian Point dock, to the sandbar between the islands, and nearshore recreational boaters. Adequate room exists on all sides of the proposed lease to accommodate these activities.

Mr. Burgess testified that the area landward of the proposed lease site is “mostly shoal water” (Burgess, testimony). Mr. Dobbins testified that the sandbar to the east of the site is passable only at high tide, but that there is “plenty of room” to navigate around the site itself at high tide (Dobbins, testimony).

Mr. Dobbins testified that boats with a draft of five feet or less can navigate over the submerged kelp lines unimpeded. He noted that he and Mr. Olson installed a small site similar to the proposed site in the waters of Bayville, off Boothbay, Maine, in 2010, under a special license from the Department, in order to test the ability of kelp to take up excess amounts of nitrogen and phosphorus occurring in the water as a result of outflow from a sewage treatment plant. He said he crossed that site with a 5 ft.-draft boat “with no problem”. Further, he noted, the site was located within a mooring field, and no problems were encountered by other vessels using the area (Dobbins, testimony).

As noted above, the intervenor Indian Island Company indicated that its concern about the project was only about whether the lines would actually remain at the planned 7-ft. depth.

The application contains a letter from DMR Marine Patrol Officer Thomas Hale, who reviewed the proposed lease site at the applicant's request. The letter states, in part:

The area directly behind the proposed site is a land bridge between the island at low tide and an impassable water covered sand bar at high tide. Only the smallest draft vessels may try to pass through that area. That area should be exempt from almost all boat traffic except for the lobster fishermen who may set more gear around the area as the summer continues. I believe this site would also be acceptable for your proposed use...Primary to my evaluation is the safety of the boating community while they operate any type of craft at any hour of the day or night. Each of these sites appear to be removed from any foreseeable hazard of vessels colliding with the equipment marking and used within the site. (App 15-16)

Eric Dyer, the Town Manager of Chebeague Island, an intervenor, testified that the Town is concerned that the location of the proposed lease, if granted, could interfere with navigation in the future, if the Town develops a new ferry and/or barge landing on land it owns at Sunset Landing, on the west shore of Great Chebeague Island approximately 1,300 ft. north of Indian Point (Dyer, testimony, & Exhibit 5). The Town's latest comprehensive plan, adopted in June, 2011, describes the need to study the feasibility of such a project and states that "The process of doing this study, making the decision about whether to implement a Sunset Landing plan and then carrying it out is likely to take between 10 and 20 years" (Exhibit 8A, p. 117).⁴

Robert Ernest, a member of the Chebeague Island Comprehensive Plan Committee, testified that if Sunset Landing were developed as a ferry dock, a mooring field would be associated with it, similar to the one that surrounds the existing ferry landing at Stone Wharf on the northwest side of the island. He said that such a mooring field would need to be designated by the U.S. Coast Guard as a "special anchorage" and referred to Exhibit 6, a portion of a NOAA chart of Chebeague Island and vicinity, which is titled "Chebeague Island Proposed Special Anchorages" (Ernest, testimony & Exhibit 6).⁵

Mr. Ernest marked Exhibit 6 with two black lines; that labeled "BE-C" shows the route a ferry from Sunset Landing would take if its destination were the present mainland ferry dock on Cousins Island. The other line, "BE*", shows the route from Sunset Landing to a hypothetical

⁴ Exhibit 8A, an excerpt from the Comprehensive Plan, discusses the Town's ferry and barge transportation issues at length. Mr. Dyer's prepared testimony (Exhibit 5) summarizes much of this information.

⁵ According to Claire Ross, the former Harbormaster of Chebeague Island, the proposal for special anchorages constitutes a request to the Coast Guard to designate certain areas where the "Rules of the Road" require vessels transiting the area to be aware of moored vessels that are unlighted at night. In areas not so designated, the Rules of the Road consider unlighted moored or anchored vessels to be hazards to navigation. The designation as a special anchorage is apparently intended to relieve such vessels of liability in the event of a collision if they are moored or anchored in a special anchorage.

Ms Ross said that the proposal for special anchorages was not coordinated with the Town's Comprehensive Plan and that if Sunset Landing were to become a ferry landing, the Town would want the anchorage around it to be designated as a special anchorage by the Coast Guard (Ross/Robinson).

alternate mainland ferry dock at the southern end of Cousins Island, on land occupied by the electric generating plant known as Wyman Unit 4.

Orange lines on Exhibit 6 mark areas the Town either has requested or plans to request the Coast Guard to designate as special anchorages. One such area is drawn from just south of Indian Point to north of Sunset Landing. Mr. Olson noted that the proposed lease site is not located within any proposed special anchorage area as drawn on Exhibit 6 (Dyer/Ross/Olson).

Mr. Burgess testified that the Sunset Landing site might also be developed for barge traffic which would likely originate in Portland (Burgess, testimony). Mr. Dyer noted that such traffic could be significant (Dyer/Burgess). Ms. Ross testified that barges following a route to and from Sunset Landing would travel around Nun Buoy #14 to reach the channel to the west (Dyer/Olson/Ross).

According to the Comprehensive Plan, ferry and barge services from Portland currently use facilities at the south end of Chebeague Island.

The evidence shows that the location of the proposed lease site is well-removed from the main navigation channel to the west and from the existing mooring field off Indian Point. Ample navigable water exists on all sides of the site, so it will not impede vessel traffic.

The applicants' intention is to maintain the kelp lines at a depth of seven feet. Vessels drawing more than five feet will be excluded from the site. Vessels of five feet draft or less can cross the site, navigating among the buoys much as would be done in an area with numerous lobster buoys.

The proposed lease site is located more than 2,000 ft. from the existing pier at Sunset Landing and more than 1,300 ft. from the pier at Indian Point.⁶ There is no evidence to suggest that it would interfere with moorings or navigation at either location or with the route of potential ferries traveling between Sunset Landing and Cousins Island. The proposed lease site is over 1,200 ft. northeast of Nun # 14, which marks the channel and the route that barges would need to take to approach Sunset Landing, were it to be developed for barge traffic. Thus, the site is well out of the way of such a route between Portland and Sunset Landing, as well. The proposed lease site is also far removed from the proposed special anchorage area around Sunset Landing, as marked on Exhibit 6.

While it is clear that the Town of Chebeague Island considers Sunset Landing as a potential site for a new ferry and/or barge dock, it is also clear that the site is unlikely to be developed in the near future and certainly not during the three-year term of the proposed lease. The Comprehensive Plan outlines the challenges the Town faces in pursuing such a plan and estimates that ten to twenty years could elapse before it is realized, if at all. It is useful for the applicants and the Department to be aware of the Town's concerns, but there is no evidence at this time that the proposed lease site will interfere with potential development at Sunset Landing.

⁶ CF, e-mail from Jon Lewis to Diantha Robinson, 1-4-12, 3:43 pm.

Therefore, I find that the aquaculture activities proposed for this site will not unreasonably interfere with navigation.

C. Fishing & Other Uses

The site report describes fishing in the area as follows:

On October 3, 2011, no fishing activities (including the presence of lobster buoys) were observed within the boundaries, or nearby the proposed lease site. Most lobster buoys were placed in proximity to, and beyond, the 36-foot depth contour approximately 400 feet to the west. Additional buoys (approximately 20-25) were scattered between the eastern boundary of the proposed lease site and the tidally exposed sand bar extending between Great Chebeague Island and Little Chebeague Island. NOAA charting describes the proposed lease area as relatively flat with a bottom composition of mud/sand and mud/shell. When removing the fifth buoy and its associated mooring tackle (see page 3, Position and Distances to Shore) on October 3, 2011, the concrete block was clearly stained by the anoxic mud, and mud remained attached to the block at the surface. It is likely that lobsters would move over this bottom at certain times of year, however, little structure is present that would tend to “hold” lobsters in this area.

Recreational hook and line fishing may also occur in the areas adjacent to the proposed lease. (SR 4).

Mr. Lewis testified, consistent with the site report, that while lobsters are likely to move over the bottom in the area of the proposed lease, there is “not a lot of structure” to hold them there, and they would be unlikely to shed in that area. Moreover, he said, “There aren’t a lot of places where lobsters don’t move” in Maine waters. He noted that the area 400 ft. west of the propose lease site has fairly heavy lobstering at the 36-ft. depth contour, and lobstering also occurs inshore of the site to the east (Lewis, testimony).

Mr. Olson testified that he has 15 or more years’ experience fishing in the area and that he and Mr. Dobbins chose a site that is lightly fished, so as not to interfere with lobstering in the area (Olson/Burgess).

Mr. Dobbins presented his and Mr. Olson’s observations of the number of lobster buoys on and around the site on 24 days between September 18, 2011 and December 11, 2011. He showed slides that listed logbook entries, as well as multiple photographs of the proposed site and surrounding waters taken on each of the visits, with paper copies of this material included in Exhibit 4. Similar material for another 17 visits between December 21, 2010 and Sept. 2, 2011 was included as paper copies in Exhibit 4. Mr. Dobbins offered to show the slides for the other 17 visits at the hearing. The Hearing Officer invited the public to inspect the paper copies of all the log entries and photographs in Exhibit 4 during a recess; one or two people did this. The Hearing Officer also offered an opportunity for anyone present to request that the additional slides be projected at the hearing, but no such request was made.

The photographs and log entries show few lobster buoys within or near the proposed lease boundaries at any time throughout the year. Numbers of buoys observed within the proposed boundaries as testified to by Mr. Dobbins ranged from a maximum of two on July 7, Sept. 18, and Oct. 10, to one on Oct. 13 and Oct. 20. Those five dates were the only ones out of a total of 41 visits when gear was observed within the site boundaries. On the other 36 visits, there was no lobster gear inside the proposed lease site (Exhibit 4).

Ernest Burgess, an intervenor, testified that there were “not many lobsters” at the site in 2011. He said there were only about one-third as many “keepers per trap” as there had been in that area in 2010. While he fished 15 traps in the area of the proposed lease in 2010, he said, he only fished a “handful” there in 2011. Following Mr. Lewis’s description of the change in the site boundaries with the revised coordinates, Mr. Burgess said that this situation was better for him, since he fishes mainly in the area around the southwest corner originally proposed for the lease, and the revision shifts the site some 400 ft. to the north (Burgess, testimony).

In response to Mr. Burgess’s concern that the kelp farm would create a “wall of kelp” that might alter currents in the area, Mr. Dobbins said that the species of kelp to be grown on the proposed lease site does not have air bladders and will not float upward from the longlines; it would be more likely to float outward and downward. He said that the presence of the kelp should not affect the current any more “than a lot of lobster lines” would (Dobbins/Burgess). Mr. Dobbins also said that Ocean Approved will mark its gear clearly and keep the lines as taut as possible, so that the overall array remains seven feet deep and does not drift outside the boundaries of the site. Lobstermen are welcome to fish along the outside of the boundaries, he said (Dobbins/Burgess).

Mr. Burgess testified that even with the revisions to the site boundaries, he is still concerned about even a marginal loss of bottom in a bay that is “intensely fished”. He said that 40% of the income of Chebeague Islanders comes from lobstering, and they cannot afford even a marginal loss of bottom. While fishing in the area of the proposed lease was poor this year, it was much better in 2010, and lobstering is “not an exact science”. “Lobsters come and go, and we follow them around”, he said, noting that some people fish the “hot spots”, while others, like himself, fish the “marginal areas”, such as that near the proposed lease location. With more fishermen using the waters around Chebeague Island in recent years, he said, losing any part of the bottom to aquaculture means more competition in the area that remains, even though the number of lobsters may not be affected (Burgess, testimony).

Eric Dyer also testified that even a marginal loss in fishing grounds can be significant. He said that the Town should have some direction in how the bottom is used, noting that any incremental loss of fishing area affects people on the island (Dyer, testimony).

Lee Bowman, a Chebeague Island fisherman, testified that he objects to privatizing the public waters, to granting exclusive rights to use the public resource, to allowing aquaculturists to sell leases, and to not having a “sunset” on a lease. Mr. Bowman noted that people from other

towns also fish in the area of the proposed lease, but they do not fish there every year (Bowman, testimony).

Colleen Francke, who has worked with Mr. Olson and Mr. Dobbins, testified in support of the lease proposal, noting that development of a kelp aquaculture industry will create new jobs on the water. She said that the total area of Maine waters now leased for aquaculture is less than the size of the Portland Jetport (Francke, testimony).

Jeff Putnam, a Chebeague fisherman, testified that he opposes the lease and the granting of exclusive use of three acres of “our area.” He said it was “rude not to consult Chebeague Island fishermen” in determining a location for the site (Putnam, testimony). Mr. Dobbins, Mr. Olson, and Ms Ross all testified to their efforts to arrange a meeting with island lobstermen before the lease application was submitted and to the meetings that were held subsequently.

Bill Jordan, a Steward for the Chebeague Island Land Trust, testified to his concerns that the impact of the lease operations might be greater than has been described. The Hearing Officer explained the limited term of an experimental lease and the more extensive process required to obtain a long-term lease for the area, should the applicants wish to do that (Jordan, testimony).

Beverly Johnson, a Chebeague Island resident, testified that she did not want potential uses of the Sunset Landing area foreclosed before the Town has an opportunity to study their feasibility (Johnson, testimony).

Sean Mahoney, an attorney for the Conservation Law Foundation, testified that he has been involved with aquaculture applications in the past and that he supports the proposed lease. It has the potential to be a sustainable use of aquaculture, he said, with benefits for marine resources infrastructure and the possibility of creating new habitat for lobsters, so that fishermen could “line the boundary of the lease with traps” (Mahoney, testimony).

Jason Garlock of Portland testified that he supports the proposal for a kelp farm and appreciates the fact that the operations could potentially be conducted in the winter, allowing lobstermen to develop an off-season fishery in kelp aquaculture (Garlock, testimony).

John Wilson of Chebeague Island testified that leasing the public waters for aquaculture constitutes a “taking” of *public* property with economic harm to private individuals who have traditionally used it and no means of compensating them for their losses (Wilson, testimony). He advocated that a compensation plan be devised. Mr. Olson noted that the lease would not cause there to be fewer lobsters in the area (Olson, testimony).

Exclusive use. The application states, “We request that fishing both lobster and dragging be restricted from the site to minimize the risk of gear entanglement” (App 6). In answer to a question from Mr. Burgess, Mr. Dobbins testified that lobstermen could set traps in the waters surrounding the proposed lease site, but that lobster gear set within the site would tangle in the kelp lines and so could not be accommodated. He indicated that the site would be well marked so that lobstermen would know where they could and could not deploy gear.

Other aquaculture leases. The three existing aquaculture leases in the vicinity are located 3,900 ft. south, 2.6 miles east, and 4,500 ft. southwest of the proposed lease site (SR 5). The site report states that “The proposed activities will not interfere with existing aquaculture operations in the region” (SR 5). Mr. Dobbins testified that he discussed his lease proposal with the holders of these leases and other sites farther away in Casco Bay, and none of them was concerned about the proposed site at Chebeague Island (Dobbins, testimony).

It appears from this evidence that the site has been carefully chosen and the lease layout designed to minimize interference with commercial fishing, including lobstering. The evidence shows that lobstering activity within the proposed lease boundaries is very sparse, even during the more active lobstering season in October. Based on this evidence, it appears that the proposed lease site will not interfere with lobstering or other forms of fishing to any significant extent. It is clear that the deployment of the kelp gear on the site will mean that dragging and lobstering will be excluded from that 3.03-acre area, and a condition to that effect will be imposed on the lease. In addition, the lease boundaries must be marked in accordance with DMR Rule 2.80⁷

Therefore, considering the number and density of aquaculture leases in the area, I find that the aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area. Dragging, lobstering, and recreational fishing will be prohibited within the lease boundaries. The lease site must be marked in accordance with DMR Rule 2.80.

D. Flora & Fauna

The Department’s site visit was conducted on October 3, 2011. The Department does not normally conduct SCUBA dives or videotape the sea bottom on experimental lease sites. The site report notes:

⁷ **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.

According to records available at MDMR, there are no documented eelgrass (*Zostera marina*) beds within the proposed area. The nearest eel grass bed is located along the western shores of Great Chebeague Island and Little Chebeague Island; approximately 975 feet from the proposed NE corner, 685 feet from the proposed SE corner and 900 feet from the eastern boundary. Water depths and substrate in the area of the proposed lease likely preclude the spread of eel grass into that area.

According to Maine Department of Environmental Protection and Inland Fisheries and Wildlife habitat mapping, the western shores of the two islands are designated Tidal Wading Waterfowl Habits. These habitats overlap with the aforementioned eel grass distribution; therefore distances to this habitat are the same as in the previous paragraph.

According to Scott Lindsay, Regional Biologist at The Maine Department of Inland Fisheries and Wildlife (MDIF&W), “The only habitat of management concern is the mapped eelgrass beds closer to the island, but it appears as though these will not be impacted by the location and type of lease” (SR 5)

Mr. Mahoney testified that kelp takes up excess nitrogen and carbon dioxide, which can improve the water quality in the vicinity.

The evidence shows that the proposed lease site will not affect the eel grass beds on the west sides of Great and Little Chebeague Islands or the habitat for tidal wading waterfowl in the same area.

Therefore, I find that the aquaculture activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.

E. Public Use & Enjoyment

According to the site report, there are no government-owned beaches, parks, or docking facilities located within 1,000 ft. of the proposed lease site (SR 6).

Therefore, I find that the aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments.

F. Source of Organisms

Mr. Dobbins testified that Ocean Approved has developed a method for producing kelp spores in a nursery to be grown out on the lease site. He described the nursery process and showed a spool of nylon line with kelp spores growing on it and explained how it would be deployed at the lease site. All kelp stock is native to Casco Bay (Dobbins, testimony).

Therefore, I find that the applicant has demonstrated that there is an available source of sugar kelp, (*Saccharina latissima*), horsetail kelp (*Laminaria digitata*), and winged kelp (*Alaria esculenta*) to be cultured for the lease site.

4. CONCLUSIONS OF LAW

Based on the above findings, 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. The lease site shall be marked in accordance with U. S. Coast Guard requirements.
3. The aquaculture activities proposed for this site will not unreasonably interfere with fishing or other uses of the area, taking into consideration the number and density of aquaculture leases in the area. Dragging, lobstering, and recreational fishing will be prohibited within the lease boundaries. The lease boundaries must be marked in accordance with DMR Rule 2.80.
4. The aquaculture activities proposed for this site will not unreasonably interfere with the ability of the lease site and surrounding areas to support existing ecologically significant flora and fauna.
5. The aquaculture activities proposed for this site will not unreasonably interfere with the public use or enjoyment within 1,000 feet of beaches, parks, or docking facilities owned by municipal, state, or federal governments.
6. The applicant has demonstrated that there is an available source of sugar kelp, (*Saccharina latissima*), horsetail kelp (*Laminaria digitata*), and winged kelp (*Alaria esculenta*) to be cultured for the lease site.

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

5. DECISION

Based on the foregoing, the Commissioner grants the requested experimental lease of 3.03 acres to Ocean Approved, LLC for three years, the term of the lease to begin within twelve months of the date of this decision, on a date chosen by the applicant; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed.⁸

This lease is granted to the applicant for the purpose of cultivating sugar kelp, (*Saccharina latissima*), horsetail kelp (*Laminaria digitata*), and winged kelp (*Alaria esculenta*) using suspended culture techniques. The applicant shall pay the State of Maine rent in the amount of \$100.00 per acre per year.

As this is an experimental lease with more than 400 sq. ft. of structures and no discharge, the applicant shall post a bond or establish an escrow account pursuant to DMR Rule 2.64 (10)

⁸ DMR Rule 2.64 (14) provides:

“The term of the lease shall begin within 12 months of the Commissioner’s decision, on a date chosen by the applicant. No aquaculture rights shall accrue in the lease area until the lease term begins and the lease is signed.”

(D) in the amount of \$ 5,000.00, conditioned upon 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, pursuant to 12 MRSA §6072-A (15)⁹. Conditions are designed to encourage the greatest multiple compatible uses of the lease area, while preserving the exclusive rights of the lessee to the extent necessary to carry out the purposes of the lease.

The following conditions shall be incorporated into the lease:

1. The lease site must be marked in accordance with both U.S. Coast Guard requirements and DMR Rule 2.80.
2. Dragging, lobstering, and recreational fishing will be prohibited within the lease boundaries.

7. REVOCATION OF LEASE

The Commissioner may commence revocation procedures upon determining pursuant to 12 MRSA §6072-A (22) and DMR Rule Chapter 2.64 (13) that no substantial research has been conducted on the site within the preceding year, that research has been conducted in a manner injurious to the environment or to marine organisms, or that any conditions of the lease or any applicable laws or regulations have been violated.

Dated: February 8, 2012

/s/ Patrick C. Keliher
Patrick C. Keliher
Commissioner
Department of Marine Resources

⁹ 12 MRSA §6072-A (15) provides that:

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