

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
Experimental Aquaculture Lease Application
Suspended & bottom culture of oysters
Blue Hill Bay, Bar Harbor

Western Bay Oyster Company, LLC
BHB OHCx
Docket #2014-18E
November 23, 2015

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Western Bay Oyster Company, LLC, applied to the Department of Marine Resources (“DMR”) for a three-year experimental aquaculture lease on 3.36 acres¹ located in the coastal waters of the State of Maine, in Blue Hill Bay/Western Bay, south of Old House Cove, Bar Harbor, Hancock County, for the purpose of cultivating American oysters (*Crassostrea virginica*) and European Oysters (*Ostrea edulis*), using suspended and bottom culture techniques. DMR accepted the application as complete on September 10, 2014. No one intervened in this case, and no public hearing was held on this application. Matthew Gerald is the sole shareholder and officer of Western Bay Oyster Company, LLC.

1. THE PROCEEDINGS

Notice of the application and the 30-day public comment period were provided to state and federal agencies which were requested to review the project, as well as to riparian landowners, the Town of Bar Harbor and its Harbormaster, members of the Legislature, representatives of the press, aquaculture and environmental organizations, and others on the Department’s mailing list. Notice of the application and comment period was published in the *Mount Desert Islander* on October 9, 2014. No comments or requests for a hearing were received by the Department.

The evidentiary record before the Department regarding this lease application includes the application and the Department’s site report dated July 13, 2015, as well as the case file, which includes the Harbormaster’s Report. The evidence from all of these sources is summarized below.²

2. DESCRIPTION OF THE PROJECT

A. Site Characteristics

The proposed lease site is located in shallow subtidal waters in the Western Bay portion of Blue Hill Bay, off the northwest shore of Mt. Desert Island (App 11, SR 2). The site report notes that although

¹ See discussion of lease size and revised east boundary on page 2.

² These sources are cited below, with page references, as CF (case file), App (application), SR (site report).

the application states the area of the lease as 3.7 acres, the lease coordinates in the application describe a total area of 4.0 acres (SR 2).

The east side of the proposed lease site lies in shallow subtidal waters along an intertidal ledge abutting Mr. Gerald's upland property; according to the site report, the ledge is likely to be exposed at and below mean low water (SR 2). The application states that the sea bottom on the east side includes ledges around the mean low water mark, as well as rocks, gravel, and small amounts of sand. The western portion of the proposed lease site has a hard bottom substrate with gravel and rocks dispersed around the lease area (App 10). To the north, south, and west of the site is a large expanse of open sea; the nearest land is Alley Island, more than 4,600 feet southwest of the proposed lease site (SR, Figures 1 & 2).

The shoreline is a mixture of ledges, rocks, and shoreline grasses. Above the ledges is a large area of salt marsh bordered by spruce and underbrush. An access road to the shore passes through the upland (App 11). According to the application, Matthew Gerald allows a few recreational and commercial fishermen and several aquaculturists to use the access road and a 40-foot-wide sandy boat launch area on his upland and intertidal shore for access to and from the water (App 7, 9). The launching area separates the southern third of the proposed lease site from the northern two-thirds. The application says that Mr. Gerald will keep the boat launch area free of oysters and gear to facilitate access to and from the shore (App 7, 9, 22).

Mr. Gerald, as the adjacent riparian landowner, and Western Bay Oyster Company, as his wholly-owned corporation, have access to and use of his upland, the access road, and the launching area, which enables them to gain access to the proposed lease site.

The application states that two moorings lie approximately 100 feet from the proposed lease site, one to the north and a second to the west, which the applicant says it has permission to use (App 10).

The proposed lease is in an area currently classified by the Department of Marine Resources Water Quality Classification program as "open/approved for the harvest of shellfish" (SR 6).

Water depths on the proposed lease site are described in the site report as 9 to 11 feet at high water along the eastern boundary, with intermittent large rocks and patches of rockweed. Along the west, north, and south boundaries, depths ranged from 13 to 17 feet at high water. The site report states, "At MLW depths are expected to range from intertidal at the eastern boundary (-1.62 feet) to a maximum of 6.4' elsewhere" (SR 2).

The site report's findings indicate that portions of the proposed lease site along its eastern boundary are exposed at mean low water and therefore are considered intertidal, not subtidal.³ Upon being advised of this, the applicant revised the east boundary to eliminate the intertidal portion of the proposed lease site, reducing the size of the site to 3.36 acres.

A map showing the changes to the east boundary appears on the last page of this decision. The revised metes and bounds description of the proposed lease site is as follows:

³ 12 M.R.S. §6001 (21). Intertidal zone. "Intertidal zone" means the shores, flats or other land between high and low water mark. DMR Rule 2.05 (1)L. Mean Low-Water. "Mean low-water" means the average low tide. An approximation of mean low-water is made by observing the low-water mark when the tide height is at 0.0 feet as indicated on a tide table.

Starting at the NW Corner (N44° 24' 53.40", W68° 22' 04.80"), thence 282.56' at 69.66° True to:
NE Corner (N44° 24' 54.37", W68° 22' 01.15"), thence 427' at 156.25° True to:
E upper corner (N44° 24' 50.51", W68° 21' 58.78"), thence 86.80' at 224.63° True to:
E lower corner (N44° 24' 49.90", W68° 21' 59.62"), thence 117.47' at 149.56° True to:
SE Corner (N44° 24' 48.90", W68° 21' 58.80"), thence 310.70' at 264.39° True to:
SW Corner (N44° 24' 48.60", W68° 22' 03.06"), thence 188.48' at 014.72° True to:
W Corner (N44° 24' 50.40", W68° 22' 02.40"), thence 350.21' at 330.17° True to NW Corner.

B. Proposed Operations

The proposed lease will be used for suspended and bottom culture of American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*). The applicant plans to test several types of gear and culture methods for commercial oyster production at this location, including ADPI bags, mats constructed of predator net, free planting of shellfish on the bottom, and growing and overwintering cage (App 6-7).

Although the application alluded to the use of the experimental lease site by other aquaculturists (App 9, item 4(c)), as well as by Mr. Gerald and his company, Mr. Gerald later advised DMR that he wished to delete that portion of the application. He stated, "I allow water access to fisherpeople and aquaculturists. They show up at all hours and days of the week, and I don't see any relationship to my application."⁴ It is up to Mr. Gerald to decide who will be authorized to use his lease site and when, but Western Bay Oyster Company, LLC, and Mr. Gerald as its sole shareholder and officer, will be responsible for compliance with all state and federal laws and rules with respect to aquaculture and the operation of the lease site. Aquaculture lease sites cannot be sublet to others by a lessee, since exclusive authority to grant aquaculture leases rests with the Commissioner of the Department of Marine Resources.⁵

The maximum buildout of the proposed lease site includes the following gear:⁶

ADPI bags: A maximum of 6,000 polyethylene mesh bags (16'X30"X 6") will be deployed on the ocean bottom in shallow water (App 17) as follows:

- North of the boat launch area, ADPI bags will be placed on the far east side of the site with 3 lines, each 390 feet in length, in rows 2 feet apart for a maximum of 1,572 bags.
- North of the boat launch area, ADPI bags will be placed in the center of the lease site with up to 11 lines, each 300 feet in length, in rows 2 feet apart for a maximum of 2,108 bags.
- South of the boat launch area, ADPI bags will be placed on the far east side of the site with 2 lines, each 100 feet in length, in rows 2 feet apart for a maximum of 840 bags.

⁴ CF, e-mail from Matt Gerald to Elaine Clark, July 21, 2015

⁵ Title 12, M.R.S. § 6072 (1)

⁶ CF, e-mail from Thomas Atherton to Elaine Clark, July 28, 2015

- South of the boat launch area, ADPI bags will be placed in the center of the lease site with up to 11 lines, each 200 feet in length, in rows 2 feet apart for a maximum of 1,480 bags.

According to the application, ADPI bags will be placed on the bottom along the mean low water line (MLW) and clipped to a moored line. Up to 140 bags will be attached to 100-foot sections of moored rope. In addition, ADPI bags will be placed in the extreme low water area and the shallow subtidal waters. The application states that the bags will be between 0 and 5 feet deep at mean low water; however, the revision of the east boundary means that these bags will remain below the level of mean low water. To harvest the bags, they will be unclipped from the lines by hand or harvested from a skiff (App 8). The applicant also plans to test the effectiveness of ADPI bags for overwintering oysters in areas where water depth exceeds 4 feet at mean low water (App 9). Other than bags used for overwintering, all bags will be removed from the water during the winter months (App 12).

Predator net mats: According to the application, a maximum of 2,450 nets will be placed on the bottom in shallow subtidal areas of the lease (0 to 4 feet below MLW); again, with the change in the east boundary, the nets will remain below MLW. Oysters will be grown on top of 6 foot by 6 foot netting mats formed with 12-foot lengths of predator netting, folded in half, with rings attached to the ends. To harvest, the mats are either picked up via a rope running through the rings or simply rolled up (App 8). Nets will be removed from the lease site in the winter (App 12).

Stacked Cages: A maximum of 1,830 wire cages (5'x 4'x 4") will be deployed directly on the bottom sediments during the growing season, arranged as follows:

- North of the boat launch area, a maximum of 1,305 cages will be arranged in 15 rows each 75 feet in length, up to 87 cages per row, two feet between rows
- South side of the boat launch area, a maximum of 525 cages will be arranged in 15 rows, up to 35 cages per row, two feet between rows.

Oysters will be placed in industry-standard wire cages in the deepest part of the site, in excess of 4 feet of water. During the summer growing season, the cages will be stacked one or two cages deep (each cage is 4" in height) (App 8). Oysters will be overwintered on the site in cages stacked two deep (total height 8"), four deep (total height 16"), and 6 deep (total height 24") (App 9).

Free planting: Oysters will be planted by hand randomly throughout the lease site except in areas that will have cages (App 8).

Oysters will be placed on the site in the various types of gear in spring, grown out through summer and into late fall, and then overwintered in bags and cages on the bottom. The applicant will use a 24-foot skiff with a mechanical arm and a small winch to retrieve gear with oysters from the deeper water of the lease site. The skiff will be moored on lease site (App 7, 9). Bottom-planted oysters will be picked up by hand or with an oyster rake from the skiff or by an individual with hip boots or chest waders (App 8).

Oysters will be taken to shore for washing and grading on the applicant's land. No power washing will occur on the lease site (App 12, 13).

3. STATUTORY CRITERIA & FINDINGS OF FACT

Approval of experimental aquaculture leases is governed by 12 MRS §6072-A. This statute provides that a lease may be granted by the Commissioner of DMR upon determining 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

DMR personnel did not observe docks or moorings in the vicinity of the proposed lease site during the site visit (SR 4). The Bar Harbor harbormaster, Charles Phippen, responding to the Department's Harbormaster Questionnaire, indicated that there are no permitted moorings within the boundary of the lease and that the proposed lease will not interfere with the ability of any riparian owners located within 1000 feet of the proposed lease to get to and from their property by water. Since the applicant owns the shore adjacent to the lease site, the lease will not interfere with riparian ingress or egress in the area immediately adjacent to the lease (CF, Harbormaster Questionnaire).

The KOA Campground lies more than 600 feet to the north of the proposed lease site. According to the site report, the aquaculture activities are not expected to interfere with "the ability of campground patrons to launch and retrieve vessels or otherwise recreate in and on the water" (SR 4).

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 application describes the relationship of the aquaculture project to navigation by saying that the proposed lease site "is a shallow rocky shoreline and all culture techniques are on the ocean floor. Not an area you should navigate sail or use power boats in at low tide" (App 13).

The site report describes navigation in the vicinity of the proposed lease site as follows:

The site is not located within any navigational corridors. As a result, vessel traffic is likely limited to commercial fishers with local knowledge of the area and/or permission to use the applicant's private boat launch and recreational canoes, kayaks, sport fishing boats, and outboard skiffs. At mean high water (MHW) and above local traffic would maintain the ability to travel through and around the proposed lease area (SR 4).

According to the Harbormaster, boat traffic in the lease area is “low and would not occur near [the] lease area.” (CF, Harbormaster Questionnaire).

The 40-foot-wide boat launch corridor through the lease site is used by “a couple of recreational and commercial fishermen and several aquaculturists” (App 9). Use of the corridor will not be obstructed by the proposed lease since no oyster cultivation will occur within it (App 22, SR 4).

The DMR site report states:

Considering the shallow water depths encountered within the proposed lease area, the potential exists for some of the described gear to be exposed or just below the surface of the water at lower tidal stages. According to the application (page 22), a 40-foot wide corridor allowing for water-borne access to shore will be left free of floating and submerged gear and oysters. To avoid potential propeller strikes, the lease, if granted, should be marked in a manner that clearly identifies the presence of submerged gear and the location of the navigation corridor (SR 2).

Regardless of the change in the east boundary, which will reduce the potential for the gear to be exposed at lower tides because it will be deployed in slightly deeper water, the applicant will be required to mark the submerged gear and the lease boundaries to indicate the location of the gear and the navigation corridor leading to the boat launching area (SR 2, 4).

Aquaculture lease sites are required to be marked for navigation purposes in accordance with U.S. Coast Guard requirements.

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

C. Fishing & Other Uses

Fishing. According to the application, the area proposed to be leased has not historically been fished for important commercial species, so negative impacts to commercial fishermen are not likely (App 10).

Department scientists did not observe fishing within or around the proposed lease site during their site visit (SR 4). However, they noted that some light recreational fishing might occur in the area. While the proposed lease will not preclude “hook and line” fishing in the area, it is possible that such fishing gear could become entangled with submerged aquaculture equipment (SR 4). The Harbormaster reported that no fishing gear was deployed within the proposed lease site but noted that some fixed-gear fishing (i.e., lobster traps) may occur nearby during the “height of the summer” (CF, Harbormaster Questionnaire).

It appears from this evidence that the proposed lease site is unlikely to affect fishing in the area.

Other Aquaculture Leases. The applicant holds four Limited Purpose Aquaculture (LPA) licenses⁷ for the culture of oysters and clams within the area of the proposed lease. The nearest aquaculture lease, BHB GC4, is located over 3,000 feet to the northeast of the proposed lease site, while

⁷ These licenses are: 2015-GER-1-13, 2015-GER-2-13, 2015-GER-5-13, and 2015-GER-6-13

other leases and licenses in the vicinity are a mile or more distant from the site. The site report notes that no interference is anticipated between the activities on the proposed lease site and those on any of the existing sites in the area (SR 5).

Exclusivity. The applicant requests that mobile fishing gear be restricted from the lease site, as draggers would damage or dislodge aquaculture gear and bottom-planted oysters. All other forms of fishing would be allowed. The applicant notes that other historical uses of the area for walking, clamming, swimming, and boating would not be affected by the lease activities (App 10).

A condition prohibiting dragging within the lease boundaries is reasonable in order to enable the aquaculture project to be carried out while encouraging the greatest number of compatible uses of the area, as provided in 12 MRS §6072-A (15). A condition reflecting this restriction will be included in the lease.

Based on this evidence, it appears that the proposed lease will not unreasonably interfere with fishing or other uses of the area. The lease must be marked in accordance with DMR Rule 2.80.⁸ Dragging within the lease area will be prohibited.

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.

D. Flora & Fauna

Site Observation. According to the site report, current and historical records indicate that eelgrass is absent from the proposed lease area. The nearest documented eelgrass bed is located in Goose Cove, more than 3,800 feet to the north (SR 5).

The application notes that seaweeds (*Ascophyllum nodosum* and *Fucus vesiculosus*) are common around the mean low water mark, attaching to rocks and ledges, and red algae (*Crustose coralline*) are common in the shallow subtidal areas. The green crab and rock crab are common, as is the common periwinkle (*Littorina littorea*) (App 11). Various other species are listed in the application as rare. The

⁸ **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.

application observes that abundance of intertidal and subtidal species varies, as some intertidal species “are known to migrate along the tidal gradient” and some subtidal species are mobile (App 11).

Fisheries and Wildlife. The proposed lease site is not located within the boundaries of an area designated by the Maine Department of Inland Fisheries and Wildlife (MDIF&W) as “Significant” or “Essential Habitat” or as Shorebird Nesting habitats (SR 5). The intertidal area immediately to the east of the proposed lease site is classified as “Tidal Wading Bird and Waterfowl Habitat” (SR 5).

As noted above, DMR sent a copy of this lease application to MDIF&W for their review and comment. No comments were received. Normally MDIF&W comments on aquaculture applications when it has concerns about potential effects on wildlife. DMR interprets the absence of any comment as indicating that MDIF&W has no such concerns in this instance.

Based on this evidence, it appears that the experimental lease as proposed for this site will not interfere with the ecological functioning of the 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 public docking facilities or beaches within 1,000 feet of the proposed lease (SR 5). All shorefront land within 1,000 feet of the proposed lease site is privately owned (App 23-27).

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

According to the application, seed stock for this proposed lease site will be obtained from Muscongus Bay Aquaculture in Bremen, Maine and Downeast Institute for Applied Marine Research and Education in Beals, Maine.

Therefore, I find that the applicant has demonstrated that there is an available source of American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*) to be cultured for the lease site.

4. CONCLUSIONS OF LAW

Based on the above findings, I conclude that:

- A. The aquaculture activities proposed for this site will not unreasonably interfere with the ingress and egress of any riparian owner.
- B. The aquaculture activities proposed for this site will not unreasonably interfere with navigation.

- C. 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.
- D. 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. 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. The applicant has demonstrated that there is an available source of American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*) to be cultured for the lease site.
- G. 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 3.36 acres to Western Bay Oyster Company, 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 lessee⁹; however, no aquaculture rights shall accrue in the lease area until the lease is fully executed.

This lease is granted to the lessee for the purpose of cultivating American oysters (*Crassostrea virginica*) and European oysters (*Ostrea edulis*) using suspended and bottom culture techniques. The lessee shall pay the State of Maine rent in the amount of \$100.00 per acre per year. Since this is an experimental lease with more than 400 square feet of structures and no discharge, a bond or escrow account is required. The lessee shall post a bond or establish an escrow account pursuant to DMR Rule 2.64 (10) (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)¹⁰. Conditions are designed to

⁹ 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.”

¹⁰ 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

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.

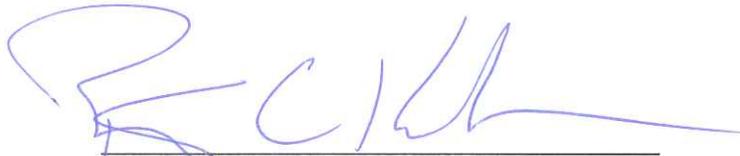
The following conditions shall be incorporated into the lease:

- A. The lease site must be marked in accordance with both U.S. Coast Guard requirements and DMR Rule 2.80.
- B. The lessee must mark all submerged gear on the lease site to indicate the location of the gear and the navigation corridor leading to the boat launching area.
- C. Dragging is prohibited within the lease boundaries.
- D. Other public uses that are not inconsistent with the purposes of the lease are permitted within the lease boundaries.

7. REVOCATION OF EXPERIMENTAL LEASE

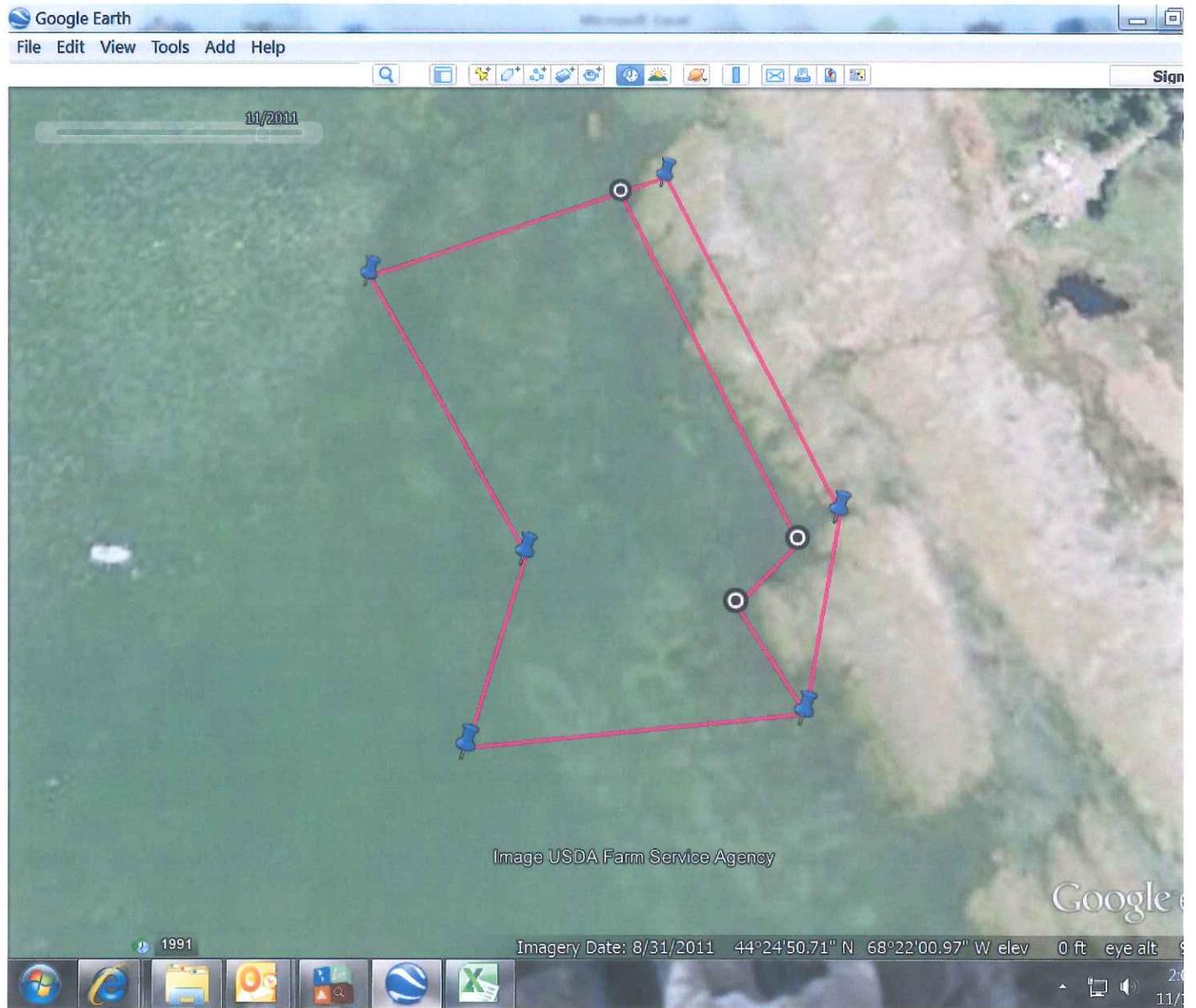
The Commissioner may commence revocation procedures upon determining pursuant to 12 MRSA §6072-A (22) and DMR Rule Chapter 2.64 (13) that no substantial research has been conducted on the site within the preceding year, that research has been conducted in a manner injurious to the environment or to marine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

Dated: Nov. 23, 2015



Patrick C. Keliher, Commissioner
Department of Marine Resources

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.”



Pictured above: Map showing revised east boundary of lease site BHB OHCx (marked with white circles). Original east boundary described in the lease application is the line farthest to the right. Map drafted by Jon Lewis, DMR, November, 2015.