

**STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES**

Adam and Zebadiah Campbell

PHSP NH

Application for Change in Gear and Species Authorization
Pulpit Harbor Salt Pond, North Haven

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND DECISION

Adam and Zebadiah Campbell applied to the Department of Marine Resources (DMR) to change the gear and species authorization for the existing standard lease PHSP NH, located in the Pulpit Harbor Salt Pond in the Town of North Haven, Knox County. The existing lease is authorized for the suspended and bottom culture of American oysters. The amendment application proposes to add hard clams (*Mercenaria Mercenaria*) as an authorized species and to add gear related to the culture of hard clams.

1. Proceedings

The amendment application was received by DMR on August 16, 2023. The application was deemed complete by DMR on October 18, 2024. Notice of the complete application and the 14-day public comment period were provided to other state agencies, riparian landowners whose shoreline property boundaries are within 1,000 feet of the lease site, the Town of North Haven and its Harbormaster, and others on DMR's email listserv. The comment period ended on November 14, 2024. The administrative record before DMR regarding this lease amendment application includes the materials listed below.

List of Materials

Description	Date	Citation
Site Report	June 10, 2003	AR-1
Original lease decision for PHSP NH	August 18, 2003	AR-2
Emergency lease decision for PHMS NH1	November 22, 2010	AR-3
Original decision for PHMS NH2	December 2, 2011	AR-4
Lease renewal decision	October 26, 2014	AR-5
Lease renewal decision	October 19, 2023	AR-6
Lease transfer decision	April 25, 2024	AR-7
Lease amendment application	October 18, 2024	AR-8

Public comment from Alice Cornwell	November 7, 2024	AR-9
Public comment from Joy and Hugh Greenway [same comment submitted by Alice Cornwell],	November 8, 2024	AR-10
Public comment from Donald Sparks	November 11, 2024	AR-11
Public comment from Lisa Shields	November 13, 2024	AR-12
Public comment from the Maine Department of Inland Fisheries and Wildlife	November 13, 2024	AR-13

2. Description of Original Decision and the Proposed Amendment

A. Lease Decision History

DMR's Findings of Fact, Conclusions of Law, and Decision, dated August 18, 2003, henceforth referred to as "the original decision", found that the evidence in the record supported the conclusion that the aquaculture activities proposed for PHSP NH met the requirements for granting a standard aquaculture lease as set forth in 12 M.R.S.A. § 6072 (AR-2). Accordingly, the 16.59-acre standard lease PHSP NH located in Pulpit Harbor Salt Pond was granted to Adam and Michelle Campbell on August 18, 2003, for the suspended and bottom culture of American oysters (*Crassostrea virginica*) (AR-2). Specifically, American oyster seed is grown in upwellers within a specific area of the site and when the American oysters reach 1.5 inches in size they are planted on the bottom (AR-2, 2). The standard lease replaced the experimental lease CAMP PN, which was held by Adam and Michelle Campbell.

On April 9, 2010, Adam and Michelle Campbell applied for a 0.9-acre emergency lease to temporarily move American oysters from PHSP NH to the proposed emergency lease site in Pulpit Harbor, North Haven. In accordance with 12 M.R.S.A § 6072-B(2), the applicant for an emergency lease needs to demonstrate that the health and safety of the shellfish at the lease area are threatened. The emergency lease application stated that low salinity, due to frequent and heavy rains, threatened the health and safety of the American oysters (AR-3, 4). The application stated that if the American oyster seed could not be moved to a location with higher salinity, then it would not survive (AR-3). The low salinity in the Salt Pond formed the basis of the applicant's emergency lease request. In evaluating the low salinity issue, the emergency lease states:

The water in the Salt Pond is connected to the tidal flow only through the culvert in the causeway dam at the head of the Mill Stream. This restricts the amount of salt water that enters the Salt Pond at high tide, so that excess water fresh water in the Pond from heavy

rainfall is not diluted quickly enough to maintain salinity adequate for the oysters to survive (AR-3, 5).

The emergency lease, PHMS NH1, was granted on November 22, 2010 (AR-3, 9). On April 21, 2010, Adam and Michelle Campbell applied to convert PHMS NH1 to a standard lease. On December 2, 2011, the request was granted and PHMS NH1 was converted to a 2.53-acre standard lease, PHMS NH2 (AR-4). The standard lease authorizes the cultivation of American oysters using suspended and bottom culture techniques (AR-4).

On October 26, 2014, PHSP NH was renewed for a 10-year term to August 17, 2023 (AR-5). The renewal decision states that prior to and during the public comment period on the renewal application, riparian landowners¹ contacted DMR requesting that upon renewal a condition be added to the lease allowing them to install a dock on the lease and to permit swimming (AR-5, 1). The riparian landowners also sent a letter to Adam and Michelle Campbell requesting that they sign an affidavit allowing them, their heirs, and future successors in title to install a dock on the lease (AR-5, 1). Adam and Michelle Campbell clarified to DMR that when asked they have always permitted docks to be installed on the lease and offered to build and install them at cost (AR-5, 1).

According to the renewal decision, DMR staff contacted the riparian landowners to inform them that swimming was already permitted on the lease and that Adam and Michelle Campbell were hesitant to sign an affidavit (AR-5, 2). DMR encouraged the riparian landowners to discuss their concerns with Adam and Michelle Campbell. The riparian landowners later called DMR to explain that they would support the renewal without any conditions, so long as DMR sent them written confirmation that swimming is permitted on the lease (AR-5). According to the renewal decision, DMR sent written confirmation and the riparian landowners subsequently confirmed that they support the renewal of PHSP NH without conditions (AR-5, 2).

On October 19, 2023, PHSP NH was renewed, to Adam Campbell, for a 20-year term to August 17, 2043.² As part of the renewal, two conditions were removed: (1) a requirement that the lease be marked in accordance with DMR regulations; and (2) a requirement that all upweller rafts and other aquaculture gear be located within the boundaries of the experimental lease CAMP PN (AR-6, 3). The condition requiring site marking was removed because leases are already required to be marked by Chapter 2.80 of DMR's regulations and that requirement is included in the lease agreement (AR-6), so the condition was redundant and unnecessary. The condition related to CAMP PN was removed because that lease was replaced by the standard lease on August 18, 2003 (AR-6). Additionally, that condition had originally been

¹ Described in the decision as a "riparian couple."

² Michelle Campbell passed away, so only Adam Campbell was listed as a leaseholder.

intended to require that upweller rafts and gear remain within CAMP PN, which was located within the boundaries of the standard lease. The renewal decision stated that, in accordance with law, all lease activities must occur within the boundaries of the PHSP NH site (AR-6). Furthermore, Chapter 2.75(7) requires lease holders to comply with their operational plan, which includes the completed lease application, final lease decision, lease agreement and subsequent DMR decisions. Therefore, the lease holder is still obligated to keep upweller rafts and associated gear within the footprint of the former CAMP PN lease.

In accordance with 12 M.R.S.A § 6072 (7-B), in granting the renewal lease for PHSP NH, the Commissioner added the following condition governing the use of PHSP NH (AR-2, 6 and AR-6, 3):

Recreational fishing and boating activities shall be allowed in open areas of the lease.

On September 15, 2023, Adam Campbell submitted a complete lease transfer application, to add Zebadiah Campbell as a holder of PHSP NH (AR-7, 1). On April 25, 2024, DMR granted the transfer request, so as of that date, Adam and Zebadiah Campbell both hold PHSP NH (AR-7).

B. Existing Authorization and Proposed Amendment

PHSP NH occupies the entirety of the Pulpit Harbor Salt Pond. There is a dam along the western boundary of the Salt Pond, so water in the Salt Pond is connected to the tidal flow only through the culvert in the causeway dam at the head of the Mill Stream. The dam limits tidal exchange and the Salt Pond is comprised of brackish water (AR-1, and AR-2).

PHSP NH authorizes the deployment of up to 10 rafted upwellers within the footprint of a former experimental lease, CAMP PN, located adjacent to the southern shoreline of the Salt Pond and property owned by Adam Campbell (AR-2, 2, and AR-1, 5). The upwellers occupy a maximum area of 0.07 acres (AR-1, 5). They are used to grow seed-size American oysters to approximately 1.5 inches in size, after which the American oysters are planted directly on the bottom. Outside of the 0.07-acre upweller footprint, the remainder of the Salt Pond remains open for swimming, boating, and other recreational activities (AR-1, 5 and AR-2, 2).

The amendment application proposes to add hard clams (*Mercenaria Mercenaria*) as an authorized species. The hard clams would be cultured in four “clam trawls” which would contain mesh nylon bags that measure 2’ x 4’ x 6” (AR-8, 4). The 2’ sides of each mesh bag would be secured to an anchored long line. The application proposes deploying up to 200 mesh bags, but it is unclear how many bags each trawl may contain. The clam trawls would be deployed in the northern section of the lease adjacent to the shoreline (AR-8, 26). Each trawl would measure 900 feet in length (AR-8, 26).

During the comment period, DMR received submissions from individuals who own storefront property on the Salt Pond. One comment, submitted by Donald Sparks, states that in January 2024, there was historic flooding and tidal surges in the area which caused damage to the dam (AR-11, 2). The comment

also states that swimming, kayaking, and paddle boarding occur in the Salt Pond and the clam trawls would be in a location where recreational users would typically access the Salt Pond. Another comment submitted by Alice Cornwell states that clam trawls are close to the shore and would extend nearly the entire length of her family's shoreline (AR-9). Alice Cornwell states that her family uses the Salt Pond for swimming and kayaking and that other people on North Haven have also used the Salt Pond for swimming and boating (AR-9).

3. Statutory Criteria and Findings of Fact

Approval of standard aquaculture lease amendments is governed by 12 M.R.S.A. § 6072 (13)(G) and Chapter 2.44 of DMR regulations.³ The statute and regulations provide that the Commissioner may grant amendments for the use of specific gear or the growth of specific species, and for operational modifications resulting from the change(s), on an existing lease site provided the lease amendment does not violate any of the lease issuance criteria, the lease amendment is consistent with the Commissioner's findings on the underlying lease application, and the lease amendment does not change or violate any of the conditions set forth in the original lease.

1. Gear

The original lease application only proposed gear in the southern portion of the Salt Pond, in an area that measures 0.07 acres. The original decision stated that the remainder of the site would remain open for activities such as boating. The original lease found the following specific to navigation:

The location of the upweller rafts will be limited to the boundaries of the applicants' experimental lease. Therefore, I find that the lease will not unreasonably interfere with navigation (AR-2, 4).

The finding that the lease would not unreasonably interfere with navigation was based upon a gear type being limited to a specific area. Permitting clam trawls in the northern section of the lease, outside the area permitted for gear, would not be consistent with the findings on the underlying lease application.

Permitting clam trawls would also violate the lease issuance criteria specific to other uses of the area. When examining other uses, the Commissioner considers whether the proposed lease activities will unreasonably interfere with other uses of the area. 12 M.R.S.A. § 6072(7-A)(C). The Commissioner shall examine whether the lease activities would unreasonably interfere with other water-related uses of the area. Chapter 2.37(1)(A)(3).

During the 2014 renewal proceedings, riparian landowners requested written confirmation from DMR that swimming was permitted within the site, which DMR provided. The comments received

³ 13-188 C.M.R. ch. 2.

concerning the amendment also state that swimming occurs within the Salt Pond. The clam trawls are proposed to be deployed adjacent to riparian property and the property owner has expressed concern about the trawl interfering with swimming. Based on the record, permitting clam trawls in that location would unreasonably interfere with other uses of the area.

There is also a condition imposed on the lease, which provides that boating activities must be allowed in open areas of the lease. Except for the specific area occupied by the upwellers, the remainder of the site is open and available for boating. Based on the original decision, it is likely that this condition was intended to preserve all open areas for boating. Permitting additional gear in other areas of the lease reduces the open area in the site, which is contrary to the condition.

Therefore, the proposed clam trawls are not consistent with the Commissioner's findings on the underlying lease application, would violate the lease issuance criteria by unreasonably interfering with other uses of the area, and would violate the condition set forth in the original lease.

2. Species

The original decision authorized the culture of American oysters, sourced from Muscongus Bay Aquaculture (MBA) in Bremen, Maine. When the original decision was rendered, MBA was an approved source of stock for American oysters and remains so currently. The amendment requests authorization to add hard clams, sourced from MBA, which is also an approved source of stock for this species. The applicant has demonstrated that there is an available source of stock for hard clams.

Hard clams, like American oysters, are bivalve mollusks and filter feeders. The addition of hard clams would be consistent with the findings of the underlying lease application specific to the culture of American oysters. There are no conditions on the lease that would limit the addition of hard clams.

American oysters and hard clams are osmoconformers, which means that their internal body fluids are closely aligned with the salinity of the surrounding water. American oysters and hard clams cannot actively regulate their internal salt balance, so rapid changes in salinity can cause metabolic and physiological stress including mortality. Though both species are osmoconformers, they have different tolerances for salinity. American oysters evolved in estuarine systems, which are partially enclosed areas where freshwater from rivers, streams, and wetlands mixes with salt water. The mix of fresh and salt water creates a brackish environment where salinity often fluctuates, due to tides, storms, and other factors. Conversely, hard clams evolved primarily in nearshore marine habitats where salinity is higher and tends to be more stable when compared to estuarine environments. As a result, American oysters have evolved to have more tolerance for low salinity and fluctuations in salinity when compared to hard clams, which prefer higher salinity and more stable salinity levels.

In this case, PHSP NH occupies the entirety of the Pulpit Harbor Salt Pond. There is a dam along the western boundary of the Salt Pond, so water in the Salt Pond is connected to the tidal flow only through the culvert in the causeway dam at the head of the Mill Stream. Due to the causeway dam, there is limited tidal exchange, and the Salt Pond is comprised of brackish water. The Salt Pond functions as an estuarine system. In 2010, as discussed above, the lease holder applied for and received an emergency lease to temporarily move American oysters from PHSP NH. The basis for the emergency lease was that low salinity, due to frequent and heavy rains, threatened the health and safety of the American oysters in the Salt Pond. Low salinity was so problematic that the lease holder believed that without the option to relocate American oysters to an area with higher salinity, they would die off. DMR found that these conditions posed a risk to the health and safety the American oysters.

In recent years, Maine has experienced intense storms that bring heavy rain and flooding. As one commenter noted, storms in January 2024 were particularly severe and caused damage to the dam and causeway. According to data maintained by the National Weather Service, the total precipitation reported for Knox County in January 2024 was approximately six inches, which was above the 1991-2020 average.⁴ Based on Maine climate data, there are on average, up to 15 more heavy precipitation events per year compared to the prior century.⁵ Heavy precipitation events create excessive runoff and can damage infrastructure.⁶

The dam and causeway along the western side of the Salt Pond limits tidal exchange and salinity within the area. Additionally, salinity fluctuates as a function of precipitation and runoff. Storm events that bring heavy precipitation are increasing and prior storms have damaged the infrastructure that allows for tidal exchange within the Salt Pond. Additionally, the Salt Pond has experienced low enough salinity levels that American oysters had to be relocated temporarily to avoid mortality. Hard clams need higher and more consistent salinity levels than American oysters.

Granting the request to add hard clams to the Salt Pond would violate Chapter 2.75 of DMR's regulations, which establishes minimum lease maintenance standards pursuant to 12 M.R.S.A. § 6072(13)(A). Specifically, Chapter 2.75(3) requires a leaseholder to maintain the site in a manner that avoids substantial injury to marine organisms. In 2010, DMR approved an emergency lease after it determined that low salinity levels posed an immediate threat to the health and safety of American oysters. Hard clams have a much lower tolerance for low salinity when compared to American oysters. Salinity levels in the Salt Pond are a function of tidal exchange, runoff from precipitation, and other factors that are beyond the ability of the leaseholder to control or maintain. The issuance of a prior emergency lease to

⁴ National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Event Rainfall Reports, <https://www.weather.gov/gyx/EventRainfallReports>

⁵ Climate Change in Maine. https://mco.umaine.edu/pubs/climate_summary/

⁶ Ibid.

allow oysters to be temporarily removed from the Salt Pond makes low salinity an established risk that could cause substantial injury to hard clams. Additionally, it may also lead to a public nuisance also contemplated as part of Chapter 2.75(3), if mortalities occurred and caused foul odors or other nuisance conditions.

The applicant has demonstrated an available source of hard clams suitable for cultivation; hard clams are consistent with findings related to American oysters and would not violate any conditions. However, approving hard clams for use in PHSP NH would violate Chapter 2.75(3), which specifies that a lessee shall maintain a site to avoid substantial injury to marine organisms. Therefore, the request to add this species to PHSP NH is denied.

Therefore, although the applicant has demonstrated an available source of hard clams suitable for cultivation, the species is consistent with findings of the underlying lease application related to American oysters and would not change or violate any lease conditions, the request is denied because it would violate Chapter 2.75(3) of DMR's regulations.

4. CONCLUSIONS OF LAW

Based on the above findings, DMR concludes that:

- a. The proposed clam trawls violate the lease issuance criteria set forth in 12 M.R.S.A. § 6072(7-A), specifically interference with other uses of the area; The proposed addition of hard clams do not violate the lease issuance criteria set forth in 12 M.R.S.A. § 6072(7-A);
- b. The proposed clam trawls are inconsistent with the Commissioner's findings on the underlying lease application; The proposed addition of hard clams is consistent with the Commissioner's findings on the underlying lease application.
- c. The proposed clam trawls violate the conditions set forth in the original lease. The proposed addition of hard clams does not violate the conditions set forth in the original lease.
- d. The proposed addition of hard clams violates Chapter 2.75(3) of DMR's regulations as the lessee cannot maintain the site in a manner to avoid substantial injury to marine organisms.

Accordingly, the evidence in the record supports the conclusion that the proposed lease amendment does not meet the requirements for the granting of a lease amendment set forth in 12 M.R.S.A. § 6072 and in DMR Rule Chapter 2.44 and Chapter 2.75(3).

5. DECISION

Based on the foregoing, the Commissioner denies the amendment request for PHSP NH from Adam and Zebadiah Campbell to add hard clams (*Mercenaria Mercenaria*) and clam trawls.

Dated:

10-26-26



Carl J. Wilson, Commissioner
Department of Marine Resources