LAND-BASED AQUACULTURE
LICENSE INSTRUCTIONS

These instructions correspond to the Department of Marine Resources (DMR) land-based aquaculture application.

This document provides instructions for each application question and provides example answers for reference. Application questions are reflective of what is required to be asked of applicants pursuant to statute and rule. To read full text of Maine's aquaculture laws and regulations please visit: https://www.maine.gov/dmr/aquaculture/laws-and-regulations

Before you get started:

- Review the application before you start filling it out. This will give you a sense of the questions asked and what resources you'll need to answer them.
- If you have clarifying questions about these instructions, please contact the Aquaculture Division at the email or phone number listed below.

  DMR Aquaculture Division: DMRAquaculture@maine.gov or (207) 350-7815
- DMR staff are available to answer questions about the application and the application process. However, we are unable to help applicants complete their proposals.

General Instructions:

- This is an application for facilities that are culturing **marine organisms** only. Marine organisms include anadromous or catadromous species. If you are proposing an anadromous or catadromous species, please be very specific so DMR can determine whether the species is a marine organism. For example, if your facility includes "Rainbow Trout" on the LBA application, please clarify that it is steelhead trout. Rainbow trout and steelhead trout are the same species (*Oncorhynchus mykiss),* but steelhead are anadromous so DMR would have regulatory authority in the LBA context (meaning they would be considered a marine organism). If it is rainbow trout, then it's a freshwater organism and subject to Maine Department of Inland Fisheries and Wildlife's (MEIFW) jurisdiction.
- Corporations and partnerships must also submit the appropriate supporting documentation with this form, based on the type of entity established. If your entity type is not listed below, please contact the Aquaculture Division at DMRaquaculture@maine.gov for further guidance.
  - **Limited Liability Company (LLC):** Submit a signed copy of the Certificate of Formation issued by the Maine Secretary of State.
  - **Business Corporation:** Submit a signed copy of the Articles of Incorporation issued by the Maine Secretary of State.
  - **Nonprofit Corporation:** Submit a signed copy of the Articles of Incorporation issued by the Maine Secretary of State.
  - **Limited Liability Partnership (LLP):** Submit a signed copy of the Certificate of Limited Liability Partnership issued by the Maine Secretary of State.
- If your proposed LBA is within areas designated as Essential Habitat, DMR recommends talking with the Maine Department of Inland Fisheries and Wildlife (MEIFW) about your proposed plans prior to applying. In accordance with the Maine Endangered Species Act, projects that are partly or wholly within Essential Habitat must be evaluated by MEDIFW before a state agency approves the required permits or authorizes project activities. It is possible that the LBA and associated project activities would need to be reviewed by MEIFW and talking with them early in the process may help with project planning and streamline review, if necessary. MEIFW's Environmental Review Program can be reached at this email: IFWEnvironmentalreview@maine.gov
- Example answers are provided for illustrative purposes only. Your responses must accurately reflect your proposed operations.
- While we strive to process applications as quickly and efficiently as possible, there are many factors that may impact processing timeframes including the scale of the project and DMR inspections of the facility. We advise applying at least 90 days prior to the intended start of any activities. In fairness to all applicants and in consideration of workloads, we are unable to expedite the review of proposals.

- Applicants are responsible for determining which additional local, state, or federal permits may apply to their operations and for obtaining all applicable permits.

1. APPLICANT INFORMATION

A. CONTACT PERSON

Legal Name of Applicant(s):	Include first and last names of all applicants or the company name. Please use legal names-no nicknames (e.g. Robert Smith instead of Bob Smith). If the license is granted, the applicant's name will be used on the license and they are legally responsible for the site. Licenses can only be granted to persons or legal entities (i.e. corporations or partnerships). "Doing Business As" or DBAs are not permitted as they are not legal entities. *Example: Jane Smith or Oystah Farm, LLC*
Contact Person:	Include first and last name for **one person** who will respond to all communications regarding the application. *Example: Jane Smith*
Email:	Include an email address that is regularly checked to reach the contact person. The email address you list here will be the primary means by which DMR will contact you. If you do not use email, please leave this blank. This also means that all correspondence concerning the application will be mailed, which limits the efficiency of communications concerning the review and processing of your proposal. *Example: jane.smith2024@gmail.com*
Telephone:	Include 10-digit phone number for the contact person. *Example: 207-555-3330*

B. PHYSICAL ADDRESS OF FACILITY

Street Address:	Include the building number and street name where the facility is physically located. *Example: 123 Main Street*
City:	Include name of city or town. *Example: Augusta*
State:	Include name of state. *Example: ME*
Zip Code:	Include 5-digit zip code. *Example: 04330*

C. MAILING ADDRESS

Check box next to 'Same as physical address' if the mailing address is the same as the physical address and do not complete section 1(C).

Street Address:	Include building number and street name or active PO Box number. *Example: P.O. Box 45*
City:	Include name of city or town. *Example: Augusta*
State:	Include name of state. *Example: ME*
Zip Code:	Include 5-digit zip code. *Example: 04330*

2. BIVALVE SHELLFISH

1. Does the facility intend to culture bivalve shellfish?
If you intend to culture shellfish, all practices at your facility must be consistent with National Shellfish Sanitation Program (NSSP) requirements that pertain to land-based aquaculture. Select "yes" if you intend to culture bivalve shellfish. Select "no" if you do not intend to culture bivalve shellfish. If you select "no", then proceed to section 3, Proposed Operations.
2. If yes to #1, will the bivalve shellfish be sold directly from the facility for human consumption?
If you selected "yes" to #1 and the bivalve shellfish will be sold directly from your facility for human consumption, then mark "yes." If you selected "yes" to #1 but the bivalve shellfish will not be sold directly from your facility for human consumption, then select "no."
3. If no to #2, I acknowledge that the facility is not going to sell any bivalve shellfish product for human consumption.
If you selected "no" to #2, then select "yes" to acknowledge that the facility is not going to sell any product for human consumption.

2A. ONLY FOR FACILITIES THAT ARE CULTURING BIVALVE SHELLFISH FOR HUMAN CONSUMPTION

Background:

The Bureau of Public Health oversees the application of the National Shellfish Sanitation Program (NSSP) within the State of Maine. This program is implemented internationally by the Interstate Shellfish Sanitation Conference (ISSC) in order to keep bivalve shellfish safe for human consumption. This is accomplished by making sure that a common set of standards are used to classify shellfish growing areas and handle shellfish when they go to market. To find the most recent shellfish closures, go here: Shellfish Sanitation and Management | Department of Marine Resources

The National Shellfish Sanitation Program (NSSP) is the federal and state cooperative program recognized by the U. S. Food and Drug Administration (FDA) and the Interstate Shellfish Sanitation Conference (ISSC) for the sanitary control of shellfish produced and sold for human consumption. The purpose of the NSSP is to promote public health protection and improve the sanitation of bivalve shellfish moving in interstate commerce through federal and state cooperation and uniformity of state shellfish programs. Participants in the NSSP include agencies from shellfish producing and non-producing states, the FDA, EPA,

NOAA, and the shellfish industry. Under international agreements with the FDA, foreign governments also participate in the NSSP. Details found in the 2023 NSSP Model Ordinance on page 66 and 67 (National Shellfish Sanitation Program (NSSP) | FDA)

The Maine Shellfish Dealer Certification and Inspection Program uses the standards outlined by the National Shellfish Sanitation Program (NSSP) to evaluate and certify all wholesale shellfish dealers in Maine. These dealers must be certified under the NSSP to ship, or process shellfish for shipment, within and outside of the state of Maine. By making sure that wholesale shellfish dealers meet these standards, the safety and wholesomeness of the shellfish being purchased by consumers is ensured. To find more information about this, go here: Maine Shellfish Dealer Certification and Inspection Program | Department of Marine Resources
Confidentiality Notice: If you wish to designate pages of your application as confidential, please leave this section of the application blank and contact DMRAquaculture@maine.gov for further instruction.

1. What procedures does the facility have in place to ensure that no poisonous or deleterious substances are introduced? Include the safe locations for toxic substances and plans for cleaning. Shellfish operations must follow NSSP guidelines.
Your procedures need to comply with NSSP guidelines. To find more information on NSSP guidelines, go here: National Shellfish Sanitation Program (NSSP)	FDA To find more information on sanitation, go here: Maine Shellfish Dealer Sanitation and HACCP Guidelines Manual and Forms	Department of Marine Resources *Example: This plant operates under our HACCP plan, including daily checks of food-contact surfaces, protection against adulteration and cross contamination, and proper labeling and storage of toxic compounds. In addition, the system area is inspected twice per day using a daily checklist, and a routine cleaning procedure is followed. Any harmful substances are stored outside the area and are clearly labeled.*
2. Describe the collection of data concerning the quality of production and provide a description of the algae growing processes and system design.
Include the facility's process of data collection, algae growing processes and a description of the system design.
3. Describe the facility's procedure for U.S. FDA, Hazard Analysis and Critical Control Points (HACCP) and Sanitation Standard Operation Procedures (SSOP) paperwork.
To find more information on sanitation and HACCP, go here: Maine Shellfish Dealer Sanitation and HACCP Guidelines Manual and Forms	Department of Marine Resources
4. Describe how the facility will maintain record keeping of the required records and how the facility will archive the records.
Include information on the facility's record keeping and archival process.
5. If applicable, provide details of the Recirculating Aquaculture System (RAS) and the use for a closed loop arrangement. Include the components used for filtration and the location of the components in the recirculating flow path. If UV, what is the wattage of each bulb and/or total?
Complete this question only if it is applicable to your facility.
6. I understand that the facility must have a program to maintain water quality. The water temperature will be measured daily using a calibrated thermometer. The salinity will be measured weekly (the bacterial indicator monitored shall be the same as used for monitoring growing areas).
Select "yes" to confirm your understanding of these requirements. Below is an example of a program to maintain water quality. *The following example outlines the water quality monitoring (Table 1).* *Table 1. Variables, frequency, and methods for monitoring water quality*

Parameter	***Production Tanks (Lines 1-4)***	
	Frequency	***Method(s)***
Temperature	*Continuous/Daily*	*Thermometer*

Salinity	*Weekly*	*Refractometer*
Fecal Coliform	*Monthly*	*Idexx Colilert-18*

Temperature: *Temperature is measured daily using a calibrated thermometer. These data are recorded on the checklist and stored in the facility.*
Salinity: *Salinity is measured weekly.*
Routine Fecal Coliform Monitoring: *Example details and laboratory: Samples for fecal coliform enumeration are collected monthly and are transported the same day to XYZ Environmental Laboratory where they are analyzed for fecal coliform (reported in MPN/100 mL) using the Idexx Colilert-18 method.*

7. I understand that monthly water test results must be emailed to DMR at DMRPublicHealthDiv@maine.gov.

Select "yes" to confirm your understanding of this requirement. If the license is granted, you need to make sure you are following this requirement. Do NOT email test results to any other account.

8. I understand DMR will conduct their own water quality samples on a quarterly basis.

Select "yes" to confirm your understanding of this requirement.

9. I understand that the facility needs to do their own monthly fecal coliform enumeration samples and records need to be kept.

Select "yes" to confirm your understanding of this requirement.

10. I understand that I need to include a bird's eye view plan of the facility depicting the plumbing and tanks, including associated measurements.

Select "yes" to confirm your understanding of this requirement. Include this attachment when you submit the LBA application.

11. Only certified shellfish dealers may conduct wet storage with a wet storage permit. If there is wet storage in addition to the LBA activities, will the bivalve shellfish be separated from the rest of the stock?

Select the appropriate answer that best matches what is happening in your facility.

12. Is the applicant a certified shellfish dealer?

Select "yes" if the applicant is a certified shellfish dealer. Select "no" if the applicant is not a certified shellfish dealer.

13. If yes, provide the certification number.

The certified shellfish dealer number is the unique identification number assigned to a dealer under the NSSP. Click here for more information: Maine Shellfish Dealer Certification and Inspection Program | Department of Marine Resources

14. Mark the water system that applies to your facility.

Select the water system that applies to your facility.

15. If the system is flow through, provide the growing area designation and classification. If you are proposing to grow bivalve shellfish in waters classified as anything other than open/approved, you must contact DMRPublicHealthDiv@maine.gov

To find the growing area designation and classification, please use the Shellfish Closure Web Map. Growing Area Classifications for bivalve shellfish are reviewed on an annual basis and subject to change. Classifications can also be updated at any time in response to changing environmental conditions, emergency situations, or other factors that impact water quality. If the license is granted, it is the responsibility of the license holder to stay informed of and comply with requirements applicable to the respective growing area.

3. PROPOSED OPERATIONS

1. Provide the final disposition of product from the facility. Check all that apply.
Select the option(s) that best matches the final disposition of product from the facility.
2. Identify the system that best describes the facility. Check all that apply.
Select the system(s) that best describes the facility.
3. What biosecurity features are present at the facility? Check all that apply.
Select the feature(s) that are present at your facility. Biosecurity means management practices or controls that prevent, reduce, and eliminate the spread of disease within a given system. DMR needs to ensure the facility is doing basic tasks to reduce the chance of pathogen proliferation in the facility.
4. What containment measures are present for organisms? Select all that apply.
Select the option(s) that are being done at your facility.
5. What is the anticipated annual production (in pounds)?
Write your best estimate (in pounds) for the annual production.

4. WATER SOURCE

1. What is the origin of the facility's water source? Check all that apply.
Fresh waters of the state can include rivers and streams, lakes and ponds, and wetlands. If there is an origin that is not listed, please include that in the textbox provided next to "other."
2. If the origin of the water source is coastal waters of the State, what is the current growing area designation and classification?
Growing area designations and classifications are found here: Interactive Shellfish Closure Map | Department of Marine Resources
3. If the origin of the water source is a public water supply, provide the name of the water source.
Name the town or city of where the water source is. For example, City of Portland, Sebago Lake; City of Augusta, Brookside, Triangle, and South wells.
4. If the origin of the water source is well water drawn from an aquifer, coastal waters, fresh waters, or other; provide the coordinates of the water source using the following format: Decimal Degrees (43.123456 N, -69.123456 W)
The coordinates must be provided using Decimal Degrees.

5. WATER INTAKE

1. Identify any treatments the facility will be using on intake water. Check all that apply.
Choose the option(s) that best describes the treatments the facility will be using. If there is a treatment that the facility is using but is not listed, select "other" and write the treatment in the provided text box.
2. What is the dosage of the identified treatments? Include the units of measurements. (Ex: UV mJ/cm2, Ozone Contact Time or mg x min/L, chlorination ppm at 2 hours post treatment)
Include the units of measurements. UV mJ/cm2, Ozone Contact Time or mg x min/L, chlorination ppm at 2 hours post treatment
3. Provide the coordinates of the facility's intake pipes (if applicable) using the following format: Decimal Degrees (43.123456 N, -69.123456 W).
The coordinates must be provided using Decimal Degrees format.

6. WATER DISCHARGE

1. **Does the water leave, or discharge, the facility at any time?**
A discharge means the water is released or otherwise disposed from the facility. This can include discharging the water into a private septic, municipal waste water treatment, leach fields, dry wells, etc. Select "yes" if water is discharged from the facility. If "yes" is selected, proceed to 6A, and then proceed to section 7. If water does not discharge the facility, select "no" and proceed to section 7.

6A. ONLY FOR FACILITIES THAT DISCHARGE WATER.

1. **Identify where the water is discharged.** Check all that apply.
"Waters of the state" means rivers and streams, lakes and ponds, coastal waters, and wetlands. Select the option(s) that matches the location of the water discharge. If none of the options listed identify where the water is discharged, please write the discharge location in the textbox provided next to "other."
2. What is the facility's anticipated daily discharge in gallons per day (GPD)?
Provide the anticipated daily discharge using the GPD format.
3. Provide the coordinates of the facility's discharge pipes (if applicable) using the following format: Decimal Degrees (43.123456 N, -69.123456 W).
The coordinates must be provided using Decimal Degrees format.
4. Identify any effluent treatments the facility will be using. Check all that apply.
Approved finfish quarantine system – a land-based aquaculture system where: - Effluent is filtered for solids with 10um filter - Effluent is treated continuously with a minimum UV dosage required to reduce all possible viruses by 3 log OR treated continuously with ozone to achieve a minimal residual concentration of 0.1mg/ml OR batch treated with chlorine to achieve a minimum concentration of 50ppm of chlorine 2 hours after treatment followed by appropriate treatment with sodium thiosulfate. Approved shellfish quarantine system – a land-based aquaculture system where: - Effluent is batch treated with chlorine to achieve a minimum concentration of 50ppm 2 hours after treatment OR continuously treated with solid filtration 10um & minimum UV dosage of >28,000 µW/ cm^2 OR ozonation to achieve a residual concentration of 0.1mg/ml More information can be found here: Pathology | Department of Marine Resources Choose the option(s) that best describes the effluent treatments the facility will be using. If there is an effluent treatment that the facility is using but is not listed, select "other" and write the treatment in the provided text box.
5. What is the dosage of the identified effluent treatments? Include the units of measurements. (Ex: UV mJ/cm2, Ozone Contact Time or mg x min/L, chlorination ppm at 2 hours post treatment)
When including the dosage, you must include the units of measurements. UV mJ/cm2, Ozone Contact Time or mg x min/L, chlorination ppm at 2 hours post treatment

7. SPECIES AND SOURCE OF STOCK

Please use the applicable tables below to list all species you intend to cultivate on the proposed site. Each table will ask for the common name and Latin (scientific) name of the stock, and the source name.

If you intend to source any marine organism from outside the State of Maine, then an import permit is required. Please contact DMR's pathology program (DMR.pathology@maine.gov) prior to filing an application to discuss

testing requirements and other considerations.

7A. SOURCE OF STOCK: APPROVED SHELLFISH HATCHERY OR NON-SHELLFISH STOCK LIST

If you are sourcing from an approved hatchery or entity included on the non-shellfish stock list (maintained by DMR), please use the table below. If you are unsure if the species are on one of these lists you can find the lists on the aquaculture website 'Resources for Growers' page, under 'Source Stocking'. The lists reflect approved shellfish hatcheries or licensed land-based facilities that have organisms available for purchase. Please contact the respective facility prior to filing an application to confirm availability of listed species.

	Common Name	Latin Name	Source
1.	Eastern oyster	*Crassostrea virginica*	Muscongus Bay

7B. SOURCE OF STOCK: OTHER AQUACULTURE SITE(S)

If you are sourcing from another aquaculture site in coastal waters please complete the table below.

American oysters and MSX: Regulation restricts the movement of American oysters (*Crassostrea virginica*) in certain bodies of water due to the detection of the protozoan parasite MSX (*Haplosporidium nelsoni*). This parasite can have significant economic consequences for growers. If you plan to source American oysters from other aquaculture sites, please review the information here: American Oyster MSX Restricted Areas | Department of Marine Resources

	Common Name	Latin Name	Aquaculture Site ID	Water Body
1.	Sea scallops	*Placopecten magellanicus*	PEN SS	Penobscot Bay

7C. SOURCE OF STOCK: WILD STOCK

If you are collecting marine organisms from Maine's coastal waters for deployment on the proposed site complete the table below. You will need to ensure that you or the individual you are sourcing from are appropriately licensed to collect the respective organisms and must abide by all laws and regulations governing the take of the organism.

Municipalities with an approved shellfish program under 12 M.R.S.A. §6671, may also issue licenses for the take of shellfish species contemplated in their respective ordinance. If you plan to gather shellfish from the wild, make sure you are following any municipal ordinances. More information is available at General Town Shellfish Information. Please contact the municipality if you have questions about their ordinance.

If you plan to purchase from a licensed harvester(s), please make sure you talk with them about your proposed plans first. If you are already licensed to collect the respective organism, you would need to list your own name.

	Common Name	Latin Name	Water Body Collected From	Name of Licensed Harvester
1.	Sea Scallops	*Placopecten magellanicus*	Penobscot Bay	John Brown

8. ACKNOWLEGEMENT AND SIGNATURE PAGE

Select each box to confirm your understanding of each statement. Once all boxes are selected, sign and date the page. If there are multiple applicants, they each need to complete this page.

SUBMISSION INSTRUCTIONS

- Before you submit, please make sure you have included all necessary attachments.
- Number each page.
- Complete application submissions must be emailed or mailed to the respective addresses listed below. If you submit the application via email, it must be sent as a single PDF attachment.
- Incomplete submissions or submissions that do not follow these instructions will be returned to you.
- After a complete submission is received, DMR will contact you with next steps.

If sending via U.S. Post Office:	If sending via email:	If sending by FedEx, UPS or other overnight service:
DEPARTMENT OF MARINE RESOURCES ATTN: Aquaculture Division 21 State House Station Augusta, Maine 04333-0021	DMRAquaculture@maine.gov	DEPARTMENT OF MARINE RESOURCES ATTN: Aquaculture Division 32 Blossom Lane Augusta, Maine 04333