Protocol for the Import of Live Eastern Oysters (Crassostrea virginica) Into Louisiana Waters

LDWF Office of Fisheries - Oyster Program
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Introduction

The Louisiana Department of Wildlife and Fisheries (LDWF) recognizes an increase in interest to import the eastern oyster (Crassostrea virginica) into Louisiana for the purpose of developing genetic diversity and/or for developing polyploidy broodstock to enhance wild native populations and to improve cage culture production (on-bottom and off-bottom). However, as per Louisiana Revised Statutes (R.S.) §56:15 and §56:20, the term "fish" means fish, as defined by R.S. 56:8, whether alive or dead, without limitation to whether or not the animal was bred, hatched, or born in captivity, and includes any part, product, egg, or offspring thereof, including oysters. While, the term "import" means to land on, bring into, or introduce into, any place subject to the jurisdiction of the state of Louisiana, including adding oysters into the waters of Louisiana, in cages or not. The introduction of any fish species into state waters from outside of the state is prohibited, except upon written permission of the Secretary of the LDWF. Oyster importation guidelines have been established to protect against the introduction of Haplosporidium nelsoni (MSX) and Bonamia exitiosa, to lessen potential impacts of Perkinsus marinus (dermo), and to protect against the introduction of parasites and invasive species that are associated with oysters. This document outlines the LDWF oyster importation process from filing an application, to the transport of oysters into the State, and through any applicable quarantining procedures.

Oyster Import Application

Any oyster importation must be approved by the LDWF prior to any importation. Those wishing to import oysters may submit an Oyster Importation Application to the LDWF for consideration. There is no fee to apply and applications can be submitted electronically. Applicants should be aware that processing may take up to 3 weeks and application submittal does NOT guarantee approval. Applications are evaluated on a case-by-case basis. Applicants will be notified in writing of the department’s decision.
If the sole oyster source is a Regional Shellfish Seed Biosecurity Program (RSSBP) certified facility, the applicant may only need to indicate that on their application. Oysters from non-RSSBP certified facilities, must include a health certificate with their application. See “Disease Testing” section for details about each option.

ONLY *C. virginica* from Northern Gulf of Mexico (GOM) stocks will be considered for import into Louisiana. Oysters imported into Calcasieu Lake, will need to have Calcasieu Lake genetic origin only. Oysters may be imported as adult, spat, seed, larvae, or genetic material (eggs and sperm).

The Oyster Importation Application form can be found on the LDWF website:


Applicants are required to supply the following on their application:

a. Name
b. Professional/company affiliation
c. Mailing address
d. Phone number
e. Email address
d. Life-stage of animals to be imported
e. Location (water body or physical address) of proposed culture/placement of imported oysters (aka, “release”)
f. Name and address of the oyster source(s)
   
   i. Multiple sources may be listed on a single import application, but a Health Certificate is required for each source.
   
   ii. Facilities cannot be added to a permit once it is issued. If additional facilities are needed, a new application must be submitted for those facilities.
g. Detailed justification of need for import (i.e., how it is advantageous to the state of Louisiana).
h. Explanation of any supplemental bio-security measures that will be taken to minimize the risk of the introduction of disease, parasites, and invasive species into Louisiana waters.
i. All other applicable and required permits and licenses.
Approved applications will receive a Special Permit for Importation and Release of Oyster Larvae and Spat via email and mail. Permits shall be valid for up to one calendar year from the date of issuance. All permits will include:

a. An expiration date
b. Approved source facility(s). Release/Facility location
d. A statement that the permit, a copy of the original application, and any applicable health certificate(s) must accompany the oysters during importation. Copies of all required documentation are provided with the permit when issued.
e. Instructions on how to notify LDWF prior to each importation event.
   I. The permittee must provide notice to the LDWF contact no more than five and no less than two business days prior to the arrival of the oysters in Louisiana territory. Notices can be submitted by an email or a phone call to the LDWF per instructions provided.

**Disease Testing**

At this time, only hatcheries that are located within the Northern GOM and work exclusively with *C. virginica* from the GOM will be permitted to have their oyster products imported in Louisiana. LDWF is also planning to work with and accept importations from hatcheries certified by the Regional Shellfish Seed Biosecurity Program (RSSBP).

The purpose of the RSSBP is to facilitate the process for permitting interstate commerce of bio secure bivalve shellfish seed and larvae (smaller than 1 inch in size) being sold directly out of hatchery facilities. The Program is voluntary and applicants will be able to have product shipped into participating states via a streamlined permitting process from Hatcheries that are compliant under this program, which obviates the need for shipment-by-shipment health evaluations. If the applicant is working with hatcheries that choose not to participate, or for some reason compliance is not achieved, the hatchery may simply continue with the status quo of batch health evaluation of products for sale and distribution as required by Louisiana. LDWF will maintain a list of actively participating hatcheries. More information can be found at https://rssbp.org.
Oyster Health Certificates, required for all non-RSSBP oyster source facilities and all other larger seed or adult brood stock oysters regardless of source, must clearly state that the oysters are free of disease, parasites, and invasive species. The certificate must include, at a minimum:

a. A dated pathology report indicating the following organisms were tested for and that the results met the allowable detection limits.
   - MSX (*Haplosporidium nelsoni*)- No detection
   - Bonamiosis (*Bonamia exitiosa*)- No detection
   - Dermo (*Perkinsus marinus*)- <10% prevalence
b. A description of the methods used
c. Source facility name
d. Certification case number
e. Certification date

Oyster Health Certificates are valid for 60 days from the date of testing.

A list of known oyster testing facilities is available from LDWF upon request.

**Quarantine Measures**

Brown mussels (*Perna perna*) and green mussels (*Perna viridis*) are found in the warmer, southern waters of the GOM. Both are nonindigenous to the GOM and are classified as “invasive.” If introduced into waters in the northern GOM, with its favorable and similar estuary conditions, both species have the potential to alter the dynamics of native ecosystems and compete with other benthic marine species for space.

Given that oysters imported from open waters or hatcheries that do not use filtration have an increased risk to introduce *P. perna* and *P. viridis* into Louisiana estuaries, and given that Florida and Texas waters are more removed from the estuary waters shared by Alabama, Mississippi and Louisiana, all broodstock and adult oysters (larger than R6) imported from Texas and (West Coast) Florida must undergo a 30-day quarantine period. Quarantine may occur prior to or after importation, but must occur before release or use as broodstock.

Larvae (R6 and smaller) do not need to undergo quarantining procedures but Texas and Florida hatcheries wishing to import larvae into Louisiana must be in compliance with the Regional Shellfish Seed Biosecurity Program (RSSBP) to ensure facilities are free and clear of *P. perna* and *P. viridis* contamination.
Quarantine criteria are:

1. Rinse oysters with clean freshwater upon delivery and/or arrival to quarantine site.
2. Scrub oysters using a wire brush dipped into a 10% chlorine solution.
3. Rinse oysters with clean freshwater following scrub.
4. Additionally dip oysters into a 10% bleach solution following scrub and rinse.
5. Rinse oysters once again with clean freshwater to remove dirty bleach water prior to placement in closed quarantine system.
6. Oysters must be in an enclosed re-circulating system that had been decontaminated with a 10% chlorine solution prior to use to preclude predation.
7. All rinse water and all water removed and/or discharged from the system must be decontaminated in a 10% chlorine solution before being disposed.
8. Oysters must be held at a temperature of 45°F or less for at least three (3) continuous days (72 hours) during quarantine.
9. Oysters must be held at salinities of 10 ppt. or less for the entirety of quarantine.
10. The re-circulating system must also be thoroughly decontaminated with a 10% chlorine solution following each quarantine event.
11. Importers needing to quarantine animals must submit their quarantine plan to LDWF with each import application. Plan must outline the steps being taken to meet the minimum or equivalent quarantine criteria stated in this protocol.
12. Quarantine facilities must have a live holding (and/or disposal) contingency plan for the evacuation of re-circulating system contents (water, oysters, and all imported shell material) in the event of impending flooding or other natural disasters.
   a. Disposal of material must be above the 100 year Flood plane areas and far enough inland away from estuarine waters.
   b. Contingency plans must include decontamination of facilities using 10% chlorine solution ahead of any evacuations.
   c. Live holding/disposal contingency plans must be on file with LDWF and updated annually.

**Summarized Steps for the Importation of Oysters**

1. An Oyster Importation Application is completed and submitted to LDWF as per instructions on the application.
a. If the seed or larvae are coming from a certified RSSBP facility and the facility is certified for the size class being imported, no additional information is needed.

b. If the oysters are coming from a non-RSSBP facility, and/or if the oysters are adult brood stock, a health certificate from the source will have to be submitted before importation is allowed. The applicant may choose to submit such a certificate at the time of application. However, the applicant should consider that Oyster Health Certificates are valid for 60 days from the date of testing and that the application review process may take up to three weeks to complete.

c. It is the responsibility of the applicant to ensure receipt of the application by LDWF. See application for contact information.

2. Once the application is received, LDWF will review the application and work towards delivering a decision on permit issuance within 21 business days from the date of receipt.
   a. LDWF will inform the applicant via email of the decision.

3. If a permit is granted, it will be sent to the applicant electronically and through mail along with any additional information LDWF deems necessary.
   a. An expiration date will appear on issued permits, but generally, permits are valid for approximately one-year from the date of issuance.

4. If applicable, the permit holder will provide LDWF with a valid Health Certificate for each batch of oysters before each importation event covered under the permit.

5. Applicant shall notify LDWF no more than five and no less than two business days prior to the arrival of oysters in Louisiana territory.
   a. Instructions on how to submit notices will be provided at the time of permit issuance.
   b. Minimal required information to be included in each notice:
      i. Applicants name
      ii. Source of oysters
      iii. Oyster life stage (e.g. larvae, set spat, seed)
      iv. Amount of oysters to be imported (e.g., sacks, individuals)
      v. Estimated timeframe of transport, estimated release date, and location of approved release
   c. Notices will be forwarded to LDWF Enforcement agents by LDWF staff.
6. The permit holder will ensure that a copy of the permit, health certificate(s) (if applicable), copy of original application, and a copy of the department provided importation protocol accompany the oysters during each importation event covered under the permit.