

Shellfish Hatchery Protocol

Production and Translocation into NSW of Sydney Rock Oyster (*Saccostrea glomerata*) spat produced by Western Australian Shellfish Hatchery Pty Ltd, Western Australia

Purpose

The following protocol has been developed to minimise the risk of the introduction of diseases and pests from Western Australian waters into NSW via Sydney Rock Oyster (*Saccostrea glomerata*) spat (juvenile seed stock) produced by the Western Australian Shellfish Hatchery Pty Ltd oyster hatchery facility at Lot 3 Murray Road, Albany, Western Australia, 6330 (Western Australian Shellfish Hatchery).

Scope

Sydney Rock Oyster spat produced by Western Australian Shellfish Hatchery will only be permitted to be placed into NSW where it can be demonstrated that the spat have been produced in accordance with the following protocol. Sydney Rock Oyster spat produced under this protocol may only be shipped to persons who hold a NSW Department of Primary Industries (NSW DPI) Class A Aquaculture Permit that endorses Sydney Rock Oyster cultivation in NSW.

It is the responsibility of the shipper to ensure that all batches of Sydney Rock Oyster spat shipped from Western Australian Shellfish Hatchery into the NSW comply with the record keeping provisions specified in Division 3 Section 13 of the Fisheries Management (Aquaculture) Regulation 2012.

A NSW DPI Fisheries Officer or Authorised Officer may examine batches of Sydney Rock Oyster spat shipped from Western Australian Shellfish Hatchery at any time once a shipment enters NSW to ensure that the shipment complies with this protocol, the provisions of the NSW *Biosecurity Act 2015*, the Biosecurity Regulation 2017, the *Fisheries Management Act 1994* and Fisheries Management (Aquaculture) Regulation 2012.

Note: At any time a formal legal instrument can take effect that may override either parts of, or the entire, protocol.

General Biosecurity Duty

On 1 July 2017 the NSW *Biosecurity Act 2015* commenced which provides a framework for responsibility for the biosecurity risk that is shared among the community, industry and government. The Act establishes a number of 'biosecurity duties' that include:

- a general biosecurity duty
- duties relating to Prohibited Matter, and
- a duty to notify biosecurity events.

The general biosecurity duty supports shared responsibility through its broad scope. Any person who deals with biosecurity matter or a carrier and who knows, or ought reasonably to know, the biosecurity risk posed or likely to be posed by the biosecurity matter, carrier or dealing has a biosecurity duty to ensure that, so far as is reasonably practicable, the biosecurity risk is prevented, eliminated or minimised. The general biosecurity duty can be found in Part 3 of the Act.

To ensure compliance with the general biosecurity duty, NSW DPI recommends that Western Australian Shellfish Hatchery develops and maintains a biosecurity plan that aims to minimise biosecurity risk to the farm and surrounding area. More information on the Act and the general biosecurity duty can be found on the website:

<http://www.dpi.nsw.gov.au/biosecurity/biosecurity-legislation>

Definitions

Algal production cycle means the time period from which algae is acquired and cultivated for use in the larval and spat production cycle.

Closed hatchery system means an enclosed land based cultivation facility for oyster larvae and spat with biosecurity controls in place, isolated from estuarine production facilities and isolated from facilities that produce stock for any other purpose.

Competent authority means a National Association of Testing Authorities (NATA) accredited veterinary diagnostic laboratory (e.g. Elizabeth Macarthur Agricultural Institute; EMAI) approved by the NSW Chief Veterinary Officer.

Independent certifier means a competent certifier as approved by the NSW Chief Veterinary Officer.

Individual batch means a group of oyster spat produced from a single spawning event, and held in a upweller system that uses the same source of water.

Larval and spat production cycle means the time period from spawning of oyster broodstock within a closed hatchery system, to cultivation of larvae, to spat prior to importation into NSW.

Oyster Shipment Log Book means a log book in a form approved by the Secretary of the Department for purposes of complying with conditions imposed by this protocol and Division 3 of the Fisheries Management (Aquaculture) Regulation 2012.

Shipper means the aquaculture permit holder whose permit lists the lease(s) on which the Sydney Rock Oyster spat will be placed.

Source Hatchery means the Western Australian Shellfish Hatchery Pty Ltd oyster hatchery facility at Lot 3 Murray Road, Albany, Western Australia, 6330.

Protocol

1) Broodstock Collection & Transport

- (a) Sydney Rock Oyster (*Saccostrea glomerata*) broodstock must not be taken from any NSW estuary where Ostreid herpesvirus- μ variant—OsHV-1 μ var (OSHV1) that causes Pacific Oyster Mortality Syndrome (POMS) is known to occur.
- (b) Sydney Rock Oyster (*Saccostrea glomerata*) broodstock must not be sourced from any High QX Risk Area or Medium QX Risk Area (as defined under the *Biosecurity Regulation 2017* under the *NSW Biosecurity Act 2015*) in which outbreaks of QX have previously been recorded, unless each individual broodstock oyster used is tested to be free of *Marteilia sydneyi* by polymerase chain reaction.

2) Hatchery & Larval Rearing

- (a) A quarantine “restricted entry” warning sign or similar is affixed to the external side of any entry door to the facility. Entry is restricted to essential authorised staff only. Access points are to remain locked whenever the facility is unattended.

- (b) Effective footbaths to be maintained at each entry/exit point to the facility and utilised both when entering and exiting the hatchery. Footbaths can be made using Virkon (made up to solution in accordance with manufacturer specifications) or 200 mg/L iodine solution.
- (c) A 200 mg/L iodine spray or 70% ethanol solution is to be used to sanitise hands prior to entry and exit from the facility.
- (d) Sydney Rock Oyster broodstock must remain isolated from all other molluscs and invertebrates in the hatchery at all times both physically and spatially (in separate rooms and separate water supplies) as well as operationally (complete separation of all equipment used on broodstock to ensure it never leaves the broodstock room).
- (e) Sydney Rock Oyster (*Saccostrea glomerata*) spat (juvenile oysters) are to be produced in a closed hatchery system and are at no time to be placed in, or exposed to, unfiltered Western Australian waters.
- (f) All seawater used in the hatchery system must be subject to nominal filtration 1.0 micron or less followed by ultraviolet irradiation at a dose of at least 30 mJ/cm² for the duration of the larval and spat production cycle. The hatchery must also certify that all seawater used in the larval, spat and algal production cycle has been subject to nominal filtration to 1.0 micron or less followed by ultraviolet irradiation at a dose of at least 30 mJ/cm².
- (g) All tanks, internal water supply lines, valves and culture equipment used in the larval and spat production cycle must be cleaned with chlorine (made to a minimum solution of 200ppm active effective chlorine) and washed with fresh water prior to commencing the larval and spat production cycle.
- (h) Each batch of eggs/sperm must be removed from spawning tanks/vessels containing broodstock oysters as soon as possible after stripping of gametes and be transferred to a larval rearing room, so that they remain completely isolated from all other molluscs in the hatchery at all times both physically and spatially (in separate rooms and water supplies) as well as operationally (complete separation of all equipment used to ensure it never leaves the larval rearing room).
- (i) Batches of Sydney Rock Oyster spat that are to be imported into NSW must be the progeny solely of broodstock which have been approved in writing by NSW DPI.
- (j) Prior to the first Sydney Rock Oyster spat batch being imported to the NSW, and thereafter every 12 months, the independent certifier is to certify that the source hatchery meets 1)(a) and has the capacity to meet 1)(b)-(d).

3) Pre-dispatch Diagnostic Testing

The following requirements must be met no more than 30 days but not less than two working days prior to the importation into NSW:

- (a) Every batch of spat must be stress tested at a suitable stage of development by holding them at a minimum temperature of 20°C for no less than 3 days prior to sampling for diagnostic testing.
- (b) Three¹ random samples of at least 300 spat from each individual batch (with each lot of 300 comprised of an equal number of spat collected from each upweller used to produce that batch) of Sydney Rock Oyster spat are to be forwarded for testing and examination to a competent authority for the following:
 - (i) 300 spat¹ are to be tested by polymerase chain reaction for the presence of:

- Malacoherpesviruses; and
 - *Bonamia* spp.; and
 - *Perkinsus* spp.; and
 - *Minchinia* spp; and
- (ii) 300 spat are to be tested through incubation in Ray's Fluid Thioglycolate Media (RFTM) for *Perkinsus* spp.; and
- (iii) 300 spat are to be examined for a general health screen by histopathology for the presence of any prohibited matter as prescribed in Schedule 2, Part 1 of the NSW *Biosecurity Act 2015*, and any notifiable diseases as prescribed in Schedule 1, Part 2 of the Biosecurity Regulation 2017.

¹ *To be discussed prior to collection with the competent authority to ensure that the polymerase chain reaction tests can be completed on the same 300 spat sample. Arrangements must be made with the competent authority to ensure that a minimum 300 spat per batch are tested for each of the polymerase chain reaction tests listed above.*

- (c) A statement of general health and a certificate of disease status must be provided by the competent authority.
- (d) A batch of Sydney Rock Oyster spat produced at the source hatchery may only be placed into NSW where the batch of spat has been certified free of evidence of disease agents by the competent authority.

4) Shipment Documentation

Prior to dispatch of each batch of Sydney Rock Oyster spat from the source hatchery to NSW:

- (a) The shipper must:
- (i) complete a copy of the Oyster Shipment Log Book; and
 - (ii) provide a completed copy of the Oyster Shipment Log Book to the source hatchery.
- (b) The source hatchery must prepare a declaration stating:
- (i) the species of oyster shipped; and
 - (ii) that the requirements of (2) and (3) of this protocol have been met.
- (c) Copies of the:
- (i) statement of general health and certificate of disease status at 3)(c) above; and
 - (ii) Oyster Shipment Log Book at 4)(a)(i) above; and
 - (iii) the source hatchery declaration at 4)(b) above

must accompany the Sydney Rock Oyster batch throughout shipment from the source hatchery into NSW, and should be held for a period of 12 months after the arrival of the shipment in NSW by the shipper and any other person who receives the Sydney Rock Oyster batch or any part of that batch.

- (d) Copies of the:
- (i) statement of general health and certificate of disease status at 3)(c) above; and
 - (ii) Oyster Shipment Log Book at 4)(a)(i) above; and
 - (iii) the source hatchery declaration at 4)(b) above

must be emailed to NSW DPI to the address: oyster.import@dpi.nsw.gov.au