Massachusetts 2016 *Vibrio parahaemolyticus (Vp)* Control Plan

Commercial Harvest Restrictions for Oysters May 21, 2016 - October 16, 2016:

A. Definitions:

Adequately iced means that the amount and application of the ice is sufficient to ensure that immediate cooling begins and continues for all oysters as described in Section B.5 of this Plan.

Adequately shaded means measures have been taken to prevent **market bound** oysters from direct exposure to sunlight. Materials in direct contact with oysters must be smooth, easily cleanable and impervious to water.

Approved means a classification used to identify a growing area where harvest for direct marketing is allowed.

Aquaculturist means any person authorized by the Director of the Division of Marine Fisheries (DMF) to propagate or rear shellfish for commercial purposes under the authority of a shellfish propagation permit issued pursuant to 322 CMR 7.01(4).

Batch tagging for re-submergence means the use of a single tag to identify multiple containers of **market-sized oysters** returned to the original oyster license site (“grant”) following **oyster culture activities** requiring **re-submergence**.

Broadcast re-submergence means the return of loose, **market-sized oysters** back to the waters of the original license site ("grant") following **oyster culture activities** requiring **re-submergence** as approved by DMF.

Conditionally Approved means a classification used to identify a growing area which meets the criteria for the approved classification except under certain conditions described in a management plan.

Harvester means a person who takes shellstock by any means from a growing area for commercial purposes.

Harvester icing tag means a **harvester** tag indicating the **time of icing** for a single **harvester lot** attached to a **shellfish icing container**.

Harvester lot means containers of oysters identified by the shellfish tag as having the same **time of harvest** and consisting of oysters from a single defined growing area gathered by a single licensed **harvester**.

Internal temperature means the external temperature of the shell of the animal, at the center of a packaged mass of oysters (a box, sack, bag, etc.) measured by the **original dealer**.

Market-bound Oysters means all oysters removed from a shellfish growing area by a commercial fisherman or aquaculturists intended for commercial purposes on that calendar day.

Market-sized oysters means those oysters measuring at least 3" in shell length or 2 ½" in shell length for those aquaculturists authorized by DMF to possess and sell undersized ("petite") oysters.

Off-site Culling means an aquaculture practice of temporarily removing shellfish from the licensed site (grant) to an **aquaculturists'** permitted **off-site culling** location for the purposes of sorting, grading and cleaning the individual shellfish.

Original dealer means a wholesale dealer authorized by the Division of Marine Fisheries as a primary buyer in order to purchase shellfish in Massachusetts directly from permitted commercial **harvesters**.

Oyster culture activities means activities conducted by some **aquaculturists** that require the removal of oysters from the waters of the license site (grant) for the purposes of sorting, culling, grading, pitting, over-wintering and/or the removal of fouling organisms to enhance oyster marketability.

Re-submergence means the return of **market-sized oysters** to the waters of the original license site ("grant") after they have been removed for off-site culling and/or oyster culture activities, or after being returned by a primary buyer, as a result of recall specified at 322 CMR 16.05(4).

Shellfish Growing Area means any geographic area within waters under the jurisdiction of the Commonwealth that have been listed and mapped by the Division as a Designated Shellfish Growing Area (DSGA) and made available to the public on the Division's website under information on the Shellfish Sanitation and Management Program.

Shellfish icing container means a container that is smooth, in good condition, is easily cleaned, impervious to water, insulated, self-draining, has a tight-fitting lid, and has a light-colored exterior (e.g. Bonar box, etc.).

Time of icing means the time when the last oyster or bag of oysters in a **harvester lot** is placed in a **shellfish icing container** and is **adequately iced**.

Time of harvest for sub-tidal areas means the time when the first oyster in a **harvester lot** is taken from the water on a calendar day. Time of harvest for intertidal areas means the time when the first oyster in a **harvester lot** is exposed during a single low tide cycle or when the first oyster in a **harvester lot** is taken from the water, whichever occurs first.

B. Harvesters:

1. This plan shall only apply to **market-sized oysters**.

2. The requirements of this plan shall apply to the commercial harvest of both privately cultured oysters as well as wild oysters from the public fishery.

3. The requirements of this plan shall apply to all **market-sized oysters** in Massachusetts coastal waters from May 21, 2016 through October 16, 2016. For the purposes of this Plan, coastal waters are the inter-tidal and sub-tidal zones where oysters are cultured or grow naturally.

4. All **market-bound** oysters harvested from May 21, 2016 through October 16, 2016 shall be **adequately shaded** immediately after harvest and remain **adequately shaded** until placed in a **shellfish icing container** and **adequately iced.**

5. All **market-bound oysters,** with the exception of those described in Section B.6 of this Plan, shall be **adequately iced** within 2 hours of time of harvest or exposure, or prior to leaving the point of landing, whichever occurs first.

6. All **market-bound oysters** harvested from **shellfish growing areas** CCB- 42, CCB-43, CCB-44, CCB-45, CCB-46, CCB-47 and V-20, between July 1 – September 15, shall be **adequately iced** within One (1) hour of time of harvest or exposure, or prior to leaving the point of landing, whichever occurs first.

7. All **market-bound oysters** must remain **adequately iced** until received by the original dealer. To accomplish this, harvesters must place oysters into a shellfish icing container and:
    a. Mesh bags containing oysters must be completely surrounded by ice, with at least two (2) inches of ice between the bags and the bottom and sides of the container, and at least three (3) inches of ice on top;

    b. Loose oysters placed into a **shellfish container** must be completely surrounded by ice, with at least two (2) inches of ice at the bottom and sides of the container, and at least three (3) inches of ice on top; or

    c. Oysters held in an ice and water mixture (e.g. ice slurry, cold water dip) must be fully submerged and the ice and water mixture must be at or below 45° F to inhibit growth and proliferation of bacteria. Fresh potable water or ocean water from an area classified as **Approved** or **Conditionally Approved** by the Division of Marine Fisheries and in the "open status" may be used to constitute the mixture.

8. All ice used to cool shellfish must originate from approved sources of potable water or ocean water from an area classified by DMF as "**Approved**" or "**Conditionally Approved**," and in the "open status," as established under the National Shellfish Sanitation Program.

9. All containers of **market bound oysters** shall be tagged with the following information: **time of harvest, time of icing,** harvest date, harvest area, identification of **harvester**, type of shellstock and quantity (pieces). The tags shall be legibly written in indelible ink and attached to the shellfish container at the **time of harvest**. The **time of icing** shall be written on the **harvester** tags when the last oyster or bag of oysters is placed in a **shellfish icing container** and is **adequately iced**.

10. **Harvesters** may elect to record the **time of icing** on a single shellfish tag attached to the **shellfish icing container** provided that all oysters in the **shellfish icing container** are from a single **harvester** and a single **harvester lot**. The tag must be attached at the **time of icing** and remain attached until received by the **original dealer**.

    a. The **harvester icing tag** must at a minimum include the **time of harvest, time of icing**, the harvest date, harvest area, identification of **harvester**, type of shellstock, and quantity. The **harvester icing tag** must be attached prior to receipt by the **original dealer**.

    b. **Harvesters** who elect to use a **harvester icing tag** are still required to attach harvester tags to all individual containers of shellfish inside the **shellfish icing container** with the **time of harvest**, harvest date, harvest area, identification of **harvester**, type of shellstock, and quantity ().

11. Harvest Logbooks:

    a. The Division of Marine Fisheries will issue each **harvester** a *Vibrio parahaemolyticus* (*Vp*) harvest logbook to record the following information detailing oyster harvest and **re-submergence** activities:

        i. For each **harvester lot** the **harvester** shall record the date, harvest area, quantity harvested , **time of harvest**, **time of icing**, and the **original dealer** who received the oysters.

        ii. For all **re-submergence** activities the **aquaculturist** shall record the date shellfish are returned to the license site for **re-submergence,** the date **re-submergence** tags are removed, the harvest area, quantity returned (), type and number of containers, and the category of **re-submergence** (anti-fouling, **off-site culling**, recall, etc.).

        iii. **Re-submergence** information shall be recorded on the date of **re-submergence** prior to the return of the first shellfish container or oyster to the license site.

b. Harvest information shall be completed before leaving the landing site and before harvested oysters are placed in transit to the **original dealer.**

c. All information shall be recorded legibly and with indelible ink.

d. All **harvesters** are required to return their completed *Vibrio parahaemolyticus* (*Vp*) harvest logbook to the Division of Marine Fisheriesby December 31, 2016..

12. Oyster Handling and Re-submergence by **Aquaculturists**:

a. **Market-sized oysters** removed from an aquaculture license site for any **oyster culture activities** (e.g. culling, sorting, anti-fouling, etc.) will be considered **off-site culled** and must be returned to the same license site and **re-submerged** for a minimum of 10 days prior to harvest.

b. **Oyster culture activities** of **market-sized oysters** conducted on barges, boats, or other floating structures within the same designated shellfish growing area that do not exceed the two (2) hour requirement for adequate icing at Section B.5 of this Plan will not be considered **off-site culled**. These oysters may be harvested in accordance with this Plan or returned to the original license site and harvested the following calendar day with the exception of those described in section B.12.c .

c. **Oyster culture activities** of **market-sized oysters** conducted on barges, boats, or other floating structures within **shellfish growing areas** CCB- 42, CCB-43, CCB-44, CCB-45, CCB-46, CCB-47 and V-20, between July 1 – September 15, that exceed the (1) hour requirement for icing at section B.6 of this Plan, but do not exceed (2) two hours from time of exposure,shall be returned to the original license site and harvested no sooner than the following calendar day.

d. **Oyster culture activities** of **market-sized oysters** conducted on barges, boats, or other floating structures that exceed (2) two hours from the time of harvest or exposure shall be considered **off-site culled** and are subject to 10day **re-submergence**.

i. **Off-site culling** activities are subject to the tagging and record keeping conditions of the aquaculturist's Division of Marine Fisheries Aquaculture Permit.

ii. Prior to removal of any shellstock from a license site, **aquaculturists** are required to notify the local shellfish authority.

e. All containers of **re-submerged** oysters or areas used for **broadcast re-submergence** must be segregated on the original license site and tagged. The tags

must identify the oysters as **"re-submerged"** and must include the date the oysters were **re-submerged**.

iii. Tags must be waterproof, legible and completed with indelible ink.

iv. After 10days the tags may be removed and discarded.

v. **Aquaculturists** who engage in **broadcast re-submergence** or **batch tagging for re-submerged** oysters must submit a **re-submergence** plan to DMF for approval 30 days prior to the start of the activity. **Re-submergence** plans must, at a minimum, include:

1. A description of the **re-submergence** method (broadcast, holding cars, cages, etc.);

2. A description of segregation method; and

3. A description of tagging method.

f. All **aquaculturists** must record all **re-submergence** activities in their *Vibrio parahaemolyticus (Vp)* logbook with the information outlined in section 9.

13. Transportation of Oysters to Original Dealers:

a. All market bound oysters shall be transported by the **harvester** directly from the landing site to the **original dealer's** physical facility or received by the **original dealer** at the landing site as required by 105 CMR 533.007 (1)(3)(f)(1-2) (or any successor regulation).

b. **Harvesters** are prohibited from storing or handling market bound oysters at a private residence or unlicensed facility prior to delivery to the **original dealer**.

c. All oyster transactions must be completed by the **harvester** and an employee of the **original dealer**.

C. Original Dealers:

1. All oysters received by the **original dealer** between May 21, 2016 and October 16, 2016 shall be cooled in the **original dealer's** facility to 45° F within 10 hours of the **time of harvest** or tidal exposure before shipment.

2. Once received by the **original dealer**, oysters shall remain under refrigeration at or below 45° F for the duration of storage at the **original dealer's** facility until transfer to refrigerated vehicles for shipment. If an **original dealer** receives oysters from the **harvester** at the landing site, the dealer shall ensure that oysters remain iced throughout

transportation to the **original dealer's** physical facility in their insulated, mechanically refrigerated vehicle. The vehicle must be pre-chilled to an ambient temperature at or below 45° prior to loading.

3. Individual containers of oysters held in the vehicle must have at least three (3) inches of ice on top of each container. Transport by this method does not require two (2) inches of ice on the sides and bottom of the container. Additionally, the **original dealer** must record the ambient temperature of the vehicle's refrigerated storage area (including the time the temperature was taken) in their **original dealer's** receiving records upon receipt at his or her facility.

4. Hazard Analysis Critical Control Point (HACCP)

   All **original dealers** who receive oysters harvested from Massachusetts coastal waters between May 21, 2016 and October 16, 2016 shall implement a HACCP Plan indicating pathogen growth of naturally occurring *Vp* as a significant hazard reasonably likely to occur and include the following:

   a. **Critical Control Point Receiving:** All oysters received by the **original dealer** shall be properly tagged in accordance with Section B.7 of this Plan and **adequately iced** in a manner sufficient to ensure that immediate cooling begins and continues for all oysters. For oysters that are not properly tagged or **adequately iced** the following Corrective Actions shall be taken:

      i. **Original dealers** shall reject any **harvester lot** of oysters not **adequately iced** and/or not properly tagged per Sections B.5 and 7 of this Plan, respectively. When a shipment of oysters is rejected the dealer shall document the date and time of the incident, the name of the **harvester** and, if possible, the harvest date, harvest area, the time of delivery of the oysters, quantity of oysters (), and the **harvester's** Division of Marine Fisheries Commercial Shellfishing Permit number. This information shall be recorded as a Corrective Action and immediately reported to the Division of Marine Fisheries; and

      ii. **Original dealers** who receive shipments of oysters not **adequately iced** and/or not properly tagged as harvested by a licensed **harvester** shall place the oysters on internal hold and immediately notify the Department of Public Health's Food Protection Program, document the deviation in a Corrective Action Report, and await instruction from the Food Protection Program for final disposition of potentially time/temperature abused oysters; and

      iii. **Original dealers** shall address the root cause of the deviation by discontinuing receipt of oysters from the **harvester** until compliance with the **harvester** requirements identified in Section B of this Plan have improved to ensure the Critical Limit at receiving is not exceeded.

b. **<u>Critical Control Point Cooling:</u>** The HACCP Plan shall include a Critical Limit indicating the **internal temperature** of oysters will be cooled to 45° F or below within 10 hours after the **time of harvest**. The **original dealer** shall verify and record in a monitoring record that all oysters have achieved an **internal temperature** at or below 45º F within 10 hours prior to release for shipment. **Original dealers** who fail to achieve the Critical Limit shall take the following Corrective Actions:

   i. Ensure oysters that are not cooled to an **internal temperature** of 45° F within 10 hours are not directed to market and;

   ii. Document the deviation in a Corrective Action Report; and

   iii. Place any remaining oysters held at the facility on internal hold; and

   iv. Recall any noncompliant oysters and dispose of all recalled oysters; and

   v. Notify the Food Protection Program of the action taken; and

   vi. Determine the root cause of the Critical Limit deviation and take preventative measures to ensure that the **original dealer's** refrigerated cold storage is capable of cooling oysters in compliance with Section C.1 of this Plan.

c. **<u>Critical Control Point Storage:</u>** The **original dealer** shall ensure that oysters are held in refrigerated storage at an ambient air temperature at or below 45º F for the duration of refrigerated storage at the **original dealer's** facility per Section C.2 of this Plan. When the Critical Limit is exceeded the **original dealer** shall take the following Corrective Actions:

   i. Document any deviations to the Critical Limit in a Corrective Action Report; and

   ii. Dispose of oysters placed in refrigerated storage not capable of maintaining an ambient air temperature at or below 45º F; and

   iii. Notify the Food Protection Program of the action taken; and

   iv. Determine and address the root cause of the deviation by making necessary repairs to malfunctioning refrigeration equipment or adjusting oyster handling practices to decrease the likelihood of future deviations to the Critical Control Point at storage.

5. To comply with dealer requirements of the Plan, each **original dealer's** facility shall maintain insulated mechanical refrigeration for cooling and storage of oysters that:

a. Cools oysters to an **internal temperature** of 45° F in 10 hours or less after **time of harvest**; and

b. Maintains an ambient air temperature of 45° F or less.

6. Each **original dealer's** receiving records shall include the following minimum information:

   a. **Harvester's** Division of Marine Fisheries Commercial Shellfishing Permit number;

   b. Harvest date and area;

   c. **Time of harvest**;

   d. Time and confirmation that oysters are **adequately iced** (including ambient temperature of vehicle and time temperature was taken if a **harvester/original dealer** uses a pre-chilled vehicle for transport);

   e. Transaction slip number;

   f. The actual time oysters were cooled to less than or equal to 45°F with actual **internal temperature**; and

   g. Quantity of oysters (pieces).

7. When an original dealer receives shipments of oysters in which the time of icing is recorded with a **harvester icing tag** in accordance with Section B.8(a) of this Plan, the original dealer shall retain the tag for a minimum of 90 days. Retention of this tag satisfies the requirement of 105 CMR 533.007(I)(3)(h) and section C.4(a) of this Plan for the corresponding **harvester lot**.

8. Sales of shellfish by a **harvester** to an **original dealer** shall only be conducted by:

   a. The **harvester** transporting his or her product directly from the landing site to the **original dealer's** physical facility for sale, or

   b. The **harvester** selling the product to an employee of an **original dealer** at the landing site, provided that the employee transports the product to the **original dealer's** facility. Shellfish purchased at the landing site must be transported by the **original dealer** per the requirements of 105 CMR 533.000: *Fish and Fishery Products,* including but not limited to 533.007 (or any successor regulation).

9. Persons who are permitted both as a **harvester** and an **original dealer** are required to meet the conditions in both Sections B and C. If a **harvester/original dealer** is unable to meet both sets of conditions, the **harvester/original dealer** may operate as a **harvester** in accordance with Section B of this Plan.

10. Re-submergence of Recalled Oysters:

    a. In the case of a recall as the result of a harvest area closure due to increased risk, including confirmed illnesses, only oysters received from aquaculturists and stored at the **original dealer's** facility may be allowed to be **re-submerged**. Recalled oysters distributed into commerce by the **original dealer** may not be returned to the license site and will be subject to disposal.

    b. **Re-submergence** of recalled oysters may only be conducted after approval is granted by Division of Marine Fisheries and the Department of Public Health and under the supervision of the local Shellfish Constable.

    c. All **re-submergence** activities must be conducted in compliance with section B.8(d) of this Plan.

D. Enforcement:

1. Representatives of state and local regulatory agencies (e.g. Division of Marine Fisheries, Department of Public Health, Office of Law Enforcement) shall conduct periodic unannounced inspections at harvest sites, common landings, and wholesale dealer facilities to determine compliance with the requirements of this Plan.

2. All oysters harvested under this plan shall be subject to embargo and/or disposal if the oysters are found to be time/temperature abused or non-compliant with the requirements of this Plan.

3. Local Shellfish Constables and their deputies will conduct spot checks at harvest sites to verify harvest times on **harvester** tags and other controls such as shading and icing.

4. Inability or refusal of **harvesters** and/or **original dealers** to maintain compliance with the requirements of this plan may result in enforcement up to and including suspension and revocation of **harvester** and/or **original dealer** permits in accordance with Massachusetts General Laws Chapter 130, Section 2.

5. In the course of implementation of the Massachusetts *Vp* Control Plan, and in the event that an illness outbreak(s) occurs, the State Shellfish Control Authority, which consists of the Division of Marines Fisheries and the Department of Public Health, reserves the option of requiring more stringent *Vp* controls in specific affected area(s) in order to prevent additional illnesses and protect public health. In the event of sporadic illnesses, the State Shellfish Control Authority will follow requirements established in the National Shellfish Sanitation Program's *Model Ordinance*, 2013 Revision, Section II, Chapter II Risk Assessment & Risk Management, to determine extent and duration of closure of areas due to illness(es).

The Massachusetts Department of Public Health, Food Protection Program and the Massachusetts Department of Fish and Game, Division of Marine Fisheries will review this Plan on an annual basis and revise it as needed to maintain compliance with the National Shellfish Sanitation Program.

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