

MEMORANDUM

DATE: June 4, 2012

TO: Division of Shellfish Sanitation Staff

FROM: Robert E. Croonenberghs, PhD, Director
Division of Shellfish Sanitation

SUBJECT: Relay Period May through September

**Purpose**

To establish as policy the time periods required for shellstock relay under various harvest time conditions.

Policy

Shellstock intended for relay that is harvested in compliance with the harvest time requirements outlined in the National Shellfish Sanitation Program (NSSP) Model Ordinance, Chapter VIII, Section @.02 (Attachment A); and with the harvest and handling requirements established in 4VAC20-1230-10 et. seq of the *Virginia Administrative Code* (Attachment B), will be released after a 15-day relay period and will be eligible for direct marketing on the 16th day after planting. Shellstock harvested for relay that exceeds these requirements will be released after a 30-day relay period and will be eligible for direct marketing on the 31st day after planting. These requirements are summarized in the table below:

Oysters:

May: Oysters are 1) offloaded at the relay site by 11:00am; or 2) if harvested after 11:00am is done so by a harvester in possession of a GPS trackstick permit and in less than five hours; or 3) are refrigerated/iced during harvest.

June, July and August: Oysters are 1) offloaded at the relay site by 10:00am; or 2) if harvested after 10:00am is done so by a harvester in possession of a GPS trackstick permit and in less than two hours; or 3) are refrigerated/iced during harvest.

September: Oysters are 1) offloaded at the relay site by 12:00pm; or 2) if harvested after 12:00pm is done so by a harvester in possession of a GPS trackstick permit and in less than five hours; or 3) are refrigerated/iced during harvest.

Clams:

May through September: Clams are offloaded at the relay site the same day of harvest; or are refrigerated/iced during harvest.

Discussion

The normal relay process is carried out when water temperatures are greater than 50°F because shellfish pump most reliably at the warmer temperatures. This routine process is typically used for shellfish taken from waters potentially contaminated with no more than moderate amounts of bacterial pathogens. In Virginia, shellfish relayed for this purpose are required to remain in the water for a minimum of 15 days, and may be harvested for direct marketing of raw product on the 16th day.

When relaying shellfish during warm weather, due to concerns about the post-harvest growth of bacterial pathogens, especially *Vibrio* bacteria, the shellfish should not be exposed to conditions that may cause bacterial growth to the extent that it may not purge in the traditional 15-day relay period. In cases where

the harvest and planting times required for relay exceed the times established in the *Code of Virginia* and the NSSP model ordinance for direct marketing, the relay period must be longer than for typical contaminant bacteria because the time required for *Vibrio* concentrations to return to background levels is not well understood. The concentrations of these vibrios are extremely variable, even in oysters taken from the same location. The factors that affect these concentrations are not understood. As such, a greater safety factor is prudent until the science can provide more direction.

DSS will consider a lot of relayed shellfish to be in compliance with the requirements referenced above when the *Record of Area Closed for Shellfish Cleansing* report received from the Marine Resources Commission documents the harvest dates and times such that compliance can be verified; or specifically notes that the shellfish were iced or mechanically refrigerated in compliance with stated requirements.

Should the harvester choose to use ice or mechanical refrigeration for compliance with these requirements, he must possess DSS vessel and/or vehicle refrigeration certificates as required by 4VAC20-1230-10 et seq. of the *Virginia Administrative Code*.

@.02 Shellstock Time to Temperature Controls

A. Each shellfish producing State shall establish time to temperature requirements for the harvesting of all shellstock to ensure that harvesters shall comply with one of the following:

(1) The State *Vibrio vulnificus* Control Plan as outlined in Chapter II. @.04; or

(2) The State *Vibrio parahaemolyticus* Plan as outlined in Chapter II. @.05; or

(3) All other shellstock shall comply with the matrix below:

Action Level	Average Monthly Maximum Air Temperature	Maximum Hours from Exposure to Temperature Control
Level 1	<50°F (10°C)	36 hours
Level 2	50°F - 60 °F (10°C - 15 °C)	24 hours
Level 3	>60 °F - 80 °F (15 °C - 27 °C)	18 hours
Level 4	>80 °F (≥27 °C)	12 hours

B. For the purposes of this section, temperature control is defined as the management of the temperature of shellstock by means of ice, mechanical refrigeration or other approved means necessary to lower and maintain the temperature of the shellstock to comply with Chapter XI, XIII., or XIV.

C. The Authority shall establish the water or air temperature to be applied to the requirements above for each growing area by averaging the previous five (5) years maximum monthly water or air temperatures.

D. For the purpose of time to temperature control, time begins once the first shellstock harvested is no longer submerged.

E. The Authority shall ensure that harvesters document and provide trip records to the initial dealer demonstrating compliance with the time to temperature requirements.

F. Shellstock intended for Wet Storage, Depuration, Post Harvest Processing (PHP) or “For Shucking Only by a Certified Dealer” must either be shucked, introduced into PHP, Wet Storage, or Depuration within the times outlined in the matrix in Chapter VIII. @ .02 A (3) or meet the applicable time to temperature controls of Chapter VIII. @ .02 A. (3). Shellstock harvested under a State *Vibrio* Plan intended for Wet Storage or Depuration, must be placed in Wet Storage, Depuration or refrigeration to comply with time to temperature controls outlined in the State Authority *Vv* or *Vp* Control Plan.

G. Ocean Quahogs (*Arctica islandia*) and surf clams (*Spisula solidissima*) are exempt from this temperature control plan when these products are intended for thermal processing.

H. Authorities shall consider the need for shading in developing *Vv* and *Vp* Control Plans. Shading shall be required when deemed appropriate by the Authority when implementing @.02 A. (1) (2) and (3).

**VIRGINIA MARINE RESOURCES COMMISSION
“PERTAINING TO RESTRICTIONS ON SHELLFISH”
CHAPTER 4VAC20-1230-10 ET SEQ.**

PREAMBLE

This chapter establishes, for the public health, harvest restrictions for shellfish taken from Virginia waters. This chapter is promulgated pursuant to the authority contained in §§28.2-201 and 28.2-801 of the Code of Virginia. This chapter amends and re-adopts, as amended, previous Chapter 4VAC 20-1230-10 et seq., which was adopted April 26, 2011 and made effective May 1, 2011. The effective date of this chapter is May 31, 2012.

4VAC20-1230-10. Purpose.

The purpose of this chapter is to establish harvest times and handling procedures for shellfish, excluding seed oysters, harvested for commercial purposes or any other use. The time, from initial harvest to when temperature control of that harvest is required, begins once the first shellstock harvested is no longer submerged and extends to the time that any harvested oysters are placed in mechanical refrigeration or are continuously and completely covered by a layer of ice in a storage container that has been approved by the Virginia Department of Health, Division of Shellfish Sanitation.

4VAC20-1230-20. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

“*Container*” means any bag, sack, tote, or conveyance, such as a boat or truck, or other receptacle that contains shellfish to be held or transported. means any bag, box, sack, tote, or other receptacle that contains shellfish to be held, in any type of conveyance, for transport from the harvest area to the landing site and from the landing site to the point of sale or other use.

“*Conveyance*” means any form of transport, either mechanical, such as a boat or truck, or non-mechanical, that is used to transport shellfish from the harvest area to the landing site or from the landing site to a certified dealer or other use.

“*Direct marketing*” means any shellfish or shellstock that is landed and sold without shucking or post-harvest processing.

“*Harvest*” means the act of removing any shellfish or shellstock from a designated harvest area and placing that shellfish or shellstock in a container or on or in a conveyance.

“*Layer*” means a single thickness or coating spread out and covering a surface.

“*Mechanical Refrigeration*” means storage in a container that is approved by the Virginia Department of Health Division of Shellfish Sanitation and capable of cooling to and maintaining an ambient temperature of 45 degrees F or less.

“*Oysters*” mean those oysters greater than 2-½ inches in shell length.

“*Restricted-use shellstock*” means shellstock or shellfish harvested from approved shellfish growing areas that shall not be sold for raw consumption or directly marketed for raw consumption.

“*Restricted-use shellstock tag*” means a Virginia Marine Resources Commission-issued green tag that shall only be used by a certified dealer who has a current Certificate of Inspection as a Shucker Packer, for shellstock or shellfish harvested from a single harvest area in any one day, and use of any such tag indicates that shellstock is intended for further processing prior to distribution to retail or food service.

“*Seed Clams*” means those clams less than 30 mm in shell length and more than six months from harvest for human consumption.

“*Seed Oysters*” mean those oysters less than 2-1/2 inches in shell length and more than six months from harvest for human consumption.

“*Shading*” means to shelter by intercepting the direct rays of the sun to protect the shellfish from heat, using a tarp or cover.

“*Shellfish*” or “*shellstock*” means all species of bivalve molluscan shellfish.

“*Shucker Packer*” means a person who shucks and packs shellfish under a Certificate of Inspection issued by the Virginia Department of Health, Division of Shellfish Sanitation.

“*Temperature control*” means the use of ice or mechanical refrigeration, which is capable of lowering the temperature of the shellstock and maintaining it at 50°F (10°C) or less, as approved by the Virginia Department of Health, Division of Shellfish Sanitation.

4VAC20-1230-30. Public Health and Warm Water Harvest Restrictions.

A. No provisions in this chapter shall apply to seed clams or seed oysters.

B. It shall be unlawful for any person to have any cat, dog, or other animal on board a vessel during the harvest of shellfish.

C. From May 1 through September 30, any vessel used for the harvest of shellfish, from either public or private grounds, shall provide shading over the area that serves as storage for the shellfish when the shellfish are on board that vessel. All shellfish in the vessel shall be offloaded every day. Shading shall not be required for vessels transporting clam seed or seed oysters for replanting.

D. From May 1 through September 30, all shellfish shall be shaded during land-based deliveries.

E. From May 1 through September 30, all land-based deliveries of shellfish requiring more than 60 minutes after offloading is complete shall be made aboard trucks or conveyances equipped with mechanical refrigeration capable of maintaining 45°F or less, except that shellfish may be continuously and completely covered by a layer of ice, according to procedures approved by the Virginia Department of Health, Division of Shellfish Sanitation. Mechanically refrigerated containers of shellfish shall be in operation during transport. Any operator of a truck that is delivering shellfish using a truck not owned by a certified shellfish dealer shall possess a truck refrigeration certificate issued by the Virginia Department of Health, Division of Shellfish Sanitation. Upon receipt of any shellfish, certified shellfish dealers shall immediately place any shellfish received from the harvester under temperature control.

F. From June 15 through August 31, it shall be unlawful for any person to leave the dock or shore, prior to one hour before sunrise, to harvest or attempt to harvest oysters from private grounds.

G. From May 1 to September 30, except for those persons permitted in accordance with subsections H or I of this section, it shall be lawful for any person to harvest oysters from open areas of public or private ground, provided those oysters are fully offloaded and placed into Virginia Department of Health, Division of Shellfish Sanitation-approved mechanical refrigeration or continuously and completely covered by a layer of ice in a Virginia Department of Health, Division of Shellfish Sanitation-approved storage container, only under the following designated curfew schedule that specifies an end to harvest time, by month:

1. May 1 through May 31, by 11:00 a.m.;
2. June 1 through June 30, by 10:00 a.m.;
3. July 1 through July 31, by 10:00 a.m.;
4. August 1 through August 31, by 10:00 a.m.; and,
5. September 1 through September 30, by 12:00 p.m.

H. It shall only be lawful to harvest oysters from open areas of public or private ground, as an exception to the provisions of subsections G and I of this section, provided:

1. The harvester has applied for, and been granted, a permit by the Virginia Marine Resources Commission to harvest oysters after the designated curfew harvesting times, as provided in subsection G of this section.

2. A Virginia Marine Resources Commission-approved Global Positioning System tracking device shall be on board the harvest vessel or with the harvester and must be in continuous operation from the time that vessel or harvester leaves the dock or shore until the vessel or harvester returns to the dock or shore, and the oysters harvested are offloaded from that vessel or onto the dock or shore and placed into mechanical refrigeration or continuously and completely covered by a layer of ice in a storage container, approved by the Virginia Department of Health, Division of Shellfish Sanitation.

3. The total time, from the time the vessel or harvester leaves the dock or shore until the oysters are placed in Virginia Department of Health, Division of Shellfish Sanitation-approved mechanical refrigeration or continuously and completely covered by a layer of ice in a Virginia Department of Health, Division of Shellfish Sanitation-approved storage container, shall not exceed the following:

- a. 5 hours during the months of May and September;
- b. 3 hours during the month of June; and,
- c. 2 hours during the months of July and August.

I. It shall only be lawful to harvest oysters from open areas of public or private ground, as an exception to the provisions of subsections G and H of this section, provided:

1. The harvester has applied for and been issued a Virginia Department of Health, Division of Shellfish Sanitation vessel approval certificate for mechanical refrigeration or icing in a storage container that is on board the vessel at all times during the harvest of oysters.

2. Oysters are placed in mechanical refrigeration or continuously and completely covered by a layer of ice in a storage container, on board the vessel, from the start of harvest and throughout the harvest period, until the oysters are offloaded.

J. From May 1 through September 30, oysters may be harvested from open areas of private or public ground as restricted-use shellstock, provided:

1. The harvester has been issued green restricted-use shellstock tags by a Virginia Department of Health, Division of Shellfish Sanitation-certified Shucker Packer and has tagged all oysters with restricted-use shellstock tags;

2. The harvester does not possess on board the vessel any oysters designated for direct marketing or raw consumption; and,

3. All oysters are harvested no later than 12:00 p.m. and placed in mechanical refrigeration or continuously and completely covered by a layer of ice in a storage container, both approved by the Virginia Department of Health Division of Shellfish Sanitation, by noon that same day.

K. From May 1 through September 30, a Bulk Seed Permit shall be obtained from the Virginia Marine Resources Commission for the harvest of any natural (wild) seed oysters that include oysters greater than 2-½ inches. Any person who harvests any natural (wild) seed oysters that include oysters greater than 2-½ inches and is not in possession of a Bulk Seed Permit issued by the Virginia Marine Resources Commission shall be in violation of this chapter.

L. Any person may handle oysters as part of a cage aquaculture operation for husbandry purposes after the designated harvesting times described in subsections G of this section, provided that person possesses a valid Cage Aquaculture Husbandry Permit from the Virginia Marine Resources Commission. Any person who handles oysters in cage oyster aquaculture operations after the designated harvesting times described in subsection G of this section and does not possess a Cage Oyster Aquaculture Husbandry Permit issued by the Virginia Marine Resources Commission shall be in violation of this chapter.

4VAC20-1230-35. [Repealed]

4VAC20-1230-40. Penalty.

A. In addition to the penalty prescribed by law, any person violating any provision of this chapter shall destroy, in the presence of a marine police officer, all shellfish in his possession, or, at the direction of the marine police officer, shall place the shellfish overboard on the nearest oyster sanctuary or closed shellfish area and shall cease harvesting on that day. All harvesting apparatus may be subject to seizure, and, pursuant to §28.2-232 of the Code of Virginia, all licenses and permits may be subject to revocation, following a hearing before the Virginia Marine Resources Commission.

B. As set forth in §28.2-903 of the Code of Virginia, any person violating any provision of this chapter shall be guilty of a Class 3 misdemeanor, and a second or subsequent violation of any provision of this chapter committed by the same person within 12 months of a prior violation is a Class 1 misdemeanor.