



State of Alaska Food Safety and Sanitation Program

Shellfish Harvester Education Program

**Alaska Department of Environmental Conservation
Division of Environmental Health
Food Safety and Sanitation Program
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<https://dec.alaska.gov/eh/fss/shellfish>**

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This document is intended to provide the necessary education for shellfish harvesters required under the National Shellfish Sanitation Program (NSSP) Guide for the Control of Molluscan Shellfish: <https://www.fda.gov/food/federalstate-food-programs/national-shellfish-sanitation-program-nssp>

All shellfish harvesters are required to complete the Alaska Department of Environmental Conservation (ADEC), Food Safety and Sanitation (FSS) Program **Shellfish Harvester Education Training. The training must be completed prior to receiving a Shellfish Harvester Permit to Operate and must be renewed every two (2) years thereafter.**

Reviewing this booklet, signing the certificate at the end, and submitting it to ADEC will satisfy this education component. For questions and additional information please contact:

Carol Brady, Shellfish Permit
Coordinator Phone: 907-269-7636
Fax: 907-269-7510
Email: carol.brady@alaska.gov

Alaska's Shellfish

There are four main types of bivalve shellfish that are harvested from Alaska's waters:

1. Clams
2. Mussels
3. Oysters
4. Scallops (whole animals only)

The harvest and subsequent processing are regulated cooperatively by ADEC and Federal Food and Drug Administration (FDA) using the National Shellfish Sanitation Program (NSSP). The NSSP is recognized by the Interstate Shellfish Sanitation Conference (ISSC) for the sanitary control of shellfish produced and sold for human consumption.

Complying with these regulations allows your product to be sold commercially for human consumption.



Figure 1: Flow of shellfish after harvest.

Hazards

Shellfish are filter-feeders that are often eaten raw or lightly cooked. Filter feeders take in nutrients from the ocean by drawing water over filtration structures. The ocean water can include things like **bacteria, viruses, and chemicals**, and if there is enough of these contaminants they can accumulate in the shellfish and may make people sick. **Even cooked shellfish can contain contaminants that can make people sick.**

Illnesses commonly associated with shellfish include Paralytic Shellfish Poisoning (PSP), Norovirus, Hepatitis A, and vibriosis. For this reason it is important to know the hazards and take appropriate steps to control them.

Figure 2. Diagram of a shellfish filter feeding.

Detritus is debris.

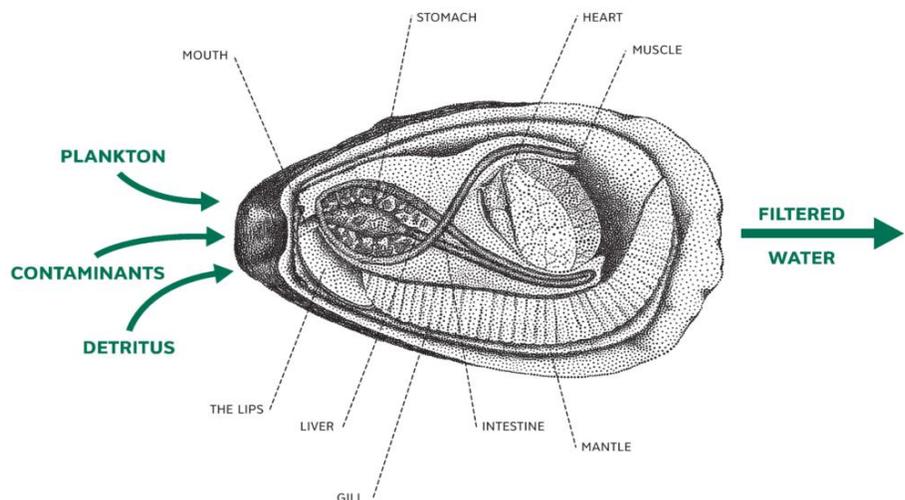
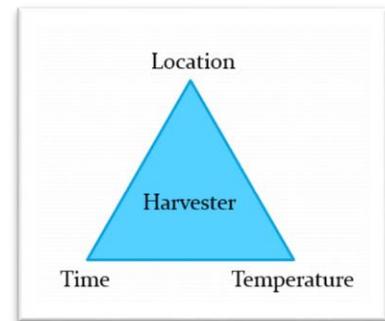


Image retrieved from: <https://99percentinvisible.org/episode/oyster-tecture/>

Controlling the Hazards

To control the hazards (**bacteria, viruses, and chemicals**), three things must be considered:

1. Location
2. Temperature
3. Time



Location

The first step in ensuring that shellfish is safe is to make sure it comes from waters that are open, classified, and approved for growing or harvesting. Many considerations go into determining if an area can be used to harvest or grow shellfish including:



- Location of human habitation or industry developments
- Fisheries
- Presence of streams, rivers, and other flowing bodies of water
- Presence of wild animals, or resident and migrating bird populations
- Harvest periods and methods
- Species to be grown or harvested
- Recreational use of the area
- Proposed boundaries and topography

In addition the growing or harvest area waters must meet the fecal coliform standards set out in NSSP. This means the water must be regularly tested for the presence of fecal coliform.

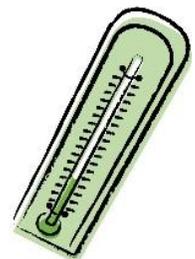
Harvesting shellfish from closed or prohibited areas is illegal.

For more information on how waters are classified visit:
<https://dec.alaska.gov/eh/fss/shellfish/growing-area-classification/>

Temperature

Temperature control must be applied to all shellstock as soon as the harvest is no longer submerged to prevent bacteria from growing. This can be done placing the shellfish on ice or in a mechanically refrigerated unit. All shellstock must be maintained at:

- An ambient temperature of 45°F or less; or
- An internal temperature of 50°F or less.



Time

Time requirements are applied in addition to temperature requirements to prevent bacteria like *Vibrio parahaemolyticus* (Vp) from growing in oysters. The amount of time allowed for cooling depends on the month the oysters were harvested in.



- **June to September:** Shellstock must be harvested and chilled to an ambient temperature of 45°F ambient or 50°F internal temperature within **five (5) hours**.
- **October to May:** Shellstock must be harvested and chilled to an ambient temperature of 45°F ambient or 50°F internal temperature within **36 hours**.

Handling Product

After the shellstock has been removed from the water steps should be taken to keep it from environmental contamination and temperature abuse. Dirt and filth from birds, unclean water, chemicals, and other environmental contaminants can transfer to shellstock and make consumers sick. Failure to take preventive measures will increase the likelihood for a foodborne illness associated with the consumption of shellfish

Protect shellfish from contamination during handling by making sure the work surface is covered to protect from birds and bird droppings. The sort table must be made of a smooth and easily cleanable material and kept clean. Rinse mud, sand, and other debris from shellfish using clean, potable water and use clean plastic totes with covers made of food-grade materials for storage of shellfish.

Commingling is the act of combining different lots of shellfish and is prohibited. When harvesting take care not to mix shellfish lots. A lot is considered one day of harvested shellfish of a specific species. For example, razor clams harvested on January 1st would be labeled Lot A while razor clams harvested on January 2nd would be Lot B.

Transportation

Shellstock must be protected from contamination during transport. The shellstock must be clean and the temperature maintained at:

- An ambient temperature of 45°F or less; or
- An internal temperature of 50°F or less.

If the shellfish are transported on a vessel, keep shellstock away from the deck of the boat where it could come into contact with bilge water, fuel, or sewage and become contaminated and unsafe for consumption.

Vessel Condition and Sanitation

To keep your shellstock safe during transport on your vessel the following should be considered:

- An approved marine sanitation device (MSD) must be on board the vessel to contain sewage. A bucket with a lid is not an approved MSD.
- A means to wash hands effectively and toilet paper must be supplied along with the MSD.
- A record of the date, time, and location of each discharge from a type III MSD must be kept as required at 18 AAC 34.920
- The vessel must be constructed in such a way to prevent contamination of shellstock with bilge water or polluted overboard water.
- Potential sources of contamination (such as fuel cans) must be kept away from shellstock storage.
- Cats, dogs, and other animals are not allowed on vessels, vehicles, or any area where shellfish are stored.

Shellfish Identification – Tagging

Correct shellstock identification is very important in protecting consumer health. In the event of a shellfish related illness, tags and records are used to trace the shellstock from the consumer back through to where the product was harvested. All shellfish tags must be durable, waterproof, and approved by the authority prior to use. Information written on the tag must be indelible and legible. Harvester tags need to include:

- **Who:** Dealer Name, Dealer Address, and Cert. No.
- **When:** Harvest Date
- **Where:** Harvest Location
- **What:** Type and Quantity of Shellfish

DEALER NAME John Smith	CERT. NO. 1234
Dealer Address 123 Shellfish Rd, City, AK 99999 City, State Zip Code	
ORIGINAL SHIPPER'S CERT. NO. IF OTHER THAN ABOVE:	
HARVEST DATE: 03/11/13 7:00 AM	
HARVEST LOCATION: Somewhere Island, AK	
TYPE OF SHELLFISH: Oysters	
QUANTITY OF SHELLFISH: 1 dozen	
THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY AND THEREAFTER KEPT ON FILE FOR 90 DAYS.	
RETAILERS, INFORM YOUR CUSTOMERS Thoroughly cooking foods of animal origin such as beef, eggs, fish, lamb, poultry, or shellfish reduces the risk of foodborne illness. Individuals with certain health conditions may be at higher risk if these foods are consumed raw or undercooked. Consult your physician or public health official for further information.	

Shipping your Shellstock

Harvested shellstock must be tagged and held at an ambient temperature of 45°F or less. All shipments must be accompanied by a shipping document stating that the shellstock was cooled to a temperature of 45°F or less. For oysters, the shipping document must also include the time it took to reach the desired temperature.

Shellfish Harvesters may only sell shellfish to permitted shellfish dealers including Shellfish Shippers (SS) and Shellfish Shucker-Packers (SP). The permit status of a potential buyer can be checked at the following link: <https://dec.alaska.gov/eh/fss/active-permits/>.

Congratulations!

You have successfully completed the Shellfish Harvester Training. Please fill out the certificate on the following page and send to Carol Brady, Shellfish Permit Coordinator.

State of Alaska DEC - Food Safety and Sanitation Program
Carol Brady, Shellfish Permit Coordinator
555 Cordova St, Anchorage, AK 99501
Phone: 907-269-7636
Fax: 907-269-7510
Email: dec.shellfish.processing@alaska.gov

CERTIFICATE OF SHELLFISH HARVESTER EDUCATION TRAINING

NAME: _____

Has successfully completed the Shellfish Harvester Education Training provided by

STATE OF ALASKA FOOD SAFETY AND SANITATION PROGRAM



SIGNED _____

DATE _____

Certificate expires two (2) years from date above.