



2017

Alaska Marine Biotoxin Monitoring & Contingency Plan for Bivalve Shellfish (Other than Geoducks)

State of Alaska
Department of Environmental Conservation
Environmental Health – Food Safety & Sanitation



Marine Biotoxin Monitoring & Contingency Plan for Bivalve Shellfish other than Geoduck Clams

Purpose & Scope

This document outlines Alaska's plan to mitigate the risks to public health that are present in bivalve shellfish (other than geoducks) as a result of marine biotoxins, particularly Paralytic Shellfish Toxin (PST).

This document has been developed in accordance with the [National Shellfish Sanitation Plan Model Ordinance \(NSSP-MO\)](#) (adopted by reference at 18 AAC 34 under the authority of AS 17.20.005). Specifically, NSSP MO Sec II, Ch IV @.04 requires Alaska define procedures and resources necessary to prevent harvest of shellfish affected by marine biotoxins.

This plan is adopted under the NSSP-MO¹ to define the administrative procedures and resources, and actions necessary to

1. initiate an emergency shellfish sampling and assay program;
2. close growing areas and embargo shellfish;
3. prevent harvesting of contaminated species;
4. provide for product recall;
5. disseminate information on occurrences of toxic algal blooms and/or toxicity in shellfish meats to the shellfish industry, and local health agencies or communities; and
6. coordinate control action taken by the department.

This plan covers commercial harvest of clams, mussels, and oysters, regardless of whether harvested from the wild or from a farm, or whether grown sub-tidally or inter-tidally. This plan does not cover geoduck, snails, or whole scallops. The department does not monitor marine toxins in shellfish harvested by individuals for subsistence, sport, or personal use.

The department may deviate from this uniform shellfish sampling plan and require a different PSP sampling program for a classified area when a review of environmental factors, epidemiology and all PSP toxin data necessitates a change. If the department develops a different plan, it will notify affected growers, harvesters, and shellstock shippers.

Biotoxins of Concern

Historically, the only known biotoxin that is periodically present in Alaska waters and shellfish at levels of concern is the toxin that causes Paralytic Shellfish Poisoning (PSP). This plan describes Alaska's management relative to this particular toxin.

Domoic Acid, the toxin that causes Amnesiac Shellfish Poisoning (ASP) was detected in razor clams in the mid-1990s at levels well below the regulatory limit of 20 ppm, so the department has conducted routine testing of that species to monitor levels.

Diarrhetic Shellfish Poison (DSP) toxins and Neurotoxic Shellfish Poison (NSP) toxins

¹ Section II, Chapter IV @.04(A)

are not known to be found in Alaska.

Overview

The plan has four levels. Levels One, Two and Three are species-specific. Level Four is not species-specific and may be assigned for individual growing areas or an entire classified area.

The plan addresses the historically seasonal nature of toxicity within shellfish growing areas. As a result, sampling protocols and product holding requirements are different for summer and winter.

Sample Submission

Shellfish submitted to the Environmental Health Laboratory (EHL) for analysis must be prepared, handled, and submitted in accordance with the EHL Sample Submission Manual at <http://dec.alaska.gov/eh/lab/index.htm>

Sample Size

Each sample must contain at least 150 grams of shucked, drained weight (equivalent to approximately 8 ounces) and must contain a minimum of 12 animals.

Harvesting & Holding

The entire lot from which a sample is taken must be harvested. That lot must be held out of water under refrigeration, protected from contamination at the facility, and handled in accordance with applicable requirements of the NSSP-MO. The lot may not be placed back into the water pending distribution and may not be commingled with other lots.

Toxin Action Levels

When the concentration of paralytic shellfish poison (PSP) toxin equals or exceeds 80 µg per 100 g of the edible portion of raw shellfish, the harvest area is temporarily closed to harvest for all species, product entered into commerce must be recalled (if eligible to release product pending test results), and remaining product is not eligible for commerce.

Rejected Lot Procedures

If the assigned level allows for product release before test results and the product has been placed into commerce, the harvester must initiate a recall and take actions necessary to remove all product from the affected lot from commerce in accordance with the requirements of the NSSP-MO².

All shellfish that has not been placed in commerce from that lot must either be destroyed or returned to the approved growing area. If lot is returned to the growing area, the harvester must segregate that lot and maintain the lot's identity for subsequent testing prior to marketing.

Detailed guidance may be found in the NSSP-MO³.

² NSSP-MO Ch X.03.B(1) and (2)

³ NSSP-MO Section IV, Ch. V (Illness Outbreaks and Recall Guidance)

Reopening Criteria

If a growing area is closed to harvest, the department will only reopen the area after at least 3 consecutive samples, taken not less than 4 days apart, over a minimum of a 14-day period show results below the toxin action level.

The area will be sampled at Level 1 following re-opening. After achieving 3 consecutive acceptable samples, the area will move up to Level 2. After achieving 3 consecutive acceptable samples at Level 2, the area will move up to Level 3. This should allow a minimum of 4 weeks for additional assurance that the shellfish is free of PST after the initial detection of an unacceptable level in the shellfish.

The process will be repeated if the area is closed again due to an unacceptable level of PST.

Definitions

For the purpose of this plan,

1. "lot" means a single type of bulk shellstock or containers of shellstock of no more than one day's harvest from a single, defined growing area gathered by one or more harvesters.
2. "month" means a calendar month.
3. "summer" means May 1 through October 31.
4. "week" means a 7-day period.
5. "winter" means November 1 through April 30.

Description of Levels

Level	Season	Individual Area or Entire Classified Area	Species-Specific* or All Species	Sampling Frequency	Number of Samples	Hold Pending Lab Results
1	Summer	Individual	Specific	Each lot	1 per species	Yes
	Winter	Individual	Specific	First lot of each month	1 per species	No
2	Summer	Individual	Specific	First lot of each week	1 per species	Yes
	Winter	Individual	Specific	First lot of each month	1 per species	No
3	Summer	Individual	Specific	First lot of each week	1 per species	No
	Winter	Individual	Specific	First lot of each month	1 per species	No
4	Summer	Individual or Entire	All	First lot of each week	Either 1 oyster or mussel (alternating) **, sampled from an alternating individual area within the classified area	No
	Winter	Individual or Entire	All	First lot of each month	Either 1 oyster or mussel (alternating) **, sampled from an alternating individual area within the classified area	No

* There is no requirement that all species achieve the next sampling level in unison.

** If clams are the sole species harvested that week, a clam sample may be submitted.

Level Advancement & Maintenance Criteria	
Level	Criteria
Level One to Level Two	<ol style="list-style-type: none"> 1. In order to advance to Level Two, a sample for that species must have been submitted for each harvest month, for a 24-month period. 2. If a sample tests at or above toxin action levels, sampling starts over for that year, for that species.
Level Two to Level Three	<p>In order to advance to Level Three,</p> <ol style="list-style-type: none"> 1. a sample must have been submitted for that species for each harvest month, for a 12-month period. 2. a growing area must have a consecutive three-year history of acceptable sample results for that species. 3. the harvester must have developed a recall plan. 4. Individual growing areas will be approved for harvest of individual species only during the months samples were submitted and released for sale, during the preceding 12-month period. 5. If samples are not submitted as required for a period of one or more years, the area will revert back one level, on a year for year basis.
Level Two or Three, to Level Four	<p>Individual Growing Area</p> <ol style="list-style-type: none"> 1. At the time of initial evaluation, the area must have a consecutive three-year history of acceptable sample results for the anticipated harvest months, for each species to be harvested. <p>Entire Classified Area (Encompassing All Individual Growing Areas within Area)</p> <ol style="list-style-type: none"> 1. At the time of initial evaluation, each individual growing area in the entire classified area must have a consecutive three-year history of acceptable sample results for the anticipated harvest months for each species to be harvested.