CANADIAN SHELLFISH SANITATION PROGRAM

Indigenous Information Package Version 2.0



PROTECT + ENHANCE + RESTORE



SEPTEMBER 11, 2020 CANADIAN SHELLFISH SANITATION PROGRAM (CSSP): INDIGENOUS INFORMATION PACKAGE Island Marine Aquatic Working Group



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Revision tracking table for CSSP Indigneous Information Package

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1.0 Draft	September 27, 2019	Revisions by Elysha Gordon incorporated	
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		 Added numbers to section headers and TOC Removed all Government of Canada symbology Add references/citations to quotes Include more hyperlinks, "Did you Know" boxes 	
2.0	September 11, 2020	Comments on Version 1.0 Fianl were addressed and revised. This version was provided to DFO CSSP Coordinator for additional review/revision.	



Canadian Shellfish Sanitation Program (CSSP): Indigenous Information Package

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Canadian Shellfish Sanitation Program (CSSP): Indigenous Information Package

1.0 OVERVIEW

1.1 What is the Canadian Shellfish Sanitation Program?

The Canadian Shellfish Sanitation Program is considered a "national food safety program" and is administered jointly by:

- The Canadian Food Inspection Agency (CFIA)
- Environment and Climate Change Canada (ECCC)
- Fisheries and Oceans Canada (DFO)

PROGRAM GOAL:

"To protect Canadians from the health risks associated with the consumption of contaminated shellfish (e.g. mussels, oysters, clams)."

The CSSP routinely monitors the level of marine biotoxins, bacteria and other harmful contaminants and closes bivalve shellfish areas when biotoxins, bacteria or contaminant levels are harmful.

• The objective of the CSSP is "to provide reasonable assurance that bivalve molluscs are safe for human consumption through various means including the collection of marine growing waters and shellstock for laboratory testing of various parameters. The CSSP is committed to developing a policy whereby other parties (non-GoC) are able to collect and submit samples to a CSSP laboratory while meeting the requirements of the CSSP."

2.0 ROLES AND RESPONSIBILITIES

2.1 What Agency is responsible for what aspects of the Program?

CANADIAN FOOD INSPECTION AGENCY

1. Canadian Food Inspection Agency is the <u>lead</u> CSSP agency and is responsible for:

- The control of handling and processing of shellfish
- Runs the Marine Biotoxin Control Program in shellfish areas
- Regulates shellfish **depuration** (depuration is the controlled purification of potentially contaminated shellfish to make it safe for consumption).
- Recommends to DFO the closing of shellfish areas because of unacceptable marine biotoxin, microbiological and chemical levels in shellfish stock, and advising DFO when shellfish areas are acceptable for the harvesting of shellfish.



ENVIRONMENT AND CLIMATE CHANGE CANADA

2. Environment and Climate Change Canada (ECCC) is responsible for evaluating environmental conditions:

- Monitors bacteriological water quality in shellfish harvest areas
- Identifies and evaluates sanitary pollution sources
- Recommends to the Pacific Region Interdepartmental Shellfish Committee (PRISC) the classification assigned to shellfish harvest areas
- Recommends to DFO the closing of shellfish areas because of unacceptable marine water quality, and chemical levels in the marine environment, and advising DFO when shellfish areas are acceptable for the harvesting of shellfish;
- Monitors rainfall warnings and implements emergency rainfall closures in shellfish harvest areas if necessary.
 - **NOTE:** This is just for emergency events such as large area closures from excess rainfall. Emergency closures because of sewage overflows are closed for a min of 7 days with both shellstock and water quality samples or 21 days with no samples.

FISHERIES AND OCEANS CANADA

3. Department of Fisheries and Oceans (DFO):

- Management of fisheries
- Licensing fishing for shellfish
- Enforcement of closure regulations
- Enacting the opening and closing of shellfish areas based on ECCC and CFIA's recommendations and agreed to by the PRISC (under the authority of the Fisheries Act and Regulations)
- Issuing fishing licences
- Issuing aquaculture licences in BC
- Patrolling shellfish harvest areas
- Charging persons illegally fishing including from closed areas
- •

FIRST NATIONS HEALTH AUTHORITY

4. First Nations Health Authority (FNHA):

FNHA Environmental Public Health Services works to identify and prevent environmental public health risks in First Nations communities that could impact the health of community members. Where public health risks are identified, recommendations are provided to reduce these risks.

- Provide community training, education and awareness to achieve a healthy and safe environment
- Provide public health inspections of public food service facilities and community gatherings such as feasts, pow-wows, wellness fairs, ceremonies, music festivals, and tournaments.
- Review plans for new or upgraded food service facilities from a public health perspective.
- Provide advice, guidance and recommendations to Chiefs, Councils, owners, operators, and First Nations community members about public health issues related to food safety.
- Review food safety and sanitation plans.
- Notify community of food recalls and alerts





Figure 1. Diagram of CSSP, showing roles and responsibilities of the three agencies responsible for the program.

3.0 WHY IS THE CSSP IMPORTANT TO YOU AND YOUR COMMUNITY?

Eating contaminated shellfish can cause potentially serious or fatal illness.

Bivalve shellfish (i.e. clams, oysters, scallops, mussels, cockles) are highly sensitive to the water quality of their marine environment. Because they feed by filtering microscopic organisms from the water, harmful bacteria, viruses and marine biotoxins from their surroundings can build up in their tissues and cause illness in people who consume them.

Eating shellfish with high levels of certain biotoxins can lead to serious and potentially fatal illnesses such as: <u>Paralytic</u> <u>Shellfish Poisoning (PSP)</u>, <u>Amnesic Shellfish Poisoning (ASP)/Domoic Acid</u> and <u>Diarrhetic Shellfish Poisoning (DSP)</u>.

See Section titled "Consuming Contaminated Shellfish: Potential Illnesses and Symptoms" for more detailed information

TO LEARN MORE...

To learn more about shellfish safety, visit:

http://www.dfo-mpo.gc.ca/shellfish-mollusques/index-eng.htm



4.0 WHAT TO KNOW BEFORE YOU GO

Due to the human health and safety concerns, not all areas on the coast are open to shellfish harvesting.

4.1 How do I know if an area is open/closed and safe to harvest?

1. .Things to check before you Go Harvesting:

- Check DFO's "Shellfish harvesting openings and closures" website at: 0
 - http://www.dfo-mpo.gc.ca/shellfish-mollusques/closures-fermetures-eng.htm
- Call the local DFO office and ask 0
 - http://www.dfo-mpo.gc.ca/contact/regions/pacific-pacifique-eng.html
- Check the "Shellfish Harvesting Access Map" (Figure 2): 0
 - https://inter-w01.dfompo.gc.ca/Geocortex/Essentials/Viewer/Index.html?viewer=CSSP Public En Site
- Check the BC Centre for Disease Control BC Shellfish Harvesting Map at (Figure 3): 0
 - https://maps.bccdc.ca/shellfish/ (*can only assess using Google Chrome*)



ons, size and quota limits refer to the Variation Orders under the Fisheries nd Var tact your local DFO office for details.

sting bivalve shellfish i.e. shellfish with th arvesting broarie sneinstri, i.e. sneinstri with wi luding all clam species, oysters, cockles, musse py, is responsible for ensuring that an area is d as safe for harvesting. Eating contaminated an cause serious illness or be fatal.

Shellfish should not be harvested in unr ining should not be narvested in unmonitored are aculture operation or a floating house. Unless dei ed otherwise, all closures extend to the coastline.

Legend

een areas are approved for harvesting of all ecies of bivalve molluscs ed areas are prohibited for all species of



areas are under variation orders ed for conservation, safety or ontamination

Zoom in and click on an area for more information

Shellfish harvesting and safety

A Home



Figure 2. Example of DFO Shellfish Harvesting Access Map





Figure 3. An example of BC Centre for Disease Control BC Shellfish Harvesting Map.

2. When you arrive at the harvest area:

o **<u>Check the area for signs</u>** that indicate the area is closed.



DID YOU KNOW:

There are different types of signs. Some indicate the area is closed to shellfish harvest (see picture right). Others are in place just to let harvesters know they should check the regulations and openings/closures before harvesting.

WHEN IN DOUBT, DON'T HARVEST!



Figure 4. Example of a DFO Bivalve Shellfish Conservation and Protection Sign.



4.2 Why do Shellfish harvesting Areas get closed?

Shellfish areas will be placed in the closed status when marine biotoxin levels (PSP, ASP or DSP) exceed established standards and when sanitary or chemical contamination closures are needed.

Some specific examples of why areas may be closed include:

Biotoxin:

- The product may be contaminated given the deviance from the sampling requirements established under the biotoxin monitoring program (lack of sampling).
- A closure due to a rapid rise in toxin levels in the biotoxin monitoring areas

Sanitary:

- Wildlife and livestock runoff
- Emergency rainfall closures
- Anchorage and hinterland drainage
- Wastewater treatment plants, sewage overflows and septic seepage
- Floathomes
- Docks, wharves and marina's
- Log dump and booming areas

Chemical:

• Sunken vessels and chemical contamination spills





5.0 INCREASING ACCESS TO HARVEST AREAS

There are a number of things that need to be considered if your Nation or local community is looking to increase shellfish harvesting access in your area.

The first thing to consider is that there are two different scenarios that you may be dealing with when looking to increase harvesting access (i.e., harvesting shellfish from a beach in your territory):

- 1. You are interested in harvesting from an area that has an **existing** CSSP classification and monitoring program, but is not "open" to harvesting for various reasons (see "Why do areas get closed").
- 2. You are interested in harvesting from an area that does not have a CSSP sampling/monitoring program and is not "classified". This is considered a **NEW**, **unclassified** sites.

The process to get access to a beach or specific harvesting area under the CSSP varies in these two scenarios.

Regardless of what scenario you are dealing with, the best thing to do as soon as you are considering trying to increase access to a New or existing area is to **contact DFO's CSSP Coordinator**, **Elysha Gordon** for further information.

Elysha Gordon

Resource Management Biologist CSSP Coordinator, DFO Pacific Region E-mail: <u>Elysha.gordon@dfo-mpo.gc.ca</u> Office: 250-756-7192 Cell: 250-713-5867

5.1 CLASSIFICATION OF SHELLFISH HARVEST AREAS

Areas are considered "classified" under the CSSP IF comprehensive surveys have been completed AND a "classification designation" has been adopted by the Pacifc Regional Interdepartmental Shellfish Committee (PRISC).

Classified areas are routinely monitored according to CSSP requirements for fecal coliform contamination and marine biotoxin content.

Under the CSSP There are 5 classification categories:

- 1. Approved
- 2. Conditionally approved
- 3. Restriced
- 4. Conditionally restricted
- 5. Prohibited

DID YOU KNOW:

PRISC is the committee established under the Canadian Shellfish Sanitation Program, composed of area/regional Fisheries and Oceans Canada, Environment and Climate Change Canada and Canadian Food Inspection Agency representatives

5.2 CSSP Program Manual: A Guidance Document

The CSSP manual is a reference document for monitoring, classifying and

controlling areas where shellfish are harvested. The policies and criteria in the manual apply to all harvesting of all shellfish unless otherwise specified.



https://www.inspection.gc.ca/food/food-specific-requirements-and-guidance/fish/canadian-shellfish-sanitationprogram/eng/1527251566006/1527251566942?chap=0#s4c3



5.3 How does my community get a **NEW** shellfish harvesting area classified and opened?

This section describes the process to get a "new area" opened for shellfish harvesting. This can either be

- a) because the area has never been classified or sampled in the past, or
- b) the area has not been sampled since a pollution source was identified.



The **first step** to inquire about the possibility of getting a new shellfish harvesting area opened is to **contact the CSSP Program coordinator**, Elysha Gordon, to help identify if there are any obvious barriers that would prevent the area from potentially being opened.

IF there is nothing obvious that would prevent the area from potentially being opened, based on discussions with the CSSP coordinator, then the next step is to submit a Proposal to the Pacific Regional Interdepartmental Shellfish Committee (PRISC).

• 1) Any requests for new area classification must **submit a Proposal in writing** (as per Section 14.1 of the CSSP Manual) to PRISC.



- Each CSSP department/agency will assess the request report back to the PRISC before any work begins to classify a new area.
- \circ The proposal must include (but is not limited to):
 - a detailed description of the proposed harvest area with a map and precise graphics GPS coordinates;
 - intended use (wild harvest, aquaculture, Food, Social and Ceremonial (FSC), recreational, etc.) and benefits of having this area classified;
 - an indication of the resource availability in the area species, amount per square metre, etc.;
 - accessibility of area for delivery of CSSP activities;
 - any other items requested by PRISC for assessment purposes.
- 2) Following a review by the PRISC, a **decision will be made** to either:
 - Accept the proposal and direct CSSP authorities to proceed with the classification of the proposed area.

OR

• **Reject the proposal** and notify the proponent, in writing, of the decision and the reason for the decision

OR

- **Defer** a decision pending a request for further information from the proponent.
- 3) Once the proposal is accepted and ECCC, DFO and the CFIA have carried out their respective responsibilities for area classification, a recommendation is submitted to the PRISC for a final decision.
- Once a proposal is submitted and approved, it will take *<u>at least one year</u> of sample collection before a site can receive final approval.

*The minimum one year is assuming that the local community helps collect the required samples. If the local community cannot help collect samples it can take up to three years.

Full details can be found in Section 14.1 of the CSSP Manaul:

https://www.inspection.gc.ca/food/food-specific-requirements-and-guidance/fish/canadian-shellfish-sanitationrogram/eng/1527251566006/1527251566942?chap=0#s14c6)

5.4 How can my community get an existing closed area re-opened

This section describes the process for getting an area opened that already has a sampling/monitoring program but has been closed due to contaminated samples.

If a sanitary closure has been in place for multiple years without the pollution source being removed, ECCC will stop sampling for water quality in many instances. Such areas will often be considered "*new areas*" if the pollution source has been removed but sampling hasn't restarted .

If ECCC deems that the area can be resampled for water quality, CFIA will also have to agree to set up a marine biotoxin monitoring station in the area.

- A minimum of 15 water quality samples are required to reclassify an area, however ECCC will not entertain resampling an existing sanitary closure unless remidation or the pollution source has been removed or elimated.
- ECCC and/or CFIA will work closely with your Nation to train you to take both water quality and biotoxin shellfish samples following their outlined protocols.
- See Section titled "Contact Information" for ECCC Coordinator Areas and CFIA contact Information*

For more details, see Section 4 of the CSSP Manual at:



https://www.inspection.gc.ca/food/food-specific-requirements-and-guidance/fish/canadian-shellfish-sanitationprogram/eng/1527251566006/1527251566942?chap=0#s4c3)

5.5 Can my community conduct sampling?

- The short answer is **YES**, but the area has to be approved for harvesting first. Following approval, Nations must work directly with CFIA and ECCC if wishing to conduct marine biotoxin or water quality sampling.
 - There is also necessary training for samplers (e.g., Nation representatives or community members) that would be required by ECCC and CFIA.
- For full details see Section B of the CSSP Manual at:

https://www.inspection.gc.ca/food/food-specific-requirements-and-guidance/fish/canadian-shellfish-sanitation-program/eng/1527251566006/1527251566942?chap=0#c3

5.6 How much does it cost to collect and analyze marine water quality samples?

If a local community wants to take on water quality sampling under the CSSP, the estimated costs are described below.

These costs would be the responsibility of the local community, not the organization responsible for that component (e.g., water quality- ECCC) of the CSSP.

Lab and shipping costs will vary and will fluctuate with inflation/market costs, etc. but a rough estimate of associated costs is provided below (this is based on costs in September 2019).

- Shipping costs: approx. \$40.00 (for a group of samples)
- Lab analysis for each sample bottle is approx. \$30.00.
 - Generally, upwards of three samples will be submitted.
 - \circ So that would be \$40.00 + (3 x \$30.00) = \$140.00 each time you send samples in to get analyzed.
- In order for a site to be established, you need a total of 15 samples collected and analyzed over a period of one to three years.
- So, in short, to collect and analyze all of the required samples to establish a monitoring site and a new harvest area it would cost approximately \$2100.00. In addition to individual communities operational costs.

In some cases ECCC will or can offer in-kind support but this would be assessed and decided on a case by case basis.

Labour costs will depend on the local community/Nation and the rates that they pay their community members/employees.

• At present, the only existing option for biotoxin testing in Canada is to send samples to a CFIA approved laboratory





6.0 CONSUMING CONTAMINATED SHELLFISH: POTENTIAL ILLNESSES AND SYMPTOMS

6.1 Red Tide

- Under specific marine conditions, certain species of microscopic algae can multiply rapidly causing a "bloom" in population. This phenomenon is commonly referred to as a red tide because, at times, seawater can become discoloured from the dense accumulation of algae.
- Red tide events can include biotoxin-producing algae that can contaminate bivalve shellfish in the area.
- Algal blooms are most common in the spring and summer months when sunlight, temperature and precipitation favour algal growth. However, algal blooms can occur at other times of the year as well.
- It is also important to note that many toxin-producing algal blooms are not "red" or do not cause discolouration of the water and cannot be readily seen from shore. This is why you should always check whether an area is open before you harvest

6.2 Paralytic Shellfish Poisoning (PSP)

- PSP is an illness that may have serious and potentially fatal effects. It is caused by eating bivalve shellfish and other molluscan shellfish that have been contaminated by toxins produced by certain species of microscopic marine algae found in coastal waters. Lobster and crab tomalley (also called hepatopancreas, which is the soft green substance inside the body cavity) can also accumulate the toxins which cause PSP.
- The toxins that cause PSP are not destroyed by cooking.
- Symptoms of PSP:

• Symptoms of PSP could begin within a few minutes and up to 10 hours after consumption.

- Symptoms of PSP can include:
 - a tingling sensation or numbness around the lips that gradually spreads to the face and neck,
 - a prickly sensation in the fingertips and toes,
 - drowsiness,
 - headache and dizziness, and
 - difficulty swallowing.

In more severe cases one may also experience:

- incoherent speech,
- a prickly sensation in the arms and legs,
- stiffness and non-coordination of limbs,
- weakness, and
- a rapid pulse.

Respiratory difficulty, salivation, temporary blindness, nausea and vomiting may also occur.

• In extreme cases, paralysis of respiratory muscles may lead to respiratory arrest and death within two to twelve hours after consumption. Seriously affected people must be hospitalized and placed under respiratory care. There is no known cure for PSP.

If you suspect you have PSP you should immediately seek medical attention.

6.3 Amnesic Shellfish Poisoning (ASP)/Domoic Acid

- Amnesic Shellfish Poisoning (ASP) is an illness caused by domoic acid poisoning, a naturally occurring acid which is produced by some marine algae. Domoic acid can accumulate in a number of filter-feeding bivalve molluscan shellfish such as clams, mussels, scallops and oysters.
- ASP was unknown in Canada until November 1987, when an outbreak in Eastern Canada resulted in four deaths.
- The toxins that cause ASP are not destroyed by cooking.

Symptoms of ASP

The symptoms of ASP can include:



- vomiting and diarrhea,
- muscle weakness,
- disorientation, and
- memory loss.

Symptoms usually occur 30 minutes to 6 hours after consumption.

If the poisoning is not severe, the symptoms disappear completely within a few days in an otherwise healthy person. However, in extreme cases, death can occur.

If you suspect you have ASP you should immediately seek medical attention.

6.4 Diarrhetic Shellfish Poisoning (DSP)

- Diarrhetic Shellfish Poisoning (DSP) is an illness caused by toxins that are produced by certain microscopic plants. Generally, DSP is often short-lived and non life-threatening; however, for some people, especially young children, the elderly, pregnant women and those with weakened immune systems, DSP can be very serious.
- The toxins that cause DSP are not destroyed by cooking.

Symptoms of DSP

The symptoms of DSP can include:

- diarrhea,
- nausea,
- vomiting,
- headache,
- abdominal cramps, and
- chills.

Symptoms usually occur 30 minutes to six hours after consumption.

The symptoms disappear completely within a few days in an otherwise healthy person. If you suspect you have a severe case of DSP or should problems persist you should immediately seek medical attention.

6.5 Bacteria and Viruses

Bacteria and viruses that may be present in the water in which shellfish live are capable of causing illness in humans. These include: *Vibrio parahaemolyticus* (Vp), *Norovirus*, and *Hepatitis A*.

Symptoms of Norovirus:

• diarrhea, abdominal discomfort, nausea, vomiting, fatigue and fever

Symptoms of Hepatitis A:

• abdominal discomfort, nausea, fatigue, fever, and jaundice. Persons with liver conditions are at risk for more serious illness.

Vibrio parahaemolyticus (Vp)

Vp is a naturally occurring bacterium found in our coastal waters. The presence of Vp can increase in warm waters to levels that can make people sick, particularly during the summer months.

Symptoms of Vibrio: diarrhea, abdominal discomfort, nausea, vomiting, fever, and headache.

More information can be found at:

http://www.inspection.gc.ca/food/information-for-consumers/fact-sheets-and-infographics/products-andrisks/fish-and-seafood/toxins-in-shellfish/eng/1332275144981/1332275222849



7.0 CONTACT INFORMATION

Organization	Name	Role/Title	Phone	Email
Canadian Food Inspection Agency (CFIA)	Pacific Shellfish I	Desk	604-666-3737	cfia.pacificshellfish- mollusquespacifique.acia@canada.ca
Environment and Climate Change Canada	Vanessa Daranikone	Zone 1 Coordinator (Mainland South Coast	604-903-4427	vanassa.daranikone@canada.ca
(ECCC)	Tim Wenman	Zone 2 Coordinator (Northern Vancouver Island, Nanaimo North	604-903-4415	tim.wenman@canada.ca
	Heather Lord	Zone 3 Coordinator (SW VI and Haida Gwaii	604-903-4478	heather.Lord@canada.ca
	Paul Moccia	Zone 4 Coordinator (SE VI and North Coast)	604-903-4425	paul.moccia@canada.ca
	*See Figure 5 below	for ECCC Coordinator Areas	ec.s	qempacifiquerimd-mwqmpacificdgir.ec@canada.ca
Department of Fisheries and Oceans (DFO)	Juanita Rogers, I Coordinator, Sou	DFO Program uth Coast Invertebrates	250-756-7268	Juanita.rogers@dfo-mpo.gc.ca
	Elysha Gordon, I	DFO CSSP Coordinator	250-756-7192	Elysha.Gordon@dfo-mpo.gc.ca
	Opening and closed of the shellfish biotoxing the second s	sure information and nupdates	1-866-431-3474	
First Nations Health Authority	Gethsemane Luttrell	Regional Manager Vancouver Island	Cell: 1-250-812- 8058	Gethsemane.luttrell@fnha.ca
	Ken Gillis	Environmental Health Officer- Campbell River	Office: 250-286- 5871 Cell:250-287-0090	Kenneth.gillis@fnha.ca



Organization	Name	Role/Title	Phone	Email
	Greg Vos	Environmental Health Officer – Campbell River	Office: 250-286- 5870	Greg.vos@fnha.ca
			Cell: 250-202- 0348	
	Peter Mazey	Environmental Health Officer –	Office: 250-924- 6125	Peter.mazet@fnha.ca
		Ladysmith	Cell: 250-360- 6140	
	Karen Larson	Environmental Health Officer – Ladysmith	Office: 250-924- 6125	Karen.larson@fnha.ca
			Cell: 250-713- 2747	
	Tyrone Elliot	Environmental Health Technician - Saanichton	Cell: 250-668- 6855	Tyrone.elliot@fnha.ca
	Keir Cordner	Environmental Health Office- Saanichton	Office:250-360- 3453	Keir.cordner@fnha.ca
			Cell: 250-920- 6822	
	Dionne Sanderson	Environmental Contaminants Program		Dionne.Sanderson@fnha.ca
	After Hours (outsic Mon-Fr, 8:00 am-4	de of regular hours I:00pm)	1-844-666-0711	Ephs.afterhours@fnha.ca
Fisheries and	Oceans Canada Viol	ation Reporting	1-800-465-4336	





Figure 5. Map of ECC Coordinator Areas (Zones)



8.0 INTERNET RESOURCES

Application to Receive Fishery Notices by E-mail

https://notices.dfo-mpo.gc.ca/fns-sap/index-eng.cfm?pg=pub_reg.

BC Centre for Disease Control Shellfish Harvesting Map

http://maps.bccdc.org/shellfish/ (*can only be accessed using Google Chrome*)

Bivalve Shellfish Contamination Closures

https://www.pac.dfo-mpo.gc.ca/fm-gp/contamination/index-eng.html

Canadian Shellfish Sanitation Program Website

https://www.inspection.gc.ca/food/food-specific-requirements-and-guidance/fish/canadian-shellfish-sanitation-program/eng/1527251566006/1527251566942

Canadian Shellfish Sanitation Program Manual (*Updated)

https://www.inspection.gc.ca/food/food-specific-requirements-and-guidance/fish/canadian-shellfish-sanitation-program/eng/1527251566006/1527251566942?chap=0

First Nations Health Authority -Environmental Health

https://www.fnha.ca/what-we-do/environmental-health

Real time Map of Shellfish Harvest Areas (DFO)

https://inter-w01.dfo-mpo.gc.ca/Geocortex/Essentials/Viewer/Index.html?viewer=CSSP_Public_En_Site

The Dangers of Illegal Harvesting

https://waves-vagues.dfo-mpo.gc.ca/Library/40755071.pdf

Find a Local DFO Office:

http://www.dfo-mpo.gc.ca/contact/regions/pacific-pacifique-eng.html



9.0 Glossary of Terms

Approved Area	The classification assigned to a shellfish harvest area as determined by the shellfish control authority from which shellfish can be harvested for direct consumption.	
ASP/Domoic Acid	Amnesic Shellfish Poisoning	
Bivalves	An aquatic mollusk that has a compressed body enclosed within a hinged shell (e.g. oysters, clams, mussels)	
CFIA	Canadian Food Inspection Agency	
Closed Area	Any classified area where shellfish harvest is not authorised.	
CSSP	Canadian Shellfish Sanitation Program - A program to classify and monitor shellfish harvest areas to determine whether shellfish are safe for human consumption and to regulate harvesting from those areas.	
Depuration	The process of using a controlled, aquatic environment in a depuration establishment to reduce the level of microbiological contamination in live shellfish.	
DFO	Department of Fisheries and Oceans	
DSP	Diarrhetic Shellfish Poisoning	
ECCC	Environment and Climate Change Canada	
FNHA	First Nations Health Authority	
GoC	Government of Canada	
IMAWG	Island Marine Aquatic Working Group	
Marine biotoxins	Poisonous compounds accumulated by shellfish feeding upon toxin containing dinoflagellates, such as Alexandrium cantenella, A. fundyense, A. tamarensis Dinophysis acuta, and Ptychodiscus brevis, or marine diatoms such as Pseudonitzschia species.	
Open Area	Any classified area where shellfish harvest is authorized	
PSP	Paralytic Shellfish Poisoning	
PRISC	Pacific Region Interdepartmental Shellfish Committee established under the Canadian Shellfish Sanitation Program, composed of area/regional Fisheries and Oceans Canada, Environment and Climate Change Canada and Canadian Food Inspection Agency representatives.	
Prohibited Area	The classification assigned to a shellfish harvest area as determined by the shellfish control authority where shellfish harvesting is not permitted.	
Restricted Area	The classification assigned to a shellfish harvest area as determined by the shellfish control authority where harvesting shall be by licence under the Management of Contaminated Fisheries Regulations and the shellfish, following harvest, is subjected to a suitable and effective treatment process through relaying or depuration.	
SCA	Shellfish Control Authority	
Unclassified Area	A marine area which is not currently classified as per the CSSP requirements by the shellfish control authority.	
Vibrio	Vibrio parahaemolyticus	

