Guidelines for the Development of a Live Lobster Facilities Protocol

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Section 1 – Introduction

In this document, the following will be referred to as:

Guidelines for Development of Live Lobster Facilities Protocol.....Guidelines
Nova Scotia Fish Processors and Fish Buyers Licence Policy..... Licence Policy
Nova Scotia Live Lobster Handling and Holding Criteria ..... Criteria
Live Lobster Facilities Protocol ..... Protocol
Live Lobster Holding and Handling Facilities .....Facilities
Live Lobster Handling Facility..... Handling Facility
Live Lobster Holding Facility..... Holding Facility

Under the Licence Policy, with respect to buying of lobster, applicants must meet detailed requirements. Applicants are required to identify the controls they will implement at the facilities and will be required to develop a protocol to address health and safety concerns. This protocol requires that a hazard analysis be conducted on the facilities and that a Hazard Analysis Critical Control Point Plan (HACCP) be developed. In addition, applicants are required to develop and implement a sanitation program.

These guidelines provide direction for the development of a Protocol, specifically addressing the requirements of facilities designed to enhance the quality of lobster.

Section 2 – Legislative Authority

The legislative authority for facilities is described in the Licence Policy, made pursuant to subsection 77(1) of the Fisheries and Coastal Resources Act. Existing licensed fish buyers who have applied for an amendment and new applicants who have applied for a fish buyers licence for lobster must comply with the applicable sections of the Licence Policy.

The facilities must meet the requirements of the criteria detailed in Schedule “C” of the Licence Policy (a copy of which has been provided on the next page of these guidelines).

Section 3 - Criteria
SCHEDULE "C"
NOVA SCOTIA LIVE LOBSTER HOLDING AND HANDLING CRITERIA

Applicants for a Nova Scotia Fish Buyer Licence and licence holders must meet, and continue to maintain, the requirements outlined in Sections A, B, C and D as follows:

A. Protocol

Applicants must develop a **Nova Scotia Live Lobster Facilities Protocol** by completing the Guidelines for the Development of a Live Lobster Facilities Protocol, available on our website http://www.gov.ns.ca/fish/licensing/lobsterprot3.pdf

Applicants must meet the Minimum Requirements as outlined on pages 5 and 6 of the Guidelines.

B. General Requirements - Holding and Handing Facilities

- Applicants and existing licensed buyers must own, and continue to maintain, a lobster holding and handling facility. The facilities will be subject to inspection prior to final approval of the application.
- Ownership of the facilities may be established by submitting proof of a deed, lease, or tax assessment. A Purchase and Sale Agreement may be submitted until such time as a deed, lease or tax assessment is available.
- The approved holding and handling facilities shall be distinct, have their own water intake system and not be encumbered by other users.
- Licence holders will not be permitted to share the same holding and handling facility.
- All intake pipes must be located below the low water mark.

C. Minimum Requirements Holding Facility

- Only a tidal pound or dryland pound will be considered as an approved holding facility.

  Tidal Pound means an enclosed shoreline facility that permits natural holding of live lobsters. Seawater is permitted to enter and leave the structure with the natural rise and fall of the tide. It is recommended that there be a minimum of four feet rise in the tide.

  Dryland Pound means an enclosed facility constructed on-shore of plastic, fibreglass, concrete or other approved material which is capable of holding live lobsters in controlled conditions utilizing pumped seawater.
- The minimum capacity of the live lobster holding facility is required to be not less than 907 kg (2,000 lbs.) of lobsters.
- In closed systems (no intake pipe and water is trucked in), re-circulation systems will be reviewed on their technical merit.

D. Minimum Requirements Handling Facility

- Each approved holding facility will have available in the immediate area a handling facility of not less than 13.4 square meters (144 square feet) in which to receive, pack and handle live lobster.
- If using seawater for hand washing or handling facility cleanup, the intake pipe must be located more than 125 meters (410 feet) from the nearest wharf.

Section 4

Minimum Requirements for Handling Facility –

For Applicants Developing a Nova Scotia Live Lobster Facilities Protocol

Ceilings	Ceilings shall be water tight. Open studding shall be tolerated provided it can be kept in good repair and reasonably clean.
Doors and Windows	Must have tight fitting doors and windows and be so constructed as to prevent entry of rodents.
Drains	Shall be properly covered to prevent entrance of rodents. Where effluent drains, it must not create an unsanitary condition where flies and unacceptable odors are prevalent.
Floors	In an existing facility wood will be tolerated provided it can be kept in good repair and clean. No earth or gravel floors permitted. In new construction floors shall be concrete or equivalent nonporous material.
Lighting	Minimum lighting, with shatterproof glass or shades must be available in the working areas.
Offal Receptacles	Must be available, marked for “Offal Only”, and constructed of approved materials.
Tables	In an existing facility wood is permitted. In new construction must be made of stainless steel or nonporous material.
Walls	Open studding shall be tolerated provided it can be kept in good repair and reasonably clean.
Toilet Facilities	Must be available for inspection and located in either the holding and handling facility **or** in a building that is close enough to the holding and handling facility so that it can be conveniently used. Toilet facilities in personal residences are not acceptable. Standard flush toilets on a septic system are required. Chemical or portable toilets will be considered in exceptional circumstances.

Hand Washing Facilities	Must be adjacent or in combination with the toilet facilities. Must be equipped with soap and single service towels. In an existing facility - Running water is required. Pressurized water is recommended, but a hose or gravity fed apparatus may be used provided the hose is equipped with a back flow preventer and hung up after use. A sink is recommended. In new construction - hot and cold pressurized water and a sink are required.
Water Used for Hand Washing and Handling Facility Clean-up	A. An adequate supply of clean seawater or potable fresh water shall be available for hand washing and handling facility cleanup as follows: (1) The coliform bacteria count cannot exceed 2 per 100 milliliters (mL). Failing this, water must be treated by ultraviolet light and/or chlorine so that the coliform bacteria count does not exceed 2 per 100 mL. (2) If using seawater, the saltwater intake pipe must be located more than 125 meters (410 feet) from the nearest wharf. If the intake pipe is less than 125 meters (410 feet) from the nearest wharf, another source of clean water must be used for hand washing and handling facility clean-up. B. If a hose is being used, it must be equipped with a back flow preventer and hung up after use. C. The water must be tested a minimum of once per year.

Section 5 – Live Lobster Facilities Protocol

Applicants for a fish buyer licence for lobster are required to own and maintain facilities which meet the conditions as set out in the criteria.

There are requirements for the holding facility, the handling facility, and the development of a protocol which addresses health, safety and sanitation issues. Applicants must document the procedures they will follow in meeting the criteria.

Applicants are required to complete the questions on pages 8 to 13 and submit forms, pages 15 to 28 *(examples are provided)*, along with any additional information they wish to include. This information will be referred to as the applicant's Live Lobster Facilities Protocol and will be subject to future audits by the Department.

The Protocol will include the following:

Completed Questions

5.1 Company Background Information
5.2 Product Description
5.3 Holding Facility Information
5.4 Handling Facility Information

Forms and Documents

5.5 Handling Facility Sanitation Program –
  5.5.1 Cleaning Plan
  5.5.2 Pest Control Plan
  5.5.3 Employee Hygiene Requirements
5.6 Proof of Water Source for Handling Facility
5.7 General Process Flow Diagram
5.8 Product Inspection Form – Receiving and Shipping Live Lobster
5.9 Hazard Analysis and HACCP Plan – If significant hazards are identified in HACCP Plan, a HACCP Worksheet is required.

Please Complete All Questions on the Following Pages:

5.1 Company Background Information
5.2 Product Description
5.3 Holding Facility Information
5.4 Handling Facility Information

Section 5.1 – Company Background Information

This information is required to identify the owner of the facilities and the personnel who will be responsible for the operation.

The rationale for the identification of the "Person(s) Responsible for Implementation of Live Lobster Facilities Protocol" is to ensure that the personnel are proficient in Hazard Analysis Critical Control Point (HACCP).

Answer the following questions, affix signature, and insert date at the bottom of this page:

Company name ➤		
Mailing address ➤		
Lobster holding facility civic address ➤		
Lobster handling facility civic address ➤		
Civic address where records will be kept ➤		
Telephone numbers ➤	Bus. ( )	Res. ( )
Cellular number(s) ➤		
Email address ➤		
Company Contact ➤		
Person responsible for implementation of Live Lobster Facilities Protocol ➤		

Are you the owner of the facilities? ☐ Yes ☐ No

If you are leasing or purchas--ing the facilities, provide name of current owner ➤	

Applicant's name ➤		
Applicant's signature/date ➤	Signature	Date

Section 5.2 – Product Description

The manner in which lobsters are handled from harvesting through holding, handling packaging and finally shipping to the market can impact on the health, safety and quality of the product.

The operator of the facilities must have knowledge of the source of the raw material. If buying from other operators who hold lobsters, the manner in which the product is held and fed has an impact on the quality of the lobster. There is an increasing use of medicated feed that, unless properly administered, could adversely impact on the health, safety and quality of the product.

The applicant is required to identify the criteria that could impact on the health and safety of the consumer. The applicant is required to demonstrate that these issues are under control.

Answer the following questions *(some examples of answers are provided on the next page):*

Product name ➤	
Source of Raw material ➤	

Will lobster be sourced from other lobster pounds ☐ Yes ☐ No *(if yes, medicated feed should be addressed in the HACCP Plan).*

Important final product characteristics ➤	
Ingredients ➤	

Will medicated feed be used? ☐ Yes ☐ No *(If yes, it must be identified in the HACCP Plan).*

Packaging ➤	
How the end product is to be used? ➤	
Shelf Life ➤	
Where the product will be sold ➤	

If the product is being exported from Nova Scotia, have you contacted CFIA regarding federal requirements? ☐ Yes ☐ No

Special Labeling Instructions ➤	
Special Distribution Control ➤	

Example – Project Description Worksheet

Product name(s)	Live Lobster *(Homarus americanus)*
1. Source of raw material	Own boats, local fishermen, outside pounds
2. Important final product characteristics	Live product
3. Ingredients	None (If medicated feed used, it must be identified)
4. Packaging	Wooden crates, cardboard boxes, plastic crates styrofoam containers, newsprint, gel packs
5. How the end product is to be used	Normally cooked before consumption
6. Shelf life	3-4 days with proper packaging
7. Where the product will be sold	Provincial, national, international
8. Special labeling instructions	Live product
9. Special distribution control	Maintain containers < $4^{o}C$

Section 5.3 – Holding Facility Information

Information is required regarding the lobster holding facility. There is also a requirement to identify the type of feed used while holding live lobsters. There is an increasing trend on the use of medicated feed. The medications that are used are designed for specific purposes and must be used under controlled conditions. Information is therefore required on the type of feed that is used, the methods of application, the frequency of use and the controls used to ensure proper application.

Answer the following questions:

Name of contact person for the holding facility ➤

Is holding facility shared with other companies? ☐ Yes ☐ No

If shared with other companies, does the lobster holding facility have its own water supply?
☐ Yes ☐ No

Is the lobster holding facility ☐ dryland or ☐ tidal? *(see description at the bottom of this page).*

Does the lobster holding facility have an ☐ intake pipe to the ocean or is it a ☐ closed system?

For closed systems (no intake pipe), identify the system designer.

Name	
Address	Tel. No.

Are all applicable permits, approvals, leases and permissions in place? ☐ Yes ☐ No
(for example Department of Natural Resources, Municipality, etc.)

List Departments from which you have received permits and approvals:

Capacity of lobster holding facility __ ___ *(indicate whether kg or lb.).* The minimum capacity of the live lobster holding facility is required to be not less than 907 kg (2,000 lbs.) of lobster.
Tank size ___ ___ *(indicate whether feet or meters)*

Are the lobsters being fed with medicated feed while being held? ☐ Yes ☐ No

If yes, indicate controls for ensuring proper use.

Tidal Pound *means an enclosed shoreline facility that permits natural holding of live lobsters. Seawater is permitted to enter and leave the structure with the natural rise and fall of the tide. It is recommended that there be a minimum of four feet rise in the tide.*

Dryland Pound *means an enclosed facility constructed on-shore of plastic, fibreglass, concrete or other approved material which is capable of holding live lobsters in pumped seawater. The intake pipe must be located below the low-tide mark. Re-circulation systems will be reviewed on their technical merit.*

Section 5.4 – Handling Facility Information

In order to provide an adequate facility to receive, pack and handle live lobster, each approved Holding Facility will have available, in the immediate area, a Handling Facility not less than 13.4 square meters (144 square feet).

Controls are necessary to ensure that the lobster are not contaminated during receiving, packing and handling of the product. A facility with floors, walls, ceilings, drains, toilets, hand washing facilities, tables, offal receptacles, lighting and wash water is required. Handling live lobster in a facility that meets minimal requirements reduces the risk of contamination.

Answer the following questions (minimum requirements are provided on pages 5 and 6):

Name of contact person for ➤ The lobster handling facility

Is the handling facility in a building occupied by another licence holder? ☐ Yes ☐ No
Is your handling facility located in the same building as your holding facility? ☐ Yes ☐ No
If not located in the same building, indicate where the handling facility is located in relation to the holding facility.

Size of handling area ➤ *Indicate meters or feet*

Do not include the size of the holding facility in this measurement. The minimum size of the handling area must be 13.4 square meters *(144 square ft.).*

Is the handling facility ☐ new construction or ☐ an existing facility?

Describe the construction material used in the floors.

Describe the construction material used in walls.

Are walls water tight, washable and in good repair? ☐ Yes ☐ No

Describe construction material used in ceilings.

Are ceilings water tight, washable and in good repair? ☐ Yes ☐ No

Are windows and doors tight fitting to prevent entry to rodents? ☐ Yes ☐ No

Describe the construction material used in tables.

Describe the construction material used in offal receptacle. Are offal receptacles marked “offal only”?
☐ Yes ☐ No

Describe lighting. Is shatterproof material used? ☐ Yes ☐ No

Where are the toilet facilities located in relation to your lobster handling facility?
Describe type of toilet facilities (chemical, composting, portable, etc.)

Where are the hand washing facilities located in relation to your toilet facilities?

Is there a sink available in the hand washing facilities? ☐ Yes ☐ No

Is hot and cold running water available in the hand washing facilities? ☐ Yes ☐ No

Are soap and single service towels available in the hand washing facilities? ☐ Yes ☐ No

Will these facilities (toilet and hand washing) be shared with other licence holders? ☐ Yes ☐ No

Indicate the source of water that will be used for handling facility clean up and hand washing.
☐ seawater ☐ fresh water ☐ both

Please Submit the Following Forms and Documents:

5.5 Handling Facility Sanitation Program –
- 5.5.1 Cleaning Plan
- 5.5.2 Pest Control Plan
- 5.5.3 Employee Hygiene Requirements

5.6 Proof of Water Source for Handling Facility
- 5.6.1 Water Sample Report Chart

5.7 General Process Flow Diagram

5.8 Blank forms to be used for Product Inspection – Receiving and Shipping Live Lobster

5.9 Hazard Analysis and HACCP Plan – a HACCP Worksheet <u>if significant hazards are identified in the HACCP Plan</u>

Section 5.5 – Handling Facility Sanitation Program

Implementation of basic sanitation practices is necessary in the handling of food products. The facility in which the lobsters are handled during receipt, preparation for market and shipping needs to be clean and in good repair so as not to contaminate the product. This can be achieved by having a Sanitation Program that ensures the facility is maintained in such a manner so as not to contribute to contamination, that personnel follow proper sanitation procedures, and a pest control program is in place.

The facility and equipment need to be cleaned on a routine basis, using proper cleaning materials, and carried out by people trained in these tasks.

A written Sanitation Program documents the company's procedures to maintain an environment for the production of a food product.

The components of a Sanitation Program for Live Lobsters should include the following plans:

- Cleaning Plan
- Employee Hygiene Plan
- Pest Control Plan

Section 5.5.1 – Cleaning Plan

The facility used for the handling and holding of live lobster should be constructed and maintained in a manner that will not contribute to the contamination of the product. Under this program, it is permissible to have open wooden construction in the facility. It is also permissible to use water from an unprotected source (not chlorinated) as part of the clean-up procedures. Both of these activities support the maintenance of the facility in a sanitary condition.

There is a need to maintain a clean environment for the packing of the live lobster. Operators are required to develop and maintain their facility in a clean and uncluttered environment. Routine maintenance and cleaning will assist in reducing the chances that the product does not become contaminated by the environment in which they are held and handled.

Submit **a Cleaning Plan for the <u>Handling</u> Facility**

An example of a Cleaning Plan is provided on the next page.

Each operation shall develop its own cleaning plan designed to reflect the specific characteristics of its operation however, it must include:

(a) The areas and items which will be cleaned in the handling facility
(b) Methods of cleaning (sweeping, hosing, scrubbing, etc.)
(c) How often the areas and items in the facility will be cleaned
(d) The name of cleansers and chemicals being used, how they are mixed (ratio), and how they will be applied

Example – Cleaning Plan for Handling Facility

	After Each Use	Once Per Week	Once Per Year
Floor	Sweep up debris and hose with high pressure water	Sweep up debris *Rinse* – Hose with high pressure water *Clean* – Scrub with cleanser *Rinse* – Hose with high pressure water	
Ceiling		Hose with high pressure water	*Rinse* – Hose with high pressure water *Clean* – Scrub with cleanser *Rinse* – Hose with high pressure water
Walls		Hose with high pressure water	*Rinse* – Hose with high pressure water *Clean* – Scrub with cleanser *Rinse* – Hose with high pressure water
Drains	Hose with high pressure water	*Rinse* – Hose with high pressure water *Clean* – Scrub with cleanser *Rinse* – Hose with high pressure water	
Tables	*Rinse* – Hose with high pressure water *Clean* – Scrub with cleanser *Rinse* – Hose with high pressure water		
Totes/ Crates			
Toilet Facilities			

Name of Cleansers/chemicals Used	How they are mixed (ratio used)	Describe how they are applied

Section 5.5.2 – Employee Hygiene Plan

Operators are required to develop hygiene procedures to ensure that the employees do not contribute to product contamination. The basic requirements follow Good Manufacturing Practices (GMP's) for the handling of food.

People who do not maintain an appropriate degree of personal cleanliness, who have certain illnesses or conditions, or have behaved inappropriately, can contaminate food and transmit illness to consumers.

Each applicant should review their operations in conjunction with their workforce to determine the most appropriate criteria needed to reduce the risk that their employees will not affect the health and safety of the product.

Submit an Employee Hygiene Plan

An example of an Employee Hygiene Plan is provided below.

Example – Employee Hygiene Requirements

1. All employees shall report to work in appropriate clothing, both clean and tidy.
2. Protective garments shall be washed between shifts.
3. Protective garments must be worn when handling fish and removed before leaving the handling area or entering a washroom.
4. All persons working in or visiting a Handling Facility shall have their hair covered.
5. All persons working in (or visitors to) a Handling Facility shall wash their hands with soap. This shall be repeated after each absence from the WORKING area.
6. Eating food, chewing gum or drinking beverages is not permitted in the Handling Facility.
7. Smoking is not permitted in the Handling Facility.
8. Spitting in the Handling Facility is prohibited.
9. All open wounds, cuts, sores or other skin abrasions shall be properly bandaged and covered.
10. Employees with a severe contagious or infectious disease, which would jeopardize product quality, shall be required to take a leave of absence, or be assigned other duties.

Section 5.5.3 – Pest Control Plan

Pests pose a major threat to the safety and suitability of food. Pest infestations can occur where there are breeding sites and a supply of food. Good hygiene practices should be used to avoid creating an environment favorable to pests. Good cleaning, inspection of incoming materials and good monitoring can minimize the likelihood of infestation and thereby limit the use of pesticides.

Submit **a Pest Control Plan**

An example of a Pest Control Plan is provided below.

Example – Pest Control Plan

The physical structure of the Handling Facility is designed and constructed to prohibit the entry of pests. The walls and drains are constructed to prevent small animals and rodents entering the facility and doors are kept closed whenever possible. Surroundings will be maintained in a condition to prevent the attraction and harborage of pests.

Doors will be kept closed when not in use. Windows are screened.

Monitoring for physical evidence of rodent droppings or hair will be part of the sanitation inspection. Any evidence of pests will be recorded and corrective action taken. This could include the placement of traps at identified locations outside the facility. A plan of the trap(s) location will be maintained on file.

Section 5.6 - Proof of Water Source for Handling Facility

Proof of water source to be used for handling facility clean up and hand washing is required as follows:

SEAWATER

Indicate the distance of the intake pipe from the nearest wharf

[ ] *(meters or feet)*

– If intake pipe is more than 124 meters (410 feet) from nearest wharf... Submit water sample report showing the coliform bacteria count.

FRESH WATER

Indicate if the water is sourced from a municipal water system

[ ] *(yes or no)*

– If yes... Submit documentation from the municipality that identifies the address of the lobster handling facility.

– If no… Submit a copy of a fresh water sample report showing the coliform bacteria count

Submit a chart that will be used to record water sample results for handling facility cleanup and hand washing. This chart must include a column that shows the treatment you will use if the bacterial coliform count exceeds 2 per 100 milliliters. An example of a Water Sample Chart is provided below.

WATER SAMPLE CHART					
NAME OF COLLECTOR	**SOURCE OF WATER (Indicate seawater "S" or fresh water "F")**	**SAMPLING DATE**	**LAB. REPORT NUMBER**	**Coliform Bacteria Count Most Probable Number**	**If lab reports indicate that coliform bacteria exceeds 2/100 mL, describe treatment used.**

Section 5.7 – Process Flow

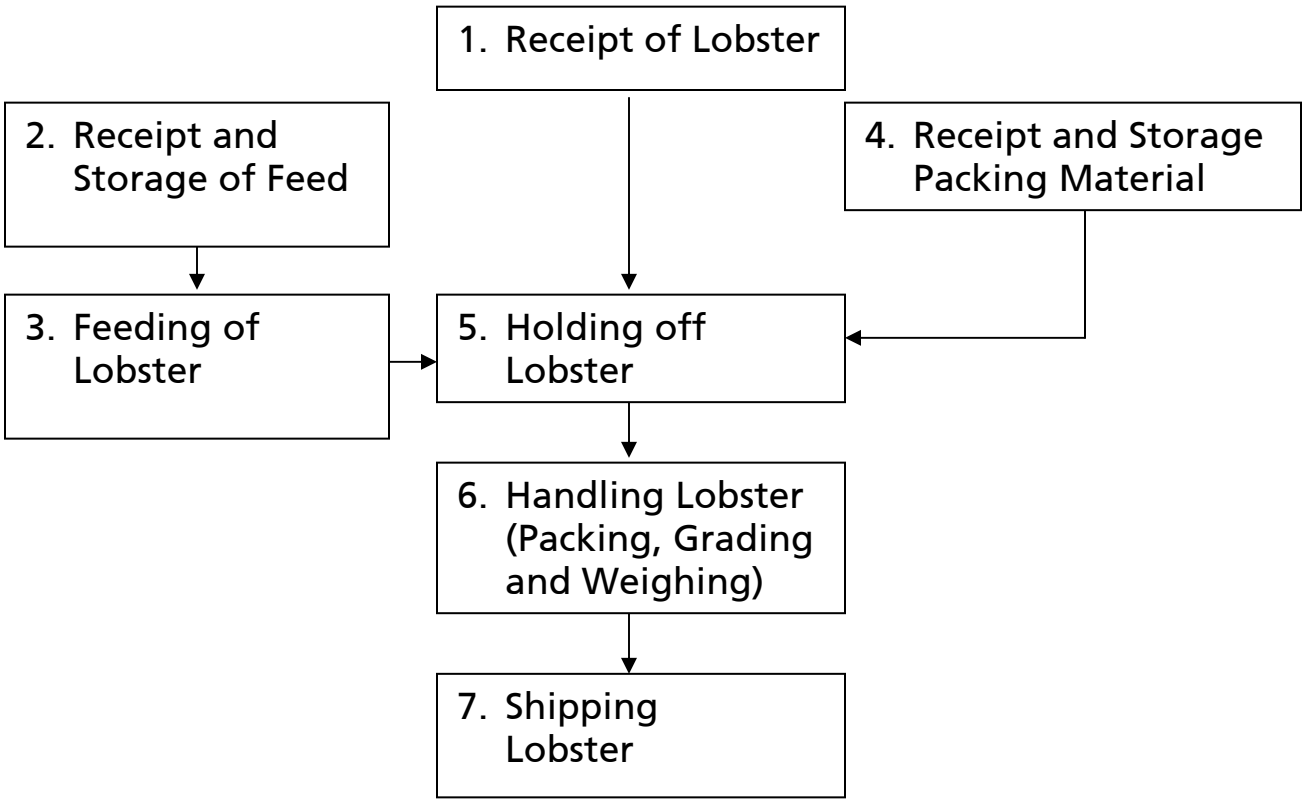
The purpose of a process flow diagram is to provide a clear, simple description of the steps involved in preparing the lobster for market, from receipt to shipping. The diagram should cover all of the steps in the process which your company performs. Receiving and storage steps for each of the ingredients (especially if medicated feed is used) should be included.

It is very important to ensure that all steps in your process are included. When the Hazard Analysis is later conducted, each step must be individually assessed for any biological, chemical or physical hazards.

Submit **a Process Flow Diagram**

An example of a process flow diagram showing how the steps can be described is provided below.

Example – General Process Flow Live Lobster



Section 5.8 – Product Inspection
Receiving and Shipping Live Lobster

The handling and holding of live lobster are activities that occur in providing a food product to the consumer. As such, the product must meet food production standards for health, safety and quality.

The provincial regulatory requirements state that food products cannot be **tainted** (abnormal odors or flavors), **decomposed** (spoiled) or **unwholesome** (toxic, contaminated with bacteria of public health significant or aesthetically offensive). In addition, lobster must be alive.

Operators are required to identify how they will ensure that the lobster they are offering for sale meet the minimum food safety and quality criteria. Some of the more common health, safety and quality concerns are lobster tainted with petroleum products, dead lobster, chemical residues resulting from the use of medicated feed, etc. It is therefore a requirement to inspect the product for these potential hazards.

When buying lobster from fishers, other licensed buyers or registered processing plants or when packing lobster for shipment, the product is inspected to ensure that it meets the minimum quality and grade criteria. These transactions are recorded and form the basis of the documentation required to meet health, safety and quality criteria.

Companies are required to identify the standards they use for accepting/rejecting the lobsters, the frequencies of inspection, what they do with reject lobster and how they document their inspections.

Submit **a <u>blank</u> form used for product inspection when <u>Receiving</u> Live Lobster**

Submit **a <u>blank</u> form used for product inspection when <u>Shipping</u> Live Lobster**

Examples of <u>blank</u> forms that could be used for documentation of product inspections are provided on the next page.

Example of Blank Form – Product Inspection – Receiving Live Lobster

Source of Product ➤	
Name(s) and phone numbers of the truckers if product is trucked to the Holding Facility ➤	
Date of purchase ➤	
Amount purchased ➤	

Standards for inspection ➤ Indicate amount of product rejected for:

Dead:	_____	kg/lbs.
Weaks:	_____	kg/lbs.
Undersized:	_____	kg/lbs.
Off odors:	_____	kg/lbs.
Foreign material:	_____	kg/lbs.
Total amount of disposals	_____	kg/lbs.

Was medicated feed used on products? ☐ Yes ☐ No

If Yes, indicate procedures for proper use and control ➤	
Signature ➤	Signature / Date

Example of Blank Form – Product Inspection – Shipping Live Lobster

Was medicated feed used on product? ➤

☐ Yes ☐ No

If Yes, indicate procedures for proper use and control:

Standards for inspection ➤ Indicate amount of product rejected for:

Dead	kg/lbs.	Off odors	kg/lbs.
Weak	kg/lbs.	Foreign material	kg/lbs.
Undersized	kg/lbs.		

Identify disposal of reject product ➤	
Amount and Date Shipped ➤	Amount (kg/lbs.) / Date
Name and phone numbers of truckers ➤	
Destination ➤	
Signature and Date ➤	Signature / Date

Section 5.9 – Hazard Analysis & HACCP Plan

Hazard Analysis Critical Control Point (HACCP) is a preventative system of hazard control that food processors can use to ensure safe food products for consumers. It is designed to minimize the risk of food safety hazards.

To perform a hazard analysis for the development of a HACCP plan, food processors must gain a working knowledge of potential hazards. The HACCP plan is designed to control all reasonably and likely food-safety hazards. Such hazards are categorized into three classes: biological, chemical and physical.

Licence holders are required to analyze their product to determine what, if any, health and safety risks or hazards are present. If any hazards are identified, appropriate controls must be put in place. The development, documentation and implementation of a HACCP plan requires knowledge of the company's operation and of the principles of HACCP.

In a live lobster operation, there is a requirement for the buyer to develop and implement control measures that directly impact on the facilities for their operation. In addition, there is a requirement to develop and implement a sanitation program. Properly developed and implemented, these control measures should address the majority of hazards associated with the production of live lobster.

However, a hazard analysis must be conducted for each operation to determine if there are any hazards (biological, chemical or physical) that are not controlled under the programs for Holding, Handling and Sanitation.

In most facilities, hazards will be identified and controlled. For example, should an operator or supplier use medicated feed, then a HACCP plan must describe the use and control of the medicated feed.

Submit **a HACCP Plan for Live Lobster**

An example of a HACCP Plan for Live Lobster is provided on pages 24–25. This example is incomplete and serves as a guide only.

Submit **a HACCP Plan Worksheet if potential hazards are identified in your HACCP Plan**

Examples of blank for a HACCP Plan Worksheet are provided on pages 26–27.

Example – Hazard Analysis & HACCP Plan

Ingredient/ Processing Step	Potential Hazard Introduced or Controlled	Is the Potential Hazard Significant?	Justification for Inclusion or Exclusion as a Significant Hazard	Preventative Measures of the Significant Hazards
1. Receipt of Lobster	Biological Pathogens	No	Product harvested from local waters or held in approved waters and transported under controlled conditions. Inspected when placed in holding facility. Live product that is cooked prior to consumption.	
	Chemical Petroleum products	No *(YES)*	Any contamination would be detected when inspected at holding facility. *(If product received from other pounds, a SQA is required from the supplier to address the use of medicated feed.)*	
	Physical Foreign material	No	Any foreign material would be detected when inspected at holding facility.	
2. Receipt and Storage of Feed	Biological Pathogens	No	Not likely to occur as feed inspected upon receipt and prior to use. Feed stored in a licensed Handling facility that meets construction and sanitation requirements.	
	Chemical Petroleum products	No	Not likely to occur as feed inspected upon receipt and prior to use. Feed stored in a licensed Handling facility that meets construction and sanitation requirements.	
	Physical Foreign material		Not likely to occur as feed inspected upon receipt and prior to use. Feed stored in a licensed Handling facility that meets construction and sanitation requirements.	
3. Feeding of Lobster	Biological Pathogens	No	Not likely to occur in medicated feed. Frozen bail used.	
	Chemical Petroleum products	Yes – medicated feed No – Frozen bait	If medicated feed is used, company will document controls in place for proper application and use. Petroleum contamination would be detected upon use.	
	Physical Foreign material	No	Would be detected upon use.	
4. Receipt and Storage of packing material	Biological Pathogens	No	Not likely to occur as packaging materials inspected upon receipt and prior to use. Packaging materials stored in licensed Handling facility that meets construction and sanitation requirements.	
	Chemical Petroleum products	No	Not likely to occur as packaging materials inspected upon receipt and prior to use. Packaging materials stored in licensed Handling facility that meets construction and sanitation requirements.	
	Physical Foreign material	No	Not likely to occur as packaging materials inspected upon receipt and prior to use. Packaging materials stored in licensed Handling facility that meets construction and sanitation requirements.	

Example – Hazard Analysis & HACCP Plan

Ingredient/ Processing Step	Potential Hazard Introduced or Controlled	Is the Potential Hazard Significant?	Justification for Inclusion or Exclusion as a Significant Hazard	Preventative Measures of the Significant Hazards
5. Holding Lobster	Biological Pathogens	No	Not likely to occur as lobsters are inspected upon receipt and prior to use. Holding facility meets construction and sanitation requirements. Water complies with the Holding criteria.	
	Chemical Petroleum products	No	Not likely to occur as lobsters are inspected upon receipt and prior to use. Holding facility meets construction and sanitation requirements. Water complies with the Holding criteria.	
	Physical Foreign material	No	Not likely to occur as lobsters are inspected upon receipt and prior to use. Holding facilities meet construction and sanitation requirements. Water complies with the Holding criteria.	
5a. Trans port to Handling Facility	Biological Pathogens	No	Product comes from approved pounds and transported under controlled conditions. Inspected when placed in handling facility.	
	Chemical Petroleum products	No	Product comes from approved pounds and transported under controlled conditions. Inspected when placed in handling facility. Sanitation program in place. Product is live. Any contamination would be detected when taken from holding facility.	
	Physical Foreign material	No	Product comes from approved pounds and transported under controlled conditions. Inspected when placed in handling facility. Sanitation program in place. Product is live. Any contamination would be detected when taken from holding facility.	
6. Handling Lobster (packing & weighing)	Biological Pathogens	No	Product individually inspected prior to packing in approved containers. Facility constructed to meet the criteria. Sanitation program in place.	
	Chemical Petroleum products	No	Product individually inspected prior to packing in approved containers. Facility constructed to meet the criteria. Sanitation program in place.	

	Physical Foreign material	No	Product individually inspected prior to packing in approved containers. Facility constructed to meet the criteria. Sanitation program in place.	
7. Shipping Lobster	Biological Pathogens	No	Live product and shipped in reefer containers.	
	Chemical Petroleum products	No	Transports inspected for cleanliness.	
	Physical Foreign material	No	Product is packed in crates, styros or cardboard masters.	

Example – Hazard Analysis & HACCP Plan

Critical Control Point (CCP)	Significant Hazard	Control Measure	Critical Limits for each Control Measure	Monitoring					Corrective Action and Records	Verification
				What	How	Frequency	Who	Records		
1. Receipt of Lobster	Improper use of medicated feed	SOP for use of Medicated feed	Proper application of medicated feed as per the SOP	Use of Medicated feed	Application of SOP for use of medicated feed	Each use	Owner	Documentation for the use of the feed as specified in the SOP	Hold lobster until proper medication/ reconditioning takes place	Owner reviews sources of lobster from outside pounds on a yearly basis. Confirms treatment procedures from outside suppliers if required.
2. Feeding of Lobsters	Improper use of medicated feed	SQA product is free of medicated feed	Each lot received from outside pounds accompanied by SQA	Each lot Received from outside pounds accompanied by SQA	Review of Documentation when product received from outside pounds	Each receipt	Owner	SQA	Reject lot if proper documentation does not accompany the lot	Owner reviews results of analyses performed by regulators.

Example – Hazard Analysis & HACCP Plan

Ingredient/ Processing Step	Potential Hazard Introduced or Controlled	Is the Potential Hazard Significant?	Justification for Inclusion or Exclusion as a Significant Hazard	Preventative Measures of the Significant Hazards
	Biological			
	Chemical			
	Physical			
	Biological			
	Chemical			
	Physical			
	Biological			
	Chemical			
	Physical			
	Biological			
	Chemical			
	Physical			

Example – The HACCP Plan Worksheet

Critical Control Point (CCP)	Significant Hazard	Control Measure	Critical Limits for each Control Measure	Monitoring					Corrective Action and Records	Verification
				What	How	Frequency	Who	Records		

Section 6 – Submission Process

Once completed, compile your **Live Lobster Facilities Protocol** in the following order:

Checklist

- ☐ **Cover page** (may be a copy of your company's letterhead)

Answers to Questions:

- ☐ 5.1 Company Background Information
- ☐ 5.2 Product Description
- ☐ 5.3 Holding Facility Information
- ☐ 4.4 Handling Facility Information

Forms and Documents:

- ☐ 5.5 Handling Facility Sanitation Program
- ☐ 5.5.1 Cleaning Plan
- ☐ 5.5.2 Pest Control Plan
- ☐ 5.5.3 Employee Hygiene Requirements
- ☐ 5.6 Proof of Water Source for Handling Facility
- ☐ 5.6.1 Water Sample Report Chart
- ☐ 5.7 General Process Flow Diagram
- ☐ 5.8 Blank Forms - Product Inspection Form – Receiving and Shipping Live Lobster
- ☐ 5.9 Hazard Analysis and HACCP Plan – *A HACCP Worksheet is required if significant hazards are identified in HACCP Plan*

- ☐ **Additional Information** (please submit any additional information that you would like to include in your Live Lobster Facilities Protocol)

Retain a copy of the completed Protocol documentation for your records and send a photocopy to:

Nova Scotia Fisheries and Aquaculture
Licensing Services
1575 Lake Road
Shelburne, Nova Scotia
B0T 1W0
Telephone: (902) 875-7439
Fax: (902) 875-7429