

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 the facilities.

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, Parts “A” and “B”, and Schedule “A” and Schedule “C”.

Specifically, lobster buyers are required to demonstrate that they are the owners of the facilities which are designed to enhance the quality of lobster. The facilities must meet the requirements of the criteria, which is detailed in Schedule “C” of the Licence Policy. A copy of the criteria has also been provided on page 4 of these guidelines.

An approved holding facility shall consist of either a tidal or a dryland pound, and have a holding

capacity of not less than 907 kg (2,000 lbs.). Re-circulation systems will be reviewed on their technical merit.

An approved handling facility must meet the minimum requirements of the criteria and be not less than 13.4 square meters (144 square feet).

Applicants are required to develop a protocol in accordance with the criteria. As part of this protocol, applicants must demonstrate proficiency in Hazard Analysis Critical Control Point (HACCP) and provide a HACCP Plan. In addition, a written sanitation program is also required.

The facilities are subject to minimum regulatory requirements and subject to inspection prior to final approval of the application.

Section 3 – Criteria

SCHEDULE "C"

NOVA SCOTIA LIVE LOBSTER HANDLING AND HOLDING CRITERIA

Existing licenced buyers, and applicants for a licence to buy lobster, must own and maintain lobster holding and handling facilities which meet the conditions as set out in this criteria and must comply with the criteria as outlined in the Live Lobster Protocol. Ownership 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.

APPROVED 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 intake pipe must be located below the low-water mark. Re-circulation systems will be reviewed on their technical merit.

The minimum capacity of the live lobster holding facility is required to be not less than 907 kg (2,000 lbs.) of lobsters.

APPROVED 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. The handling facility should meet the minimum requirements as set out in the Nova Scotia Live Lobster Handling and Holding Criteria.

LIVE LOBSTER PROTOCOL

An applicant for a Fish Buyers Licence for lobster shall develop a live lobster protocol in accordance with the program established by the Nova Scotia Department of Agriculture and Fisheries. As part of this protocol, applicants will have to demonstrate proficiency in Hazard Analysis Critical Control Point (HACCP) and provide a hazard analysis and HACCP Plan as part of their application. In addition, a written sanitation program will also be required. The associated holding and handling facilities will be subject to minimum regulatory requirements and subject to inspection prior to final approval of the application.

The licence holder will own approved holding and handling facilities that is distinct, has its own water intake system and is not encumbered by other users. Licence holders will not be permitted to share the same holding and handling facilities.

Section 4 – 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 6 to 12 and submit forms, pages 14 to 27 (*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

- 4.1 Company Background Information
- 4.2 Product Description
- 4.3 Holding Facility Information
- 4.4 Handling Facility Information

Forms and Documents

- 4.5 Handling Facility Sanitation Program –
 - 4.5.1 Cleaning Plan
 - 4.5.2 Pest Control Plan
 - 4.5.3 Employee Hygiene Requirements
- 4.6 Proof of Water Source for Handling Facility
- 4.7 General Process Flow Diagram
- 4.8 Product Inspection Form – Receiving and Shipping Live Lobster
- 4.9 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:

- 4.1 Company Background Information
- 4.2 Product Description
- 4.3 Holding Facility Information
- 4.4 Handling Facility Information

Section 4.1 – 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 <u>holding</u> facility ➤		
civic address		
Lobster <u>handling</u> facility ➤		
civic address		
Civic address where records ➤		
will be kept		
Telephone numbers ➤	Bus. ()	Res. ()
Cellular number(s) ➤		
Fax number ➤		
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 purchasing the facilities, provide name ➤

--

of current owner

Applicant’s name ➤		
Applicant’s Signature/Date ➤	Signature	Date

Section 4.2 – 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 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 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 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 page 8):

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 (<i>Homarus americanus</i>)
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°C

Section 4.3 – 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 ____ x ____ *(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 4.4 – 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 page 12):

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

Minimum Requirements for Handling Facility

Floors –

- i) in an existing facility, wood will be tolerated provided it can be kept in good repair and clean. No earth or gravel floors permitted.*
- ii) in new construction, floors shall be concrete or equivalent (nonporous).*

Walls – *Open studding shall be tolerated provided it can be kept in good repair and reasonably clean; facility must have tight fitting doors and windows and be so constructed as to prevent the entry of rodents.*

Ceilings – *Ceilings shall be water tight. Open studding shall be tolerated provided it can be kept in good repair and reasonably clean.*

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.*

Toilet facilities – *must be available in the immediate area.*

Hand washing Facilities –

- (i) in an existing facility, running water is required. Pressurized water is recommended but not required.*
- (ii) in new construction, the hand washing facilities must be located adjacent or in combination with the toilet facilities. Hot and cold running water is required.*
- (iii) hand washing facilities in all cases must be equipped with soap and single service towels.*

Tables –

- i) in an existing facility, wood is permitted*
- ii) in new construction, tables must be made of approved material.*

Offal Receptacles – *must be marked For Offal Only, and be constructed of approved material*

Lighting – *minimum lighting, with shatterproof glass or shades must be available in the working in the working areas.*

Water –

An adequate supply of water shall be available for handling facility clean up and hand washing.

The criteria for water requires that it comes from:

- (a) a supply of clean seawater derived from a source which meets the overlay water standard.*

Overlay water standard means that

- ▶ an area that is not contaminated with faecal material, poisonous or deleterious substances or marine biotoxins to the extent that consumption of the lobster might be hazardous; and*
- ▶ where the median or geometric mean faecal coliform Most Probable Number (MPN) of the water does not exceed 14/100 mL, and not more than 10% of the samples exceed a faecal coliform MPN of 43/100 mL, for a five-tube decimal dilution test.*

If seawater is used for handling facility clean up and hand washing, the intake pipe, if located near a wharf, must be at least 125 meters (410 feet) from the wharf.

or

- (b) an approved potable freshwater source where the water has a coliform bacteria count of not more than two per hundred milliliters*

Please Submit the Following Forms and Documents:

- 4.5 Handling Facility Sanitation Program –
 - 4.5.1 Cleaning Plan
 - 4.5.2 Pest Control Plan
 - 4.5.3 Employee Hygiene Requirements
- 4.6 Proof of Water Source for Handling Facility
- 4.7 General Process Flow Diagram
- 4.8 Blank forms to be used for Product Inspection – Receiving and Shipping Live Lobster
- 4.9 Hazard Analysis and HACCP Plan – a HACCP Worksheet if significant hazards are identified in the HACCP Plan

Section 4.5 – 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 4.5.1 – 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 Handling Facility

An example of a Cleaning Plan is provided on page 15.

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 <i>Rinse</i> – Hose with high pressure water <i>Clean</i> – Scrub with cleanser <i>Rinse</i> – Hose with high pressure water	
Ceiling		Hose with high pressure water	<i>Rinse</i> – Hose with high pressure water <i>Clean</i> – Scrub with cleanser <i>Rinse</i> – Hose with high pressure water
Walls		Hose with high pressure water	<i>Rinse</i> – Hose with high pressure water <i>Clean</i> – Scrub with cleanser <i>Rinse</i> – Hose with high pressure water
Drains	Hose with high pressure water	<i>Rinse</i> – Hose with high pressure water <i>Clean</i> – Scrub with cleanser <i>Rinse</i> – Hose with high pressure water	
Tables	<i>Rinse</i> – Hose with high pressure water <i>Clean</i> – Scrub with cleanser <i>Rinse</i> – 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 4.5.2 – 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

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 4.5.3 – 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

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 4.6 - 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:

SOURCE

Submit

clean seawater –

proof that seawater is not being obtained from a contaminated area. If seawater comes from an area which Environment Canada has classified for direct harvesting of shellfish, you may provide a copy of the appropriate map from the Environment Canada website at www.atl.ec.gc.ca/epb/sfish/maps/ns/ns.html

– If saltwater intake pipe is located near a wharf, indicate on map the distance it is located from the wharf.

fresh water –

a recent copy of the water sample report

both –

proof of water source as outlined in (a) and (b) above

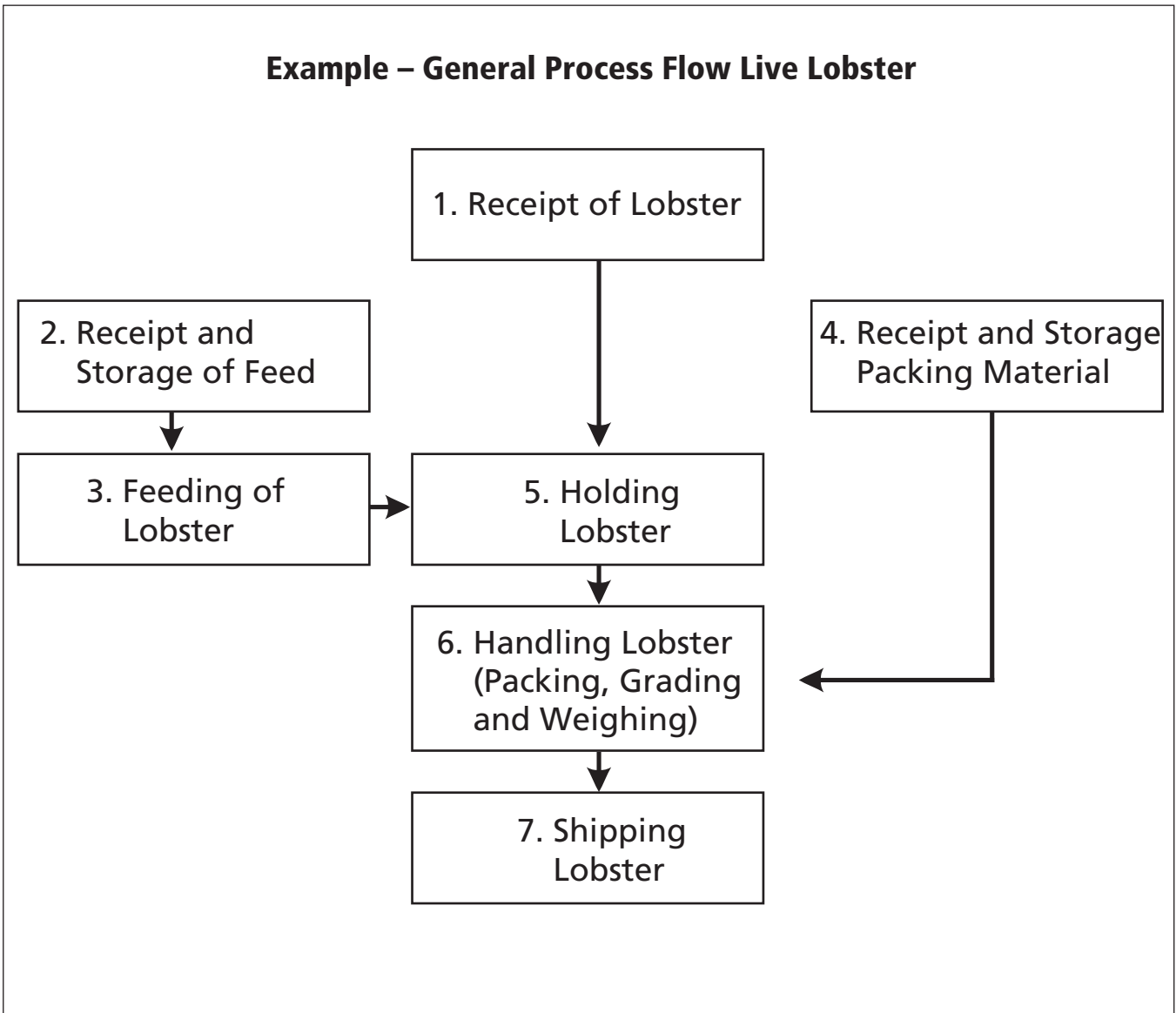
Section 4.7 – Process Flow

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.



Section 4.8 – 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 blank form used for product inspection when Receiving Live Lobster

Submit

a blank form used for product inspection when Shipping Live Lobster

Examples of blank forms that could be used for documentation of product inspections are provided on page 21.

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 product? <input type="checkbox"/> Yes <input type="checkbox"/> 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? ➤	If Yes, indicate procedures for proper use and control:			
<input type="checkbox"/> Yes <input type="checkbox"/> No				
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 4.9 – 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 23–24. 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 and blank forms for a HACCP Plan Worksheet are provided on pages 25–27.

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	<u>Biological</u> 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.	
	<u>Chemical</u> Petroleum products	No (YES)	Any contamination would be detected when inspected at holding facility. <i>(If product received from other pounds, a SQA is required from the supplier to address the use of medicated feed.)</i>	
	<u>Physical</u> Foreign material	No	Any foreign material would be detected when inspected at holding facility.	
2. Receipt and Storage of Feed	<u>Biological</u> 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.	
	<u>Chemical</u> 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.	
	<u>Physical</u> Foreign material	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.	
3. Feeding of Lobster	<u>Biological</u> Pathogens	No	Not likely to occur in medicated feed. Frozen bait used.	
	<u>Chemical</u> Chemicals in medicated feed	Yes – medicated feed	If medicated feed is used, company will document controls in place for proper application and use. Petroleum contamination would be detected upon use.	
	Petroleum products	No – frozen bait		
	<u>Physical</u> Foreign material	No	Would be detected upon use.	
4. Receipt and Storage of packing material	<u>Biological</u> 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.	
	<u>Chemical</u> 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.	
	<u>Physical</u> 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	<u>Biological</u> 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.	
	<u>Chemical</u> 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.	
	<u>Physical</u> 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. Transport to Handling Facility	<u>Biological</u> Pathogens	No	Product comes from approved pounds and transported under controlled conditions. Inspected when placed in handling facility.	
	<u>Chemical</u> 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.	
	<u>Physical</u> 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)	<u>Biological</u> Pathogens	No	Product individually inspected prior to packing in approved containers. Facility constructed to meet the criteria. Sanitation program in place.	
	<u>Chemical</u> Petroleum products	No	Product individually inspected prior to packing in approved containers. Facility constructed to meet the criteria. Sanitation program in place.	
7. Shipping Lobster	<u>Biological</u> Pathogens	No	Live product and shipped in reefer containers.	
	<u>Chemical</u> Petroleum products	No	Transports inspected for cleanliness.	
	<u>Physical</u> Foreign material	No	Product is packed in crates, styros or cardboard masters.	

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		
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 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 Plan Worksheet

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
	<u>Biological</u>			
	<u>Chemical</u>			
	<u>Physical</u>			
	<u>Biological</u>			
	<u>Chemical</u>			
	<u>Physical</u>			
	<u>Biological</u>			
	<u>Chemical</u>			
	<u>Physical</u>			

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 5 - 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:

- 4.1 Company Background Information
- 4.2 Product Description
- 4.3 Holding Facility Information
- 4.4 Handling Facility Information

Forms and Documents:

- 4.5 Handling Facility Sanitation Program
 - 4.5.1 Cleaning Plan
 - 4.5.2 Pest Control Plan
 - 4.5.3 Employee Hygiene Requirements
- 4.6 Proof of Water Source for Handling Facility
- 4.7 General Process Flow Diagram
- 4.8 Blank Forms - Product Inspection Form – Receiving and Shipping Live Lobster
- 4.9 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 Agriculture and Fisheries
c/o Audrey Gay, Licence Administrator
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Halifax, Nova Scotia
B3J 3C4
Email: gayam@gov.ns.ca
Telephone: (902) 424-0340 or 424-0342
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