

**Maine Department of Marine Resources
Shellfish Sanitation Program
Public Health Division**



**Sanitation & HACCP Guidelines
Updated December 2007**

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Introduction

Welcome to Edition Two of the Maine Department of Marine Resources Sanitation & HACCP Guidelines reference book. Like everything else in life, changes are taking place all the time. We, of the Department's Public Health Division, recently reviewed the old Guidelines book, and decided it was time for improvements and updating. We strive to keep you up to speed with all the latest information available to us.

As with the previous edition, this book is designed with our Certified Shellfish Dealers in mind and hopefully will be used by them when working with HACCP (Hazard Analysis Critical Control Point), as well as with the monitoring of Daily Sanitation practices.

As always, we welcome your comments and suggestions for improvements to future editions.

Respectfully,

Public Health Division Staff

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SSOP (Sanitation Standard Operating Procedures)

What is “required” and what is “suggested”?

A **Sanitation Log** (record) is **required** to be kept by our Certified Shellfish Dealers. This record must cover, at least, the eight key control points listed as follows:

1. Safety of Water
2. Food contact surfaces
3. Prevention of cross contamination
4. Maintenance of: hand-washing, hand-sanitizing & toilet facilities
5. Protection from adulterants
6. Toxic compounds: proper labeling, storage & use
7. Employee health conditions
8. Exclusion of pests

Note: Some examples of forms used for this monitoring will follow in this section. You may use example pages from this book for photo-copying, or you may wish to design your own, as long as the eight key points of sanitation monitoring listed above are covered.

Sanitation Standard Operating Procedures are not required, but are **recommended**. In a plant’s **SSOP**, each of the eight key items listed above are spelled out in detail separately for one particular firm as to **how** that particular firm will deal with each item. This is an instruction guide for all workers at the plant. With each item, the following procedures are listed:

1. Name of the control measure (i.e. safety of the water)
2. Control measures that will be followed
3. Monitoring procedures that will be used
4. Corrective actions that will be taken
5. Record keeping that will be kept

Note: An SSOP will vary from plant to plant. An example (for illustrative purposes only) will follow.

Model Sanitation Standard Operating Procedures

Maine Clam Company

River Road

Waldoboro, ME ed. 10/16/05

(Example: For illustrative purposes only)

The following model SSOP addresses the sanitation concerns for a fictional seafood company processing shucked soft shell clams. SSOPs will vary from facility to facility, because each facility and process is designed differently. This SSOP is for illustrative purposes only and does not constitute a recommendation by the National Seafood HACCP Alliance or DMR. The use of trade names does not constitute endorsement by the National Seafood HACCP Alliance or DMR for any specific product.

1. SAFETY OF THE WATER THAT COMES INTO CONTACT WITH FOOD OR FOOD-CONTACT SURFACES, OR IS USED IN THE MANUFACTURE OF ICE

Control Measures

All water used in the plant is from a commercially drilled well. The water system in the plant was designed and installed by a licensed plumbing contractor, and meets current community building codes. All modifications to the plumbing system will be completed by a licensed plumbing contractor, and will be inspected to ensure conformance with local building codes. All hoses inside and outside the plant have anti-siphoning devices installed. Floors are sloped to facilitate drainage.

Monitoring Procedures

The well was tested for potability by the ME Dept. of Human Services Water Quality Laboratory when it was initially installed. Additional potability tests are repeated every four years.

Twice a year, and when modifications are made to the plumbing system, water samples from the plant are collected by a representative of the Dept. of Marine Resources, taken to the DMR Microbiology Lab, and examined for the presence of coliforms. Cultures testing positive for coliforms are examined for the presence of fecal coliforms. The production supervisor receives and reviews the laboratory reports.

Hoses are inspected daily during production for the presence of anti-siphoning devices. Processing area floors are inspected daily during production for adequate drainage.

Corrective Actions

If in-plant sampling indicates the presence of coliforms in the plant's water sample, the plant will immediately sanitize the well and the water system. The plant will also immediately inspect the well and the plumbing system to determine the source of the coliforms. Corrections will be made to the plumbing system, if necessary, to correct problems.

If in-plant sampling indicates the presence of fecal coliforms in any plant water sample, the plant will stop production and embargo all products until product safety can be assured. The plant will contact the DMR and inform them of the actions taken. The plant will inspect the plumbing system to determine the source of the fecal

coliforms. Corrections will be made to the plumbing system, if necessary, to correct problems. Production will resume only when water meets state and federal water quality standards.

Hoses without anti-siphoning devices will be red-tagged and will not be used until anti-siphoning devices have been installed. Floors with standing water will have the drains unplugged or, if necessary, consultations will be held with plumbing or general contractors and corrections will be made to correct floor drainage problems.

Record keeping

Reports are maintained for plant water quality testing and corrective actions. Hose inspections, floor drainage inspections, and corrective actions are recorded on the Daily Sanitation Report.

2. CONDITION AND CLEANLINESS OF FOOD CONTACT SURFACES, INCLUDING UTENSILS, GLOVES, AND OUTER GARMENTS

Control Measures

Food-contact surfaces are adequately and easily cleanable.

Food-contact surfaces are cleaned and sanitized twice each day during processing.

In the morning before processing: Food-contact surfaces are rinsed with cold water and sanitized with a 100-ppm sodium hypochlorite (bleach) sanitizer.

At the midday break: Major solids are physically removed from floors, equipment, and food-contact surfaces. Equipment is disassembled as required for adequate cleaning. All surfaces are rinsed with cold water. Equipment and food-contact surfaces are scrubbed using brushes with a chlorinated alkaline cleaner in warm (120 ° F) water. All surfaces and floors are rinsed with cold water. Food-contact surfaces are sprayed with a 100-ppm sodium hypochlorite sanitizer solution. Floors are sanitized with a 400-ppm quaternary ammonium chloride sanitizer. Utensils are cleaned in a deep sink with a chlorinated alkaline cleaner, rinsed in hot water (190 ° F), soaked in a 100-ppm sodium hypochlorite sanitizer for at least 10 minutes, and rinsed in hot water (190 ° F) prior to use.

At the end of the shift: Major solids are physically removed from floors, equipment, and food-contact surfaces. Equipment is disassembled as required for adequate cleaning. All surfaces are rinsed with cold water. Equipment and food-contact surfaces are scrubbed using brushes with a chlorinated alkaline cleaner in warm (120 ° F) water. All surfaces and floors are rinsed with cold water. Floors and walls are sprayed with a 400 ppm quaternary ammonium chloride sanitizer solution. Utensils are cleaned in a deep sink with a chlorinated alkaline cleaner, rinsed in hot water (190 ° F), soaked in a 100-ppm sodium hypochlorite sanitizer for at least 10 minutes, and air-dried.

Workers working with raw shellfish meats wear waterproof aprons and waterproof gloves. Waterproof aprons and gloves are cleaned and sanitized twice each day: at the midday break and at the end of the shift. Workers will wear clean clothing beneath any protective outer wear. Employees will wear waterproof footwear when working in wet areas. Disposable aprons and gloves will be supplied as needed by the supervisor. Workers will be responsible for keeping their aprons and gloves clean and sanitized while they are in use. Aprons and gloves are stored in a safe and protected manner during breaks and at the end of the day, if they are to be reused. Aprons and gloves will be properly disposed of if worn or torn.

Monitoring Procedures

The supervisor inspects food-contact surfaces to determine if they are adequately cleanable; and are clean and sanitized before processing begins, and after each clean-up period. The supervisor also monitors the use of gloves and the cleanliness of worker's outer garments.

Corrective Actions

Food-contact surfaces that are not adequately cleanable are repaired or replaced. Food-contact surfaces that are not clean are re-cleaned. Gloves that become a potential source of contamination are cleaned and sanitized, or replaced. Outer garments that become a potential source of contamination are cleaned and sanitized or replaced.

Record Keeping

Condition of food-contact surfaces, sanitation inspections, use and cleanliness of gloves, cleanliness of worker outer garments, and corrective actions are noted on the Daily Sanitation Report.

3. PREVENTION OF CROSS-CONTAMINATION FROM UNSANITARY OBJECTS TO FOOD, FOOD-PACKAGING MATERIAL, AND OTHER FOOD CONTACT SURFACES; INCLUDING UTENSILS, GLOVES, AND OUTER GARMENTS; AND FROM RAW PRODUCT TO COOKED PRODUCT

Control Measures

The production supervisor has received basic food sanitation training. Workers wear hairnets, headbands, caps, beard covers, or other effective hair restraints; and do not wear jewelry or other objects that might fall into the product, equipment, or containers. Workers wear disposable gloves and replace them as needed. Workers wash their hands and gloves thoroughly and sanitize them before starting work, after each absence from their workstation, and anytime they have become soiled or contaminated.

Clothing and personal belongings are not stored in production areas. Workers do not eat food or chew tobacco in raw product areas. Unauthorized personnel are not allowed to enter, or pass through, restricted processing areas.

Cleaning and sanitizing equipment is color-coded for specific plant areas: blue for cooler and receiving areas and general plant cleaning, white for the shucking/packing areas, and yellow for toilet facilities.

Plant grounds are in a condition that protects against contamination of food. Waste is removed from processing areas every 4 hours during production.

Plant buildings are maintained in good condition. Raw-product processing and shucked-product processing areas are separate. Drip or condensate does not contaminate food or packaging materials. Safety-type light fixtures are used in processing and packaging areas. Coolers, including the evaporators, are cleaned bi-annually, or more often, if needed. Nonfood-contact surfaces in processing and packaging areas are cleaned daily at the end of the shift. Raw and cooked products are physically separated in coolers. Packaging materials are protected from contamination during storage.

Monitoring Procedures

Plant manager schedules basic food sanitation courses for new production supervisors.

Production supervisor monitors hair restraint use, glove use, hand washing, personal belonging storage, eating and drinking in processing areas, and boot sanitizing.

Production supervisor monitors use of proper sanitation equipment and removal of waste from processing areas.

Production supervisor inspects the plant and cooler before processing begins. The production supervisor also inspects package material storage areas and plant grounds daily.

Corrective Actions

New production supervisors receive basic sanitation instruction.

Workers correct deficiencies in hair restraint use, glove use, hand washing, personal belonging storage, eating and drinking in processing areas, and apron cleanliness before working with raw products.

Sanitation equipment that is being used in the wrong plant area is cleaned and sanitized and exchanged for correct equipment. Production supervisor initiates correction of any potential cross-contamination condition.

Unprocessed and processed raw products are kept physically separate in cooler and during processing. Any cooked, ready to eat product is also kept separate and well protected while stored in the plant.

Record Keeping

Training records indicate that production supervisors have received basic food sanitation training. Hair restraint use, glove use, hand washing, personal belonging storage, eating and drinking in processing areas, use of proper sanitation equipment, plant grounds and waste inspections, plant and cooler inspections, packaging material storage inspections, and corrective actions are noted on the Daily Sanitation Report.

4. MAINTENANCE OF HAND WASHING, HAND SANITIZING, AND TOILET FACILITIES

Control Measures

Toilet facilities are provided off the worker's dressing room, physically separate from processing areas. Toilet facilities have self-closing doors, are maintained in good repair, and are cleaned and sanitized daily at the end of the shift.

Hand washing facilities are provided in shucking-packing area and in the toilet facility. Hand washing facilities have: hot and cold running water with foot activated valves, liquid sanitizing hand soap, hand sanitizer solutions that are changed every 4 hours during production, sanitary towel service, refuse receptacles; and signs directing workers to wash their hands and gloves thoroughly and sanitize them before starting work, after each absence from their work station, and anytime they have become soiled or contaminated.

Monitoring Procedures

Production supervisor inspects the toilet facilities and hand-washing facilities daily.

Corrective Actions

Production supervisor initiates cleaning of dirty toilet facilities and correction of any potentially contaminating condition. Repairs are made as needed.

Record Keeping

Inspections of toilet and hand washing facilities and corrective actions are noted on the Daily Sanitation Report.

5. PROTECTION OF FOOD, FOOD-PACKAGING MATERIAL, AND FOOD-CONTACT SURFACES FROM: ADULTERATION WITH LUBRICANTS, FUEL, PESTICIDES, CLEANING COMPOUNDS, SANITIZING AGENTS, CONDENSATE AND OTHER CHEMICAL, PHYSICAL, AND BIOLOGICAL CONTAMINANTS

Control Measures

Cleaning compounds, sanitizers and lubricants used in processing, and packaging areas are listed in the U.S. Department of Agriculture, Food Safety and Inspection Service's "List of Proprietary Substances and Nonfood Compounds Authorized for Use Under USDA Inspection and Grading Programs" (FSIS Miscellaneous Publication No. 1419).

Food-grade, and non-food-grade, chemicals and lubricants are stored separately outside processing and packaging areas.

Food, food-packaging materials, and food-contact surfaces are protected from adulteration from biological, chemical, and physical contaminants.

Monitoring Procedures

Invoices are checked at receiving before chemicals are stored in the food-grade chemical storage area. Production supervisor inspects chemical storage areas daily, and inspects processing and packaging areas daily before production begins.

Corrective Actions

Unapproved chemicals are returned, or used in non-processing areas. Improperly stored chemicals are moved to the correct storage area. Production supervisor corrects any potentially contaminating condition. Repairs are made as needed.

Record keeping

Invoices are kept for food-grade chemicals and lubricants. Chemical storage area and processing and packaging area inspections, and any corrective actions, are noted on the Daily Sanitation Report.

6. LABELING, STORAGE, AND USE OF TOXIC COMPOUNDS

Control Measures

Cleaning compounds, sanitizing agents, lubricants, and pesticide chemicals are properly labeled and stored outside processing and packaging areas, separate from packaging materials. Food-grade chemicals and lubricants are stored separately from non-food-grade chemicals and lubricants.

Monitoring Procedures

Sanitation supervisor inspects chemical storage areas daily.

Corrective Actions

Unlabeled chemicals are removed from storage areas and disposed of properly. Improperly stored chemicals are moved to correct storage areas.

Record Keeping

Chemical storage area inspections and corrective actions are noted on the Daily Sanitation Report.

7. CONTROL OF EMPLOYEE HEALTH CONDITIONS THAT COULD RESULT IN THE MICROBIOLOGICAL CONTAMINATION OF FOOD, FOOD-PACKAGING MATERIALS, AND FOOD-CONTACT SURFACES

Control Measures

Workers are instructed to report to their immediate supervisor any health condition they may have that might result in food contamination.

Monitoring Procedures

Supervisor reports suspected health problems to the plant manager. The plant manager decides if a potential food contamination situation exists.

Corrective Actions

Workers who represent a potential risk are sent home or reassigned to non-food-contact jobs.

Record Keeping

Worker health issues and corrective actions are noted on the Daily Sanitation Report.

8. EXCLUSION OF PESTS FROM THE FOOD PLANT

Control Measures

A pest management firm treats the outside of the building every other month. They also inspect the interior of the building, and treat as necessary with appropriate chemicals. Plant grounds and interior areas are kept free of litter, waste, and other conditions that might attract pests. Outer plant doors are kept closed, processing areas are screened with plastic curtains, and electric bug-killing devices are located outside entrances to processing areas. No pets are allowed in the plant. Supervisors report any pest problems to the plant manager.

Monitoring Procedures

The plant manager reviews reports of pest treatment. The production supervisor inspects the plant's exterior and interior daily.

Corrective Actions

The pest management firm is notified of any pest problem and treats the problem. Pest treatments are more frequent if problems are identified.

Record Keeping

Records of pest treatment are maintained. Plant inspections and corrective actions are noted on the Daily Sanitation Report.

Revised:10/16/05 **Reviewed by (Plant Manager Name)**

Date:

Chemicals Approved for Use in Maine Clam Company
Revised 10/16/05

Chemical	Strength	Dilution
Chlorinated Alkaline Cleaner Brand: <i>Ecolab Solid Kleen-Up</i> Tm Usage: Equipment, food-contact Surfaces, utensils, toilet facilities		1 ounce of concentrate to 3 gallons of water
Liquid Sanitizing Hand Soap Brand: <i>Ecolab Insurance</i> Tm (E-2) Usage: Hand washing facilities		Undiluted
Sodium Hypochlorite Sanitizer Brand: <i>Ecolab XY-120</i> Usage: Food-contact surfaces, Utensils	100 ppm	1 ounce of concentrate to 6.5 gallons of water
Quaternary Ammonium Sanitizer Brand: <i>Ecolab Ster-Bac</i> Usage: Floor	400 ppm	1 ounce of concentrate to 2 gallons of water
Iodine Sanitizer Brand: <i>Ecolab Bac-Flush</i> Tm Usage: Hand sanitizing solutions	25 ppm	
Lubricants Brand: <i>Bettcher Industries Special Whizard Grease (H-1)</i> Usage: Food processing equipment		

SSOP Records

1. Municipal water quality reports and corrective actions are reviewed and kept on file for two years.
2. In-plant water quality testing and corrective actions are reviewed and kept on file for two years.
3. Daily Sanitation Reports are reviewed and kept on file for two years.
4. Invoices for food-grade chemicals and lubricants are reviewed and kept on file for two years.
5. Records of pest treatment are reviewed and kept on file for two years.

Revised 10/16/05

Reviewed by (Plant Manager)

Date:

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10/18/05

This work has been modified by the Maine Dept. of Marine Resources for instructional purposes in their DMR Shellfish HACCP and Sanitation Guide. The information has been for illustrative purposes and does not constitute any recommendations by DMR.

DAILY SANITATION REPORT – Shucker Packer

Firm Name:

Week of:

Initial entry when checked Enter date and time of entry	MON _/_	TUE _/_	WED _/_	THUR _/_	FRI _/_	SAT _/_	SUN _/_
SAFETY OF WATER: (Municipal water source) Check for backflow devices							
CONDITION/CLEANLINESS OF FOOD CONTACT SURFACES: No wooden handled knives, shucking blocks, or hammers. Equipment is smooth (welds), easily cleanable.							
Ice scoop is clean, stored in a sanitary manner. Ice scoop is sanitized and stored to prevent contamination.							
Knives, shucking blocks, hammers, gloves, and aprons are clean and sanitized before beginning of day and after all breaks.							
Knives, shucking blocks, hammers, gloves, and aprons are washed and rinsed at the end of each day.							
Knives, shucking blocks, hammers, gloves, and aprons are in good condition.							
Shucking containers are cleaned and sanitized before each filling.							
PREVENTION OF CROSS CONTAMINATION: Product is protected from splash and condensate drip.							
Product not directly in contact with floor of cooler. Product separated by lot.							
Shucked product is protected from contamination. Personal items not stored in processing area.							
Knives, shucking blocks, hammers, gloves, and aprons are stored in a manner to prevent splash, dust and contamination.							
No eating or tobacco use in processing area. Employee's hands are washed after any breaks from work.							
MAINTENANCE OF HAND-WASHING, HAND-SANITIZING, AND TOILET FACILITIES: Toilet and Hand-washing facilities are checked for cleanliness, supplies, and warm water.							
PROTECTION FROM ADULTERANTS: Light fixtures shielded; Product protected during transfer.							
Adequate ventilation is provided to minimize condensation in areas where food is stored, processed or packed.							
PROPER LABELING, STORAGE, AND USE OF TOXIC COMPOUNDS: Cleaning supplies stored properly and away from product. All supplies labeled. Toxic compounds stored properly.							
Sanitizing agent is checked as necessary to ensure proper usage. (See sanitizer strength checklist)							
CONTROL OF EMPLOYEES WITH ADVERSE HEALTH CONDITIONS: Employees with unhealthy conditions reassigned to other duties.							
EXCLUSION OF PEST: There are no pest, rodents, insects, etc., in plant area.							
INITIALS OF OBSERVER:							

** Please note on back of this sheet any corrections that had to be made to the items.

DAILY SANITATION REPORT - Shellstock Shipper/Reshipper

Firm Name: _____ Reviewed By: _____ Date _____

Date: Time of observation:	MON	TUE	WED	THUR	FRI	SAT	SUN
SAFETY OF WATER: Check for backflow devices; backflow preventers on all hose bibs Ice clean and from a safe source.							
CONDITION/CLEANLINESS OF FOOD CONTACT SURFACES: Ice handling equipment is cleaned and sanitized; properly stored.							
Ice handling equipment is properly constructed; in good repair.							
Food contact surfaces are clean and sanitized; properly stored							
Food contact surfaces are properly constructed; in good repair.							
PREVENTION OF CROSS CONTAMINATION: Product is protected from splash & biological cross-contamination							
Product not directly in contact with floor of cooler. Product separated by lot.							
Personal items not stored in processing area. No eating or tobacco use in processing area.							
Employees' hands are washed after any breaks from work.							
MAINTENANCE OF HAND-WASHING, HAND-SANITIZING, AND TOILET FACILITIES: Toilet and Hand-washing facilities are checked for cleanliness, supplies, and warm water; operating and accessible.							
PROTECTION FROM ADULTERANTS: Light fixtures are shielded.							
Product protected during transfer.							
Food and food contact surfaces are protected from condensate, overhead drippage, or other adulterants.							
PROPER LABELING, STORAGE, AND USE OF TOXIC COMPOUNDS: Cleaning supplies stored properly and away from product.							
Toxic compounds labeled and stored properly. Toxic compounds used properly							
All supplies labeled. Chemicals separated by type; cleaners, sanitizers, petroleum based products, and pesticides.							
CONTROL OF EMPLOYEES WITH ADVERSE HEALTH CONDITIONS: Employees healthy, without wounds or sores; those with unhealthy conditions are reassigned to other non-critical duties.							
EXCLUSION OF PEST: There are no pest, rodents, insects, etc., in area.							
Initials of recorder:							

*Please note corrections made to listed items on the back of this sheet, along with date of correction

Explanation of HACCP

Hazard Analysis Critical Control Point (HACCP) is a scientific approach to food safety. It is a method for insuring control of a food process to reduce the risk of food borne illness. It simplifies food safety by focusing on critical parts of the process, and providing ways for controlling them. We need to keep in mind that HACCP is both location and product specific. In other words, if a firm operates from more than one location, each location together with the products handled at that location must be dealt with separately.

It is highly recommended that once you have selected a location and a product, that a “flow chart” be developed. A flow chart can be a simple list of steps that occur with the handling of a product. The first step is often “Receiving”, while the last step may be, and often is, “Shipping”. A flow chart example is provided in this printing. It should also be mentioned that many firms prefer to describe what actually happens to the product at each step.

When you are considering the HACCP Rule, always think of HACCP as containing two parts.

Part One - The Hazard Analysis.

This is the required part of the Rule and must be considered for each separate location and each product handled. It is important to remember that a Hazard Analysis may or may not lead to a HACCP plan.

Part Two - The HACCP Plan.

If, during the Hazard Analysis, it is determined that there are one or more Critical Control Points (CCP) in the operation, you will then need to develop a HACCP plan. Keep in mind that a HACCP plan must be developed by a “qualified” individual, preferably one who has received a Certificate of Training from an approved training school; such as the one put on by AFDO (Association of Food & Drug Officials). If there is any question on this point, you should contact your Inspector.

Samples of a Hazard Analysis Worksheet and HACCP Plans for shellfish operations are included in this printing.

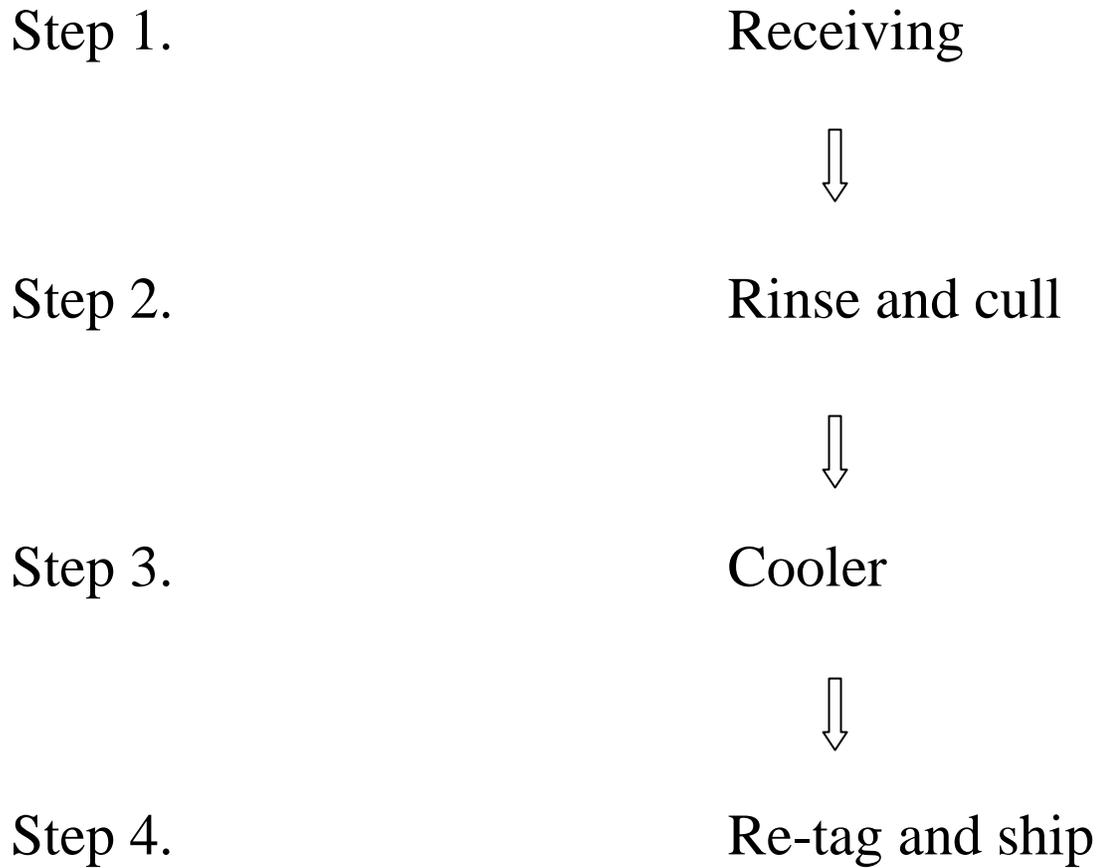
The Seven Principles of HACCP

1. Conduct hazard analysis. Prepare a list of steps in the process where significant hazards occur and describe the preventive measures.
2. Identify the Critical Control Points (CCP) in the process.
3. Establish Critical Limits (CL) for preventive measures associated with CCP identified.
4. Establish CCP monitoring requirements. Establish procedures for using monitoring results to adjust the process and maintain control.
5. Establish corrective actions to be taken when monitoring indicates that there is a deviation from an established CL.
6. Establish effective record-keeping procedures that document the HACCP system.
7. Establish procedures for verification that the HACCP system is working correctly.

The seafood HACCP regulation and other domestic and international HACCP control systems are based on these principles. It is a preventive system for food safety, which must rely on Good Manufacturing practices (GMPs); e.g., sanitation and personal hygiene programs to make it work.

Flow Chart

(this example is for a Shellstock Shipper)



Shellfish HACCP Forms & Example Plans

In general, a Hazard Analysis may or may not lead to a Firm needing a HACCP plan.

Under the Shellfish Sanitation program, you are required to have a HACCP plan.

The following pages contain a blank form that may be used for developing your own HACCP plan. In addition, you will find examples plans designed for use by Re-Shippers, Shellstock Shippers and Shucker-Packers.

Blank Hazard Analysis Worksheet

Firm Name: _____ Firm Location: _____

Product Description: _____

Method of Distribution & Storage: _____

Intended Use & Consumer: _____

(1)	(2)	(3)	(4)	(5)	(6)
Ingredient/ processing step	Identify potential hazard(s) introduced, controlled, or enhanced at this step	Are any potential food safety hazards significant? (Yes/No)	Justify your decision for Column # 3	What preventative measure(s) can be applied for the significant hazards?	Is this step a Critical Control Point? (Yes/No)
	<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>				
	<u>Biological</u>				
	<u>Chemical</u>				
	<u>Physical</u>				

(1)	(2)	(3)	(4)	(5)	(6)
Ingredient/ processing step	Identify potential hazard(s) introduced, controlled, or enhanced at this step	Are any potential food safety hazards significant? (Yes/No)	Justify your decision for Column # 3	What preventative measure(s) can be applied for the significant hazards?	Is this step a Critical Control Point? (Yes/No)
	<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>				
	<u>Biological</u>				
	<u>Chemical</u>				
	<u>Physical</u>				
	<u>Biological</u>				
	<u>Chemical</u>				
	<u>Physical</u>				

Example of Completed Hazard Analysis Worksheet

(For Illustrative Purposes Only)

Firm Name: Maine Clam Company Firm Location: Jonesport, Maine

Product Description: Shucked Soft-shell Clams

Method of Distribution & Storage: Packed & stored in gallon containers; held in refrigerated storage, packed in ice; distributed in refrigerated trucks, packed in ice

Intended Use & Consumer: To be cooked in restaurants and consumed by general public

(1)	(2)	(3)	(4)	(5)	(6)
Ingredient/ processing step	Identify potential hazard(s) introduced, controlled, or enhanced at this step	Are any potential food safety hazards significant? (Yes/No)	Justify your decision for Column # 3	What preventative measure(s) can be applied for the significant hazards?	Is this step a Critical Control Point? (Yes/No)
Receiving (Shellstock)	<u>Biological</u> : Bacterial pathogens from the growing area	Yes	Clam meats are assumed to be eaten only partially cooked. Clams can be contaminated with pathogens from the growing area.	* Only accept clams harvested from open growing areas * Require harvester/dealer tagging with proper info * Require dealers to be certified	Yes
	<u>Chemical</u> : Chemical contamination	Yes	Industrial pollution such as oil or chemical spills can occur in estuarine waters. Clams may become contaminated with these pollutants.	* Only accept clams harvested from open growing areas * Require harvester/dealer tagging with proper info * Require proper harvester licensing or dealer certification	Yes
	Natural biotoxins	Yes	Natural biotoxins such as PSP and the organisms that produce them can be filtered out of growing waters and concentrated by clams	* Only accept clams harvested from open growing area * Require harvester/dealer tagging with proper info * Require proper harvester licensing or dealer certification	Yes
	<u>Physical</u> : None	Yes			
Refrigerated Cooler Storage	<u>Biological</u> : Bacterial pathogen growth	Yes	Pathogens may increase to unacceptable levels if clams aren't maintained at proper temperature during storage	Maintain cooler at temperature of 45°F or less	Yes
	<u>Chemical</u> : None	No			
	<u>Physical</u> : None	No			

Example of Completed Hazard Analysis Worksheet (cont.)

(For Illustrative Purposes Only)

(1)	(2)	(3)	(4)	(5)	(6)
Ingredient/ processing step	Identify potential hazard(s) introduced, controlled, or enhanced at this step	Are any potential food safety hazards significant? (Yes/No)	Justify your decision for Column # 3	What preventative measure(s) can be applied for the significant hazards?	Is this step a Critical Control Point? (Yes/No)
Hot Dip	<u>Biological:</u> Bacterial pathogen growth	Yes	Excessive exposure times to temperatures higher than 45°F may result in unacceptable levels of pathogen growth	* Cumulative time of exposure to higher temperatures kept to a minimum * Product flow is controlled to allow product to be shucked, washed, and packed within 2 hours of hot dip * Hot dipped product must be chilled to 45°F or less within 2 hours of hot dip	Yes
	<u>Chemical:</u> None				
	<u>Physical:</u> None				
Shucking	<u>Biological:</u> Bacterial pathogen growth	Yes	Excessive exposure times to temperatures higher than 45°F may result in unacceptable levels of pathogen growth	* Cumulative time of exposure to higher temperatures is kept to a minimum by controlling product flow * Shucking bowls have 2 quart capacity to minimize time/temperature exposure	No
	<u>Chemical:</u> None				
	<u>Physical:</u> None				
Washing/ Draining	<u>Biological:</u> Bacterial pathogen growth	Yes	Excessive exposure times to temperatures higher than 45°F may result in unacceptable levels of pathogen growth	* Cumulative time of exposure to higher temperatures is kept to a minimum by controlling product flow	No
	<u>Chemical:</u> None				
	<u>Physical:</u> None				

Example of Completed Hazard Analysis Worksheet (cont.)

(For Illustrative Purposes Only)

(1)	(2)	(3)	(4)	(5)	(6)
Ingredient/ processing step	Identify potential hazard(s) introduced, controlled, or enhanced at this step	Are any potential food safety hazards significant? (Yes/No)	Justify your decision for Column # 3	What preventative measure(s) can be applied for the significant hazards?	Is this step a Critical Control Point? (Yes/No)
Rinse/Chill	<u>Biological:</u> Bacterial pathogen growth	Yes	Pathogens may increase to unacceptable levels if clams aren't maintained at proper temperature during this step	* Use sufficient time and ice in ice bath to chill meats to 45°F or less (Must restrict total rinse/chill time to 30 minutes or less)	Yes
	<u>Chemical:</u> None				
	<u>Physical:</u> None				
Packing	<u>Biological:</u> Bacterial pathogen growth	Yes	Excessive exposure times to temperatures higher than 45°F may result in unacceptable pathogen growth	* Cumulative time of exposure to higher temperatures is kept to a minimum by controlling product flow * Shucked product must be packed within 3 hours of removal from cooler (if not hot dipped) * Shucked product packed into containers with capacity of 1 gallon or larger, and must be chilled to 45°F or less prior to packing * Hot dipped product chilled to 45°F or less within 2 hour of hot dip	Yes
	<u>Chemical:</u> None				
	<u>Physical:</u> None				
Refrigerated cooler storage of shucked clams	<u>Biological:</u> Bacterial pathogen growth	Yes	Pathogens may increase to unacceptable levels if clams aren't maintained at proper temperatures during storage	* Maintain cooler at temperature of 45°F or less	Yes
	<u>Chemical and Physical:</u> None				

Blank HACCP Plan

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Critical Limits for each Control Measure	Monitoring				(8) Corrective Action(s)	(9) Records	(10) Verification
			(4)	(5)	(6)	(7)			
			What	How	Frequency	Who			

Firm Name: _____ Firm Address: _____ _____ _____ Signature: _____ Date: _____	Product Description: _____ Method of Storage and Distribution: _____ _____ Intended Use and Consumer: _____ _____
--	---

HACCP Plan – Reshipper Example

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Critical Limits for each Control Measure	Monitoring				(8) Corrective Action(s)	(9) Records	(10) Verification
			(4)	(5)	(6)	(7)			
			What	How	Frequency	Who			
Receiving live shellstock from Certified Maine Shellfish Dealer Receiving shucked shellstock from Certified Maine Shellfish Dealer	<ul style="list-style-type: none"> ◆ Pathogens ◆ Natural Toxins ◆ Chemical contaminants 	<ul style="list-style-type: none"> ◆ Harvested from approved waters in open status ◆ Properly tagged or labeled ◆ Received from certified dealer 	◆ Dealer tags	Visual	Every bag	Owner/ Manager	Refuse shipment if critical limits not met	Harvest/ Receiving Log	Weekly Record review of receiving log

Firm name: _____

Product description: Clams, mussels, and oysters; in the shell or shucked.

Firm address: _____

Method of storage and distribution: Distribution in refrigerated truck, or in coolers with ice or gel packs.

Signature _____

Date: _____

Intended use and Consumer: Consumed raw or cooked by general public.

HACCP PLAN - Shellstock Shipper Example

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Critical Limits for each Control Measure	Monitoring				(8) Corrective Action(s)	(9) Records	(10) Verification
			(4)	(5)	(6)	(7)			
			What	How	Frequency	Who			
Receiving live shellstock Receiving shucked shellstock	♦ Pathogens ♦ Natural Toxins ♦ Chemical contaminants from harvest area	♦ Received from licensed harvester ♦ Harvested from approved waters in open status ♦ Properly tagged or labeled ♦ Received from certified dealer	♦ Harvest tags ♦ Dealer tags ♦ Container labels	Visual	Each container	Receiver	Refuse shipment if critical limits not met	Harvest/Receiving Log Corrective Action Log	Weekly Record review (including signature and date) of receiving log (including signature and date)
Dry cooler Storage ♦ Refrigeration ♦ Fresh Frozen	Pathogen growth	Cooler temperature not to exceed 45° F Freezer temperature not to exceed 0° F	Temperature of cooler	Visual check of indicating thermometer	2 times daily when in operation	Manager or appointed employee	♦ Adjust cooler temperature ♦ Call for repair if necessary ♦ Hold, separate and evaluate product based on total time/temp exposure ♦ Discard product if deemed unsafe	Cooler temperature log Corrective Action Log	Weekly record review of cooler temperature log (including signature and date) Monthly thermometer calibration

Firm Name: _____

Firm Address: _____

Certification # _____

Signature: _____

Date: _____

Product Description: Clams, quahogs, mussels, and oysters; in the shell or shucked.

Method of Storage and Distribution: Refrigeration/Freezer and distribution in refrigerated truck

Intended Use and Consumer: Consumed raw or cooked by general public.

HACCP PLAN - Shucker-Packer Example

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Critical Limits for each Control Measure	Monitoring				(8) Corrective Action(s)	(9) Records	(10) Verification
			(4)	(5)	(6)	(7)			
			What	How	Frequency	Who			
Receiving live shellstock Receiving shucked shellstock	<ul style="list-style-type: none"> ◆ Pathogens ◆ Natural Toxins ◆ Chemical contaminants 	<ul style="list-style-type: none"> ◆ Received from licensed harvester ◆ Harvested from approved waters in open status ◆ Properly tagged or labeled ◆ Received from certified dealer 	<ul style="list-style-type: none"> ◆ Harvest tags ◆ Dealer tags ◆ Container labeling 	Visual	Every container	Receiver	Refuse shipment if critical limits not met	Harvest/ Receiving Log Corrective Action Log	Weekly Record review (including signing and dating) of receiving log
Dry cooler Storage ◆ Refrigeration ◆ Fresh Frozen	Pathogen growth	Cooler temperature not to exceed 45° F Freezer temperature not to exceed 0° F	Temperature of cooler	Visual check of indicating thermometer	2 times daily when in operation	Plant Manager / appointed employee	<ul style="list-style-type: none"> ◆ Adjust cooler temperature ◆ Call for repair if necessary ◆ Hold and evaluate product ◆ Discard product if deemed unsafe 	Cooler temperature log Corrective Action Log	Weekly record review (including signing and dating) of cooler temperature log Thermometer calibration monthly

Firm Name: _____

Firm Address: _____

Certification # _____

Signature: _____

Date: _____

Product Description: Clams, quahogs, mussels, and oysters; in the shell or shucked

Method of Storage and Distribution: Refrigerated/freezer storage and distribution by refrigerated truck

Intended Use and Consumer: Consumed raw or cooked by general public

(1) Critical Control Point (CCP)	(2) Significant Hazard(s)	(3) Critical Limits for each Control Measure	Monitoring				(8) Corrective Action(s)	(9) Records	(10) Verification
			(4)	(5)	(6)	(7)			
			What	How	Frequency	Who			
Processing: Shucking and/or Packing	Pathogens	<ul style="list-style-type: none"> ◆ Shellstock directly from harvester (not placed in cooler storage) must be shucked, packed, and chilled to 45°F or less within 3 hours of shucking ◆ Shellstock from cooler storage must be shucked, packed, and chilled to 45° F or less within 4 hours of removal from refrigeration ◆ Shellstock that has been heat shocked must be shucked, packed, and cooled to 45°F or less within two hours after the heat shock process 	Shucked product Time and Temperature	Visual	3 lots each day or until approved processing verification is on file.	Packer	Product will be destroyed if critical limits are not met.	Processing Log Corrective Action Log	<ul style="list-style-type: none"> ◆ Weekly record review (including signing and dating) of processing logs ◆ Monthly calibration of probe thermometer
Shucked meat storage	Pathogens	<p>Cooler temperature not to exceed 45° F</p> <p>Freezer temperature not to exceed 0° F</p>	Temperature of cooler	Visual check of indicating thermometer	2 times daily when in operation	Plant Manager / appointed employee	<ul style="list-style-type: none"> ◆ Check meat temperature; evaluate product based total time /temperature exposure Discard unsafe product. ◆ If over 45° F then check for presence of ice and move to a different certified cooler 	Cooler temperature log Corrective Action Log	<p>Weekly record review (including signing and dating) of cooler temperature log</p> <p>Thermometer calibration monthly</p>

Monitoring Forms

Monthly Cooler Temperature Log
Shucker-Packer Processing Log
Corrective Action Report
Shellfish Receiving/Sales Log
Monthly Thermometer Calibration Record

Certain monitoring records are required to be kept on file.

Records for fresh products are required to be kept for at least one year.

Records for frozen products are required to be kept for at least two years.

These records might include any of those listed above, and any other record keeping as stated in your HACCP plan.

Some firms like to keep separate records for the calibration of thermometers, while others prefer to make a simple notation on the Cooler temperature monitoring log that the “thermometer was calibrated today”.

We have provided sample forms in this printing.

Monthly Cooler Temperature Log

Plant name: _____

Plant location: _____

Month: _____

Day	1	2	3	4	5	6	7
Temperature							
Time taken							
Initials							

Date and signature of reviewer: _____

Day	8	9	10	11	12	13	14
Temperature							
Time taken							
Initials							

Date and signature of reviewer: _____

Day	15	16	17	18	19	20	21
Temperature							
Time taken							
Initials							

Date and signature of reviewer: _____

Day	22	23	24	25	26	27	28
Temperature							
Time taken							
Initials							

Date and signature of reviewer: _____

Day	29	30	31				
Temperature				See back of page for corrective action entry This needs to be done 2 times a day			
Time taken							
Initials				Date and signature of reviewer: _____			

Corrective Actions for Cooler Temperatures

The shellstock cooler temperature will be monitored at the frequency stated on the firm's HACCP plan. The temperature must be maintained at 45 °F or less to avoid corrective actions. If the cooler temperature exceeds 45 °F, and shellstock temperature is between 45 °F and 50 °F, the thermostat will be adjusted downward, or the product moved to another DMR approved cooler. If the cooler temperature is above 45 °F, and the shellstock temperature is above 50 °F, then product is placed on hold and evaluated. Evaluation of shellstock will consist of placing a hold on the product, and notifying the Authority (DMR). Firm may be responsible for sampling of shellstock that have been temperature abused. When cooler or shellstock temperatures exceed 60 °F, Authority will be notified and product will be replanted (only if local product) or discarded. Firm will record any corrective action for cooler temperatures below.

Example of a Shucker-Packer Processing Log

Company Name: _____

Company Address: _____

Date: _____

Lot Code: _____

Meat must be 45 degrees or less within 2 hour of hot dip.

If not heat shocked, meat must be 45 degrees or less within 3 hours of removal from refrigeration.

Start time (from hot dip or removal from refrigeration): _____

Meat temp. 1 hour later: _____

Meat temp. 2 hours later: _____

Meat temp. 3 hours later: _____

Recorder initials: _____

Reviewed by: _____

Date reviewed: _____

Note: Try to use the same container, leave the thermometer in and stop when reaching 45 degrees or less. If reaching proper temperature within time frame, one or two checks a day may be enough. You probably will need to use ice to bring the temperature down faster. Satisfy yourself that you are processing safely.

If corrective action was needed, please record it on the back side of this page.

Date: _____ Time: _____ Signature: _____

Step 1. Record the actual event or circumstance that lead to a corrective action.

Step 2. Record what corrective action you performed to control the hazard or event, and its outcome.

Step 3. If the corrective action was a result of a food safety hazard, a review of the HACCP plan must occur.

Description of problem:

Corrective action taken:

Date problem was solved: _____

Time: _____

Verification signature: _____

Date: _____

Note: Verification of record must occur within 7 days of entry.

Corrective Action Report

Plant name: _____

Plant location: _____

Date: _____ Time: _____ Signature: _____

Step 1. Record the actual event or circumstance that lead to a corrective action.

Step 2. Record what corrective action you performed to control the hazard or event, and its outcome.

Step 3. If the corrective action was a result of a food safety hazard, a review of the HACCP plan must occur.

Description of problem: _____

Corrective action taken: _____

Date problem was solved: _____

Time: _____

Verification signature: _____

Date: _____

Note: Verification of record must occur within 7 days of entry.

SHELLFISH RECEIVING/SALES LOG

Date Received	Amount	Harvester	Harvest Location	Harvester License #	Shuck Date	Date Sold	Whole or Shuck	Sold to	Initials
A									
B									
C									
C									
D									
E									
F									
G									
H									
I									
J									
K									
L									
M									
N									
O									

HACCP RECORDS MUST BE REVIEWED AT LEAST ONCE EVERY SEVEN (7) DAYS. Sign and date after every review

SHELLFISH RECEIVING/SALES LOG

COMMINGLE

Clams that were commingled on the front

Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With
Date	With	With	With	With	With

Monthly Thermometer Calibration Record

Firm Name: _____

Firm Address: _____

The firm's thermometer probe(s) will be calibrated by placing the probe in a crushed ice / water slurry, stirring vigorously and reading/recording the temperature. This temperature should be 32° F, the melting point of ice. If the probe is not 32°F, the probe can be adjusted by using a wrench to rotate the screw under the backside of the dial to read 32° F when placed in the ice slurry. Next, place the probe in cooler for 3-5 minutes near the cooler thermometer, allowing time for probe to adjust. The temperatures of both are recorded and compared; any difference noted. The corrective action(s) must be recorded. These records must also be reviewed and verified.

	January	February	March	April	May	June	July	August	September	October	November	December
Temperature of probe when placed in the ice slurry												
+/- Adjustments made to the probe dial												
Difference between cooler thermometer and probe (+/-)												
Corrective action taken when cooler thermometer does not record the same temperature as probe when compared												
Employee Initials												
Review Signature and date												

Helpful Materials

The documents included in this next section are:

Notice to Shucker-Packers Regarding Heat Sealed Plastic Bags

Guidelines for a Shucking Plant's Physical Facilities

Directions for Mixing Hand Sanitizing Solution

Directions for Mixing Equipment & Utensil Sanitizing Solution

Heat Shock Process for Preparing Soft-shell Clams for Shucking

Tags, Tagging & Trucking of Shellstock

Bulk Tagging Policy (2/13/02)

Generic Bulk Tagging Plan-Example

Information Required on Tags

Sample Tags

Labeling of Shucked Product

Description of Commingling

Commingling and Intermediate Processing Plans

Commingling Plan Template

Wet Storage Permit Application Requirements (Application and Example of Standard Operating Procedure)

Recall Information

Introduction to Inspection Process

NSSP Standardized Shellfish Processing Plan Inspection Form

Overview of DMR Shellfish Dealer's Plant Inspection Form

Model Ordinance Sanitation Coding Reference

Well Disinfection Information

DMR Shellfish Sanitation Well Water Policy (8-21-03)

Sample Hand Wash Sign

Web Link Information

DMR Shellfish Information Directory

**MAINE DEPARTMENT OF MARINE RESOURCES
BUREAU OF RESOURCE MANAGEMENT
DIVISION OF PUBLIC HEALTH**

**NOTICE TO SHUCKER-PACKERS REGARDING HEAT SEALED PLASTIC
BAGS**

Revised 4/5/05

Please note – this revision establishes an oxygen transmission rate (see # 1 below).

It has come to our attention that the packing of shellfish meats into plastic bags that are heat sealed creates a potential hazard for ***Clostridium botulinum***. (*FDA Hazards Guide (2001) pg.48*). This type of packaging is listed as one of the factors that make C. bot. toxin formation reasonably likely to occur.

As such, you must consider this in your hazard analysis as part of the development of your HACCP plan. The potential hazard comes from the depletion of oxygen in the heat sealed bag by the growth of aerobic bacteria. Once the anaerobic condition exists the shellfish would have to be stored in such a manner as to prevent the growth of C. bot.

To perform the hazard analysis you should refer to Chapter 13 in the FDA's *Fish & Fisheries Products Hazards & Controls Guide* Third Edition, June 2001, pp.167-189.

In researching **critical control point options**, we gathered information from Ms. Mary Losikoff, FDA Office of Seafood, Dr. William Watkins, FDA Office of Seafood and Ms. Mercuria Cumbo, DMR Microbiologist III along with others involved in HACCP implementation. They have suggested the following two options as the best options available to you:

1. The use of packaging that provides an oxygen transmission rate of 10,000 cc/m²/24hrs along with label instructions for product to be stored at 45°F or below from the point of packaging.

2. If reduced oxygen packaging is used, the product must be frozen at 0 °F and the label must include instructions for the user to keep it frozen at 0 °F until use and for the user to open the bag prior to thawing.

Any other packaging options must be approved by the ME Department of Marine Resources, Division of Public Health. If you have any questions regarding this information please contact Mercuria Cumbo at (207) 633-9682.

The FDA's *Fish & Fisheries Products Hazards & Controls Guide* can be found at:
<http://www.cfsan.fda.gov/~comm/haccp4.html>

Guidelines for a Shucking Plant's Physical Facilities

The following items should be taken into consideration before constructing a shucking plant:
The facility must have:

- 1. Receiving area**
 - a. Water for washing shellstock
 - b. Scale for weighing product
 - c. Sufficient space to perform operations
 - d. Well-drained floor
 - e. Protected lighting
 - f. Walls and ceiling must be smooth, light colored, and easily cleaned. Areas that may get wet should be impervious.

- 2. Cooler**
 - a. Impervious, light colored, smooth walls and ceiling –e.g., modular/prefab type
 - b. Mechanical refrigeration unit w/ sufficient capacity for the operation
 - c. Well-drained floor- ¼ inch/foot
 - d. Condensate drain plumbed into the waste system or to outside
 - e. Thermometer - accurate and easily read- e.g., digital
 - f. Protected lighting-sufficient for area

- 3. Processing area with separate areas for shucking (less sanitary) and packing operations (more sanitary).** These operations may be performed in the same area, but must be separated by time/space. Persons involved in both operations will need to change aprons and wash/sanitize hands when switching roles from the shucking (dirty) to packing operation (clean).
 - a. 3-bay sink (to be used for ware-washing only)
 - b. Separate hand wash sink with soap, paper towels, waste basket, hand wash sign, and method to sanitize hands before returning to work
 - c. Shucking table – stainless, well drained
 - d. Method to handle shell waste in sanitary manner
 - e. Stools (if used), cleanable, easy to maintain
 - f. Skimmer table/sink- can be a separate sink or stand, indirectly attached to waste system
 - g. Packing table/stand- sufficient space for operation
 - h. Shucking bowls and other food handling equipment that is Food Grade i.e.; stainless, Food Grade plastic
 - i. Impervious, light colored, easily cleanable walls and ceiling
 - j. Area needed for drying and storing equipment
 - k. Packaging storage area

- 4. Hot dip area – if using hot dip method, area must be inside plant**
 - a. Hot dip tank - stainless, easily cleanable
 - b. Chill tank - food grade
 - c. Space to wash clams prior to hot dip
 - d. Method to control steam from operation
 - e. Ice will be needed to help chill product either at chill tank or at chill/rinse step in packing room. Must be treated as food
 - f. Food Grade hot dip basket(s) or bucket

5. **Packaging storage area**
 - a. Sufficient space to store crates, baskets, boxes for shellstock
 - b. Protected method for storing shucked meat containers- plastic gallon and 1/2 gallon containers, bags, etc

6. **Equipment store areas**
 - a. Area needed to store cleaning equipment
 - b. Area needed to store equipment used in other operations: e.g., shrimp or crabmeat processing

7. **Ice machine (not required but strongly suggested).** Ice can be purchased commercially.
 - a. Ice must be treated as food. Must be handled with food grade equipment, iceboxes, totes, scoops, and shovels.
 - b. Ice must be protected from contamination. Chief potential source is condensate from the ice machine itself. With free-standing machine, condensate may need to be controlled with a tray located beneath machine. This tray will need to be drained into waste system. Separate ice machines that contain their own ice bin will need to have bin kept clean and sanitized. May need to have drain connected into waste system, depending on set-up of machine.

8. **Water- must come from a potable source.**
 - a. Local water district –annual water bill
 - b. Drilled well-
 1. Initial Safety test from DHS or other acceptable Lab.
 2. Semiannual test for coliform bacteria
 - c. Plumbing must meet state plumbing code. Initial plant certification will require inspection by local plumbing inspector/CEO.
 - d. Hose bibs will need back flow protection- best to build into system when new, but can be added later
 - e. Septic disposal will need to be approved by local CEO.
 1. When having system designed, consider large amount of sand and grit from washing steps. May need sand trap and cleanout located between plant and septic system
 - f. Any water treatment system must be approved by the DMR

9. **Bathrooms** - must not open directly onto processing area
 - a. One for every 10 employees
 - b. Each bathroom will require a hand wash sink
 - c. Soap/soap dispenser
 - c. Hand wash sign
 - d. Waste basket

10. **Break area**
 - a. Area to store employee’s personal items
 - b. Area to take lunch and regularly scheduled breaks
 - c. Area to maintain/store shellfish records

11. **Other Ideas/concepts**
 - a. RFB-“kalite” type of wall covering is encouraged in areas that will get wet on a regular basis, and/or need to be washed and maintained.
 - c. Cooler walls and ceiling may have condensation problems, and prefab units are recommended.

DIRECTIONS FOR MIXING HAND SANITIZING SOLUTION

ATTENTION ALL EMPLOYEES

- ✓ MIX ½ TABLESPOON OR ¼ OUNCE OF 5% BLEACH* INTO ONE GALLON OF WATER
- ✓ USE A CHLORINE TEST STRIP TO CHECK THE CONCENTRATION
- ✓ ADD WATER OR BLEACH TO ADJUST THE CONCENTRATION
- ✓ CONCENTRATION MUST BE BETWEEN 50 AND 100 PARTS PER MILLION (PPM)

* 5% BLEACH IS 5.25% OR 5.5% SODIUM HYPOCHLORITE

DIRECTIONS FOR MIXING EQUIPMENT AND UTENSIL SANITIZING SOLUTION

ATTENTION ALL EMPLOYEES

- ✓ MIX 1 TABLESPOON OR 1/2 OUNCE OF 5% BLEACH* INTO ONE GALLON OF WATER

- ✓ USE A CHLORINE TEST STRIP TO CHECK THE CONCENTRATION

- ✓ ADD WATER OR BLEACH TO ADJUST THE CONCENTRATION

- ✓ CONCENTRATION MUST BE BETWEEN 100 AND 200 PARTS PER MILLION (PPM)

* 5% BLEACH IS 5.25% OR 5.5% SODIUM HYPOCHLORITE

Heat Shock Process for Preparing Soft-shell Clams for Shucking

DATE:

INSPECTOR SIGNATURE:

DEALER:

CERTIFICATE #:

1. Shellstock are washed with cool, potable water of adequate supply and pressure – not by immersion. Shellstock shall be culled of dead, unsafe, unwholesome, or broken clams immediately prior to the heat shock operation. Shellstock are handled in a manner that prevents their contamination during this pre-wash: i.e. their containers will not be placed on the floor.
2. The hot dip water must be at least 160 ° F, with the temperature being monitored by probe thermometer. The hot dip tank holds at least 8 gallons of hot water and the dip basket ½ bushel of clams (or a similar ratio thereof). The clams are dipped for approximately 10 seconds and then removed. The process shall be such that the shellfish are not killed by the heat shock.
3. Following hot dip, the shellstock shall be subjected to an immediate cool down with a dip in an ice bath or use of flowing potable water (less than 50 ° F). Heat-shocked shellstock shall be handled so as to prevent contamination during the cool-down phase, but in no event may be immersed for more than 5 minutes.
4. All clams must be shucked and cooled to 45 ° F or less within 2 hours after the heat shock process or are placed in storage of at least 45 ° F or below. This will require the use of crushed or flaked ice in shucking containers, chill tanks, or the use of refrigerated rinse or soak water. Cold storage at less than 32 ° F for a short time period of time is also acceptable, as long as the product does not freeze. A probe thermometer is required to monitor these temperature requirements.
5. Heat shock tanks, retorts, and all other equipment use in the heat shock process shall be thoroughly cleaned and sanitized in such a manner and at such a frequency as to minimize the danger of contamination of shellfish.
 - a. When used on a continuous basis, such equipment shall be cleaned and sanitized every 3 hours or less in such manner that all mud and detritus remaining in the dip tank from previous dippings are eliminated.
 - b. Tanks, retorts, and all other equipment used in the heat shock process are thoroughly cleaned at the end of each day's operation.
 - c. All heat-shock process tanks, retorts, conveyances and other equipment are constructed so that they may be easily cleaned. The use of food grade plastic is acceptable.

Tags, Tagging & Transportation of Shellstock

TAGS - The most commonly used types of shellstock tags are as follows: Harvester tags, Dealer bulk tags, Dealer shipping tags, Dealer wet storage tags, Dealer Intermediate Processing tags and Dealer depuration tags.

1. Harvester tags – By land or by boat, **each** container must bear the Harvester’s tag from the point of harvest to the destination within the State of Maine. This is for traceability, so must be **legible** and **complete**. Harvester tags must state “**Harvester Tag**” at the top of the tag, must show the “**Time**” of harvest and the “**Date**” of harvest. As with all tags, they must be waterproof and durable. **Each tag must show the most precise identification of the harvest area, i.e. cove, river, town and State (Maine or ME)**. Check with your local warden for other tag requirements.
2. Maine Dealer Bulk tags – A **Maine** Dealer may have a **DMR approved** bulk tagging plan between themselves and specified harvester(s), which completely describes how the lot(s) will be handled and delivered **to them** prior to the Dealer attaching their shipper tags. Bulk tags are only for getting the shellstock from the point of harvest to the Certified Maine Shellfish Dealer. This plan can only be made for harvesting mussels, quahogs, surf clams, or oysters. Bulk tags must be **legible, complete**, and must be of a **bright color**, other than white (see Bulk Tagging policy 3). One bulk tag may cover a (loose) lot **or**, if individual containers are placed on pallets, **each pallet** must be tagged. Dealers must consult with the DMR Public Health Division before ordering or attempting to use bulk tags. The tags are only for in-State use, and the Bulk tagging plan must fully describe how the product will be handled from the point of harvest to the Dealer; and include the harvesters and their license numbers, for all those who will be involved.
3. Dealer (shipping) tags – A Maine certified dealer tag is attached to **each** container prior to shipping. Also, for traceability, no lot(s) can be without tag(s) at any time. Dealer tags must be **legible** and **complete** and must state “**Dealer Tag**” at the top. If the Dealer tag is the only tag on the container, it must be completely filled out. If lots have been commingled within the container, the Dealer must have an approved **Commingling Plan** on file with the DMR and must show, on his Dealer tag, the harvest dates and most precise identification of the harvest areas as described on the harvester or bulk tags. If the Harvester tags are **legible** and **complete**, they may be attached to the Dealer tag and save the Dealer some writing. Again, they must be all attached in order to be a complete record. Whenever Dealer tags are used, either the certified Dealer **or** his **actual employee** must be present to supervise the tagging and use of his shipping tags **A Dealer can not allow harvesters or another Dealer to possess or otherwise use his Certified Dealer (shipping) tags**. Check with your local warden for other tag requirements.
4. Dealer Wet Storage tag –This tag is sometimes used by the Dealer to show additional information on the wet stored lot, which the Dealer may wish to keep for his own record keeping. Normally, the Dealer Bulk tag may contain enough information. Again, all wet storage requires a permit from DMR.
5. Intermediate Processing tags -- A tag sometimes used by a Dealer who has an approved Intermediate Processing plan on file with the DMR. These tags can supply the Dealer with more detailed information that he may wish to have when the product is held in dry cooler storage. Normally, the harvester tags or bulk tags supply enough information.

6. Dealer Depuration tags -- A tag used by certified shellfish depurators to supply additional information on the Depuration process, i.e. Depuration Processing Date, Depuration Lot #, etc.

TRANSPORTATION

Harvester:

- a. May haul **their own** product with **their own** vehicle anywhere within the State of Maine.
- b. Must **sell** their product to a certified Maine shellfish dealer, who may choose to pick the product up with their DMR certified vehicle.

Certified Dealer:

A Maine certified shellfish dealer with a DMR licensed vehicle **must** have the vehicle and/or coolers **inspected** and **certified** by DMR's Public Health Division, in order to use it for hauling shellfish. The certification may be restricted to individual coolers to be transported in the vehicle, **or** can be for the **completely insulated** truck box. In either case, the **current** year certification sticker(s) must be displayed. All truck bodies must be labeled with the **Name of the Dealer** and their **Certification number** (i.e., ME # # SS) in **3 inch high letters** in a color contrasting with the application surface. The cargo area of any vehicle used to transport shellfish shall be completely enclosed (see Regulations Chapter 16, 16.23 for more information).

Note: So-called Buyer's trucks, which were used as buying stations, are no longer allowed by the Department.

Common Carrier:

Common Carriers are federally licensed trucks that are engaged in carrying goods for profit in interstate commerce. They are exempt from having to be certified by the Department's Public Health Division. This means you may not see a Certification sticker on the box. Shellstock transported by Common Carrier **are not** exempted from being properly tagged and handled. There **must** be a proper invoice or bill-of-lading with the load. Shellstock **can not** be shipped out of Maine on a Common Carrier, or the dealer's vehicles, without the dealer's tags attached to **every** bag or container.

Remember: It's always a good idea to check a truck's invoice or bill-of-lading to see what it's hauling; from whom and to whom. If you are ever in doubt, contact one of the Department's Public Health officials, or have your office do it.

Note: This Document is only meant to be a general overview on the tagging and transportation of Shellfish. For more requirements, it would be wise to consult the Department's regulations, Chapters 9, 15, 16, 17, 18 and 19; as well as any pertinent Department policies.

Department of Marine Resources Public Health Division: (207) 624-6570 **or** (207) 633-9554

CHAPTER 3

POLICY 3. BULK TAGGING POLICY 2/13/02

A. PURPOSE

This policy is established to allow harvesters of mussels, mahogany quahogs and oysters to bulk tag product to transport from the harvest area to the initial certified shellfish dealer until the NSSP Guide for Control of Molluscan Shellfish 1999 Revision Chapter VIII @02.E.7. is incorporated into the DMR shellfish regulations.

B. PROCEDURE

1. A single tag may be used to identify a lot of shellfish if:
 - i. all shellfish are harvested from one harvest area by one licensed harvester
 - ii. all shellfish are harvested on a single day
 - iii. the shellfish harvested are mussels, quahogs, surf clams or oysters
 - iv. the lot may consist of several bags/containers utilized on a wrapped pallet, tote, net brailer or other clean containment mechanism approved by DMR.
2. The tag for each lot must be bright colored (other than white), waterproof, durable and sanctioned by the Department prior to use and be at least 25/8 x 51/4 inches in size.
3. The tag must contain the following indelible, legible information in the order specified below:
 - v. Harvester name
 - vi. DMR license number
 - vii. Date of harvest
 - viii. Harvest location
 - ix. Type of shellfish
 - x. Number of bags/containers in this lot
 - xi. the following statement "All shellstock in this lot have the same harvest date and area of harvest."
 - xii. the destination of shipment (exact location)
 - xiii. consignee (certified dealer name and certification number)
 - xiv. . the following statement in bold capitalized type on each tag : **"THIS TAG IS REQUIRED TO BE ATTACHED UNTIL THE CONTAINER IS EMPTY OR RETAGGED, AND THEREAFTER KEPT ON FILE FOR 90 DAYS."**

4. The receiving dealer shall have a Bulk Tagging Plan approved by the Department to ensure that each lot of shellstock is kept separate and identified in a way which prevents commingling or misidentification (reference Model Ordinance X. 05.C). The Bulk Tagging Plan must be pre - approved by the Department and must describe the standard operating procedure implemented by the firm for handling bulk tagged product within the facility, during transportation of the product and during processing or repackaging. It must also list the harvester name and license number of each participating harvester.
5. The dealer shall maintain purchase and sales records under the provisions of DMR. Reg. 16.22.

Z:\inspectors\BULK TAGGING\Policy and Procedure\Policy 3 Bulk Tagging amended 2-13-02.doc

Generic Bulk Tagging Plan- Example

Harvesters fishing in a single harvest area during a single harvest day land (**whatever shellfish you handle except soft shelled clams**) at a local wharf. The (**mussels, quahogs, surf clams, oysters**) are palletized, and a bulk tag will accompany each pallet of product from each harvester. The captains of the fishing boats will be instructed on the bulk tagging procedures.

Pallets will be piled to a total of 36 bags for bushel bags and iced, if necessary. Pallets will be wrapped with shrink wrap and the appropriate bulk tag will be inserted between the (**mussels, quahogs, surf clams, oysters**) and plastic wrap in such a way as to be seen when approaching the pallet. Captains and crew, in addition to plant personnel, will be instructed that under no circumstances will they add incoming (**mussels, quahogs, surf clams, oysters**) to existing pallets. The (**mussels, quahogs, surf clams, oysters**) are transferred from the wharf to our cooler by certified vehicle. Bulk tags will remain with the pallet until all of the product is used; the tag will then be forwarded to the main office for proper filing. Bulk tags are attached to the purchase order form and are kept on file for one year.

If lots are to be resized after being transferred to our facility, we will follow our intermediate processing and commingling plans on file with the Department.

Dealer tags put on final product containers are filled out with the pertinent information from the master tag from each bulk lot.

Our harvesters include Joe Smith, License # 000 and Joe Clam, License # 0001.

Information Required on Dealer Tags

- ❖ The dealer's name, address and assigned certification number
- ❖ The original shipper's certification number, including the state abbreviation
- ❖ Country of Origin
- ❖ Date of harvest
- ❖ Most precise identification of harvest area
- ❖ Type and quantity of shellfish
- ❖ The following statement in bold caps: **“THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY AND THEREAFTER KEPT ON FILE FOR 90 DAYS:**
- ❖ **The following statement:** “Retailers, inform your customers: Thoroughly cooking foods of animal origin such as beef, eggs, lamb, poultry or shellfish reduces the risk of food borne illness. Individuals with certain health conditions may be at higher risk if these foods are consumed raw or undercooked. Consult your physician or public health official for further information”.

Sample Tags

<u>DEALER TAG</u>	COMPANY NAME 134 US Route 1, York, ME 03934 207-395-4000 ME 26 SS
Original Shippers Certification # (if different from shipping dealer): _____	
Harvest Date(s): _____ Shipping Date: _____	
Harvest Area(s): _____	
Shellfish Type: _____ Wild _____ Farm-Raised _____	
Quantity: _____ Bu. _____ Lbs. _____ Count _____	
Product of the USA _____	<u>KEEP PRODUCT REFRIGERATED</u>
THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR RETAGGED AND THERE AFTER KEPT ON FILE FOR 90 DAYS	
RETAILERS, INFORM YOUR CUSTOMERS: "Thoroughly cooking foods of animal origin such as beef, poultry, eggs, fish, or shellfish reduces the risk for food borne illness. Individuals with certain health conditions may be at higher risk if these foods are consumed raw or undercooked. Consult your physician or public health official for further information."	

<u>HARVESTER TAG</u>
NAME: _____ DMR LICENSE # : _____
HARVEST DATE: _____ TIME: _____
HARVEST AREA: _____ TOWN: _____, ME
SHELLFISH TYPE: _____ QUANTITY: _____
THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR RETAGGED AND THERE AFTER KEPT ON FILE FOR 90 DAYS

DEALER TAG - BULK

Name:

Address:

DMR Certificate #:

Harvester Name:
DMR License #:

Harvest Date & Time:

Harvest Area: with Bay or Zone#:

ALL SHELLSTOCK CONTAINERS IN THIS LOT HAVE THE SAME HARVEST DATE AND AREA OF HARVEST

Shellfish Type:

of Individual Containers in the lot:

THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR IS RETAGGED AND THEREAFTER KEPT ON FILE FOR 90 DAYS

RETAILERS, INFORM YOUR CUSTOMERS: “Thoroughly cooking foods of animal origin such as beef, eggs, fish, lamb, poultry, or shellfish reduces the risk of food borne illness. Individuals with certain health conditions may be at higher risk if these foods are consumed raw or undercooked. Consult your physician or public health official for further information.”

DEALER TAG - WET STORAGE

Name:

Address:

DMR Certificate #:
Original Shipper Cert.#/State:

Harvest Date:

Harvest Area:

Shellfish Type:
Quantity:

THIS PRODUCT IS A PRODUCT OF (NAME OF STATE): & WAS WET STORED AT (FACILITY CERT. NUMBER): FROM (DATE): TO (DATE):

THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR IS RETAGGED AND THEREAFTER KEPT ON FILE FOR 90 DAYS

RETAILERS, INFORM YOUR CUSTOMERS: “Thoroughly cooking foods of animal origin such as beef, eggs, fish, lamb, poultry, or shellfish reduces the risk of food borne illness. Individuals with certain health conditions may be at higher risk if these foods are consumed raw or undercooked. Consult your physician or public health official for further information.”

DEALER TAG - DEPURATION

Name:

Address:

DMR Certificate #:

Depuration
Processing Date:

Depuration Lot #:

Harvest Area:

Shellfish Type:

Quantity:

THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR IS RETAGGED AND THEREAFTER KEPT ON FILE FOR 90 DAYS

RETAILERS, INFORM YOUR CUSTOMERS: “Thoroughly cooking foods of animal origin such as beef, eggs, fish, lamb, poultry, or shellfish reduces the risk of food borne illness. Individuals with certain health conditions may be at higher risk if these foods are consumed raw or undercooked. Consult your physician or public health official for further information.”

Labeling of Shucked Product

Each individual package containing fresh or fresh frozen shucked shellfish meat shall bear a permanently printed label approved by the Department that is legibly and indelibly marked with:

- ❖ Packer's, distributor's, and/or original shucker's name and address
- ❖ Original shucker-packer's certification number, and
- ❖ Type and quantity of shellfish in the container

If individual packages of fresh or fresh frozen shellfish are less than 64 fluid ounces (1873 ml), then each package shall have the following:

- ❖ The words "**SELL BY DATE**" or "**BEST IF USED BY**" followed by a date when the product would be expected to reach the end of its shelf life
- ❖ For fresh frozen shellfish, the year shall be added to the date

If individual packages contain 64 fluid ounces (1873 ml) or more of fresh or fresh frozen shellfish, the label should include the following:

- ❖ Words "**DATE SHUCKED**" followed by the date (m/d/y or Julian date) written on lid and sidewall or bottom of the container

These are not the only requirements for shucked shellfish labeling. Please refer to the Department's regulations Chapter 15.21 for more information.

Description of Commingling

What is commingling?

The mixing together of shellstock or shucked produce harvested on different dates or from different areas.

Who may commingle?

The primary Maine certified Shellfish Dealer.

Requirements:

If a primary shellfish dealer (those dealers purchasing shellfish directly from harvesters) chooses to commingle shellfish, they must possess a written commingling plan approved by the Department. This plan establishes procedures to be used to ensure that each lot will be identified in a way to prevent misidentification and provide traceability.

The plan shall include provisions that minimize commingling but meet the minimum of:

- (a) multiple harvest areas from the same date
- or**
- (b) multiple harvest dates from the same harvest area

Commingled Shellstock (Dealer tags)

If commingled by multiple areas from the same date, those areas must be listed on the Dealer tag under harvest area. Example: **Long Cove, Steuben/ Short Cove, Milbridge**

or

If commingled by multiple dates from the same area, those dates must be listed on the Dealer tag under harvest date. Example: **6/1/05 & 6/2/05**

Option: An option chosen by many Dealers is to simply attach their Dealer tag to the multiple harvester tags for product going into that one container (this saves a lot of writing).

Commingled Shellfish (Dealer records)

The Dealer's purchase/sales records also must show the same information for any commingled product as to multiple areas **or** multiple harvest dates as shown above.

Shucked Shellfish (Commingled)

Shucked product may be commingled if it's in one container and from **only two consecutive days processing**.

Shucked Shellfish (Dealer records)

The areas commingled must be documented in the day's **shucking log**, and in the **sales record**. Show the lot number as well as what has been commingled within that lot.

Note: The word commingled can be written on tags to indicate commingled product.

Commingling and Intermediate Processing Plans

Commingling and intermediate processing plans may be done once, and will be considered the current plan until changed by the dealer. It will be the responsibility of the dealer to send updated commingling and intermediate processing plans to the Shellfish Sanitation office when the plans are changed. Please refer to DMR Regulation 15.20 for more information.

Commingling Plan---Dealers who package shellstock directly from harvesters must have a written, DMR-approved commingling plan.

Requirements

If a primary dealer (those dealers packaging shellfish directly from harvesters) chooses to commingle shellstock, they must possess a written commingling plan approved by the Department.

The plan shall include provisions that minimize commingling but meet the minimum of:

- * Multiple harvest areas from the same harvest date, and/or
- * Multiple harvest dates from the same harvest area are permitted to be commingled.
- * The shellfish tag and records must indicate which areas and/or which dates from the same harvest area have been commingled; i.e. Quahog Bay/Whites Cove, Brunswick commingled or Quahog Bay, Brunswick 11/12 & 11/13 commingled.

Shucked product may be commingled if it is in one container and from only two consecutive days processing. The areas commingled must be documented in the days shucking log, also in the sales records.

Intermediate Processing Plan--Dealers who wash and/or repack shellstock must have a written, DMR-approved intermediate processing plan.

Requirements

This plan establishes procedures the dealer shall use to tag the lot during the washing and packaging of shellfish and which **includes a Department approved commingling plan, if needed**, to ensure that each lot of shellstock is separated and identified in a way, which prevents commingling or misidentification.

Identification shall be provided by either: (1) a harvester tag, bulk tag or dealer tag which meet the requirements of Chapter 15.19, or (2) a tag for each lot of shellstock as described in Chapter 15.20 (B)(2).

Commingling Plan Template

When purchasing shellstock from harvesters,

may commingle lots of shellstock from the same harvest date or the same harvest area. Commingled lots are identified using our Dealer shellfish tag, filled out to indicate which areas or dates have been commingled. Records will be maintained to indicate this information as well, so traceability will be maintained.

Name:

Date:

Wet Storage Permit Application Requirements

Each dealer choosing to practice wet storage shall apply to the Department annually. The permit evaluation will include, but not be limited to, an evaluation of the near shore site or the facilities plan and operating procedures for an onshore operation submitted by the dealer and an inspection of the storage site or facility. **An example of an offshore wet storage SOP is on page # 70.**

The following information must be submitted to the department as part of the annual application package (including but not limited to):

- Name (as it appears on certificate), address, telephone number and certification number included as part of a letter requesting a permit for wet storage. Please sign the letter.
- A chart indicating the exact location, using latitude/longitude [obtained by pushing the TD/LL button on the LORAN receiver] being considered for near shore storage sites and floats. Onshore facilities must submit a map indicating location of facility and source water used for wet storage.
- A physical description, diagram or photograph of the design of the wet storage structure or system. Details of any water treatment system. All plans for construction or remodeling of onshore wet storage facilities shall be reviewed and approved by the department prior to commencing construction.
- Submit local code enforcement or plumbing inspector's permit to the Department to show that all new and/or remodeling of existing plumbing and sewage within the facility meets state and local requirements.
- Submit a copy of current Maine Department of Environmental Protection Waste Discharge License, or most recent DEP letter of no-impact, for each wet storage site.
- A written standard operating procedure (SOP) which includes:
 - ✓ A description of the purpose for the wet storage operation (i.e. holding, conditioning, or salinization) and any species-specific physiological factors that may effect design criteria.
 - ✓ How product is tagged or identified during wet storage and,
 - ✓ How product is handled and tagged when it comes out of wet storage.
- * If the dealer has an approved intermediate processing or commingling plan on file with the Department, these plans may be referenced in the SOP.
- * The Department suggests dealers keep a copy of their final wet storage application and permit at their facility. Dealers may contact Shellfish Program Coordinator for a copy of their final application.

Note: All structures within navigable waters require a permit from the Army Corps of Engineers and/or municipality. Depending upon the location and duration, structures may also require a permit from the Department of Environmental Protection (Natural Resources Protection Act) or Inland Fisheries and Wildlife (Endangered and Threatened Species Program).

Please send this completed application with **all** attachments required to: Shellfish Sanitation Program, 21 State House Station, Augusta, ME 04333-0021. Should you have questions, please call (207) 624-6570.

Example of a Wet Storage Standard Operating Procedure (SOP)

Cool Clam Company
12 Clam Rd
Clamville, ME 04000
(207) 000-0000
Certification # ME 000 SS

This is a request for a wet storage permit to hold soft-shell clams in floating plastic trays. This is done to purge the clams of any grit and/or sand. Please refer to the attached diagram of the wet storage system for design information. Buoys will be labeled (in contrasting color) with our certification number for easy identification, and will be marked with reflective tape. The wet storage area is located at GPS coordinates N 43 58.000' W 069 34.000' (see attached map for additional information).

We understand that you will be sending this application to the Department of Environmental Protection (DEP) to determine if this wet storage site needs either a NPDES permit, or DEP letter of “no impact”.

Product will be placed in separate trays each day; no lots will be commingled. Each tray will be labeled with a harvester’s tag indicating original harvest area and original harvest date. When removed from wet storage, the lots will be tagged with a dealer wet storage tag.

Product will be transported to our processing facility by boat. Product on the boat will be handled according to general sanitation requirements. We will use our intermediate processing plan on file with the Department to process the product in our facility. When shipped to customers, an appropriate tag will be placed with the product.

Wet storage, intermediate processing and shipping records, as well as tags, will be maintained at our facility for one year.

We would appreciate a copy of our final wet storage application when the Department accepts it. We will keep the copy on file at our facility with our wet storage permit.

Recall Information

Dealers: Certified dealers shall adopt written procedures, approved by the Department for conducting recalls based on, and complementary to, the FDA Enforcement Policy on Recalls. This policy is described in greater detail in DMR Regulation 15.36.

Harvesters: Harvesters must comply with the requirements for recall procedure, as described in DMR Regulation 9.09. These requirements include maintaining complete, legible and accurate records of harvest for sales other than to certified dealers. These records must be made available for inspection for at least one year. The records will help Department personnel, and the harvester, trace shellfish if there is a recall.

Introduction to Inspection Process

The Inspection process need not be a difficult one. Remember, if you have everything organized, it will go much more smoothly.

If you are very busy when the Inspector arrives, simply hand over the HACCP and Sanitation files and allow the Inspector to do their task. If the Inspector understands that you are indeed very busy, he or she may save a list of questions for the final review of the inspection results.

The Inspector will:

1. Evaluate your plan
2. Check your CCP monitoring forms (to see if you are doing what you said you would do in your plan)
3. Check your Daily Sanitation Log and compare it with their own sanitation inspection results

The final review may only take a few minutes of your time.

If records are missing or incomplete, the process may take a little longer. Again, it's mostly up to you and how well you are organized.

Everyone concerned wants it to go as smoothly as possible. The Inspectors are trained, standardized professionals.

NSSP Standardized Shellfish Processing Plant Inspection Form

Agency Name:						Date					
Type of Inspection		<input type="checkbox"/> Certification <input type="checkbox"/> Pre-operational <input type="checkbox"/> Routine <input type="checkbox"/> Follow-up <input type="checkbox"/> Standardization									
Dealer Name:						Certification Number					
Dealer Address:											
Hazard Analysis Critical Control Point (HACCP)											
1.	HACCP Plan		Yes <input type="checkbox"/>	No <input type="checkbox"/>	Required for Certification						
2.	Plan Elements Identified and Adequate		✓/✗ NA	Code		✓/✗ NA	Code	Overall Code <div style="border: 1px solid black; width: 40px; height: 40px; margin: auto;"></div>			
	(a) Hazards			O	(e) Critical Control Points		K				
	(b) Records			O	(f) Monitoring		K				
	(c) Critical Limits			K	(g) Verification Procedures		O				
	(d) Name, Address, Signed and Dated			O	(h) Corrective Action if identified		K				
3.	HACCP Training		<input type="checkbox"/> Yes <input type="checkbox"/> No		Code	O					
4.	Plan Implementation		Corrective Actions (C)		Verification Procedures (K)		Monitoring Procedures (K)		Records Accurate/Maintained (K)		Overall Code <div style="border: 1px solid black; width: 40px; height: 40px; margin: auto;"></div>
			✓/✗	Code	✓/✗	Code	✓/✗	Code	✓/✗	Code	
	(a)	Receiving									
	(b)	Shellstock Storage									
	(c)	Processing									
(d)	Shucked Meat Storage										
(e)	Other Critical Limits										
5.	Approved Source Control Failure						C				
6.	Time/Temperature Control Failure						C				
7.	Other Critical Control Failure						C				
Sanitation Items						Citation	✓/✗	Code			
8.	Safety of water for processing and ice production						.02A				
9.	Condition and cleanliness of food contact surfaces						.02B				
10.	Prevention of cross-contamination						.02C				
11.	Maintenance of hand-washing, hand sanitizing, and toilet facilities						.02D				
12.	Protection from adulterants						.02E				
13.	Proper labeling, storage, and use of toxic compounds						.02F				
14.	Control of employees with adverse health conditions						.02G				
15.	Exclusion of pests						.02H				
16.	Sanitation Monitoring and Records								S(K/O)		
Additional Model Ordinance Requirements						CITATION	✓/✗	CODE			
17.	Plants and Grounds						.03A				
18.	Plumbing and related facilities						.03B				
19.	Utilities						.03C				
20.	Insects and vermin control						.03D				
21.	Disposal of other waste						.03E				
22.	Equipment construction (non-food contact surfaces)						.03F				
23.	Cleaning non-food contact surfaces						.03G				
24.	Shellfish storage and handling						.03H				
25.	Heat shock						.03I				
26.	Personnel						.03J				
27.	Supervision						.03K				
28.	Transportation (To include only the person shipping)						IX.05		K		
29.	Labeling and Tagging (Other than receiving)						X.05, .06		S(K/O)		
30.	Shipping Documents and Records						X.07		K		
Dealer's Signature						Inspector's Signature					

Overview of DMR Shellfish Dealer's Plant Inspection Form

The top section of the form indicates the date, type of inspection, and dealer information.

Section 1. HACCP Plan -- Is the Firm's HACCP plan in the facility being inspected, and is the plan available for review by the DMR Inspector? The inspector marks Yes or No.

A note: In the following sections on the inspection form, you will notice columns to the right of each numbered item being considered during the inspection. The first column may show a check mark (means "OK") or an X (means "Fail"). To the right of that column, you will notice another column for a Code. We use "C" for Critical, "K" for Key and "O" for Other debits. When you get a C debit on an item, it means "Shut down and fix it, or shut down until it is fixed".

During regular inspections, in order to pass, you are allowed:

(A) No Critical debits

(B) 3 Key debits

(C) 4 Other debits

During Certification inspections, in order to pass, you are allowed:

(A) No Critical debits

(B) 2 Key debits

(C) 3 Other debits

Section 2. Plan Elements – This section addresses whether or not the Plan is properly constructed for the product(s) for which it is written. This is where HACCP training comes into play.

- (a) **Hazards** – Are they properly identified?
- (b) **Records** -- What records will be kept?
- (c) **Critical Limits** – Are the critical limits adequate for the product?
- (d) **Name, address, signed and dated**--Does the plan have this done? Also, the plan must be reviewed by HACCP person, re-signed and re-dated, once a year. Note: only a HACCP certified and properly trained person can write or up-date, sign and date a firm's HACCP plan.
- (e) **Critical Control Points** – Have the CCP's been properly identified in the plan?
- (f) **Monitoring** – Does the plan show how the CCP's will be monitored, and are the monitoring forms well constructed to show all required information?
- (g) **Verification Procedures** – Does the plan show what verification procedures will be used when required? (example: Thermometer calibration and frequency)
- (h) **Corrective Action if identified** – If critical limits are exceeded, does the plan show the proper action to be taken to bring things back under control?

Section 3. HACCP Training – Has the Firm’s designated HACCP person been properly trained and certified to do Seafood HACCP work?

Section 4. Plan Implementation – (How are you doing with your HACCP plan?)

- (a) Receiving
- (b) Shellstock Storage
- (c) Processing
- (d) Shucked Meat Storage
- (e) Other Critical Limits

For any of the plan elements listed in your plan under (a), (b), (c), (d) or (e), have you been taking and recording **proper corrective actions** (when needed)? When required, have you been following **correct verification procedures**? Have you been doing the **required monitoring**, correctly and on proper forms? Are your **records** accurate and properly maintained? Do your **records** have a good format? Are they signed and dated properly? Is the Firm’s name and address shown on all records?

Section 5. Approved Source Control Failure – As you can see, this is a **critical** item. Are the tags (on the shellstock that you accepted and purchased) completely, accurately, and legibly made out?

- (a) Titled, Harvester Tag
- (b) Harvester’s name
- (c) Harvester’s Dept. license number
- (d) Date of harvest
- (e) Time of harvest
- (f) The most precise identification of the harvest location
- (g) Type and quantity of shellfish
- (h) Contain the 90 day retention statement
- (i) Contain the consumer advisory statement

Do your receiving/sales records also show, at least, the above listed items (b), (d), (f) and (g)?

Section 6. Time/Temperature Control Failure – Another **critical** item.

- (a) Do not accept shellstock more that 24 hours after harvest time.
- (b) Do not allow product to be soaked in water for more that 30 minutes.
- (c) Do not store in a cooler above 45 degrees Fahrenheit.
- (d) Destroy any product which is greater than 60 degrees Fahrenheit.
- (e) Heat shocked product must be chilled to 45 degrees Fahrenheit or less within 2 hours of hot dip.
- (f) Non-heat shocked product must be chilled to 45 degrees Fahrenheit or less within 3 hours of removal from refrigeration.

Section 7. Other Critical Control Failure – **This means failure of any other CCP you may have selected to include in your own HACCP plan.**

****Codes for Sections #8 through #30 are described in the next section, titled MODEL ORDINANCE SANITATION CODING REFERENCE, starting on page 76.

MODEL ORDINANCE SANITATION CODING REFERENCE

(This is provided for better understanding of the NSSP Standardized Plant Inspection Form)

8. SAFETY OF WATER FOR PROCESSING AND ICE PRODUCTION

- C - Shellstock washing with water from approved source
- C - Ice made on site or from sanctioned facility
- C - Cross-connections; hoses over sinks or skimmers hanging below overflow line
- C - Dead legs in plumbing system
- C - Follow local code on private water source
- C - Hoses used in place of pipes in supply line
 - C - UV system installed without proper solenoid switch for shutdown of pump when bulb weak or not working.
- C - Well head protected
- C - Ice machine reservoir not covered or protected or dirty
- C - Inlet hose in toilet hanging in water (out of inlet tube)
- C/K - Dirty filter on ice maker supply line
- K - Water from private source to be sampled
- K - Backflow devices
- K - No backflow preventers /vacuum breakers on all hose bib
- K - Check valves used as backflow devices
- K - Inadequate backflow preventers
- K - Drain line back siphon on ice maker

9. CONDITION AND CLEANLINESS OF FOOD CONTACT SURFACES

- K - Improperly constructed FCS
- K - FCS in disrepair
- K - Equipment used to handle ice stored in sanitary manner
- K - FCS cleaned and sanitized to prevent contamination
- K - Adequate cleaning supplies
- K - FCS sanitized prior to startup
- K - Shucking container W/R/S before each filling
- K - Shucked shellfish packed in clean containers/ containers properly stored
- K - Finger cots gloves impermeable/sanitized 2X day/cleaned/properly stored/good condition
- K - Properly constructed
- K - All joints smooth cleanable/ welded
- K - Containers properly stored
- K - Wood handle on ice shovel or scoop
- Recommended CL: 100ppm-200ppm, <50ppm is too low, not properly sanitized
- Sanitizer test strips present

10. PREVENTION OF CROSS-CONTAMINATION

- C/K - Shellstock properly stored in storage/transfer
- C/K - Shucked shellfish protected from contamination
- C/K - Equipment and utensil shall be stored to protect from contamination
- K - Shellstock shall not be placed in standing water
- K - Employee works as shucker and packer wash hands after entering
- K - Employees wash hands soap/water and sanitize before work/absence/interruption/when soiled
- K - No hand sanitizer solution
- K - Shuckers entering packing room

11. MAINTENANCE OF HAND-WASHING, HAND SANITIZING AND TOILET FACILITIES

- C - Sewage properly removed from facility
- K - Hand washing sink has warm water (min. 110 ° F)
- K - Liquid waste properly removed from facility
- K - Adequate # of convenient toilets; not greater than 500 feet away
- K - Toilet paper provided
- K/O - Toilet paper in suitable holder
- K - Hand sanitizer strength
- K - No hand sanitizer or CL level too low
- O - Mixing faucet

12. PROTECTION FROM ADULTERANTS

- C/K - Condensation on ceiling or walls
- C/K - Ice not made onsite inspected at receipt
- C/K - Ice stored in safe and sanitary manner to prevent contamination of ice
- C/K - Adequate ventilation to minimize condensation in areas where food is store/processed/packed
- C - Condensate dripping into ice or shellfish (if ceiling clean, may be ok)
- K - Shellfish protected during transfer
- K - Shellstock packed in clean containers
- K - FCS protected from cleaning compounds toxic items
- O - Light fixtures adequately shielded

13. PROPER LABELING STORAGE AND USE OF TOXIC COMPOUNDS

- K - Properly stored/ stored separately Insecticides/cleaning compounds/polish & other chemicals
- K - Only store compounds necessary for plant activities
- K - Do not store toxic items above shellfish or FCS
- K - Cleaning compounds and Toxic substances properly labeled
- K - Toxic compounds used in accordance to directions
- K - Chlorine concentration too high on food contact surfaces

14. CONTROL OF EMPLOYEES WITH ADVERSE HEALTH CONDITIONS

- K - Communicable disease
- K - Infected wound properly controlled
- K - Sick or wounded working with the food

15. EXCLUSION OF PESTS

- K - Pests excluded from facility

16. SANITATION MONITORING AND RECORDS

- K - Not reflecting problems found

17. PLANTS AND GROUNDS

- C - Flooding
- C/K - Dirt filth excluded from facility
- K - Animals or unauthorized persons excluded
- K - Shucking and packing operations separated by rooms, partitions or sufficient space
- K - Toilet room doors tight fitting/ self-closing/ do not open directly into processing area
- K - Mold on ceiling or walls

- O -- Physical facilities shall be maintained in good repair
- O -- Dirty filters on blowers
- O -- Air pump intakes located in protected place/proper filter
- O – Delivery shelf drains to shucking room
- O – High grass, weeds, trash on ground
- O -- Sanitary condition maintained throughout plant
 - Interior surfaces in good repair
 - Dry floor areas smooth easily cleanable
 - Wet floor areas easily cleanable/ graded/ free from cracks/ sealed coving
- O - Walls and ceiling properly constructed easily cleanable
- O - Grounds adequately maintained/ no rodent harborage areas/ properly drained

18. PLUMBING AND RELATED FACILITIES

- O - Handwashing facilities are convenient/ separate of 3 unit sink
- K - Directly plumbed to sewage
- O - One handsink in packing room
- K - Dealer provide soap for handwashing
- O - Towels/ waste can/ handwash sign at handwash location
- K - All plumbing designed/ maintained to provide water system that is adequate and under pressure
- K - Cold and warm water at all sinks/ adequate # size located so supervisor can see.
- K - Adequate floor drainage
- K - A safe and effective means of sewage disposal for facility
- K - Installation of drain pipes or waste pipes not permitted over food areas
- K – Hoses stored on floor, torn or leaking
- K – No soap at handwash sink
- K – Low water pressure

Note: blower/skimmer waste water, and 3 compartment sink waste water = gray water

19. UTILITIES

- C/K - Utilities ventilation/ cooling/ heating shall not create condition that may contaminate shellfish
- K – Inadequate or no lighting

20. INSECT AND VERMIN CONTROL

- K - Dealer shall have proper control measures tight fitting self closing doors and windows/screens <15 mesh/cont air
- K – Gaps around shell waste conveyors to the outside
- K – Cover off floor drain

21. DISPOSAL OF OTHER WASTES

- O - Shell and other non-edible waste promptly and effectively removed from bench or table
- O - All areas and receptacles used for storage or conveyance of waste maintained

22. EQUIPMENT CONSTRUCTION (NON-FOOD CONTACT SURFACES)

- O - NFC surfaces properly constructed
- O - NFC surfaces easily cleanable, impervious, free from cracks - benches, stalls, stools, storage
- O - Shucking benches drain completely, rapidly, away from shellfish
- O - Rust

23. CLEANING NON-FOOD CONTACT SURFACES

- K - Cleaning of NFCS in a manner and frequency appropriate to prevent contamination
- O - All conveyances and equipment shall be cleaned and maintained in a manner to prevent contamination

24. SHELLFISH STORAGE AND HANDLING

- K/O - Shellstock to be alive and culled
- O - Shellfish reasonably free of sediment
- K - Shucking buckets completely emptied - no overage
- K - Reject incoming lots of shellfish - reject dead or inadequately protected shellstock
- K - Do not use dip buckets for hand or knife rinsing
- K - No usable containers w/ other certification #'s etc.
- K - Wash, blow, rinse all meats in accordance to 21 CFR
- K - Thoroughly drain, clean and pack shucked meats promptly
- K - Conduct packing activities to conform to food additives regulation
- K/O - Store frozen meats at 0 ° F
- K - Do not commingle unless there is a plan

25. HEAT SHOCK

- K - Post a schedule
- K - Make sure person is familiar with schedule
- K - Cool hot dipped shellstock immediately in ice bath or flowing potable water

26. PERSONNEL

- O - Wear hair restraints
- O - Remove jewelry or wear cots or gloves
- O - Wear clean outer garments that are rinsed/changed as necessary
- O - Do not store clothing/personal items in processing areas etc.
- K - Do not eat, drink, spit, or use tobacco in any form in processing, storage areas, etc.

27. SUPERVISION

- K - Reliable and competent to supervise and manage
- K - Cleaning procedures shall be developed and supervised to assure activities do not contaminate
- K - All supervisors shall be trained in proper food handling, personal hygiene, and sanitary practices
- K - Supervisors shall monitor employee practices
- K - Supervisors shall assure proper sanitary practices are implemented
- K - Employees are trained in food handling and proper hygiene, report any illness

28. TRANSPORTATION (TO INCLUDE ONLY THE PERSON SHIPPING)

Follow requirements in IX.05 - 05A all are KEY violations

- Shipping times less than 4 hours - shellfish are well-iced or other acceptable means of refrigeration
- When mechanical refrigeration used - equipped w/auto. controls- capable of maintaining 45 °F (7.2 °C)
- Dealer not required to provide thermal records during shipment
- Lack of ice or other acceptable types of refrigeration equals unacceptable shipping condition

Shipping times greater than 4 hours - needs temperature recording device or other means specified in HACCP Plan

29. LABELING AND TAGGING (OTHER THAN RECEIVING)

K/O

SHELLSTOCK

K – Commingled product improperly tagged

Dealer shall keep harvester tag affixed to each container until shipped or emptied

When dealer is harvester, he can affix dealer tag prior to shipment

Tags are durable, water proof, sanctioned, 2 5/8 X 5 1/4 in size

Dealer tag shall have the following indelible, legible information in the following order:

Dealer name and address

Dealer's certification number

Date of harvest

Most precise identification of harvest location

Type and quantity of shellstock

90 day statement

Consumer advisory information

SHUCKED

Original SP name and Certification #

Shucking date

Quantity of shellfish per container

Individual package of fresh or frozen is labeled with indelible, legible form on display panel

Less than 64 fluid ounces - shall have SP or RP # on label and a sell by date or best if used by date

Fresh shall have month and day; frozen must also have year

64-fluid ounces or more - shall provide "date shucked"

Fresh shall have month & day indicated; frozen must also have year

Appears on lid and sidewall or bottom of durable containers

Appears on lid or sidewall of disposable containers

All frozen shall be labeled as frozen

30. SHIPPING DOCUMENTS AND RECORDS

KEY ITEMS

Each shipment shall have shipping document

Shipping document shall have name, address, cert. #, name & address of consignee, kind & quantity of product

Receiving dealer shall maintain copy of completed shipping document

Have commingling plan, but not keeping records

Document available upon request

Transaction records

Must have business address, complete & accurate records, must be able to trace back

Must have recording method authorized by authority

Fresh record maintained for 1 year; frozen for 2 years

Shipping/Sales records not matching with receiving records

Well Disinfection Information

The following information has been provided by the Department of Health and Human Services Maine Drinking Water Program.

**Maine Department of Health and Human Services
11 State House Station
Augusta, Maine 04333-0011
Drinking Water Program**

Recommended Procedure for Shock Chlorination of Water Systems using Bedrock Wells By the Drinking Water Program Field Services Section on 6/25/04

Shock chlorination is a disinfection treatment recommended when a drinking water system has been contaminated with total coliform or E. coli bacteria. The presence of bacteria in a well is usually caused by the intrusion of surface water contaminated by decayed material, animal/human waste, or other materials. This intrusion can sometimes be attributed to a defective or damaged well casing or casing seal, improperly installed pitless adapter, a casing that terminates too close to ground level, or a shallow bedrock fracture. If any of these situations exist, then no amount of shock chlorination will permanently solve the problem, and a licensed water professional should be consulted.

Frequently, bacteria can be introduced during the well drilling process, installation of the pump system, subsequent servicing of the well pump, pipe repairs, storage tank replacement, or an inadequate well cap installation allowing vermin and insects access to the well casing. Any cause or causes for contamination should be fully investigated prior to shock chlorination, since contamination will likely reoccur if the cause is not addressed.

How to Effectively Shock Your Well

Shock chlorination of a well is an involved process that cannot be rushed. It requires time, planning, preparation, proper methods, and proper materials. Carefully read these directions before starting the shock chlorination process. Be sure you understand them completely, or consider hiring a well contractor or other licensed water professional for assistance. It will be necessary to provide an alternate source of drinking water until the well shocking process is completed; use of the water system must be minimized since very high levels of chlorine will be present. Remember, the objective is to disinfect the entire water system (not just the well). Prior to disinfection, ensure that the entire well and piping system has been running with sufficient flow to purge any sediment, foreign matter, or corrosive material (due to unsanitary construction, repair, or an extended period of idleness). These substances can react with the chlorine solution and decrease its effectiveness in destroying bacteria.

1. Preparation: Determine the correct amount of liquid bleach (6% sodium hypochlorite) needed by using the following dosages, which are based on the depth of a typical six-inch diameter well:

DEPTH	50 FEET	100 FEET	150 FEET	200 FEET	250 FEET	300 FEET
DOSAGE	1 QT	1 ½ QTS	2 QTS	2 ½ QTS	3 QTS	3 ½ QTS

Do not use bleach in excess of the recommended amount, since this will only require additional flushing before the system is ready for use. Use proper personal protective equipment, which will include gloves and eye protection. Prepare the chlorine solution by mixing the specified amount of bleach to about 10 gallons of water - typically in two, five-gallon pails. Follow the manufacturer's recommendations for handling and mixing disinfectant. Switch off power to the well pump, and drain as much water from the system as possible. If the system has a hydro-pneumatic pressure tank, check with the manufacturer to determine if the chlorine solution will harm the tank's membrane material. For air-over-water pressure tanks, release the air to allow the tank to be completely filled with chlorinated water. After switching off electrical power (or gas or oil burners), drain all water heaters to allow the solution to circulate through the hot water system as well. **(Continued on page # 82)**

2. Application: Remove the well cap, carefully pour the chlorine solution into the well and allow it to “settle” into the well (and its bedrock fractures) for three hours while the well is allowed to remain undisturbed. Attach a hose to a nearby sill cock, restore power to the well pump, and circulate chlorinated water through the hose only, thoroughly wetting the inside of the well casing, supply pipe, pitless adapter, your gloved hands, and the well cap. After washing down the well casing for a minimum of 30 minutes, carefully reinstall the well cap. Obtain spare replacement gaskets or other parts as necessary to properly re-cap the well before proceeding. If there are other outside faucets, go to the furthest from the well, open the faucet and run the water until chlorine odor is detected. Repeat this procedure for all other outside faucets before going to all inside plumbing fixtures to conduct the same process; this includes cold and hot water valves (hot water heater turned off), showerheads, laundry fixtures, dishwashers, and toilets. Allow the chlorinated water to stand in the well and the entire water system for a minimum of 12 hours (24 hours is recommended) during which time the system, with the exception of moderate toilet use, should be considered unusable. After 12-24 hours, chlorinated water can be flushed from the system through the furthest outside faucet until the chlorine odor is no longer present. Once the chlorine odor is no longer detectable at all outside faucets, repeat the process for all indoor faucets and fixtures taking care not to discharge large amounts of heavily chlorinated water into a septic system, nearby lakes, rivers, ponds, or any surface waters, onto lawns, gardens, or sensitive plants. When no chlorine odor can be detected at any inside faucet or fixture, restore power to water heaters.

For further information, contact the Drinking Water Program at (207) 287-2070.

For follow-up actions, please see the Department of Marine Resources’ Well Water Policy, starting on page 83.



WELL WATER POLICY 8-21-03

A. PURPOSE

This policy is established to clarify the protocol for violative and borderline well water samples taken at certified shellfish dealer facilities.

B. Private water supplies shall be sampled by persons recognized by DMR and tested at laboratories sanctioned or certified by DMR:

1. Prior to use of the water supply. This sampling and testing will also include potability tests to meet for ME DHS Drinking Water Program requirements.
2. Every six months while the water supply is in use.
3. After water supply has been repaired and disinfected.
4. The Department may conduct tests at any time (DMR Regulation 20.10A).

C. Failing test scores will result in corrective action steps to be taken by the Dealer, Office, and Inspector. These steps, and failing test scores, will be covered in the following sections.

D. In the event that E-Coli is detected in any sample, an immediate shutdown of all operations will result. See Sections F. 1-4 for corrective action steps.

E. In the event of a total coliform score of 1.1 MPN/100ml, when previous DMR test results for that well have been satisfactory:

1. Inspector shall:
 - a) Resample well within 14 days.
 - b) Submit Well Water Corrective Action Form to Supervisor after problem is corrected.
2. Lab shall:
 - a) Enter sample results into database. Send copies of database record to office, dealer, and inspector.

F. In the event of a score for total coliform greater than 1.1 MPN/100ml, or a score equal to 1.1 MPN/100ml when the establishment has a history of unacceptable water for the well tested, a shutdown will be required. Corrective steps are as follows:



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1. Inspector shall:
 - a) Contact dealer with results of test. Inform dealer that all shellfish operations must cease. Require dealer to sanitize well. Emphasize that dealers follow instructions in DMR Shellfish Sanitation Blue Book Guide.
 - b) Notify Hallowell office and Supervisor of test results and request shut down letter, verbally and by e-mail.
 - c) Begin Well Water Corrective Action Form.
 - d) Re-contact dealer to check on sanitizing actions.
 - e) Conduct drive-by verification that operation has shut down. For documentation purposes, notify office that it has been done.
 - f) After contacted by dealer, take a follow-up sample of well, checking to see that chlorine is not present in water. If chlorine is still present, return to resample when sufficient time has passed to allow chlorine to leave the well.
 - g) Require that the dealer take all steps possible to locate the source of the problem with the water system; including, but not limited to;
 1. An internal plumbing inspection by a licensed plumber to check for dead legs, closed loops, cross-connections, dirty filters, clogged lines, etc. Plumber shall provide written results and statement that system meets State of Maine Plumbing Code.
 2. If needed, a well inspection by a well driller or a qualified water treatment expert for cracked, broken, lifted casing, contaminated pump, etc. Inspection should include written, signed, and dated findings.
2. Lab shall:
 - a) Call inspector about failed test results.
 - b) Email office and inspector of test results for documentation purposes.
 - c) Enter results into database; send copies of database record to office, dealer, and inspector.
3. Office shall:
 - a) Send written, certified notification to dealer of shut down, and require a written (within 10 business days of receipt) response. A faxed response will be accepted, if the dealer signs it. The dealer must then mail the original letter to the office.



4. Dealer shall:

- a) Cease operation until given written permission to restart.
- b) Sanitize well, following the instruction contained in the DMR Shellfish Sanitation Blue Book Guide.
- c) Take all steps possible to locate the source of the problem with the water system; including, but not limited to;
 1. An internal plumbing inspection by a licensed plumber to check for dead legs, closed loops, cross-connections, dirty filters, clogged lines, etc. Plumber shall provide written results and statement that system meets State of Maine Plumbing Code.
 2. If needed, a well inspection by a well driller or a qualified water treatment expert for cracked, broken, lifted casing, contaminated pump, etc. Inspection should include written, signed, and dated findings.
- d) Advise inspector of time and date of corrective actions taken.
- e) Record the corrective actions.
- f) Respond to DMR registered letter within 10 business days of receipt.

G. Restart protocol:

1. Inspector shall:

- a) Verify passing test score with lab: notify office of test status by email or fax.
- b) Check to see if corrective action has been taken.
- c) Check with office to see if dealer's response letter, and all required material from dealer, has been received.
- d) See documentation of inspection of plumbing inspection and /or well inspection.
- e) Complete the well water corrective action form, with notation of startup approval.
- f) Send documentation to Supervisor.
- g) Confirm the ok to restart with Supervisor.



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2. Lab shall:

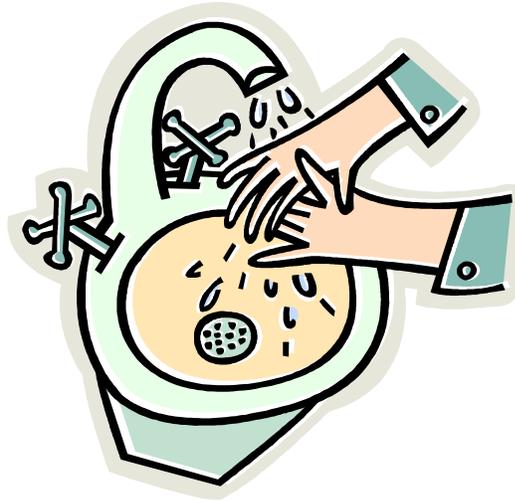
- a) Enter results into database; send copies of database record to office, dealer, and inspector.

3. Office shall:

- a) Require signed response letter from dealers, as well as all other required information.
- b) Require written confirmation from Supervisor for startup approval.
- c) Send dealer written permission to restart. The office may fax the approval letter to the dealer. The office would then mail the original letter to the dealer.
- d) Email inspector about start-up; have them notify Marine Patrol.

Sample Hand Wash Sign

Hand Washing Sink Only



This area requires:

Hot and cold running water

Paper towels & hand soap from a dispenser

Maine Department of Marine Resources
Public Health Division



Department of Marine Resources

Web Link Information

The Maine Department of Marine Resources, Public Health Division, is pleased to announce that all of the bacterial and red tide/PSP closures are now online! Each signed legal notice and accompanying map is now available.

- Bacterial closures can be found at the following link:
http://www.maine.gov/dmr/rm/public_health/closures/closedarea.htm

Closed area numbers denoted in **RED** are conditional areas. These areas open and close depending on various conditions which effect pollution levels, such as waste water treatment plants (WWTP), sewage treatment plants (STP), marinas, rainfall or season. In the event that the closed area inventory has not been updated you may check the hotline text to see whether or not the area is open or closed. Be advised that the best information comes from your local Marine Patrol Officer or shellfish warden.

- Red tide/PSP closures can be found at the following link:
http://www.maine.gov/dmr/rm/public_health/closures/pspclosures.htm

The Shellfish Sanitation Hotline continues to be available by dialing 1-800-232-4733 (in state) and (207)633-9571 (outside Maine).

- Hotline text can be found at the following link:
http://www.maine.gov/dmr/rm/public_health/closures/shellfishhotline.htm

WARNING: Despite our efforts to be accurate, these pages may contain errors. We present this website to you with a good-faith representation that the information it contains is generally reliable. Information on this site should not be relied upon for legal purposes. This website is generally only updated during normal business hours. Anyone who needs a certified copy should contact Michelle Mason at 624-6570 or michelle.mason@maine.gov

Additional online information:

- Maine Certified Dealer List - http://www.maine.gov/dmr/rm/public_health/certified_dealers.htm
- Online Forms and Applications - http://www.maine.gov/dmr/rm/public_health/forms/index.htm
- Compilation of Shellfish Laws and Regulations – <http://www.maine.gov/dmr/lawsandregs.htm>
- FDA Seafood Information and Resources - <http://www.cfsan.fda.gov/seafood1.html>
- FDA Model Ordinance - <http://www.cfsan.fda.gov/~ear/nss2-toc.html>
- FDA Retail Food Code - <http://www.cfsan.fda.gov/~dms/foodcode.html>
- Interstate Certified Shellfish Shippers List (ICSSL) - <http://vm.cfsan.fda.gov/~ear/shellfis.html>
- Seafood HACCP Alliance Internet Training Course - <http://seafoodhaccp.cornell.edu/>

Hallowell Office:	21 State House Station, Augusta, ME 04333	Phone: (207) 624-6570
Boothbay Office:	194 McKown Point Road, W. Boothbay Harbor, ME 04575	Phone: (207) 633-9500
Lamoine Office:	22 Coaling Station Lane, Ellsworth, ME 04605	Phone: (207) 667-5654

DMR Shellfish Information Directory

Department of Marine Resources, 21 State House Station, Augusta, ME 04333-0021

Shellfish Sanitation Hotline: 1-800-232-4733

Public Health Division

Amy Fitzpatrick, Director (*Closed/PSP/Depuration Areas: Shellfish Sanitation*)

Boothbay Harbor Office: 194 McKown Point Road, P.O. Box 8, W. Boothbay Harbor, ME 04575

Phone: (207) 633-9554; Fax: (207) 633-9579; email: amy.fitzpatrick@maine.gov

Michelle Mason, Shellfish Program Coordinator (*Closed/PSP Areas; Shellfish Sanitation*)

Hallowell Office, 21 State House Station, Augusta, ME 04333

Phone: (207) 624-6570; Fax: (207) 624-6015; email: michelle.mason@maine.gov

Biotoxin Monitoring (PSP)

Darcie Couture, Toxin Monitoring Director, Boothbay Harbor Office

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Laurie Bean, Toxin Monitoring, Boothbay Harbor Office

Phone: (207) 633-9555; Fax: (207) (207) 633-9579; email: laurie.bean@maine.gov

Allie Rohrer, Toxin Monitoring, Lamoine Office

Phone: (207) 667-2418, Fax: (207) 664-0592, email: Alexandra.Rohrer@maine.gov

Microbiology Lab, Boothbay

Cathy Vining, Microbiologist II

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Gail Parsons, Microbiologist

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Edward Thier, Marine Resources Technician

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Landings Program

Heidi Bray, Commercial Landings Scientist, Boothbay Harbor Office

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Volunteer Coordinator

Alison Sirois, Boothbay Harbor Office

Phone: (207) 633-9401; Fax: (207) 633-9579; email: Alison.Sirois@maine.gov

Wetlands Alteration Review

Brian Swan, Environmental Coordinator, Hallowell Office

Phone: (207) 624-6573; Fax: (207) 624-6024, email: brian.swan@maine.gov

DMR Development

Togue Brawn, Resource Management Coordinator, Hallowell Office
Phone: (207) 624-6558; Fax: (207) 624-6024

Licensing

Hallowell Office Receptionist
Phone: (207) 624-6550; Fax: (207) 624-6024

Water Quality – Boothbay (Closed & Depuration Area Openings/Closings)

***, **Supervisor** (Area from Boothbay Harbor to Friendship, and East side of New Meadows River)
Phone: (207) 633-9501; email: jan.barter@maine.gov

Laura Livingston (Area from Kittery to the Sheepscot River)
Phone: (207) 633-9533; email: laura.livingston@maine.gov

Fran Pierce (Area from Friendship to Cape Jellison Bay Island)
Phone: (207) 633-9511; email: fran.pierce@maine.gov

Water Quality – Lamoine (Closed & Depuration Area Openings/Closings; Microbiology Lab)

Robert Goodwin, Field Supervisor
Lamoine Office, 22 Coaling Station Lane, Lamoine, ME 04605
Phone: (207) 667-5654; Fax: (207) 664-0592; email: Robert.Goodwin@maine.gov

John Fendl
Phone: (207) 667-5654; Fax: (207) 664-0592; email: John.Fendl@maine.gov

Erick Schaefer
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Marine Patrol – Hallowell Office

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Marine Patrol – Division I
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Other Agencies

Department of Environmental Protection,
Bureau of Land & Water Quality, 17 State House Station, Augusta, Maine 04333-0017
Contact: Richard Green, Phone: (207) 287-7765, Fax: (207) 287-7939; email: Richard.A.Green@maine.gov

Department of Agriculture, Division of Quality Assurance and Regulation, (*for other than molluscan bivalves*)
28 State House Station, Augusta, ME 04333-0028
Contact: David Gagnon, Phone: (207) 287-2161

Peter Koufopoulos, (*Questions about NSSP, Model Ordinance, etc.*)
USFDA, Shellfish Sanitation Program, 1 Montvale Avenue, Stoneham, MA 02180
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Melissa Potts (*HACCP training classes*)
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Visit the DMR web page at: <http://www.maine.gov/dmr/index.htm>