



“GLIFWC Chippewa Ceded Territory Traditional Food Regulatory Project”

Food Harvester & Handler Training

PowerPoint Slides

September 21, 2020

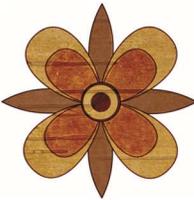
Welcome to GLIFWC's Food Harvester & Handler Training

We are glad you could join us!
We will get started soon.




Introductions

- ▶ Name
- ▶ Tribal Affiliation
- ▶ What are you hoping learn?
- ▶ What is your favorite traditionally harvested food?



Training Objectives & Expectations

- ▶ To provide information in support of food harvesters and food handlers effectively processing, selling and distributing safe, wholesome treaty harvested foods within the scope of the project.
- ▶ Provide contaminant and food safety information for maple syrup, wild rice, walleye, whitefish, venison, and wild turkey.

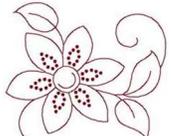


To be eligible receive a certificate of completion, attendees will need to:

- Attend the full training as provided (estimated to be 4 hours)
- Participate in class exercises, to the best of your abilities
- Complete and return the course survey

Training Agenda

- Project Background and Outcomes
- Food Safety Basic
- Food Safety Systems
- Model Food Code-General Provisions
- Fish, Food Safety and the Model Food Code
- Meat, Food Safety and the Model Food Code
- Low-Risk Foods, Food Safety and the Model Food Code



About GLIFWC

- ▶ Conservation Enforcement
- ▶ Division of Intergovernmental Affairs
- ▶ Planning and Development
- ▶ Public Information Office
- ▶ Administration
- ▶ Biological Services Division
 - ▶ Inland Fisheries Section
 - ▶ Great Lakes Section
 - ▶ Wildlife Section
 - ▶ Environmental Section
 - ▶ Climate Change



About the project

- ▶ **GLIFWC Chippewa Ceded Territory Traditional Food Regulatory System Project**
 - ▶ 3 Year Project
 - ▶ Currently in Year 3
 - ▶ Funded by the Administration for Native Americans
- ▶ **Project Aim**
 - ▶ Create regulatory tools around treaty-reserved traditional foods to assist tribes in expanding sovereignty over food systems



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Project Impact

- ▶ **Important Note**
 - ▶ Only applies if your tribal council approves and implements the specific Model Food Code
- ▶ **Will not impact:**
 - ▶ Cultural and community feasts
 - ▶ Home use of traditional foods
 - ▶ Informal commercial sale
 - ▶ Examples:
 - ▶ Fundraisers
 - ▶ Powwow Stands



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Project Timeline and Outcomes

- ▶ Traditional Food Interest List
 - ▶ ~326 participants
- ▶ "2018 Traditional Food Contaminant and Food Safety Report" page 7 and Addendum page 157
- ▶ "Guidance Reports": page 488
 - ▶ Small scale food production of wild foods harvested off-reservation
 - ▶ Packaging, labeling, and sales of wild foods harvested off-reservation
- ▶ Community Roundtables and Workshops



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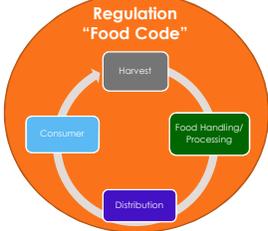
Food Systems



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What is a Food Regulatory System?

- ▶ A legal system made of policies, guidelines, and regulations with the purpose of **protecting the health and safety of food consumers**
- ▶ Managing food safety risks in three broad categories: biological, chemical, and physical contaminants



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Why contaminant information is important

- ▶ Information on contaminant risks are used in several ways:
 - ▶ To guide the development of safety standards that apply to the entire food system, and with respect to specific foods
 - ▶ Used by the individuals and entities who produce, store and transport food to manage risks associated with the foods they are producing, and to reduce potential liability

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Food Safety Basics

OBJECTIVES:

- WHAT IS FOODBORNE ILLNESS
- WHAT ARE CONTAMINANTS

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Bacteria: Temperature and Time

- ▶ Temperature
 - ▶ Bacteria grows well when the temperature of the food is between:
 - ▶ 41°F – 135°F (5°C – 57°C)
 - ▶ Known as the "Danger Zone"
 - ▶ Bacteria can grow very quickly between:
 - ▶ 70°F – 120°F (21°C – 52°C)
- ▶ Time
 - ▶ It takes time for bacteria to multiply, even in prime conditions
 - ▶ Example:
 - ▶ In food held at 42°F – 50°F, it takes **Listeria 24 hours** to grow to unsafe levels
 - ▶ The same food held **above 86°F**, *Listeria* can grow to unsafe levels in **1 hour!**

1 Food and Drug Administration, Fish and Fishery Products Hazard Guide, 2020, Page 421

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Bacteria: Oxygen and Moisture

- ▶ Oxygen
 - ▶ Some bacteria require oxygen to survive
 - ▶ Some bacteria require the absence of oxygen to survive or become dangerous
- ▶ Moisture
 - ▶ Water activity is the amount of water available to react with bacteria
 - ▶ Water activity = a_w
 - ▶ Water activity is not moisture content
 - ▶ Water activity is measure on a scale of 0 - 1:
 - ▶ 0 = low water activity
 - ▶ 1 = high water activity
 - ▶ Bacteria prefer a water activity of 0.85 and higher



Photo Credit: SciencePhotoLibrary

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Common Bacteria Species

- ▶ *Bacillus cereus*
- ▶ *Listeria monocytogenes*
- ▶ Shiga toxin-producing *E. coli*
- ▶ *Campylobacter jejuni*
- ▶ *Clostridium perfringens*
- ▶ *Clostridium botulinum*
- ▶ Nontyphoidal *Salmonella*
- ▶ *Salmonella* Typhi
- ▶ *Shigella* spp.
- ▶ *Staphylococcus aureus*



Photo Credit: BioCote

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Viruses and Parasites

- ▶ **Viruses:**
 - ▶ Needs a host to survive
 - ▶ Does not need food
- ▶ Virus Sources:
 - ▶ Humans and animals
 - ▶ Contaminated water
 - ▶ Contaminated surfaces
- ▶ Common Food Related Viruses:
 - ▶ Hepatitis A
 - ▶ Norovirus
- ▶ **Parasites:**
 - ▶ Needs a host to survive
 - ▶ Typically associated with the food or water, not the food handler
- ▶ Parasite sources:
 - ▶ Fish (seafood), wild game, and contaminated water
- ▶ Common Parasites:
 - ▶ *Anisakis simplex*
 - ▶ *Cryptosporidium parvum*
 - ▶ *Giardia duodenalis*
 - ▶ *Cyclospora cayentanensis*

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Fungi

- ▶ Mold or yeast
 - ▶ Can make people sick
 - ▶ Toxins or allergic reactions
 - ▶ Most often associated with food spoilage
 - ▶ Refrigerator or freezer temperatures may slow but do not destroy molds and yeast
 - ▶ Prefers acidic and low water activity foods (i.e. jams and jellies)



Photo Credit: HealthyCanning

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Biological Toxins

- ▶ Naturally forming chemicals within foods which can make people sick
- ▶ Sources:
 - ▶ Seafood (typically ocean fish)
 - ▶ Plants
 - ▶ Mushrooms



- ▶ Underscores the importance of plant identification and understanding of proper preparation.

University

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Chemical Hazards

- ▶ The inclusion of chemicals at levels unsafe to human health
- ▶ Sources:
 - ▶ Allergens
 - ▶ Processing equipment
 - ▶ Machine lubricants
 - ▶ Misuse of sanitizers and cleaning agents
 - ▶ Pesticides or environmental contaminants (e.g. mercury in fish)
 - ▶ Health and beauty products from anyone handling food



Photo Credit: SafetySkills.com

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Physical Hazards-brief

- ▶ Physical objects in food which can cause harm
- ▶ Common Sources:
 - ▶ Rocks
 - ▶ Wood
 - ▶ Bones
 - ▶ Fruit pits
 - ▶ Glass
 - ▶ Jewelry



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Additional Food Safety Education



Indian Health Service:

- ▶ Offers **free** online Food Handler Training <https://www.ihc.gov/foodhandler/>
- ▶ Training is 1 hour and includes a 20 question quiz

ServSafe

- ▶ Nationally recognized food safety training
- ▶ Food Handler course (\$15 online course)
- ▶ Food Manager course (\$179 online course)
- ▶ <https://www.servsafe.com/>



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Purpose of a Food Regulatory System & Food Safety

To provide safe and wholesome foods for consumption

This is done through regulation and implementation of food safety systems

- Food is made or kept safe for consumption by managing risk through reducing food related hazards

IDENTIFIED TRADITIONAL FOODS LIST	
Food	Classification
White-Tail Deer	Large Game
Rabbit/Hare	Small Game
Duck	Migratory Birds
Turkey	Upland Game Birds
Whitefish	Great Lake Fish
Walleye	Inland Fish
Fresh Berries	Fruit
Wild Leeks/Ramps	Bulk Vegetable
Wild Beach Pea	Legume
Hazelnut	Tree nut
Mored Mushroom	Fungi
Wild Rice	Grain
Berry Jams/Jellies	Value Added
Maple Syrup	Value Added
Animal Fat	Value Added
Venison Jerky	Value Added

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Traditional Food Focused Contaminant Information

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Biological Hazard Overview

- 2018: project staff completed a review of scientific literature to identify known and unknown contaminant and food safety risks of the traditional foods from the Interest List. (page 16 of Training Manual)
- Traditional foods carry many of the same risks as conventional foods (e.g. bacteria, disease, etc.)
 - from "2018 Traditional Food Contaminant and Food Safety Report"

Common Name	Scientific Name	HAZARD			
		Pathogen	Disease/Toxin	Parasite	Pain (PAIN)
Large/Small Game					
White-tailed Deer	Odocoileus virginianus	X	X	X	X
Snowshoe Hare	Lepus americanus	X	X	X	X
Arctomys Rabbit	Capreolus americanus	X	X	X	X
Birds					
Ducklings					
Domestic Duck	Anas platyrhynchos	X	X	X	X
Ring-necked Duck	Aythya americana	X	X	X	X
Blue-winged Teal	Blue-winged Teal	X	X	X	X
Least Sandpiper	Lesser Sandpiper	X	X	X	X
Mourning Dove	Quail	X	X	X	X
Ring-necked Pheasant	Ring-necked Pheasant	X	X	X	X
Fish					
Walleye	Stizostedion vitreum	X	X	X	X
Whitefish	Coregonus artedii	X	X	X	X
Berry Jams/Jellies					
Wild Strawberry	Fragaria virginiana	X			
Wild Blueberry	Vaccinium angustifolium	X			
Wild Blackberry	Rubus occidentalis	X			
Wild Elderberry	Sambucus racemosa	X			
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Model Food Code Food Safety System Requirements 37

	GMP	SSOP	HACCP
Tribally Licensed Food Facility	Required	Required	Required
Retail Food Establishment	Required	Required	x
Class 1 Meat Vendor	Required	Required	Required
Class 1 Fish Vendor	Required	Required	Required
Low-Risk Food Vendor*	modified	modified	x

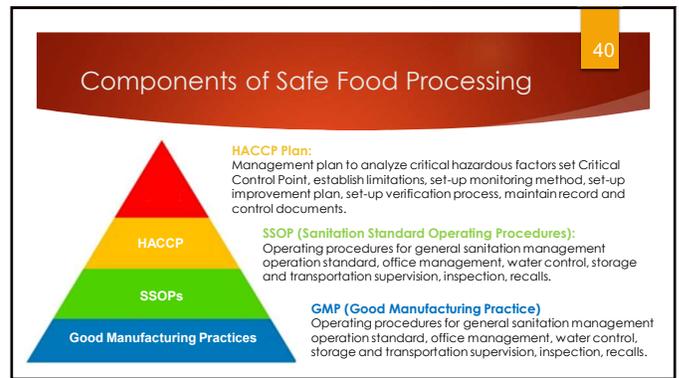
*Low-Risk Foods produced within a tribally licensed food facility must comply with the requirements of the food facility, which include GMPs, SSOPs, HACCP.

Food Safety Terminology 38

- ▶ **Food contact surface(s):** any surface that comes into contact with food
▶ Examples: work table, utensils, food service gloves, food containers
- ▶ **Ready to Eat (RTE):** refers to foods that ready to consume as is and do not need any additional cooking
▶ Examples: fresh berries, cooked meat, bread
- ▶ **Cross Contamination:** the process of transferring microorganisms from one surface to another with a harmful effect
▶ Example: Using tongs to move raw turkey to a baking pan, then using the same tongs to move muffins to a platter without cleaning and sanitizing tongs

Food Safety Terminology continued 39

- ▶ **Adulterant:** poisonous or deleterious substances, either naturally occurring or added to food. To include added substance, unapproved substances, handling or holding food in ways that could make the food unsafe. *May include substances from food contact surfaces and packaging
▶ Examples: Lead ammunition can fragment within a deer carcass. These fragments would be considered adulterants
- ▶ **Kill Step:** a process within the production of food where pathogens are eliminated or reduced to an acceptable level
▶ Example: boiling, baking, smoking, etc.



Good Manufacturing Practices (GMPs) 41

▶ Focus of GMPs is the sanitary environment of food production or manufacturing

Requirements:

- ▶ General maintenance of physical facilities
- ▶ Cleaning and sanitizing of equipment and utensils
- ▶ Storage and handling of clean equipment and utensils
- ▶ Pest control
- ▶ Proper use and storage of cleaning compounds, sanitizers, and pesticides
- ▶ Employee training
- ▶ Plant design
- ▶ Quality assurance assessment

Model Food Code - Chapters 3.06 & 3.11 parts 4-8 which can be found in the training manual

Current Good Manufacturing Practices (cGMP) 42

▶ Focus on reducing cross contamination and employee hygiene

▶ Includes:

- ▶ Employee food handling and personal hygiene training
- ▶ Inspection of employee hygiene and work habits
- ▶ Proper maintained sanitary facilities and supplies
- ▶ Care taken during the handling of allergens

Model Food Code - Chapter 3.04 part 1 which can be found in the training manual



Standard Sanitation Operating Procedures (SSOP) 43

- ▶ SSOPs are the specific, **written procedures** necessary to ensure sanitary conditions in the establishment, before, during, and after operations
- ▶ Used to meet the requirements of GMPs
- ▶ Address processing environments and employee practices

8 Areas of Sanitation 44

1. Safety of water which comes into contact with food or food surfaces
2. Condition and cleanliness of food contact surfaces
3. Prevention of cross-contamination and cross-contact of allergenic foods
4. Maintenance of hand washing stations, hand sanitizing, and toilet facilities
5. Protecting food and food contact surface from adulterants
6. Proper use and storage of toxic chemicals used in the facility
7. Pest control measures
8. Where employee health may be a biological risk to food, controlling access to food and food surfaces

Model Food Code - Chapter 3.11 parts 4-8 which can be found in the training manual

SSOPs and the Model Food Code 45

Chapter 3.08

- ▶ Required for:
 - ▶ Tribally Licensed food facility
 - ▶ Retail food establishment
 - ▶ Class 1 Meat Vendor
 - ▶ Class 1 Fish Vendor

SSOPs:

- ▶ Must be written
- ▶ Must be monitored
- ▶ Specific to the location
- ▶ Specific to the establishment
- ▶ Must be signed by the establishment authority
- ▶ Requires monitoring activities
- ▶ Recordkeeping is required
- ▶ Must be routinely evaluated for effectiveness

Template SSOP (training manual page 730) 46

Hazard Analysis Critical Control Points (HACCP) 47

- ▶ A management tool used to monitor and protect a food product, before, during, and after, processing
- ▶ Addresses food safety issues around **a specific food product or processing line**
- ▶ Monitors food safety in 3 main areas
 - ▶ Biological
 - ▶ Chemical
 - ▶ Physical
- ▶ Designed to minimize the risk of food hazards but may not reduce the hazards to zero
- ▶ Documents the active protection of food from contaminants

HACCP in 7 Steps 48

1. Conduct a hazard analysis
2. If hazards are identified, determine critical control points in the process
3. Establish critical limits
4. Establish monitoring procedures
5. Establish corrective actions
6. Establish verification procedures
7. Establish recordkeeping procedures

The plan itself is a written, signed, and dated document that is periodically updated

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HACCP and the Model Food Code

- ▶ **All food processing plants, retail food establishments, and class 1 fish/meat vendors must:**
 - ▶ Conduct a **hazard analysis** for each raw and finished food product processed by the facility
 - ▶ Identify **preventive control measure** to control **hazards identified** in the hazard analysis
 - ▶ GLIFWC has developed model HACCP plans that can be used by tribal entities
- ▶ Training: Training on HACCP, or equivalent job experience, is required to develop or amend a HACCP plan, and to conduct a records review required for HACCP implementation. Currently, GLIFWC offers an annual fish HACCP training course each fall

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HACCP and the Model Food Code

- ▶ HACCP plans are required when a hazard is identified through the Hazard Analysis
- ▶ HACCP Records include:
 - ▶ Written hazard analysis
 - ▶ Written HACCP plans
 - ▶ Critical control point and critical limit supporting documents
 - ▶ Monitoring records of critical control points
 - ▶ Corrective action plans (optional)
 - ▶ Documentation of corrective actions taken

Model Food Code - Chapter 4
which can be found in the training
manual

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HACCP Form Examples (training manual page 562)

HACCP PLAN FORM

Product Name: _____

Facility Name: _____

Facility Address: _____

State: _____

Facility Type: _____

| CCP |
|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | |

Signature of Company Official: _____ Date: _____

HACCP PLAN FORM

Product Name: _____

Facility Name: _____

Facility Address: _____

State: _____

Facility Type: _____

Signature of Company Official: _____ Date: _____

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Let's take a short break!

K.

53

General Provisions Summary & Labeling

Objectives:

- Understand what General Provisions are and where to find them
- Understand the aspects of labeling

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Model Food Code Structure

Please turn to the Model Food Code Chapters - page 400 in the training manual

- ▶ Chapter 1 - Purpose and Powers
- ▶ Chapter 2 - Food Code Definitions
- ▶ Chapter 3 - General Provisions
- ▶ Chapter 4 - HACCP
- ▶ Chapter 5 - Meat
- ▶ Chapter 6 - Fish
- ▶ Chapter 7 - Produce
- ▶ Chapter 8 - Low-Risk Foods

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General Provisions

Chapter 3

- ▶ Chapter 3.01 - Zhawenindiwag; Respect for Traditional Foods and Consumers
- ▶ Chapter 3.02 - 3.02 Debwenin; Truth in Labeling
- ▶ Chapter 3.03 - Food Additives
- ▶ Chapter 3.04 - Personnel
- ▶ Chapter 3.05 - Food Transportation and Storage
- ▶ Chapter 3.06 - Equipment and Utensils
- ▶ Chapter 3.07 - Handling of Inedible Food Bi-Products
- ▶ Chapter 3.08 - Sanitation Control Procedures & GMPs
- ▶ Chapter 3.09 - Variance
- ▶ Chapter 3.10 - Recordkeeping
- ▶ Chapter 3.11 - Food Processing Plants
- ▶ Chapter 3.12 - Retail Food Establishments
- ▶ Chapter 3.13 - Enforcement
- ▶ Chapter 3.14 - Prohibited Practices

Chapter 3 -
General Provisions

56

Licensing Classes

Classes are based on location of sale, the customer and the risk level of the product being sold

- ▶ **Class 1** = sales from tribal member to tribal member, on reservation
- ▶ **Class 2** = sales to tribal institutions and programs
- ▶ **Class 3** = retail sales, on and off reservations, to both tribal and non-tribal members
- ▶ *All commercial harvesters must comply with applicable Off-Reservation Conservation Code requirements regarding records of commercial transactions*

Class 1 meat vendor license is required to sell cuts of meat.

Class 1 fish vendor license is required to sell fresh fish filets.

These licenses allow for the processing of meat or fish in facilities which are not licensed as food processing plants (home kitchens), an inspection of the facilities and a licensing fee may apply.

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Foundations of the Model Food Code

- ▶ 3.01 Zhawenindiwag; Respect for Traditional Foods and Consumers:
 - ▶ All foods are to be handled in a respectful manner and in order to prevent adulteration
 - ▶ All foods sold or donated must be amenable* foods
 - ▶ No adulterated food may be donated or sold

*Amenable - food that may be sold or donated to institutions or individuals

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Labeling - General

- ▶ **3.02 Debwenin: Truth in Labeling:**
 - ▶ All foods must be labeled in a truthful manner, not misleading
 - ▶ Information on label must be in a readable format
 - ▶ Letters and numbers must be a minimum of 1/16th of an inch
- ▶ **Wild rice** (manoomin), **maple syrup** (zhiwaagamizigan), **fish** (giigoohn), and **mushrooms** (waghashkwedoons) have special labeling requirements.
- ▶ *Meat has additional inspection labeling requirements

Terminology:

- ▶ **Principal Display Panel (PDP)** - the part of the food label most likely to be displayed to the customer when the product is offered for sale
- ▶ **Information Fact Panel (IFP)** - a label with required information that appears on a location on the product other than the front of the product

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Labeling Standards - Specialized

Food processed outside of a License Food Processing Plant:

- ▶ Most Low-Risk Food licenses, Class 1 meat/fish license
- ▶ Including foods prepared, processed, or packaged
- ▶ If ingredients contain an allergen, it must be listed
- ▶ Must include, in 12-point font

"Processed and packaged in a home facility"

Meat:

- ▶ Inspected meat requires an inspection legend
- ▶ Legends will be developed by tribes during the implementation process

Photo Credit: South Dakota Animal Industry Board

60

Labeling Standards - Additional

- ▶ If an allergen is present, it must be clearly stated on the label
- ▶ In the ingredient list [Example: Walleye (fish)] OR
- ▶ As a "Contains:" Statement

The Big-8

Milk	Eggs	Fish	Crustacean Shellfish
Tree Nuts	Peanuts	Wheat	Soy

Photo Credit: University of Nebraska-Lincoln

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Food Additives

- ▶ Ingredients or additives must be listed by weight from largest to smallest
- ▶ Any ingredients or items added to food must be declared
 - ▶ including water, vegetables, or salt
 - ▶ includes items such as garlic powder
- ▶ Only food safe colors and preservatives may be used
 - ▶ Must include declaration of purpose
 - ▶ Example: Red #40 (coloring)
 - ▶ Packaging must be made of food safe materials

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Personnel, Training, and Records

- ▶ Each person engaged in processing, packaging, or holding of food for donation or sale should:
 - ▶ Should be trained for the duties they are assigned and food safety
 - ▶ Must maintain good personal hygiene
 - ▶ Be free of contagious disease
 - ▶ Clothing should be cleanable or single use and adhere to food contact surface standards and SSOPs
 - ▶ Records of staff training should be maintained in accordance with recordkeeping regulations (Sec. 3.10)

*Mushroom harvesters must complete training on mushroom identification and harvesting and maintain records of this training

63

Food Transportation and Storage

- ▶ Food should be transported and stored in a manner to protect it from contamination and deterioration:
 - ▶ Made of food grade material
 - ▶ Cleanable or single use
 - ▶ Clean and sanitary prior to use
 - ▶ Prior to use with another food, containers, or vehicle or food trailer must be cleaned and sanitized to prevent cross contamination
 - ▶ E.g. fish boxes should be cleaned and sanitized before holding fresh fruit
- ▶ Food storage areas should be cleaned regularly

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Transportation Temperature Controlled Food

- ▶ Time and Temperature Control for Safety (TCS) foods are foods where bacteria grow more readily. Strict control of temperature or reduction of time foods are in the danger zone.
- ▶ When Transporting or Storing TCS Foods:
 - ▶ Temperature should be:
 - ▶ at or below 45°F
 - OR
 - ▶ at or above 140°F (unless exempt)
 - ▶ Adequately monitor temperature
 - ▶ Monitoring creates records which should be kept in accordance with Record Keeping Ch. 3.10
 - ▶ Meats must be continuously cooled
 - ▶ Must be loaded in a manner that allows proper refrigerated air circulation

Cooler Temperature Log

Vehicle Number	Product Name	Temperature (°F)	Time	Initials
12345	Chicken	40	10:00	ABC
12345	Chicken	40	11:00	ABC
12345	Chicken	40	12:00	ABC
12345	Chicken	40	13:00	ABC
12345	Chicken	40	14:00	ABC
12345	Chicken	40	15:00	ABC
12345	Chicken	40	16:00	ABC
12345	Chicken	40	17:00	ABC
12345	Chicken	40	18:00	ABC
12345	Chicken	40	19:00	ABC
12345	Chicken	40	20:00	ABC

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Equipment and Utensils

- ▶ All equipment and utensils should be:
 - ▶ Designed to be cleanable and to be sanitized according to SSOP, HACCP plans, or Harvest Safety Plans, as applicable
 - ▶ Made of food safe or food grade material
 - ▶ All storage equipment for tools must not create adulteration or unsanitary conditions
- ▶ Receptacles used for storing inedible material cannot be used for storing edible product and must be conspicuous marked with intended use i.e. "Trash"
- ▶ Instruments used to measure, regulate, or record critical controls must be:
 - ▶ Accurate and precise (in most instances, calibrated before use)
 - ▶ Maintained in working order
 - ▶ Appropriate quantity for designated uses (i.e. enough recording thermometers to record temperature at each fish smoker)

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Standard Sanitation Operating Procedures (SSOPs)

- ▶ Required for:
 - ▶ Food Processing Plants
 - ▶ Retail Food Establishments
 - ▶ Facilities used by Class 1 Meat Processors
 - ▶ Facilities used by Class 1 Fish Processors
- ▶ The SSOP should specify how the establishment will meet required sanitation conditions and practices
- ▶ Records document sanitation monitoring and corrections
- ▶ Shall be signed and dated by the person with overall authority for the facility

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Recordkeeping

Record Types	Duration
Sanitation Records	6 months
Refrigerated meat, fish, and other HACCP required product records	1 year
Frozen, shelf-stable, or preserved meat, fish, and other HACCP required product	2 years
Equipment records or scientific study based process records	2 years
Training records of all workers (paid, unpaid, permanent, and temporary personnel)	3 years
Tribally Licensed facilities: Harvester education or training records and harvester processing records	3 years

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Record Locations

- ▶ For seasonal facilities, records may be located in a reasonably accessible location at the end of the season
 - ▶ Records must be returned to the facility within 24 hours, if requested
- ▶ Records may be kept electronically if appropriate controls are implemented to ensure the integrity of the data and signatures
- ▶ **All records and plans required by Model Food Code Chapter 3.10 [Recordkeeping] must be available, at reasonable times, for official review and copying by the tribal licensing authority**

69

Food Processing Plant - Summary

Chapter 3.11

- ▶ Must be licensed and registered
 - ▶ Licensing requires an inspection and certification
 - ▶ Annual inspection
- ▶ Compliance with standards on the following required:
 - ▶ Water quality and plumbing (complies with CFR 141)
 - ▶ Construction and sanitary design
 - ▶ Toilet facilities for personnel
 - ▶ Controlled access and pest exclusion
 - ▶ Waste disposal

Covered in the Food Manager and Regulator training



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Retail Food Establishments

- ▶ Chapter 3.13
- ▶ Retail food establishments are required for entities selling class 3 foods (sales to non-Anishinaabeg)
 - ▶ [Covered in the Food Manager and Regulator training](#)

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Licensing and Enforcement

- ▶ The following operations require licensing with the tribal licensing authority:
 - ▶ Food processing plant
 - ▶ Retail food establishment
 - ▶ Class 1 Meat vendor
 - ▶ Class 1 Fish vendor
 - ▶ Produce packer
 - ▶ Low risk food vendor
- ▶ Type of enforcement actions:
 - ▶ Penalties
 - ▶ Suspension of license
 - ▶ Revocation of license
- ▶ Examples of reasons for enforcement actions:
 - ▶ Evidence of serious health or safety threat
 - ▶ Reasonable grounds to suspect food is adulterated
 - ▶ Non-compliance with regulations
 - ▶ Failure to pass inspection

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“ Let’s take a short break! ”

K.

73

Traditional Foods Harvest to Kitchen

OBJECTIVES:

- Review processing and labeling requirements for:
 - Low Risk Foods
 - Fish
 - Venison
 - Turkey

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Summary of Standards for Traditional Foods and Processing

The following applies to All Licensing Classes & All Foods:

- ▶ All food contact surface should be made of only food grade materials
 - ▶ This includes food packaging material, utensils, equipment, etc.
- ▶ All food contact surfaces should be cleaned and sanitary prior to use and cleaned and sanitized as needed
 - ▶ Single use, disposable items should arrive clean and sanitary prior to use and do not need cleaning and cannot be reused
- ▶ Clothes should be made of cleanable material or single use and should be cleaned prior to use and as needed
- ▶ Good personal hygiene and frequent hand washing is required
- ▶ All water used in food or on food contact surfaces should be potable
- ▶ Persons handling or packing food should be free of contagious disease

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Model Food Codes for Treaty-Harvested Foods

In recognition of the Tribes' civil regulatory authority, the Model Food Code requires varying degrees of regulation per class

- ▶ Class 1 = sales from tribal member to tribal member, on reservation (minimal regulation; limited to lower risk products)
- ▶ Class 2 = sales to tribal institutions and programs (more involved regulation; includes products that involve a higher degree of risk)
- ▶ Class 3 = retail sales, on and off reservations, to both tribal and non-tribal members (most regulated; for products that must be carefully produced to remain safe)

Labeling standards vary depending on the class of the food

76

State/Federal Food Safety Standards

State/Federal Standard	Every-day meaning
Adulteration	Food needs to be clean, wholesome & safe
Misbranding	Food label needs to be accurate
Food Processing Plants	Food needs to be prepared in a facility that is safe, sanitary and secure
Meat Inspection (not applicable for fish)	Food from animals needs to be checked for potential disease or spoilage to make sure its safe for human consumption
Preservatives, artificial colors, food additives	Food processors can only use certain additives to foods and they must be safe

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Fish:

- Adikameg (Whitefish)
- Ogaa (Walleye)

OBJECTIVES:

- CONTAMINANT INFORMATION
 - Harvester
 - Food Processor/Handler
- PROCESSING REQUIREMENTS
- MODEL FOOD CODE CHAPTER SUMMARY

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Overview of Harvester Responsibilities

- ▶ For off-reservation, inland harvesting, use GLIFWC website for information on fish harvesting regulations
- ▶ Tribal codes address commercial harvesting in Lake Superior
- ▶ Hazards from water to freezer
- ▶ Hazards in the Food Facility and Kitchen

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Food Safety Considerations

- ▶ **Biological**
 - ▶ Bacteria (*E. Coli*, *Listeria*, *Salmonella*)
 - ▶ Parasites
- ▶ **Chemical**
 - ▶ Ogaag:
 - ▶ Mercury
 - ▶ Adikameg:
 - ▶ Low in chemical contaminants
- ▶ **Physical**
 - ▶ Low likelihood of physical hazards from harvest to processor

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Biological Contaminants - Location Selection



City Dams nearly 10 million gallons of sewage into bay
By the Associated Press
A large reservoir in the city of Seattle, Washington, is shown in this photo. The reservoir is a large body of water that is used for drinking water. It is located in the city of Seattle, Washington. The reservoir is surrounded by a concrete structure that is used to control the flow of water. The water in the reservoir is clear and blue. The sky is blue and there are some clouds. The photo was taken from a high angle, looking down at the reservoir.

- ▶ Bacteria is found in the water and the body of fish
- ▶ During large water events, the amount of bacteria can increase

Risk Reduction:

- ▶ Check with tribal and state natural resource departments about areas closed to fishing
- ▶ Consider the impact of flooding or other water related natural
- ▶ Always use potable water for processing, handwashing, etc.

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Food Safety – Bacterial Pathogens

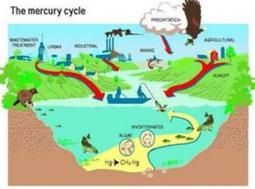
Reduce Risk

- ▶ Cool rapidly and keep cool (below 38°F)
- ▶ Potable water must be used for processing and any ice used for cooling must be made of potable water
- ▶ Treat ice as food
- ▶ Gut, process, and handle using clean and sanitized surface, equipment, and hands
- ▶ Transport at or below 38°F



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Chemical Contaminant - Methylmercury



Mercury (Walleye)

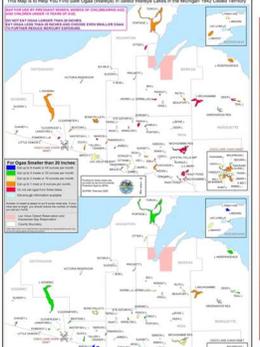
- ▶ Fish consumption is the primary route of exposure
- ▶ Can pass from mother to fetus
- ▶ Can impair neurodevelopment in children
- ▶ In adults, impacts the central nervous system and cardiovascular health

Possible Sources:

- ▶ Mining and metals processing
- ▶ Burning of fossil fuels
- ▶ Forest Fires and volcanoes

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Chemical: Methylmercury



Inland Lakes:

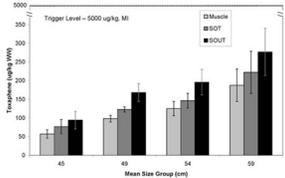
- ▶ Since 1989, GLIFWC has tested nearly 9,000 walleye from inland waters for mercury
- ▶ Annual testing provides information on mercury concentration walleye from inland Ceded Territory lakes

Consuming Fish:

- ▶ Found in the muscle or meat of the fish
- ▶ Cannot be removed by cooking or trimming fat
- ▶ Body of water, fish species, and fish age and size can impact mercury exposure
- ▶ Walleye are large, long-lived, and sit high on the food chain

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Adikameg Chemical Contaminants



Trigger Level = 5000 ug/kg, Ml

- ▶ Studies performed on Great Lakes Whitefish have shown it to be low in contaminants of concern:
 - ▶ Polychlorinated Biphenyls (PCBs)
 - ▶ Dioxin
 - ▶ Toxaphene
- ▶ Trimming fat can reduce but not eliminate these particular contaminants

Food Safety Considerations Harvest to Kitchen



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Fish & Food Safety - Snapshot

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Fish is a TCS Food (Time and Temperature Control for Safety)

- ▶ Biological
 - ▶ Botulism for Reduced Oxygen Packaging
 - ▶ Bacteria
 - ▶ Parasites & Viruses
- ▶ Physical
 - ▶ Metal
- ▶ Chemical
 - ▶ Allergens (industry and labeling)
 - ▶ Methylmercury



Keweenaw Bay Tribal Judge by day, fish processor by night Brad Dakota fillets a lean lake trout. Brother and Tribal Police Chief Dale Dakota shares responsibility at their fish shop near L'Anse, Michigan.

Food Safety – Botulism *Clostridium botulinum*

87

- ▶ Creates a spore which can survive both cooking and freezing
- ▶ Spores can release a powerful neurotoxin
- ▶ A LITTLE CAN BE LETHAL TO ALL AGES
- ▶ A concern when fish is stored in environments without air (e.g. vacuum packed)

Reduce Risk

- ▶ Vacuum Packed Frozen:
 - ▶ Reduce the time that the product is subject to temperature abuse during transportation, storage and processing
 - ▶ These products must be labeled with safe handling instructions →



MAINTAIN FISH OIL
Food Name: Filet
KEEP FROZEN UNTIL USED; CUT PACKAGE AND THAW UNDER REFRIGERATION OR WHILE THAWING UNDER COOL RUNNING WATER

KEEP FROZEN UNTIL USED; CUT PACKAGE AND THAW UNDER REFRIGERATION OR WHILE THAWING UNDER COOL RUNNING WATER.

Food Safety – About *E. Coli*

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Reduce Risk

- ▶ Cool rapidly and keep cool (below 38°F)
- ▶ Check fish when receiving, fish should be completely surrounded by ice. If using another form of cooling, internal temperature should be 38°F or below
- ▶ Fish should look healthy and fresh
- ▶ Keep processing times short
- ▶ Reduce opportunities for cross contamination



HACCP Plan in place

- ▶ HACCP Plan includes the concepts for Food Handlers and Consumers but on a larger, more formal scale

Food Safety- Parasites, Viruses, & Physical Hazards

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General

- ▶ Naturally occurring in the fish and water
- ▶ Both need a living host to survive

Food Handler or Consumer

- ▶ Keeping fish 38°F or lower
- ▶ Prevent cross contamination
- ▶ Cook thoroughly to internal temp of 145°F
 - ▶ If smoking, opt for hot smoking and bring the internal temperature of the fish to 145°F for 30 full minutes

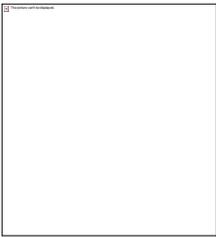
Physical Concerns

- ▶ Metal inclusion
 - ▶ Rare, but can happen, risk may depend on harvest tool or previous experience



Fish and the Model Food Code

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All Licensing Class Processing

- ▶ Appropriate quality control must be used:
 - ▶ Examples:
 - ▶ Time and Temperature control: refrigeration or freezing (below 40°F)
 - ▶ Cross contamination prevention: SSOP
 - ▶ Food safe materials: food safe plastics, stainless steel
 - ▶ Sanitation control: good hygiene, clean, and sanitary surfaces
 - ▶ Using potable water for processing fish, ice, cleaning hands, and other surfaces
 - ▶ Packaging materials must be food safe, kept clean and dry prior to using
 - ▶ SSOPs in place for the processing facility
 - ▶ HACCP to manage risks associated with the products being produced

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Prior to Processing Fresh Fish

- ▶ To be processed for sale, (evisceration/gutting is not considered processing) fish must be:
 - ▶ Fresh and wholesome
 - ▶ Proof that the fish was held at or below 38°F (ambient or internal temperature)
 - ▶ Transportation records (i.e. recording thermometer records, temperature check records, etc.)
 - ▶ Fish is completely surrounded by ice
 - ▶ Chemical cooling media (i.e. ice blocks) remain frozen and the product's internal temperature at delivery is 38°F or below
 - ▶ Delivered refrigerated with transit time of 4 hours or less, transportation records, and the product's internal temperature at deliver is 38°F or below

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Prior to Processing Fresh Fish continued

- ▶ Proof of legal harvest
 - ▶ All fish received by a food facility or Class 1 processor must be accompanied by proof of legal harvest
 - ▶ Records of the proof of harvest must be maintained in accordance with Chapter 3
- ▶ All fish, sold or donated, must be accompanied by a Harvester Certificate of Guarantee. To include:
 - ▶ Waterbody(ies) of harvest
- ▶ **The following inland fish cannot be sold or donated:** Inland fish harvested from lakes which are labeled on GULFWC Mercury maps as "Do Not Eat" for pregnant women, children, and women childbearing age



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Class 1 Regulations

- ▶ Sales to tribal members only, on reservation
 - Fresh filets only**
 - ▶ Must be stored in a refrigerated container at or below 38° F or in contact with ice
 - ▶ Containers holding fish must be sanitary
 - ▶ Allergen label required

Can be processed outside of a tribally licensed food processing plant in a facility such as a home kitchen.



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Class 2 Regulations

- ▶ Sales to tribal programs
 - Fresh and frozen fish only (whole, gutted, or filets)**
 - ▶ Labeling for Class 2 & Class 3 apply
 - ▶ Standard labeling (identity of food, net contents, nutrition facts, etc.)

Must be processed in a tribally licensed food processing plant

Fisherman finds street corner success

... (text) ...



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Class 3 Regulations

- ▶ Retail sales to anyone, anywhere
 - Fresh, frozen vacuum packed, smoked, and roe**
 - ▶ Same food safety standards as Class 1 & 2, plus additional safety requirements for specialty products
 - ▶ Class 2 and 3 Labeling applies

Processed in a tribally licensed food processing plant (facility requirements and HACCP apply)

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Class 3: Smoked Fish Products

- ▶ All fish intended for smoking must be eviscerated in a food safe manner
- ▶ Brining and pickling loads are single species and similarly sized (liquid must be changed as frequently as necessary to reduce harmful microbial load)

Hot smoking fish:

- ▶ During process:
 - ▶ Fish internal temperature must be maintained **at or above 145°F for a minimum of 30 minutes**
 - ▶ Smoked fish products which are cooked should be rapidly cooled:
 - ▶ Example:
 - ▶ Less than 70°F within 2 hours
 - ▶ Cool to less than 41°F in 48 hours
 - ▶ Refrigerated smoked fish products must have a minimum of **3.5% water phase salt** content or a minimum of **100 ppm nitrate and 3% water phase salt** content

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Class 3: Smoked Fish Standards, cont.

Packaging

- ▶ Refrigerated smoked fish product packaged in reduced oxygen packaging (e.g. vacuum sealing) must have a minimum of 3.5% wps (water phase salt)
- ▶ Otherwise, smoked fish is contained in air permeable membranes (i.e. film or butcher paper wrapped) and must have a minimum of 5% wps

Labeling

- ▶ Smoked fish must be labeled with handling instructions: "PERISHABLE" and/or "KEEP REFRIGERATED AT 38° F (3.33° C) OR LESS."
- ▶ If additives are used (nitrites), they must be included in the ingredient list, along with its function (preservative)
- ▶ Allergen labeling required for fish products

[For information on fish egg products please see Chapter 6.04 of the Model Food Code.](#)

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Class 3 Only: Fish Egg Products

- ▶ Refrigerated or frozen fish egg products
 - ▶ After skeins are removed, salt must be added to produce a ratio of 1 pound salt to 33 pounds of roe
 - ▶ Only use canning salt (other forms of salt contain anti-caking chemicals which produce a bad flavor)
 - ▶ Strict refrigeration control is necessary (most roe products are kept frozen for export to European nations)
 - ▶ Labeled with handling instructions and allergen statement

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Labeling: Fish Products

<p><u>Class 1 Fish Products</u></p> <ul style="list-style-type: none"> ▶ If processed outside of a food processing plant, must be labeled "PROCESSED AND PACKAGED IN A HOME FACILITY" <p><u>Labeling requirement:</u></p> <ul style="list-style-type: none"> ▶ Allergen name (Fish), along with the name of the food source (i.e. walleye) is included on the label: <ul style="list-style-type: none"> ▶ In the ingredient list OR ▶ "Contains:" Statement 	<p><u>Class 2 & 3 Fish Products</u></p> <ul style="list-style-type: none"> ▶ Standard labeling requirement (similar to federal labeling) ▶ Handling instructions ▶ Allergen name (Fish), along with the name of the food source (i.e. walleye) is included on the label: <ul style="list-style-type: none"> ▶ In the ingredient list OR ▶ "Contains:" Statement
--	---

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Let's take a short break!

IF YOU HAVE QUESTIONS FEEL FREE TO UNMUTE AND ASK.

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Meat:

Venison
Wild Turkey

OBJECTIVES:

- MODEL FOOD CODE CHAPTER SUMMARY
- CONTAMINANT INFORMATION
- PROCESSING REQUIREMENTS

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Food Processing & LCO v. Wisconsin

- ▶ In the 1980s, the parties the *Lac Courte Oreilles v. Wisconsin* (Voigt) case made agreements or stipulations on many issues
- ▶ Commercial sale of venison agreement
 - ▶ The Tribes agreed to hold off on selling any processed venison products (i.e. any cuts of venison, ground venison, venison jerky, etc.) until they created a food regulatory system similar to state and federal models
 - ▶ The Tribes also agreed to give the state notice and provide a copy of their regulations to the federal court
- ▶ Currently, the only opportunity for tribal members to sell venison is by selling a whole carcass



For more information about this, please join us for our Food Manager and Regulator trainings

104

State/Federal Food Safety Standards

State/Federal Standard	Every-day meaning
Adulteration	Food needs to be clean, wholesome & safe
Misbranding	Food label needs to be accurate
Food Processing Plants	Food needs to be prepared in a facility that is safe, sanitary and secure
Meat Inspection (not applicable for fish)	Food from animals needs to be checked for potential disease or spoilage to make sure its safe for human consumption
Preservatives, artificial colors, food additives	Food processors can only use certain additives to foods and they must be safe

105

Meat - General

- ▶ Meats are a TCS food
 - ▶ Animals carry in their intestinal tract and on their fur or feathers, bacteria which could make consumers sick if not controlled
- ▶ Like fish, meat requires more care and regulation due to the higher risk nature of meat
- ▶ Terms:
 - ▶ **Game Animal** - individual of a wildlife species of animal used by the Anishinaabe for food that has not been raised domestically

*All references to meat, animal, or game animal in this section specifically refer to wild, undomesticated animals

106

Harvesting Under the Model Food Code

- ▶ Harvesters must comply with applicable tribal conservation codes including tagging and registering
- ▶ Ambient air temperature must be **41°F or below** when the animal is slaughtered
- ▶ Only non-toxic ammunition may be used
- ▶ Only small game may be harvested with projectile shot (pellets)
 - ▶ Pellet sizes may be smaller than size 6

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Harvesting Documentation

- ▶ All harvested game animals, including wild poultry, should include assurances in writing that:
 - ▶ The animal was healthy when harvested
 - ▶ Was field dressed using clean clothes and cleanable equipment
 - ▶ Transported and stored in accordance with Transportation and Storage regulation (Sec. 3.06)
- ▶ Harvesters will need to successfully complete field-dressing education or equivalent training approved by the regulating tribe. Training number will need to be indicated on form Class 2 & Class 3
 - ▶ Inspected within 24 hours of kill
 - ▶ Documentation must be provided to a tribally-certified meat inspector regarding the measures taken during and after field-dressing

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Harvester Certificate of Guarantee

- ▶ Harvester Certificate of Guarantee includes:
 - ▶ Harvest/Carcass tag number (or equivalent information)
 - ▶ Date, time, and location of harvest
 - ▶ Ambient air temperature information at the location and time of harvest
 - ▶ Manner of kill (i.e. "killed by gunshot wound to the upper right shoulder")
 - ▶ Type of ammunition or killing instrument

HARVESTER CERTIFICATE OF GUARANTEE (VENISON)

Commercial Tag No. _____
 Tribal Disease Management Area Tag No. _____
Only applicable to other harvesters in Tribal Disease Management Area
 Name of the Tribal Member Harvester _____
 NAGFA ID No. _____

Pre-harvest Inspection Information Required
 Approved for Class 2 and 3 (Date Only) _____
 Conditions and behavior of animal at time of harvest _____
(Overall condition of the animal, especially the head, eyes, legs and body; animal, or describe)

Aliveness, mobility and breathing (normal, or describe) _____

Presence of any unusual swelling, signs of injury or other abnormalities? (Yes or describe) _____

Displaying any abnormal behavior? If so, describe _____

Normal post, normal grazing activity, alert to danger (yes/no) (circle one) _____

Alive, when harvested (yes/no) (circle one) _____

Unable to walk due to broken appendages, severed tendons or ligaments, severe paralysis or fractured spine (circle as applicable) _____

Time of Kill Information
 Required for All Classes of Sale
 Date: _____
 Time: _____
 (MST) _____
 Air temp _____
 Moisture (chilling) _____
 Barometric _____
 Conditions _____

Signature of Harvester _____
 Title _____
 Type of shot used (if applicable) _____
Signature date is required

I was harvested within a Tribal Disease Management Area for Chronic Wasting Disease (CWD) or Bovine Spongiform Encephalitis (BSE).

109

Class 1 Regulations

Sales to tribal members only, on reservation
Fresh and frozen cuts of meat only

- ▶ Can be processed in a non-licensed facility such as a home kitchen or shed
- ▶ Must have a valid Class 1 meat vendor license
- ▶ Annual inspection is required



Photo Credit: The News-Gazette

110

Class 2 Regulations

Sales to tribal programs such as Head Start and Elderly
 Nutrition Programs
Limited to cuts of meat or ground meat which are fresh or frozen

- ▶ All butchering is done in a tribally licensed food processing facility
- ▶ Standard labeling requirements apply (i.e. nutrition content, weight of package, facility name & address, etc.)



111

Class 3 Regulations

Retail sales both on and off reservation, to anyone
Fresh/frozen cuts of meat/ground meat and dried meat products (jerky)

- ▶ All butchering/packaging is done in a tribally licensed food facility
- ▶ Standard labeling requirements apply (i.e. nutrition content, weight of package, facility name & address, etc.)



Photo Credit: The National Poultry Processor

112

Harvester to Processing in a Food Plant

Class 2 & 3:

- ▶ No animal carcass enters the food processing plant until it has passed inspection
- ▶ Harvester must document steps taken to protect carcass from contamination and continuously cool it
- ▶ The harvester must be present documentation (Harvester Certificate of Guarantee) and the carcass for inspection
- ▶ Inspection must take place within 24 hours of the kill
 - ▶ A tribally-certified meat inspector can reject carcass or request a second inspection by a licensed veterinarian
- ▶ Food Processing Plant must keep on file the Harvester Certificate of Guarantee and accompanying documents for each carcass it accepts

113

Tribal Disease Management Areas

- ▶ Harvests from a Tribal Disease Management Area are presumed be diseased must undergo a post-mortem inspection with 24 hours of harvest
 - ▶ Transport carcass to Tribal Natural Resource department or designee for sample collection
- ▶ Until results of testing are provided, the carcass must be stored in compliance with Transportation and Storage regulation (Sec. 3.06), below 38°F, without contacting other carcasses or food and records kept.
- ▶ Test Results:



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Tribal Disease Management Areas continued

- ▶ Until results of testing are provided, the carcass must be stored in compliance with Transportation and Storage regulation (Sec. 3.06), below 38°F, without contacting other carcasses or food and records kept
- ▶ Test Results:
 - ▶ No detectable disease = carcass may be released to food processing facility or may be processed by a Class 1 Meat vendor
 - ▶ Disease detected = carcass is condemned and may not be used for human consumption



116

Food Safety for Venison & Turkey-Harvester

- ▶ **Biological concerns:**
 - Venison**
 - ▶ Chronic Wasting Disease (CWD)
 - ▶ Bovine Tuberculosis (bTB)
 - Turkey**
 - ▶ West Nile Virus
 - Both**
 - ▶ Bacteria: E. Coli, Salmonella, Listeria
- ▶ **Chemical**
 - ▶ Lead
- ▶ **Physical**
 - ▶ Bullet fragments




117

Before the Hunt (Ceded Territory)

- ▶ Read through relevant hunting regulations at <https://data.glifwc.org/regulations/>
- ▶ GLIFWC Wardens are available to answer your questions



Hunter must:

- ▶ Complete Hunter's Education & Firearm Safety
 - ▶ Unless born before January 1, 1977
 - ▶ Or have completed an Armed Forces basic training
 - ▶ Or hunt with a qualified mentor
 - ▶ <http://data.glifwc.org/archive.bio/hunter.safety.mentor.hunter.summary.2020-04-03.pdf>
- ▶ Contact tribal registration station for updates and to obtain required permits

118

Protecting Hunter's Health

- ▶ Tick and mosquito-borne diseases carry the risk of serious infection
 - ▶ Wear long sleeves and pants
 - ▶ If possible, wear tick and mosquito repellants and apply according to manufacturer's instructions
 - ▶ Perform daily tick checks following time in the woods



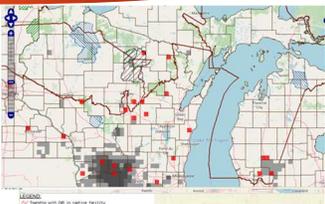


Photo Credit: Cleveland Clinic
Photo Credit: Bug Connection.com
Photo Credit: Natural Department of Conservation

119

Deer Related Disease - CWD

- ▶ Chronic Wasting Disease (CWD)
 - ▶ A protein based disease which infects deer, moose, and elk
 - ▶ Unknown risk to humans
 - ▶ There is no cure
 - ▶ The disease is always fatal to deer
 - ▶ May be transmitted through many different vectors (i.e. urine, feces, carcasses and potentially other animals, vegetation, and tools)



CWD has been found in MI, WI, and MN

data.glifwc.org/cwd

120

Deer Related Diseases - bTB

- ▶ Bovine Tuberculosis
 - ▶ According to the CDC, bTB represents about 2% of tuberculosis cases annually or about 130 people!
 - ▶ Can be passed from cattle to deer
 - ▶ Can transmit to humans through bodily fluid contact & inhaling bacteria exhaled from infected lungs!
 - ▶ Monitored by state natural resource departments and GLIFWC



1 Centers for Disease Control "Table 18 Reported Tuberculosis 2018" September 2019. (see handout)

121

Deer Disease Monitoring in the Ceded Territories

- ▶ **CWD and Bovine Tuberculosis**
- ▶ GLIFWC Biological Services Division is engaged on efforts to monitor the spread of these diseases in the Ceded Territories, in conjunction with tribal, state, and federal partners
- ▶ The Voigt Intertribal Task Force and Tribes have processes in place to manage wildlife diseases (Tribal Wildlife Disease and Invasive Species Management Areas) within the Wisconsin portion of the 1837 and 1842 Ceded Territories

Chronic wasting disease taking hold in Wisconsin Ceded Territory
Captive deer rules fail to halt spread

By Tom Iversen for the Wisconsin State Journal

WISCONSIN DEER HUNTERS ARE BEING WARNED that chronic wasting disease (CWD) is spreading in the state's ceded territories, and that captive deer rules are failing to stop the disease's spread.

The Wisconsin Department of Natural Resources (DNR) says it has found CWD in several captive deer in the ceded territories, which are areas of land that were ceded to the state by the federal government in the 1830s and 1840s.

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122

Parasite - *Toxoplasma gondii*

- ▶ Common parasite found in mammals and contaminated water throughout US
- ▶ Persons infected may not show signs of illness
- ▶ Venison = top 3 sources of *T. gondii* in food (CDC) as deer may show no signs of infection or disease
- ▶ Use hygienic practices during field dressing and processing to reduce the risk of cross-contamination with cooking being the best known way to reduce risk to consumer
 - ▶ Whole cuts: minimum 145°F and rested for several minutes
 - ▶ Ground meat: minimum internal 160°F



123

Protecting Consumer Health

- ▶ Chronic Wasting Disease
 - ▶ Refrain from harvesting deer that exhibit strange characteristics (abnormally thin, irregular gait, etc.)
 - ▶ Have harvest tested for deer harvested in CWD Management Areas
- ▶ Bovine Tuberculosis
 - ▶ Check for signs of tuberculosis when harvesting in bTB Management Areas
 - ▶ Signs of disease include white spots on the lung and/or lung cavity

Clean and sanitize all surfaces and equipment

Deer that test positive for CWD or bTB CANNOT BE SOLD OR DONATED



Photo Credit: Michigan DNR

124

Protecting Hunter's Health-Field Dressing

When Field Dressing:

- ▶ Wear gloves when field dressing **any animal** and change as needed
- ▶ For **Bovine Tuberculosis** (in areas where TB is present)
 - ▶ Cover nose and mouth with breathing mask when working with the lungs, throat, and mouth of deer
 - ▶ Inspect lungs for signs of disease, retain a tissue sample of lungs which appear diseased for testing

After Field Dressing:

- ▶ Wash hands, especially before eating or drinking
- ▶ For **Chronic Wasting Disease** (CWD) have deer tested
- ▶ Decontaminate all equipment between harvests (50% bleach/water solution for 5 min. is an effective decontaminant)



125

Protecting Hunter's Health - West Nile Virus

- ▶ Mosquito disease which can infect both birds and humans. Needs blood to blood transmission
- ▶ Limited incidences of West Nile Virus have been seen in turkey
- ▶ Harvesters should:
 - ▶ Wearing gloves when handling turkey can reduce likelihood of transmission
 - ▶ Examine harvest for signs of disease

Animals exhibiting signs of disease cannot be sold or donated under the model food code



Comparison of breast meat of grouse suffering from west Nile virus (left) and healthy grouse breast meat (right). Photo credit: Milwaukee Journal Sentinel

126

General Bacterial Hazards

- ▶ Animals carry a variety of bacterial in their intestines which, if allowed to grow, could cause illness and disease
- ▶ Most Likely:
 - ▶ *E. Coli* - Both Venison and Turkey
 - ▶ *Salmonella* - Turkey
 - ▶ *Listeria* - Turkey
- ▶ Incidences of reported foodborne illness related to these foods is very low

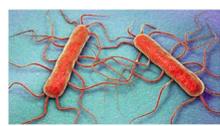


Photo Credit: BigCoke

127

Food Safety – Bacteria in the Field

- ▶ Harvesters
 - ▶ Process harvest in clean, sanitary environment
 - ▶ Process with clean, sanitized equipment
 - ▶ Avoid nicking the intestines or allowing fecal matter to come into contact with meat
- ▶ Process and cool carcass quickly:
 - ▶ Example:
 - ▶ Less than 70°F within **2 hours**
 - ▶ Cool to less than 41°F in 48 hours

Continuous cooling is required

Optional Techniques:

- ▶ Shot placement
- ▶ Bung tying
- ▶ Antimicrobial rinse



Photo Credit: S. H. N. S. N.

128

Keeping Turkey Safe

- ▶ Turkey is naturally low in heavy metals
- ▶ 2019 study conducted by GLIFWC found that ammunition pellet size and metal type can impact the amount of lead in found in harvested turkey breast meat
- ▶ The following lead shot increased lead content of the breast meat in the study:
 - ▶ No. 6
 - ▶ No. 8
- ▶ Pellet size must be larger than size 6

Shot Size Graphic

Lead shot size:	12	9	8	7 1/2	6	5	4	3	2	1
Pellet diameter (inches)	0.5	0.45	0.4	0.35	0.3	0.25	0.2	0.15	0.1	0.075
Pellet diameter (mm)	12.7	11.4	10.2	8.9	7.6	6.4	5.1	3.8	2.5	1.9

Backshot size:	No. 4	No. 3	No. 2	No. 1	No. 0	No. 00	No. 000
Pellet diameter (inches)	0.4	0.35	0.3	0.25	0.2	0.15	0.1
Pellet diameter (mm)	10.2	8.9	7.6	6.4	5.1	3.8	2.5

Shot size:	6	4	3	2	1	00	000	1
Pellet diameter (inches)	0.25	0.2	0.15	0.1	0.075	0.05	0.0375	0.025
Pellet diameter (mm)	6.4	5.1	3.8	2.5	1.9	1.3	0.95	0.64

Notes: The sizes of shot are neither exact nor equal. Shot sizes are approximate. Shot sizes are listed in inches and millimeters. Shot sizes are listed in inches and millimeters. Shot sizes are listed in inches and millimeters. Shot sizes are listed in inches and millimeters.

Photo Credit: Shot Gun World.com

129

VENISON PROCESSING CHART

Waawaashkeshi & Mizise wiyas in the Facility or Kitchen

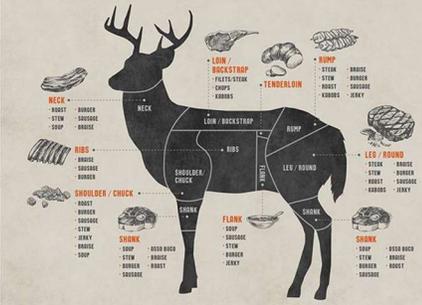


Photo Credit: Deer Processing.com

130

Reminder: Receiving Food from Harvesters

- ▶ All harvested game animals, including wild poultry must be accompanied by a complete Harvester Certificate of Guarantee, documenting
 - ▶ That the animal was healthy when harvested
 - ▶ Examined by the hunter before and after harvest
 - ▶ Was field dressed using clean clothes and cleanable equipment
 - ▶ Transported and stored in accordance with standards

Harvester Certificate of Guarantee (HCOG) Form

Harvester Name: _____

Harvester Address: _____

Harvester Phone: _____

Harvester Email: _____

Harvester License Number: _____

Harvester Signature: _____

Harvester Date: _____

Harvester State: _____

Harvester Species: _____

Harvester Sex: _____

Harvester Age: _____

Harvester Weight: _____

Harvester Length: _____

Harvester Circumference: _____

Harvester Comments: _____

Harvester Signature: _____

Harvester Date: _____

Harvester State: _____

Harvester Species: _____

Harvester Sex: _____

Harvester Age: _____

Harvester Weight: _____

Harvester Length: _____

Harvester Circumference: _____

Harvester Comments: _____

131

Food Safety

Animals exhibiting signs of disease cannot be sold or donated under the model food code

- ▶ Consumers, Food Handlers & Processors
 - ▶ Ask for:
 - ▶ Harvest location or county
 - ▶ CWD test results (required for deer from CWD Management Areas)
 - ▶ Temperature logs from transportation
 - Food code requires deer from CWD Management Areas held under refrigeration and not



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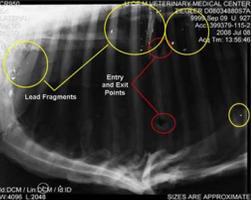
T. gondii

- ▶ **Toxoplasmosis gondii**
 - ▶ Cannot be seen with the naked eye
 - ▶ Assume all venison contains *T. gondii*
 - ▶ Prevent cross-contamination
 - ▶ All equipment and utensils should be cleaned and sanitized after use on venison
 - ▶ Consider wearing gloves to protect food handlers
 - ▶ **Cook thoroughly:**
 - ▶ Whole cuts of venison to 145°F and let rest for several minutes
 - ▶ Cook ground venison products to 160°F



Photo Credit: Cooking NY Times.com

Food Safety – Bullet Fragments & Shot Pellets 133



Bullets Fragments and Shot Pellets

- ▶ Only non-toxic (lead free) ammunition is allowed for harvesting
- ▶ Inspect meat for bullet fragments or pellets. Remove found fragments or pellets

Photo Credit: NY Department of Environmental Conservation

Food Safety – Bacteria in the Kitchen 134

- ▶ All
 - ▶ Keep meat or carcasses refrigerated or frozen until ready to use
 - ▶ Ask hunter about food safety practices
 - ▶ Use good hygiene and sanitary practices
- ▶ Processors and Food Handlers
 - ▶ Clean and sanitize equipment often
- ▶ Consumers
 - ▶ Cook meat thoroughly



Low-Risk Foods 135

OBJECTIVES:

- WHAT ARE LOW-RISK FOODS
- CONTAMINANT INFORMATION
- PROCESSING REQUIREMENTS
- MODEL FOOD CODE CHAPTER SUMMARY

Low-Risk Foods (LRF) 136

- ▶ Low-Risk Foods are foods that do not require a time and temperature control or refrigeration to remain safe

AND

- ▶ Which have been shown to not support the growth of pathogens

Chapter 8 of the Model Food Code



Photo Credit: North Wind Organic Farm

Example of Low-Risk Foods 137

- ▶ Maple Syrup
- ▶ Maple Sugar
- ▶ Wild Rice (manoomin)
- ▶ Jams and Jellies (low acid preserved foods)
- ▶ Pickles (low acid preserved foods)
- ▶ Dried fruits/teas (not including melons)
- ▶ Candy



Low-Risk Food Licensing 138

- ▶ Low-Risk Food Vendor license is required for Class 1, Class 2 & Class 3 if Low-Risk Food is produced **anywhere other than** a tribally licensed food processing plant (i.e. home kitchen)
- ▶ Licenses are:
 - ▶ Issued by the tribe
 - ▶ Annual
 - ▶ Location specific
 - ▶ Not required for the production of Class 1 manoomin or Class 1 sugar and syrup
- ▶ Obtain a license:
 - ▶ Submit an application
 - ▶ Participate in an Inspection
 - ▶ Pay any required fees

139 Categories of Low Risk Foods

Less than \$50,000* annual sales

- Outside of a tribally licensed food processing plant
 - Exempt from HACCP
- Must comply with portions of Chapter 3
- Must comply with simplified processing regulations in Chapter 8.01(3)

\$50,000* and above in annual sales

- INSIDE a tribally licensed food processing plant
 - HACCP required
- Must comply with ALL of Chapters 3, 4, and 8

*excluding any revenue from manomin or syrup/sugar sales

140 LRF General Requirements

Less than \$50,000* annual sales

- ▶ Vendors must demonstrate an understanding of the applicable food safety standards
- ▶ Foods are prepared consistent with traditionally safe methods
- ▶ Any produce used is appropriately cleaned and inspected (by vendor)
- ▶ Water must be safe to drink (potable)
- ▶ Persons preparing/packaging foods are not sick with a contagious disease

141 LRF Processing Requirements

Less than \$50,000* annual sales

Preparing and Packaging Specific:

- ▶ Wear clean, cleanable clothing and washes hands sufficiently
- ▶ Keep premises, tools, equipment clean and sanitary in compliance with traditionally safe methods
- ▶ **No animals are allowed in the workspace while in use**
- ▶ **No other domestic activities are to be conducted during use (i.e. preparing your own meal)**
- ▶ Materials used for packaging will be clean and dry prior to use if single use. Other containers should be clean and sanitized prior to use

142 Class Exercise

- ▶ Using the training manual starting on page 480:
 - ▶ **Please list in the chat the 6 portions of Chapter 3 which Low-Risk Food Vendors with annual sales less than \$50,000 must comply.**
 - ▶ 3.01 Respect for Traditional Foods and Consumers
 - ▶ 3.02 Truth in Labeling
 - ▶ 3.03 Food Additives
 - ▶ 3.05 Food Transportation and Storage
 - ▶ 3.06 Equipment and Utensils
 - ▶ 3.10 Recordkeeping

143 LRF Sale Requirements

- ▶ Low-Risk Foods must be sold from processor directly to the consumer with the exception of:
 - ▶ Maple syrup
 - ▶ Maple sugar
 - ▶ Manomin
- ▶ If sales take place off-reservation, vendors may have to comply with state law (i.e. cottage food laws), which may differ from this regulation



144 LRF Labeling Requirements

- Sec. 3.02 Truth in Labeling:
- All food, except for manomin and maple syrup/sugar, produced outside of a tribally licensed food processing plant must be labeled

“PROCESSED AND PACKAGED IN A HOME FACILITY”

- Specialized terminology and labeling is required for certain processing practices for wild rice and maple syrup

Class 2 & 3 LRF Labeling Standards 145

Statement of Identity:
Must be prominent

Artwork: should not hide or detract from label information

Signature line: with name and address of the product's manufacturer, packer or distributor

PDP panel example

Price \$ _____ Net Weight: _____ lb. _____ g.

Remember, labeling for Class 2 & 3 require additional components. Please refer back to the General Provisions for more information

Net Quantity Statement:
the amount of food in the package

Zhiwaagamizigan (Maple Syrup) 146

Zhiwaagamizigan Contaminant Overview 147

Maple syrup is a safe, low contaminant food

- ▶ Maple sap is low in chemical contamination including:
 - ▶ Heavy metals
 - ▶ Lead
- ▶ Food Safety Risks
 - ▶ Process related chemical risks:
 - ▶ Lead from food contact surfaces
 - ▶ Misuse of chemical cleaners

Maple Syrup & the Model Food Code 148

- ▶ **Maple Syrup and Sugar**
 - ▶ Syrup is defined as "liquid derived from sugar-rich tree sap, which is not less than 66 degrees brix"
 - ▶ Sugar is defined as "a solid, grainy or viscous substance derived from sugar-rich tree sap, which was boiled beyond 66 degrees Brix and stirred"
 - ▶ Sugar content of finished syrup must be measured by a properly calibrated refractometer or equivalent device, with a record made and kept by producer

Photo Credit: Cook's Maple Farm
Photo Credit: Alltoppress.com
Photo Credit: Ohio State University Extension

How to use 149

Refractometer

Video credit: Roth Sugar Bush and CDL Wisconsin

Hydrometer

Video credit: Roth Sugar Bush and CDL Wisconsin

Maple Syrup Processing Requirements 150

- ▶ Sap must be covered and care taken to avoid spoilage
- ▶ Only nontoxic defoaming/filtering agents may be used
- ▶ Equipment and facilities
 - ▶ Food contact surfaces used for syrup/sugar production must be cleaned and sanitized prior to use and
 - ▶ when there's break in boiling sap
 - OR**
 - ▶ at least every 40 days
- ▶ All producers need to employ practices to keep maple syrup products safe

Photo credit: University of Maine

151

Canning and Labeling Maple Syrup

- Jars or bottles used for packaging maple syrup must be cleaned and sanitized prior to their use
- Maple syrup may not be labeled "traditionally processed Ojibwe maple syrup" unless the syrup was produced by boiling sap over a wood-burning fire
- Reminder:** Food contact surfaces which come into contact with maple sap, syrup, or sugar should be free of lead and lead solder and resistant to corrosion.



152

Licensing Classes and Maple Syrup

- For Class 1 food:
 - Low-risk vendor license not needed
- For Class 2 and Class 3 food:
 - Low risk vendor license needed; inspection requirement
 - The final boiling and packaging of the product occurs in a tribally licensed food processing plant or premises exempt from 21 CFR 1.225. Residences are exempt



153

Manoomin

Wild Rice



154

Manoomin Food Safety - General

Manoomin is a low-risk food

- Low in heavy metals including:
 - Methylmercury
 - Lead
 - Arsenic (both organic and inorganic)
- Food safety risks:
 - Mold
 - Sand and Rocks
 - Bacteria – Bacillus Cereus -- cooked rice only



Food safety risks are effectively managed with traditional processing techniques

155

Traditional Practices for Reducing Risk

- Mold**
 - Lay rice out to dry as soon as possible
 - Dry rice efficiently, turning often throughout the day
 - Parch rice soon after drying
 - Store rice in cool, dry locations both during and after the processing
- Sand and Rocks**
 - Reasonable efforts should be made to remove or prevent sand, rocks, or other inedible materials from commingling with the rice
 - Efforts may include:**
 - Cleaning or rinsing canoe well immediately before harvesting
 - Removing sand, rocks, and debris from shoes prior to entering canoe every time you enter the canoe
 - Any items entering the canoe should be checked and cleaned of sand, rocks, and debris (i.e. dry bags, water bottles, etc.)



156

Manoomin Processing Standards

Manoomin for Sale or Donation:

- Processed in line with cultural practices of the regulating tribe, which may include machines
- Does not contain inedible materials larger than 7mm, with reasonable efforts to remove all inedible materials prior to packaging



4 quarters stacked is about 7 mm

157

Manoomin Packaging Standards

Make sure to keep packaging materials clean and dry prior to their use

Only use clean, single-use containers (i.e. plastic bags) or containers which were cleaned and sanitized prior to use (i.e. glass jars)

- ▶ Wild rice may not be labeled as "natural wild rice" or "hand-harvested wild rice" unless the contents **consist entirely of hand-harvested wild rice and contains no mechanically-harvested wild rice, or wild rice grown with the use of chemical fertilizers or herbicides**



158

Jams, Jellies and Pickles

- ▶ Are considered low risk foods if they are "acidified" fruit preserves or vegetable pickles
- ▶ The pH of the finished product needs to be measured with a pH meter or equivalent device to ensure that the **pH is 4.6 or lower**
- ▶ Producers need to make and keep a record for each batch, documenting the pH measurement
- ▶ Jars used to package need to be cleaned and sterilized



Photo Credit: The Fruit Guys

159

Questions

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Miigwetch for your time!

- Project Staff:
 - Owen Schwartz
 - Community Dietitian
 - Madelyn Wiggins
 - Community Food Project Outreach Coordinator Assistant
 - LaTisha Coffin
 - Project Coordinator
- Other Project Staff: James Thannum (Planning and Development Director), Philomena Kebec (GLIFWC Policy Analyst), and Zoongee Mayotte (Planning and Development Assistant)

More Questions or Concerns?
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lcoffin@glifwc.org




GLIFWC Chipewewa Ceded Territory Traditional Food Regulatory System Project