Information on environmental contaminants, diseases and parasites in local game
"We gather our minds together to send greetings and thanks to all the animal life in the world. They have many things to teach us as people. We are honored by them when they give up their lives so we may use their bodies as food for our people. We see them near our homes and in the deep forests. We are glad they are still here and we hope that it will always be so…"

**History**

Hunting and trapping are strong components of lifestyle in the Mohawk community of Akwesasne. Hunting and trapping provide economic and nutritional benefits, and represent strong cultural ties to the environment. The purpose of the Saint Regis Mohawk Tribe (SRMT) Game Advisory is to promote Mohawk culture and tradition, while protecting human and environmental health and safety.

The major environmental health concern at Akwesasne is exposure to polychlorinated biphenyls (PCBs) through consumption of fish and wild game. PCBs are primarily an aquatic contaminant found in sediments of contaminated waterbodies. Fish consumption advisories are issued in the Akwesasne area because PCBs can accumulate in the food chain. However, because most wild game have a plant-based diet, they accumulate fewer contaminants than game that eat fish and other aquatic animals. While some animals remain contaminated, there exists an abundance of wild game options for Akwesasrò:non to enjoy the benefits of a traditional diet.

Additionally, the many Akwesasrò:non who choose to hunt and trade for wild game off the territory should be aware of state and provincial advisories.
Wild Game are Good for You!

A healthy diet should include good sources of protein—such as fish, skinless poultry and lean meats. Most wild game can be considered a good source of lean meat with about one-third fewer calories, and less saturated and total fat than lean cuts of beef and pork. This is due to the animals' active lifestyle and plant-based diet.

Due to the possibility of ingesting lead fragments, children and pregnant women may want to avoid eating game harvested with lead shot or bullets.
**Large Game**

**Black Bear, White-Tailed Deer, Moose and Caribou**

**Disease/parasite advice**

Chronic Wasting Disease (CWD) is an untreatable and fatal brain infection of deer, elk and moose. CWD is caused by abnormal infectious proteins known as prions. CWD prions are passed through saliva, urine and feces of infected animals. Symptoms in infected animals: loss of body functions, poor body condition, staggering, poor

**Contaminant advice**

The plant-based diet of large game helps limit their exposure to contaminants like PCBs. Accordingly, available data indicates lower levels of contaminants in larger game like deer. However, as a precaution, avoid harvesting large game from contaminated areas (see map insert, Sources of Contaminants in Game).
posture and abnormal behavior. CWD was first detected in central NY in 2005. Since then, no new cases of CWD have been detected in this state.

Deer ticks are found in tall grass, brush and shrubs, and can carry several infectious diseases, including Lyme disease. Untreated, Lyme disease can cause a number of health problems in humans. Symptoms in infected humans: skin rash, joint pain, chills, fever and fatigue.

Rabies is a viral infection that can be found in any mammal. Humans can be infected with rabies from the bite of an infected animal, or exposure to nervous tissue or saliva. Left untreated, rabies is almost always fatal in humans. Symptoms in infected animals: lost fear of humans, mobility problems (such as lying on the ground struggling), excessive salivation/drooling, unusual aggressiveness or tameness.

Many wild animals can carry diseases or parasites. Please follow the guidance on *Tips for Good Hunting and Game Preparation* to reduce the potential for disease and infection.
Small Game

Rabbit, Squirrel, Beaver, Muskrat and Raccoon

Contaminant advice
The diet of small game helps limit their exposure to chemicals like PCBs. However, as a precaution, avoid harvesting small game from contaminated areas (see map insert, Sources of Contaminants in Game).

Disease/parasite advice
Tularemia is a bacterial disease that infects both animals (most often the rabbit) and humans. Humans can become infected through tick and deer fly bites, skin contact with infected animals and ingestion of contaminated water. Symptoms in infected humans: skin lesions, swollen glands, throat infection, intestinal pain, diarrhea and vomiting, fever, pneumonia-like illness.

For information about rabies and ticks, please see p.5 under Large Game. Many wild animals can carry diseases or parasites. Please follow the guidance on Tips for Good Hunting and Game Preparation to reduce the potential for disease and infection.
**Contaminant advice**

The diet of upland birds helps limit their exposure to chemicals like PCBs. However, as a precaution, avoid harvesting upland birds from contaminated areas (see map insert, *Sources of Contaminants in Game*).

**Disease/parasite advice**

Many wild animals can carry diseases or parasites. Please follow the guidance on *Tips for Good Hunting and Game Preparation* to reduce the potential for disease and infection.
Contaminant advice

Mergansers are the most contaminated of waterfowl and should not be eaten. Diver ducks (blue bills, goldeneye, etc.) are more contaminated than dabbler ducks (mallards, gadwalls, etc.). Canada geese and wood ducks are the least contaminated of waterfowl because of their plant-based diets. Hunters are advised to avoid taking waterfowl from contaminated areas (see map insert, Sources of Contaminants in Game).

Disease/parasite advice

Avian Botulism is caused by a bacterium (common in the environment) that produces botulism toxin and can cause illness or death when ingested by humans and animals. Cooking does not destroy the botulism toxin. Avoid ill or lame ducks.

Symptoms in waterfowl: unable to hold head up, may drown as result, cannot fly and have poor posture, dragging one or both wings while standing.
Many wild animals can carry diseases or parasites. Please follow the guidance on *Tips for Good Hunting and Game Preparation* to reduce potential for disease and infection.

**Disease/parasite advice**

**Contaminant advice**

Historically, data shows high amounts of PCBs in local turtles. However, the current extent of this contamination is not known. DO NOT EAT any local turtles. DO NOT EAT any frogs from contaminated areas (see map insert, *Sources of Contaminants in Game*). Frogs outside of these contaminated areas are a better choice.
Advice for the Entire Family

Reduce Exposure to Chemicals in Game

Best Choices for Everyone to Eat

Less chemicals

White-tailed Deer, Moose, Caribou, Black Bear,

Beaver, Muskrat, Raccoon, Rabbit, Squirrel

Pheasant, Ruffed Grouse, Snipe, Woodcock, Turkey

Avoid Eating Most Chemicals

Frogs

Canada geese

Wood Duck

Diver ducks (Goldeneye, Scaup, Ringnecked)

Mergansers

Turtles

Saint Regis Mohawk Tribe
GAME ADVISORY
www.srmtenv.org
Sources of Contaminants in Game

Industry
1 - ALCOA West
2 - ALCOA East: Non-operative
3 - Former General Motors

Areas to avoid hunting wild game including lower Grasse River from downtown Massena to St. Lawrence River and Turtle Pond, Turtle Creek and Turtle Cove (see inset)

Roads

Rivers and Streams

Akwesasne Territory

Environment Division, Saint Regis Mohawk Tribe
449 Frogtown Road, Akwesasne, NY 13655
518-358-5937, www.srmtenv.org
Kentenhkó:wa / November 2014
**Diseases & Parasites**

**Tips for Good Hunting and Game Preparation**

**Hunting**
- Hunt game that looks and acts healthy
- Avoid game that moves slowly, acts strangely or isn't afraid of people

**Harvesting**
- Avoid using shot or bullets made of lead, which is very toxic to children; use other ammo, or arrows if you can
- Do not harvest or even touch, game that is found already dead or dying
Health/Other Risks

- Ticks can carry Lyme disease and other sicknesses, so avoid ticks by covering all skin.
- Check for ticks after being outside.
- Use tweezers to take out any ticks found, making sure to grab the tick’s head and pull it out from there.
- Avoid direct contact between game skin, fur and feathers and your skin.

Handling

- Wear gloves when field dressing animals, during skinning, butchering, and filleting.
- Remove any and all feathers, fur, skin, or debris.
- Cook all meats well-done to kill bacteria, viruses and parasites.
- Keep raw meat in the fridge or freezer and separate from other foods until ready to cook.
Hunt

• Respect the resource and hunt sustainably to ensure game for future generations.

• All hunters are required to take a hunter safety course outside of Akwesasne; follow hunter safety practices.

• Consider lead-free shot and bullet alternatives. Traditional lead bullets can shatter upon impact into microscopic fragments and contaminate game meat. This is of greatest concern for young children because they are particularly susceptible to the toxic effects of lead.

• Harvest game that act and look healthy, do not handle or harvest game that are found dead or dying, act abnormally or seem sick.

• To protect against ticks and prevent tick borne diseases, such as Lyme disease, wear clothing that covers the skin (tuck pant legs into socks and shirts into pants) while outside or near forested areas, bathe or shower as soon as possible after going indoors, do a final full-body tick check at the end of the day (also check children and pets), and remove ticks promptly, using tweezers and keeping the head intact.

• Check state and provincial advice when hunting/harvesting game outside of Akwesasne.
**Butcher**

- Wear gloves while filleting, field dressing, skinning or butchering.
- Remove all bullets, slugs, shot, lead fragments and affected meat (including feathers, fur and debris) from game when preparing for consumption.
- Keep game cool until butchered, and then refrigerated or frozen until ready to cook.
- Avoid handling the brain, spinal tissues or fluids, saliva and mouth parts of animal.
- Remove the skin and trim the fat to reduce PCBs. This is especially true for waterfowl and turtles.

**Cook**

- Keep raw meats separate from other foods during preparation.
- Cook all meat thoroughly to kill bacteria, viruses or parasites that can cause illness.

**Eat**

- A portion size of meat for an adult is 3-4 oz. or about the size of your palm without the fingers.
- A healthy diet consists of no more than two portions of meat a day for the average adult.
Q. Are deer close to industrial plants contaminated with PCBs?

A. Not likely, since PCBs are primarily an aquatic contaminant.

Q. How will the community be notified if there is an outbreak of rabies?

A. Both the SRMT Health Services and Compliance Department are equipped to handle incidents of potential rabies. They work closely with Franklin County and NYSDOH on the notification of rabies risk. For suspected rabies in animals, please contact SRMT Compliance at (518) 358 - 2272. For incidences involving potential human contact call SRMT Health Services at (518) 358 - 3141.

Q. Do deer get worms?

A. Yes, deer do get worms. Most parasites can be avoided by wearing gloves when handling raw meat, and cooking meat thoroughly to kill the parasites.
Q. Do ducks get West Nile virus (WNV)?

A. Yes, ducks can be infected with WNV. WNV is most commonly transmitted by the bite of an infected mosquito. However, WNV can be transmitted to people who handle infected tissues or fluids from birds if the person’s skin is penetrated or cut. Wear protective gloves when handling ducks and other birds to reduce this risk.

Q. Where can I find information on tick borne diseases?

A. http://www.cdc.gov/ticks/diseases/

Q. Since beaver and muskrat live in the water do they accumulate PCBs?

A. The diet of beaver and muskrat is almost completely plant-based, placing them very low on the food chain. A recent study conducted by SRMT shows the levels of PCBs in beaver and muskrat are very low.
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