

Frequently Asked Questions and Answers regarding the “do not eat” deer advisory in Iosco County (*printable map attached*)

(updated 11/27/18)

What is the “do not eat” advisory?

On October 19, 2018, the Michigan Department of Health and Human Services (MDHHS) issued a ‘Do Not Eat’ advisory for deer taken within approximately five miles of Clark’s Marsh in Oscoda Township. The advisory is due to high levels of PFOS (perfluorooctane sulfonic acid) found in a single deer taken about two miles from Clark’s Marsh, which borders the former Wurtsmith Air Force Base. PFOS is one type of PFAS (per- and polyfluoroalkyl substances) chemical.

What parts are safe for me to eat?

None. Do not eat any deer that came from within five miles of Clark’s Marsh. In addition, MDHHS recommends you do not eat kidneys or liver of any deer because PFAS and other chemicals are stored in the organs. For more information about PFAS in wild game and fish, visit Michigan.gov/pfasresponse and go to the Fish and Wildlife button. For more information about wild game consumption, visit Michigan.gov/eatsafegame and go to the Eat Safe Wild Game button. If you have health related questions, please contact MDHHS at 1-800-648-6942.

Can’t I just cook it well?

No. You cannot get rid of PFAS by cooking the meat or organs

Why was the advisory issued?

One deer out of twenty tested around the former Wurtsmith Air Force Base was found to have high levels of PFOS. The level of PFOS in the muscle of the deer was 547 parts per billion, exceeding the level of 300 ppb at which MDHHS recommends people do not eat the meat. PFAS was either not found or was at low levels in muscle samples from the other 19 deer. Although only one deer of this group tested at such high levels, the advisory was issued to protect the health of anyone eating venison taken within approximately five miles of Clark’s Marsh. The state has plans to test more deer from this area.

How long will the “do not eat” advisory be in place?

It’s unknown how long the advisory will be in place. We don’t have enough information on how deer are exposed to PFAS and there are still high levels of PFAS in the local area waterbodies.

Where is the area from which we should avoiding eating deer?

The five-mile radius encircles the Wurtsmith base property and covers what the DNR has estimated to be the expected travel range of deer living in or near the marsh. The area covered by the deer consumption advisory issued can be described as:

From Lake Huron west along Aster Street, west on Davison Road, north on Brooks Road, east on Esmond Road, north on Old US 23, north on Wells Road, west on River Road, north on Federal Forest Road 2240, north on Lenard Road, north on Indian Road, and East on E. Kings Corner Road (along the county line) toward Lake to Lake Road, to Lake Huron (*see the last page of this handout for a visual, printable map*).

Why did the state test deer in this area?

MDNR and MDHHS developed this investigation in response to questions from hunters concerned about harvesting deer in contaminated areas. This is the first study of its kind and very little scientific information exists on PFAS exposure in whitetail deer.

DNR also collected an additional 60 deer for PFAS testing this year as part of the Michigan PFAS Action Response Team’s work on this emerging contaminant. In addition to the testing around Wurtsmith, 20 deer were taken from near each of the PFAS investigation sites in Alpena, Rockford and Grayling with known contamination in lakes and rivers. The deer meat tested from these areas was found to have no PFAS or very low levels of the chemical. An additional 48 samples of deer muscle from the 2017 hunting season were tested from other areas across the state. Preliminary data for these deer also shows no PFAS contamination or very low levels of the chemical.

Why the five-mile radius?

The deer with high PFAS levels was taken about two miles from Clark’s Marsh. Deer usually travel about 1 to 1.5 miles. The “do not eat” advisory extends five miles around the Marsh in order to provide an extra measure of protection for hunters and their families.

The five-mile area has some features that likely restrict deer access and movement. There are fences, urban development, and large swamps that likely restrict access by the deer to Clark's Marsh. Though deer can and do come into contact with this area, these restrictions likely limit the number of deer that are being affected by the contamination at Clark's Marsh.

Should I have my well tested if I live in this area?

The five-mile area "do not eat deer" advisory was set around Clark's Marsh, the suspected source of contaminated drinking water for deer. That area was chosen to represent the farthest a deer might travel from the Marsh. It doesn't represent the area where contaminated groundwater has moved from the base. The wells in those areas have been identified and testing has been offered to those well owners.

What is PFOS and PFAS?

PFOS is one type of PFAS (per- and polyfluoroalkyl substances) chemical. PFAS are manmade chemicals that are resistant to heat, water, and oil. For decades, they have been used in many industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food paper wrappings, personal care products, fire-fighting foams, and metal plating. They are still used today. PFAS have been found at low levels both in the environment and in the blood of the general U.S. population.

These chemicals do not break down in the environment. They build up over time in the blood and organs. Studies in animals who were exposed to PFAS found links between the chemicals with harm to the liver, harm to the body's ability to fight off sickness, birth defects, slow growth, and newborn deaths.

How did this deer pick up high levels of PFAS contamination?

It is unknown how PFAS could accumulate to this level in deer. The State of Michigan is investigating the circumstances of the one deer with elevated levels and doing further analysis on these test results to learn more about PFAS in deer and wildlife. In addition, the state will be doing additional testing on deer from the Clark's Marsh region and performing modeling studies to learn about PFAS consumption in wildlife.

Can I eat other game species from this area?

There are no current advisories on other wild game species, but we don't have data on them.

What animals have been tested for PFAS?

In Michigan, to date, only fish and deer have been sampled for PFAS. For more information about PFAS in wild game and fish, visit Michigan.gov/pfasresponse and go to the Fish and Wildlife button. For more information about wild game consumption, visit Michigan.gov/eatsafegame and go to the Eat Safe Wild Game button.

What about cattle, chickens, or other livestock raised in the area?

The advisory does not apply to cattle, chickens, or other livestock raised in the area. Those animals are provided drinking water and are not drinking water from Clark's Marsh, the suspected source of contaminated drinking water for deer.

How do we know this wasn't just a unique situation or a mistake?

The kidney and liver from this deer confirmed this result with very high levels of PFOS. The muscle, kidney, and liver samples from this deer were all received at the laboratory individually packaged, processed separately on different days, and analyzed at the laboratory separately, so the high results in all three tissues helps to confirm these results.

If I have a deer in my freezer from the PFAS "do not eat" advisory area what do I do with it?

We recommend that you do not eat it, because there is a possibility that it could have a high level of contamination. For more information about PFAS in wild game and fish, visit Michigan.gov/pfasresponse and go to the Fish and Wildlife button. For more information about wild game consumption, visit Michigan.gov/eatsafegame and go to the Eat Safe Wild Game button. If you have health related questions please contact MDHHS at 1-800-648-6942.

Where do I dispose of it?

You can dispose of it in your trash or landfill.

How can I have deer meat tested? Can I take a full deer to a regular check station to have it tested for PFAS?

While the state cannot endorse or recommend any lab, the following labs confirmed that they will analyze PFAS samples from deer tissue. For information on the cost and how to send deer tissue, contact:

Vista Analytical Laboratory

Contact: Martha Maier, mmaier@vista-analytical.com

Phone: 916-673-1520

Visit: <http://www.vista-analytical.com>

Battelle

Contact: Jonathan Thorn, thornj@battelle.org

Phone: 781-681-5565

Visit: www.battelle.org

GEL Laboratories, LLC

Contact: Robert Pullano, rlp@gel.com

Phone: 843-556-8171

Visit: <http://www.gel.com>

Testing will tell you if there is PFAS in the meat but won't tell you how much or how often to eat the meat.

How are the deer tested?

Testing for PFAS is a several step process. First, deer are collected, and the lymph nodes are tested for chronic wasting disease and bovine tuberculosis. These lab tests take approximately 2 weeks. The disease testing is an important step because lab staff processing the deer meat could be exposed if the deer have diseases.

The meat and organs then go through several steps of processing for PFAS analysis. Laboratories tend to run samples in batches. It can take up to 12 weeks from the time the sample is received to get test results. It may take even longer if the results need to be confirmed with a second round of tests. The test results from the sample show the amount of PFAS measured in the sample (meat, organs).

What is done with the deer after it's tested?

During the PFAS testing process, any deer parts that were not needed for testing were disposed of. Due to the length of time it took to collect and test the deer, they were not fit for human consumption. For any future testing, the state will investigate opportunities to donate safe deer meat to food banks.

Can I take my deer to a processor or do I need to have test results first?

Hunters should not eat deer from the “do not eat” advisory area. Hunters should dispose of deer harvested from within 5 miles of Clark’s Marsh in Oscoda Township. We advise processors to ask hunters where they harvested their deer. If they were taken from this area, they should be disposed of.

What if I’ve already eaten it? What about my kids?

One of the twenty deer tested near Clark’s Marsh had high levels of PFAS, so not all deer in the area have high levels of PFAS. If you have eaten deer with PFAS, it doesn’t mean you are sick or will get sick. For more information about PFAS in wild game and fish, visit Michigan.gov/pfasresponse and go to the Fish and Wildlife button. For more information about wild game consumption, visit Michigan.gov/eatsafegame and go to the Eat Safe Wild Game button. If you have health related questions, please contact MDHHS at 1-800-648-6942.

What health problems can be linked to eating deer with PFAS?

No one can say for certain if PFAS will harm your health. Some health studies found health problems linked to too much PFAS such as:

- Lowering a woman’s chance of getting pregnant
- Increasing the chance of high blood pressure in pregnant women
- Increasing the chance of thyroid disease
- Increasing cholesterol levels
- Changing immune response
- Increasing chance of cancer, especially kidney and testicular cancers
- Studies in animals help us understand what could happen in people. In testing, scientists have found that animals given high amounts of PFAS chemicals showed:
 - Harm to the liver
 - Harm to the body’s ability to fight off sickness
 - Birth defects, slow growth, and newborn deaths

If you have medical questions, talk with your doctor. You may find the Agency for Toxic Substances and Disease Registry’s factsheet, “Talking to Your Doctor about Exposure to PFAS” helpful. It is available at www.atsdr.cdc.gov/pfas.

I’ve eaten deer from this area. Should I have my blood tested?

Blood tests are available that can measure the amount of PFAS in blood at the time it is

collected. However, the test cannot tell you how much PFAS was in your blood in the past or if the PFAS has or will cause a medical condition.

According to the Center for Disease Control and Prevention, most people in the United States have measurable amounts of PFAS in their blood, especially PFOA and PFOS. There is no medical treatment to remove PFAS from blood.

If you're thinking about having your blood tested for PFAS, talk to your doctor.

How is PFAS different from deer diseases?

Deer diseases are caused by bacteria or viruses and are usually contagious. PFAS are chemicals that deer may have from contamination in the environment rather than spread from one deer to another. However, it is possible does can pass PFAS to their fawns during pregnancy or when nursing. If a deer has PFAS in its meat or organs, it could show signs of illness, but it would not pass it on to other deer like with bacteria or a virus. Very little is known about the effects that PFAS has on deer.

What percentage of deer potentially have high levels of PFAS?

It is unknown at this time how many deer are potentially affected by PFAS exposure at this site. Additional testing of deer is necessary before these determinations can be made. Very little is known about the effects that PFAS has on deer.

What does a deer with elevated levels PFAS look like? How can I tell which deer have it so I can avoid shooting one? What should I do if I see a sick deer?

A deer that has been exposed to PFAS may not show any signs or symptoms of being sick. If you see a deer that appears to be sick, contact the DNR hotline at 800-292-7800.

If I harvested a deer from the "do not eat" area, can I get a replacement deer harvest tag, so I can take another deer?

If a deer was harvested within five miles of Clark's Marsh before learning about the advisory, a replacement license may be issued. Call (517) 284-6057 or email DNR-CustomerService@michigan.gov. The hunter can keep the antlers if taken with the original tag.

Are there rules for transporting deer from a “do not eat” area?

There are no transportation rules from this area. However, MDHHS and DNR recommend hunters do not eat the meat and organs and dispose of any deer taken from this region.

What about baiting and feeding in that area? What other regulations will there be on hunting?

For the 2018 hunting season, baiting and feeding is banned in the following counties: Alcona, Alpena, Calhoun, Clinton, Eaton, Gratiot, Hillsdale, Ingham, Ionia, Isabella, Jackson, Kent, Mecosta, Montcalm, Montmorency, Muskegon, Newaygo, Oscoda, Ottawa and Shiawassee. For current hunting regulations in your area, go to www.michigan.gov/dnrdigests and review the appropriate hunting digest.

What precautions should processors take in the event a deer has been contaminated by PFAS?

Processors should ask hunters where they harvested their deer and if it’s from the area surrounding Clark’s Marsh, they should dispose of it. Normal sanitation procedures should be enough in the event a processing machine comes in contact with PFAS.

What about other parts of the state? Is it still safe to eat deer where there have been other “do not eat fish” advisories?

At this time, there is no evidence that causes us to issue advisories on eating deer at any of the other locations tested for PFAS. Clark’s Marsh is a unique situation near the former Wurtsmith Air Force Base with known levels of high contamination. The state will be evaluating other areas for potential sampling if there is a risk determined. As a reminder, this event was a single deer with very high levels.

Will more deer be taken in Oscoda?

The state plans to collect about 40-50 more deer from the Oscoda area surrounding the former air force base, to determine the amount of possible contamination in the deer herd. We will investigate opportunities to donate safe deer meat to food banks.

Can hunters help the state harvest deer for testing?

Not at this time. A specific number of deer need to be collected from precise locations during a short window of time. All deer collected will be sent to the state laboratory for testing. We will investigate opportunities to donate safe deer meat to food banks.

Can the deer be tested locally?

No, PFAS testing is not possible at deer check stations. The deer will be sent to the Michigan Department of Health and Human Services' laboratory in Lansing, MI. Testing for PFAS in deer must be done in a laboratory with specific machines and procedures.

Where else will deer be tested?

DHHS and DNR are committed to further understanding contamination in deer and other wildlife such as turkey and waterfowl. The state will continue to look at areas where we know there is PFAS contamination. Information on those locations can be found at Michigan.gov/pfasresponse.

Where can people hunt?

If hunters wish to avoid the "do not eat" advisory area, they can still hunt the public land surrounding that area, in DMU 487 and DMU 006 to the south. Visit www.michigan.gov/dnrdigests for more information on DMUs or Deer Management Units that provide hunting opportunities.

Why was Tuttle Marsh included in the advisory area?

Tuttle Marsh was included in the advisory because the five-mile "do not eat deer" advisory area was set around Clark's Marsh, the suspected source of contaminated water. That area was chosen to represent double the furthest distance deer might travel.

What is the state doing to get the contamination under control?

On Oct. 19, the Michigan Department of Environmental Quality (DEQ) issued the U.S. Air Force with a violation notice for PFAS contamination in the waters of Clark's Marsh near Oscoda, the second violation notice issued to the U.S. Air Force this year for this site.

The DEQ has found the Air Force to be in violation of Part 31 under the water resources protection section of the Natural Resources and Environmental Protection Act. Under the violation notice, the DEQ is requiring the Air Force to increase pumping and treatment of contaminated groundwater at the base and to increase the size of the capture zone of the PFAS plume emanating from the WAFB. In January, the DEQ issued the Air Force with a violation notice for failing to meet a 2017 deadline to start-up a second granular activated carbon filtration system at the WAFB to address discharges of PFAS-containing groundwater to the Au Sable River and Van Etten Creek.

For more information about PFAS:

- Michigan PFAS Response: <https://www.michigan.gov/pfasresponse/>
- Michigan's Eat Safe Fish Guidelines: <https://www.michigan.gov/eatsafefish>
- EPA PFAS Info Page: <https://www.epa.gov/pfas>
- Call the Michigan Toxics Hotline at 1-800-648-6942
- Discuss with a healthcare professional