



## **Frequently Asked Questions and Answers regarding the “Do Not Eat” deer advisory in Iosco County (*printable map attached*)**

(Updated July 2021)

### **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. That advisory was issued due to high levels of PFOS (perfluorooctane sulfonic acid) found in a single deer taken from Clark’s Marsh, which borders the former Wurtsmith Air Force Base. PFOS is one type of PFAS (per- and polyfluoroalkyl substances). Additional testing occurred in 2019 and 2020, and results of the testing indicated the “Do Not Eat” advisory area could be reduced in 2021 to a three-mile area around Clark’s Marsh.

### **What are PFOS and PFAS?**

PFAS are human-made chemicals that are resistant to heat, water, and oil. PFOS is one type of PFAS. For decades, PFAS have been used in industrial applications and consumer products such as carpeting, waterproof clothing, upholstery, food 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 majority of the U.S. population.

PFAS do not easily break down in the environment. They can also build up over time in the blood and organs of wild game, fish, and humans that are exposed to these chemicals through the food they eat and the water they drink. Studies of people who were exposed to PFAS found links between the chemicals and increased risk of liver damage, thyroid disease, and preeclampsia, as well as decreased fertility and small decreases in birthweight.

### **What parts of the deer are safe for me to eat?**

None. Do not eat any deer taken from within three miles of Clark’s Marsh. In addition, MDHHS recommends you do not eat organs of any deer throughout the state because PFAS and other chemicals can build up in the organs. For more information about PFAS in wild game and fish, visit [Michigan.gov/PFASResponse](https://Michigan.gov/PFASResponse) and go to the Fish and Wildlife button. For more information about wild game consumption, visit [Michigan.gov/EatSafeGame](https://Michigan.gov/EatSafeGame) and click on the Eat Safe Wild Game button. If you have health-related questions, please contact MDHHS at 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?**

The original "Do Not Eat" advisory was issued because in 2018, one deer out of twenty taken from the Clark's Marsh area and tested for PFAS was found to have high levels of PFOS. The level of PFOS in the muscle of the deer was 547 parts per billion (or nanograms PFAS per gram muscle). PFAS was either not found or was at low levels in muscle samples from the other 19 deer sampled from the area. 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 around Clark's Marsh.

The 'Do Not Eat' advisory was amended in 2021 after tests were done on tissue samples from 44 deer collected from the Clark's Marsh area in 2020. This time, the focus was on collecting deer within a couple of miles of Clark's Marsh. PFOS was detected in seven of those 44 deer, at lower levels than the deer from the 2018 collection (547 ppb or nanograms PFAS per gram muscle). When scientists looked at the collective data from all tested deer, they noticed a relationship between the deers' proximity to Clark's Marsh and the level of PFOS in the deer. This led them to recommend that the coverage area of the "Do Not Eat" advisory be reduced to within three miles of Clark's Marsh rather than five miles. The state has plans to test more wild game from the area, but no further testing on deer will take place.

### **How long will the "do not eat" advisory be in place?**

It is unknown how long the advisory will be in place. We don't have enough information on how deer are exposed to PFAS. There are still high levels of PFAS in the area waterbodies.

### **Where is the area from which we should avoid eating deer?**

The three-mile "Do Not Eat" advisory area surrounds the former Wurtsmith Air Force 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:

Oscoda Township East (T24N, R09E) Sections: 17, 18, 19, 20, 21, 27, 28, 29, 30, 31, 32, 33, and 34

AuSable Township (T23N, R09E) Sections: 4, 5, 6, 7, and 8

Wilbur Township (T23N, R08E) Sections: 1, 2, and 12

Oscoda Township West (T24N, R08E) Sections: 13, 14, 23, 24, 25, 26, 27, 34, 35, and 36

[\*See a visual, printable map\*](#)

### **Why did the state test deer in this area?**

The Michigan Department of Natural Resources (DNR) and MDHHS developed this investigation in response to questions from hunters who were concerned about eating deer harvested in contaminated areas. Very little scientific information exists on PFAS in whitetail deer.

The DNR and MDHHS investigation include several areas. DNR collected 60 deer for PFAS testing in 2018 as part of the Michigan PFAS Action Response Team's work on PFAS. In addition to the testing around Oscoda, 20 deer were taken from areas near each of the PFAS investigation sites in Alpena, Rockford, and Grayling. These sites all have lakes and rivers known to be contaminated with PFAS. The venison tested from these other areas had no PFAS or very low levels of the chemicals detected. An additional 48 samples of deer muscle from the 2017 hunting season were also tested from other areas across the state. The results for these deer also showed no PFAS or very low levels of the chemicals detected. Read the final report: [PFAS levels in Michigan Deer and Eat Safe Wild Game Guidelines](#).

Twenty deer were also collected from the Norton Creek area, Oakland County, in 2019. The results for these deer also showed no PFAS or very low levels of the chemicals detected. Read [the final report](#).

A "Do Not Eat" advisory was issued for this area for five-mile radius. In order to further understand the boundaries of the advisory, an additional 22 muscle samples from hunter-submitted deer during the regular hunting season were tested for PFAS in 2019. No PFAS were detected in those muscle samples. Also, in 2020, DNR collected an additional 44 deer around Clark's Marsh and had muscle and liver tested for PFAS. Deer from this 2020 collection had detectable levels of various PFAS, including PFOS. This additional testing helps define the three mile "Do Not Eat" advisory coverage area around Clark's Marsh. Read the final report [PFAS levels in Michigan Deer from the Oscoda Area, Iosco County Michigan](#) for more information.

### **Why the three-mile advisory area?**

The deer with high PFAS levels was taken from Clark's Marsh in 2018. Deer usually travel about one to one and a half miles but may travel farther in some circumstances. The "Do Not Eat" advisory extends three miles around the marsh to provide an extra measure of protection for hunters and their families.

Initially, as mentioned above, the "Do Not Eat" advisory area was five miles from Clark's Marsh. Additional testing conducted in 2019 and 2020 further defined the risk and allowed the boundary of the area to be reduced to three miles. Deer tested outside the three-mile advisory area had no detections of PFAS in the muscle, showing minimal risk to human health. Detectable levels – but low – were found in deer within the three-mile advisory area. Again, to date, only one deer taken from the Clark's Marsh area has been found to have high levels-of PFAS, and that was in 2018.

### **Can I eat other game species from this area?**

MDHHS is advising that in addition to fish and deer, other animals such as frogs, muskrat, and turtles taken from Clark's Marsh should not be eaten. While there are no additional data at this time, it is reasonable to assume that other animals living in the water of Clark's Marsh could have elevated levels of PFAS.

### **What animals have been tested for PFAS?**

To date, only fish and deer have been sampled for PFAS by the state for the purposes of determining if they are safe to eat. Waterfowl will be tested in 2021. For more information about PFAS in wild game and fish, visit [Michigan.gov/PFASResponse](https://Michigan.gov/PFASResponse) and go to the Fish and Wildlife button. For more information about wild game consumption, visit [Michigan.gov/EatSafeGame](https://Michigan.gov/EatSafeGame) and click on 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 the 2018 deer muscle tissue result wasn't just a mistake?**

The muscle, kidney, and liver tissue 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 samples help to confirm these results are valid.

### **I have venison in my freezer from the three-mile 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](https://Michigan.gov/PFASResponse) and go to the Fish and Wildlife button. For more information about wild game consumption, visit [Michigan.gov/EatSafeGame](https://Michigan.gov/EatSafeGame) and go to the Eat Safe Wild Game button. If you have health-related questions, please contact MDHHS at 800-648-6942.

### **If I want to throw my venison away, how should I do this?**

You can throw it away in your trash or landfill.

### **How can I have venison tested? Can I take a deer to a check station to have it tested for PFAS?**

PFAS testing is not possible at deer check stations. While the state cannot endorse or recommend any lab, the labs listed below confirmed that they will analyze deer tissue for PFAS.

For information on the cost and how to send deer tissue, contact:

*Vista Analytical Laboratory*

Contact: Martha Maier, [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com)

Phone: 916-673-1520

Website: [www.vista-analytical.com](http://www.vista-analytical.com)

*Battelle*

Contact: Jonathan Thorn, [thornj@battelle.org](mailto:thornj@battelle.org)

Phone: 781-681-5565

Website: [www.battelle.org](http://www.battelle.org)

*GEL Laboratories, LLC*

Contact: Robert Pullano, [rlp@gel.com](mailto:rlp@gel.com)

Phone: 843-556-8171

Website: [www.gel.com](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. While MDHHS cannot do the testing for you, they can review your results with you. Please call 800-648-6942 and ask to talk to a toxicologist about PFAS levels in venison.

### **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 two weeks. The disease testing is an important step because lab staff processing the venison 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 are not needed for testing are disposed of. Due to the length of time it takes to collect and test the deer using our current process, the venison will not be fit for human consumption. For any future testing, the state will investigate opportunities to donate safe venison to food banks.

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

If deer were taken from this area, the venison should not be eaten.

### **What if I've already eaten venison from this area? What about my kids?**

One of the 86 deer tested near Clark's Marsh had high levels of PFAS in muscle tissue. Ten out of 86 deer had detectable levels of PFAS in muscle tissue, so not all deer in the area have high levels of PFAS. If you or your kids have eaten deer with PFAS, it doesn't mean you or your kids will get sick.

For more information about PFAS in wild game and fish, visit [Michigan.gov/PFASResponse](https://www.michigan.gov/PFASResponse) and go to the Fish and Wildlife button. For more information about wild game consumption, visit [Michigan.gov/EatSafeGame](https://www.michigan.gov/EatSafeGame) and go to the Eat Safe Wild Game button. If you have health-related questions, please contact MDHHS at 800-648-6942.

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

Eating or drinking PFAS found in foods and drinking water does not necessarily mean that you will have health problems. Individual health factors and genetics determine your actual personal risk.

Some studies have linked PFAS to health issues such as:

- Decreased response to vaccines
- Increased chance of fertility problems in women
- Increased chance of high blood pressure in pregnant women (preeclampsia)
- Increased chance of thyroid disease
- Increased cholesterol levels
- Increased chance of cancer, especially kidney and testicular cancers

If you have questions about your health, 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](https://www.atsdr.cdc.gov/pfas).

### **I've eaten venison 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, where the PFAS came from, or if the PFAS has or will cause health problems.

According to the Centers for Disease Control and Prevention, most people in the United States have some amount 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 might build up in deer due to contamination in the environment rather than spread from

one deer to another. A deer that has been exposed to PFAS is not likely to 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.

### **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 in the Clark's Marsh area.

### **What does a deer with elevated levels of 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?**

Very little is known about the effects that PFAS has on the health of deer. A deer that has been exposed to PFAS is not likely to show any signs or symptoms of being ill. If you see a deer that appears to be sick, contact the DNR hotline at 800-292-7800.

### **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 three miles of Clark's Marsh before learning about the advisory, a replacement license may be issued. Call 517-284-6057 or email [MDNRCustomerService@michigan.gov](mailto:MDNRCustomerService@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 pertaining to this area. However, MDHHS and DNR recommend hunters do not eat the venison and organs and throw them away if taken from this area.

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

Since 2019, baiting and feeding has been banned in the entire Lower Peninsula and the core chronic wasting disease surveillance area in the Upper Peninsula. For current hunting regulations in your area, go to [Michigan.gov/DNRDigests](https://Michigan.gov/DNRDigests) and review the appropriate hunting digest.

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

No special sanitation procedures are needed if a deer contaminated with PFAS comes into contact with a processing machine.

### **What about other parts of the state? Is it still safe to eat deer taken from places where 'Do Not Eat' advisories are in place for fish?**

At this time, there are no advisories against eating venison from any of the other Michigan locations being investigated for PFAS contamination.

In addition to the deer testing in the Oscoda area, 60 deer were taken from areas near PFAS investigation sites in Alpena, Rockford, and Grayling. These sites all have lakes and rivers known to be contaminated with PFAS. The venison tested from these areas had no PFAS or very low levels of the chemical detected.

Forty-eight samples of deer muscle from the 2017 hunting season were tested from other areas across the state. The results for these deer also showed no PFAS or very low levels of the chemical detected. Read the final report: [PFAS levels in Michigan Deer and Eat Safe Wild Game Guidelines](#).

In 2019, 20 deer were collected from the Norton Creek area (Oakland County). The results for these deer also showed no PFAS or very low levels of the chemical detected. Read [the final report](#).

The State will continue to test additional wild game and fish across the state to assess levels of PFAS and will issue consumption advisories as needed.

### **Can hunters help the state harvest deer for testing?**

In Fall of 2019, the state initiated a pilot project for collection of hunter-harvested deer. Hunters were invited to participate, and finalists were chosen prior to the deer hunting season. Twenty-two hunter-harvested deer were tested for PFAS from within the “Do Not Eat” advisory area and no detectable PFAS were found in the muscle tissue from those deer. At this time, the state has no further plans to test hunter-harvested deer.

### **Can the deer be tested locally?**

No, PFAS testing is not possible at deer check stations. The deer collected through the DNR’s project will be sent to the MDHHS laboratory in Lansing, MI. Testing for PFAS in deer must be done in a laboratory with specific machines and procedures.

### **Are other wild game being tested and where?**

MDHHS 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 [Michigan.gov/DNRDigests](#) for more information on Deer Management Units (DMUs) that provide hunting opportunities.

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

The three-mile “Do Not Eat” advisory area was set around Clark’s Marsh, the suspected source of contaminated drinking water for deer. That area was chosen to represent a

reasonable distance a deer might travel from the Marsh. It does not represent all areas of PFAS contaminated groundwater. Potentially contaminated wells in those areas have been identified and testing has been offered to those well owners.

### **What is the state doing to reduce PFAS contamination in this area?**

For current information on this site, please see the [Michigan PFAS Action Response Team webpage for the Former Wurtsmith Airforce Base](#), Iosco County.

### **For more information about PFAS:**

- Michigan PFAS Response: [Michigan.gov/PFASResponse](https://www.michigan.gov/PFASResponse)
- Michigan's Eat Safe Fish Guidelines: [Michigan.gov/EatSafeFish](https://www.michigan.gov/EatSafeFish)
- EPA PFAS Info Page: [EPA.gov/PFAS](https://www.epa.gov/PFAS)
- Call the Michigan Toxics Hotline at 800-648-6942
- Discuss with a healthcare professional



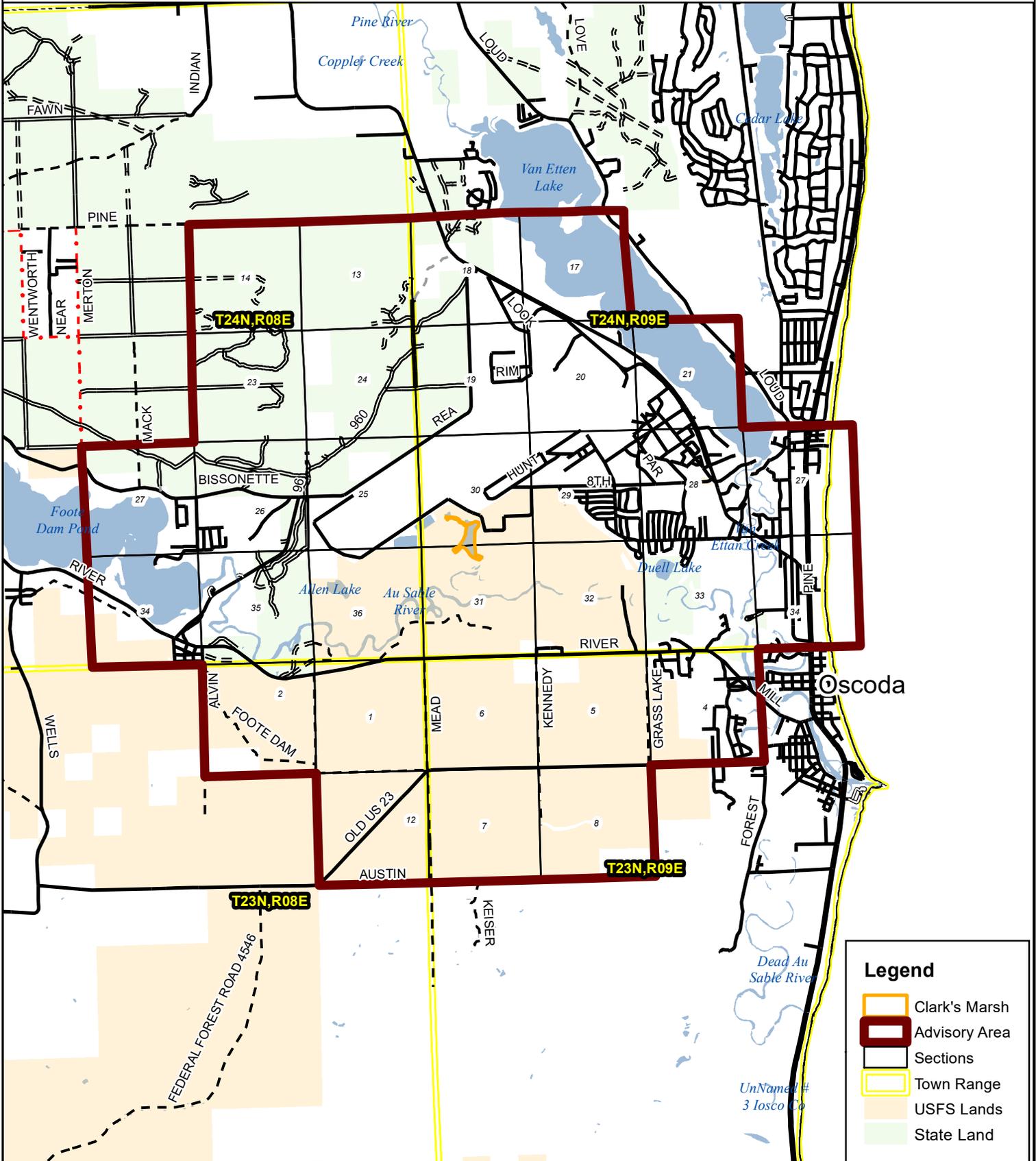
# Clark's Marsh HEALTH ADVISORY AREA



For more information go to:  
[www.michigan.gov/pfasresponse/](http://www.michigan.gov/pfasresponse/)

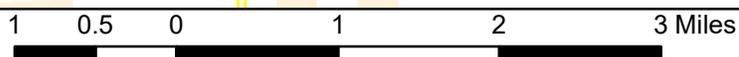
## Do Not Eat Deer

Advisory Area  
30.9 Square Miles



**Legend**

- Clark's Marsh
- Advisory Area
- Sections
- Town Range
- USFS Lands
- State Land



Date: 08/03/2021