WISCONSIN DNR
Department of Natural Resources

PFAS Contamination in the Marinette Peshtigo Area

Listening Session 2

October 16, 2019

WISCONSIN
DEPT. OF NATURAL RESOURCES

WISCONSIN DNR Department of Natural Resources

Welcome and Agenda

- What Is A Listening Session – What To Expect From This Meeting And Future Meetings
- Upcoming Listening Session Schedule
- Brief History - Timeline of Events to Date
- Updates Since Meeting on September 18th, 2019
- PFAS and Deer
- Listening Session – Opportunity For Community Feedback

What is a Listening Session?

- Commitment made by DNR to provide a monthly, in-person forum for area residents to meet with DNR and DHS staff.
- Your opportunity to ask questions and discuss concerns about PFAS investigation in Marinette and Peshtigo

Listening Session Updates

- Since the last Listening Session in September, 2019……***What We Heard From You***
- Communication
  - flyers delivered, radio/TV, social media, PSA
  - Post cards → to be delivered to community in November
- Accessibility of Information
  - Library case summary documents for review
  - Update the Marinette/Peshtigo Web site
- Investigation Progress
  - Biosolids Site Investigation Work Plan

What is a Listening Session?

- Committed to open and ongoing communication – ask questions, give feedback, let us know what topics you want to hear about:
  - Call (888-626-3244) or
  - email DNRJCIPFAS@wisconsin.gov

- Also – check out our FAQs and latest investigation information
  - https://dnr.wi.gov/topic/Contaminants/Marinette.html

Listening Session Schedule

- Developing agenda items

Listening Session	Date	Time(s)
Listening Session 1	Wednesday, September 18, 2019	6-7:30 p.m.
Listening Session 2	Wednesday, October 16, 2019	6-7:30 p.m.
Listening Session 3	Wednesday, November 20, 2019	noon-1:30 p.m. **and** 6-7:30 p.m.
Listening Session 4	Wednesday, December 18, 2019	6-7:30 p.m.
Listening Session 5	Wednesday, January 15, 2020	noon-1:30 p.m. **and** 6-7:30 p.m.
Listening Session 6	Wednesday, February 19, 2020	6-7:30 p.m.

Topics
Foam/water Sampling
Deer
Air Dispersion
TBD

- Public Meeting – Long Term Potable Water Solutions
  - *Holding off on scheduling this meeting so DNR can review analysis of options. This way, we are able to provide clear and complete information to the public.*

PFAS in Marinette & Peshtigo Area

The data shown on this map have been obtained from various sources, and are of varying age, reliability and resolution. This map is not intended to be used for navigation, nor is this map an authoritative source of information about legal land ownership or public access. Users of this map should confirm the ownership of land through other means in order to avoid trespassing. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map.

PFAS in Marinette & Peshtigo Area

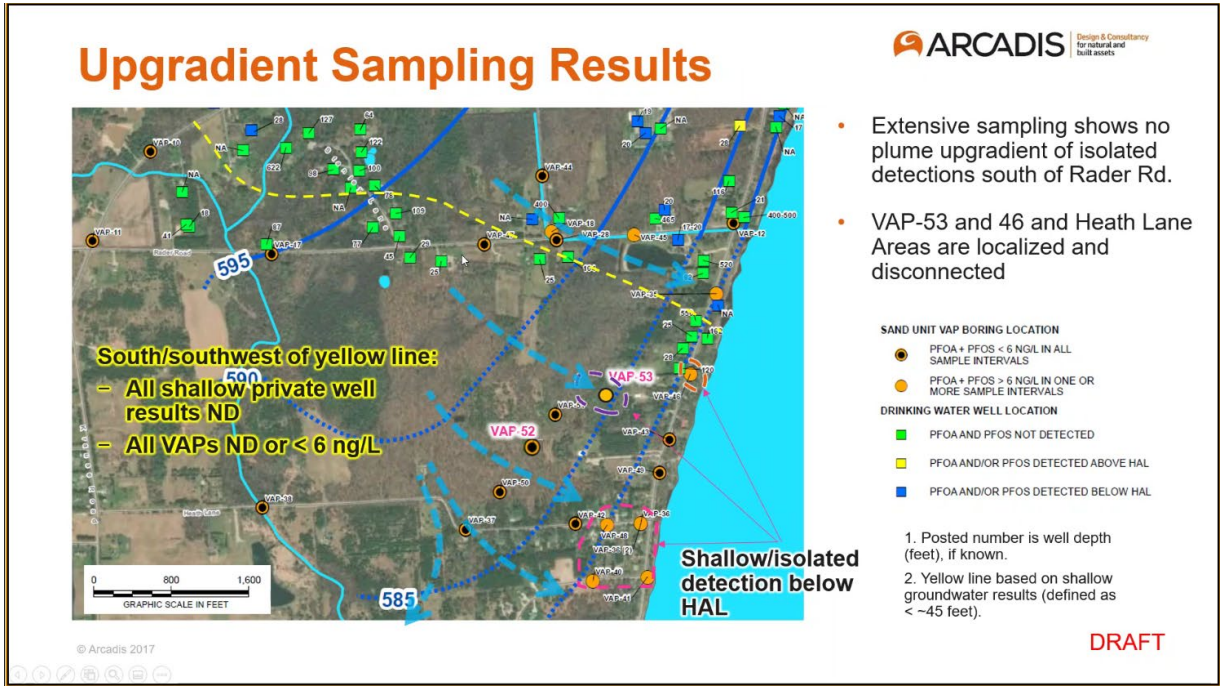
- **November 2017:** Report PFAS release at Fire Training Center (FTC)
- **2018-2019:** Site Investigation: soil, groundwater, surface water, sediment
  - Interim Action: Sampling of potable wells in study area & treatment systems installed on impacted wells
  - Interim Action: Ditch A & B surface water treatment systems
- **September 2018:** Initial Site Investigation Report
  - Interim Action: Long Term Drinking Water Options
- **January 2020:** 2nd Site Investigation Report
- **Spring 2020:** Fire Training Center (FTC) Clean-up Plan
- Other releases are at various stages of investigation

Project Updates – Drinking Water

- **May/Sept 2019** Long Term Drinking Water Options Submitted
- Fact Sheet developed to outline options & what it will mean in the long term
- JCI will have a Public Comment Period + Survey of options
- DNR will hold a Public Meeting
- Opportunities to comment will be announced via Marinette/Peshtigo Website, DNR Marinette/Peshtigo email list, library

Project Updates – Site Investigation

- Heath Lane sample Results
  - Preliminary results have been submitted – DNR evaluating data and determining if further site investigation efforts are needed
  - Data is available on BOTW

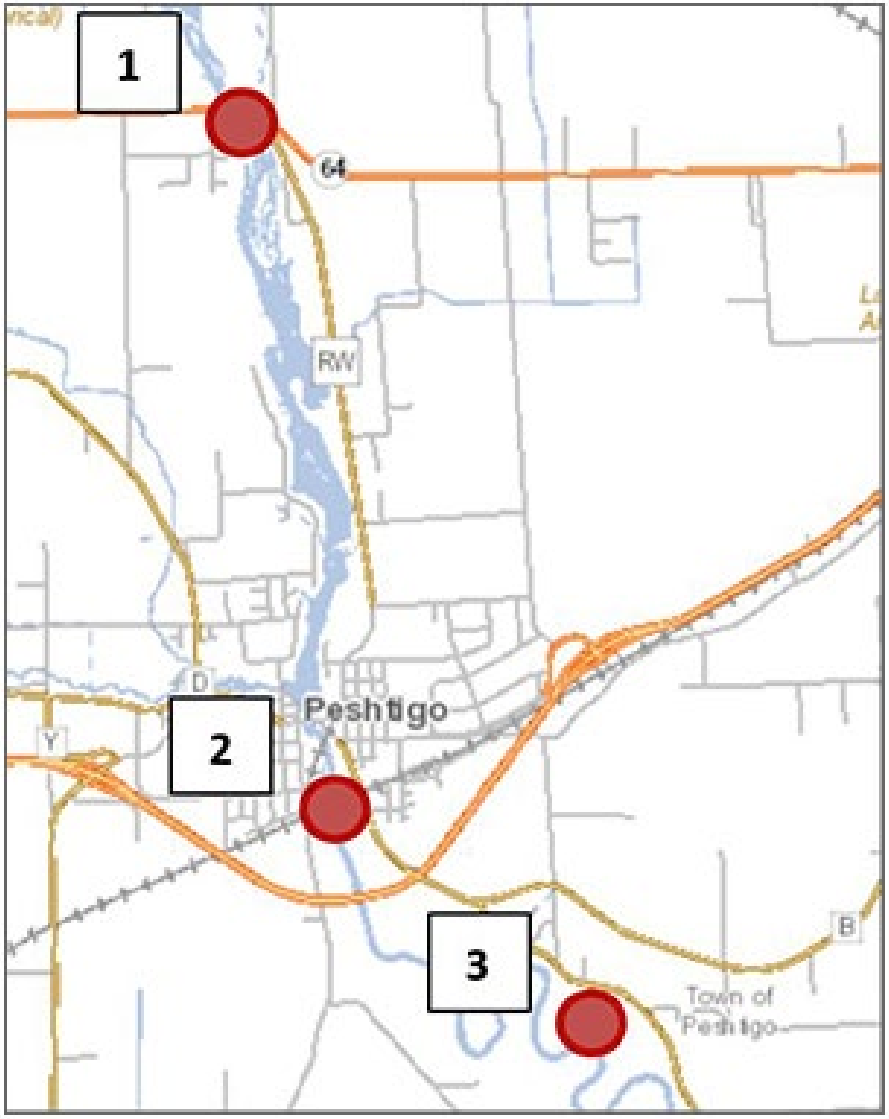


Dept SW Sampling Initiative

- Menominee River
  - 1) Chalk Hills Flowage (not shown here, ~50 miles upstream)
  - 2) Upper Scott Flowage
  - 3) Lower Scott Flowage
  - 4) Menominee River ~250 meters downstream POTW outfall
  - 5) Menominee River at mouth to Green Bay

Dept SW Sampling Initiative

- Peshtigo River
  - 1) Above Hwy 64 at boat landing
  - 2) Below Peshtigo Flowage between railroad bridges
  - 3) Below city of Peshtigo (river mile 7.65)



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June 27, 2019

05/29/19 (CHF) & 06/27/19	1) Menominee River	2) Menominee River	3) Menominee River	4) Menominee River	5) Menominee River	Field Blank
	Chalk Hills Flowage	Upper Scott Flowage	Lower Scott Flowage	Bl WWTP outfall	Mouth to Green Bay	
Analyte (ng/l)						
10:2 FTSA	ND	ND	ND	ND	ND	ND
11Cl-PF3OUdS	ND	ND	ND	ND	ND	ND
4:2 FTSA	ND	ND	ND	ND	ND	ND
6:2 FTSA	ND	ND	ND	ND	1.3	ND
8:2 FTSA	ND	ND	ND	ND	ND	ND
9Cl-PF3ONS	ND	ND	ND	ND	ND	ND
DONA	ND	ND	ND	ND	ND	ND
FOSA	ND	ND	ND	ND	ND	ND
HFPO-DA	ND	ND	ND	ND	ND	ND
N-EtFOSA	ND	ND	ND	ND	ND	ND
N-EtFOSAA	ND	ND	ND	ND	ND	ND
N-EtFOSE	ND	ND	ND	ND	ND	ND
N-MeFOSA	ND	ND	ND	ND	ND	ND
N-MeFOSAA	ND	ND	ND	ND	ND	ND
N-MeFOSE	ND	ND	ND	ND	ND	ND
PFBA	ND	2.6	2.7	ND	2.5*	ND
PFBS	ND	ND	ND	ND	ND	ND
PFDA	ND	ND	ND	ND	ND	ND
PFDoA	ND	ND	ND	ND	ND	ND
PFDoS	ND	ND	ND	ND	ND	ND
PFDS	ND	ND	ND	ND	ND	ND
PFHpA	ND	0.3	0.24*	ND	0.41*	ND
PFHpS	ND	ND	ND	ND	ND	ND
PFHxA	ND	ND	ND	ND	ND	ND
PFHxDA	ND	ND	ND	ND	ND	ND
PFHxS	0.068*	0.088*	0.092*	ND	0.094*	ND
PFNA	0.18*	0.19*	0.18*	0.094*	0.19*	ND
PFNS	ND	ND	ND	ND	ND	ND
PFOA	0.32*	0.51*	0.44	ND	0.6	ND
PFODA	ND	ND	ND	ND	ND	ND
PFOS	0.31*	0.29*	0.3*	ND	0.31*	ND
PFPeA	ND	ND	ND	ND	ND	ND
PFPeS	ND	ND	ND	ND	ND	ND
PFTeDA	ND	ND	ND	ND	ND	ND
PFTrDA	ND	ND	ND	ND	ND	ND
PFUnA	ND	ND	ND	ND	ND	ND

*Between LOD and LOQ

ND =Non-Detect

Dept SW Sampling Initiative

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July 29, 2019

07/29/19	1) Menominee River	2) Menominee River	3) Menominee River	4) Menominee River	5) Menominee River	Field Blank
	Chalk Hills Flowage	Upper Scott Flowage	Lower Scott Flowage	Bl WWTP outfall	Mouth to Green Bay	
Analyte (ng/l)						
10:2 FTSA	NS	ND	ND	ND	ND	ND
11Cl-PF3OUdS	NS	ND	ND	ND	ND	ND
4:2 FTSA	NS	ND	ND	ND	ND	ND
6:2 FTSA	NS	ND	ND	ND	5.7	ND
8:2 FTSA	NS	ND	ND	ND	ND	ND
9Cl-PF3ONS	NS	ND	ND	ND	ND	ND
DONA	NS	ND	ND	ND	ND	ND
FOSA	NS	ND	ND	ND	ND	ND
HFPO-DA	NS	ND	ND	ND	ND	ND
N-EtFOSA	NS	ND	ND	ND	ND	ND
N-EtFOSAA	NS	ND	ND	ND	ND	ND
N-EtFOSE	NS	ND	ND	ND	ND	ND
N-MeFOSA	NS	ND	ND	ND	ND	ND
N-MeFOSAA	NS	ND	ND	ND	ND	ND
N-MeFOSE	NS	ND	ND	ND	ND	ND
PFBA	NS	3.7	3.7	3.5	3.3	ND
PFBS	NS	0.17*	0.21*	ND	0.2*	ND
PFDA	NS	ND	ND	ND	ND	ND
PFDoA	NS	ND	ND	ND	ND	ND
PFDoS	NS	ND	ND	ND	ND	ND
PFDS	NS	ND	ND	ND	ND	ND
PFHpA	NS	0.48	0.53	0.51	0.65	ND
PFHpS	NS	ND	ND	ND	ND	ND
PFHxA	NS	ND	ND	ND	0.98	0.96
PFHxDA	NS	ND	ND	ND	ND	ND
PFHxS	NS	0.12*	0.11*	0.13*	0.15*	ND
PFNA	NS	0.25	0.26	0.29	0.26	ND
PFNS	NS	ND	ND	ND	ND	ND
PFOA	NS	0.67	0.71	0.71	0.82	ND
PFODA	NS	ND	ND	ND	ND	ND
PFOS	NS	0.31*	0.32*	0.32*	0.4*	ND
PFPeA	NS	ND	ND	ND	ND	ND
PFPeS	NS	ND	ND	ND	ND	ND
PFTeDA	NS	ND	ND	ND	ND	ND
PFTrDA	NS	ND	ND	ND	ND	ND
PFUnA	NS	ND	ND	ND	ND	ND

*Between LOD and LOQ
ND =Non-Detect
NS=No Sample

Dept SW Sampling Initiative

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September 16, 2019

09/16/2019	1) Menominee River	2) Menominee River	3) Menominee River	4) Menominee River	5) Menominee River	Field Blank
	Chalk Hills Flowage	Upper Scott Flowage	Lower Scott Flowage	Bl WWTP outfall	Mouth to Green Bay	
Analyte (ng/l)						
10:2 FTSA	NS	ND	ND	ND	ND	ND
11Cl-PF3OUdS	NS	ND	ND	ND	ND	ND
4:2 FTSA	NS	ND	ND	ND	ND	ND
6:2 FTSA	NS	ND	ND	ND	2.5	ND
8:2 FTSA	NS	ND	ND	ND	ND	ND
9Cl-PF3ONS	NS	ND	ND	ND	ND	ND
DONA	NS	ND	ND	ND	ND	ND
FOSA	NS	ND	ND	ND	ND	ND
HFPO-DA	NS	ND	ND	ND	ND	ND
N-EtFOSA	NS	ND	ND	ND	ND	ND
N-EtFOSAA	NS	ND	ND	ND	ND	ND
N-EtFOSE	NS	ND	ND	ND	ND	ND
N-MeFOSA	NS	ND	ND	ND	ND	ND
N-MeFOSAA	NS	ND	ND	ND	ND	ND
N-MeFOSE	NS	ND	ND	ND	ND	ND
PFBA	NS	3.2*	3.6*	3*	3.1*	ND
PFBS	NS	ND	ND	ND	ND	ND
PFDA	NS	ND	ND	ND	ND	ND
PFDoA	NS	ND	ND	ND	ND	ND
PFDoS	NS	ND	ND	ND	ND	ND
PFDS	NS	ND	ND	ND	ND	ND
PFHpA	NS	0.37*	0.44*	0.5*	0.61*	ND
PFHpS	NS	ND	ND	ND	ND	ND
PFHxA	NS	ND	ND	ND	ND	1.5
PFHxDA	NS	ND	ND	ND	ND	ND
PFHxS	NS	ND	ND	ND	ND	ND
PFNA	NS	0.18*	0.19*	0.21*	0.22*	ND
PFNS	NS	ND	ND	ND	ND	ND
PFOA	NS	0.5*	0.6*	0.56*	0.82	ND
PFODA	NS	ND	ND	ND	ND	ND
PFOS	NS	ND	ND	ND	ND	ND
PFPeA	NS	ND	ND	ND	ND	ND
PFPeS	NS	ND	ND	ND	ND	ND
PFTeDA	NS	ND	ND	ND	ND	ND
PFTrDA	NS	ND	ND	ND	ND	ND
PFUnA	NS	ND	ND	ND	ND	ND

*Between LOD and LOQ
ND =Non-Detect
NS=No Sample

Dept SW Sampling Initiative

August 14, 2019

- Peshtigo River
  - 1) Above Hwy 64 at boat landing
  - 2) Below Peshtigo Flowage between railroad bridges
  - 3) Below city of Peshtigo (river mile 7.65)

08/14/19 & 07/01/19 (St Louis)	1) Peshtigo River	2) Peshtigo River	3) Peshtigo River
	Above HWY 64	Below Peshtigo Flowage	Below City Peshtigo
Analyte (ng/l)			
10:2 FTSA	ND	ND	ND
11Cl-PF3OUdS	ND	ND	ND
4:2 FTSA	ND	ND	ND
6:2 FTSA	ND	ND	0.17*
8:2 FTSA	ND	ND	ND
9Cl-PF3ONS	ND	ND	ND
DONA	ND	ND	ND
FOSA	ND	ND	ND
HFPO-DA	ND	ND	ND
N-EtFOSA	ND	ND	ND
N-EtFOSAA	ND	ND	ND
N-EtFOSE	0.13*	ND	ND
N-MeFOSA	ND	ND	ND
N-MeFOSAA	ND	ND	ND
N-MeFOSE	ND	ND	ND
PFBA	4.8	4.6	4.6
PFBS	0.26	ND	ND
PFDA	ND	ND	ND
PFDoA	ND	ND	ND
PFDoS	ND	ND	ND
PFDS	ND	ND	ND
PFHpA	0.71	0.65	0.75
PFHpS	ND	ND	ND
PFHxA	ND	ND	0.85
PFHxDA	ND	ND	ND
PFHxS	ND	0.095*	0.093*
PFNA	0.26	0.29	0.27
PFNS	ND	ND	ND
PFOA	0.73	0.87	1
PFODA	ND	ND	ND
PFOS	0.19*	0.27*	0.41
PFPeA	ND	ND	ND
PFPeS	ND	ND	ND
PFTeDA	ND	ND	ND
PFTrDA	ND	ND	ND
PFUnA	ND	ND	ND

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ND =Non-Detect

PFAS in Wisconsin Wildlife

Sean M. Strom

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Wildlife Contaminants Monitoring

- Program initiated in early 1980's
- Concerns regarding consumption of wild game
- Concerns regarding wildlife health

- DDT
- PCBs
- Mercury
- Lead
- Pesticides
- Pharmaceuticals
- Phthalates
- ***PFAS***

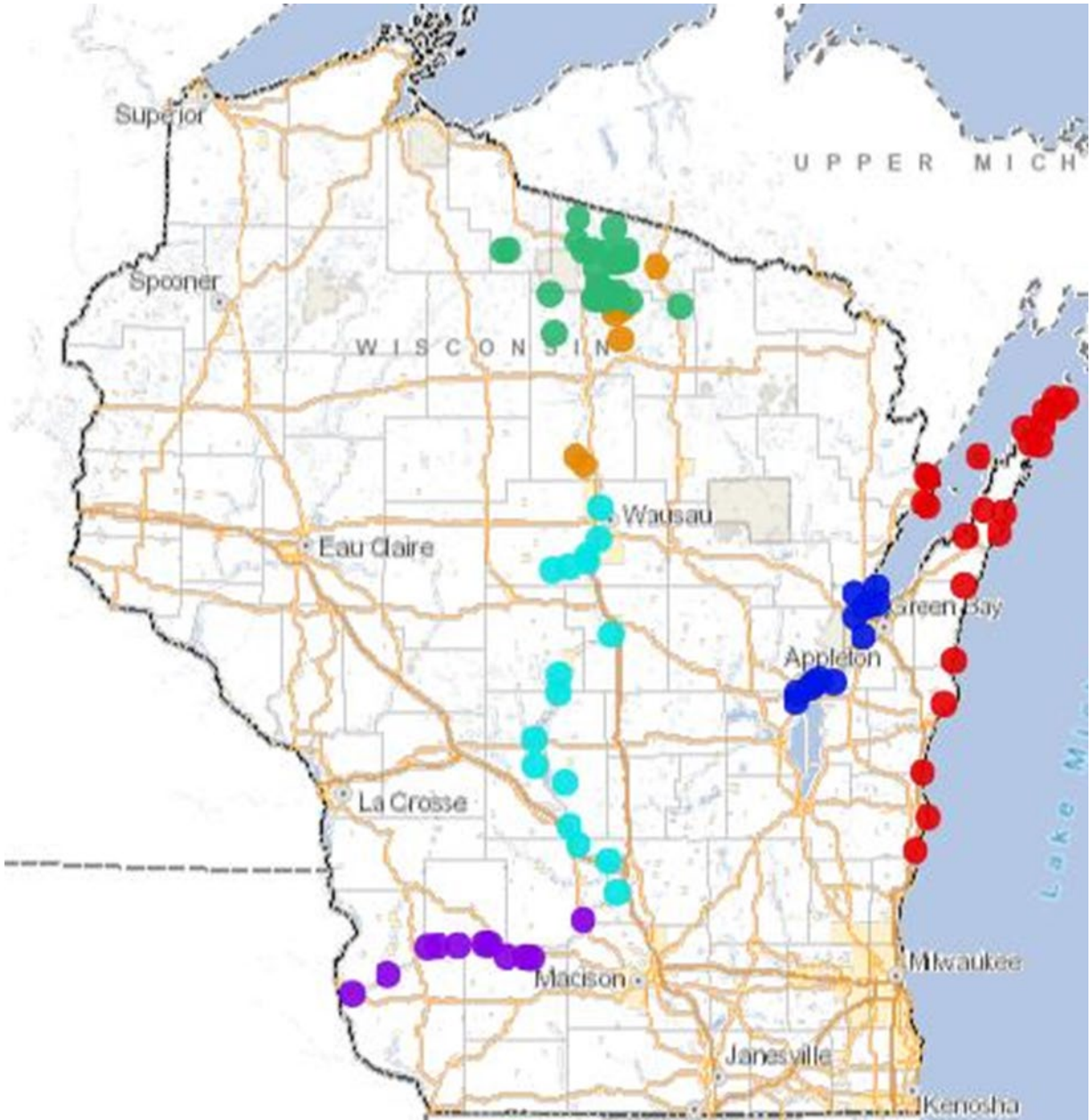
Wildlife Consumption Advisories

- Existing waterfowl consumption advisories
  - Fox River/Lower Green Bay
  - Sheboygan River
  - Milwaukee Estuary
- Contaminant levels have not decreased since advisories created
- Advisories remain in effect until analysis suggests need for revision
- Advisories due to PCB and mercury contamination

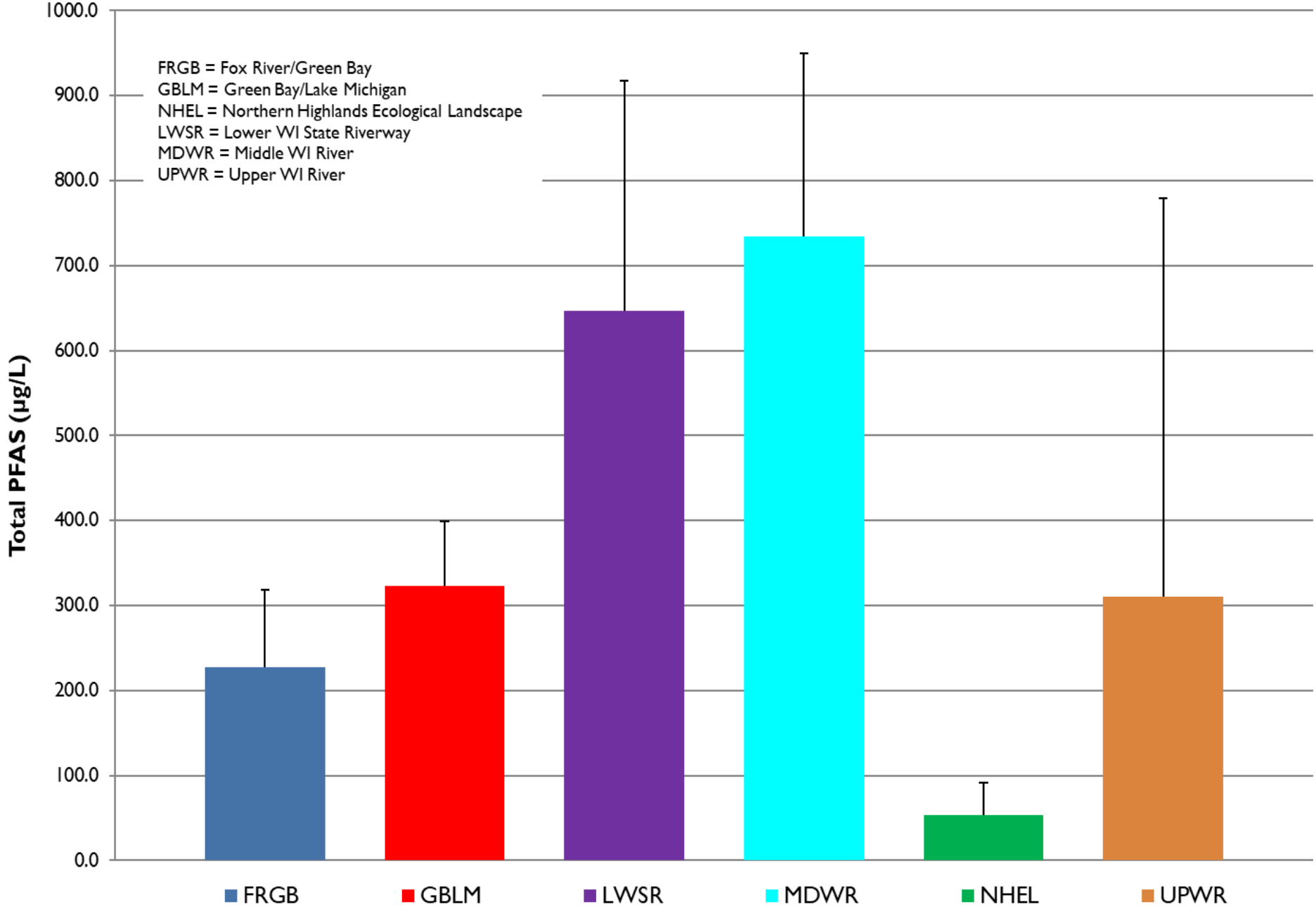
Bald Eagle Bio-Sentinel Program

- Uses bald eagles to assess trends in environmental contaminants
- Sample different regions on a rotating basis
- Legacy and emerging contaminants
- Plasma, whole blood, feathers

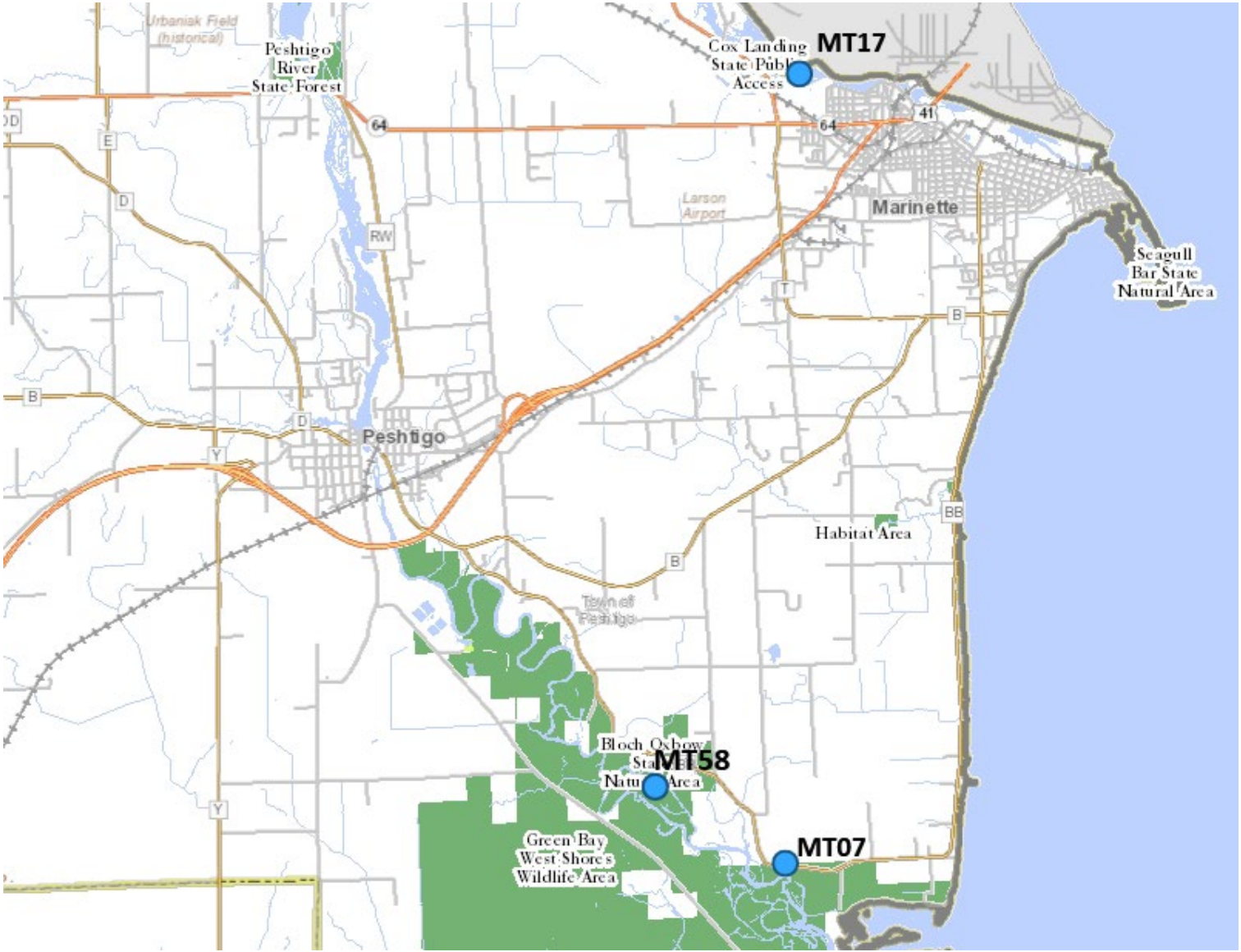
Bald Eagle Populations Sampled 2011 - 2017

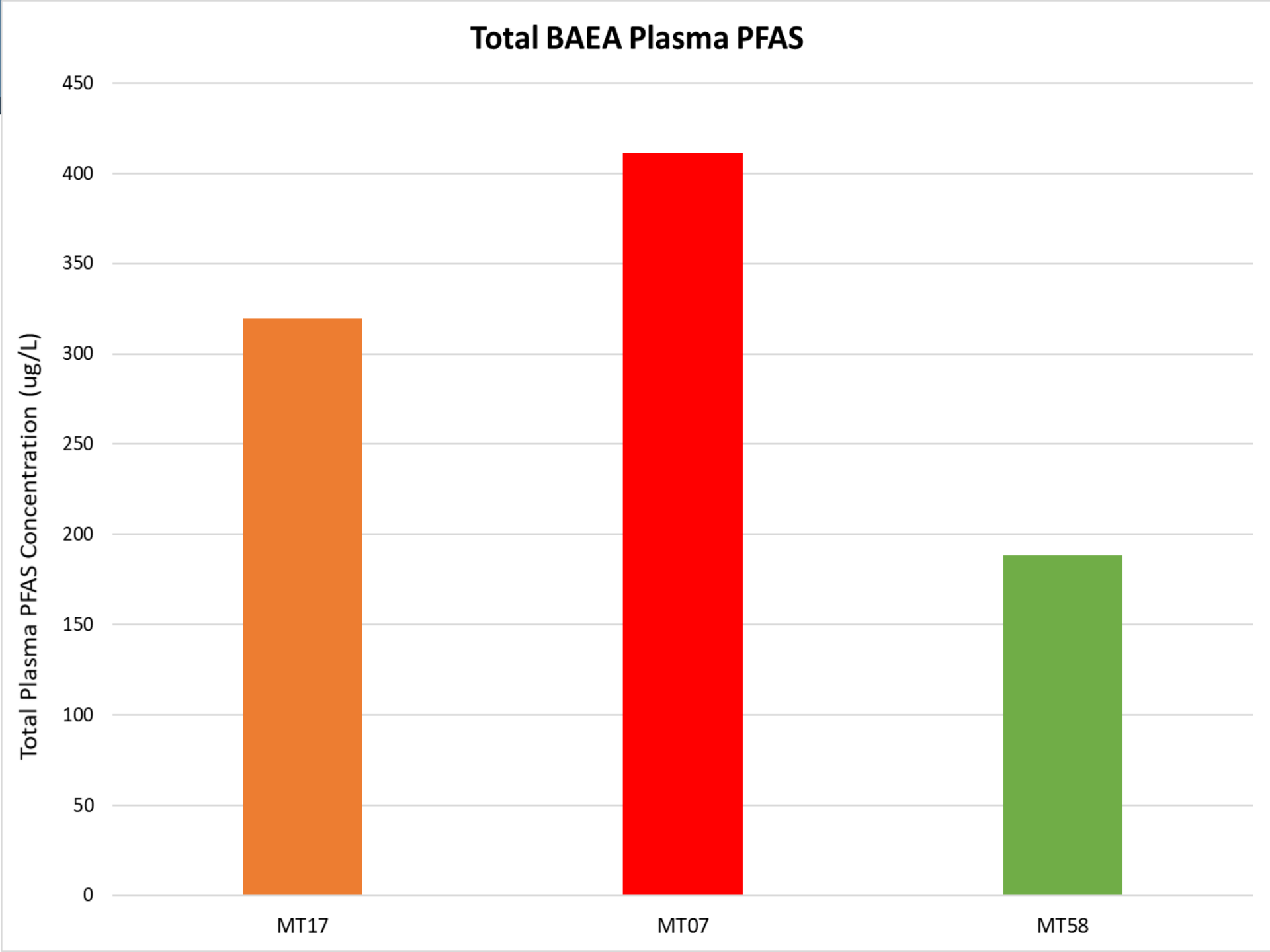


Total Bald Eagle Plasma PFAS by Region (2011 - 2016)



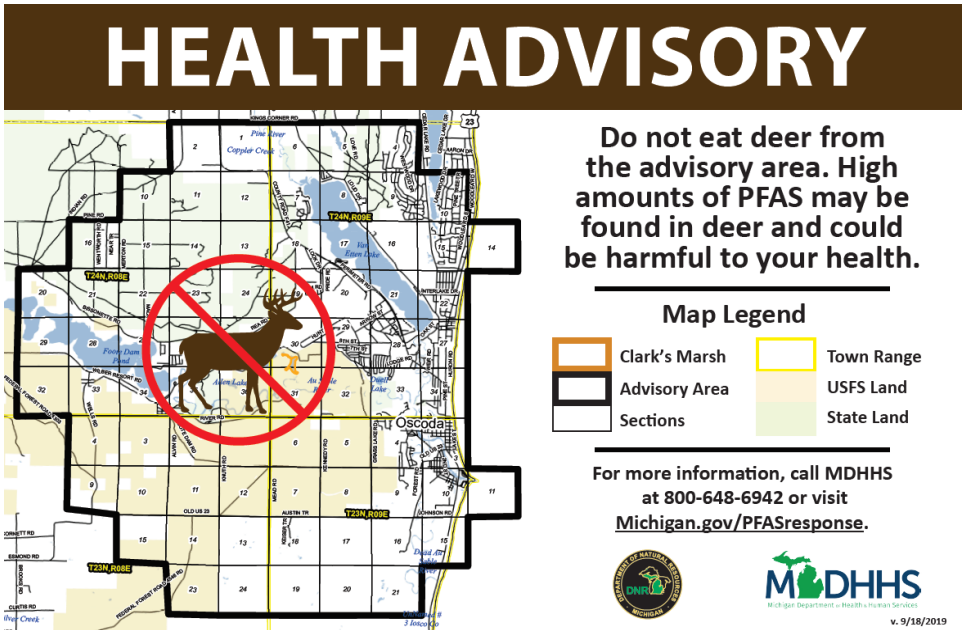
Marinette Eagle Sampling




Total BAEA Plasma PFAS
Total Plasma PFAS Concentration (ug/L)
450
400
350
300
250
200
150
100
50
0
MT17
MT07
MT58

PFAS in Deer

- What do we know?
  - Michigan has reported results on nearly 150 deer
  - Many from sites contaminated with PFAS
  - Only 1 deer had PFAS levels that warranted an advisory



PFAS in Deer

- Preliminary sampling plan
  - Sample approximately 20 deer in 2020
  - Focus collection in/around JCI complex
  - Work with DHS to interpret results and evaluate need for any advisory

Listening Session Format

- **Format:**
  - Visit Stations for 45-mins and reconvene for 15-mins at the end to summarize
- **Ground Rules:**
  - Purpose of Listening Sessions
  - 3-mins per person → everyone has the opportunity to ask their questions
  - Keep comments constructive
  - Attack the problem not the person

Listening Session

- **Break Into Stations: 6:30pm – 7:15pm**
  - Site Investigation and Clean-up
  - Drinking Water
  - Water Quality and Wastewater – Biosolids
  - Public Health
  - PFAS in Deer
- **Re-convene as a group: 7:15 pm**
  - What we'll bring back to our team to discuss further
  - What's Next
- **Meeting Adjourn – 7:30pm**