



Wisconsin State Agency PFAS Action Plan – Public Meeting

Tuesday, February 18th, 2020 11:00am – 1:00pm

UW Oshkosh
Fond du Lac Campus



Welcome

Topic 1: Welcome and Introductions

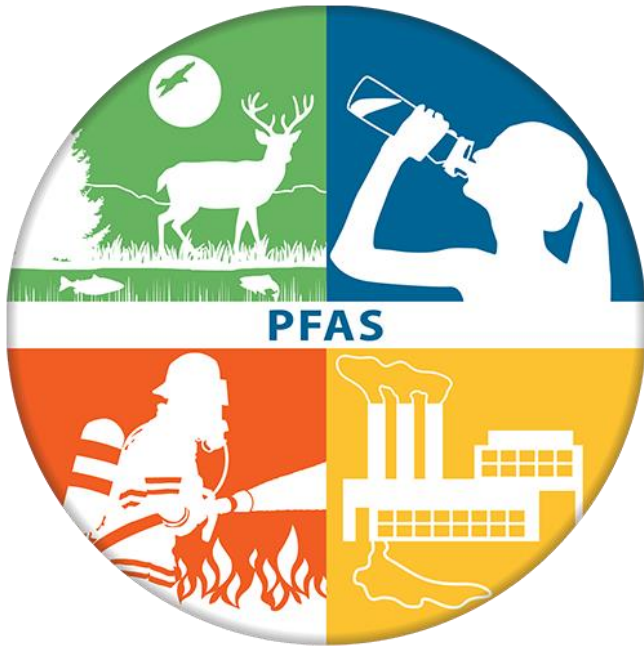
Topic 2: Overview of PFAS and Wisconsin PFAS Action Council

Topic 3: Actions DNR is taking/has taken to date

Topic 4: Q&A

Topic 5: Public Input

PFAS Overview



- What are PFAS
- Where do we find PFAS
- Emerging issues
- Challenges we face
- Wisconsin response via WisPAC

Graphic: ITRC

What are PFAS?

- **Per- and Polyfluoroalkyl Substances (PFAS)**
 - Family of 4,000+ human-made chemicals
 - Commercial and industrial applications since 1940s
 - PFOA, PFOS, PFNA, PFHxS, GenX
 - Less known about “short-chain” PFAS
- **“Emerging Contaminant”**
 - Bioaccumulate
 - Not known to degrade in the environment and the environment
 - Certain PFAS are threat to human health



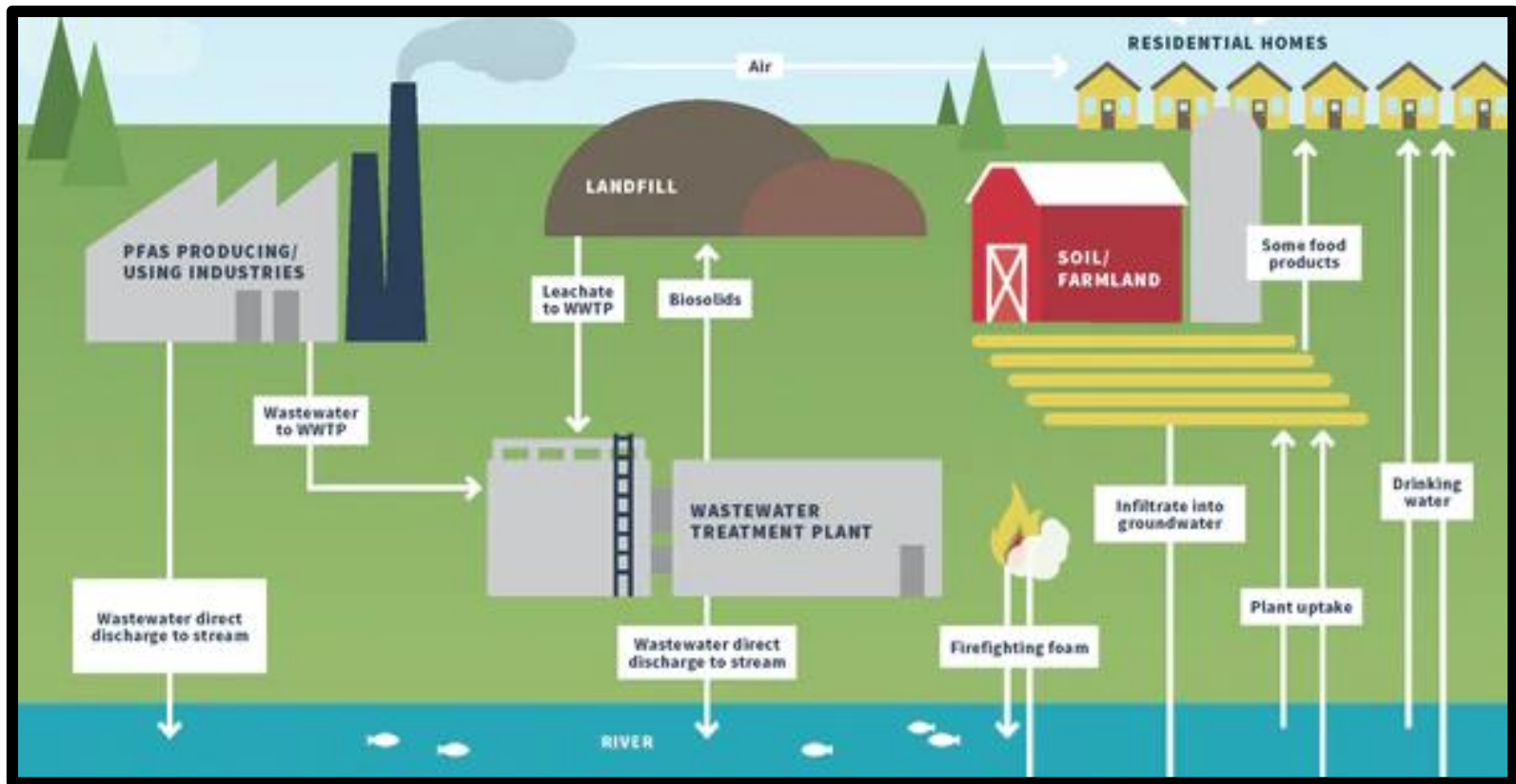
Source: Australian Department of Defense



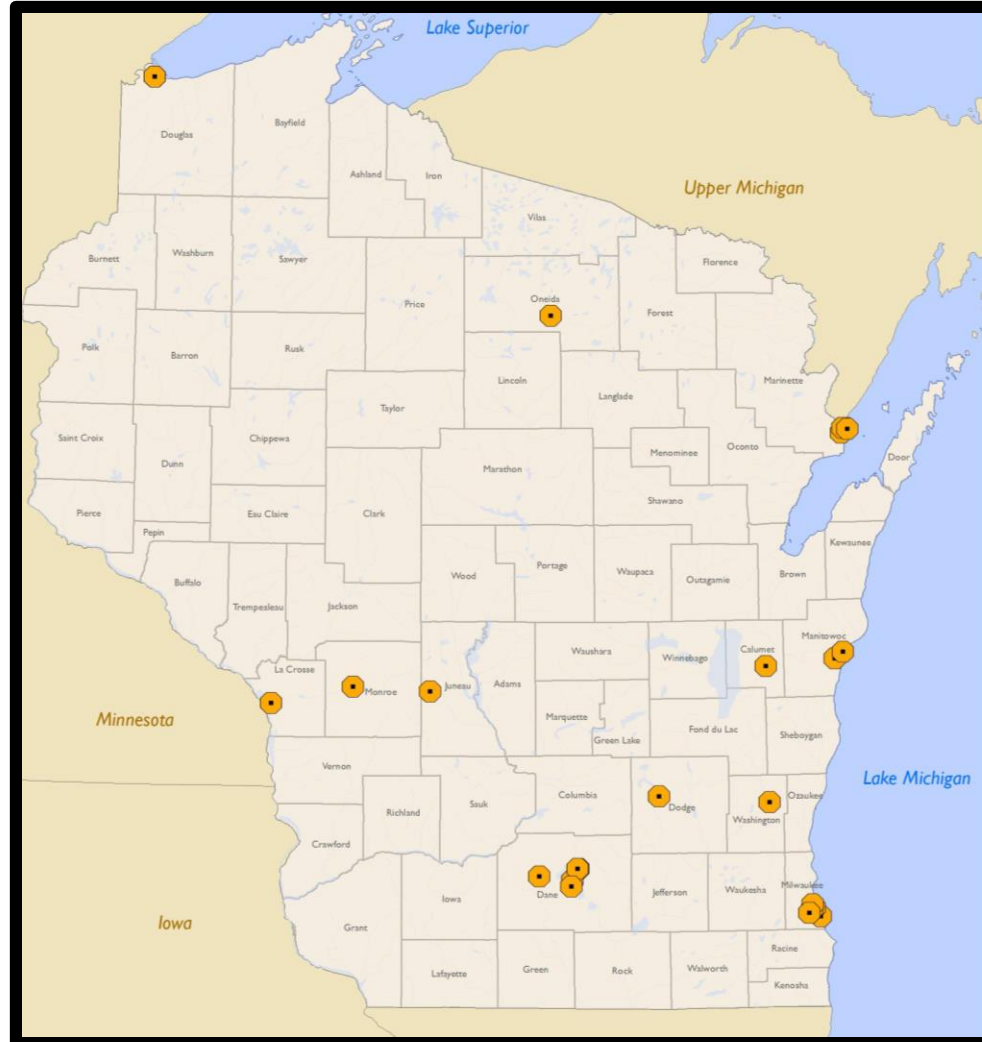
Products that may contain PFAS

- Non-stick coatings
- Waterproof fabrics
- Certain firefighting foams
- Protective coatings
- Stain/water resistant products
- Chrome plating
- Food packaging
- Personal care products
- Coated paper

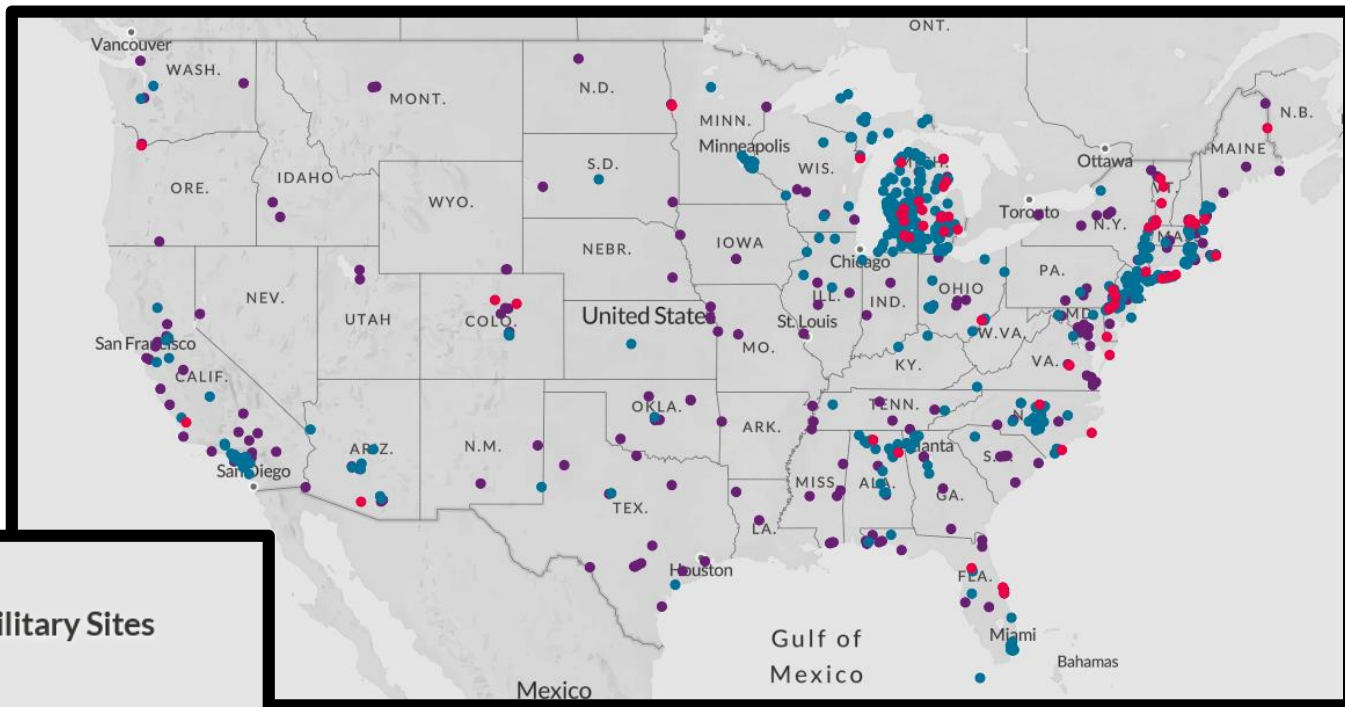
Where are PFAS found?



Wisconsin PFAS Sites



Not just a Wisconsin issue...



- On** Military Sites
- On** Drinking Water
- On** Other Known Sites

PFAS Contamination Sites In the U.S.

Source: EWG 2019

How are humans exposed?



Main exposure from *ingestion*...

- Drinking contaminated water
- Eating food with PFAS-containing packaging
- Eating fish caught from PFAS-contaminated water
- Accidentally swallowing contaminated soil or dust.

Exposure can also occur from PFAS-containing consumer products



Health effects of PFAS?

Studies in humans show PFAS may:

- Increase cholesterol levels
- Reduce antibody response
- Decrease fertility in women
- Increase the risk of:
 - thyroid disease
 - Osteoarthritis
 - Ulcerative colitis
 - Testicular cancer
 - Kidney cancer

Studies in animals have shown:

- Changes in liver, thyroid function
- Changes in hormone levels
- Changes in pancreatic function

Based on conclusion by:
US EPA, the US CDC and ATSDR.

PFAS Exposure: Environment



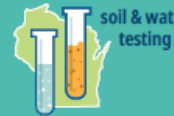
What are PFAS?

PFAS are a group of human-made chemicals used for decades in numerous products.



Products that may contain PFAS.

What is Wisconsin Doing About It?



Additional efforts include a **PFAS Action Committee (WisPAC)** and a **PFAS Technical Advisory Group**.

Why Should I Care?

PFAS persist in the environment and the human body for long periods of time. Recent findings indicate that exposure to certain PFAS may have harmful health effects in people.



What You Can Do...

Test Your Water
<http://bit.ly/WDNRTTESTYOURWELL>



Check State Fish Advisories
<http://bit.ly/WDNREATINGYOURCATCH>

Learn More About PFAS Health Risks

http://bit.ly/WDNR_PFAS



More information Online too



http://bit.ly/WDNR_PFAS



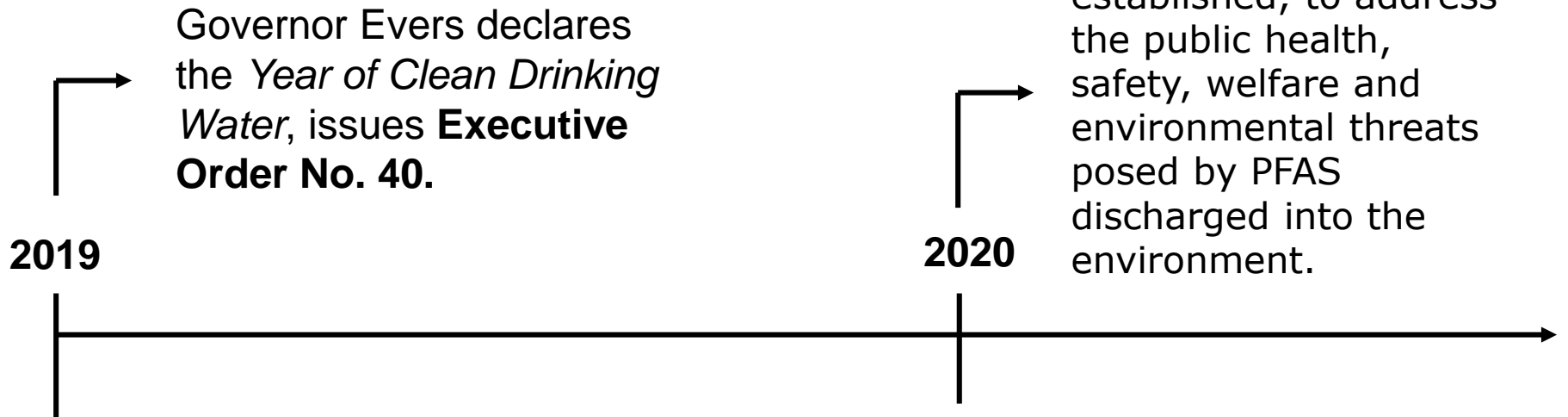


Wisconsin Per- and Polyfluoroalkyl Substances (**PFAS**) **Action Council**

(**WisPAC**)

An overview of the PFAS action council
spearheaded by the Wisconsin Department of
Natural Resources





Executive Order No. 40

“Create the PFAS Coordinating Council pursuant to Section 13.019 of the Wisconsin Statutes. The Council shall be staffed by the Department of Natural Resources, with assistance provided by other agencies. Membership of the Council shall include a representative from each agency seeking to participate.”





WisPAC Members

Department of Administration

Department of Agriculture, Trade and Consumer Protection

Department of Corrections

Department of Health Services

Department of Justice

Department of Military Affairs

Department of Public Instruction

Department of Revenue

Department of Safety and Professional Services

Department of Transportation

Department of Veterans Affairs

Office of the Commissioner of Insurance

Public Service Commission

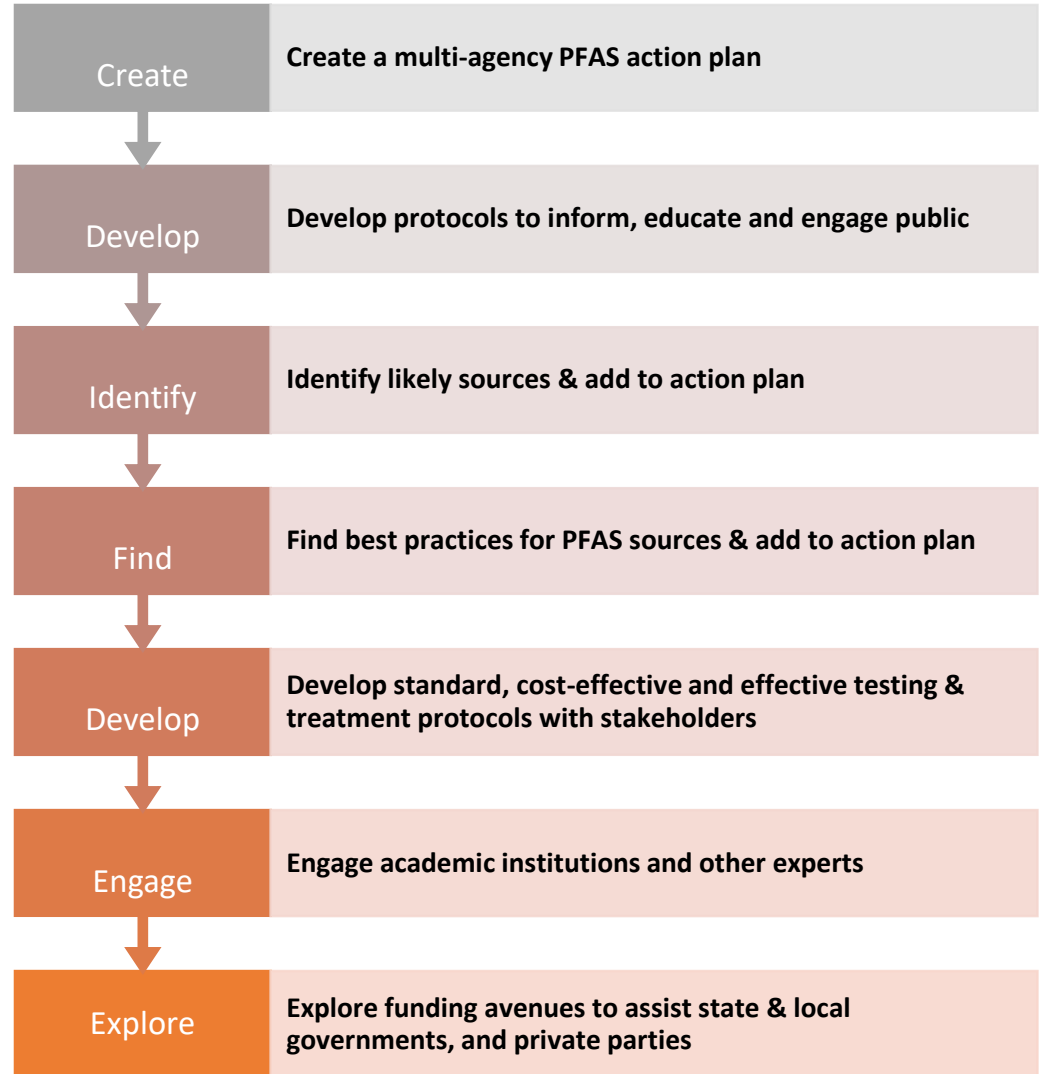
University of Wisconsin (UW) System

Wisconsin Economic Development Corporation

Wisconsin State Laboratory of Hygiene



WisPAC's Charge





WisPAC PFAS Action Plan

Focus Areas

1



Preventing
Future
Discharges
and
Exposures

2



Inventorizing
and Minimizing
Current PFAS
Exposures

3



Identifying and
Addressing
Historic or
Legacy PFAS
Discharges and
Exposures

4



Educating and
Communicating
About the Risks
Associated with
PFAS



Action Plan

Building an Outline

1



Preventing
Future
Discharges
and
Exposures



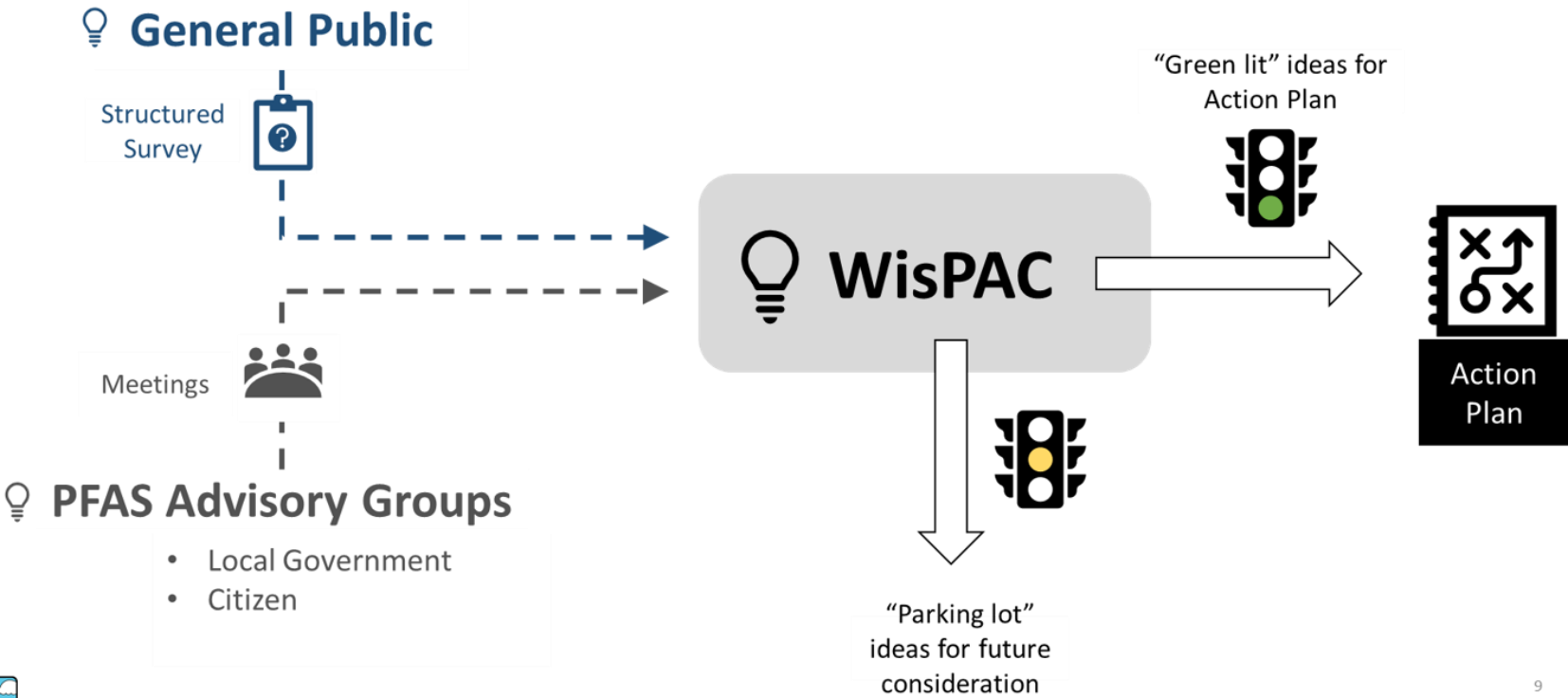
Action Item

Step
1

Step
2

Step
3

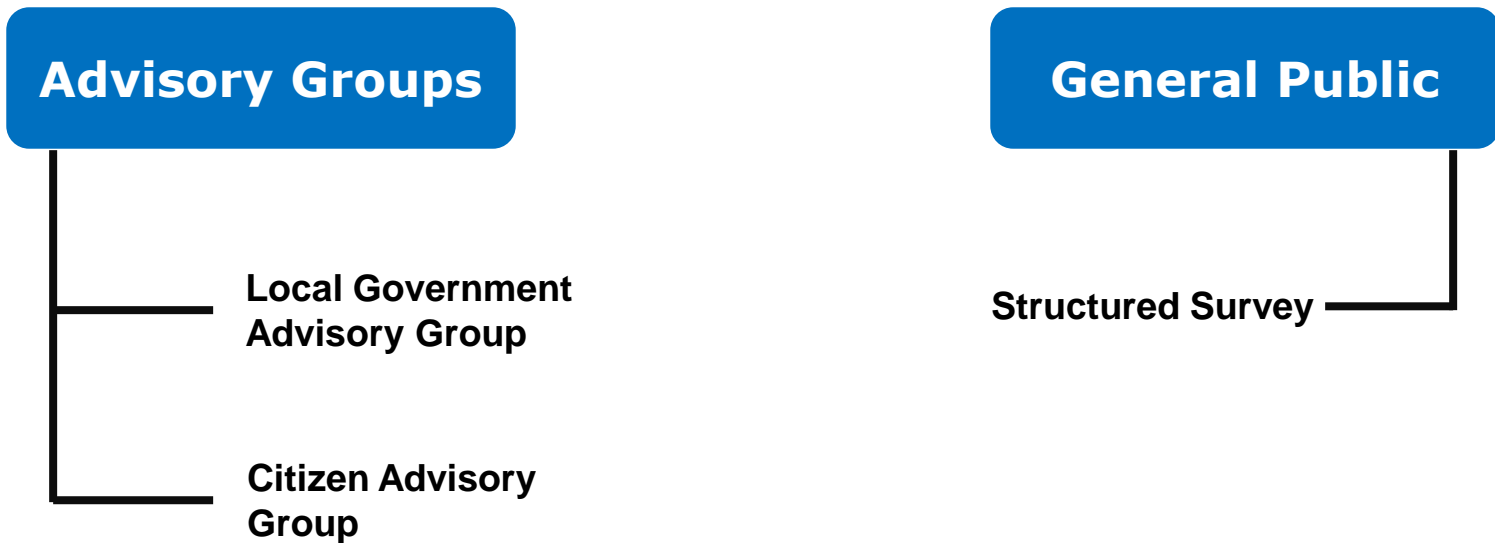
Action Plan Development





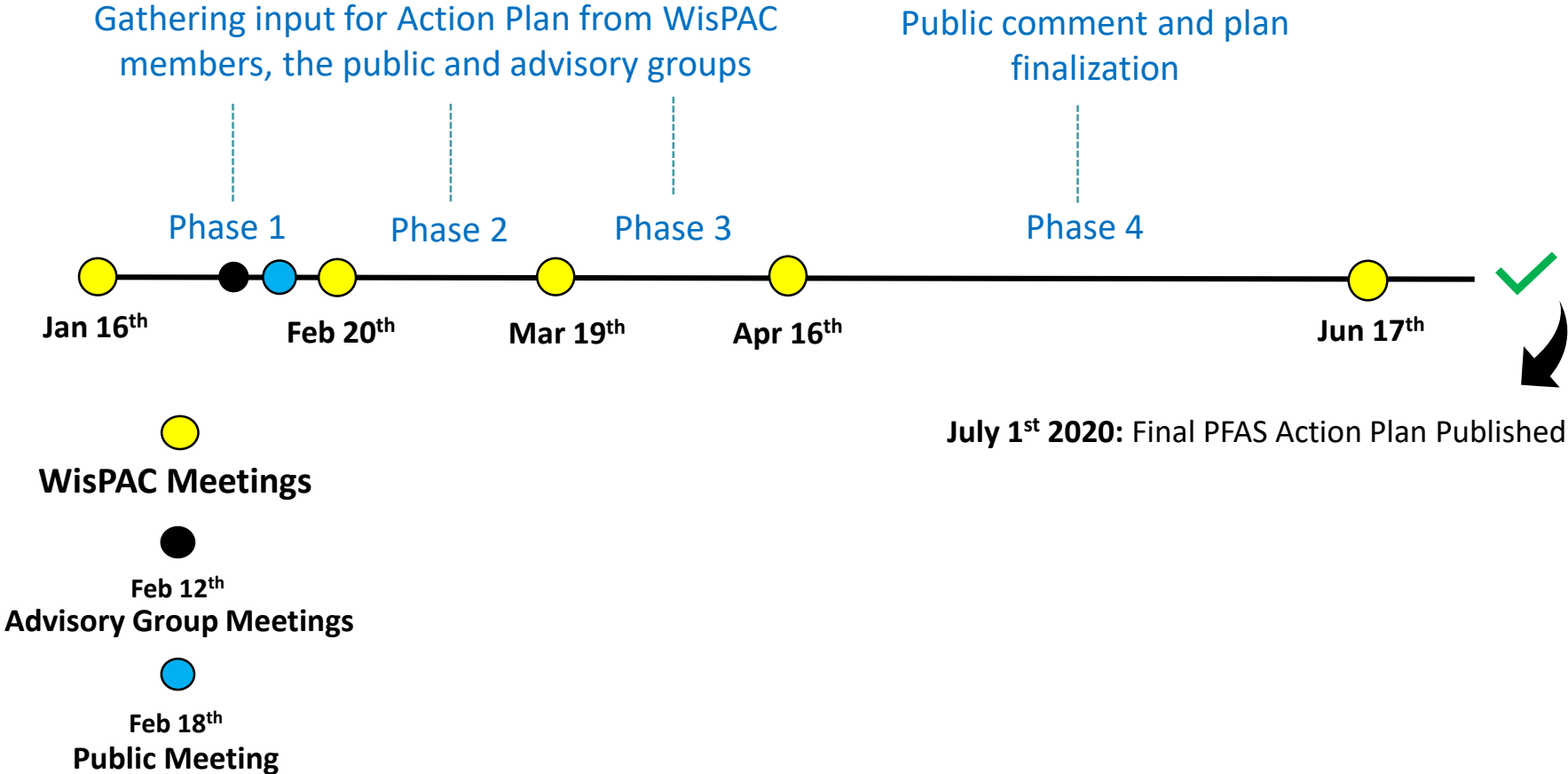
Action Plan

Fielding Input





Action Plan Timeline





WisPAC Resources

Public survey open Feb. 3 – Feb. 21, 2020

Available on the **Wisconsin PFAS Action Plan** webpage:

<https://www.surveymonkey.com/r/PC67F6N>

Public meetings:

Citizen/Public Policy Advisory Group Meeting | March 5th

9:00 AM – 12:00 PM **DNR Fitchburg Service Center**

Local Government Advisory Group Meeting | March 5th

1:00 PM – 4:00 PM **DNR Fitchburg Service Center**

Joint Advisory Groups Meeting | April 2nd

10:00 PM – 3:00 PM **Natural Resources Building (GEF2) Madison**



Communication and Engagement

- PFAS Technical Advisory Group
- Public meetings in impact communities
- Engagement with local gov't where PFAS has been found
- Public comment
 - Lab certification
 - Rule scope statements
 - Natural Resources Board



Planning and Coordination

- WisPAC – PFAS Action Plan
- Internal working group
- Collaboration with DHS and UW-SLOH
- Learning from other states
- Identified research needs



Budget Initiatives

- Survey of Fire Departments
 - AFFF – firefighting foam
 - Volume
- Model development
 - Potential PFAS sources
 - Impacts to receptors

DNR Programs Involved

- Drinking Water and Groundwater
- Remediation and Redevelopment
- Water Quality, including Fisheries
- Waste and Material Management
- Air Management
- Wildlife
- Lab Certification






Drinking Water and Groundwater Program

NR 140 – Groundwater Rule & Standards

- Establishes numeric groundwater quality standards
- Helps if cleanup needed or private well is contaminated
- DHS recommended NR 140 standard of 20 ppt for PFOA and PFOS
 - 2 of approx. 5,000 PFAS compounds
 - process required by state law
- DNR rulemaking has begun

Additional PFAS Compounds Discovered in Groundwater

- State law requires DNR to maintain lists of compounds detected in, or have a reasonable probability to enter groundwater, and routinely ask DHS to recommend standards
- 34 additional PFAS were sent to DHS for their toxicological review



PFTtA	Perfluorotridecanoic acid	72629-94-8
PFTeA	Perfluorotetradecanoic acid	376-06-7
PFBA	Perfluorobutanoic acid	375-22-4
PFPeA	Perfluoropentanoic acid	2706-90-3
PFHxA	Perfluorohexanoic acid	307-24-4
PFHpA	Perfluoroheptanoic acid	375-85-0
PFNA	Perfluorononanoic acid	375-95-1
PFDA	Perfluorodecanoic acid	335-78-2
PFUnA	Perfluoroundecanoic acid	2059-94-8
PFBS	Perfluorobutanesulfonic acid	375-73-5
PFHxS	Perfluorohexanesulfonic acid	355-46-4
PFHpS	Perfluoroheptanesulfonic acid	375-92-8
FOA	Perfluorooctane sulfonamide	754-91-6
PFDA	Perfluorododecanoic acid	307-55-1
6:2 FTSA	6:2 Fluorotelomer sulfonic acid	27619-87-2
8:2 FTSA	8:2 Fluorotelomer sulfonic acid	39108-34-4
PFDS	Perfluorododecanesulfonic acid	335-77-3
PFPeS	Perfluoropentanesulfonic acid	2709-81-4
HFPO-DA	Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6
4:2 FTSA	4:2 Fluorotelomer sulfonic acid	757124-72-4
10:2 FTSA	10:2 Fluorotelomer sulfonic acid	120226-60-0
PFHxDA	Perfluorohexadecanoic acid	67905-19-5
PFDDA	Perfluorododecanoic acid	16617-11-6
DONA	4,8-Dioxa-3H-perfluorononanoic acid	919005-14-4
9Cl-PF3ONS	9-chlorohexadecafluorop-3-oxanonane-1-sulfonic acid (F-53B Major)	756426-55-1
11Cl-PF3OUoS	11-chlorooctadecafluoro-3-oxoundecane-1-sulfonic acid (F-53B Minor)	763051-92-9
PFDoS	Perfluorododecanesulfonic acid	79780-39-5
PFNS	Perfluorononanesulfonic acid	68259-12-1
NMeFOSA	N-Methyl perfluorooctane sulfonamide	31606-32-8
NEFOSA	N-Ethyl Perfluorooctane sulfonamide	4151-50-2
NMeFOSAA	N-Methyl perfluorooctane sulfonamidoacetic acid	2355-31-9
NEFOSAA	N-Ethyl perfluorooctane sulfonamidoacetic acid	2991-50-6
NMeFOSE	N-Methyl perfluorooctane sulfonamidoethanol	24446-09-7
NEFOSE	N-Ethyl perfluorooctane sulfonamidoethanol	1691-96-2



Drinking Water and Groundwater Program

NR 809: Drinking Water Standards (Public Water Supplies)

- DNR rulemaking has begun
- Maximum contaminant level for PFOA and PFOS
 - 20 ppt individually and combined
- Will have requirements for testing public water supplies
- Laboratory methods
- Public notification
- Treatment or new well will be required if above the Maximum Contaminant Level (MCL)
- Does not apply to private wells

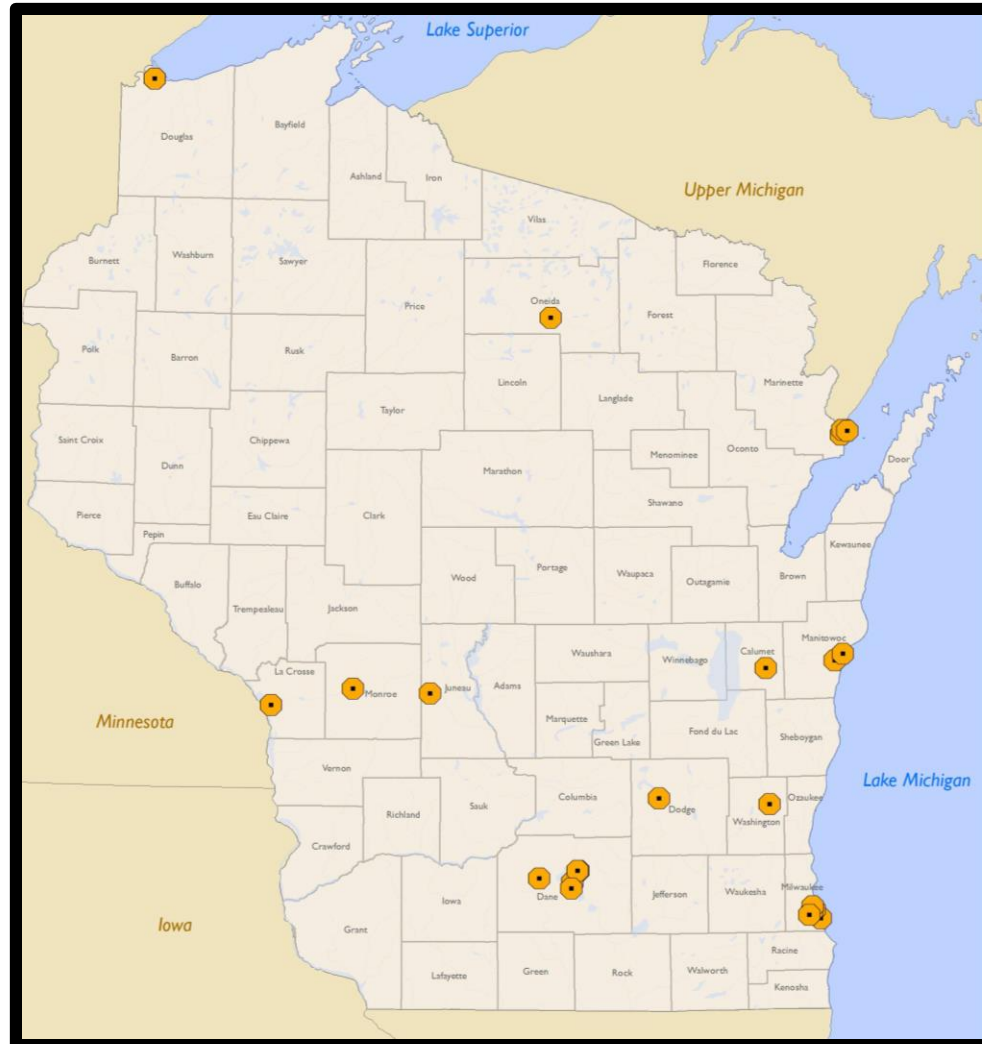
Water Quality Program

- Initiated rule making for surface water quality standards
- Requiring PFAS testing and treatment in general discharge permit for known sites (e.g., Husky refinery fire and at Tyco)
- Assisting City of Marinette and Peshtigo with bio-solids and Publicly Owned Treatment Works (POTW) issues
- Assessing need for surface water quality standards (triennial standards review): every 3-5 years
- Surface Water and fish sampling near potential PFAS sources in 2019 & more planned for 2020
- Seeking more information for POTW



← Foam tested for PFAS

Wisconsin PFAS Sites



Remediation and Redevelopment Program

Environmental Cleanups:

- RR Program overseeing site investigation and remedial action at defense department sites, some airports, and limited manufacturers to date, such as TYCO/JCI firefighting foam site in Marinette.
- Legal authority to require cleanup even if no numeric standards.
- Can be considered a discharge of a hazardous substance or environmental pollution.



Remediation and Redevelopment Program

Environmental Cleanups:

- 11 sites with known PFAS contamination; more suspected.
- Until more experience, statewide group is deciding which sites are being asked to sample for PFAS.



Air Program

- Monitoring

- Utilizing connections with WSLH to collaborate on monitoring efforts that advance the science and help us work toward greater understanding of how to conduct a well thought out deposition modeling analysis
- Working to determine air pathway to inform fate and transport knowledge

- Permits/Compliance

- Wis. Stats. 285.11(7) gives us legal authority to conduct investigations and research.





Waste & Materials Management

Research on treatment and disposal options

Impact of waste facilities

- landfills
- leachate
- compost piles

Wildlife

- PFAS discovered by DNR in:
 - bald eagles
 - fish
- Concerns over other wildlife, such as deer. (E.g. Michigan)



'Do Not Eat' deer advisory issued after PFAS contamination

By LESTER GRAHAM • OCT 19, 2018

PROGRAM
The Environment Report



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Clark's Marsh near the closed Wurtsmith Air Force Base is contaminated with PFAS chemicals.

CREDIT LESTER GRAHAM / MICHIGAN RADIO

State agencies in Michigan have issued a 'Do Not Eat' advisory for deer in Oscoda Township near the closed Wurtsmith Air Force Base.

The state tested deer tissue from areas across the state known to have PFAS chemical contamination, including places such as Grayling, Rockford, and Oscoda Township.

DNR Lab Certification

- DNR developed lab certification program for PFAS compounds in specific media





PFAS: Wisconsin Takes a Leadership Role

Questions??

DNR's PFAS Response

