Safe Water for Cascade

PFAS Community Forum

EGLE

MDHHS
Michigan Department of Health & Human Services

County of Kent Michigan
HEALTH DEPARTMENT
Caring today for a healthy tomorrow

PFAS ALLIANCE

CASCADE

Community Forum Agenda

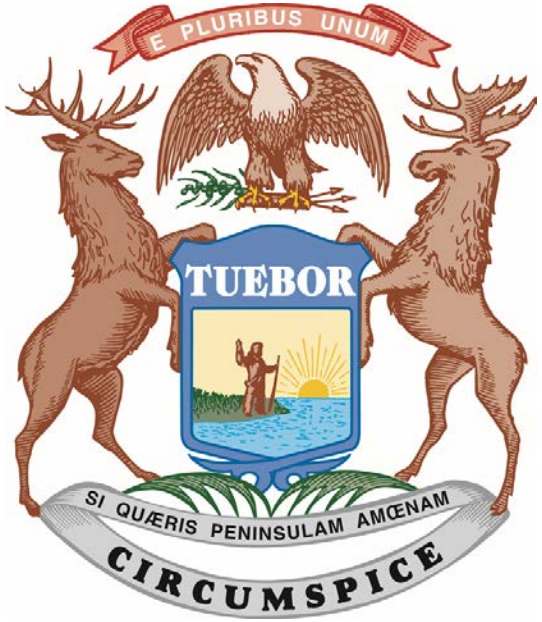
- Welcome & Housekeeping Details – Patti Baldwin (Safe Water for Cascade)
- Introduction of Invited Guests – Supervisor Grace Lesperance (Cascade Twp)
  - Brief Comments
    - State Senator Winnie Brinks
    - Cascade Township Special Counsel Doug Van Essen
- PFAS 101 – EGLE, MDHHS
- Airport Investigation Update – Aaron Assmann (EGLE)
- Well Information – KCHD
- Municipal Water Project & Grant Application – Cascade Twp / EGLE
- Review Of Question List
- Summary and Additional Questions – A.J. Birkbeck (PFAS Alliance)

- Meeting MC – Kris White (Safe Water for Cascade)

Community Forum Speakers

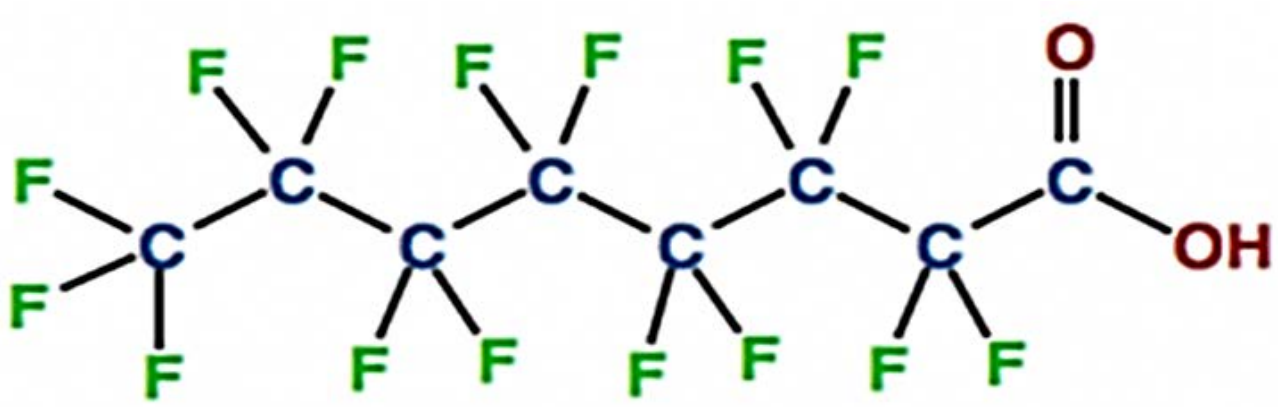
- EGLE – Abby Hendershott – MPART Executive Director
- EGLE – David Bandlow – Acting District Supervisor
- EGLE – Aaron Assmann – Environmental Quality Analyst
- MDHHS – William Farrell – Toxicologist
- MDHHS – Laura Gossiaux – Acting Community Engagement Unit Manager
- KCHD – Sara Simmonds – Environmental Health Division Director
- CCT – Grace Lesperance – Township Supervisor
- CCT – Ben Swayze – Township Manager

Michigan PFAS Action Response Team (MPART)



- Executive Order 2019-03
- Unique Multi-Agency Approach
- Leads Coordination and Cooperation Among All Levels of Government
- Directs Implementation of State's Action Strategy

Per- and Polyfluoroalkyl Substances (PFAS)



PFOA - perfluorooctanoic acid

- **Strong Carbon-Fluorine Bonds**
- Surfactants
- Highly Stable
- Repel Water, Oil, Fat, and Grease
- Began Developing in 1940s
- 5,000+ Compounds Today

PFAS Uses

Aerospace

Apparel

Building and Construction

Chemicals and Pharmaceuticals

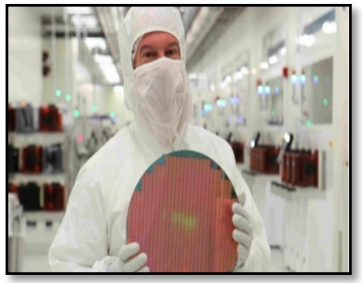
Electronics

Oil & Gas

Energy

Healthcare and Hospitals

Aqueous Film Forming Foam

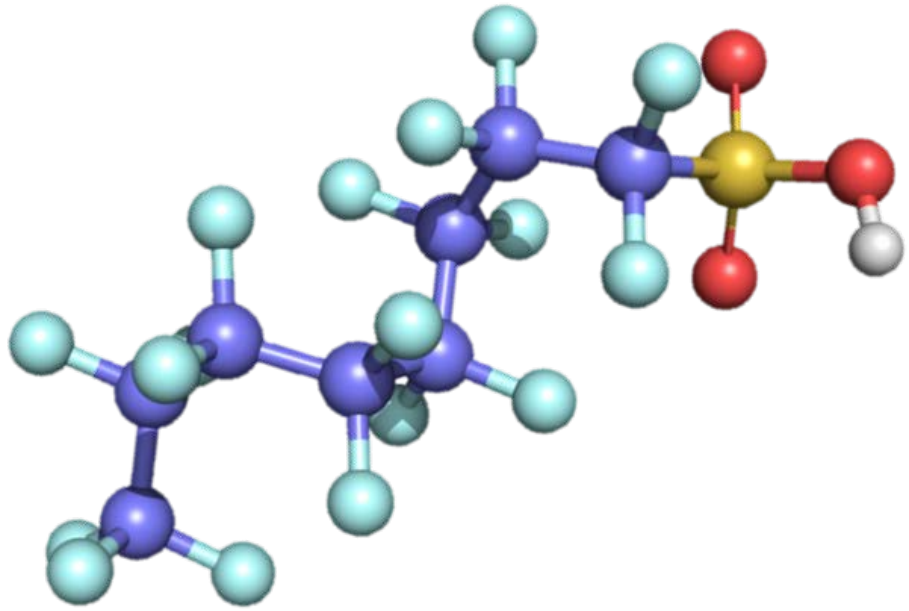


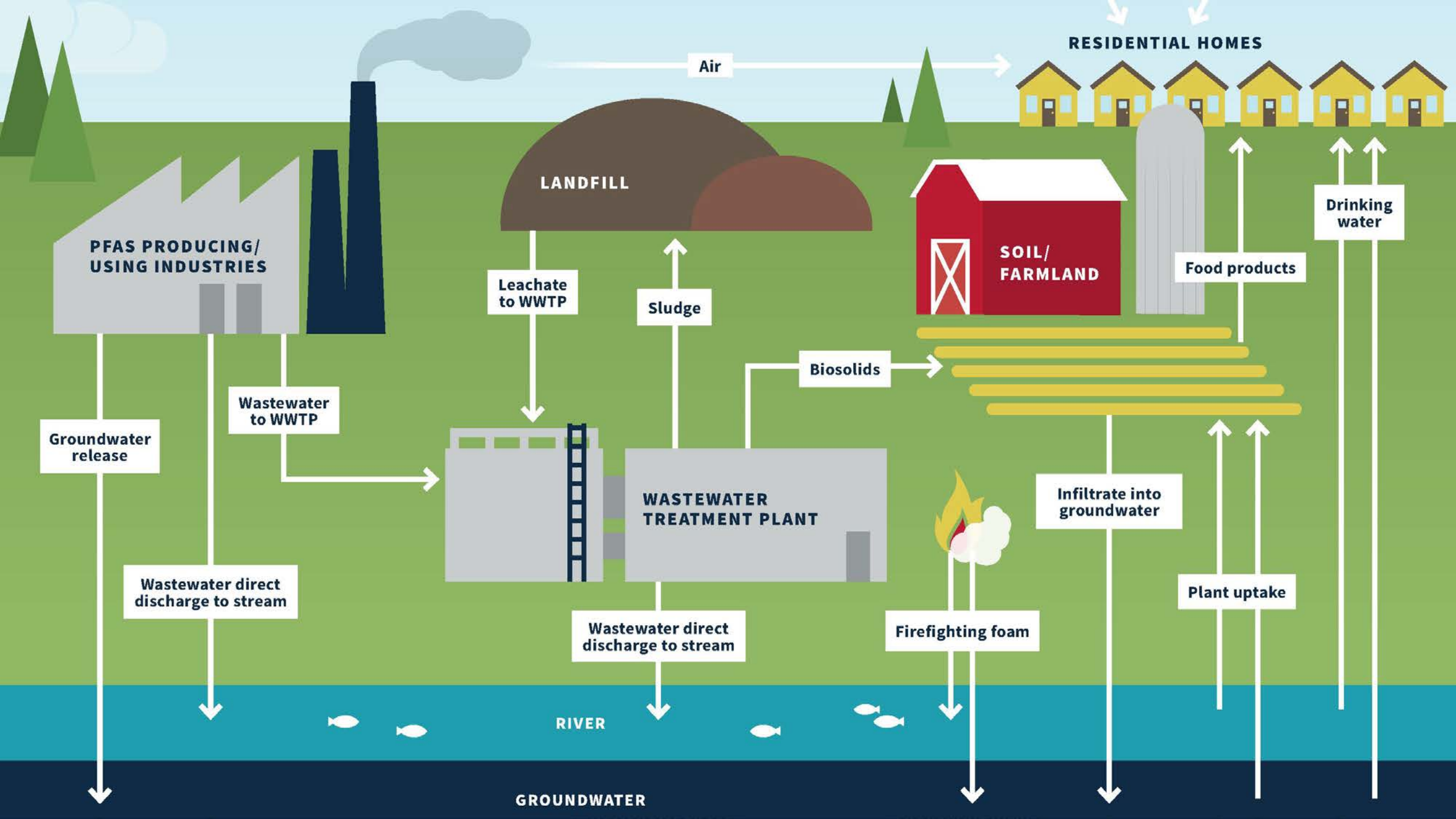
Semiconductors

MPART

Why the Concern?

- Widespread
- Don’t Break Down Easily - Hard to Get Rid of
- Bioaccumulative – Build Up in Our Bodies
- Some PFAS May Affect Health
- Lack of Information
- Inconsistent Standards Nationally




RESIDENTIAL HOMES
Air
LANDFILL
PFAS PRODUCING/
USING INDUSTRIES
SOIL/
FARMLAND
Drinking
water
Food products
Leachate
to WWTP
Sludge
Biosolids
Wastewater
to WWTP
Groundwater
release
WASTEWATER
TREATMENT PLANT
Infiltrate into
groundwater
Wastewater direct
discharge to stream
Wastewater direct
discharge to stream
Firefighting foam
Plant uptake
RIVER
GROUNDWATER




Surface Water Investigations

- Survey of Surface Water and Fish
- Foam
- Wastewater

Michigan Drinking Water Standards

2700 public water supplies regulated and monitoring

Compound	Michigan Standards	EPA Recommendation
PFNA	6 ppt	NA
PFOA	8 ppt	70 ppt combined
PFOS	16 ppt	
PFHxS	51 ppt	NA
GenX (HFPO-DA)	370 ppt	NA
PFBS	420 ppt	NA
PFHxA	400,000 ppt	NA

PFAS and Health

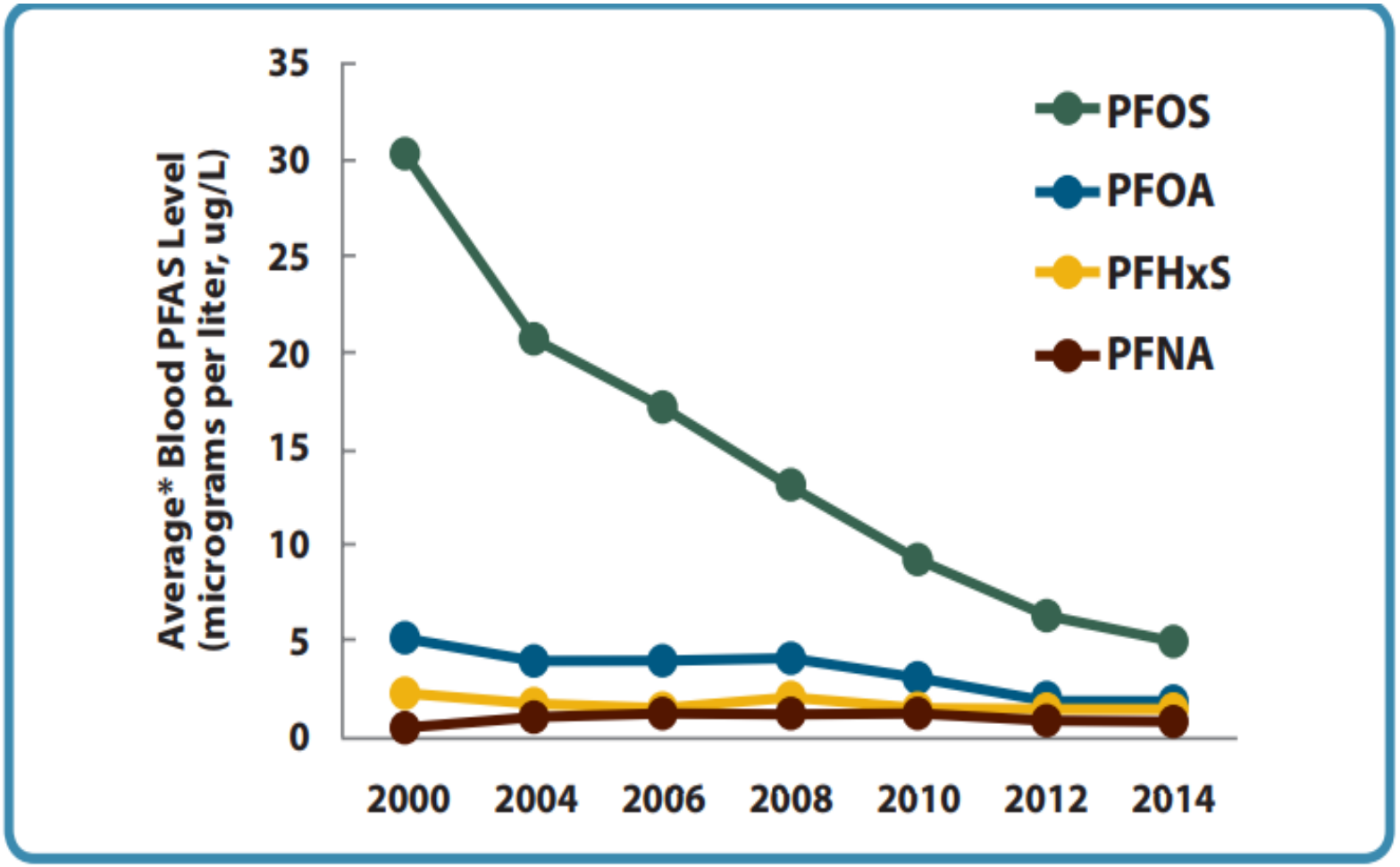
Bill Farrell, Toxicologist
Michigan Department of Health and Human Services
(517) 243-5350
FarrelW@Michigan.gov

The Role of MDHHS/ Local Health Department (LHD)

- Understand the health concerns facing your community
- Develop a plan to investigate and address health risks
    - EGLE leads the site investigation
    - MDHHS and the Local Health Department lead the public health planning and response
- Evaluate PFAS exposures to residents in the community
    - Recommend public health actions as needed

Exposure to PFAS Chemicals

- Drinking contaminated water
- Eating fish caught from water contaminated by PFAS
  - "Eat Safe Fish" Guidelines
- Incidental swallowing of contaminated soil or dust
- Eating food packaged in materials containing PFAS
- Using some consumer products
- PFAS absorption through skin is typically not a concern



Blood levels of the most common PFAS in people in the United States 2000-2014

* Average = geometric mean

Data Source: Centers for Disease Control and Prevention. Fourth Report on Human Exposure to Environmental Chemicals, Updated Tables, (January 2017).

Potential Associated Human Health Outcomes PFOA and/or PFOS

- Reduced fertility
- High blood pressure or pre-eclampsia in pregnant women
- Small decreases in infant birth weight
- Higher cholesterol
  - Especially total cholesterol and LDL cholesterol

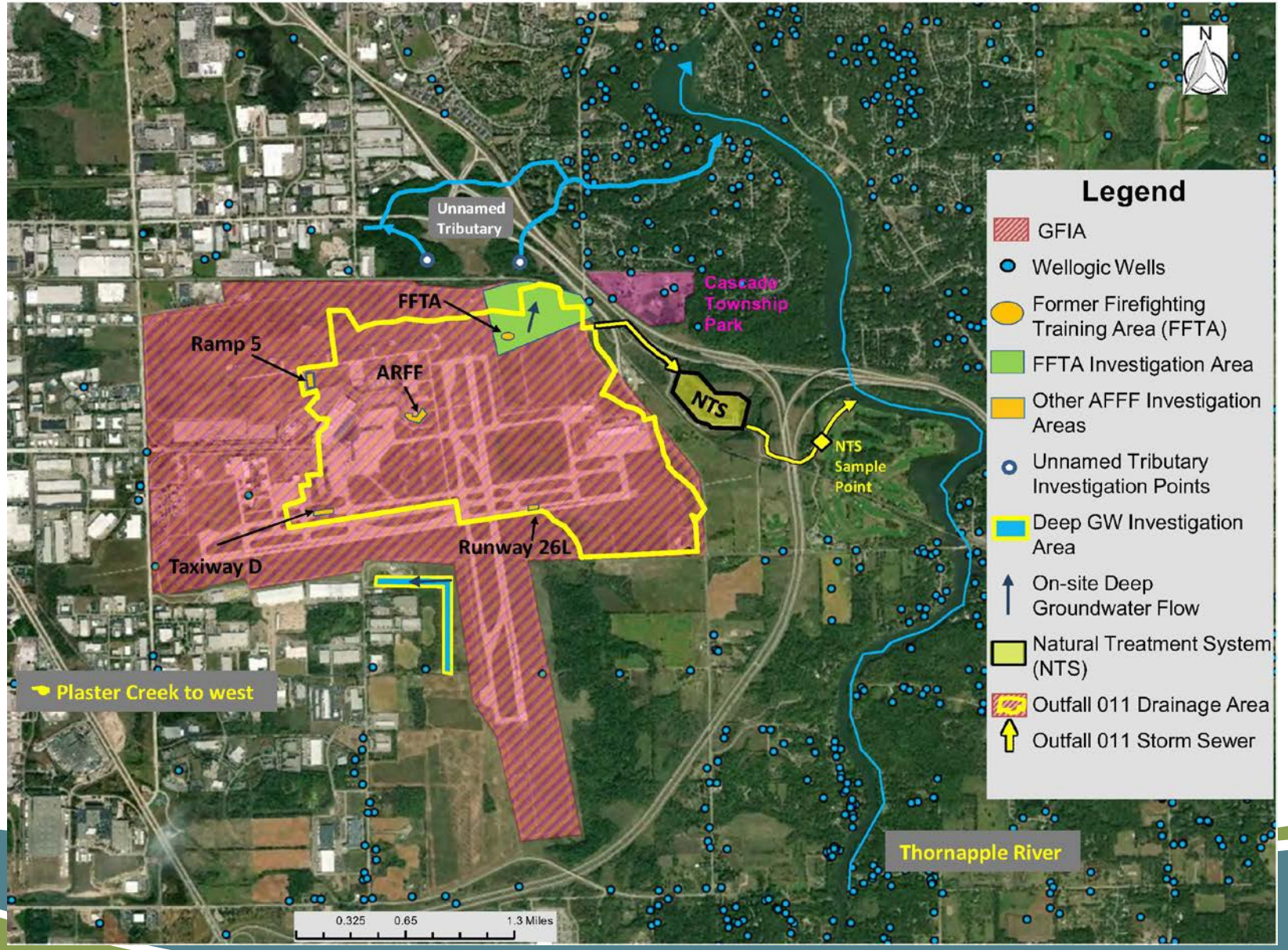
Potential Associated Human Health Outcomes PFOA and/or PFOS

- Thyroid disease
- Liver damage
- Decreased immune system response to vaccines
- Developing certain types of cancer
  - In particular, kidney and testicular cancers*

* PFOA only

EGLE Update – Cascade Area Overview

All locations are approximate



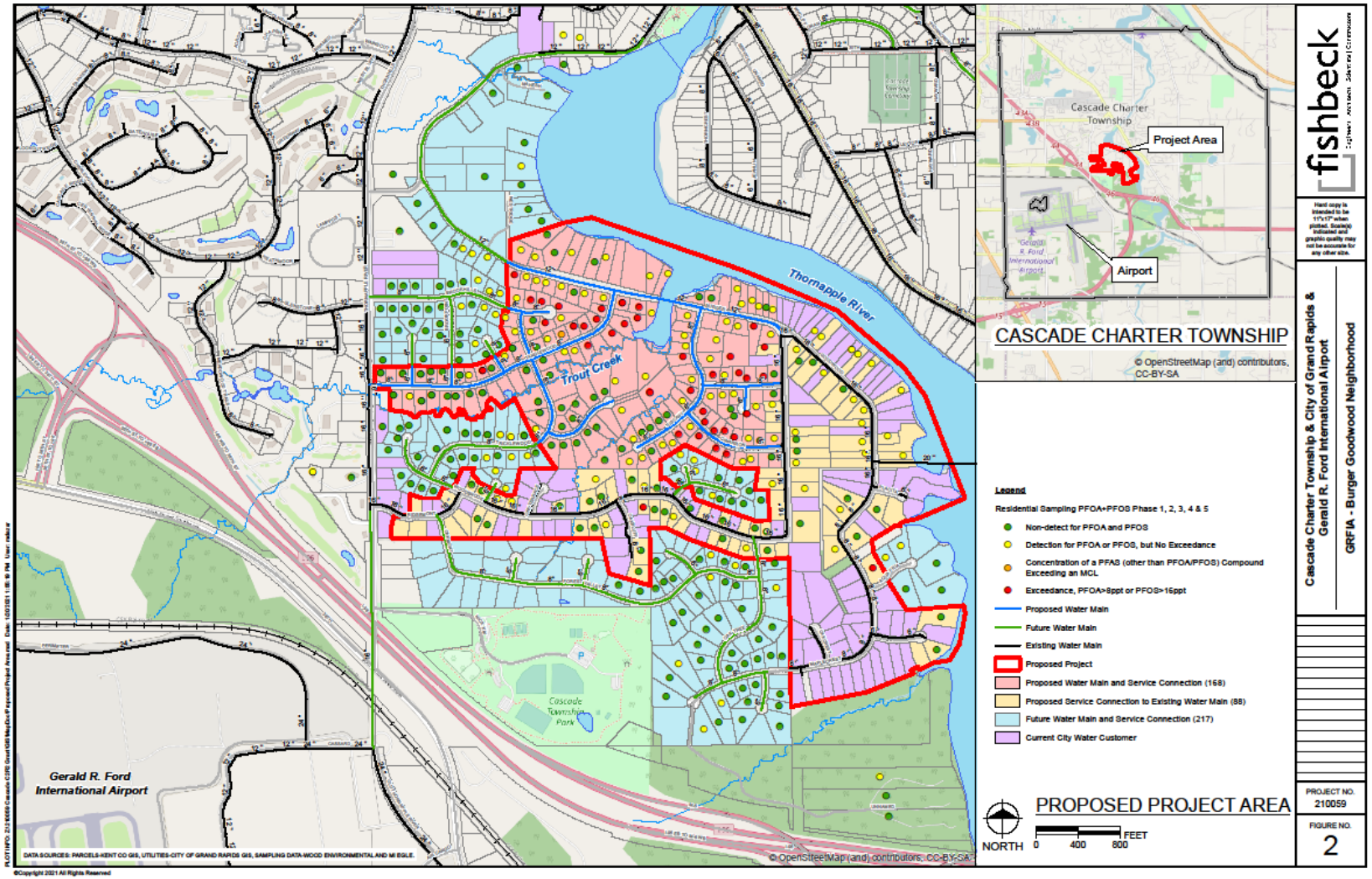
MPART

EGLE Update – PFAS Investigations

- Complete - EGLE residential well sampling
  - 364 samples over five phases
- Ongoing - Gerald R. Ford Int'l Airport (GFIA) onsite investigation
  - Executing work plan under MDOT grant
- Ongoing – EGLE/GFIA negotiations for off-site contamination
  - EGLE to GFIA Enforcement Notice on March 31, 2021
    - EGLE to GFIA Violation Notice on December 9, 2020
    - EGLE to GFIA liability notice on October 9, 2020

Consolidation and Contamination Risk Reduction (C2R2) Grant Update

C2R2 Grant Application



C2R2 Grant Application

Table 5 – Phase 1 Estimated Project Costs

Item	Unit	Quantity	Unit Cost	Total
Phase 1				
Water Main, 12-inch	Feet	5,100	$165	$841,500
Water Main, 12-inch Creek Crossing	Feet	400	$300	$120,000
Water Main, 8-inch	Feet	6,275	$145	$909,875
Water Main, 8-inch Creek Crossing	Feet	250	$300	$75,000
Water Service, Residential, 1-inch	Each	168	$1,500	$252,000
Water Service Connection to Home	Each	256	$5,650	$1,446,400
Well Abandonment	Each	256	$750	$192,000
Residential Pressure Reducing Valves	Each	120	$500	$60,000
			Construction Sub-total	**$3,896,775**
			Contractor mobilization, overhead, and project costs (15%)	$584,500
			Construction and estimating contingency (20%)	$779,350
			Phase 1 Preliminary Construction Estimate	**$5,260,625**
			Survey, Engineering Des & CA (15%)	$789,100
			Phase 1 Estimated Project Cost	**$6,049,725**

Table 6 - Future Phases Estimated Project Costs

Item	Unit	Quantity	Unit Cost	Total
Water Main, 12-inch	Feet	2,800	$165	$462,000
Water Main, 12-inch Creek Crossing	Feet	300	$300	$90,000
Water Main, 8-inch	Feet	14,950	$145	$2,167,750
System Pressure Reducing Valve	Each	1	$125,000	$125,000
Water Service, Residential, 1-inch	Each	217	$1,500	$325,500
Water Service Connection to Home	Each	217	$5,725	$1,242,325
Well Abandonment	Each	217	$750	$162,750
Residential Pressure Reducing Valves	Each	100	$500	$50,000
			Construction Sub-total	**$4,625,325**
			Contractor mobilization, overhead, and project costs (15%)	$693,800
			Construction and estimating contingency (20%)	$925,075
			Future Phases Preliminary Construction Estimate	**$6,244,200**
			Survey, Engineering Des & CA (15%)	$936,600
			Future Phases Estimated Project Cost	**$7,180,800**

Safe Water for Cascade

QUESTIONS?

https://docs.google.com/document/d/1G8mFm1NaeInb6kWYfV0R2NVF0tzzTjVqfIrJcJ65VXE/edit?usp=sharing