

# Community Meeting

## PFAS Investigation in the Palo Area (Ronald and Bushnell Townships)

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**February 27, 2020**

Michigan Department of Environment,  
Great Lakes, and Energy (EGLE)

Michigan Department of Health and Human Services  
(MDHHS)

Ionia County Health Department

# Introductions

**Heidi Hollenbach** – EGLE, Air Quality Division

**Stephanie Kammer** – EGLE, Water Resources Division

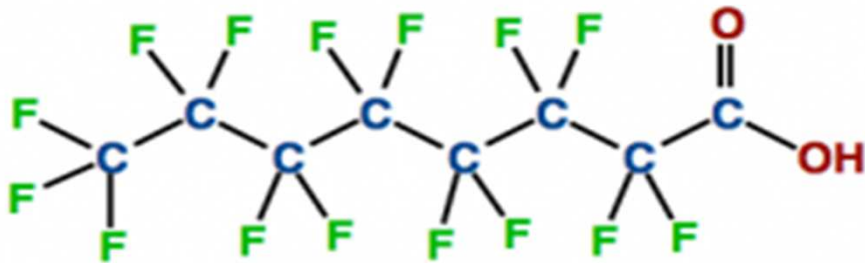
**Puneet Vij** – MDHHS, Division of Environmental Health

**Ken Bowen** – Ionia County Health Department

# Goals for this Meeting

- Provide a brief overview on PFAS and MPART
- Provide background information on the PFAS investigation in the Palo area
- Provide information on residential/private well sampling
- Provide information on the public health response

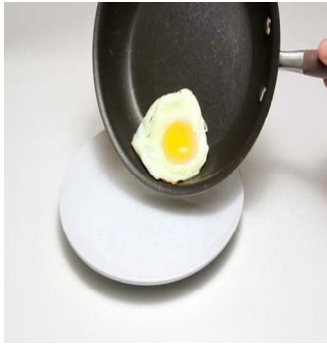
# Per- and Polyfluoroalkyl Substances (PFAS)



PFOA - perfluorooctanoic acid

- Strong carbon-fluorine bonds
- Surfactants
- Repels water, oil, fat, and grease
- Began developing in 1940s
- 5,000+ compounds today

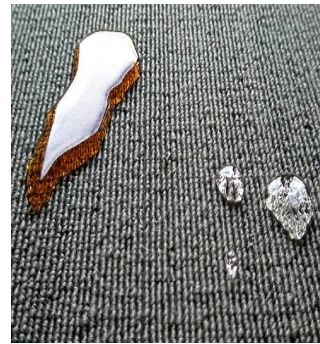
# PFAS Uses



**Nonstick products**



**Waterproof apparel**



**Stain resistant products**



**Food packaging**



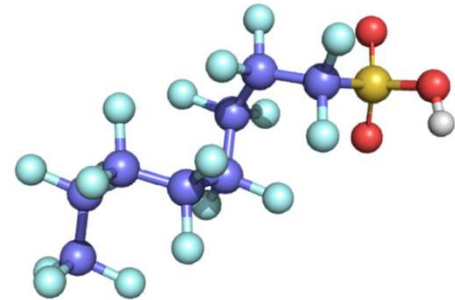
**Industry**



**Fire fighting foam**

# Why the Concern?

- Widespread
- Don't break down easily; hard to get rid of
- Bioaccumulative – builds up in our bodies
- Some PFAS may affect health
- Lack of information about these chemicals
- Lack of standards



# Michigan PFAS Action Response Team (MPART)



- Unique multi-agency approach
- Leads coordination and cooperation among all levels of government
- Directs implementation of state's action strategy

# For more information on PFAS: Michigan.gov/PfasResponse

Michigan.gov  
Department of Environment, Great Lakes, and Energy  
RECEIVE UPDATES FAQ SEARCH

## Michigan PFAS Action Response Team

HEALTH DRINKING WATER INVESTIGATIONS TESTING FISH AND WILDLIFE PFAS FOAM MPART

JAN. 14, 2020: MICHIGAN FILES LAWSUIT AGAINST 3M, DUPONT AND OTHERS FOR PFAS CONTAMINATION

SEARCH

**TRENDING TOPICS**

- Drinking Water Rule Promulgation (EGLE)
- Firefighting Foam (AFFF) Collection
- WWTP / IPP
- In-Home Water Filters

**POPULAR PAGES**

- Public Meetings
- PFAS Sites
- Watershed Investigations
- Sampling Guidance
- Correspondence
- Citizen's Advisory Workgroup

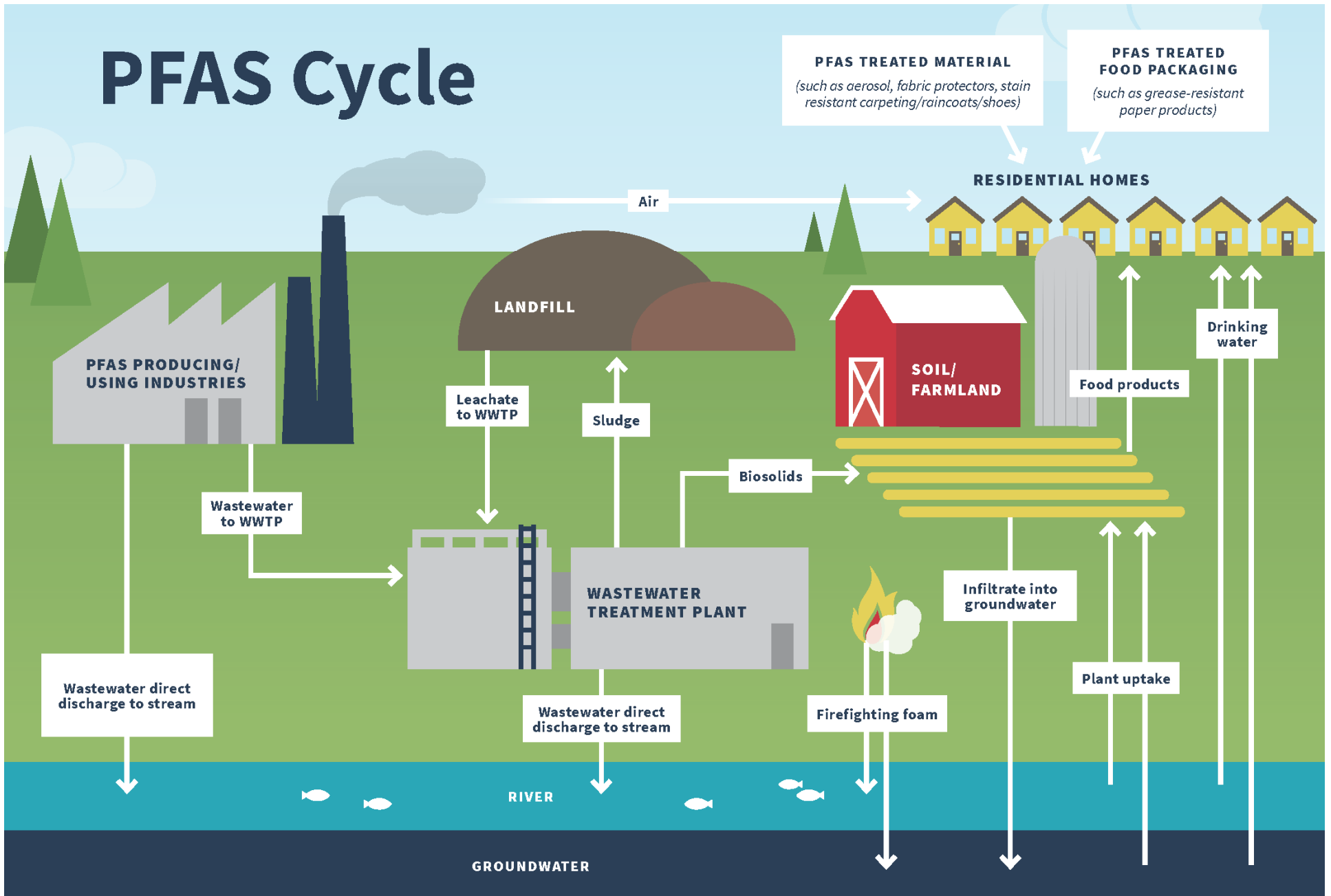
FREQUENTLY ASKED QUESTIONS

MPART - TAKING ACTION TO PROTECT THE PUBLIC'S WATER

SIGN UP FOR WEEKLY UPDATES

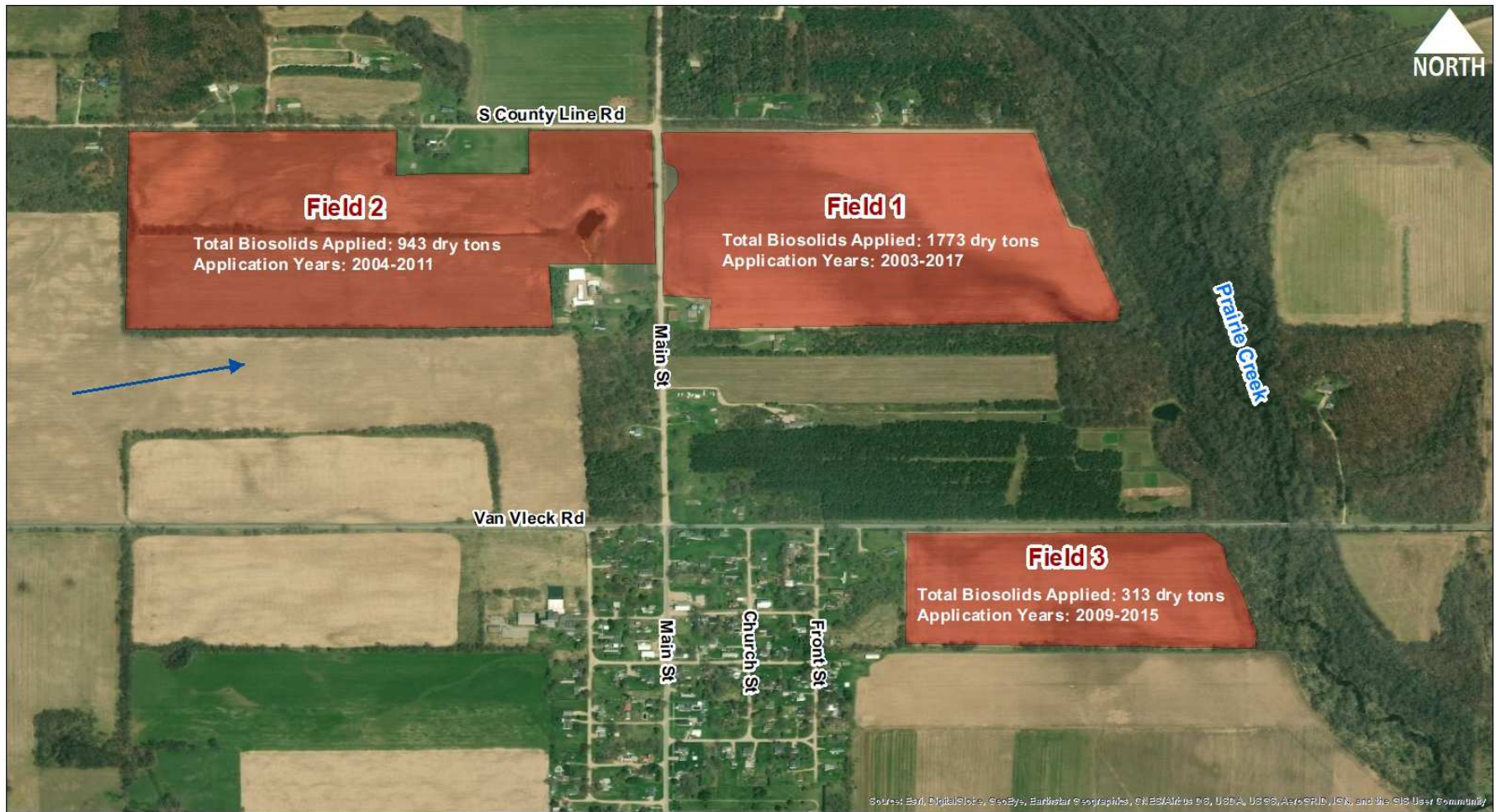


# PFAS Cycle



# Background: Why the Palo Area?

- Initially – Sample residential wells near potential source of PFAS
  - City of Ionia Municipal Wastewater Treatment Plant
    - 2018 - Statewide Initiative with 95 WWTPs
      - Elevated PFOS in discharge and sewage sludge (**biosolids**)
      - Source - Industrial Facility
  - Biosolids applied to 3 fields near Palo



Ionia WWTP Biosolids Land Application Fields near Palo, Michigan

**EGLE**

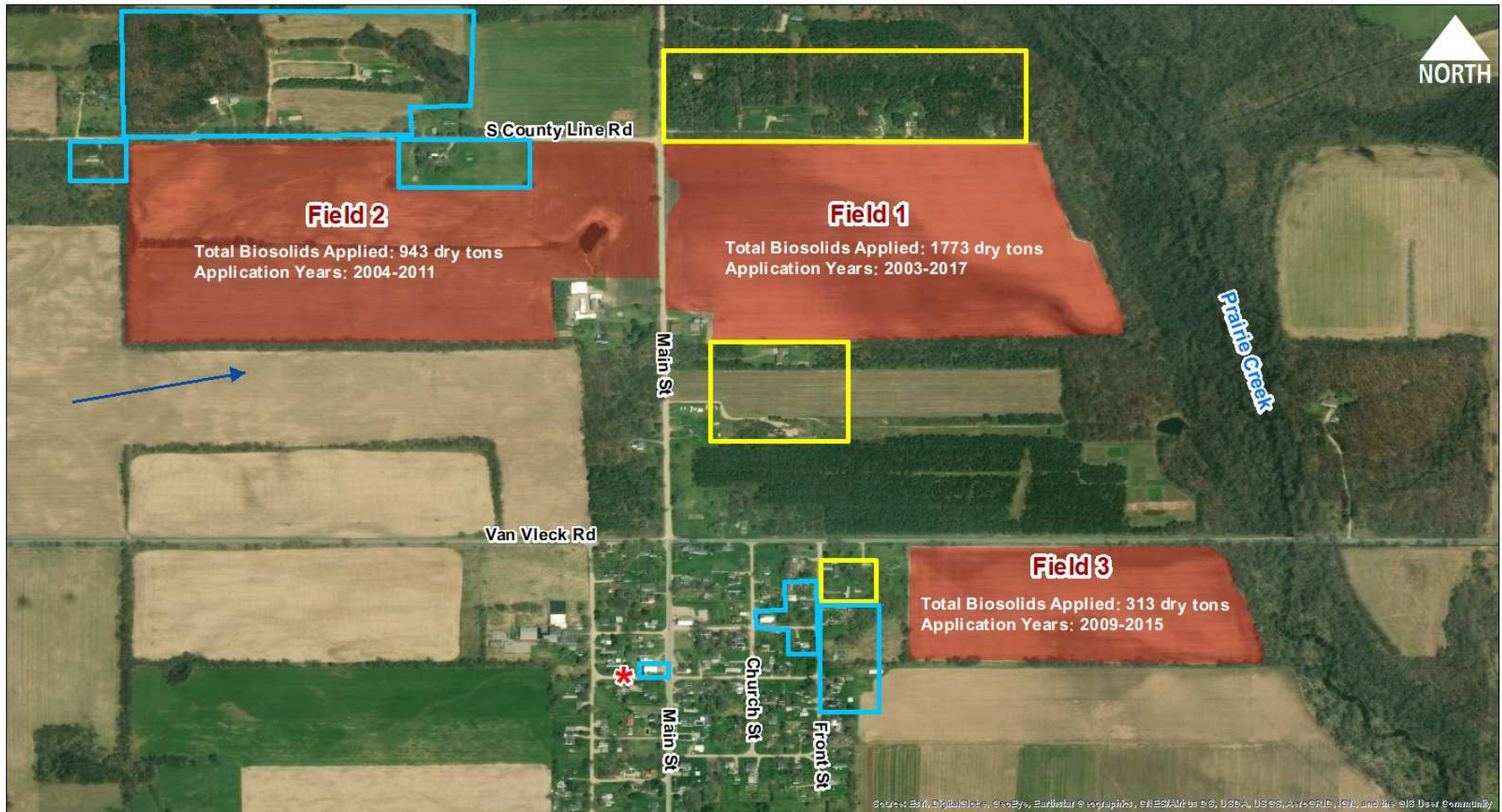
Last Updated: 1/28/2020

# Palo Investigation Cont.

EGLE w/ assistance from DHHS, Ionia County Health Department and Mid-Michigan District Health Department

- Identified and prioritized private drinking wells for PFAS sampling based on proximity to fields
- 2019 - two rounds of sampling were conducted



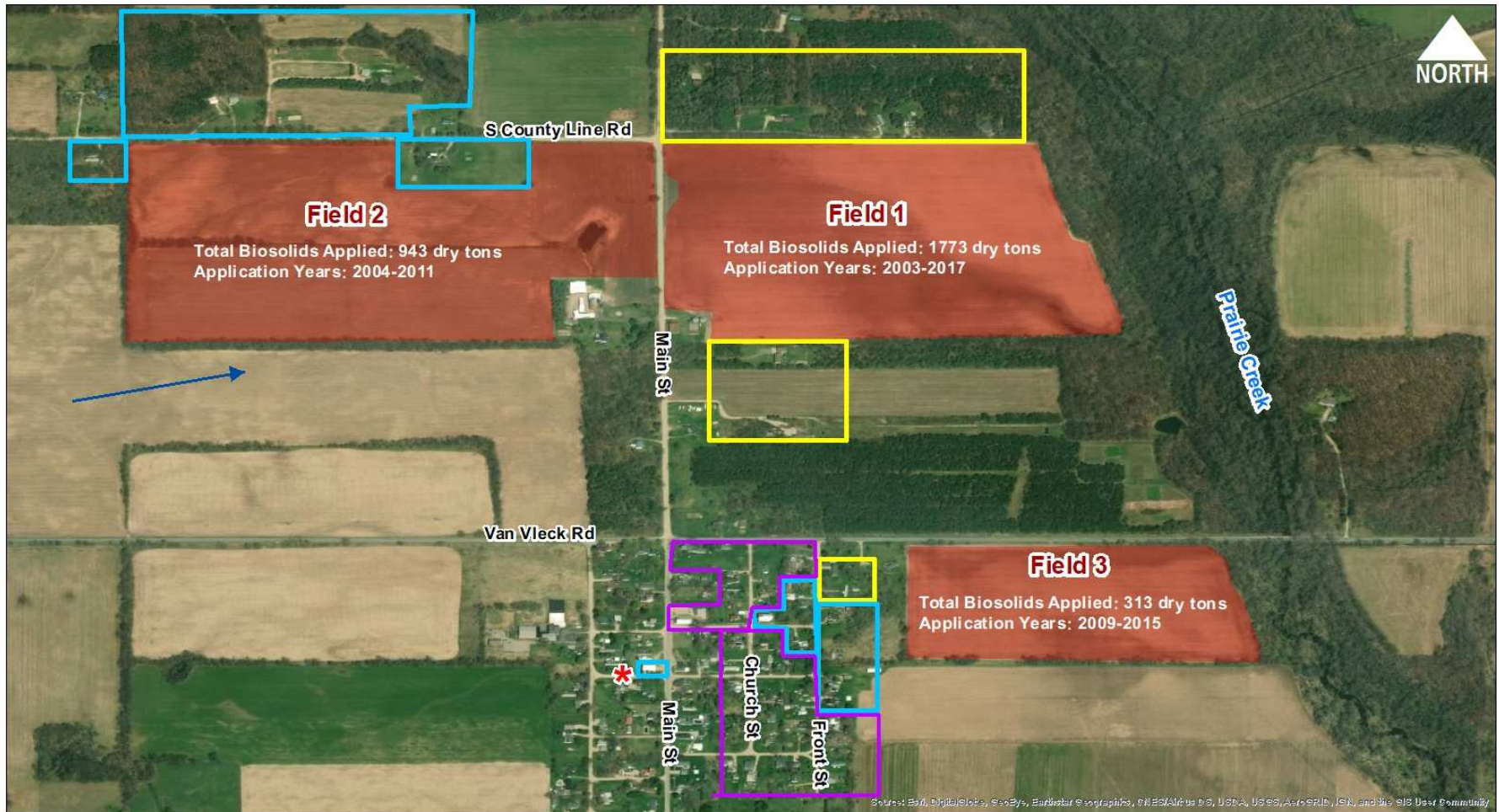


## Residential Well Sampling Phases Biosolids Land Application Fields, Palo, Michigan

**EGLE**

Last Updated: 1/28/2020






## Residential Well Sampling Phases Biosolids Land Application Fields, Palo, Michigan

**EGLE**

Last Updated: 1/28/2020

0 0.125 0.25 0.5  
Miles

-  Approximate GW Flow Direction
-  Fire Station
-  Biosolids Fields
-  Phase 1 Sampling (July 2019)
-  Phase 2 Sampling (Sept 2019)
-  Phase 3 Sampling (Proposed)

# Palo Area PFAS: The Role of MDHHS



Puneet Vij

Michigan Department of Health and Human Services  
Division of Environmental Health



# What Are PFAS?

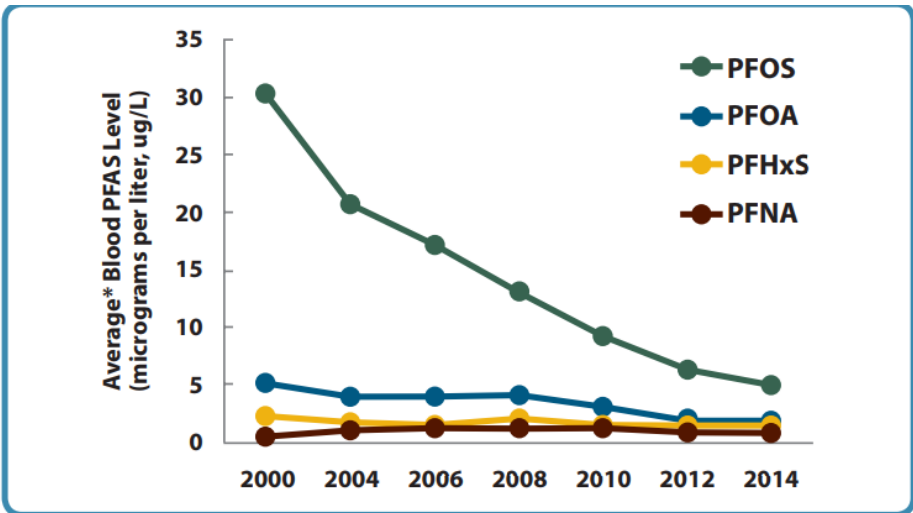
(Per and Poly-fluoroalkyl Substances)



# What are PFAS?

- PFAS are a family of chemicals used widely in industry and consumer goods
  - Waterproof, grease proof, very stable
  - Includes PFOS, PFOA, and others
- Sources:
  - Stain-resistant clothing, upholstery, carpet
  - Fire-fighting foam
  - Personal care products such as water-proof cosmetics
  - And many more applications

# Blood Levels of the Most Common PFAS in People in the U.S. from 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). Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.

# What are the Health Effects of PFAS?

- Exposure to high levels of PFAS chemicals have been associated with certain health effects, including:
  - Decreased chance of a woman getting pregnant
  - Increased chance of high blood pressure in pregnant women
  - Increased chance of thyroid disease
  - Changed immune response
  - Increased cholesterol levels
  - Increased chance of cancer, especially kidney and testicular cancers

What is being done in your  
community?

# PFAS Investigation in Palo

- Local drinking water wells were tested for presence of PFAS chemicals
- MDHHS uses screening levels and advisory levels to guide our public health response
  - MDHHS Public Health Screening Levels
  - U.S. Environmental Protection Agency (EPA) Lifetime Health Advisory
  - EGLE Residential Drinking Water Criterion
  - Drinking water well results (individually and collectively)
  - Site-specific information (e.g., source, geology, etc.)

# What are PFAS public health drinking water screening levels?

- PFAS public health drinking water screening levels
  - Health-based
  - Protective of everyone, including those most at risk of harm to their health: fetuses and breastfed infants
  - Used to determine if further evaluation of PFAS is needed
  - Used to determine if public health actions are needed
  - Non-regulatory

## MDHHS Public Health Screening Levels

PFAS	MDHHS Public Health Drinking Water Screening Level
PFOA	9 ng/L
PFOS	8 ng/L
PFNA	9 ng/L
PFHxS	84 ng/L
PFBS	1,000 ng/L

ng/L=nanograms per Liter=parts per trillion (ppt)

# What is being done?

- Drinking water well testing has been conducted
  - Two rounds of testing complete
  - Planning underway for third round of testing
- 18 residential wells tested for PFAS



# Public Health Response

- Results:
  - 11 wells were NON-DETECTS
  - 7 wells with PFAS detections
    - 3 wells below and 4 wells above screening level
    - Filters offered to residents with PFAS detections (no cost)
    - Precautionary response
      - Ensures residents' safety while investigation continues

# MDHHS/ICHD are Here To...

- Understand the health concerns facing your community
- Develop a plan to investigate and address health risks
  - EGLE leads the site investigation
  - MDHHS and Ionia County Public Health lead the public health planning and response
- Evaluate PFAS results for drinking water wells
  - Recommend public health actions as needed

*ICHD: Ionia County Health Department*

# How Can I Learn More?

- Please contact us with any questions you may have!
  - PFAS and your health
  - Questions about bottled water or filters
  - Site updates

Gary Klase

MDHHS Toxicologist

(517) 284-9024

[klaseg@Michigan.gov](mailto:klaseg@Michigan.gov)

Michigan Toxics Hotline

1-800-648-6942

(1-800-MI-TOXICS)

# Ionia County Health Department



Ken Bowen  
(616) 527-5341  
[kbowen@ioniacounty.org](mailto:kbowen@ioniacounty.org)

# Contact Information and Questions

**Stephanie Kammer** – EGLE-517-897-1597 – [kammers@michigan.gov](mailto:kammers@michigan.gov) – questions related to overall efforts to investigate PFAS in the Palo Area

**Heidi Hollenbach** – EGLE- 616-356-0243 – [hollenbachh@Michigan.gov](mailto:hollenbachh@Michigan.gov) – questions related to other MPART activities/sites in the Grands Rapids Region including Ionia and Montcalm Counties

**Gary Klase** – DHHS- 517-284-9024— [klaseg@michigan.gov](mailto:klaseg@michigan.gov) --questions related to public health response activities

**Ken Bowen** – Ionia County Health Department – 616-527-5341 – [kbowen@ioniacounty.org](mailto:kbowen@ioniacounty.org)

**Liz Braddock** – Mid-Michigan District Health Department – 616-302-6301 – [lbraddock@mmhd.org](mailto:lbraddock@mmhd.org)