

# Circularity of PFAS

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# Disclaimer:

- I'm just an attorney
  
- But I'm a litigation attorney...



# Why does this matter?

- Liability
- Are you thinking beyond just permit requirements?
- Good corporate governance
- The “Green Guides” – deceptive
  - “non-toxic”
  - “PFAS free”

# Claims

- Nuisance – “a substantial interference with the use and enjoyment of property”
- Public Nuisance
- Part 201
- CERCLA? / RCRA?

# State of Minnesota lawsuit (\$850 million settlement)

- Fluorine is buried deep in the rocks beneath the earth and is amongst one of the most dangerous elements that exist
- It was called the “Devil’s Poison”

# Fluorochemicals

- Bond between fluorine and carbon
- One of the strongest bonds that exists
- Can withstand temperatures up to 1,700 degrees.
- *“Forever chemicals”*

# PFAS

- Per- and Polyfluoroalkyl Substances
  - PFOS
  - PFOA
  - Over 9,000 different synthetic chemicals

# Getting into the Environment

- Not the goal (of course)
- Production
- Waste streams
  - Solid waste
  - Liquid discharge
  - Biosolids
  - Air



# Toilet paper?



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# What's the big deal?

- Reproduction
  - Thyroid function
  - Immune system
  - Injure the liver
- 
- More fundamentally, it's a man-made chemical in the environment.

# Dangerous combination

- Gets into environment
- Doesn't break down
- Bioaccumulates (animals and humans)
- Possible health effects



# Increasing regulation

- The more we know, the lower the limits.
- Federal regulation increasing
- More mediums

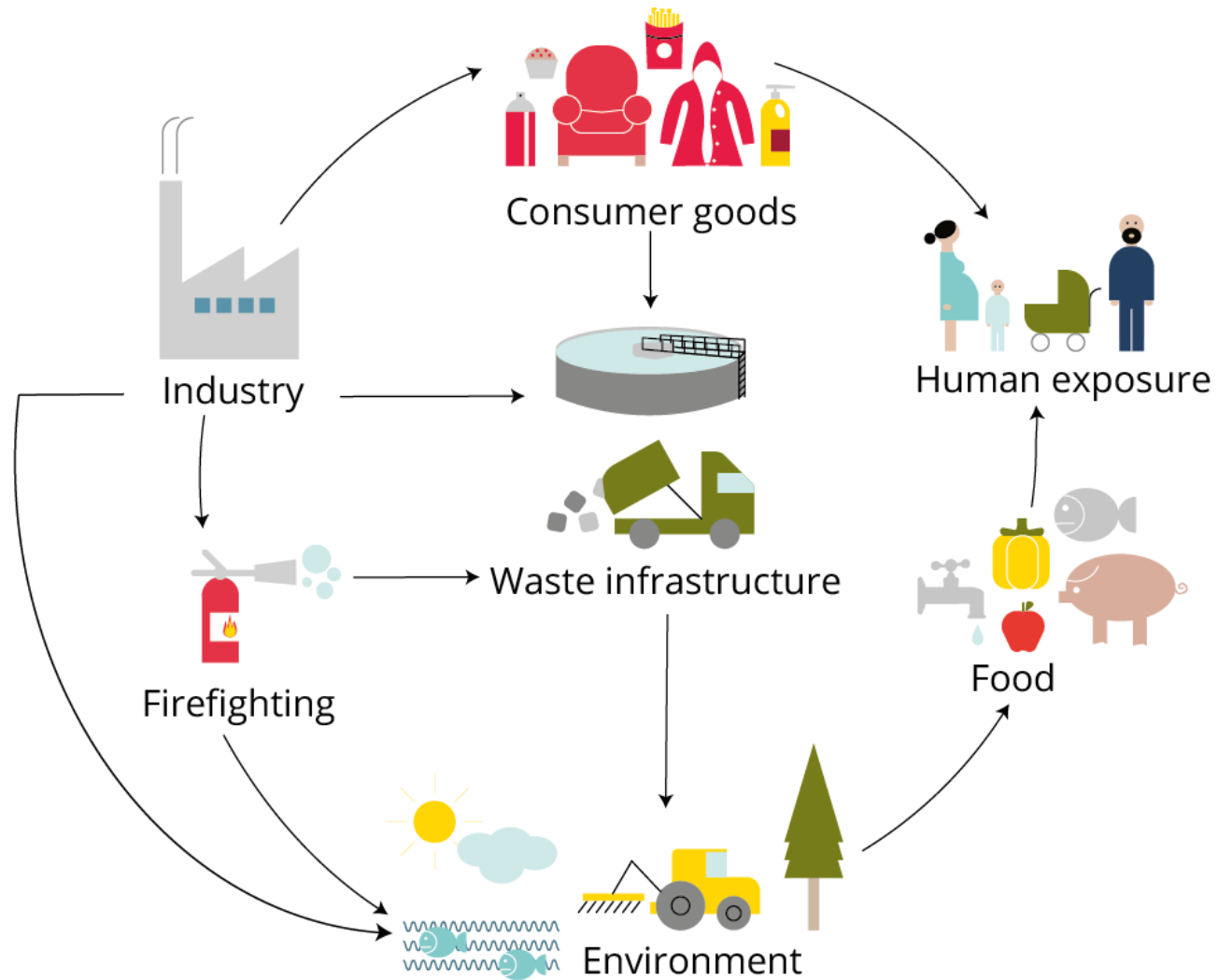
# EPA proposed rule

- National Primary Drinking Water Regulation (six PFAS)
- Maximum Contaminant Level
  - PFOS – 4 ppt
  - PFOA – 4 ppt
- Maximum Contaminant Level Goals – “health based”
  - PFOS – 0
  - PFOA – 0

# CERCLA Hazardous Substance proposal

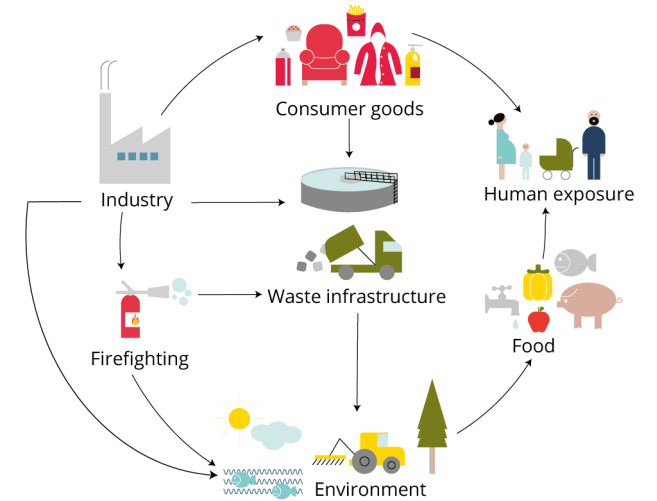
- Potential timeline of late 2023 (subject to change)





# Industry to:

- Consumer Goods
- Waste (liquid and solids)
- Firefighting foam
- To the environment





# Contributing, but Not Reducing

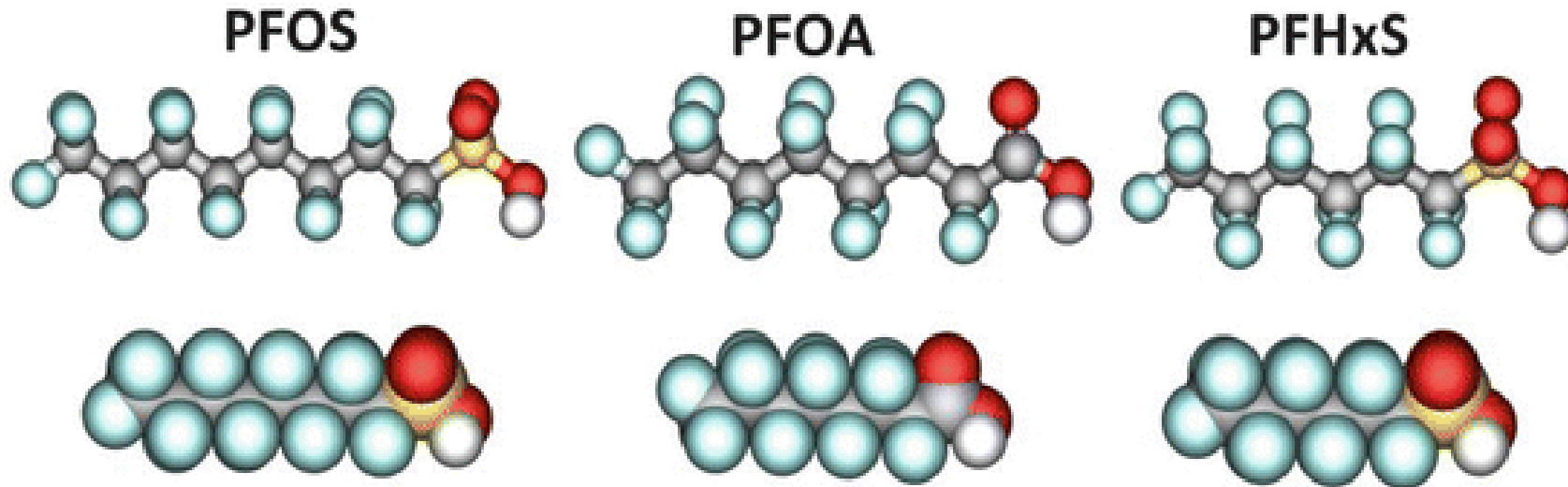


# Real consequences: the Grostics

- Centennial farm
  - Jason, Teresa, and their two young kids.
- Organic beef (Grostic Cattle LLC)
- Crops (approximately 300 plantable acres)

# How did it get there? From the beginning...

- PFAS is manufactured



PFAS is then sold to chemical maker



# MacDermid Enthone makes Macuplex STR

- Mist suppressant to keep fumes out of the air.

# Chemical manufacturer sells to industry

- Tribar Manufacturing (formerly Adept Plastics) purchases Macuplex STR.
- Put into chrome baths from 2010-2015

# Tribar has industrial waste

- Discharged to the City of Wixom Sewer pursuant to IPP
- Contained PFAS

# City of Wixom treats waste

- (1) Discharged to Huron River (containing PFAS)
- (2) Biosolids land applied (containing PFAS)





# Biosolids (with PFAS) applied to the Grostics' farm

- 2010-2015: 12,991,000 gallons on 234 acres
  - (55,500 gallons / acre)

# The Grostics grow crops

- The crops (with PFAS) are eaten by cattle
- The crops (with PFAS) are sold to a grain elevator



So what's the problem?

Beef and crops are consumed



Waste is sent to a septic tank or a sewer



And high levels of PFAS is now in the soil



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# Groastics' centennial farm ruined





# How did it start?

- February 2018: Industrial Pretreatment Program PFAS initiative
- June 2018: City of Wixom conducted sampling.
- Identified Tribar Manufacturing as the source of the contamination

# Groistics (cont'd)

- EGLE samples the Groistics' farm fields and groundwater.
- Eventually, beef is sampled.

# Beef testing results:

- State of Michigan: “atypically high”
- 1/27/2022 -- Seizure order
  - Continues to this day.
  - Grostics required to care for the cattle, but can't sell

# What about the cash crops?

- Grain elevator won't buy.



# Possible to remediate?

- Technically feasible.
- Practically? Over \$100 million.

# The Grostics now:

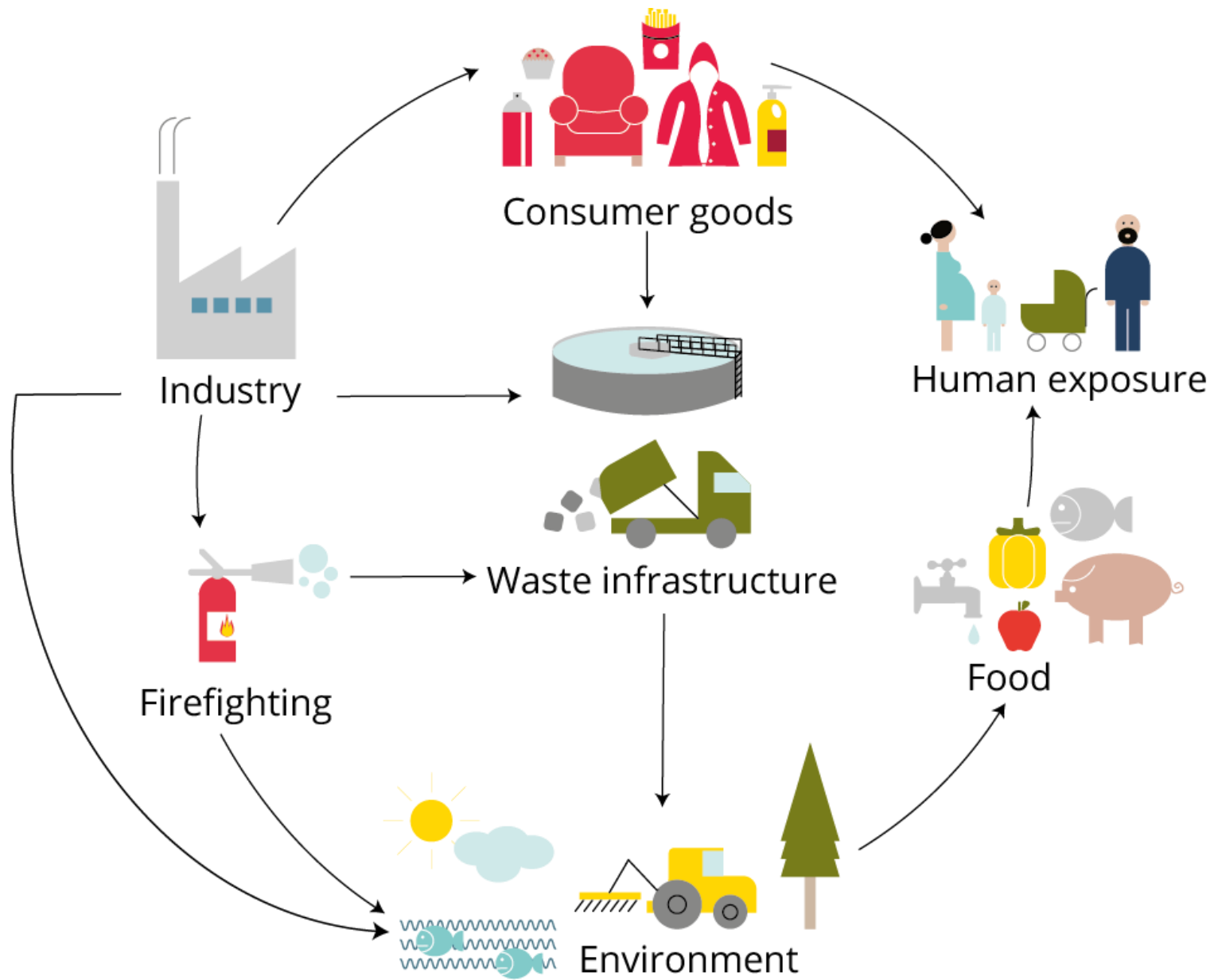
- Going broke
- Had to auction farm equipment
- Can't use their land
- Lost their “way of life”
- Stress is enormous

# Lawsuit against Tribar.

- TBD how it ends.

The Grostics are unique, but not really





# Thanks!

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