

Hot Topics

Ben Degner

County Delegation 2024 Sessions

ARPA Well Comp - Intro

- \$10,000,000 in funding through America Rescure Plan Act (ARPA)
- Awards of \$16,000+ for corrective systems or a new well
- Many eligible contaminants including bacteria and nitrate

ARPA Year 1

- 600+ Applications
- 300+ Rewards granted
- >\$5,000,000 in grants awarded
- Grants for several different contaminants
 - 75% with nitrate exceedances
 - 9% arsenic
 - 7% PFAS
 - 17% for others (e-coli, manganese, etc)

Emerging Contaminants

- Per- and Polyfluorinated Alkyl Substances (PFAS)
- Pharmaceuticals and personal care products (PPCPs)
- Agricultural contaminants (pesticides)
- Microbial Contaminants (viruses and bacteria)
- Microplastics

Emerging Contaminants (Health concerns)

- Not always well understood
- Endocrine disrupting compounds (EDCs) – affect behavior of our natural hormones
- Developmental, reproductive, neurologic, cancer
- NR 160.27 – review long term data to get a better idea
- EPA Contaminant Candidate List (CCL)

PFAS (continued)

- Human-made chemicals
- Firefighting homes, non-stick products, non-stain products, packaging, cosmetics
- Exposure through water, food, product use
- Negative effects to humans and environment (even when low ppt)

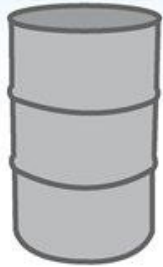
PFAS (continued)

- PFAS Ambient Shallow Groundwater Study
- 450 wells selected in a grid system
- 71% of wells detected
- 1% above Wisconsin public health value (20 - 40 ppt)
- 4% above EPA proposed Maximum Contaminant Level (4 - 10 ppt)
- Often found with chloride and nitrates
- Not totally representative (only 40' or less casing)

How much is one part per ...

million (ppm)

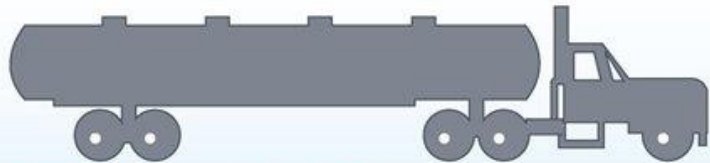
milligrams/liter (mg/L)



= three drops added to a
42-gallon barrel

billion (ppb)

micrograms/liter ($\mu\text{g/L}$)



length = 35 feet, diameter = 8 feet

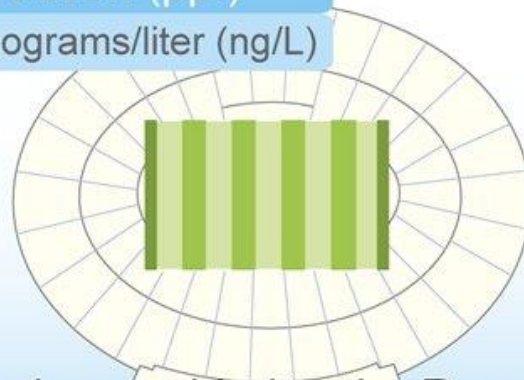
= one drop added to
a large tanker truck

quadrillion (ppq)

picograms/liter (pg/L)

trillion (ppt)

nanograms/liter (ng/L)



= ten drops added to the Rose Bowl
(filled with water)

= two teaspoons added to the
Great Salt Lake of Utah

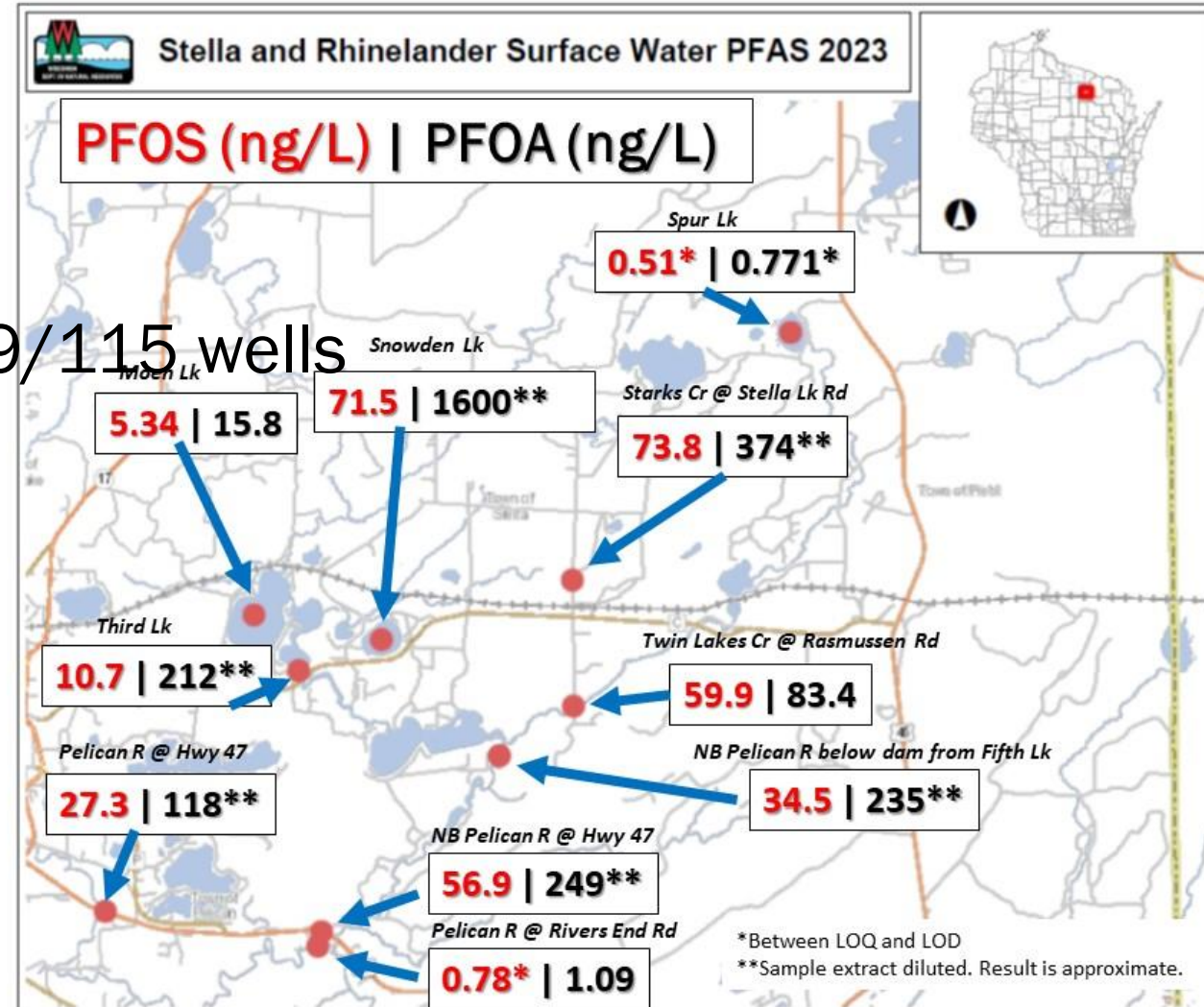


PFAS in Wisconsin

- Northeast Wisconsin (Tyco – Peshtigo)
- Western Wisconsin (French Island)
- Central Wisconsin (City of Wausau, City of Rhinelander)
- North Central Wisconsin (Town of Stella)
- Constantly evolving

Stella PFAS

- Sampled during statewide study
- 115 Wells sampled
- PFAS above health standard in 49/115 wells

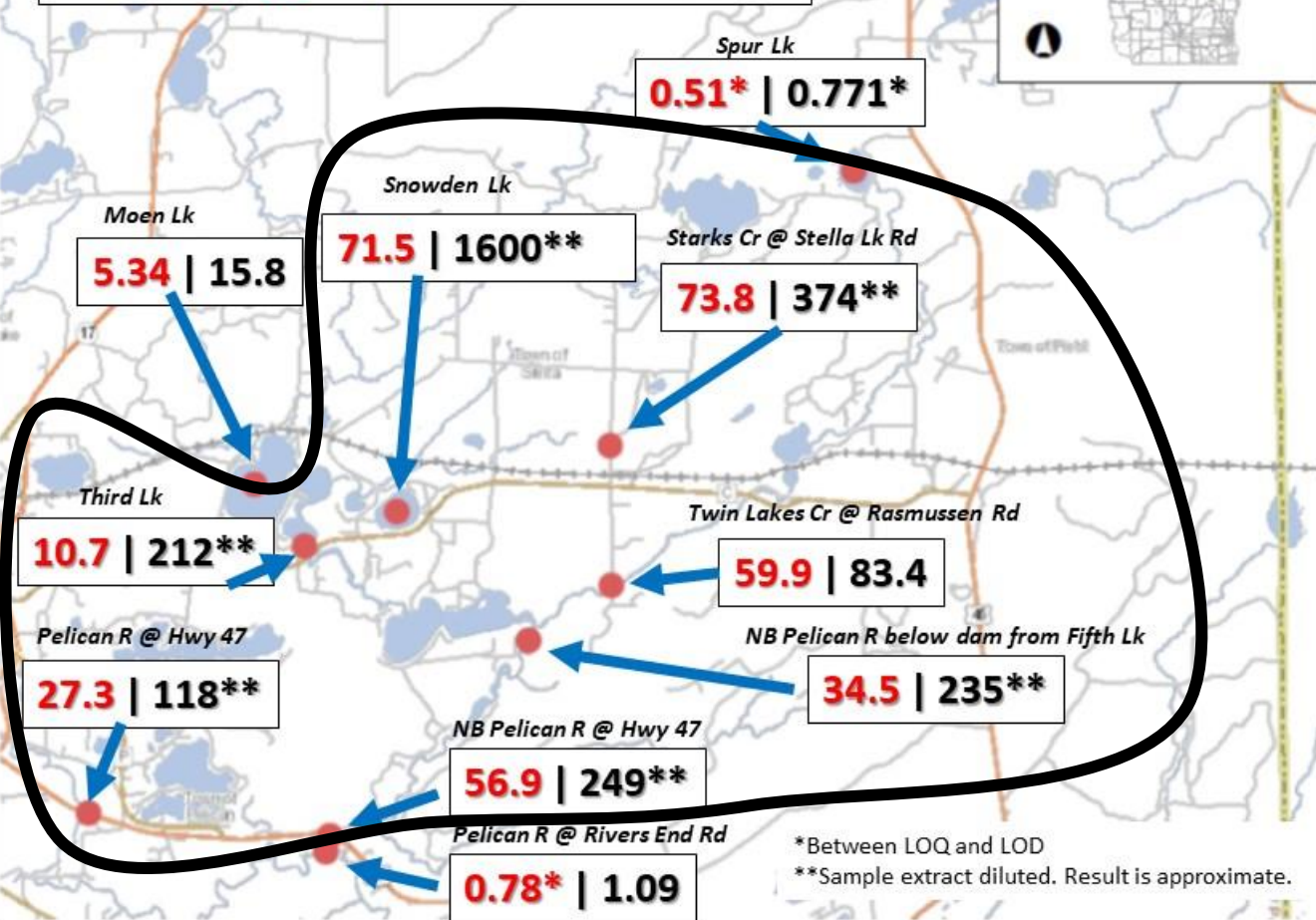




Stella and Rhinelander Surface Water PFAS 2023



PFOS (ng/L) | PFOA (ng/L)



*Between LOQ and LOD
**Sample extract diluted. Result is approximate.

PFAS in Wisconsin

- Testing?
- Treatment can be possible
 - Most effective when levels <200 ppt
- Temporary Water
- Drilling into a different aquifer

Manure Runoff

- Wells can act as vertical conduit
- Contaminants migrate downward
- Agriculture areas
- Manure spreading / land spreading
- Spring thaw / melt water
- Heavy rain
- Runoff
- Sinkholes
- Karst topography
- Infiltration



Manure Runoff (Sampling)

- Well owner responsibility to collect first well water sample
- If bacteria positive, advise to sanitize & resample.
- May need licensed well contractor (PI, WD)
- Notify DNR (Public or Private) if obvious change
- DG may collect microbial source tracking sample
- Owner's sample E. coli positive or obvious contamination

Emergency Reponse

- DNR may be able to provide temporary emergency water supply
- Livestock contaminated private water supply is verified
- DG/R&R cooperate via NR 738 (emergency water protocol)
- Eligibility / application requirements
- Provide bottled water for up to 6-months (i. e. Culligan or similar)
- Emergency water may be terminated
- Contamination not livestock source
- Well sanitized and resampled (no longer contaminated)
- New well installed (water supply replaced)
- Alternative water supply
- Disinfect/sanitize well, resample
- Water tanks (portable tank), licensed PI or WD
- Temporary hookup (neighbor's well)

Questions?



CONNECT WITH US

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"WILD WISCONSIN:
OFF THE RECORD"