



POLY AND PERFLUOROALKYL SUBSTANCES (PFAS)

Washington State Board of Health
October 11, 2017

Presenter

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What are PFAS?

- Large class of manufactured chemicals
- Widely used since the 1950's
- Very persistent
- Water soluble – leach into groundwater
- Some bio-accumulate in humans and animals
- Primary exposure pathways for people: diet, drinking water, indoor dust and air

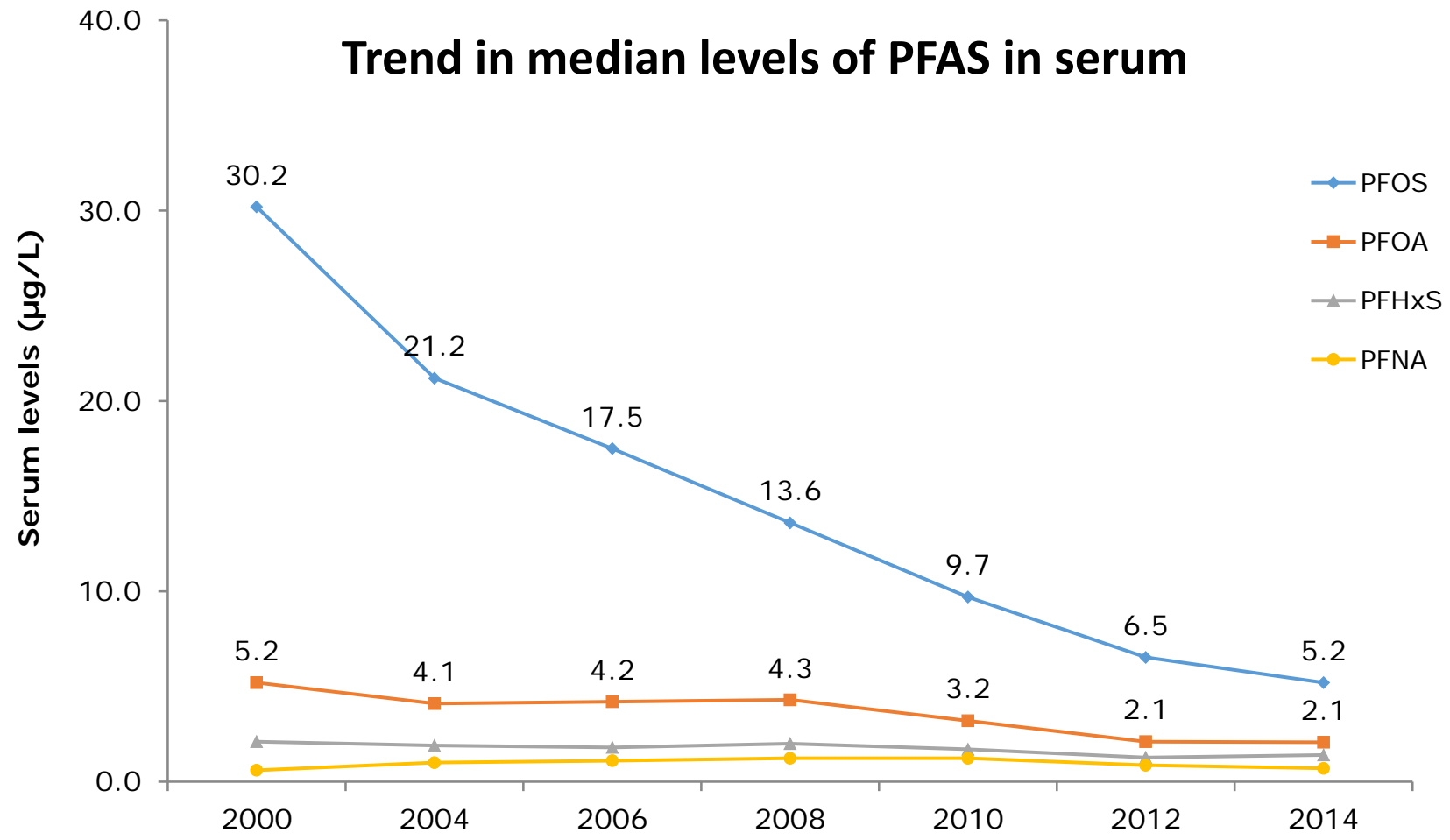
PFAS Used in Production of Many Products



Health Concerns have Primarily been with Long-Chain PFAS

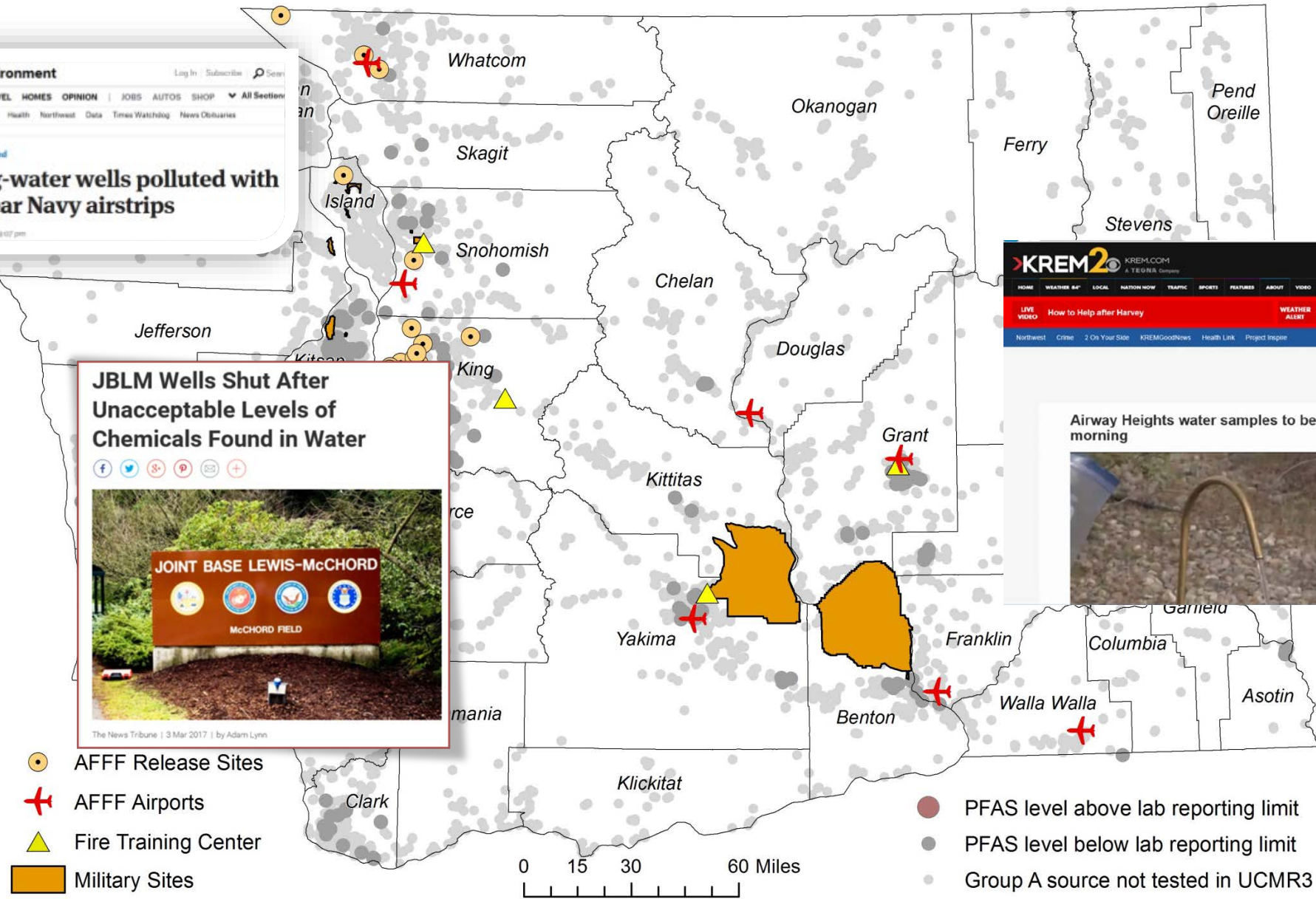
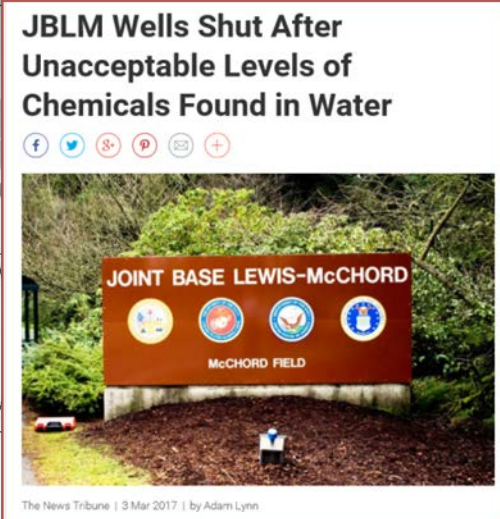
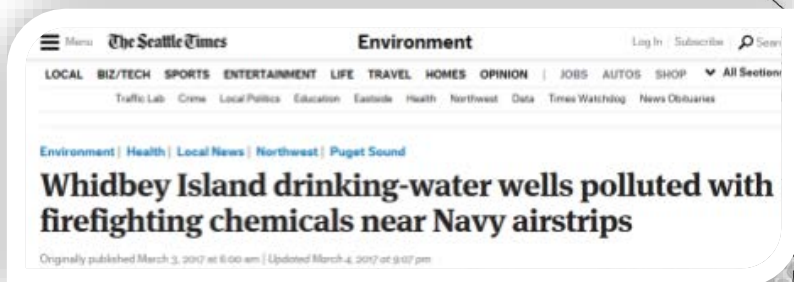
- Liver and metabolic effects
- Developmental effects
- Immune suppression
- Endocrine effects
- Reproductive effects
- Cancer

PFAS Levels in U.S. Population - NHANES



Source: CDC, NHANES, 2017

Primary Potential Sources in Washington



- AFFF Release Sites
- AFFF Airports
- Fire Training Center
- Military Sites

- PFAS level above lab reporting limit
- PFAS level below lab reporting limit
- Group A source not tested in UCMR3

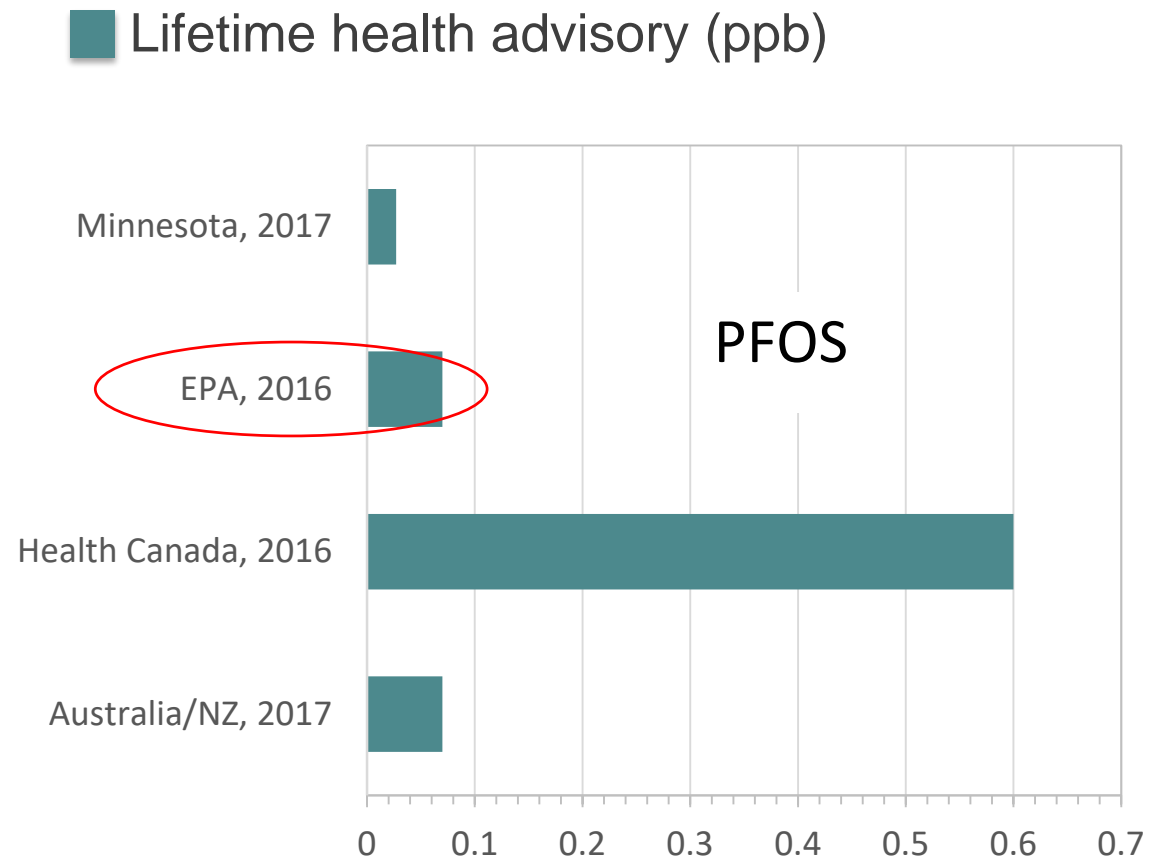
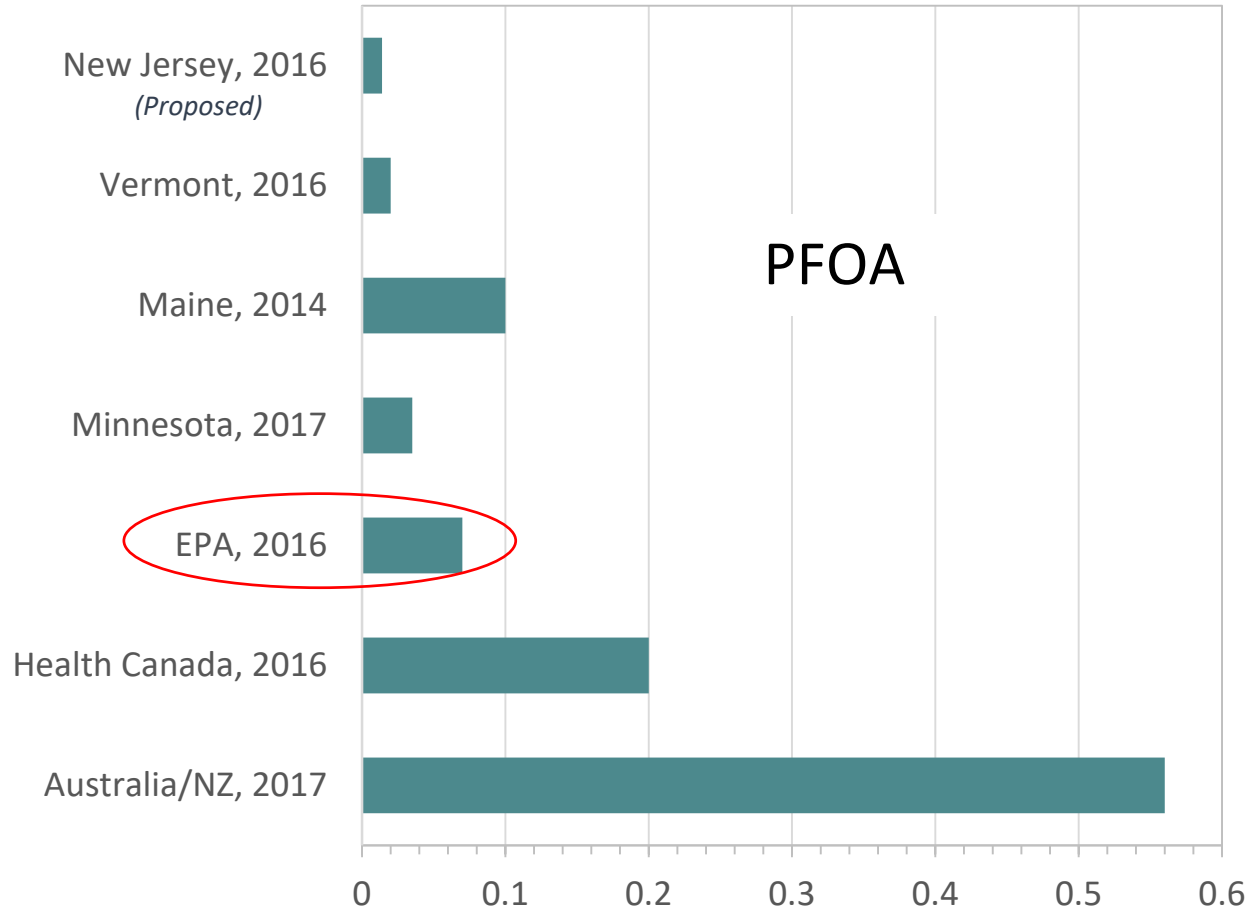
EPA Lifetime Advisory Level

70 parts per trillion (ppt) in drinking water

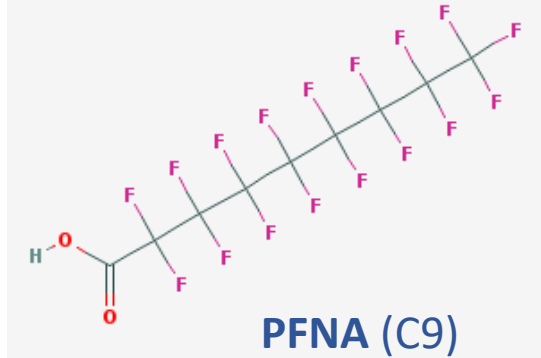
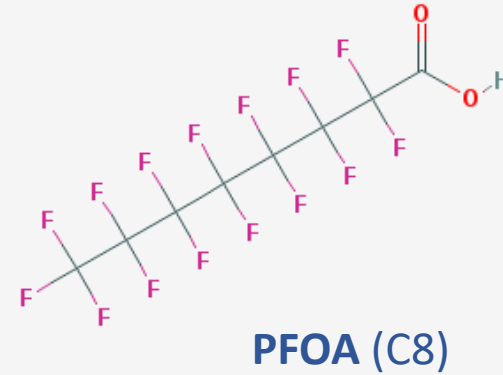
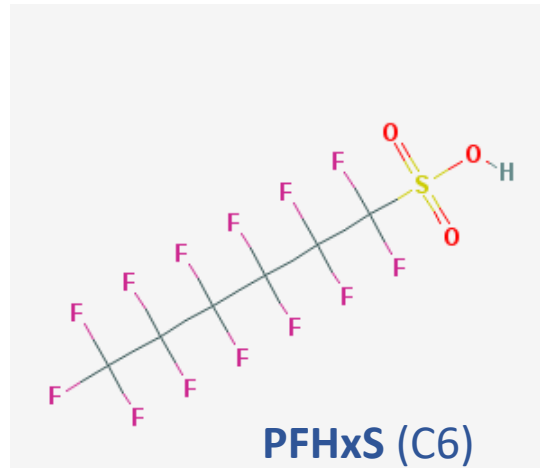
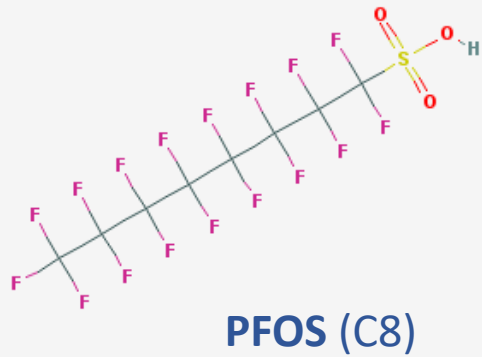
- Provides a margin of protection (even for sensitive populations) against adverse health effects associated with PFOS or PFOA, even for life-long exposure
- Assumes 20 percent of exposure from drinking water



Drinking Water Health Advisories



Common PFAS Found in Water Impacted by Fire Fighting Foam



Source: PubChem; <https://pubchem.ncbi.nlm.nih.gov>

Next Steps

- Continue planning for voluntary expanded testing of water systems
- Continue work with Ecology on Chemical Action Plan
- Consider petition for rulemaking that asks us to set drinking water standards for PFAS chemicals

Thank you!



Department Recommendation

- Accept the petition for rulemaking
- Begin rulemaking to set drinking water standards for some PFAS chemicals
- Coordinate effort with work on Chemical Action Plan
- Time activities to allow voluntary water testing to inform rulemaking discussions

Issues to Address in Rulemaking

- What should the numeric standard be?
- What chemicals should be included?
- What regulatory mechanism should we use?

