From Rust to Blue: Challenges From Emerging Contaminants

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Rockford Area Plume

- Over 50 km²
- Rogue River affected up to Sparta 40 km
- Waste disposal sites, landfills, gravel pits, the Tannery, and farmland disposal of sludge
- Plainfield township groundwater supply wells 40,000 people
- Thousands of residential groundwater wells

Figure 20 - Water Well PFOS and PFOA Data, ng/L

Probable Health Effects

- Developmental effects (e.g., LBW, accelerated puberty)
- Cancer
- Liver damage

- Cardiovascular concerns
- Immune disorders
- Thyroid disorders



Perspective from a community member An epidemiologist in gets a crash course in environmental health...

- Lived in Rockford (~0.5mi from the tannery) from 1994 – 1998 in a house that was on city water
 - Until 2000, city water was drawn from the Rogue River
 - Current River PFAS levels: ~12,000 ppt
- Support public communication and local engagement in managing risk



THE ROCKFORD SQUIRE

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"We now know that PFA levels at the Wolverine tanner site are among the highest levels ever seen in our nation, even though it has been more than a decade since the tannery was torn down.... Saying that the "river is safe now" is insulting to residents who were (apparently) exposed for decades – it is reasonable for us to be concerned about the health effects of these chemicals. We need research to understand what those are, and pretending like the past doesn't matter is simply unacceptable."

-B. Mezuk, Letter to the Editor, Rockford Squire 12/7/17

Next Steps:

- Area Wide Groundwater Assessment USGS
- Expanded Epidemiology Study with Blood Testing (City of Rockford, Plainfield Township, Residents with Contaminated Wells
- Expand Study of Fish and Invertebrates in the Rogue River
- Public Outreach and Participation in Development of Risk Management & Remediation Plan
- Visioning and Capacity Building for Restoration



Environmental Risk Communication

- Trust & credibility contingent upon perceptions of:
 - Knowledge & expertise
 - Openness & honesty
 - Concern & care
- Environmental risk communication should:
 - Foster communication between community members (laypeople) & other relevant parties (e.g., public health, environmental & corporate entities)
 - Demonstrate efforts to mitigate risks
 - Include community members (laypeople) in the process of managing risk
 - Use different methods for communicating risk (e.g., scientific, visual)

