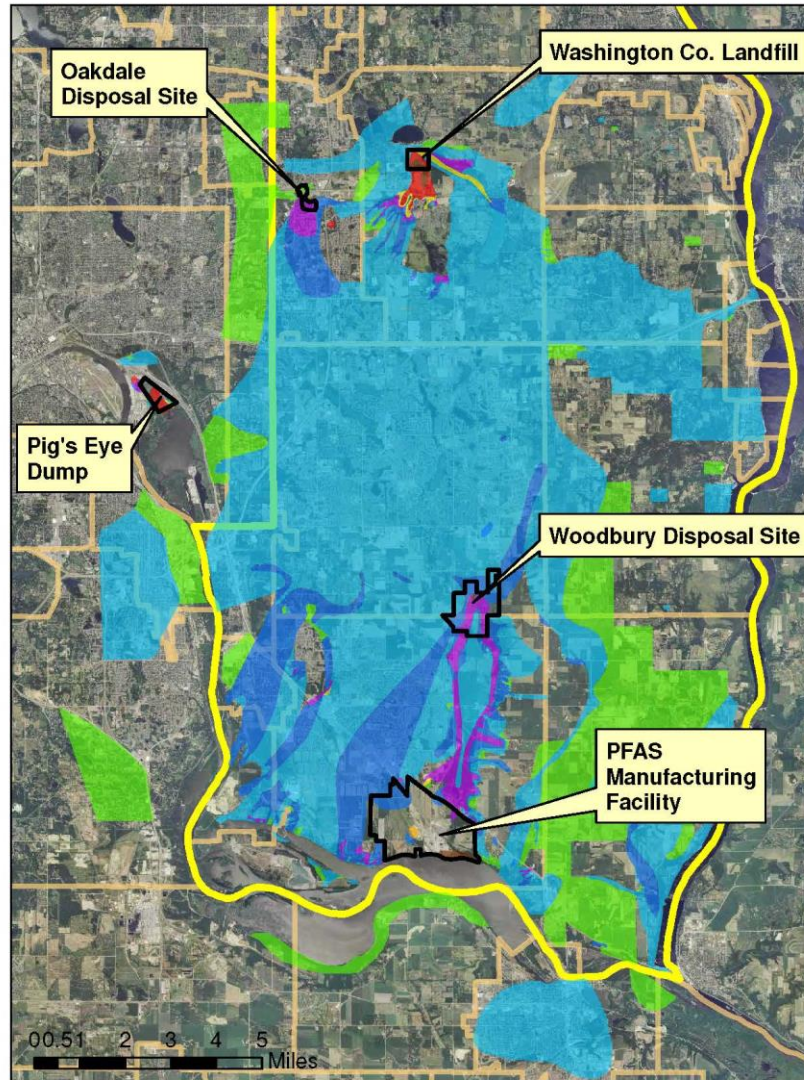




PFAS Risk Communication and Community Engagement

Why are PFAS in Minnesota Groundwater?

- PFAS manufactured by 3M since 1940s
- Waste disposal: on-site and landfills
- 2004 – PFOS & PFOA first detected in private and city wells
- Subsequent investigations:
 - >150 mi² contaminated GW & SW
 - 4 major aquifers
 - 13 communities
 - 8 municipal systems (150,000+ pop.)
 - 3,500+ private wells



Location of Legacy PFAS Sites in Washington Co., Minnesota



How Do Communities View Risk ?

ACCEPTABLE

- Voluntary risk
- Individual control
- Fair
- Info from trusted sources
- Morally right
- Natural
- Familiar
- Assoc. with daily life



UNACCEPTABLE

- Imposed risk
- Government control
- Unfair
- Info from strangers
- Unethical practices
- Artificial
- Unfamiliar
- Associated w/catastrophes

Our Response: Build Trust and Credibility

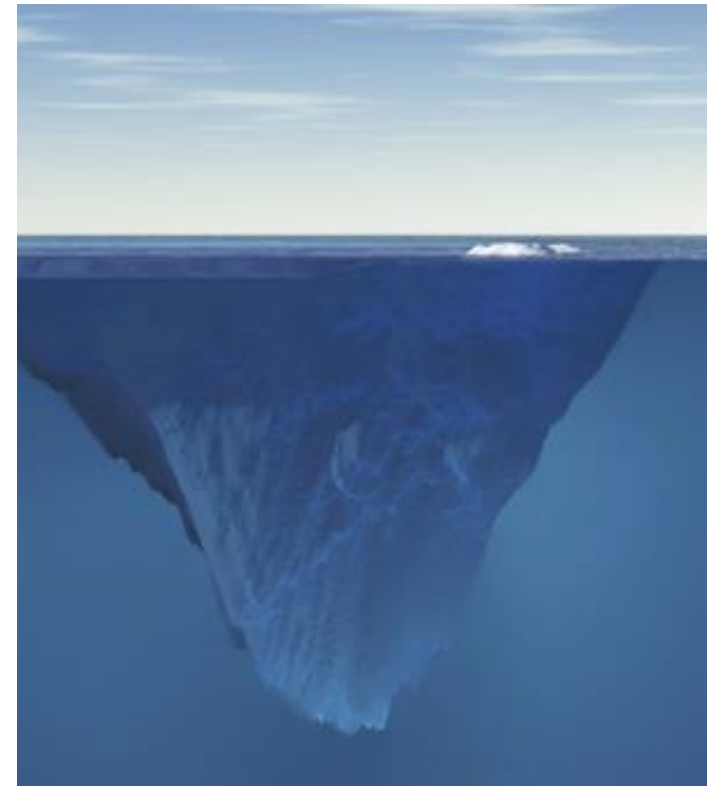
- Pay attention to and explain processes
- Involve the public early
- Listen to concerns
- Follow up with accurate information
- Only make promises you can keep
- Provide information that meets agency and public needs
- Use local partners for support



Open access image

PFAS: With No/Limited Data, Often No Guidance

- When data are limited, so are health advice options
- Use data from another related chemical (maybe)
- Different types of guidance are possible
- #1 issue for PFAS is a lack of data
 - ~99% of PFAS, no data on toxicity

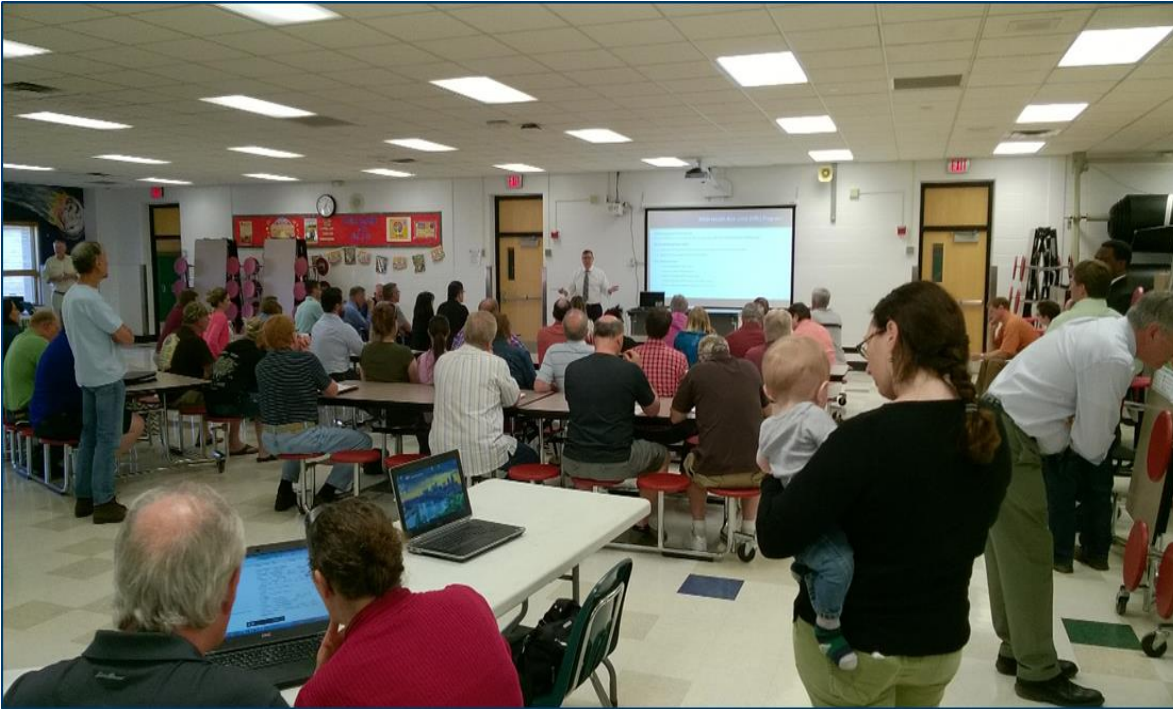


MDH Messages Used to Communicate PFAS Risk

	PFOA	PFOS	PFBA	PFBS	PFHxS
2002	7	1			
2006	1	0.6	1		
2007	0.5	0.3	7		
2009	0.3	0.3	7	7	
2013	0.3	0.3	7	7	0.3
2016	0.07	0.07	7	7	0.07
2017	0.035	0.027	7	3/2	0.027
2019	0.035	0.015	7	3/2	0.047

- We take a cautious public health approach
- This is a area of active scientific research
- As new knowledge becomes available, we will let you know
- Acknowledge uncertainty
- Explain differences in health guidelines (between states, EPA)
- Why did MDH change its guidance?

We Didn't Invent this Approach



- Empathy and caring
- Competence and expertise
- Honesty and openness
- Dedication and commitment

(V. Covello, 1992, 1993)

Biomonitoring Provides Assurance

