Advancing Environmental Solutions

ITRC PFAS

Risk Communication Toolkit: A PFAS Focus

NEWMOA'S SCIENCE OF PFAS CONFERENCE
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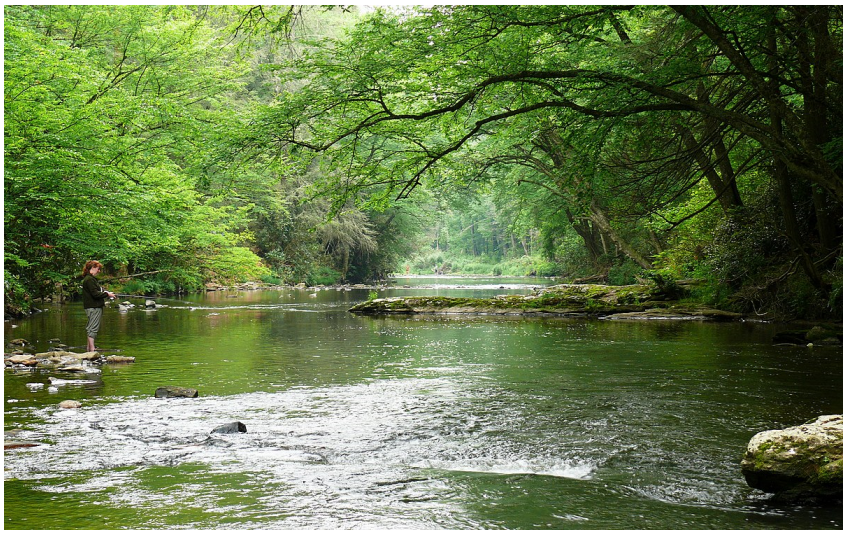
What is ITRC?

- ITRC is a state-led coalition working to advance the use of innovative environmental technologies and approaches. ITRC's work translates good science into better decision making.
- Since 1995, ITRC has grown into a national organization representing 50 states, D.C., and Puerto Rico.

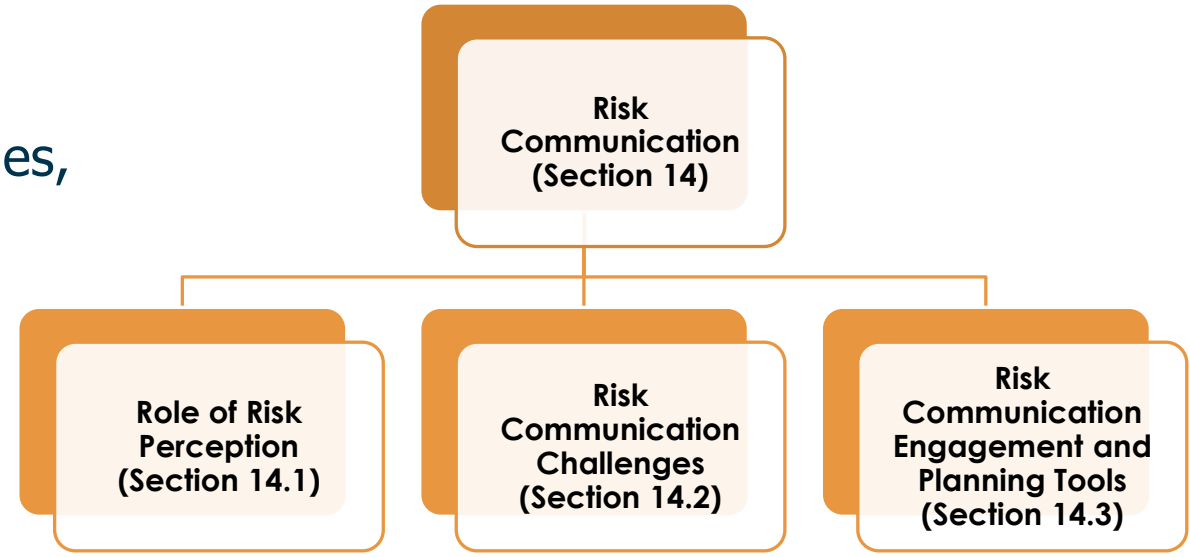


How We Achieve Our Mission

Select Projects → Form Team → Develop Documents, Training, and Other Tools → Conduct Training and Outreach → Implement Solutions

PFAS Technical and Regulatory Guidance Document Published

- Final web document PFAS-1: https://pfas-1.itrcweb.org
  - Risk Communication, Section 14
  - Risk Communication Case Studies, Section 15.4
  - Stakeholder Perspectives, Section 13



ITRC Risk Communication Toolkit

- Developed by the ITRC PFAS, 1,4-Dioxane and Harmful Cyanobacterial Blooms (HCBs) teams
- Recognizes that risk communication is broader than any specific environmental issue
- Highlights the value of this science-based communication approach

Overview of Risk Communication Toolkit

Principles of Risk Communication

Establish dialogues early and continue through resolution.

Include community in the decision-making process.

Present accessible and clear information.

Communicate both the known and the uncertainties.

Listen, acknowledge and follow up on specific concerns.

Communicate context for the risk.

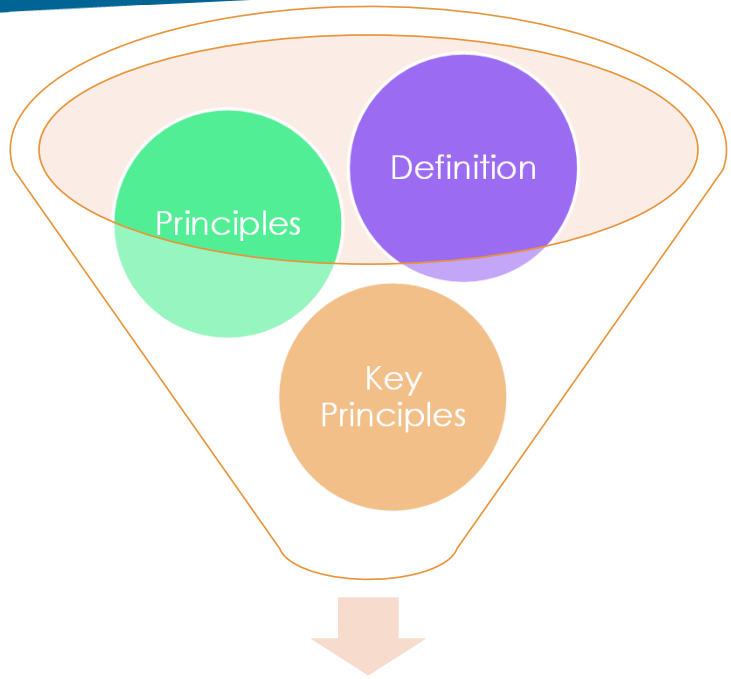
Key Aspects of Risk Communication Planning

1. How Communities See Risk
2. Building Trust and Credibility
3. Releasing Information Effectively
4. Interacting with Communities
5. Explaining Risk and Management Strategies

NJDEP 1991

Moving into the planning process

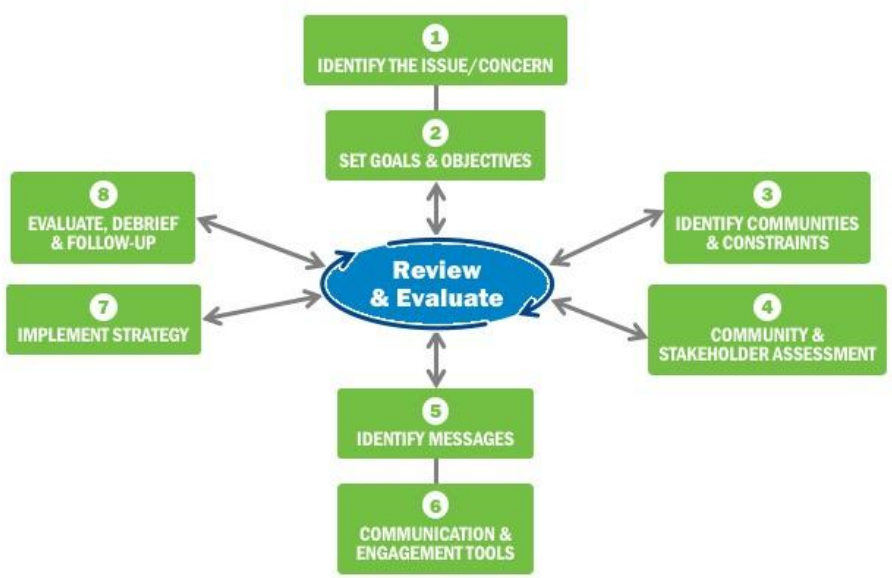
How do we use the basics information to go forward with a risk communication plan?



Risk Communication Planning Process

Risk Communication Plan Process Diagram

- Facilitates the development of project-specific plans
- Risk Communication Toolkit
  - Appendix A: template to download and fill-in
  - Section 4: process steps description
  - Section 5: case studies
  - Section 6: appendices of tools and examples
  - Additional case studies and tools to be linked as developed by other ITRC issue teams



Source: NJDEP 2014

PFAS Risk Communication Challenges

Regulatory	▪ Federal and state standards, guidance, and policies for PFAS are not uniform ▪ Only available for a handful of compounds
Fate and Transport	▪ Complicated due to the potential of multiple sources ▪ Persistence and migration in the environment
Toxicological/ Epidemiological	▪ Risks are not fully known or characterized ▪ No medical procedure to remove PFAS (such as lead)
Technical	▪ Difficulty in distinguishing between low levels of PFAS from use of consumer products and PFAS industrial use contamination
Analytical Ability	▪ Numerous PFAS compounds in existence, yet not all can be measured
Quality of Life	▪ Community outrage due to involuntary risk ▪ Misinformation and misperception of risk

Role of Risk Perception

- Determine community-specific risk perception factors to help understand stakeholders perceived risk

- Risk perception for emerging issues is challenging to address
  - science is rapidly evolving
  - exposure is perceived as involuntary
  - risk management strategies are a moving target
  - health impacts are greatest for the most sensitive populations

Example of Risk Communication Challenges: Heightened Sense of Risk

Risk Amplification

Amplification: Heightened sense of risk

Drivers:

- emerging characteristics
- physical, social, psychological, demographic factors

Challenges

Acceptance of proposed risk management strategy and broader policies

Solutions

Communicate transparent CSM, include uncertainties

Establish secondary risk management performance metrics (examples)

- Source control/ removal
- Reduction in contaminant bioavailability/loading
- Mitigation of exposure pathways

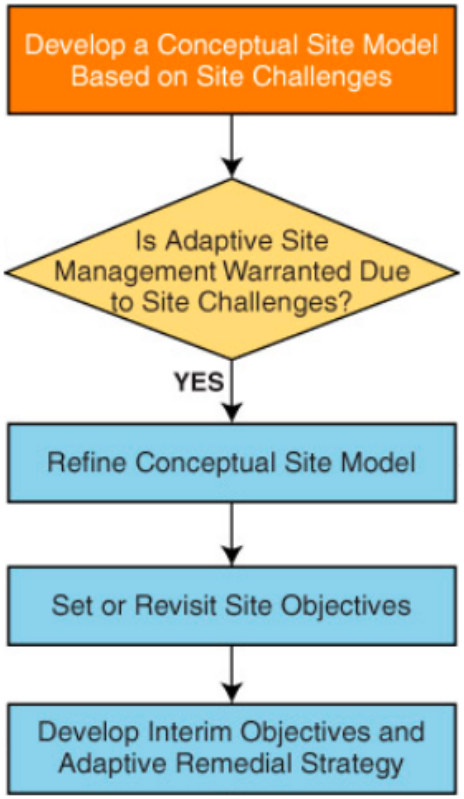
Collaborative and compassionate atmosphere with affected individuals

Example Risk Communication Challenges: Diminished Sense of Risk

Risk Perception	Challenge	Solutions
Attenuation: Diminished sense of risk Drivers: • physical, social, psychological, demographic factors	Inaction in risk reduction measures, such as: • Blood testing • Installation of water treatment system • Use of an alternate water source • Abatement and mitigation activities	Identify site-specific risk perception factors (examples): • lack of access to information • inability to fund property owner mitigation activities • presence of other higher ranking "hazards", such as food security and safety Integrate into the risk communication/community involvement plan

Moving Towards Adaptive Management?

- Consideration of:
  - Increased understanding in fate and transport, as well as human and ecological risk assessment
  - Advancements in technologies, sampling, and analytical techniques
  - New and updated regulatory standards and policy
  - Changes in community and stakeholder risk perception factors overtime



Adaptive Management Process, figure from ITRC Remediation Management of Complex Site Technical Guidance (2017). http://rmcs-1.itrcweb.org

ITRC Risk Communication Toolkit Resources

Steps 1 & 2 Identify the Issue & Set Goals

- Agenda for First Internal Communication Team Planning Meeting
- **PFAS-specific SMART Goals**

Steps 3 & 4 Audience Assessment

- **Actor Mapping Tools, including PFAS-specific examples**

Steps 5 Identify Messages

- Message Mapping Guide
- **PFAS-specific Key Messages**

Step 6 Communication Methods

- **Case Studies**
- **Active Centralized Information Repositories**
- **Community Education Classes**
- **Guidance for Writing Analytical Results Summary Letters**
- **Guidance for Writing Press Releases**
- **Social Factors Vision Board**
- **Analytical Data Package Public Information Fact Sheet**
- **Tracking Form of Media Correspondence**

Risk Communication Toolkit
A Highlight of Selected Tools

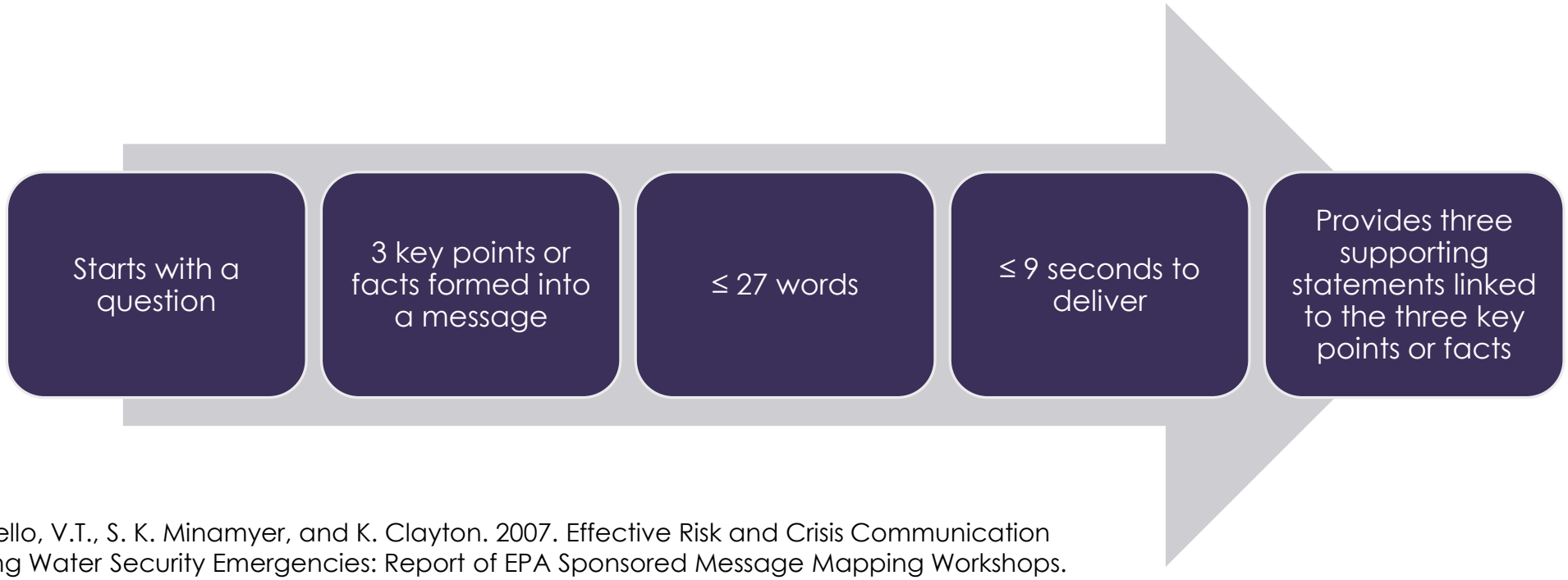
Stress and Messaging

People under stress often have difficulty hearing, understanding and remembering information.

- They may lose as much as 80% of the information
- They are often distrustful
- They may focus on the negative

USEPA 2007. "Effective risk and Crisis Communication during Water Security Emergencies, Summary Report of EPA Sponsored Message Mapping Workshop." EPA/600/R-07/027, March.

Message Mapping Tool



Covello, V.T., S. K. Minamyer, and K. Clayton. 2007. Effective Risk and Crisis Communication During Water Security Emergencies: Report of EPA Sponsored Message Mapping Workshops. EPA/600/R-07/027. Washington, D.C.: U.S. Environmental Protection Agency.

PFAS Mapped Message Opening Statement

Stakeholder: Community member	**Question/Concern/Issue:** What are PFAS and why is the state concerned about them?	
Key Message/Fact 1: PFAS are a family of human-made chemicals in many products used by consumers and industry.	Key Message/Fact 2: PFAS are emerging contaminants of concern.	Key Message/Fact 3: PFAS may adversely impact human health.

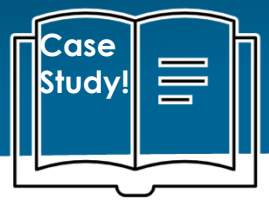
Partnering with Academic Institutions

- Community Education
  - e.g., High School teachers, medical professionals, journalists, and municipal water managers
  - e.g., Interpret science and regulatory assessment in laymen terms
- Access to a Neutral Party
  - How to evaluate test results
- Citizen Science
  - Regional and local sampling

Understanding PFOA Class at Bennington College, Vermont
Fact sheets, Bennington College example

(photo used with permission, D. Bond, Bennington College)

Communication Methods Summary



Purpose: identify specific communication methods to help achieve the RC SMART Goals and communicate mapped message

Kirk Pflugh, K. and S. Shannon. 1992. Improving Public Participation in Environmental Cases: Lessons for Agency Outreach Efforts 1991-1992.

AGENCY RECEIVES INFORMATION FROM CITIZENS

TECHNIQUE	DESCRIPTION	STRENGTHS	WEAKNESSES	PURPOSE	PROMOTE AWARENESS OF PARTIES AFFECTED BY PROJECT/ISSUE	AGENCY LEARNS HOW AFFECTED PARTIES VIEW PROJECT/ISSUE	IDENTIFY PROBLEMS	GENERATE SOLUTIONS	ARTICULATE & CLARIFY MAIN IDEAS
Interactive Public Meeting	The agency conducts a presentation to educate the public on	The method can reach a large number of people and functions	Agency has less control in a large meeting than in a	To reach a large group with information on a	Yes, this format provides an opportunity to find	Yes.	Yes.	This is not the best technique to use to generate solutions,	Yes.

Appendix H of ITRC Risk Communication Toolkit, *Communication Methods Table* (Kirk Pflugh and Shannon 1992)

Thank you! Questions?

- Check out the ITRC PFAS Risk Communication Resources:
  - PFAS Technical and Regulatory Guidance Document and Fact Sheets PFAS-1. Washington, D.C.. https://pfas-1.itrcweb.org/
  - Risk Communication Toolkit RCT-1. Washington, D.C.: Interstate Technology & Regulatory Council. https://rct-1.itrcweb.org/
  - PFAS Risk Communication Video: https://www.youtube.com/watch?v=HqOaPip-z5g

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