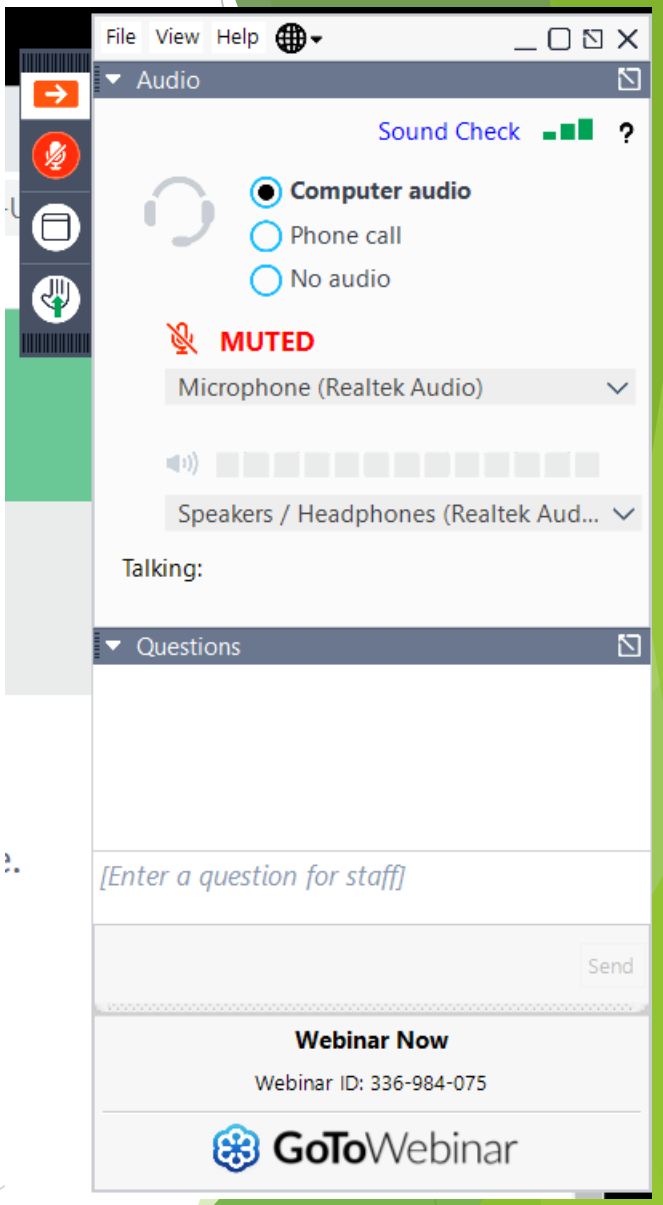
2020 ASTSWMO RCRA Corrective Action Virtual Conference: Day 2

September 2, 2020

Before we start

- All attendees are muted throughout the webinar.
- **Questions:** Use the Questions Pane in the control panel to send questions to the speakers throughout the webinar.
- **Note who the question is directed to in your submittal.**
- The webinar is being recorded and will be made available on the ASTSWMO website.



September 2, 2020 Agenda

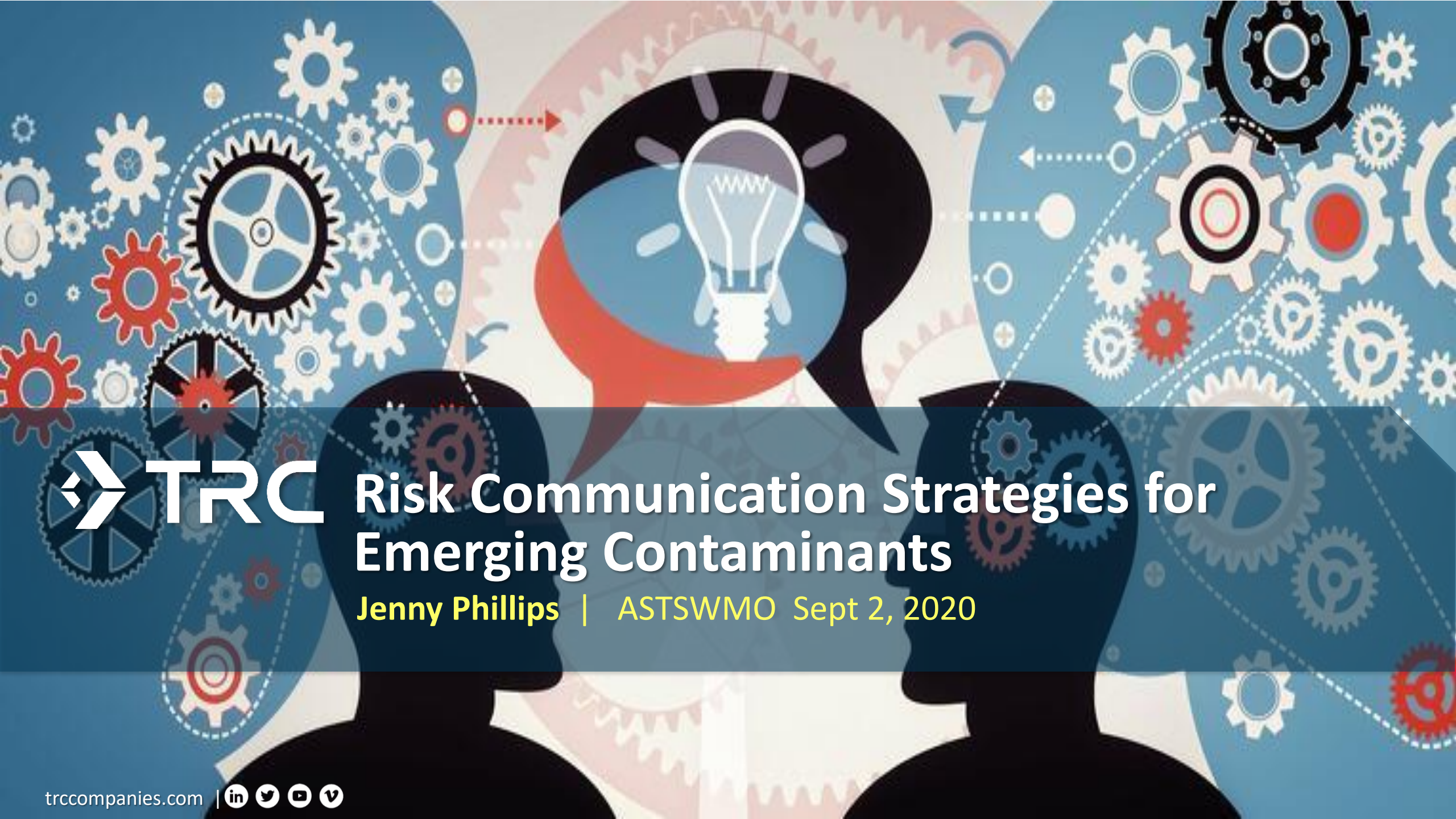
1:00 – 1:10 PM	Opening Remarks
1:10 – 2:40 PM	Long-Term Stewardship for RCRA Corrective Action
2:40 – 3:00 PM	Break
3:00 – 4:15 PM	Risk Communication
4:15 PM	End of Day 2

Jenny Phillips

Director, Risk Assessment and Toxicology and Vice President

TRC Companies, Inc.

Risk Communication



Risk Communication Strategies for Emerging Contaminants

Jenny Phillips | ASTSWMO Sept 2, 2020

Drinking water serving 7.5 million Californians has been contaminated with toxic PFAS, new report says

By Leah Asmelash, CNN

Updated 11:18 AM ET, Fri September 27, 2019

Expert warns New Plymouth chemical plant needs testing for dioxin contamination

Robin Martin of RNZ · 09:18, Aug 21 2020

CONNECTICUT

Connecticut inmates say drinking water is contaminated with sewage

By PAT EATON-ROBB
ASSOCIATED PRESS | SEP 13, 2019 | 9:59 AM

ADVERTISEMENT

headlines-gone-wrong-funny-awful-13
SOUTH HAVEN
City unsure why the sewer smells
By KRISTIN HAY
H-P Correspondent
SOUTH HAVEN — The tests have been inconclusive in trying to locate the source of a mysterious odor that has been detected in several downtown South Haven businesses.
Stickland said he will discuss the strategy of putting a non-toxic smoke into the sewer to detect the path of the offensive gas emanating from basement drains.
"Somebody is putting something into the sewer that is creating the odor," Stickland said in an interview after the council meeting.

The risk of preterm birth rises near gas flaring, reflecting deep-rooted environmental injustices in rural America
August 20, 2020 8.15am EDT

DOE to do NEPA's EIS on BNFL's AMWTP at INEEL after SRA protest
Nuclear waste incinerator to get full environmental study
BY DICK DORWORTH
A nuclear waste incinerator costing an estimated $1.8 billion scheduled to be built at the Idaho National Engineering and Environmental Laboratory (INEEL) near Arco will have a full environmental impact statement (EIS) conducted after all.
The EIS is required under the National Environmental Policy Act (NEPA) but until last month the Department of Energy (DOE)
technologies BNFL has chosen to incinerate and otherwise treat mixed waste. We still do not know exactly what waste will be treated. Nor will we learn the answers to these and other fundamental questions if DOE-ID pursues its intended course of action, for a supplement analysis does not require the full public involvement that is the cornerstone of NEPA and, I would argue, of any broad acceptance of mixed waste incineration here in Idaho."
shall execute a procurement contract for the Facility by June 1, 1997, complete construction of the Facility by December 31, 2002, and commence operation of the Facility by March 31, 2003."
Before the governor's agreement was signed, federal law within the Resource and Conservation Recovery Act (RCRA) obligated the DOE to clean up its nuclear waste. Putting the AMWTP in Idaho is part of the DOE's
BANNED

Risk Communication

Risk communication -- the exchange of real-time information, advice and opinions between experts and people facing threats to their health, economic or social well-being.

Basic considerations for a successful presentation include:

- Begin with a purpose and objective to ensure that your team will start on the same page and know what the meaning of success looks like.
- Consider first the communicator – their confidence in the issue and their values, how will the audience perceive the speaker?
- Tackle the complexities of science to get to your message and then back it up into an understandable key message that the general population can follow and perhaps embrace.
- Risk communication must be a dialog with the goal of building consensus, you won't get there with a monolog

(Lundgren, Regina E and McMakin Andrea H, 2018)

Key Messages & Objectives - Share Early & Often

The goal of defining key messages is to Ease Public Concern via statements specifically about the risk, what is being done, and to give guidance on how to respond and take precautions, if necessary.

When developing key messages:

- Think freely and jot down all pieces of information you wish to communicate.
- Identify the most important ideas. Repeat the process until your list is down to three items.
- Keep them simple and straightforward in presentation but not in content
- Deliver with brevity and clarity
- State your conclusions first, then provide supporting data.
- Stick to the facts of what has, is, and will be done.

Key Messages & Objectives-Share Early & Often

- Scientific information will be more useful to the audience if the information provided is easily understood
  - A discussion of statistical probabilities and how they translate into a “relatively minimal-risk scenario for the average citizen” might be fine for scientists, but for the general public such a discussion will only confuse the issue and fail to meet the goals of informing and easing concerns.
- If the risk is low, say, “the risk to the public is low.”
- Stay on message, repeat your key messages throughout the discussion
- Raise your points often enough that your audience leaves with a clear understanding of the message you wanted them to hear --not word by word but say the same message in a variety of ways.
- **The key messages are points you want your public to have in mind after the meeting.**

Some that don't work

Lawsuit Alleges Union Carbide Failed To Report Toxic Landfill

By BRITTANY PATTERSON • AUG 7, 2020

Share
Tweet
Email

CLEARWATER

Sick children. Brown water. Lost homes. Inside a Clearwater mobile home park.

The owner of Southern Comfort denies there are problems with the drinking water. But the park is still being shut down. All families must be out by Oct. 31.

REDEVELOPMENT | OSCAR MAYER SITE

Environmental contamination concerns taint Oscar Mayer redevelopment plan

Chris Hubbuch | Wisconsin State Journal Jul 19, 2020

Key Messages & Objectives – Emerging Contaminant Examples

- The fish advisory is intended to prevent exposure to methylmercury, as people are mainly exposed when they eat fish and shellfish that contain the compound.
- 1,4-Dioxane in groundwater used for drinking, food preparation and irrigation of food crops has been confirmed to be at concentration levels which do not pose threat to public health.
- The detection methods for 1,2,3-trichloropropane (1,2,3-TCP) have improved, and results indicate that groundwater wells in the area are impacted above the protective levels.

Importance of Key Messages

Roane County soccer fields are open again after tests show they're free of coal ash

Jamie Satterfield, Knoxville News Sentinel Published 11:00 p.m. ET Sept. 29, 2019 | Updated 8:36 a.m. E

Judge sides with Johnson Controls that Goshen pollution is not a danger

JOHN KLINE THE GOSHEN NEWS 22 hrs ago

swnewsmedia
Great People Growing Communities
Communities
News
Sports
Events
Obituaries
Classifieds
BOOK ONLY AT HILTON.COM
Rollover for Hilton brands
Terms & Conditions apply

Firemen's Clayhole reopens after additional testing shows it's safe for recreation

Alex Chhith Jul 11, 2019

Children play on the Firemen's Clayhole swimming dock.

Buy Now
Ad
CHASE
MAKE MORE OF WHAT
Open an account at
Trending Now
Chaska

Relationship Building to Earn & Gain Trust

In risk communication, trust is the currency of transaction. Trust is the "assured reliance on the character, ability, strength, or truth of someone or something" *(Websters, 2019)*.

Five Rules for Building Trust and Credibility:

1) Accept and involve the public as a partner.
2) Appreciate the public's specific concerns.
3) Be honest and open. Once lost, trust and credibility are almost impossible to regain.
4) Work with other credible sources.
5) Meet the needs of the media

(Covello & Allen, 1988)

Relationship Building to Earn & Gain Trust

- **Tools to establish this trust include communicating early often and fully**, don't plan to just show up once and either not meet the key community leaders prior to your presentation or to not follow up.
- **Always know how information was gathered** and conclusions reached.
- **Building knowledge on emerging contaminants** as information becomes available is common as the science is often rapidly changing.
- **Therefore, a balance of timing** (getting information out before perception rules) and ensuring accuracy is critical

Credible Technical Expertise

- Don’t shy away from being the expert however, don’t give the impression that you, alone, are the authority on the issues being raised or the sole decision-maker.
- Speak the truth, practice your key messages so that the community understands your sincerity and conviction to the issue, without repeating yourself over and over.
- While sharing your expertise is critical to your credibility, make sure to define all technical terms and acronyms. Don’t use language that may not be understood by even a portion of your audience.

Credible Technical Expertise

- Focus on the benefits to be derived, not on the costs entailed. If costs are an issue, voice respect for the need for responsible stewardship of public funds.

- Work hard to identify the best subject matter expert with sufficient empathy, commitment, competence and honesty to engender trust. Just as important is the have the audience view the channel for information – (website, news, journal) as similarly trustworthy.

Dupont C8 Science Panel - Mid-Ohio Valley

"The settlement also established that a group of public health scientists would assess whether or not there is a probable link between C8 exposure and disease in the community. We were ***chosen as members of the Science Panel jointly by the lawyers for the community and DuPont****. The panel was made up of: Dr. Tony Fletcher of the London School of Hygiene and Tropical Medicine, Dr. David Savitz of Brown University in Providence, and Dr. Kyle Steenland of Emory University in Atlanta. We were chosen because of our long experience in designing and carrying out environmental health studies and the view of the parties in the settlement that* ***we would be able to objectively generate and evaluate the evidence.***

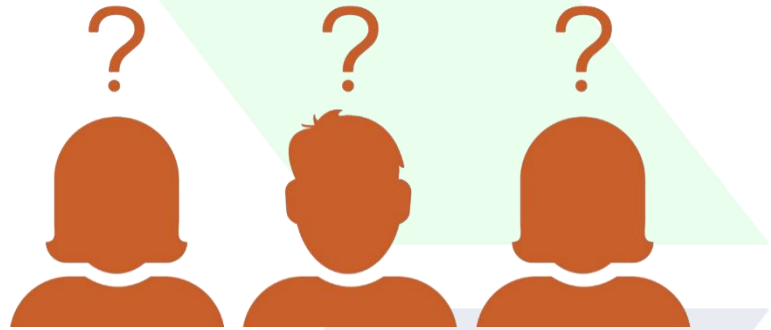
We came to this project as independent epidemiologists - scientists trained in gathering information to evaluate whether environmental factors may or may not be causing disease in groups of people; ***and remained independent and neutral throughout. The settlement paid for our work but the parties to that case did not direct what we did or how we did it****. We had no belief ahead of time that C8 does or doesn't affect human health."*

Do the Work - Understand the Target Audience and Their Point of View

- Risk Communication is not effective unless you acknowledge the public perspectives and try to understand how they understand the issue
  - *Detection of an emerging contaminant in the water supply.*
  - *There will be different understanding of what has been communicated.*
- You may have understood that the health department has released written information for example to all residents, however, many residents will have not received or will not have the same understanding of the information.
- Recognize that when people perceive themselves at risk, their ability to hear and process information decreases dramatically, estimated to be 80% less retention than normal.

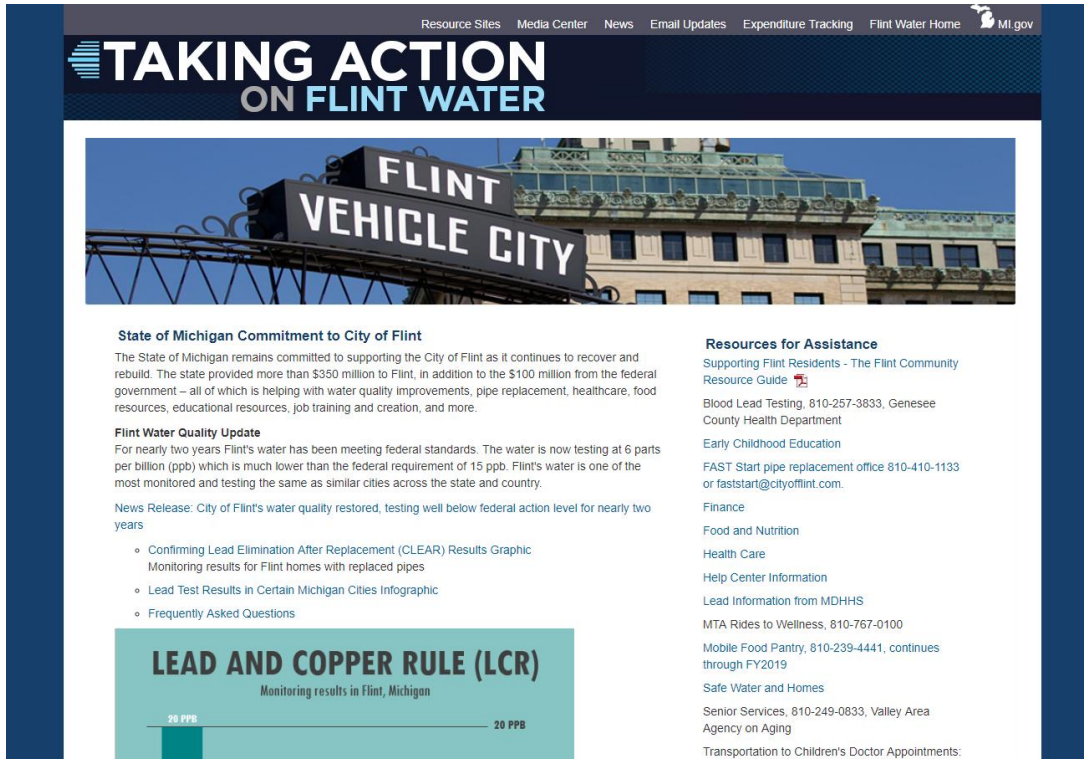
Do the Work - Understand the Target Audience and Their Point of View

- **Knowing your audience also takes some basic understanding of**
  - Who they are, where are they from?
  - What are their interests and concerns?
  - What are their likely perceptions and biases?
  - Will they be receptive or resistant or even hostile ?



- Give the audience something to take away, use of key messages helps the audience to remember the important points. For example, with emerging contaminants, if the risk is low, make sure that is your key message with some suggestions of what actions they can take.

Understand the Target Audience – Flint, MI



Dear Parent,

To help make sure the children of Flint are safe from lead exposure, the Genesee County Health Department and the Michigan Department of Health and Human Services are providing answers to the following questions:

- Where does lead come from?
- What can I do to protect my family?
- Should I get my child tested for lead?
- Where can I find more information about lead?

Be Open About What You Know & What You Don't Know

Remember Perception is Reality

If done properly, risk communication ideally educates and informs. Crucial to this success is giving people the chance to express their concerns, and ask questions.

Scientific uncertainty adds complication to providing reliable and meaningful information for many hazards and risks

The public often believes that scientific findings are or should be precise, repeatable, and reliable.

An audience question such as, "If you're not certain, how can we know we're being protected?" is not a question about data, it's about personal and family safety. That is the issue to be addressed.

Be Open About What You Know & What You Don't Know

- Risk communication should derive from a science based, coherent, relevant, respect and lawful basis
- There is a need to channel the right message to the right person at the right moment. Consumers are not idiots and they do understand.
- Openness and transparency is needed. Everyone can get information using sources like the internet, but communicating risk should be done in an advanced way

2018 Helsinki Chemical Forum,
Panel 2 on Risk Communication and Endocrine Disruption

Special Considerations for Emerging Contaminants / Summary

Lastly, keep in mind the importance of knowing your communication limits, experts believe that public outrage is greater when hazards are: (Gamhewage G., 2014)

- Unfamiliar and/or new
- Involuntary
- Affects future generations
- Cannot be seen or otherwise sensed
- Catastrophic in consequence
- Unfair in the distribution of harm and benefits
- Potentially fatal

With Emerging Contaminants, many of these factors may come into play.

People do 3 things – take in, process and act on information differently.

Emerging Contaminant Challenges

- Rapidly changing Science, yielding uncertainty in results (knowledge changes with time)
- Lack of federal standards and consensus among regulatory agencies (trust)
- Frequently the focus of what ”you hear” is on toxicity or hazard (the health effects of chemical x), and does not provide the balancing information of the likelihood and/ or magnitude of exposure in daily activities – tying to ***risk assessment concepts*** if there is little or no exposure then there is little to no possibility of harm
- Keep in mind that research that <u>didn’t</u> find any health risks is likely <u>underreported</u>

Thank you

Questions?

Jenny Phillips

P: 970.484-3263 | **E:** *jkphillips@trccompanies.com*

www.trccompanies.com

Regina Strong
Environmental Justice Public Advocate
Michigan Department of Environment, Great Lakes, and Energy

Risk Communication

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Communications and Environmental Justice

Regina Strong
Office of the Environmental Justice Public Advocate
September 2, 2020
strongr1@Michigan.gov

What is Environmental Justice?

EPA defines environmental justice as the fair and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

History of the EJ Movement

- Grounded in the civil rights and environmental movement
- The birth of the EJ movement 1982
- Studies validating concerns that race was a significant factor in locating hazardous waste sites (1983 & 1987)
- 1991 - first People of Color Leadership Summit held in Washington DC
- 1994 - President Clinton issued Executive Order 12898, entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”
- https://www.epa.gov/environmentaljustice/environmental-justice-timeline

EJ History in Michigan

- Both the Granholm and Snyder administrations made previous attempts to address environmental justice.
- Working groups were convened during both administrations to look at the best ways to engage environmental justice communities.
- Advocates have long advocated and pushed for recognition of environmental justice issues. Flint served as a tipping point.

EGLE and the Executive Order

- Governor Whitmer created the Office of the Environmental Justice Public Advocate and the role of Environmental Justice Public Advocate in Executive Order 2019-06
- Office of the EJPA was created as a Type I agency within the Department of Environment, Great Lakes and Energy.
- Interagency Environmental Justice Response Team was established.

Michigan and EJ

- The Interagency Environmental Justice Response Team began meeting monthly in July 2019.
- Work Groups of the Response Team have been meeting since last fall.
- Michigan Advisory Council for Environmental Justice (MAC EJ) has been created and began meeting in February 2020.
- Engagement with communities throughout the state to address equitable application of environmental laws and regulations is underway.

Michigan Advisory Council on Environmental Justice

Equity and Environmental Justice

- Diversity vs. **Inclusion**
  - Diversity simply points to difference
  - **Inclusion** describes the need to incorporate these differences on a shared platform where they are accepted and valued
- Equality vs. **Equity**
  - Equality reflects treating everything the same
  - **Equity** takes into consideration how the past has shaped the present and assesses social advantage/disadvantage. It reflects providing what is needed versus equal amounts.

Two Pillars of EJ

- **Fair treatment** of all people.
- **Meaningful** public **involvement** in government decision making
  - People have the opportunity to participate in decisions about activities that may affect their health and/or environment;
  - The public can influence the regulatory agency's decision;
  - Concerns will be considered in the decision-making process; and
  - Decision makers will seek out and facilitate the involvement of those potentially affected

Disparate Impact Factors

Proximity and Exposure

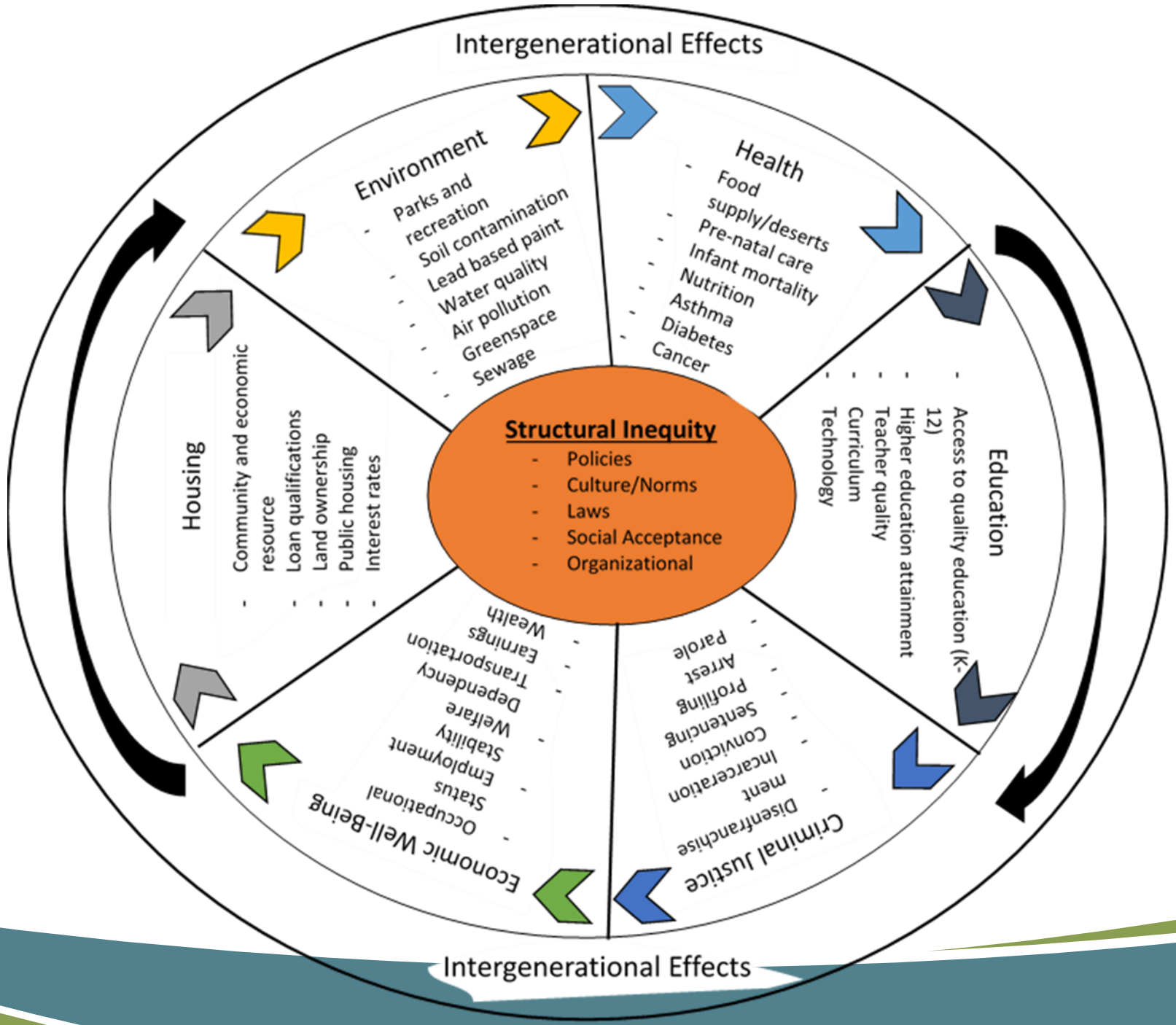
Unique Exposure Pathways

Physical Infrastructure

Cumulative Impacts

Public Participation

Vulnerable Populations


Intergenerational Effects
Environment
Parks and recreation
Soil contamination
Lead based paint
Water quality
Air pollution
Greenspace
Sewage
Health
Food supply/deserts
Pre-natal care
Infant mortality
Nutrition
Asthma
Diabetes
Cancer
Education
Access to quality education (K-12)
Higher education attainment
Teacher quality
Curriculum
Technology
Criminal Justice
Disenfranchisement
Incarceration
Conviction
Sentencing
Profiling
Arrest
Parole
Economic Well-Being
Occupational Status
Employment
Stability
Welfare
Dependency
Transportation
Earnings
Wealth
Housing
Community and economic resource
Loan qualifications
Land ownership
Public housing
Interest rates
Structural Inequity
Policies
Culture/Norms
Laws
Social Acceptance
Organizational
Intergenerational Effects

An Equitable Lens for Our Work

- How will being more intentionally inclusive enhance our work?
- How can we think of equity as an element of how we move forward and not an add on or something extra?
- How can we learn to value diverse perspectives, diversify our workforce and use a broader lens to view what we do and why?
- How do we let communities speak for themselves?

Key Considerations

- Look at over-burdened communities and assess cumulative impact as mitigation strategies are developed.
- Provide opportunities for meaningful engagement and equitable participation for impacted communities.
- Talk directly to community members.

Enhancing EJ Engagement

- Meet with community and listen to community concerns
- Communicate often and be transparent
- Remember everyone can’t reach your website
- Access is a key part of outreach
- Remember to address potential language barriers. Identify languages spoken in area.
- Use existing tools that communities use
  - Local groups, churches, websites
  - Social media, text chains, flyers

Office of Environmental Justice Public Advocate

Regina Strong
Environmental Justice Public Advocate
strongr1@michigan.gov

Questions

End of Day 2
Please respond to the Feedback Survey

Join Us Tomorrow, September 3, for:

- Opening Remarks, EPA Office of Enforcement and Compliance Assurance
- Corrective Action: Tools and Authorities
- Corrective Action: Parceling
- RCRA Redevelopment Videos

Thank You!