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Anticipating the Public's Questions during a Water Emergency

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Acknowledgements

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Presentation Outline

- Crisis communication study background
- Current research study
- Findings and conclusions
- Message Development Tool

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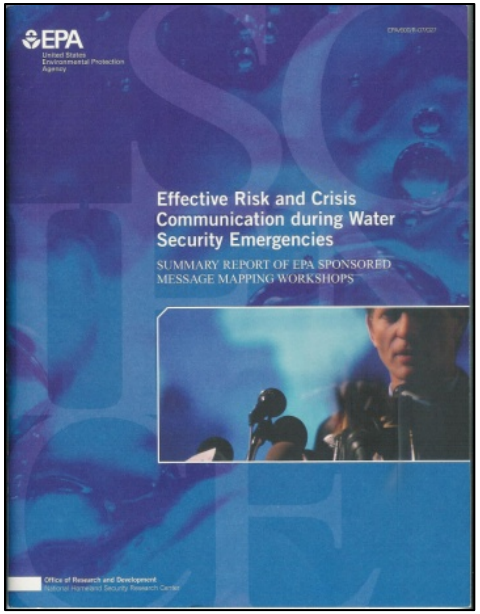
The Research Issue

- During water emergency, communication is critical to inform the public, reduce misinformation, and encourage appropriate behaviors
- Research shows that intuitions of technical experts regarding either what laypeople currently believe or what they need to know during a crisis are often strikingly different than what is actually the case
- Effective crisis communication must take into account such differences

Previous EPA Research

- Three workshops on Effective Crisis Communication during Water Security Emergencies
  - Facilitated by Dr. Vincent Covello, internationally recognized expert
  - Preparing effective messages to inform media and public during crisis events ahead of time
  - Supports crisis communication planning



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Current Research Study

- USEPA's National Homeland Security Research Center conducted crisis communication study with the Oak Ridge Institute for Science and Education (ORISE)
- Objectives
  - Identify critical information needs of public during water emergency
  - Identify differences in perceptions between professional and public
  - Inform crisis communication planning

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Current Research Study

- Information was collected from both drinking water professionals and water consumers across diverse geographical areas

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Utility Professional Interviews

- Professional moderator guided one-hour discussions
  - Total of 24 interview sessions with a total of 38 professionals of various job classifications
    - Senior management (5)
    - Public information officers (6)
    - Emergency management (7)
    - Plant operations (8)
    - Field operations (7)
    - Call Center (1)
    - Other (4)
  - Senior management interviewed individually
  - Others interviewed in pairs

Professional Session Process

- Contamination scenario
  - Unfit for use/cause unknown
  - Intentional act/terrorist attack
- Professionals listed questions the public would want answered
- Indicated five they thought the public would need to have addressed immediately
- List of 400 questions generated

Public Sessions

- Data from the public were collected through focus groups
  - Professional moderator guided two-hour discussions
  - Four focus groups conducted in each city
  - Up to eight participants per group
  - Total of 113 respondents participated
  - Received a financial incentive

Public Session Process

- Rated severity of loss of municipal services, including water
- Contamination scenario
  - Reverse 9-1-1 emergency message
    - Water contaminated/Do not use
  - Expanded to intentional act
  - Event occurred in other community or state
- Listed 300 questions
- Indicated five most important

Public Evaluation of Draft Messages

- Tested appropriateness and effectiveness of messages
- Reviewed draft messages for two scenarios
  - Pesticide contamination
  - Biological agent contamination
- Evaluated total of 20 messages
  - 12 messages evaluated by four groups
  - 7 messages evaluated by two groups
  - 1 message evaluated by one group

Example of Draft Message Tested

5-1: What can you tell us about the water contamination?	Participant Comments
We have confirmed the presence of a pesticide in the drinking water. • The pesticide is [insert name of pesticide], which is used for [insert use]. • Levels of the pesticide are above recommended drinking water standards. • The drinking water in the following locations has been affected [insert locations]. **An investigation is underway to determine the source and amount of the pesticide.** • We are taking samples and conducting tests throughout the system. • Public health and hospitals are tracking and treating those who are ill. • Law enforcement is investigating the cause. **Effective immediately, people should not use the water.** • People and pets should not drink the water. • People should not use the water to bathe, shower, or wash. • Alternative sources of drinking water will be made available at the following locations [insert locations and show map].	**Important Information** • Pretty good, had timeframe. • Effective immediately most important. • Keep water locations bullet. • Affected immediately should have been first response. • Second group very vague. • First will worry about health--is there something we can do to prevent. • Want to hear results of testing after time (show decreasing). • "Levels of drinking water" too vague, take out because we can't test. • Tell us not to drink first. **Change/Modification** • Narrowed down location, liked it. • Should be third, first, and second. • 1, 3, 2 as order. • Concerned that people would still drink if they say above water drinking standards, so say how far above recommended. Remove recommended. • Wouldn't warn us not to drink water if below level; eliminate bullet "above recommended level' -- sounds optional. **Questions** • Third bullet of first question: what if people can't get to locations for water? • What to do if you already drank water? • Is there food on store shelves that was prepared using the water? Ice? • How often are you going to give me updates? • How often are they testing water?

Results and Conclusions

Public Response to Water Disruption

- 75 percent ranked a 2-3 day disruption of service as severe situation
- Water uses clearly recognized
  - Drinking
  - Food preparation
  - Sewage disposal

"You can't live without water."

"Losing water – that's devastating."

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QUESTION SUMMARY

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General Question Categories for Both Professionals and Public

- Questions sorted into nine general categories
  - Details about the incident
  - Who has been affected
  - How the tap water can be used
  - Alternate sources of water
  - Actions consumers can take to purify water
  - Exposure to the contaminant
  - How to get additional information
  - Response and recovery

"If you can keep the…public informed…you can help the public manage the situation."

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Professional and Public Questions Mostly Similar

- Identification of the contaminant
- Expected duration of service disruption
- Who/what area was affected
- Consequences of exposure
- Prohibited and non prohibited uses of tap water
- Alternative water supplies

"As long as you're well informed, you're better off."

Professional and Public Differences

- Professionals thought of uses besides residential
  - Medical care
  - Fire protection
  - Business uses
- Public focused more on
  - Time
  - Personal safety
  - Obtaining “safe” water

Questions Most Important to Public

- How long until tap water is “safe”?
- How do I obtain “safe” water?
- How dangerous is the contaminant?
- Who is affected?
- What can I do?
- Where do I get additional information?

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OBSERVATIONS

Importance of Identifying the Contaminant

- For professionals
  - Control
  - Remediation
  - Public health directives
- For the public
  - Personal safety
  - Personal protective actions to be taken

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Public Reactions to Attack Scenario

- Terms like “attack” and “terrorism” carried significant negative connotations
- Strong emotional reaction
- Desire to know how their supply is being protected
- Public typically believed that
  - Likely point of attack will be source water (e.g., reservoir, river)
  - Contamination will spread throughout the system

“anger…panic…will there be others?”

Pros and Cons of Using Terms Like "Attack"

- Benefits
  - Immediate, intense focus and attention
  - Possibly greater resolve to comply with directives
- Costs
  - Anxiety is likely to
    - Decrease the ability to assimilate information
    - Diminish trust in the utility

Perception of Public: "Safe" Water = Zero Contamination

- Public respondents demonstrated little knowledge of routine testing
  - The frequency of testing
  - The idea of maximum allowable levels

"You didn't figure this out until enough people got sick?"

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Convincing the Public Water Is "Safe" Could be Tough

- Verification by multiple credible authorities
- Testing procedures are poorly understood
- Comparisons of test results to federal and state standards for safe drinking water might be helpful

Backing Up the Message

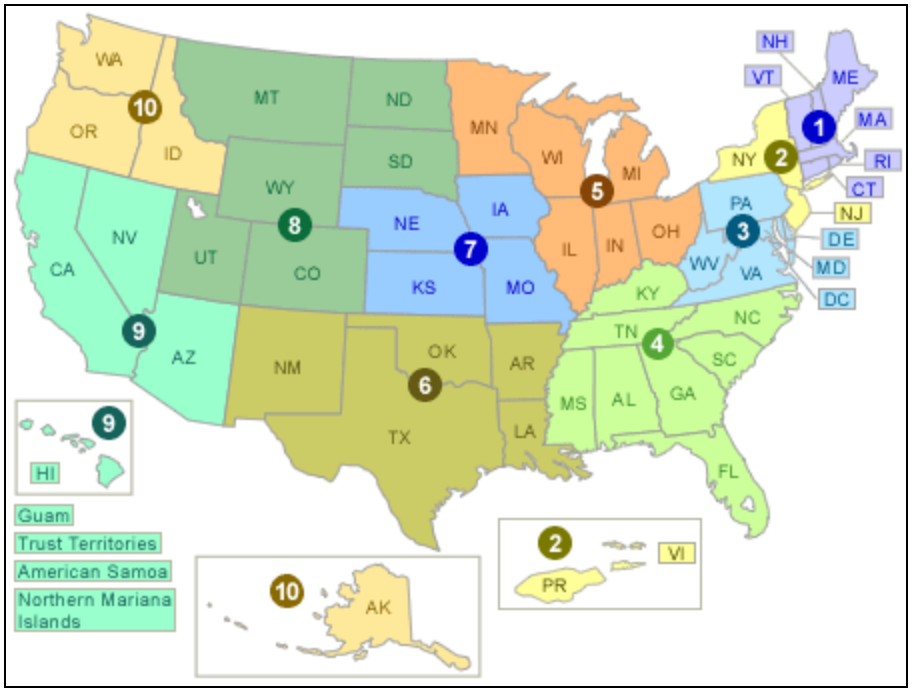
- Collaboration with public health agencies would be critical to affirm credibility of messages
- Elected officials important
  - Varied by location
- Clear presentation of extent of testing would be essential

Professional: "The health information must come from health officials."

Public: "I'd have to have someone come out, open the faucet, and drink it."

What If Attack Occurs Elsewhere?

- The public might expect multiple coordinated attacks
  - Assure the safety of local water supply
- Be prepared to address security issues



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Distribution Systems Difficult to Understand

- Complexity
- Ability to isolate portions of the system
- Alternative sources of water
- Extent and limitations of protection of water quality

Professional: "The public takes most of this for granted."

Public: "I don't know if I believe it could be that isolated."

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Intentional Biological Contamination More Concern than Pesticide

- Bacterium or virus is alive
- Remediation of a biological agent perceived as more difficult
- Pesticides less alarming
  - Ingested when eating fruit/vegetables
  - Used in homes

"Big difference…we eat pesticides."

"A biological agent will grow rather than be diluted."

"[Biological agent] automatic…sick, gut-wrenching feeling"

Doubts about Reverse-911 Call

- Efficiency questioned
  - Widespread unfamiliarity
  - Cell phones included?
  - Cell phones from out of area
- Public and professionals recognized need for multiple channels of communication

"[I thought] 'It's a hoax."

"How did you get my number?"

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PUBLIC EVALUATION OF DRAFT MESSAGES

Public Improved Draft Messages Tested

- Preference for
  - Directives (i.e., do/do not) rather than recommendations
  - Short concise sentences
  - Protective actions
  - Results rather than process
  - Sense of time/predictability

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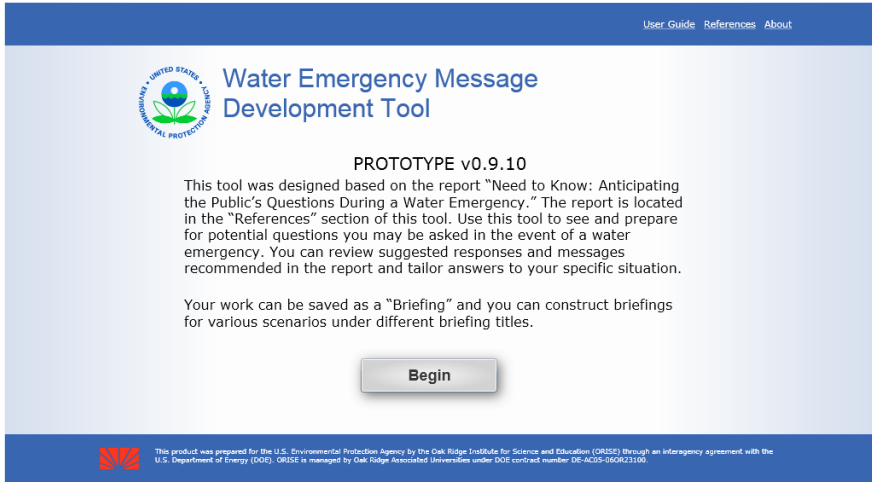
EPA MESSAGE DEVELOPMENT TOOL

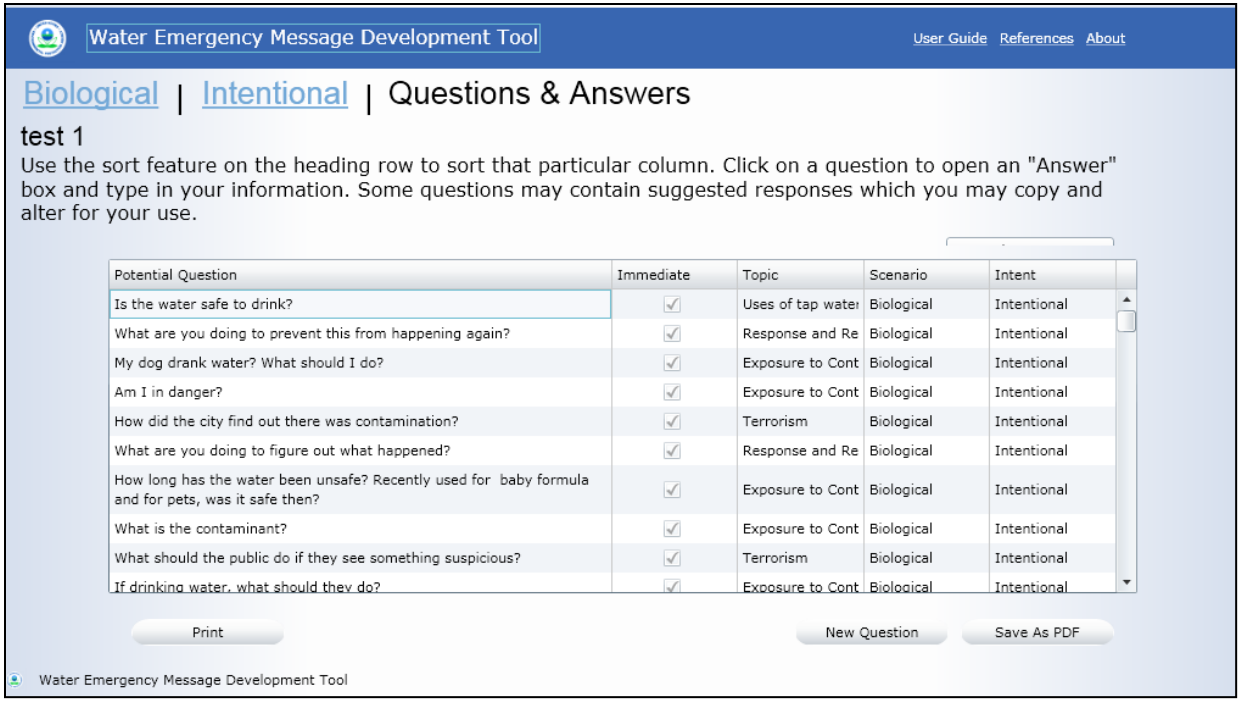
Message Development Tool



- Rapid organization of messages for utilities as part of crisis communication planning
- Incorporates study questions
- Includes some sample answers
- User-specific application
  - Build and save briefings
  - Add questions and answers

Message Development Tool Availability

- Web or CD
- Target availability September 2012



Report is Available

- Current crisis communication study is described in a report available on the NHSRC website and the WaterISAC
  - Go to www.epa.gov/nhsrc – then click on Risk Communications under Key Topics
- For more information, contact
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