Critical Public Information needs during Drinking Water Emergencies

Request for the Office of Management and Budget Review and Approval for Federally Sponsored Data Collection

September 2009

Project Officer: Scott Minamyer, Environmental Scientist
U.S. Environmental Protection Agency
Office of Research and Development
National Homeland Security Research Center
Water Infrastructure Protection Division

26 West Martin Luther King Drive
Cincinnati, OH 45268
Phone: 513-569-7175
Fax: 513-487-2555
minamyer.scott@epa.gov

Table of Contents

A. Justification

1. Circumstances Making the Collection of Information Necessary

Since the events of September 11, 2001, improving the security of the nation's drinking water and wastewater infrastructure has become a top priority. As a critical infrastructure, water systems can be subject to threats and intentional attacks and must be protected. The U.S. Environmental Protection Agency (EPA), as the federal lead sector-specific agency for water, plays a critical role in this effort and is responsible for protecting water systems including detection and recovery from terrorist attacks. The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of Americans' drinking water. SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. Amendments to the SDWA in 1986 and 1996 required many actions to protect drinking water and its sources. The 1996 amendments also recognized public information as an important component of safe drinking water. Following the terrorist attacks of September 11, 2001, EPA developed and initiated a research program to comply with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. The Act amended the SDWA and its 1996 amendments and included requirements for EPA to conduct research and review the methods and the means to prevent, detect, and respond to contamination by various chemical, biological, and radiological agents (Appendix A).

In addition to the Safe Drinking Water Act amendments, a number of Homeland Security Presidential Directives (HSPDs) drive EPA's water protection research.

- **HSPD-7**: **Critical Infrastructure Identification, Prioritization, and Protection** designates EPA as the sector-specific lead agency for critical water infrastructure safety and security and encourages the development of risk management strategies to address terrorist events (Appendix B).
- **HSPD-9: Defense of United States Agriculture and Food** directs EPA to develop a fully coordinated surveillance and monitoring program to provide early detection and to develop a nationwide laboratory network to support monitoring and response requirements (Appendix C).
- **HSPD-10: Biodefense in the 21st Century** is currently a classified document that reaffirms EPA's responsibilities under HSPD-9 while adding a clear directive regarding the agency's responsibilities during decontamination efforts and in developing the ability to address the risk of contamination following a bioattack.

The main focus of EPA's Homeland Security water protection research is on improving the nation's ability to be protected from and respond to terrorist attacks on the nation's water and wastewater infrastructure. The thematic research areas include:

- Protection and prevention research, which involves developing tools and methods to address the vulnerabilities of drinking water and wastewater systems.
- Detection research, which involves developing tools and methodologies to detect, confirm, and measure accidental and intentional contamination events and support the development of a laboratory network.
- Containment and mitigation research, which involves supporting the development of planning tools for contamination events and tools and methodologies for responding to and mitigating such events.
- Decontamination and water treatment research, which involves developing a better understanding of the treatment and decontamination of water infrastructure and contaminated water.

EPA distributes public information materials and holds public meetings, working with states, tribes, water systems, and environmental and civic groups, to encourage public involvement.

As part of EPA's Homeland Security water protection research initiatives, a critical need has been identified for the development of methodologies to effectively communicate risks associated with water security emergencies. The EPA sponsored three workshops in 2005 and 2006 on the development of message maps as part of effective risk communication planning. Message mapping uses include:

- A process by which users can predict 95 percent of questions likely to be asked by the media and others following an incident, prepare clear and concise answers to the questions along with supporting information ahead of time, and practice effective message delivery before a crisis occurs.
- A viable tool for communicating information about terrorist attacks and other manmade or natural emergencies. They ensure that risk information has the optimum chance of being heard, understood, and remembered.
- A tool to allow organizations to convey timely, accurate, clear, and credible information. They enable audiences to better understand issues, act constructively upon the information provided, recover more quickly from the stress of the event, and gain and regain trust in risk mangers.

As part of the 2005 and 2006 workshops, draft sample messages were developed through the cooperative efforts of subject matter experts in water agencies, public health, emergency response, law enforcement, communication, policy, and management. This data collection initiative is being undertaken as part of the formative research to: 1) evaluate message maps developed during the above-mentioned workshops for appropriateness and effectiveness and 2) compare public and professional assessments of critical information needs.

2. Purpose and Use of Information Collection

This will be the first opportunity for EPA to evaluate the message maps developed during the aforementioned workshops for appropriateness and effectiveness and compare public and professional assessments of critical information needs as noted previously. The results of the study will directly support the mission of the National Homeland Security Research Center (NHSRC). The NHSRC Threat and Consequence Assessment Division (TCAD) evaluates environmental and human health risks associated with the release of contaminants. TCAD also develops risk assessment and risk communication techniques and methods of practical assistance to government agencies and first responders dealing with chemical, biological, and radiological contamination. In addition, TCAD aids response leaders and decision makers in determining levels of risk to the public, deciding what steps to take, and communicating their decisions to the public in a useful and reassuring way.

The NHSRC Water Infrastructure Protection Division (WIPD) conducts research focusing on ways to better secure the nation's drinking water and wastewater systems against threats and attacks. Along with providing applied research and technical support, WIPD encourages information sharing and risk communication strategies among key water infrastructure stakeholders. WIPD scientists and engineers produce analytical tools and procedures, technology evaluations, models and methodologies, decontamination techniques, and technical resource guides and protocols. The overall objective of this study is to provide practical information that communicators can directly apply to their message development and crisis communication planning. The target audiences for the current efforts are water sector professionals and consumers (members of the public who use drinking water supplied by water utilities).

The results of the study will assist water utility Public Information Officers and others in addressing appropriate issues of public concern related to a terrorist or other crisis incident impacting drinking water systems and requiring post-incident decontamination actions. More specifically, the research will probe consumers' and water sector professionals' beliefs, opinions, and knowledge about water security risks that will assist public officials in planning effective risk communication messages.

Interviews with water sector professionals and focus groups with consumers will be conducted in each of the four regions of the country (U.S. Census Bureau identified regions). The selection of the locations was based on location (region), city population, location within the top 25 largest cities within the country, and household units (cities with housing units greater than 250,000 that potentially would use drinking water supplied by water utilities).

Target Location Considerations					
Region	**Location***	**City Selected**	**2007 City Population Estimate****	**2007 Rank of City Population Estimates****	**Housing Units*****
Region 1	Northeast	Boston, MA	599,351	23rd	255,072
Region 2	Midwest	Chicago, IL	2,836,658	3rd	1,173,754
Region 3	South	Charlotte, NC	671,588	19th	296,465
Region 4	West	San Diego, CA	1,266,731	6th	501,609
Data collected from the U.S. Census Bureau web site at: * www.census.gov/geo/www/us_regdiv.pdf (viewed 12-29-08). ** www.census.gov/popest/cities/tables/SUB-EST2007-01.xls (viewed 12-29-08). *** www.census.gov/ (viewed 12-29-08).					

Water Sector Professional Data Collection:

The objective for the water sector professional data collection is to explore the communication priorities associated with terrorist attacks on water supplies and information needs during and following crisis events.

Data will be collected from water sector professionals through in-depth interviews. Interviews will be conducted with those involved in the following job categories:

- Senior Management Water Sector Professionals
- Other Water Sector Professionals
  - Call Center
  - Emergency Management
  - Field Operations
  - Plant Operations
  - Public Information

Recruiting of water sector professionals will be conducted by EPA and the Oak Ridge Institute for Science and Education (ORISE), the supporting contractor for the initiative. ORISE is a U.S. Department of Energy institute that focuses on scientific initiatives to research health risks from occupational hazards, assess environmental cleanup, respond to radiation medical emergencies, support national security and emergency preparedness, and educate the next generation of scientists. ORISE also provides support to other government initiatives, including areas related to safety and health research. ORISE has a long history of collecting and analyzing research data for the U.S. Department of Health and Human Services, including their agencies such as the Centers for Disease and Control Prevention (CDC) and the National Institute for Occupation Safety and Health (NIOSH).

For this initiative, EPA will establish contact, obtain agreement of the organization to participate, and identify prospective interviewees. ORISE will screen potential interviewees, schedule interviews, provide directions, and otherwise make arrangements for participation (Appendix D).

Members of Senior Management will be interviewed individually. There will be an interview scheduled with one Senior Management professional in each city. Professionals from other job classifications (Call Center, Emergency Management, Field Operations, Plant Operations, and Public Information) will be interviewed in pairs (dyads). Each dyad will consist of professionals from two different job categories. There will be a total of six dyad interviews in each location. The exact composition of each dyad will depend on the number of personnel in that job category and their availability. Across the dyads, at least one person from each job category will be interviewed. A total of seven interview sessions will be conducted in each city.

Water Sector Professional Interview Selection					
Water Sectors Professionals Participants to be Interviewed	**Number of Interview Sessions Per City**	**Number of Participants per Interview Session**	**Number of Participants per City**	**Number of Cities where Interviews will Occur**	**Number of Participants per Initiative**
Senior Management	1	1	1	4	4
Other Professionals: - Call Center - Emergency Management - Field Operations - Plant Operations - Public Information	6	2	12	4	48
Total	7	1 - Senior Management 2 - Other Professionals	13	4 cities for Senior Managements and Other Professionals	52

For each individual interview or focus group, the participant(s) will assemble at a commercial market-research facility. Prior to participating in the study, each prospective participant will receive an information sheet providing such information as sponsorship of the study, their rights as a participant, risks and benefits of participating, and who to contact for more information (Appendix E). Participants can keep or discard the information as they choose. A representative from ORISE will address any questions regarding the study before the interview begins.

A moderator will conduct a 1-hour guided discussion with water sector professionals using a Moderator Guide (Appendix F). The interview will focus on discussions about issues the public would want or need to know in the event of a major water emergency.

An EPA representative will be available to answer questions at the completion of the discussion.

Up to four observers from EPA and ORISE may observe the interviews from behind a one-way mirror. They will take notes of the information being collected in preparation for drafting the findings of the study. No identifying information will be included in the notes.

Consumer Data Collection:

The objectives of the consumer data collection include:

- Explore the appropriateness and effectiveness of the messages prepared by EPA for delivery by water sector and other spokespersons to the media and general public during crisis events and post-incident decontamination.
- Explore anticipated concerns of members of the public and their priorities regarding information they would need during a terrorist attack on water supplies.

Data from the consumers will be collected by focus group sessions. Up to eight participants will be selected for each focus group, for a total of four focus groups per city.

Consumer Group Sessions					
Participants to be included in a Focus Group Session	**Number of Focus Group Sessions per City**	**Number of Participants per Focus Group Session**	**Number of Participants per City**	**Number of Cities where Focus Group Sessions will Occur**	**Number of Participants per Initiative**
Consumers	4	8	32	4	128

The participants will be selected using a screening instrument (Appendix G). Participants will be selected using the follow criteria:

- All participants will be at least 18 years of age
- Approximately half of the participants will be female
- The racial/ethnic mix of the participants will approximate the composition of the city of the focus group session
- Participants will be comfortable conversing in English
- Participants will be a mix of those who have earned a college degree and those who have not
- None of the participants will work in the media
- None of the participants will work in a health-related field
- None of the participants will have participated in a market research study within the last 6 months

For each focus groups session, participants will assemble at a commercial market-research facility. Prior to participating in the study, each prospective respondent will receive an information sheet providing information, such as sponsorship of the study, their rights as a participants, risks and benefits in participating, and contacts for more information (Appendix H). Participants can keep or discard the information as they choose. A representative from ORISE will address any questions regarding the study before the session begins.

A moderator will guide the discussion of the group using the Moderator's Guide (Appendix I). Each session is expected to last about 2 hours. The session will focus on:

- Discussion of public safety
- Identification of information people might want and actions people might take
- Review of draft information sheets (Appendix J); each group will review three to four fact sheets (Scenarios)

An EPA representative will be available to answer questions at the completion of the discussion.

Up to six observers from EPA, ORISE, and municipal water operations may observe the focus groups from behind a one-way mirror. They will take notes of the information being collected in preparation for drafting the findings of the study. No identifying information will be included in the notes.

Water Sector Professional and Consumer Data Collections:

Both the interviews with the water sector professionals and the consumer focus group sessions will be moderated by a representative from Mark Herring Associates, Inc. ORISE has a long-standing history of using the services of this company for government-related data research tasks, including support for qualitative research projects for CDC. The president of the company, Dr. Mark Herring, has consulted on this initiative and anticipates personally conducting the interviews and moderating the sessions. Dr. Herring has a doctorate in Counseling Psychology with doctoral-level training in experimental design, group process, and behavioral research. He has over 25 years experience in market research and works regularly on public health issues.

For provider (water sector professionals) interviews and consumer focus group sessions:

- All sessions will be conducted in English.
- Participants will be screened for their comfort level in conversing in English
- An audio recording of each session will be made
- No transcripts will be prepared.

A report of the findings will be compiled from the notes of the EPA and ORISE observers and in-depth discussions with the moderator. The audio recording will be reviewed if additional information or clarification is needed.

3. Use of Improved Information Technology and Burden Reduction

An audio recording of the interviews and focus groups will be made but will only be used if there are questions about the information received from the session (interview/focus group meeting). There is no need for a transcript or information to be entered into a data system. It is anticipated the bulk of the information will be obtained from the observers' notes and discussions with the moderator.

4. Efforts to Identify Duplication and Use of Similar Information

The current data collection will not duplicate any existing or past EPA work or the work of other agencies.

- EPA's National Homeland Security Research Center has identified a critical need for the development of methodologies to effectively communicate risks associated with water security emergencies. They sponsored workshops in 2005 and 2006 to prepare example message maps for such emergencies. This data collection initiative is being undertaken to evaluate message maps developed during the workshops and compare public and professional assessments of critical information needs
- A professionally trained librarian researched the literature for any studies similar to this EPA proposed research. None were found that closely match these potential research efforts. During the literature search, information was located concerning:
  - Communicating risks to the public in drinking water incidents in a study conducted in the United Kingdom (UK) that was published in the *Journal of Water and Health* (Rundblad 2008). According to the article, the UK study results indicated the need for communicators to address the words used to make up risk messages that this proposed research focus will include.

  - An international consensus that a preventive risk management approach to the supply of drinking water (Water Safety Plans [WSPs]) is the most reliable way to protect public health according to an article published in the *Journal of Water and Health* (Byleveld et al. 2008). A key component of a comprehensive WSP is that water suppliers and health authorities must have plans to respond in the case of water contamination and/or outbreaks and include clear guidance on when to issue warnings to consumers and how these warnings are to be communicated. This EPA proposed research should aid in providing risk communication guidance in this area.

  - Communicating successfully information about water-related risks to the public was published in *the Journal American Water Work's Association* (Parkin et al. 2003). In a workshop, researchers and practitioners discussed emerging issues to develop recommendations for improving water-related health risk communication. Workshop participants stressed that water utilities need to educate their staff on the importance of risk communication and that risk communication should be a board-level responsibility. This proposed research would support the education of water professional staff about risk communication methods.

4.1 References

Byleveld PM, Deere D, Davison A (2008): Water safety plans: Planning for adverse events and communicating with consumers. *Journal of Water and Health* 6:1-9.

Parkin RT, Embrey MA, Hunter PR (2003): Communicating water-related health risks: Lessons learned and emerging issues. *Journal American Water Works Association* 95(7):58.

Rundblad G (2008): The semantics and pragmatics of water notices and the impact on public health. *Journal of Water and Health* 6(suppl 1):77-86.

5. Impact of Small Businesses or Other Small Entities

The participants for this study will be water sector professionals and consumers of drinking water supplied by water utilities. The water sector professionals will be municipal employees that have jobs related to public drinking water.

Consumers will be members of the general public who use drinking water supplied by water utilities. Although some of the consumers may work for small businesses, small businesses will not be directly involved in the study.

6. Consequences of Collecting Information Less Frequently

This is a component of EPA's current behavioral science research intended to assist water utilities and others in developing methodologies for effectively communicating risks associated with water security emergencies. This data collection initiative is being undertaken to evaluate message maps developed during the workshops and to compare public and professional assessments of critical information needs. It is critical that these methodologies be tested prior to a real water security emergency to ensure that public officials have the right tools to use in planning effective risk communication messages. The interviews and focus group evaluations comprising this study will be conducted one time. No follow-up effort is planned at this time.

There are no legal obstacles to reduce the burden.

7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5

There are no special circumstances involved in this study.

8. Consultations Outside the Agency

8.1 Federal Register Notice

A copy of the 60-day notice in the Federal Register soliciting comments on the proposed study is attached (Appendix K).

8.2 Consultations

The following professionals/consultants contributed to the development of the message maps and/or the message map evaluation process being proposed:

Participants of the EPA sponsored Message Mapping Workshops held in 2005 (Atlanta, Georgia and Washington, DC) and 2006 (Alexandria, Virginia) assisted in developing the message maps that are being evaluated. Invited workshop participants represented a cross-section of water utilities from various regions of the United States; local, state, and federal government agencies; emergency response organizations; public health officials; law enforcement agencies; water sector professional associations, and experts in emergency communications.

Dr. Vincent Covello, Director
Center for Risk Communication
29 Washington Square West Suite 2
New York, New York 10011
Phone: 646-654-1679
E-mail: vcovello@CenterForRiskCommunication.org

Dr. Vincent Covello facilitated the 2005 and 2006 workshops for EPA. Dr. Covello is an internationally known crisis communication expert and Director of the Center for Risk Communication. In the past, Dr. Covello has held numerous positions in academia and government, including Associate Professor of Environmental Sciences and Clinical Medicine at Columbia University. He has been a senior scientist at the White House Council on Environmental Quality, a Study Director at the National Research Council/National Academy of Sciences, and the Director of the Risk Assessment Program at the National Science Foundation. He is on the editorial board of several journals and is the Past President of the Society for Risk Analysis. Dr. Covello has authored or edited over 25 books and over 75 published articles on risk assessment, management, and communication.

Dr. Mark Herring
Mark Herring Associates, Inc.
2150 Diamond Rock Road

Malvern, PA 19355-9528
Phone: 610-296-7489
E-mail: mark@markherringassociates.com

Dr. Mark Herring was consulted on the process and materials to be used for the interview and focus group sessions. Both the interviews with the water sector professionals and the consumer focus group sessions will be moderated by a representative from Mark Herring Associates, Inc. The President of the company, Dr. Mark Herring, anticipates personally conducting the interviews and moderating the sessions. Dr. Herring has a doctorate in Counseling Psychology with doctoral-level training in experimental design, group process, and behavioral research. He has over 25 years experience in market research and works regularly on public health issues. He has had experience in the completion of qualitative research projects for the Centers for Disease Control and Prevention on many topics, including bioterrorism, willingness of first responders to be vaccinated for smallpox, and strategies for encouraging high-risk groups to receive the flu vaccine annually. He has written several articles for national health care and market research publications.

Deborah McFalls
Oak Ridge Institute for Science and Education/Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37831-0117
Phone: 865-576-4741
E-mail: Deborah.McFalls@orise.orau.gov

Ms. McFalls contributed to the interview and focus group session format and content. She has conducted research in health and safety studies for the past 10 years for the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, and the National Institute for Occupational Safety and Health. She is a Health Education Specialist, Project Manager II at the Oak Ridge Institute for Science and Education where she has worked for 17 years. Ms. McFalls conducted the testing of the Moderator Guides and accompanying materials for water sector professional interviews and consumer focus group meetings. The Moderator Guide - Professional was tested with a city Director of Public Works who has responsibilities for the city's water distribution system. The Moderator Guide - Public was tested with four consumers of public drinking water. Through the pilot testing for both sectors, the time required to complete the interviews and focus group meetings was determined. The purpose of the testing for interviews and focus group session materials was to determine the clarity, time, and opinion of participants about the materials used. None of the participants in the pilot testing process will be part of the proposed study.

Dr. Richard Tardif
Oak Ridge Institute for Science and Education/Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37831-0117
Phone: 210-698-0063
E-mail: Richard.Tardif@orise.orau.gov

Dr. Richard Tardif contributed to the evaluation instrument design format, layout, and content. He is a Senior Scientist at the Oak Ridge Institute for Science and Education (ORISE) with 25 years of experience in risk communication, stakeholder involvement, and training. Dr. Tardif established and currently manages several ORISE health communication efforts in environmental and public health. He is responsible for designing, conducting, and evaluating some of ORISE's most prominent health education and risk communication efforts in the areas of exercise planning, audience research, communication science, public health preparedness, training development, and evaluation. He has also moderated, facilitated, or served as an instructor for numerous training, workshop, exercise, and focus group activities. Some of his recent projects have addressed health care worker immunization practices, rotavirus vaccine, smallpox, the Strategic National Stockpile, Environmental Public Health Tracking, severe acute respiratory syndrome, emergency communication for bioterrorism events, pandemic influenza preparedness, and factors influencing adherence to public health directives.

9. Explanation of Any Payment or Gift to Respondents

No financial payments or incentives will be provided to the water sector professionals being interviewed. It is anticipated they will be employees of the state or local government and will not expect to be compensated, since this will be a job-related task with the anticipated research outcome resulting in direct benefits to the government they represent.

It is standard practice to reimburse focus group respondents for their time. Consumers of water utility supplied drinking water asked to participate in focus group sessions will be paid a cash incentive each not to exceed $80.00 (this amount may vary slightly based on local standard market payments). The $80.00 is a typical incentive for consumers that ORISE and other contractors have paid for past research participation activities based on consultation with numerous marketing research companies. Consumers are paid to compensate them for their time and expenses such as gas, parking cost, etc. involved in the activity. Even though the results of the study will indirectly benefit the consumer, this activity is not a job-related task for them. The cash incentive will be described at the time of recruitment; it is anticipated that this incentive will help to ensure participation. An Information for Participants handout will be provided to all consumers prior to the start of each focus group session. Included in the handout will be information noting that they will receive a cash incentive for participating in the discussion but will be free to leave at any time without losing the cash incentive or other penalty (see Appendix H).

10. Assurance of Confidentiality Provided to Respondents

Confidentiality of responses from respondents will be assured by using an independent contractor to collect the information, by enacting procedures to prevent unauthorized access to respondent data, and by preventing the public disclosure of the responses of individual participants.

Data are being collected from water sector professionals and focus groups of consumers of drinking water supplied by water utilities. EPA has chosen to implement a confidentiality policy for the participants of this research in which EPA has deemed it unnecessary for them to have access to information about the participants in the research. Under this policy, the support contractor, ORISE, will:

- Maintain no identifiers connecting any data collected to any particular participant; neither will it provide any personal identifiers to EPA or others; firms that conduct recruiting and host the sessions will be required to not provide personal identifiers to ORISE or EPA
- Retain one set of audio recordings and at least one copy of any report it produces, which will not contain any personal identifiers
- Develop a report in an agreed-upon format summarizing the responses provided by participants; the report will contain no personal identifiers--that is, information sufficient to determine the identity of any participant (e.g., first and last name, address)
- Retain records and audiotapes for 1 year and then burn, shred, or otherwise destroy them. No personal identifiers of participants will be delivered to EPA or others.

Even though EPA will initially provide a list of potential water sector professionals for ORISE to contact about participating in the research, any data collected from them will not have any personal identifiers linked to them.

An Information for Participants handout will be provided to all participants prior to the start of each interview or focus group session. Among the information on the handout will be a section about confidentiality that notes the following:

> "We will keep the information you give us private and confidential to the extent allowed by law. Your name will not be used in the reports, presentations, or publications. No statement you make will be linked to you by name. Only members of the research staff will be allowed to look at the records. When we present this study or publish its results, your name or other facts that point to you will not be shown or used."

ORISE will submit an application to conduct research on human subjects to the Oak Ridge Site-Wide Institutional Review Board (IRB) and will be required to abide by any restrictions that the IRB requires of them.

11. Justification for Sensitive Questions

No questions will be asked that are of a personal or sensitive nature. The data collection process does not contain any personal questions regarding health status, lifestyle, sexual practices, religious beliefs, or other potentially sensitive issues commonly considered to be private. Consumer participants will be asked questions about the following during the participant screening process:

- Age: All participants will be at least 18 years of age
- Education: Mix of those who have earned a college degree and those who have not
- Employment: None of the participants will work in the media or a health-related field
- Gender: Approximately half of the participants will be female
- Race: Racial/ethnic mix of participants will approximate the composition of the city of the focus group session

12. Estimates of Annualized Burden Hours and Costs

The target audiences for the research are water sector professionals and consumers (members of the public who use drinking water supplied by water utilities). Data will be collected from water sector professionals through in-depth 1-hour interviews. Interviews will be conducted with those involved in the following job categories:

- Senior Management Water Sector Professionals
- Other Water Sector Professionals
  - Call Center
  - Emergency Management
  - Field Operations
  - Plant Operations
  - Public Information

Data from the consumers will be collected by means of 2-hour focus group sessions. Up to eight participants will be selected for each focus group for a total of four focus groups per city. A total of four cities will be visited. There is no cost to the consumers or their employers since they will participate after working hours and will be reimbursed for participation.

The pilot test with one water sector professional indicated that the interview takes approximately 1 hour to complete. The pilot test with consumers indicated that the focus group sessions take approximately 2 hours to complete. The interview and focus group format/materials were designed so participants can focus quickly on addressing questions and reviewing materials easily, moving from one exercise to another.

12.1. Estimated Annualized Burden Hours

Type of Respondent	Format	Number of Respondents	Length of Interview/Focus Group Session	Response Burden
Senior Management	Interview	4	1 hour	4
Other Water Sector Professionals	Interview	48	1 hour each	48
Consumers*	Focus Group	128	2 hours	256
Total	NA	180	NA	308

Professionals from other water sector professional classifications (five classifications: Call Center, Emergency Management, Field Operations, Plant Operations, Public Information) will be interviewed in pairs (dyads). Each dyad will consist of professionals from two different job categories. There will be a total of six dyad interviews in each location. The exact composition of the dyad will depend on the number of personnel in that job category and their availability. Across the dyads, at least one person from each job category will be interviewed. A total of six interview sessions will be conducted in four cities with a total of 48 interviews for the research initiative.

12.2. Estimated Annualized Burden Costs

Type of Respondent	Number of Respondents	Response Burden per Respondent/ Interview/Focus Group/State	Total Burden per Respondent per Respondent Category	Hourly Wage Rate*	Respondent Cost
Senior Management - California	1	1 hour	1	$56.00	$56.00
Senior Management - Illinois	1	1 hour	1	$52.51	$52.51
Senior Management - Massachusetts	1	1 hour	1	$54.44*	$54.44
Senior Management - North Carolina	1	1 hour	1	$52.08	$52.08
Total	4	1 hour	4	NA	$215.03
Call Center - California	2.4	1 hour	2.4	$22.92	$55.01
Call Center - Illinois	2.4	1 hour	2.4	$24.40	$58.56
Call Center - Massachusetts	2.4	1 hour	2.4	$26.52	$63.65
Call Center - North Carolina	2.4	1 hour	2.4	$22.65	$54.36
Emergency Management - California	2.4	1 hour	2.4	$34.22	$82.13
Emergency Management - Illinois	2.4	1 hour	2.4	$18.70	$44.88
Emergency Management - Massachusetts	2.4	1 hour	2.4	$31.20	$74.88
Emergency Management - North Carolina	2.4	1 hour	2.4	$22.23	$53.35
Field Operations - California	2.4	1 hour	2.4	$25.31	$60.74
Field Operations - Illinois	2.4	1 hour	2.4	$23.48	$56.35
Field Operations - Massachusetts	2.4	1 hour	2.4	$20.81	$49.94
Field Operations - North Carolina	2.4	1 hour	2.4	$16.09	$38.62
Plant Operations - California	2.4	1 hour	2.4	$25.31	$60.74
Plant Operations - Illinois	2.4	1 hour	2.4	$23.48	$56.35

Type of Respondent	Number of Respondents	Response Burden per Respondent/ Interview/Focus Group/State	Total Burden per Respondent per Respondent Category	Hourly Wage Rate*	Respondent Cost
Plant Operations - Massachusetts	2.4	1 hour	2.4	$20.81	$49.94
Plant Operations - North Carolina	2.4	1 hour	2.4	$16.09	$38.62
Public Information - Massachusetts	2.4	1 hour	2.4	$30.61	$73.46
Public Information - Illinois	2.4	1 hour	2.4	$25.74	$61.78
Public Information - North Carolina	2.4	1 hour	2.4	$24.42	$58.61
Public Information - California	2.4	1 hour	2.4	$30.61	$73.46
Total	48	1 hour	48	NA	$1,165.43
Consumers* - California	32	2 hours	2 hours	NA	NA
Consumers * - Illinois	32	2 hours	2 hours	NA	NA
Consumers* - Massachusetts	32	2 hours	2 hours	NA	NA
Consumers* - North Carolina	32	2 hours	2 hours	NA	NA
Total	128	2 hours	2 hours	NA	NA
Total	**52**	**NA**	**NA**	**NA**	**$1,380.46**

* No cost to the consumers or their employers. They will be interviewed after working hours and will be reimbursed for participation.

The hourly wage rate was collected from the U.S. Department of Labor (DOL), Bureau of Labor Statistics, May 2007 State Occupational Employment and Wage Estimates data located at url: http://www.bls.gov/oes/2007/may/oessrcst.htm (viewed 02-12-09). The hourly mean wage was used for the hourly wage rate calculation. The following table reflects the job categories selected from the DOL data for the EPA research participant hourly wage rates.

Hour Wage Rate Categories	
EPA Research Participant Category	**DOL Occupational Category Referenced**
Senior Management	General and Operations Manager
Call Center	Media and Communication Workers
Emergency Management	Emergency Management Specialists
Field Operations	Water and Liquid Waste Treatment Plant and System Operators
Plant Operations	Water and Liquid Waste Treatment Plant and System Operators
Public Information	Public Relations Specialists

Burden Statement:

The annual public reporting and recordkeeping burden for this collection of information is estimated to average 1 hour per response for water sector professionals and 2 hours per response for consumers. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID Number EPA-HQ-ORD-2009-0313, which is available for online viewing at www.regulations.gov, or in person viewing at the Research and Development (ORD) Docket in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, D.C. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the ORD Docket is (202) 566-1752. An electronic version of the public docket is available at www.regulations.gov. This site can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. When in the system, select “search,” then key in the Docket ID Number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-ORD-2009-0313 and OMB Control Number 2080-NEW in any correspondence.

13. Estimates of Other Total Annual Cost Burden to Respondents or Recordkeepers

Not applicable. The interviews or focus group sessions have no capital, operating, maintenance, or other costs to the water sector professionals or their employers or to the consumers resulting from the collection of information.

14. Annualized Cost to the Federal Government

This baseline study will be conducted by ORISE under an Interagency Agreement with EPA. ORISE has participated in the development of the evaluation plan including the development of the Moderator Guides, Screening Instruments, Participant Information Forms, finalization of materials for testing, and pilot testing the materials being used during the interviews and focus group sessions. ORISE will also be responsible for

conducting the focus group sessions and the interviews, analyzing the data, and developing reports of the results. The total estimated cost for support from ORISE is $350,000.00, which also includes the cash incentive payments to focus group participants. The estimated total cost of the project to the government is $383,886.00. This includes the cost for the data collection by ORISE, as well as the $33,886.00 cost for the federal employees involved in evaluation planning, oversight, data analysis, and report writing. The government employee costs are as follows: 295 hours of a GS-13 ($67.50 fully loaded rate) and 5 hours of a GS-15 ($94.50 fully loaded rate). There are also anticipated travel costs of $8,500 and $5,000.00 in initial printing, bringing the total federal employee cost to $33,886.00. The total time period from the beginning of the planning of the project until the completion of the project is approximately 2 years. Therefore, the annualized cost of the project to the government is $191,943.00.

15. Explanation for Program Changes or Adjustments

This is a new data collection submission.

16. Plans for Tabulation and Publication and Project Time Schedule

There are no tabulated results for this information collection.

16.1 Project Time Schedule

Project Activity	Time Schedule
Recruit water sector professionals from Boston, Massachusetts; Chicago, Illinois; Charlotte, North Carolina; and San Diego, California for interviews	1 to 2 months after OMB approval
Recruit consumers (members of the public who use drinking water supplied by water utilities) from Boston, Massachusetts; Chicago, Illinois; Charlotte, North Carolina; and San Diego, California for focus group sessions	1 to 2 months after OMB approval
Arrange for locations (market research facilities) where interviews and focus group sessions will be held	1 to 2 months after OMB approval
Arrange for a moderator/interviewer for the interviews and focus group sessions.	1 to 2 months after OMB approval
Travel to Boston, Massachusetts; Chicago, Illinois; Charlotte, North Carolina; and San Diego, California for interviews and focus group sessions	2 to 3 months after OMB approval
Develop a report summarizing the responses provided by water sector professionals and consumers	4 to 5 months after OMB approval
Publish a report of results of the research	6 to 12 months after OMB approval

16.2 Analysis and Publication Plan

A report of the findings will be compiled from the notes of the EPA and ORISE observers and in-depth discussions with the moderator. The audio recording will be reviewed if additional information or clarification is needed. The results will be combined from the different locations; a comparison of the results from the different locations may also be required. It is anticipated a final report of the study will include:

- Executive Summary
- Introduction
- Findings and Comments
- Conclusion and Recommendations
- Appendices

Wherever appropriate, a graph or table will display information from related analyses of the results.

It is anticipated that the messages tested will be revised according to the findings of the study. It is also anticipated that an EPA published report of the findings will be printed and made available through the EPA web site.

The results of the study will assist water utility Public Information Officers and others in addressing appropriate issues of public concern related to a crisis incident impacting drinking water systems and requiring post-incident decontamination actions. The research will probe consumers' and water sector professionals' beliefs, opinions, and knowledge about water security risks that will assist public officials in planning effective risk communication messages.

17. Reason(s) Display of OMB Expiration Date is Inappropriate

We are not requesting an expiration date display exemption.

18. Exceptions to Certification for Paperwork Reduction Act Submissions

We are not requesting an exception to the certification statement.

B. Collection of Information Employing Statistical Methods

Part B is attached separately.

Appendices

Appendix A: Authorizing Legislation - Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Selected Sections Copied)
Appendix B: Authorizing Legislation - Homeland Security Presidential Directive 7: Critical Infrastructure Identification, Prioritization, and Protection
Appendix C: Authorizing Legislation - Homeland Security Presidential Directive 9: Defense of United States Agriculture and Food
Appendix D: Screening Instrument EPA Water Security - Professionals
Appendix E: Research: Opinions about a Public Health Issue Information for Participants - Professionals
Appendix F: Moderator's Guide - Professionals
Appendix G: Screening Instrument EPA Water Security - Public
Appendix H: Research: Opinions about a Public Health Issue Information for Participants - Public
Appendix I: Moderator's Guide - Public
Appendix J: Materials Available for Testing - Public
Appendix K: Copy of 60 Day Federal Register Notice

Appendix A

Authorizing Legislation - Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Selected Sections Copied)

Web site source: www.fda.gov/oc/bioterrorism/PL107-188.html (viewed 02-23-09)

[DOCID: f:publ188.107]

PUBLIC HEALTH SECURITY AND BIOTERRORISM PREPAREDNESS AND RESPONSE ACT OF 2002
Public Law 107-188
107th Congress

An Act

To improve the ability of the United States to prevent, prepare for, and respond to bioterrorism and other public health emergencies. <<NOTE: June 12, 2002-[H.R. 3448]>>

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, <<NOTE: Public Health Security and Bioterrorism Preparedness and Response Act of 2002.>>....

Subtitle A--National Preparedness and Response Planning, Coordinating, and Reporting

SEC. 2801. NATIONAL <<NOTE: 42 USC 300hh.>> PREPAREDNESS PLAN.
(a) In General.--

(1) Preparedness and response regarding public health emergencies.--The Secretary shall further develop and implement a coordinated strategy, building upon the core public health capabilities established pursuant to section 319A, for carrying out health-related activities to prepare for and respond effectively to bioterrorism and other public health emergencies, including the preparation of a plan under this section. The Secretary shall periodically thereafter review and, as appropriate, revise the plan.

(2) National approach.--In carrying out paragraph (1), the Secretary shall collaborate with the States toward the goal of ensuring that the activities of the Secretary regarding bioterrorism and other public health emergencies are coordinated with activities of the States, including local governments.

(3) Evaluation of progress.--The plan under paragraph (1) shall provide for specific benchmarks and outcome measures for evaluating the progress of the Secretary and the States, including local governments, with respect to the plan under paragraph (1), including progress toward achieving the goals specified in subsection (b).
(b) Preparedness Goals.--The plan under subsection (a) should include provisions in furtherance of the following:

(1) Providing effective assistance to State and local governments in the event of bioterrorism or other public health emergency.

(2) Ensuring that State and local governments have appropriate capacity to detect and respond effectively to such emergencies, including capacities for the following:
(A) Effective public health surveillance and reporting mechanisms at the State and local levels.
B) Appropriate laboratory readiness.
C) Properly trained and equipped emergency response, public health, and medical personnel.
D) Health and safety protection of workers responding to such an emergency.
E) Public health agencies that are prepared to coordinate health services (including mental health services) during and after such emergencies.
F) Participation in communications networks that can effectively disseminate relevant information in a timely and secure manner to appropriate public and private entities and to the public.

(3) Developing and maintaining medical countermeasures (such as drugs, vaccines and other biological products, medical devices, and other supplies) against biological agents and toxins that may be involved in such emergencies.

(4) Ensuring coordination and minimizing duplication of Federal, State, and local planning, preparedness, and response activities, including during the investigation of a suspicious disease outbreak or other potential public health emergency.

(5) Enhancing the readiness of hospitals and other health care facilities to respond effectively to such emergencies....

SEC.402.OTHER SAFE DRINKING WATER ACT AMENDMENTS.

The Safe Drinking Water Act (title XIV of the Public Health Service Act) is amended by inserting the following new sections after section 1433 (as added by section 401 of this Act):

SEC.1434. <<NOTE: 42 USC 300i-3.>> CONTAMINANT PREVENTION, DETECTION AND RESPONSE.

(a) <<NOTE: Contracts.>> In General.--The Administrator, in consultation with the Centers for Disease Control and, after consultation with appropriate departments and agencies of the Federal Government and with State and local governments, shall review (or enter into contracts or cooperative agreements to provide for a review of) current and future methods to prevent, detect and respond to the intentional introduction of chemical, biological or radiological contaminants into community water systems and source water for community water systems, including each of the following:

(1) Methods, means and equipment, including real time monitoring systems, designed to monitor and detect various levels of chemical, biological, and radiological contaminants or indicators of contaminants and reduce the likelihood that such contaminants can be successfully introduced into public water systems and source water intended to be used for drinking water.

(2) Methods and means to provide sufficient notice to operators of public water systems, and individuals served by such systems, of the introduction of chemical, biological or radiological contaminants and the possible effect of such introduction on public health and the safety and supply of drinking water.

3) Methods and means for developing educational and awareness programs for community water systems.

(4) Procedures and equipment necessary to prevent the flow of contaminated drinking water to individuals served by public water systems.

5) Methods, means, and equipment which could negate or mitigate deleterious effects on public health and the safety and supply caused by the introduction of contaminants into water intended to be used for drinking water, including an examination of the effectiveness of various drinking water technologies in removing, inactivating, or neutralizing biological, chemical, and radiological contaminants.

(6) Biomedical research into the short-term and long-term impact on public health of various chemical, biological and radiological contaminants that may be introduced into public water systems through terrorist or other intentional acts.
(b) Funding.--For the authorization of appropriations to carry out this section, see section 1435(e).....

SEC.1435. <<NOTE: 42 USC 300i-4.>> SUPPLY DISRUPTION PREVENTION, DETECTION AND RESPONSE.

(a) <<NOTE: Contracts.>> Disruption of Supply or Safety.--The Administrator, in coordination with the appropriate departments and agencies of the Federal Government, shall review (or enter into contracts or cooperative agreements to provide for a review of) methods and means by which terrorists or other individuals or groups could disrupt the supply of safe drinking water or take other actions against water collection, pretreatment, treatment, storage and distribution facilities which could render such water significantly less safe for human consumption, including each of the following:

(1) Methods and means by which pipes and other constructed conveyances utilized in public water systems could be destroyed or otherwise prevented from providing adequate supplies of drinking water meeting applicable public health standards.

(2) Methods and means by which collection, pretreatment, treatment, storage and distribution facilities utilized or used in connection with public water systems and collection and pretreatment storage facilities used in connection with public water systems could be destroyed or otherwise prevented from providing adequate supplies of drinking water meeting applicable public health standards.

(3) Methods and means by which pipes, constructed conveyances, collection, pretreatment, treatment, storage and distribution systems that are utilized in connection with public water systems could be altered or affected so as to be subject to cross-contamination of drinking water supplies.

(4) Methods and means by which pipes, constructed conveyances, collection, pretreatment, treatment, storage and distribution systems that are utilized in connection with public water systems could be reasonably protected from terrorist attacks or other acts intended to disrupt the supply or affect the safety of drinking water.

(5) Methods and means by which information systems, including process controls and supervisory control and data acquisition and cyber systems at community water systems could be disrupted by terrorists or other groups.

b) Alternative Sources.--The review under this section shall also include a review of the methods and means by which alternative supplies of drinking water could be provided in the event of the destruction, impairment or contamination of public water systems.

(c) Requirements and Considerations.--In carrying out this section and section 1434--

1) the Administrator shall ensure that reviews carried out under this section reflect the needs of community water systems of various sizes and various geographic areas of the United States; and

(2) the Administrator may consider the vulnerability of, or potential for forced interruption of service for, a region or service area, including community water systems that provide service to the National Capital area.
(d) Information Sharing.--As soon as practicable after reviews carried out under this section or section 1434 have been evaluated, the Administrator shall disseminate, as appropriate as determined by the Administrator, to community water systems information on the results of the project through the Information Sharing and Analysis Center, or other appropriate means.
(e) Funding.--There are authorized to be appropriated to carry out this section and section 1434 not more than $15,000,000 for the fiscal year 2002 and such sums as may be necessary for the fiscal years 2003 through 2005.".

SEC.403.MISCELLANEOUS AND TECHNICAL AMENDMENTS.
The Safe Drinking Water Act is amended as follows:

(1) Section 1414(i)(1) <<NOTE: 42 USC 300g-3.>> is amended by inserting ``1433" after ``1417".

(2) Section 1431 <<NOTE: 42 USC 300i.>> is amended by inserting in the first sentence after ``drinking water" the following: ``, or that there is a threatened or potential terrorist attack (or other intentional act designed to disrupt the provision of safe drinking water or to impact adversely the safety of drinking water supplied to communities and individuals), which".

(3) Section 1432 <<NOTE: 42 USC 300i-1.>> is amended as follows:
(A) By striking ``5 years" in subsection (a) and inserting ``20 years".
(B) By striking ``3 years" in subsection (b) and inserting ``10 years".
(C) By striking ``$50,000" in subsection (c) and inserting ``$1,000,000".
(D) By striking ``$20,000" in subsection (c) and inserting ``$100,000".
(4) Section 1442 <<NOTE: 42 USC 300j-1.>> is amended as follows:
(A) By striking ``this subparagraph" in subsection
(b) and inserting ``this subsection".
B) By amending subsection (d) to read as follows:
(d) <<NOTE: Appropriation authorization.>> There are authorized to be appropriated to carry out subsection (b) not more than $35,000,000 for the fiscal year 2002 and such sums as may be necessary for each fiscal year thereafter.".

Appendix B

Authorizing Legislation – Homeland Security Presidential Directive 7: Critical Infrastructure Identification, Prioritization, and Protection

Web site source: www.dhs.gov/xabout/laws/gc_1214597989952.shtm#0 (viewed 02-23-09)

Homeland Security Presidential Directive 7: Critical Infrastructure Identification, Prioritization, and Protection

Homeland Security Presidential Directive 7 establishes a national policy for Federal departments and agencies to identify and prioritize critical infrastructure and to protect them from terrorist attacks. The directive defines relevant terms and delivers 31 policy statements. These policy statements define what the directive covers and the roles various federal, state, and local agencies will play in carrying it out.

Homeland Security Presidential Directive-7

December 17, 2003

SUBJECT: Critical Infrastructure Identification, Prioritization, and Protection

Purpose

1. This directive establishes a national policy for Federal departments and agencies to identify and prioritize United States critical infrastructure and key resources and to protect them from terrorist attacks.

Background

2. Terrorists seek to destroy, incapacitate, or exploit critical infrastructure and key resources across the United States to threaten national security, cause mass casualties, weaken our economy, and damage public morale and confidence.
3. America's open and technologically complex society includes a wide array of critical infrastructure and key resources that are potential terrorist targets. The majority of these are owned and operated by the private sector and State or local governments. These critical infrastructures and key resources are both physical and cyber-based and span all sectors of the economy.
4. Critical infrastructure and key resources provide the essential services that underpin American society. The Nation possesses numerous key resources, whose exploitation or destruction by terrorists could cause catastrophic health effects or mass casualties comparable to those from the use of a weapon of mass destruction, or could profoundly affect our national prestige and morale. In addition, there is critical infrastructure so vital that its incapacitation, exploitation, or destruction, through terrorist attack, could have a debilitating effect on security and economic well-being.
5. While it is not possible to protect or eliminate the vulnerability of all critical infrastructure and key resources throughout the country, strategic improvements in security can make it more difficult for attacks to succeed and can lessen the impact of attacks that may occur. In addition to strategic security enhancements, tactical security improvements can be rapidly implemented to deter, mitigate, or neutralize potential attacks.

Definitions

6. In this directive:
    a. The term "critical infrastructure" has the meaning given to that term in section 1016(e) of the USA PATRIOT Act of 2001 (42 U.S.C. 5195c(e)).
    b. The term "key resources" has the meaning given that term in section 2(9) of the Homeland Security Act of 2002 (6 U.S.C. 101(9)).
    c. The term "the Department" means the Department of Homeland Security.
    d. The term "Federal departments and agencies" means those executive departments enumerated in 5 U.S.C. 101, and the Department of Homeland Security; independent establishments as defined by 5 U.S.C. 104(1); Government corporations as defined by 5 U.S.C. 103(1); and the United States Postal Service.
    e. The terms "State," and "local government," when used in a geographical sense, have the same meanings given to those terms in section 2 of the Homeland Security Act of 2002 (6 U.S.C. 101).
    f. The term "the Secretary" means the Secretary of Homeland Security.
    g. The term "Sector-Specific Agency" means a Federal department or agency responsible for infrastructure protection activities in a designated critical infrastructure sector or key resources category. Sector-Specific Agencies will conduct their activities under this directive in accordance with guidance provided by the Secretary.
    h. The terms "protect" and "secure" mean reducing the vulnerability of critical infrastructure or key resources in order to deter, mitigate, or neutralize terrorist attacks.

Policy

7. It is the policy of the United States to enhance the protection of our Nation's critical infrastructure and key resources against terrorist acts that could:
    a. cause catastrophic health effects or mass casualties comparable to those from the use of a weapon of mass destruction;
    b. impair Federal departments and agencies' abilities to perform essential missions, or to ensure the public's health and safety;
    c. undermine State and local government capacities to maintain order and to deliver minimum essential public services;
    d. damage the private sector's capability to ensure the orderly functioning of the economy and delivery of essential services;
    e. have a negative effect on the economy through the cascading disruption of other critical infrastructure and key resources; or
    f. undermine the public's morale and confidence in our national economic and political institutions.
8. Federal departments and agencies will identify, prioritize, and coordinate the protection of critical infrastructure and key resources in order to prevent, deter, and mitigate the effects of deliberate efforts to destroy, incapacitate, or exploit them. Federal departments and agencies will work with State and local governments and the private sector to accomplish this objective.
9. Federal departments and agencies will ensure that homeland security programs do not diminish the overall economic security of the United States.

10. Federal departments and agencies will appropriately protect information associated with carrying out this directive, including handling voluntarily provided information and information that would facilitate terrorist targeting of critical infrastructure and key resources consistent with the Homeland Security Act of 2002 and other applicable legal authorities.
11. Federal departments and agencies shall implement this directive in a manner consistent with applicable provisions of law, including those protecting the rights of United States persons.

Roles and Responsibilities of the Secretary

12. In carrying out the functions assigned in the Homeland Security Act of 2002, the Secretary shall be responsible for coordinating the overall national effort to enhance the protection of the critical infrastructure and key resources of the United States. The Secretary shall serve as the principal Federal official to lead, integrate, and coordinate implementation of efforts among Federal departments and agencies, State and local governments, and the private sector to protect critical infrastructure and key resources.
13. Consistent with this directive, the Secretary will identify, prioritize, and coordinate the protection of critical infrastructure and key resources with an emphasis on critical infrastructure and key resources that could be exploited to cause catastrophic health effects or mass casualties comparable to those from the use of a weapon of mass destruction.
14. The Secretary will establish uniform policies, approaches, guidelines, and methodologies for integrating Federal infrastructure protection and risk management activities within and across sectors along with metrics and criteria for related programs and activities.
15. The Secretary shall coordinate protection activities for each of the following critical infrastructure sectors: information technology; telecommunications; chemical; transportation systems, including mass transit, aviation, maritime, ground/surface, and rail and pipeline systems; emergency services; and postal and shipping. The Department shall coordinate with appropriate departments and agencies to ensure the protection of other key resources including dams, government facilities, and commercial facilities. In addition, in its role as overall cross-sector coordinator, the Department shall also evaluate the need for and coordinate the coverage of additional critical infrastructure and key resources categories over time, as appropriate.

16. The Secretary will continue to maintain an organization to serve as a focal point for the security of cyberspace. The organization will facilitate interactions and collaborations between and among Federal departments and agencies, State and local governments, the private sector, academia and international organizations. To the extent permitted by law, Federal departments and agencies with cyber expertise, including but not limited to the Departments of Justice, Commerce, the Treasury, Defense, Energy, and State, and the Central Intelligence Agency, will collaborate with and support the organization in accomplishing its mission. The organization's mission includes analysis, warning, information sharing, vulnerability reduction, mitigation, and aiding national recovery efforts for critical infrastructure information systems. The organization will support the Department of Justice and other law enforcement agencies in their continuing missions to investigate and prosecute threats to and attacks against cyberspace, to the extent permitted by law.
17. The Secretary will work closely with other Federal departments and agencies, State and local governments, and the private sector in accomplishing the objectives of this directive.

Roles and Responsibilities of Sector-Specific Federal Agencies

18. Recognizing that each infrastructure sector possesses its own unique characteristics and operating models, there are designated Sector-Specific Agencies, including:
    a. Department of Agriculture -- agriculture, food (meat, poultry, egg products);
    b. Health and Human Services -- public health, healthcare, and food (other than meat, poultry, egg products);
    c. Environmental Protection Agency -- drinking water and water treatment systems;
    d. Department of Energy -- energy, including the production refining, storage, and distribution of oil and gas, and electric power except for commercial nuclear power facilities;
    e. Department of the Treasury -- banking and finance;
    f. Department of the Interior -- national monuments and icons; and
    g. Department of Defense -- defense industrial base.
19. In accordance with guidance provided by the Secretary, Sector-Specific Agencies shall:
    a. collaborate with all relevant Federal departments and agencies, State and local governments, and the private sector, including with key persons and entities in their infrastructure sector;
    b. conduct or facilitate vulnerability assessments of the sector; and
    c. encourage risk management strategies to protect against and mitigate the effects of attacks against critical infrastructure and key resources.
20. Nothing in this directive alters, or impedes the ability to carry out, the authorities of the Federal departments and agencies to perform their responsibilities under law and consistent with applicable legal authorities and presidential guidance.
21. Federal departments and agencies shall cooperate with the Department in implementing this directive, consistent with the Homeland Security Act of 2002 and other applicable legal authorities.

Roles and Responsibilities of Other Departments, Agencies, and Offices

22. In addition to the responsibilities given the Department and Sector-Specific Agencies, there are special functions of various Federal departments and agencies and components of the Executive Office of the President related to critical infrastructure and key resources protection.
    a. The Department of State, in conjunction with the Department, and the Departments of Justice, Commerce, Defense, the Treasury and other appropriate agencies, will work with foreign countries and international organizations to strengthen the protection of United States critical infrastructure and key resources.
    b. The Department of Justice, including the Federal Bureau of Investigation, will reduce domestic terrorist threats, and investigate and prosecute actual or attempted terrorist attacks on, sabotage of, or disruptions of critical infrastructure and key resources. The Attorney General and the Secretary shall use applicable statutory authority and attendant mechanisms for cooperation and coordination, including but not limited to those established by presidential directive.
    c. The Department of Commerce, in coordination with the Department, will work with private sector, research, academic, and government organizations to improve technology for cyber systems and promote other critical infrastructure efforts, including using its authority under the Defense Production Act to assure the timely availability of industrial products, materials, and services to meet homeland security requirements.
    d. A Critical Infrastructure Protection Policy Coordinating Committee will advise the Homeland Security Council on interagency policy related to physical and cyber infrastructure protection. This PCC will be chaired by a Federal officer or employee designated by the Assistant to the President for Homeland Security.
    e. The Office of Science and Technology Policy, in coordination with the Department, will coordinate interagency research and development to enhance the protection of critical infrastructure and key resources.
    f. The Office of Management and Budget (OMB) shall oversee the implementation of government-wide policies, principles, standards, and guidelines for Federal government computer security programs. The Director of OMB will ensure the operation of a central Federal information security incident center consistent with the requirements of the Federal Information Security Management Act of 2002.
    g. Consistent with the E-Government Act of 2002, the Chief Information Officers Council shall be the principal interagency forum for improving agency practices related to the design, acquisition, development, modernization, use, operation, sharing, and performance of information resources of Federal departments and agencies.
    h. The Department of Transportation and the Department will collaborate on all matters relating to transportation security and transportation infrastructure protection. The Department of Transportation is responsible for operating the national air space system. The Department of Transportation and the Department will collaborate in regulating the transportation of hazardous materials by all modes (including pipelines).

i. All Federal departments and agencies shall work with the sectors relevant to their responsibilities to reduce the consequences of catastrophic failures not caused by terrorism.

23. The heads of all Federal departments and agencies will coordinate and cooperate with the Secretary as appropriate and consistent with their own responsibilities for protecting critical infrastructure and key resources.
24. All Federal department and agency heads are responsible for the identification, prioritization, assessment, remediation, and protection of their respective internal critical infrastructure and key resources. Consistent with the Federal Information Security Management Act of 2002, agencies will identify and provide information security protections commensurate with the risk and magnitude of the harm resulting from the unauthorized access, use, disclosure, disruption, modification, or destruction of information.

Coordination with the Private Sector

25. In accordance with applicable laws or regulations, the Department and the Sector-Specific Agencies will collaborate with appropriate private sector entities and continue to encourage the development of information sharing and analysis mechanisms. Additionally, the Department and Sector-Specific Agencies shall collaborate with the private sector and continue to support sector-coordinating mechanisms:
    a. to identify, prioritize, and coordinate the protection of critical infrastructure and key resources; and
    b. to facilitate sharing of information about physical and cyber threats, vulnerabilities, incidents, potential protective measures, and best practices.

National Special Security Events

26. The Secretary, after consultation with the Homeland Security Council, shall be responsible for designating events as "National Special Security Events" (NSSEs). This directive supersedes language in previous presidential directives regarding the designation of NSSEs that is inconsistent herewith.

Implementation

27. Consistent with the Homeland Security Act of 2002, the Secretary shall produce a comprehensive, integrated National Plan for Critical Infrastructure and Key Resources Protection to outline national goals, objectives, milestones, and key initiatives within 1 year from the issuance of this directive. The Plan shall include, in addition to other Homeland Security-related elements as the Secretary deems appropriate, the following elements:
    a. a strategy to identify, prioritize, and coordinate the protection of critical infrastructure and key resources, including how the Department intends to work with Federal departments and agencies, State and local governments, the private sector, and foreign countries and international organizations;
    b. a summary of activities to be undertaken in order to: define and prioritize, reduce the vulnerability of, and coordinate the protection of critical infrastructure and key resources;
    c. a summary of initiatives for sharing critical infrastructure and key resources information and for providing critical infrastructure and key resources threat warning data to State and local governments and the private sector; and
    d. coordination and integration, as appropriate, with other Federal emergency management and preparedness activities including the National Response Plan and applicable national preparedness goals.
28. The Secretary, consistent with the Homeland Security Act of 2002 and other applicable legal authorities and presidential guidance, shall establish appropriate systems, mechanisms, and procedures to share homeland security information relevant to threats and vulnerabilities in national critical infrastructure and key resources with other Federal departments and agencies, State and local governments, and the private sector in a timely manner.
29. The Secretary will continue to work with the Nuclear Regulatory Commission and, as appropriate, the Department of Energy in order to ensure the necessary protection of:
    a. commercial nuclear reactors for generating electric power and non-power nuclear reactors used for research, testing, and training;
    b. nuclear materials in medical, industrial, and academic settings and facilities that fabricate nuclear fuel; and
    c. the transportation, storage, and disposal of nuclear materials and waste.
30. In coordination with the Director of the Office of Science and Technology Policy, the Secretary shall prepare on an annual basis a Federal Research and Development Plan in support of this directive.

31. The Secretary will collaborate with other appropriate Federal departments and agencies to develop a program, consistent with applicable law, to geospatially map, image, analyze, and sort critical infrastructure and key resources by utilizing commercial satellite and airborne systems, and existing capabilities within other agencies. National technical means should be considered as an option of last resort. The Secretary, with advice from the Director of Central Intelligence, the Secretaries of Defense and the Interior, and the heads of other appropriate Federal departments and agencies, shall develop mechanisms for accomplishing this initiative. The Attorney General shall provide legal advice as necessary.
32. The Secretary will utilize existing, and develop new, capabilities as needed to model comprehensively the potential implications of terrorist exploitation of vulnerabilities in critical infrastructure and key resources, placing specific focus on densely populated areas. Agencies with relevant modeling capabilities shall cooperate with the Secretary to develop appropriate mechanisms for accomplishing this initiative.
33. The Secretary will develop a national indications and warnings architecture for infrastructure protection and capabilities that will facilitate:
    a. an understanding of baseline infrastructure operations;
    b. the identification of indicators and precursors to an attack; and
    c. a surge capacity for detecting and analyzing patterns of potential attacks.

    In developing a national indications and warnings architecture, the Department will work with Federal, State, local, and non-governmental entities to develop an integrated view of physical and cyber infrastructure and key resources.

34. By July 2004, the heads of all Federal departments and agencies shall develop and submit to the Director of the OMB for approval plans for protecting the physical and cyber critical infrastructure and key resources that they own or operate. These plans shall address identification, prioritization, protection, and contingency planning, including the recovery and reconstitution of essential capabilities.
35. On an annual basis, the Sector-Specific Agencies shall report to the Secretary on their efforts to identify, prioritize, and coordinate the protection of critical infrastructure and key resources in their respective sectors. The report shall be submitted within 1 year from the issuance of this directive and on an annual basis thereafter.

The Assistant to the President for Homeland Security and the Assistant to the President for National Security Affairs will lead a national security and emergency preparedness communications policy review, with the heads of the appropriate Federal departments and agencies, related to convergence and next generation architecture. Within 6 months after the issuance of this directive, the Assistant to the President for Homeland Security and the Assistant to the President for National Security Affairs shall submit for my consideration any recommended changes to such policy.

36. This directive supersedes Presidential Decision Directive/NSC-63 of May 22, 1998 ("Critical Infrastructure Protection"), and any Presidential directives issued prior to this directive to the extent of any inconsistency. Moreover, the Assistant to the President for Homeland Security and the Assistant to the President for National Security Affairs shall jointly submit for my consideration a Presidential directive to make changes in Presidential directives issued prior to this date that conform such directives to this directive.
37. This directive is intended only to improve the internal management of the executive branch of the Federal Government, and it is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity, against the United States, its departments, agencies, or other entities, its officers or employees, or any other person.

Appendix C

Authorizing Legislation - Homeland Security Presidential Directive 9: Defense of United States Agriculture and Food

Web site source: http://www.dhs.gov/xabout/laws/gc_1217449547663.shtm
(viewed 02-23-09)

Homeland Security Presidential Directive 9: Defense of United States Agriculture and Food

Homeland Security Presidential Directive (HSPD) 9 establishes a national policy to defend the agriculture and food system against terrorist attacks, major disasters, and other emergencies. America's agriculture and food system is an extensive, open, interconnected, diverse, and complex structure providing potential targets for terrorist attacks. U.S. agriculture and food systems are vulnerable to disease, pest, or poisonous agents that occur naturally, are unintentionally introduced, or are intentionally delivered by acts of terrorism. The directive lays out policies, including roles and responsibilities, awareness and warning, and vulnerability assessments, to provide the best protection possible against a successful attack on the U.S. agriculture and food system.

Homeland Security Presidential Directive-9

January 30, 2004

SUBJECT: Defense of United States Agriculture and Food

Purpose

1. This directive establishes a national policy to defend the agriculture and food system against terrorist attacks, major disasters, and other emergencies.

Background

2. The United States agriculture and food systems are vulnerable to disease, pest, or poisonous agents that occur naturally, are unintentionally introduced, or are intentionally delivered by acts of terrorism. Americas agriculture and food system is an extensive, open, interconnected, diverse, and complex structure providing potential targets for terrorist attacks. We should provide the best protection possible against a successful attack on the United States agriculture and food system, which could have catastrophic health and economic effects.

Definitions

3. In this directive:
    a. The term critical infrastructure has the meaning given to that term in section 1016(e) of the USA PATRIOT Act of 2001 (42 U.S.C. 5195c(e)).
    b. The term key resources has the meaning given that term in section 2(9) of the Homeland Security Act of 2002 (6 U.S.C. 101(9)).
    c. The term Federal departments and agencies means those executive departments enumerated in 5 U.S.C. 101, and the Department of Homeland Security; independent establishments as defined by 5 U.S.C. 104(1); Government corporations as defined by 5 U.S.C. 103(1); and the United States Postal Service.
    d. The terms State, and local government, when used in a geographical sense, have the same meanings given to those terms in section 2 of the Homeland Security Act of 2002 (6 U.S.C. 101).
    e. The term Sector-Specific Agency means a Federal department or agency responsible for infrastructure protection activities in a designated critical infrastructure sector or key resources category.

Policy

4. It is the policy of the United States to protect the agriculture and food system from terrorist attacks, major disasters, and other emergencies by:
    a. identifying and prioritizing sector-critical infrastructure and key resources for establishing protection requirements;
    b. developing awareness and early warning capabilities to recognize threats;
    c. mitigating vulnerabilities at critical production and processing nodes;
    d. enhancing screening procedures for domestic and imported products; and
    e. enhancing response and recovery procedures.
5. In implementing this directive, Federal departments and agencies will ensure that homeland security programs do not diminish the overall economic security of the United States.

Roles and Responsibilities

6. As established in Homeland Security Presidential Directive-7 (HSPD-7), the Secretary of Homeland Security is responsible for coordinating the overall national effort to enhance the protection of the critical infrastructure and key resources of the United States. The Secretary of Homeland Security shall serve as the principal Federal official to lead, integrate, and coordinate implementation of efforts among Federal departments and agencies, State and local governments, and the private sector to protect critical infrastructure and key resources. This directive shall be implemented in a manner consistent with HSPD-7.

7. The Secretaries of Agriculture, Health and Human Services, and the Administrator of the Environmental Protection Agency will perform their responsibilities as Sector-Specific Agencies as delineated in HSPD-7.

Awareness and Warning

8. The Secretaries of the Interior, Agriculture, Health and Human Services, the Administrator of the Environmental Protection Agency, and the heads of other appropriate Federal departments and agencies shall build upon and expand current monitoring and surveillance programs to:
    a. develop robust, comprehensive, and fully coordinated surveillance and monitoring systems, including international information, for animal disease, plant disease, wildlife disease, food, public health, and water quality that provides early detection and awareness of disease, pest, or poisonous agents;
    b. develop systems that, as appropriate, track specific animals and plants, as well as specific commodities and food; and
    c. develop nationwide laboratory networks for food, veterinary, plant health, and water quality that integrate existing Federal and State laboratory resources, are interconnected, and utilize standardized diagnostic protocols and procedures.
9. The Attorney General, the Secretary of Homeland Security, and the Director of Central Intelligence, in coordination with the Secretaries of Agriculture, Health and Human Services, and the Administrator of the Environmental Protection Agency, shall develop and enhance intelligence operations and analysis capabilities focusing on the agriculture, food, and water sectors. These intelligence capabilities will include collection and analysis of information concerning threats, delivery systems, and methods that could be directed against these sectors.
10. The Secretary of Homeland Security shall coordinate with the Secretaries of Agriculture, Health and Human Services, and the Administrator of the Environmental Protection Agency, and the heads of other appropriate Federal departments and agencies to create a new biological threat awareness capacity that will enhance detection and characterization of an attack. This new capacity will build upon the improved and upgraded surveillance systems described in paragraph 8 and integrate and analyze domestic and international surveillance and monitoring data collected from human health, animal health, plant health, food, and water quality systems. The Secretary of Homeland Security will submit a report to me through the Homeland Security Council within 90 days of the date of this directive on specific options for establishing this capability, including recommendations for its organizational location and structure.

Vulnerability Assessments

11. The Secretaries of Agriculture, Health and Human Services, and Homeland Security shall expand and continue vulnerability assessments of the agriculture and food sectors. These vulnerability assessments should identify requirements of the National Infrastructure Protection Plan developed by the Secretary of Homeland Security, as appropriate, and shall be updated every 2 years.

Mitigation Strategies

12. The Secretary of Homeland Security and the Attorney General, working with the Secretaries of Agriculture, Health and Human Services, the Administrator of the Environmental Protection Agency, the Director of Central Intelligence, and the heads of

other appropriate Federal departments and agencies shall prioritize, develop, and implement, as appropriate, mitigation strategies to protect vulnerable critical nodes of production or processing from the introduction of diseases, pests, or poisonous agents.

13. The Secretaries of Agriculture, Health and Human Services, and Homeland Security shall build on existing efforts to expand development of common screening and inspection procedures for agriculture and food items entering the United States and to maximize effective domestic inspection activities for food items within the United States.

Response Planning and Recovery

14. The Secretary of Homeland Security, in coordination with the Secretaries of Agriculture, Health and Human Services, the Attorney General, and the Administrator of the Environmental Protection Agency, will ensure that the combined Federal, State, and local response capabilities are adequate to respond quickly and effectively to a terrorist attack, major disease outbreak, or other disaster affecting the national agriculture or food infrastructure. These activities will be integrated with other national homeland security preparedness activities developed under HSPD-8 on National Preparedness.

15. The Secretary of Homeland Security, in coordination with the Secretaries of Agriculture, Health and Human Services, the Attorney General, and the Administrator of the Environmental Protection Agency, shall develop a coordinated agriculture and food-specific standardized response plan that will be integrated into the National Response Plan. This plan will ensure a coordinated response to an agriculture or food incident and will delineate the appropriate roles of Federal, State, local, and private sector partners, and will address risk communication for the general public.
16. The Secretaries of Agriculture and Health and Human Services, in coordination with the Secretary of Homeland Security and the Administrator of the Environmental Protection Agency, shall enhance recovery systems that are able to stabilize agriculture production, the food supply, and the economy, rapidly remove and effectively dispose of contaminated agriculture and food products or infected plants and animals, and decontaminate premises.
17. The Secretary of Agriculture shall study and make recommendations to the Homeland Security Council, within 120 days of the date of this directive, for the use of existing, and the creation of new, financial risk management tools encouraging self-protection for agriculture and food enterprises vulnerable to losses due to terrorism.

18. The Secretary of Agriculture, in coordination with the Secretary of Homeland Security, and in consultation with the Secretary of Health and Human Services and the Administrator of the Environmental Protection Agency, shall work with State and local governments and the private sector to develop:
    a. A National Veterinary Stockpile (NVS) containing sufficient amounts of animal vaccine, antiviral, or therapeutic products to appropriately respond to the most damaging animal diseases affecting human health and the economy and that will be capable of deployment within 24 hours of an outbreak. The NVS shall leverage where appropriate the mechanisms and infrastructure that have been developed for the management, storage, and distribution of the Strategic National Stockpile.
    b. A National Plant Disease Recovery System (NPDRS) capable of responding to a high-consequence plant disease with pest control measures and the use of resistant seed varieties within a single growing season to sustain a reasonable level of production for economically important crops. The NPDRS will utilize the genetic resources contained in the U.S. National Plant Germplasm System, as well as the scientific capabilities of the Federal-State-industry agricultural research and extension system. The NPDRS shall include emergency planning for the use of resistant seed varieties and pesticide control measures to prevent, slow, or stop the spread of a high-consequence plant disease, such as wheat smut or soybean rust.

Outreach and Professional Development

19. The Secretary of Homeland Security, in coordination with the Secretaries of Agriculture, Health and Human Services, and the heads of other appropriate Federal departments and agencies, shall work with appropriate private sector entities to establish an effective information sharing and analysis mechanism for agriculture and food.

20. The Secretaries of Agriculture and Health and Human Services, in consultation with the Secretaries of Homeland Security and Education, shall support the development of and promote higher education programs for the protection of animal, plant, and public health. To the extent permitted by law and subject to availability of funds, the program will provide capacity building grants to colleges and schools of veterinary medicine, public health, and agriculture that design higher education training programs for veterinarians in exotic animal diseases, epidemiology, and public health as well as new programs in plant diagnosis and treatment.
21. The Secretaries of Agriculture and Health and Human Services, in consultation with the Secretaries of Homeland Security and Education, shall support the development of and promote a higher education program to address protection of the food supply. To the extent permitted by law and subject to the availability of funds, the program will provide capacity-building grants to universities for interdisciplinary degree programs that combine training in food sciences, agriculture sciences, medicine, veterinary medicine, epidemiology, microbiology, chemistry, engineering, and mathematics (statistical modeling) to prepare food defense professionals.
22. The Secretaries of Agriculture, Health and Human Services, and Homeland Security shall establish opportunities for professional development and specialized training in agriculture and food protection, such as internships, fellowships, and other post-graduate opportunities that provide for homeland security professional workforce needs.

Research and Development

23. The Secretaries of Homeland Security, Agriculture, and Health and Human Services, the Administrator of the Environmental Protection Agency, and the heads of other appropriate Federal departments and agencies, in consultation with the Director of the Office of Science and Technology Policy, will accelerate and expand development of current and new countermeasures against the intentional introduction or natural occurrence of catastrophic animal, plant, and zoonotic diseases. The Secretary of Homeland Security will coordinate these activities. This effort will include countermeasure research and development of new methods for detection, prevention technologies, agent characterization, and dose response relationships for high-consequence agents in the food and the water supply.

24. The Secretaries of Agriculture and Homeland Security will develop a plan to provide safe, secure, and state-of-the-art agriculture biocontainment laboratories that research and develop diagnostic capabilities for foreign animal and zoonotic diseases.

25. The Secretary of Homeland Security, in consultation with the Secretaries of Agriculture and Health and Human Services, shall establish university-based centers of excellence in agriculture and food security.

Budget

26. For all future budgets, the Secretaries of Agriculture, Health and Human Services, and Homeland Security shall submit to the Director of the Office of Management and Budget, concurrent with their budget submissions, an integrated budget plan for defense of the United States food system.

Implementation

27. Nothing in this directive alters, or impedes the ability to carry out, the authorities of the Federal departments and agencies to perform their responsibilities under law and consistent with applicable legal authorities and Presidential guidance.

28. This directive is intended only to improve the internal management of the executive branch of the Federal Government, and it is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity, against the United States, its departments, agencies, or other entities, its officers or employees, or any other person.

Appendix D

Screening Instrument EPA Water Security - Professionals

Screening Instrument

EPA Water Security -- Professionals

City: _____ Local Water Works Contact: _____

Hello. My name is _____ and I am calling from the Oak Ridge Institute for Science and Education (ORISE). We are assisting the US Environmental Protection Agency in conducting a study about municipal water supplies. I understand _____ (EPA or local contact) has spoken to you about participating in this study [confirm]. We are calling to schedule your interview and ask a few brief questions for our records.

1. First, are you an employee of the municipal water works for _____ (city)?

   01 Yes
   02 No **(THANK AND TERMINATE)**

2. Which of the following activities best describes your primary duties at the water works?
   (DOCUMENT ON GRID)

   01 Public Information
   02 Emergency Management
   03 Plant Operations
   04 Field Operations
   05 Senior Management
   06 Call Center

3. How many years' experience do you have in this type of work – at this facility or similar ones?

   01 less than one year **(THANK AND TERMINATE)**
   02 _____ years
   (DOCUMENT ON GRID)

4. Are you willing to participate in the study?

   01 yes
   02 no

5. Are you available for the interview on _____ at _____AM/PM? The location is _____(address). We will send directions to you.

These are all of my questions. Thank you for agreeing to participate in the study.

Appendix E

Research: Opinions about a Public Health Issue Information for Participants - Professionals

Research: Opinions about a Public Health Issue

Information for Participants -- Professionals

Purpose of This Survey

You are being asked to participate in a discussion being done by the U.S. Environmental Protection Agency, with the assistance of the Oak Ridge Institute for Science and Education. In the discussion, you will be asked: 1) your opinions about communication materials that the agency is developing to inform people about a public health issue; 2) your knowledge, attitudes, and beliefs about the issue; and 3) related issues. Your answers can help us develop materials to better inform the public. The discussion will be recorded (audio only) to be sure we get all the information.

Please remember that:

You choose to participate.
You are not required to answer the questions.
This session should last about 1 hour.
You are free to leave at any time without losing the cash incentive or other penalty.

Risks

The risks you take by taking part in the discussion are the same as you encounter in daily life.

Benefits

You will be better informed about a public health issue.
You may have a sense of satisfaction from your professional contribution.
Your answers may help us better inform the public and others about a public health issue.

Confidentiality

We will keep the information you give us private and confidential to the extent allowed by law. Your name will not be used in the reports, presentations, or publications. No statement you make will be linked to you by name. Only members of the research staff will be allowed to look at the records. When we present this study or publish its results, your name or other facts that point to you will not be shown or used.

Persons to Contact

If you have questions about this session or taking part in it, you may call:
Scott Minamyer, U.S. Environmental Protection Agency, Cincinnati, OH, 513-569-7175.

If you need more information about your rights as a study participant, you may contact:
Chair, Oak Ridge Site-Wide Institutional Review Board, Oak Ridge Institute for Science and Education, Oak Ridge, TN 37831-0117, 865-576-1725.

Appendix F

Moderator’s Guide - Professionals

EPA Water Security

Moderator's Guide – Professionals

1. Introductions (5 minutes)

A. Introduce moderator
B. EPA sponsorship
   1. Opportunity, importance of participation
C. Audio recording, observers
   1. For reporting only
   2. No personal or city identifiers used
D. Respondent introductions
   1. First name
   2. Something about your particular duties
E. Plan for the session: discuss issues the public would want/need to know in the event of a major water emergency.

2. Important Questions during a Disruption of the Water Supply (35 minutes)

A. Exercise: What should people know?
   1. Imagine it's been discovered that the water supply is no longer safe
      a. Could be chemical, biological, or mechanical
      b. Could be intentional (terrorism) or unintentional
   2. What do you think people should know?
      (LIST ON FLIPCHART)

Probes: Incident
Response/Authorities
Response/Public
Recovery

B. Ranking of questions
   1. Ask interviewee to rank questions
      a. Five most important that they think the public should know
      b. Five least important that the public should know.

3. Issues Thought Most Likely to be Misunderstood by the Public (10 minutes)

A. *Providing safe water is a complex operation. It seems likely that a fair percentage of the general public doesn't often think about how the system works or what the issues are if the system is not providing safe water. Based on your experience…*

B. What are some issues in a water supply emergency that the public is most likely to misunderstand?

1. Probes
   - Incident
   - Government Response
   - Personal Protection
   - Following Directives
   - Recovery

4. EPA Assistance (5 minutes)

A. What would be most helpful for your organization to receive from EPA to help in crisis communication planning for an incident such as we have been discussing?

5. Wrap-Up (5 minutes)

A. Anything else EPA should know about this subject?

B. Thank you.

C. Introduce EPA representative: _____ would be glad to answer questions about the study or EPA activities.

Appendix G

Screening Instrument EPA Water Security - Public

Screening Instrument

EPA Water Security -- Public

Recruit eight per group, four groups per market (two groups to be done on each of two consecutive evenings; 6:00 and 8:00 p.m.).

Good evening. My name is _____ and I am calling from _____, a market research firm. We are talking today with people in the area as part of a study being done by the U.S. Environmental Protection Agency. We are not selling anything. We have a few brief questions and if you qualify and are interested, we will invite you to take part in a discussion group with other people in your area that will take place at a later date.

1. First, do you or does anyone in your household work for any of the following? **(THANK AND TERMINATE IF YES TO ANY OF THE FOLLOWING)**

   01 Advertising, public relations, and/or market research
   02 Any form of media – TV, radio, newspaper, magazine
   03 A health clinic, doctor's office, or hospital
   04 Other health-related field

2. Have you ever participated in a market research study?

   01 Yes → When was that? **(THANK AND TERMINATE IF LESS THAN 6 MONTHS AGO)**
   02 No

3. How old are you? **(RECRUIT A MIX)** **(DOCUMENT ON GRID)**

   01 Under 18 **(THANK AND TERMINATE)**
   02 18-34
   03 35-44
   04 45-54
   05 55-64
   06 65 or older
   07 Refused **(THANK AND TERMINATE)**

4. **VERIFY**: Conversant in English?

01 Yes **(CONTINUE)**
02 No **(THANK AND TERMINATE)**

5. Document gender **(RECRUIT A MIX)**
(DOCUMENT ON GRID)

01 male
02 female

6. What was the highest grade or degree you achieved in school? **(RECRUIT A MIX)**
(DOCUMENT ON GRID)

01 High School Diploma or less
02 College Degree

7. What is your race? **(RECRUIT A MIX)**
(DOCUMENT ON GRID)

01 Caucasian
02 African-American
03 Hispanic
04 Asian
05 Mixed Race
06 Other _____

That is all of my questions. You do qualify for our discussion group and we would like to invite you to join us on _____ at _____ PM. The discussion will last about 2 hours. In appreciation for you time, you will be paid $XX at the time of the discussion.
Are you willing to participate?

01 yes
02 no

Appendix H

Research: Opinions about a Public Health Issue Information for Participants - Public

Research: Opinions about a Public Health Issue

Information for Participants -- Public

Purpose of This Survey

You are being asked to participate in a discussion being done by the U.S. Environmental Protection Agency, with the assistance of the Oak Ridge Institute for Science and Education. In the discussion, you will be asked: 1) your opinions about communication materials that the Agency is developing to inform people about a public health issue; 2) your knowledge, attitudes, and beliefs about the issue; and 3) related issues. Your answers can help us develop materials to better inform the public. The discussion will be recorded (audio only) to be sure we get all the information.

Please remember that:

You choose to participate.
You are not required to answer the questions.
This session should last about 2 hours.
You will receive a cash incentive for participating in the discussion.
You are free to leave at any time without losing the cash incentive or other penalty.

Risks

The risks you take by taking part in the discussion are the same as you encounter in daily life.

Benefits

You will be better informed about a public health issue.
You may have a sense of satisfaction from civic participation.
Your answers may help us better inform the public and others about a public health issue.
You will receive a cash incentive for participating in the discussion.

Confidentiality

We will keep the information you give us private and confidential to the extent allowed by law. Your name will not be used in the reports, presentations, or publications. No statement you make will be linked to you by name. Only members of the research staff will be allowed to look at the records. When we present this study or publish its results, your name or other facts that point to you will not be shown or used.

Persons to Contact

If you have questions about this session or taking part in it, you may call:
Scott Minamyer, U.S. Environmental Protection Agency, Cincinnati, OH, 513-569-7175.

If you need more information about your rights as a study participant, you may contact:
Chair, Oak Ridge Site-Wide Institutional Review Board, Oak Ridge Institute for Science and Education, Oak Ridge, TN 37831-0117, 865-576-1725.

Appendix I

Moderator’s Guide - Public

EPA Water Security
Moderator's Guide – Public

I. Introductions (5 minutes)

- Introduce moderator
- EPA sponsorship – opportunity, importance of participation
- Recording, observers – for reporting only, no personal identifiers used
- Respondent introductions – first name, favorite hobby
- Plan for the session
    - Discuss public safety issue
    - Identify information people might want, actions people might take
    - Review some draft information sheets
    - About 2-hour session

II. City Services (10 minutes)

NOTE: Hand out worksheet: "City Services"

*In the left-hand column of this worksheet is a list of city services. There is also space at the bottom for you to list other city services that are important to you. Let's assume that there is a terrorist attack and these city services are lost for several days. For each item, please rate **how severe** the impact would be, for you and your family, if services were disrupted for several days.*

Please rate each item from 1, not at all severe, to 10, very severe. You can use any number from 1 to 10. When you're finished, we will talk about the scores you gave and the reasons for those scores.

NOTE: Respondents will work in pairs. Provide time for them to discuss each item, then debrief, getting responses from each dyad.

- Did you list **any other city services**?
- **Which item was most important** to you? What factors made it most important?
- **Which item was least important** to you? What factors made it least important?
- Was **water** a high priority for you, a low priority, or somewhere in the middle? What factors did you consider in deciding on this position?

III. Exercise: Attack on the Water Supply – Questions and Information Needs (40 minutes)

[NOTE: If someone asks---the spokesperson is someone they trust and feel would do the best they could to keep people safe—who the person is providing the information is not an issue to them]

We want to focus the next several minutes of our discussion today on one of those city services – the water supply. I would like for you to get comfortable in your chair, close your eyes, and create in your mind's eye a vivid image of the following situation: Imagine it is a weekday evening.

You have just come home from work or running errands. The phone rings. When you pick up the phone you hear a recorded emergency announcement that there has been an attack on the water supply for [name of city]. Someone has purposely released a pesticide into the water. The announcer says that, for now, the water may be unsafe and cannot be used for any purpose. In your mind, make a note of the specific questions you have.

When you are ready, open your eyes.

You have probably come up with some really important ideas during this exercise. Take a few minutes to write on your pad anything that is so important that you want to make sure you don't forget it. Also, write down questions you would most want officials to answer at this point.

[NOTE: provide time for note-taking]

- Now, let's talk a little bit about this experience. First, **what questions did you have,** when you first heard the **phone announcement** about a pesticide in the water? What did you want or need to know from officials about this situation at that point?

Now, I would like to understand the relative importance of these questions. I'm going to give each of you colored dots. I want you to use these dots as votes, placing them on the flip chart paper next to the questions that are most important for you. If a question is really important to you, you may place more than one dot by that question to indicate how important it is.

NOTE: Count dots and debrief results

- **What would be your greatest concern** in this situation? Please tell me a little about your reaction to the situation you visualized a few minutes ago.
    - **What are the reasons?**
    - **What did you think** when you heard the information?
    - **How did you feel** when you heard the information?
    - **What kinds of information** would you most want to receive during an event such as this?
    - **What kinds of information** would you want if the event happened in a neighboring community ten miles away? [if time permits]
    - **What if** it were in another more distant city in your state? [if time permits]

IV. Materials Testing (50 minutes)

One thing we can be certain about is that if there is an attack on the water supply, people will want lots of information. It's important to EPA that people get information that effectively addresses their concerns. An important part of doing that is preparing now, rather than during an urgent situation. EPA has identified a number of topics – questions people are likely to ask or information they feel people would want to know. For most of the rest of our time together, we will be reviewing some of these.

We'll read one together. I'll ask you to mark it up – underlining the things you like, circling the things you don't like or want to change.

There are a few things I would like you to keep in mind for purposes of this exercise:

1 It's important to put yourself in the situation. Continue to imagine the situation as you did in the last exercise. Stay in touch with what you are feeling, as well as what you are thinking. Both parts are important.

2. Keep in mind that the questions you are seeing are a sample. There are many more questions likely – too many for one group to look at in a reasonable amount of time. We can note other questions you have but remember that you are not seeing them all.

3. Remember that in the event of a terrorist attack on a water supply there will likely be a lot of press conferences and interviews with public health officials, elected officials, and others. TV, radio, newspapers, and the Internet will have lots and lots of coverage. All the issues will be addressed in a variety of ways.

Exercise

- Assign partners so respondents are working in teams of 2± people.
- Hand out fact sheet
- Provide background: *As we work through some of these fact sheets together, you'll notice that all of these are set up the same way. First, there is a question at the top of the page. Second, there are three "key messages" in bold print. Third, for each key message there are three pieces of supporting information – examples, details that provide more information.*

- Read through first fact sheet
  - **What did you underline** as important? Can you tell me the reasons why this information is important?
  - **What did you circle**? What changes should we make to this information?
  - **What other reactions** do you have to this fact sheet?

- Repeat for other fact sheets as time allows, rotating the order.

V. Wrap-Up (15 minutes)

- What additional advice would you give someone who has to prepare or provide information to the public during a terrorist attack on the water supply?
- All the issues for today.
- Thank you.
- Introduce EPA representative: discussion may have raised some questions, _____ will be happy to try to address questions or concerns.

Worksheet: City Services

Some City Services	Impact of Service Disruption
Electricity	
Telephone	
Water	
Sewage Treatment	
Trash Collection	

1 = not at all severe
10 = very severe

City: _____ *Date:* _____ *Time:* _____

Appendix J

Materials Available for Testing - Public

Materials Available for Testing - Public

Scenario 1 - Pesticide contamination (Scenario 5 from workshops)

1-1: What can you tell us about the water contamination?
1-2: What is the water utility doing now about the pesticide contamination?
1-3: How many people may have been contaminated?
1-4: What are the symptoms of exposure?
1-5: What should people do to protect children and the elderly?
1-6: If people cannot drink or touch the water, is there anything people can do with it?
1-7: What should people do now for water?
1-8: Do you accept responsibility for what happened?
1-9: How are you going to clean the system?
1-10: Once it is cleaned up, how will you know if the water system is safe?
1-11: How do you normally know the water is safe to drink?

Scenario 2 - Biological contamination (Scenario 6 from workshops)

2-1: What happened?
2-2: What can you tell us about this contamination event?
2-3: Do you know exactly where the contaminant is within the drinking water system?
2-4: How did public health find out there was contamination?
2-5: Can people in the affected area use the water at all (bathing, washing dishes, making coffee)?
2-6: What are the health effects associated with exposure to [Insert biological agent]?
2-7: How did the city find out there was contamination?
2-8: How or where can people in the affected area get safe water?
2-9: How did this happen?

1-1: What can you tell us about the water contamination?

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].

1-2: What is the water utility doing now about the pesticide contamination?

We are testing water quality throughout the system.

- We are taking samples at various locations.
- [Insert laboratory name] is testing those samples.
- The results of these tests will determine our next steps.

We have begun recovery operations.

- Our recovery operations are being coordinated with local, state, and federal agencies.
- The CDC and other public health experts are advising us on potential health effects.
- The U.S. Environmental Protection Agency and other experts are advising us on how to clean the system.

Effective immediately, people should not use the water.

- People 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].

1-3: How many people may have been contaminated?

We are assessing the number of people who might be affected.

- Health officials are tracking calls and complaints.
- Samples have been sent to state laboratories for testing.
- Results of the tests will help us better determine affected areas.

We are working closely with local hospitals.

- Hospitals are prepared to provide treatment.
- Hospitals are also providing medical advice.
- The CDC is providing advice to us and the hospitals.

We are coordinating our response efforts with other organizations.

- In special cases, we will make door-to-door visits.
- Hospitals and nursing homes will receive priority attention.
- Other communities have offered resources and support.

1-4: What are the symptoms of exposure?

Symptoms depend on exposure.

- Because of the unusual smell and taste, most people will not drink the water.
- Because of the small amounts of pesticide involved, most people will not breathe amounts large enough to cause harm.
- Skin penetration is unlikely unless there has been prolonged contact with the water.

The pesticide can enter the body through drinking, breathing, or skin contact.

- Exposure is typically not life threatening.
- Most people who have been exposed and have symptoms will fully recover.
- The biggest concern is exposure by drinking a large amount of contaminated water.

There are many symptoms.

- People who drank more than a quart of the water may experience nausea, an upset stomach, and vomiting.
- People who are experiencing symptoms should not be encouraged to vomit.
- Call 911 immediately or go to an emergency room if you have symptoms.

1-5: What should people do to protect children and the elderly?

Children and the elderly need special protection.

- Children and the elderly are more vulnerable to illness than other populations.
- Children are more vulnerable because they have less developed body defenses.
- The elderly are more vulnerable because they may have weakened immune systems.

Children and the elderly should be especially careful not to contact the water.

- Children and the elderly should not bathe using the water.
- Children and the elderly should not swim in the water.
- Children and the elderly should not wash dishes using the water or use dishes washed in the water.

Children and the elderly should be especially careful not to drink the water.

- Children and the elderly should drink only bottled water.
- Children and the elderly should not drink beverages prepared with the water.
- Parents should not prepare infant formula using the water.

1-6: If people cannot drink or touch the water, is there anything people can do with it?

Our primary concern is the pesticide entering the body through drinking.

- People should not drink the water or cook with it. Boiling does not remove a pesticide.
- People should not drink beverages prepared with the water or make infant formula.
- People should keep children and pets away from the water.

People can water their plants, gardens, and lawns with the water.

- People should wear gloves to prevent skin contact with the water when using a hose.
- Avoid breathing aerosolized water from sprinklers.
- Avoid creating run-off that could contaminate the sewer system.

Skin contact should be avoided, especially if contact is prolonged.

- People should not use the water for washing dishes.
- People should not use the water to take baths or showers.
- It is okay to flush toilets.

1-7: What should people do now for water?

At this time, people should not use the water.

- People should not drink the water.
- People should not use the water to bathe, shower, or wash.
- Boiling the water will not make it safe.

We will provide regular updates on our testing.

- Updates are available on our web site [insert web site].
- Updates will be broadcast through local radio and TV.
- Updates are available from our information line at [insert number].

People from affected areas should drink only bottled water.

- Free bottled water will be available at the following locations [insert location] at [insert times].
- Bottled water should be used for cooking and other uses.
- Bottled water should be used for pets.

1-8: Do you accept responsibility for what happened?

Our most immediate concern is the safety of the water.

- We are working to identify impacted areas.
- We are working to minimize the spread of the pesticide in the system.
- Our goal is to restore normal service throughout the system as quickly and safely as possible.

We will help determine the cause of the incident.

- It is possible that the contamination was unintentional.
- We are working closely with law enforcement as they conduct their investigation of the incident.
- The investigation should identify the source of contamination.

We are responsible for making changes in our operations, if needed.

- After the incident has been addressed, standard procedure is to review our emergency response plan and make any necessary changes to improve it.
- We will review the actions we took following the discovery of the pesticide.
- We will know more once the investigation is complete.

1-9: How are you going to clean the system?

We are evaluating which parts of the distribution system need to be cleaned.

- We will take samples from throughout the distribution system.
- We will analyze the samples to determine where the pesticide is present in the system.
- We will also use water-flow models to determine which parts are affected.

We will use flushing and other cleaning methods as applicable.

- We are consulting with experts at federal, state, and local agencies.
- We will select methods that are safe and effective for dealing with pesticides.
- We will select cleaning methods that will enable us to meet regulatory requirements for this pesticide.

We will selectively replace pipes if needed.

- We will replace pipes based on results from the testing program.
- Replacement pipes are readily available.
- We have extensive experience replacing pipes.

1-10: Once it is cleaned up, how will you know if the water system is safe?

Testing will confirm the absence of harmful levels.

- We will collect water samples at multiple locations along the distribution system.
- Samples will be tested for [insert pesticide name] at laboratories.
- The tests are highly accurate in detecting the pesticide.

Federal and state agencies determine what level is considered safe.

- The water system will not be put back into service until the contamination is reduced below this level.
- This cleanup level is based on protecting human health against long-term effects for all age groups.
- The public health department will verify that levels are safe.

We will continue testing to ensure that levels remain safe.

- We will monitor for elevated levels of the pesticide.
- We will report any problems and take necessary actions.
- Water users should report any unusual odors, coloration, or other problems by calling our hotline at [insert number].

1-11: How do you normally know the water is safe to drink?

We continuously test the water for safety.

- The law requires us to check water safety daily.
- We continually meet or do better than water quality standards set by the U.S. Environmental Protection Agency.

Testing is done in partnership with the local health department.

- The water utility and the local health department have experts on staff with specialized knowledge of testing procedures.
- Our experts test the water daily.

We will inform you when testing shows that the water is safe to drink and use.

- We will provide updates through the media.
- We also post updates on water quality on our Web site at [insert Web address].
- People can also call our telephone hotline for updates at [insert number].

2-1: What happened?

Terrorists contaminated part of the water system with [insert biological agent].

- People have reported gastrointestinal illness.
- [Insert biological agent] causes nausea, vomiting, and diarrhea, but it is generally not life threatening.
- If you are experiencing symptoms, please seek immediate medical attention.

We have contained the contamination [insert map showing system and indicating affected area].

- The affected area has been isolated from the rest of the water system.
- Sampling for additional contaminants is currently being performed.
- Additional public announcements will be made as more information becomes available.

We recommend people living in this area [insert boundaries] boil their water.

- Bring your water to a rolling boil for [insert number] minutes and let cool before drinking.
- Fact sheets and other information are available on the following web site [insert web site] or at our toll-free telephone line [insert telephone number].
- Alternative drinking water is available at [insert address of location].

2-2: What can you tell us about this contamination event?

There has been an intentional contamination of the water system.

- We are currently working with local law enforcement and the FBI in response to this event.
- We know the location of the point of introduction [insert location] and are currently working to define the area affected.
- We are also working to sample our entire system for indication of other areas that may be contaminated.

Most people infected with this bacterium will have mild to moderate illness.

- [Insert biological agent] infection can cause diarrhea and vomiting.
- The very young and old and people with weakened immune systems are typically most at risk.
- If people are having symptoms, they should consult their physicians.

We have issued a "Do Not Use" notice in response.

- "Do Not Use" means do not use the water for drinking, bathing, or cooking. It is safe to flush toilets.
- We are recommending the use of alternative sources (such as bottled water) until we lift the "Do Not Use" notice.
- We are working to contain and clean up this contamination and will provide more information as soon as it becomes available.

2-3: Do you know exactly where the contaminant is within the drinking water system?

We know the source of the contamination.

- The police and FBI have identified a location in the [insert name] neighborhood where the contaminant was introduced.
- The police are currently treating this contamination event as an act of terrorism.
- Evidence collected at the scene confirms that the source of the water contamination came from this location.

We are currently working to clearly define the area affected.

- We are sampling and analyzing the water system around that location.
- We are looking at the water distribution system to specifically define the affected area.
- Sample results can be expected from the laboratory within 48 hours.

At this time, illness has been reported only in this area [insert boundaries].

- In addition to the localized sampling, we are sampling throughout the system for evidence of contamination.
- Preliminary water quality testing indicates that this contamination has not spread throughout the system.
- If you have questions as to whether or not you may be affected by this event, please call our 24-hour hotline at [insert number].

2-4: How did public health find out there was contamination?

RODS – our public health surveillance system – showed a higher than normal number of illnesses in the community.

- The Real-time Outbreak Disease Surveillance (RODS) system examines emergency department data from area hospitals and over-the-counter drug sales.
- Recent RODS data have shown an increase in the number of emergency room patients with diarrhea and gastrointestinal symptoms.
- RODS data have also shown an increase in the sale of over-the-counter anti-diarrheal medications from local drug stores.

Water samples were collected by the water utility.

- Samples were collected within the impacted areas.
- Samples were collected throughout the distribution system.
- Additional sampling and analysis will be conducted as needed.

Further investigation indicates that the public water system is the likely source.

- The health department interviewed patients to investigate the cause of their illness.
- Clinical laboratory tests supported the diagnosis.
- The health department worked with the water department to verify the cases occurred within the water department's service area.

2-5: Can people in the affected area use the water at all (bathing, washing dishes, making coffee)?

If you live in the affected area (see map), your water may still contain [insert biological agent].

- This bacterium can cause illness when people come in direct contact with it.
- The "Do Not Use" notice is based on taking a conservative stance to protect against any resulting illness.
- The protection of public health and safety is the basis for all aspects of this advisory and response.

This should not affect fire fighting.

- The fire department has informed us that they will continue to use this water as needed to fight fires.
- Bacteriological contamination of this type does not prohibit its use for fire-fighting purposes.
- Fire protection will continue during the emergency.

People should avoid direct contact with this water at this time.

- People in this area are advised to not drink, cook, bathe, give to pets, or otherwise use the water where personal contact may occur.
- We are working as quickly as possible to resolve this issue and restore full use of the drinking water system in the affected areas.
- We will inform you of any change in the use advisory.

2-6: What are the health effects associated with exposure to [insert biological agent]

[Insert agent] is a bacteria that affects the gastrointestinal system.

- Frequent hand washing will help control the spread of [insert agent].
- The water utility has treated the water with higher but safe levels of chlorine to kill the [insert agent].
- Use alcohol-based hand cleaners until the water is safe to drink.

Symptoms will generally last for 7 to 10 days.

- Primary symptoms include nausea, vomiting, and diarrhea.
- People with symptoms should contact their health care providers for treatment information.
- People can call the public health hotline at [insert number] for more information about [insert biological contaminant].

[Insert agent] does not typically cause long-term health effects.

- [Insert agent] is generally not life threatening.
- The most vulnerable groups include small children, the elderly, and people with weak immune systems.
- [Insert biological contaminant] infection is treatable by [insert treatment].

2-7: How did the city find out there was contamination?

Hospital reports from [insert names of hospitals] indicate higher numbers of cases of ill patients than normal.

- [Insert number] hospitals have reported a total of [insert number] cases during a [insert number]-day period.
- The number of hospital patients with gastrointestinal symptoms is well above normal.
- The reports were provided to the health department as part of the community's medical tracking system.

The health department identified [insert biological contaminant] in the water system as the cause.

- The health department conducted interviews with ill patients to determine the cause.
- The health department's investigation also included laboratory tests.
- The health department contacted the water authorities and indicated there may be a waterborne problem.

The water utility reports [insert biological contaminant] in samples collected from the water system.

- The water utility initiated testing after notification from the health department.
- The water utility is identifying impacted areas.
- The water utility will continue to sample and test the water, and we will keep you posted.

2-8: How or where can people in the affected area get safe water?

Water is being made available to households in the affected area [insert boundaries].

- The city is setting up distribution centers for the affected area.
- We are able to distribute [insert number] gallons of water per person.
- Disabled or other individuals who cannot get to a distribution center should call [insert number] for assistance.

Hospitals in the affected area will have supplies of safe drinking water.

- The water utility has arranged for the provision of water treatment units for the hospital system.
- People should not go to a hospital for their household's supply of emergency water.
- Health clinics in the area are also receiving supplies of emergency drinking water.

Please follow the "Do Not Use" drinking water order.

- People are not to use the water for cooking, bathing, or any other personal contact uses, including for pets.
- Ongoing samples of the water system are being taken.
- We will let you know when the water is again safe to use.

2-9: How did this happen?

A terrorist group has claimed responsibility.

- Police found a note at [insert location].
- The group who left the note is on the FBI watch list.
- The investigation to find the perpetrators is ongoing.

Terrorists introduced the bacteria into the location's plumbing system.

- Police found equipment at the location.
- Laboratory results verify traces of [insert bacterial agent] in containers near the equipment.
- Initial tests by the water utility confirm traces of [insert bacterial agent] in the water system in the vicinity of this location.

Authorities have found the contamination source.

- Residents reported suspicious activities in and around this location.
- Equipment at the location is consistent with this kind of attack.
- Fact sheets related to [insert biological agent].

Appendix K

Copy of 60 Day Federal Register Notice

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-ORD-2009-0313; FRL-]

Agency Information Collection Activities; Proposed Collection; Comment Request; Critical Public Information Needs during Drinking Water Emergencies (New); EPA ICR No. 2322.01, OMB Control No. 2080-NEW

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice

SUMMARY: In compliance with the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq*.), this document announces that EPA is planning to submit a request for a new Information Collection Request (ICR) to the Office of Management and Budget (OMB). Before submitting the ICR to OMB for review and approval, EPA is soliciting comments on specific aspects of the proposed information collection as described below.

DATES: Comments must be submitted on or before [insert date 60 days after publication in the Federal Register]..

ADDRESSES: Submit your comments, identified by Docket ID No. **EPA**-HQ-ORD-2009-0313 by one of the following methods:

- www.regulations.gov: Follow the on-line instructions for submitting comments.
- Email: ord.docket@epa.gov
- Fax: 202-566-9744
- Mail: Office of Research & Development Docket, Environmental Protection Agency, Mail Code 28221T, 1200 Pennsylvania Avenue, NW., Washington, DC 20460.
- Hand Delivery: EPA Docket Center, Public Reading Room, EPA West Building,

Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA-HQ-ORD-2009-0313**.** EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or e-mail. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at http://www.epa.gov/dockets

FOR FURTHER INFORMATION CONTACT: Scott Minamyer, Environmental Protection Agency, Mail Code NG-16, Environmental Protection Agency, 26 West Martin Luther King Drive; telephone number: 513-569-7175; fax number: 513-487-2559**;** email address: minamyer.scott@epa.gov

SUPPLEMENTARY INFORMATION:

How Can I Access the Docket and/or Submit Comments?

EPA has established a public docket for this ICR under Docket ID No. EPA-HQ-ORD-2009-0313, which is available for online viewing at www.regulations.gov, or in person viewing at the ORD Docket in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Ave., NW, Washington, DC. The EPA/DC Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is 202-566-1744, and the telephone number for the ORD Docket is 202-566-1752.

Use www.regulations.gov to obtain a copy of the draft collection of information, submit or view public comments, access the index listing of the contents of the docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the docket ID number identified in this document.

What Feedback is EPA Particularly Interested in?

Pursuant to section 3506(c)(2)(A) of the PRA, EPA specifically solicits comments and information to enable it to:

(i) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the Agency, including whether the information will have practical utility

(ii) Evaluate the accuracy of the Agency's estimate of the burden of the proposed collection of information

(iii) Enhance the quality, utility, and clarity of the information to be collected

(iv) Minimize the burden of the collection of information on those who are to respond

What Should I Consider when I Prepare My Comments for EPA?

You may find the following suggestions helpful for preparing your comments:

1. Explain your views as clearly as possible and provide specific examples

2. Describe any assumptions you used

3. Provide copies of any technical information and/or data you used that support your views

4. If you estimate potential burden or costs, explain how you arrived at the estimate you provide

5. Offer alternative ways to improve the collection activity

6. Make sure to submit your comments by the deadline identified under DATES

7. To ensure proper receipt by EPA, be sure to identify the docket ID number assigned to this action in the subject line on the first page of your response. You may also provide the name, date, and Federal Register citation.

What Information Collection Activity or ICR Does this Apply to?

Affected entities: Entities potentially affected by this action are municipal water utility managers and members of the public participating in focus groups.

Title: Critical Public Information Needs during Drinking Water Emergencies (New)

ICR numbers: EPA ICR No. 2322.01, OMB Control No. 2080-NEW.

ICR status: This ICR is for a new information collection activity. An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information, unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in title 40 of the CFR, after appearing in the Federal Register when approved, are listed in 40 CFR part 9, are displayed either by publication in the Federal Register or by other appropriate means, such as on the related collection instrument or form, if applicable. The display of OMB control numbers in certain EPA regulations is consolidated in 40 CFR part 9.

Abstract: EPA is collecting this information as part of a formative research study to identify critical information the public will need from water utilities and other decision-makers during a crisis event impacting drinking water. The research will probe consumers' and water sector professionals' beliefs, opinions, and knowledge about water security risks to assist public officials in planning effective crisis communication strategies for such emergencies. Good communication can rally support, calm fears, provide needed instructions, and encourage cooperative behaviors.

Study participants will also provide feedback on the effectiveness of draft sample messages previously developed by EPA in consultation with subject matter experts from water utilities, public health, emergency response, law enforcement, and water trade/professional organizations. Voluntary participants for this one-time study will include water utility managers, public information officers, and members of the public who consume drinking water supplied by water utilities. Confidentiality of responses from respondents will be assured by using an independent contractor to collect the information, enacting procedures to prevent unauthorized access to respondent data, and preventing public disclosure of the responses of individual participants.

Burden Statement: The annual public reporting and recordkeeping burden for this collection of information is estimated to average 1.7 hours per response. Burden is defined as the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to: review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements which have subsequently changed; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

The ICR provides a detailed explanation of the Agency's estimate, which is only briefly summarized here:

Estimated total number of potential respondents: 52 water utility professional staff and 128 members of the public participating in focus group discussions

Frequency of response: Once.

Estimated total average number of burden hours for each respondent: 1 hour for water utility professional staff and 2 hours for members of the public participating in focus group discussions

Estimated total annual respondent burden hours: 308 hours.

Estimated total annual costs: $1,380.46. This includes an estimated burden cost of $1,380.46 for participating water utility professional staff and $0 for members of the

public participating in focus group discussions and an estimated cost of $0 for capital investment or maintenance and operational costs.

What is the Next Step in the Process for this ICR?

EPA will consider the comments received and amend the ICR as appropriate. The final ICR package will then be submitted to OMB for review and approval pursuant to 5 CFR 1320.12. At that time, EPA will issue another Federal Register notice pursuant to 5 CFR 1320.5(a)(1)(iv) to announce the submission of the ICR to OMB and the opportunity to submit additional comments to OMB. If you have any questions about this ICR or the approval process, please contact the technical person listed under FOR FURTHER INFORMATION CONTACT.

Dated: _____

_____

Cynthia Sonich-Mullin, Acting Director

National Homeland Security Research Center

Office of Research and Development

Billing Code 6560-50-P