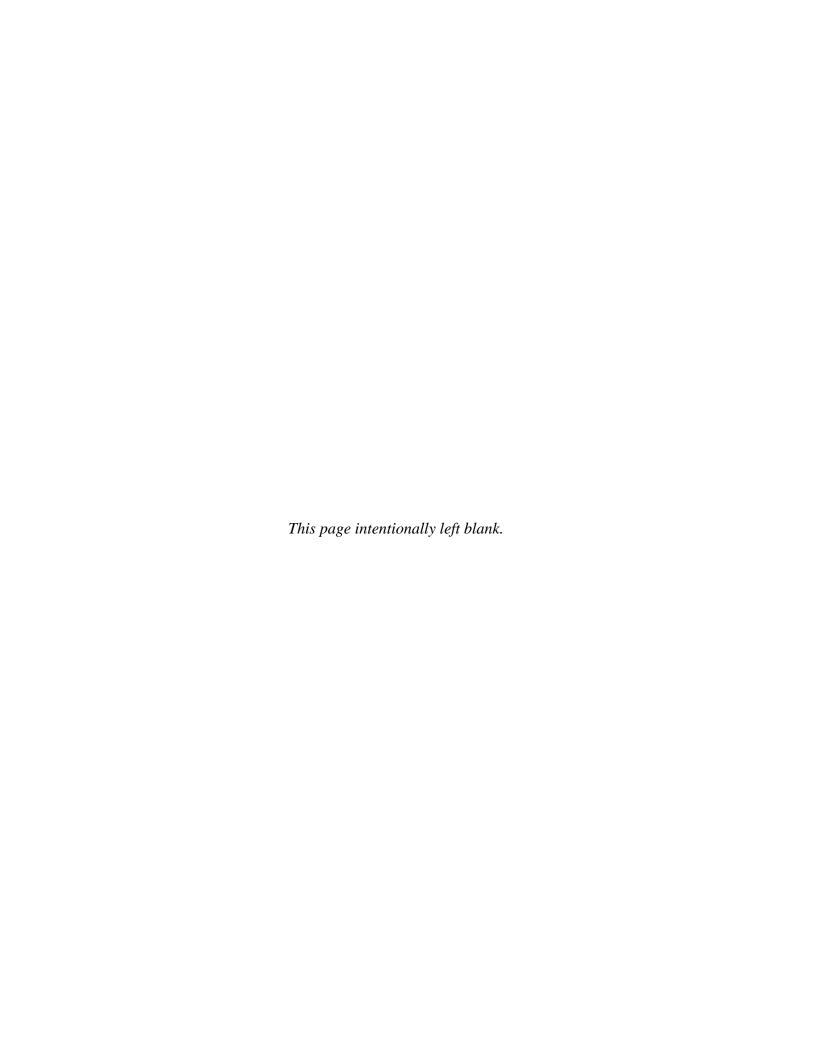


### **Community-Based Water Resiliency**

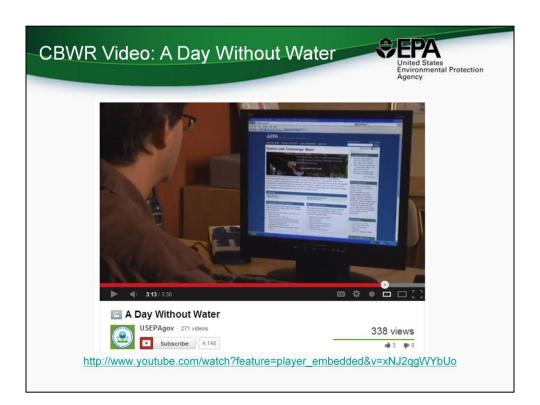


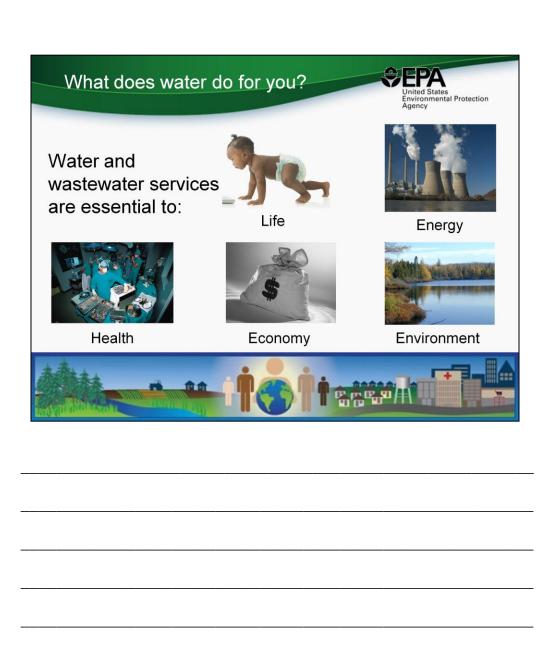
Training Workshop – Participant Workbook





### Section 1: Introduction / Background



### Preparedness for All-Hazards

United States
Environmental Protection
Agency

Water and wastewater utilities face a number of threats:

- Hurricanes
- Tornadoes
- · Aging infrastructure
- · Intentional contamination
- Man-made accidents and intentional events








### Breakout Group Exercise:

# Potential Causes for a Water Service Interruption


### **Breakout Question - Potential Causes for a Water Service Interruption:**

What are some potential causes of a water service interruption?		

### Imagine a Day Without Water





Infrastructure failures are not a matter of "if" they are a matter of "when"...we all need to be prepared and plan ahead.

### How would you meet your needs for:

- · Drinking water
- · Sewage disposal and sanitation
- Firefighting

#### What about...

- Energy
- · Hospitals and dialysis services
- Transportation
- Food processing and services
- Manufacturing
- Banking

### What if Things Were Different?



- · Water utilities regularly coordinated with emergency planners?
- · Environmental health regularly coordinated with water utilities?
- · Emergency response plans included utilities?
- Citizens understood impacts of drinking water and wastewater service interruptions before they happened?
- · Area hospitals and businesses had backup water plans?
- Businesses and critical community services factored water service interruptions into emergency plans?




# CBWR Addresses the "What if ...?" United States Environmental Protection Agency · Brings utilities together with: - Emergency planners/responders - Business community - City/county managers - Public health officials - Members of the public · Increases preparedness at the community level by: Increasing understanding of critical interdependencies - Highlighting multiple benefits of preparedness - Improving integration of Water Sector into community emergency preparedness and response Goal: Communities, as a whole, are more resilient in the event of a water service interruption

### Why CBWR?



### CBWR strives to:

- Increase overall community preparedness by:
  - Raising awareness of Water Sector interdependencies and
  - Integrating the Water Sector into community emergency preparedness and response efforts
- Increase preparedness and resiliency of drinking water and wastewater utilities by:
  - Delivering tools and information to increase community collaboration and bolster security practices



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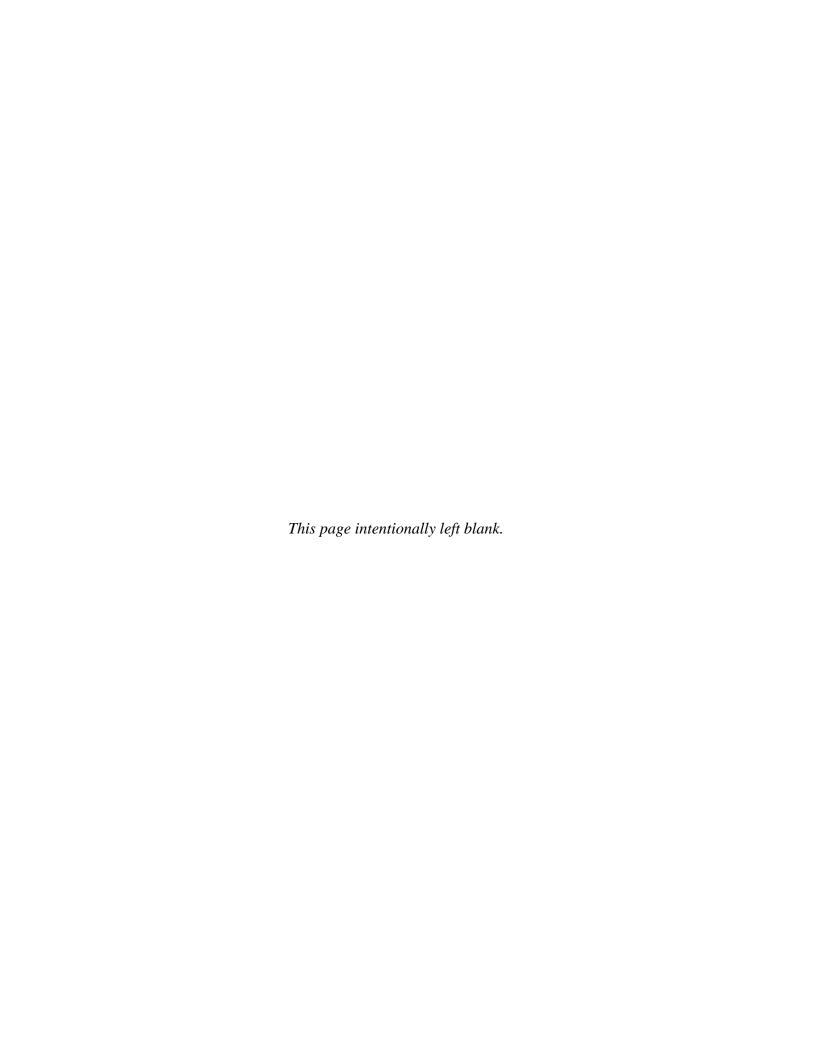
### Why Involve the Entire Community?



- All emergencies are local, all responses are local
- · Threats and vulnerabilities vary by community
- · Utilities play a critical role in public health and safety during water emergencies
- · Communities need to:
  - Understand their unique interdependencies
  - Be prepared to work together during a crisis
  - Access tools and resources that speak to their roles and responsibilities in advance of a crisis
- Water utilities need:
  - Regular coordination with law enforcement personnel, community leaders, business leaders and the general public
  - Collaboration with interdependent sectors

Water service interruptions can have serious economic, environmental, psychological and public health consequences on a community. Resilient communities can significantly reduce these risks at negligible cost.





# Section 2: Community-Based Water Resiliency (CBWR) Tool

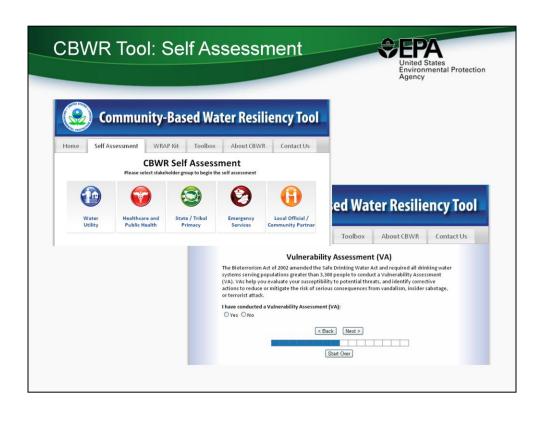

### **CBWR Tool**



The CBWR Tool consists of three main sections:

- Stakeholder Self Assessment
- 2. CBWR Toolbox
- 3. Water Resiliency Action Plan (WRAP) Kit






# Breakout Group Exercise: CBWR Tool Self Assessment


# **Self Assessment Category of Concern 1:** Self Assessment Stakeholder Group: Identify a question where you received a negative response (indicated by red X): What suggestions and resources does the tool recommend? **Self Assessment Category of Concern 2:** Self Assessment Stakeholder Group: Identify another question where you received a negative response (indicated by red X): What suggestions and resources does the tool recommend?

### **Self Assessment Category of Concern Additional:**

Self Assessment Stakeholder Group:
Identify another question where you received a negative response (indicated by red X):
What suggestions and resources does the tool recommend?



# Breakout Group Report Out: CBWR Tool Self Assessment



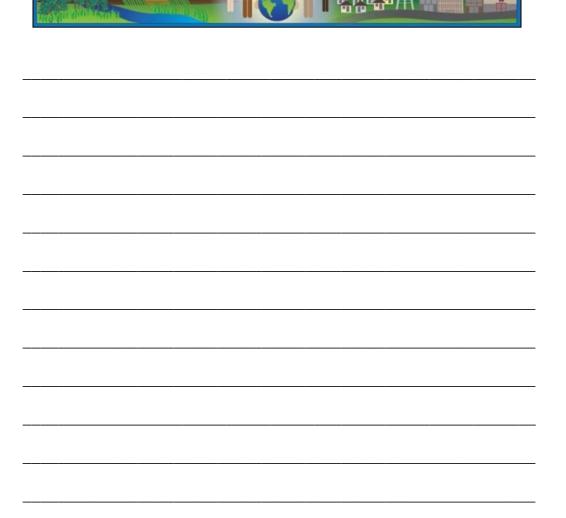


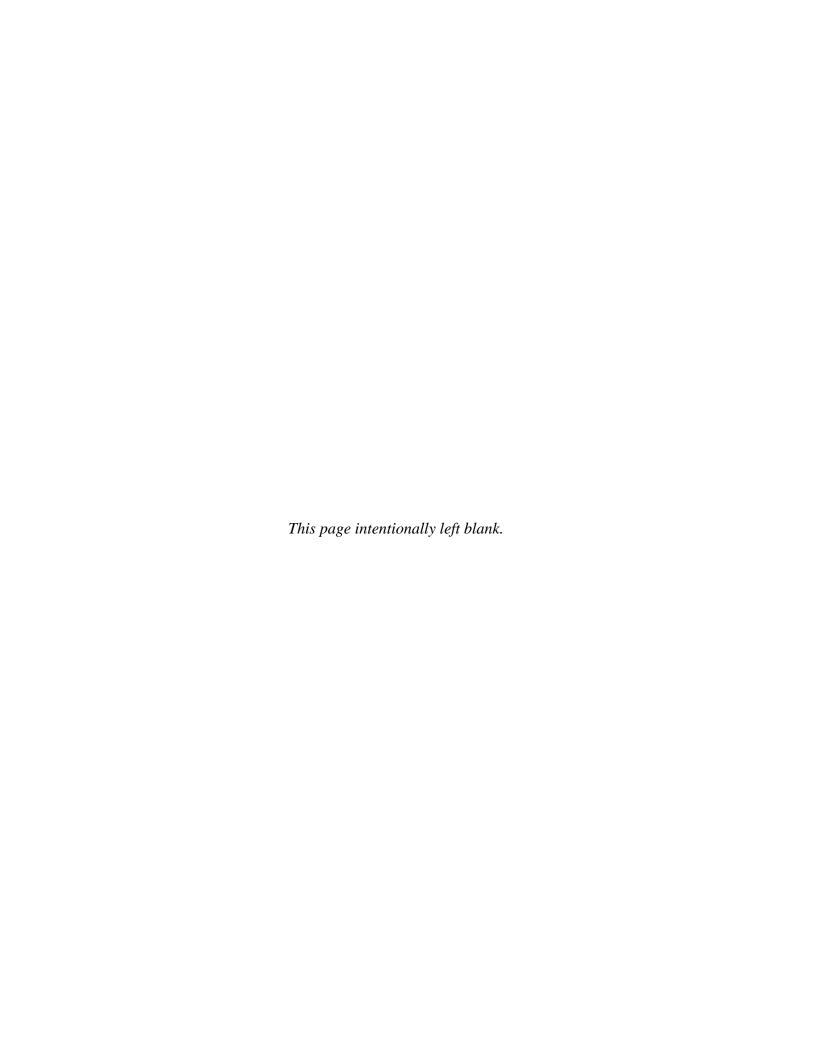
### Water Resiliency Action Plan (WRAP) Kit



- Provides users with step-by-step process for planning a water emergency meeting or workshop, and covers:
  - Expectations
  - Roles and responsibilities
  - Capabilities and limitations
  - Planning, hosting and follow-up actions
- · Includes sample:
  - Agendas
  - Invitations
  - Suggested participants
  - Logistical templates and scripts for recruitment









### Section 3: Importance of Community-Based Approach to Preparedness

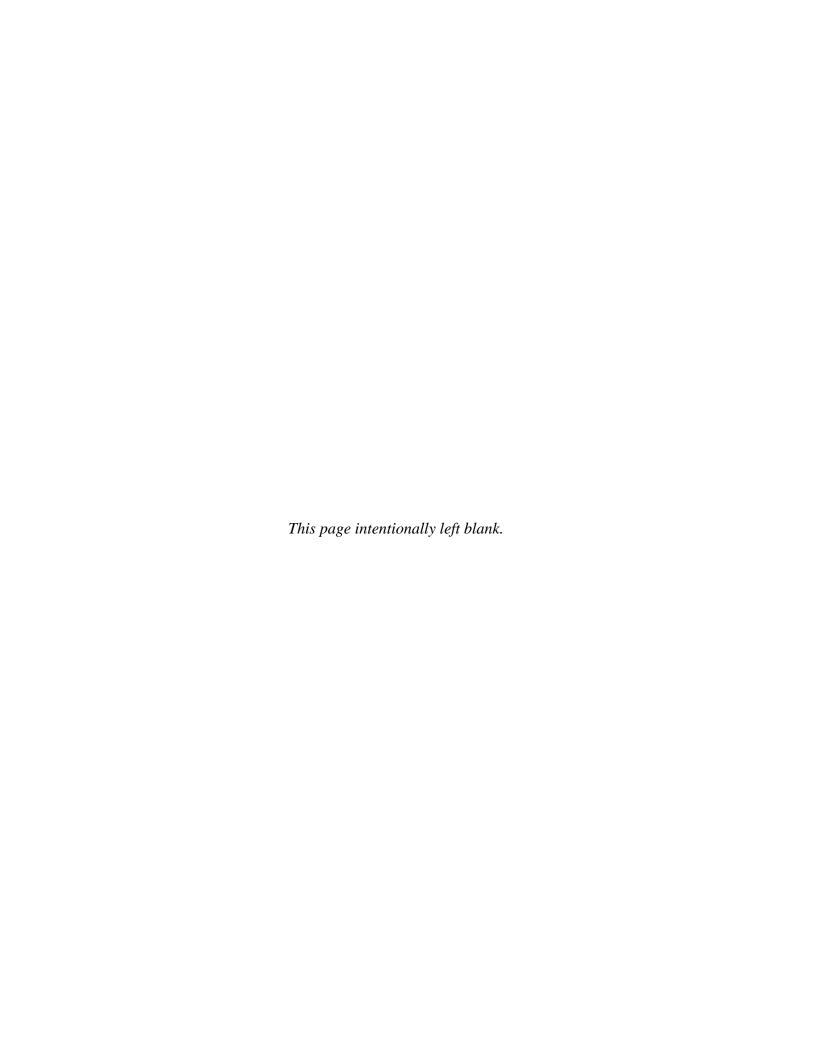



### Breakout Group Discussion:

Water Emergency Scenario




### Placeholder: Insert Water Emergency Scenario Example

Water Emergency Scenario - Question 1:	
Given the scenario you just discussed, what impacts would you expect on the community?	
Water Emergency Scenario - Question 2:	
Based again on the scenario you discussed, what types of emergency plans could have been	n in
place to mitigate impacts?	,,,,,,,,

Water Emergency Scenario - Question 3:	
What other actions could you take to improve	ve preparedness?
Water Emergency Scenario - Question 4:	

## Benefits of Community-Wide Preparedness

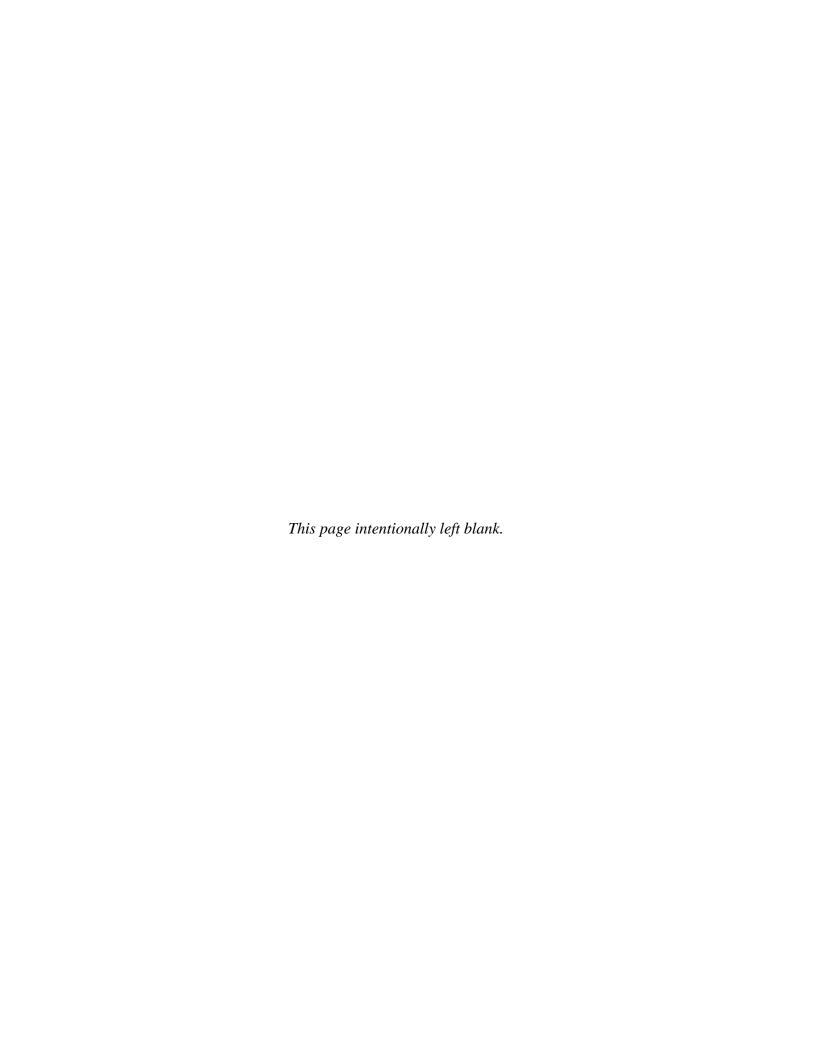


Community-wide preparedness helps communities understand:

- Importance of water and how people and businesses rely on it for everyday services
- Forge partnerships between water utilities and other sectors
- Clarify roles and responsibilities of individuals and organizations during a water emergency
- Increase community resiliency to water emergencies
- Reduce impacts of water service interruptions







# Section 4: How to Implement a CBWR Program in Your Community


### Water Resiliency Action Plan (WRAP) Kit





interruptions which could have serious public health and economic impacts -- so it is important to plan ahead.

Hosting a water emergency workshop or meeting in your community is the first step in

Hosting a water emergency workshop or meeting in your community is the first step in preparing for a water emergency. The Water Resiliency Action Plan (WRAP) Kit shows how to plan:

- A community meeting that brings together stakeholders to raise awareness and provide education on the need for preparedness

" Choose your track and move forward "

Community Workshop Community Meeting

## What is a Community Workshop?



A **community workshop** is an informal meeting with water utilities and members of their communities to become better prepared for a water emergency.

Suggested goals include:

- · Provide solutions for future water service interruptions
- · Identify preparedness activities to improve water resiliency
- · Integrate water utilities into community planning

### Suggested activities:

- Tour of drinking water and/or wastewater treatment plant operations
- Facilitated breakout discussion on a response to an incident – actual or hypothetical




## Example of a Community Workshop



### **Evanston Water Emergency Roundtable**

September 2009

A water emergency in January 2009, caused by **frazil ice build-up** on water intakes resulted in the awareness of how critical reliable and resilient water service is to the communities served by the Evanston Water Utility.

The purpose of the **invitation-only** meeting was to:

- · Discuss customers' water needs
- · Review current emergency response plans
- · Describe roles and capabilities in a water emergency response
- Identify action items to increase preparedness and community resiliency

## What is a Community Meeting?



A **community meeting** provides an opportunity to raise awareness of how communities rely on water and how they can work with their water utilities to become better prepared for a water emergency.

Suggested goals include:

- Raise awareness of water sector interdependencies within a community
- Define roles and responsibilities during a water emergency
- Establish relationships among community partners and their water utilities



# Example of a Community Meeting



### **Chicagoland Water Preparedness and Business Resiliency Summit**

November 2007

The Summit raised awareness of the importance of drinking water and wastewater services, and the potential consequences of a loss of services to the **business community**.

Key Findings included:

- · Water is often taken for granted
- · Many businesses do not realize how much they depend on water
- Without immediate access to water, the chemical, manufacturing, pharmaceutical and food processing industries would have to stop production

At the conclusion of the Summit, an ongoing public–private working group was formed to improve preparedness.

#### Overview of Key Planning Activities



Key planning activities include:

- Planning the meeting/workshop
- · Developing the agenda
- · Inviting participants
- · Preparing for the meeting/workshop
- · Conducting the meeting/workshop
- Wrapping up the meeting/workshop

# Planning the Meeting or Workshop



#### Planning activities may include\*:

- · Deciding who should host the meeting
- · Establishing a planning team
- · Picking a date and location
- Identifying goals and objectives
- · Assigning roles and responsibilities



\*Planning activities will depend on the size and scope of the meeting or workshop.


#### Developing the Agenda



The WRAP Kit provides suggestions and templates to help you develop your agenda.

You may want to include in your agenda:

- Overview of drinking water and wastewater systems
- Case study from community members impacted by water service interruptions
- Breakout discussions on impacts of water emergency
- Tour of water utility

#### **Inviting Participants**



For a successful meeting or workshop, it is critical to get the right people to attend. The WRAP Kit helps you:

- Determine your target audience
- Develop a compelling invitation
- Clearly state the purpose and anticipated outcomes
- Facilitate registration process

# Preparing for the Meeting or Workshop



Decide in advance who will be responsible for:

- Pre-meeting registration
- On-site check-in
- Note taking
- Development of post-meeting report (if applicable)

The WRAP Kit also provides a list of supplies you might need during your meeting.

# Conducting the Meeting or Workshop



In this section, the WRAP Kit provides suggestions to ensure that your meeting runs smoothly.



#### Topics include:

- On-site registration
- Audio-visual setup
- Walk through with presenters and facilitators
- Ensuring presentations stay on schedule




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## Lessons Learned and Recommendations



The St. Clair County, Michigan, Water Resiliency Roundtable was held in May 2012.

- 1. Promoted better understanding of public-private sector interdependencies
- 2. Fostered greater understanding of water infrastructure and the potential impacts from service interruption
- 3. Identified actions and resources needed to respond to, and recover from, a water emergency

# Lessons Learned and Recommendations



Critical Water Users (hospital, schools, etc.)	Have bulk water available for 72-96 hours     Reduce water services for non-essentials     Contract with alternate water providers     Use alternate sanitary facilities     Conduct exercises/drills to test plans     Conduct water audits in advance
Water Utilities	<ul> <li>Determine flow capabilities and exercise interconnections</li> <li>Set priorities for water provision</li> </ul>
First Responders	<ul> <li>Include details of alternate water supplies in emergency response plans</li> <li>Implement long-range planning</li> </ul>
Emergency Management	Strengthen public/private sector awareness of COOP regarding water service interruption     Post County Hazard Mitigation Plans     Conduct water audits     Raise awareness through education


# Wrapping Up the Meeting or Workshop



Following your meeting or workshop, it is important to follow up on any actions identified during the meeting.

The WRAP Kit provides a Water Emergency Preparedness Plan template to help identify and track actions through completion.

1		Water Emergency Preparedness Improvement Plan Template				
2	#	Observation Title	Recommendation	Corrective Action Description	Primary Responsible Organization	Status
3		Water Emergency	Modify to gain greater	Format/Improve		
4	1)	Preparedness Plan Template	functionality	Aesthetic Design	US-EPA	Completed Friday
5						
6	2)					
7						
8	3)					
9						
10	4)					
11						
12	51					




### Group Exercise:

### Water Emergency Preparedness Plan


### **Water Emergency Preparedness Improvement Plan Template**

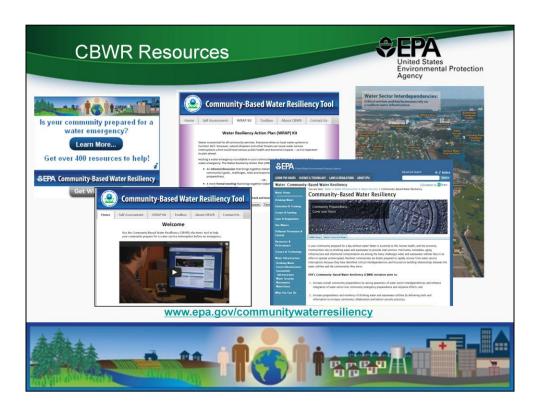
			Corrective Action	Primary Responsible	
#	Observation Title	Recommendation	Description	Organization	Status
1)					
2)					
3)					
4)					
5)					
6)					
7)					
8)					
9)					
10)					
11)					
12)					
13)					



### **Water Emergency Preparedness Improvement Plan Template**

				Estimated Date		
#				<u>Start</u>		
	First Name	Last Name	Title	Completion	POC Contact Phone & Email	Comments
1)						
2.						
2)						
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#### Section 5: Train-the-Trainer


#### Train-the-Trainer



To make CBWR sustainable, communities themselves will need to champion this effort.

You will learn how to:

- · Identify communities to champion CBWR efforts
- · Target different stakeholder groups within a community
- · Identify champions within a community to lead effort



## What Communities Can Benefit from CBWR?



## Communities that could benefit by implementing a CBWR program:

- Communities actively engaged (or interested) in preparedness efforts
- Communities that have experienced a recent emergency
- · Communities with strong leadership
- Communities with a strong champion

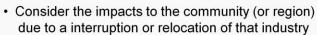


## What Communities Can Benefit from CBWR?



### Additional consideration when identifying a potential CBWR community:

- Does the community have an industry that heavily relies on water service?
  - · Manufacturing
  - Banking
  - Healthcare
  - · Food processing
  - and many more...






### Who is a CBWR Champion?



#### Who should lead a CBWR program?

- Drinking water and wastewater
  - Utility managers
  - Public affairs official
- County/city emergency manager
- · Public health officials
- Representatives from local or regional associations

#### How to get the Champion started?



Once you have identified the champion, you can help them get started by:

- Illustrating the need for implementing a CBWR program in their community
- Showing how they can use the WRAP Kit to host a community meeting
- · Assisting with the planning process, where needed
- · Training others to replicate process in other communities

Remember, each community is unique. The CBWR program should be adapted to meet the goals and needs of each community.

