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PRINCIPAL INVESTIGATORS:
Jack Moyer, Rhiannon Kincaid, Kory Wilmot, Kate Novick, Marian Long, Marilyn Nikolas, and Marie Shadden

GUIDANCE DOCUMENT OVERVIEW

Water and wastewater utilities throughout the water sector, which are collectively referenced as “water systems” or “water utilities” in this document, each need a Business Continuity Plan (BCP). A Business Continuity Plan’s end goal is maintaining solid operations - financially, managerially, and functionally, after any incident. Utilities that operate other systems, such as gas and electrical, can utilize this guidance as well, although specific technical terminology may be different.

The Water Sector Coordinating Council (WSCC) Strategic Roadmap, which was published in October of 2008 by the Water Sector Coordinating Council (WSCC), listed the Top Priority Activities to significantly mitigate risk in the water sector. On this list was to “Provide guidance on business continuity/continuity of operations planning in the water sector.” This Guidance Document and the corresponding Template and on-line training were developed in support of this activity. The EPA has determined the Key Features of an Active and Effective Protective Program, which includes “Prepare, test and update emergency response, recovery and business continuity plans.” Further, a BCP is recommended as part of the ANSI/AWWA G430-09 Security Practices for Operations and Management Standard.

Appendix C contains a summary of the background research that preceded the development of this Guidance Document and Template. Appendix G provides a case study of an actual BCP development process by a water utility, the East Bay Municipal Utility District. The other Appendices provide information that may be useful in the development of a BCP.
About the BCP Template and Video Training Modules

The Guidance Document is designed to be used with the corresponding BCP Template (referred to throughout this document as the Template) to assist users in the development of a BCP for a water utility. While the Template makes it easier for utilities to get started developing their own BCP, a BCP should be customized for a specific utility, as needed, so that it can be most effective. To further enhance an understanding of the Business Continuity Planning process, a series of video training modules was developed to accompany the BCP guidance document and template. These modules correspond to the various sections of the written materials. Users may view the entire video or select individual modules, as appropriate to their needs.

In addition to these tools, a Business Case Analysis tool was developed to assist utilities in evaluating the business case for developing a BCP. This tool is included as Appendix A, and is intended to be used by any utility needing to prove a return on investment for a BCP program.

The callout boxes throughout this document provide guidance on how to customize the BCP for any size of utility. The water drops throughout both documents help users keep track of information in the Guidance Document that corresponds to the Template. These drops should be removed from the final BCP after plan development.

A BCP is not meant to replace any other emergency management document, or to replicate any other document. It should complement and enhance a water utility’s existing emergency management system as shown in Figure 1. Generally, the BCP will be a plan that pulls other existing plans together, although a water utility may choose to integrate their BCP into an existing plan or vice versa.
An emergency response plan (ERP) or similar emergency plan is a tool that “stops the bleeding,” while a BCP is a tool that keeps the “heart pumping”. Regarding the distinction between a BCP and a Continuity of Operations Plan (COOP), while there are historical distinctions, the two are increasingly interchangeable as more and more organizations plan for and mitigate disruptions to their operations. This Guidance Document and Template address the concepts of both BCP and COOP.
A list of plans that may complement the BCP are listed below in Table 1, and a glossary of notable types of preparedness plans is included in Appendix J.

<table>
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<tr>
<th>Type of Plan</th>
<th>Included Documents</th>
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| Hazard Mitigation Plans | Vulnerability Assessment / Risk Analysis  
Business Impact Analysis (BIA)  
Impact Assessment  
Hazard Identification  
Risk Mitigation Plan (RMP) |
| Standard Operating Procedures to support Mission Essential Functions | Documentation Policy  
Timekeeping Procedures  
Safety and Security Plans |
| Preparedness Plans | Facility Response Plan (FRP)  
Hazard-Specific Preparedness Plan (e.g., Hurricane, Flood)  
Spill Prevention Control and Countermeasure (SPCC) |
| Response Plans | Emergency Response Plan (ERP)  
Emergency Operations Plan (EOP)  
Fire Evacuation Plans  
Incident Management Plans  
Crisis Communications Plan (CCP)  
Point of Dispensing (POD) Plan  
Hazard-Specific Response Plan (e.g., Flood, Tornado, Bomb-Threat, Water Quality Emergency) |
| Recovery Plans | COOP  
Laboratory COOP  
Pandemic Plan  
Information Technology (IT) Disaster Recovery Plan (DRP) |

Table 1: Plan Relationships

**Real World Examples of Where a BCP Fits Relative to Other Plans**

One large utility uses the BCP as their central plan, and includes other emergency management plans in the appendices of that central plan. During and after an incident, this one document has all of the needed information.

Another utility has the BCP as an annex to their ERP. This layout also allows users to access one document with all of the information that is needed in an emergency.

Many utilities have their ERP and BCP as separate stand-alone documents.

All three scenarios presented are effective because they were developed with the culture and needs of the respective utilities in mind.
Why is a BCP critical?

Why invest in developing a BCP? Besides being a prudent business practice, some additional justifications for developing a BCP include:

- Address gaps in the existing emergency management system, particularly associated with financial and business functions of the utility.
- Pull together existing plans.
- Address an item that is listed as a “Top Priority Activity” in the WSCC Strategic Roadmap.
- Provide guidance for any interruption in business, such as power outages or supply interruptions.
- Provide policies and procedures restoring mission essential functions after an incident.
- Reduce downtime and associated costs.
- Strengthen a utility’s ability to continue serving critical customers during an emergency.
- Improve resource management.
- Improve reputation management.
- Keep employees engaged and employed.
- Improve a utility’s ability to survive through any size of incident.

BCP Management System

A management system is the framework of processes and procedures used to ensure that an organization can effectively fulfill all tasks required to achieve its objectives. It is recommended that a business continuity program use a management system approach to ensure that the plan is effective and continually improved.

In supporting the management systems approach, the “Plan-Do-Check-Act” cycle is presented in Figure 2:

- **PLAN** – Establish management system policy, objectives, processes, and procedures relevant to managing business continuity risks and improving response and recovery processes that deliver results in accordance with the organization’s strategic needs.
- **DO** – Implement and operate the management system policy, controls, processes, and procedures.
- **CHECK** – Monitor, assess, measure, and review performance against management system policy, objectives, and practical experience; report the results to management for review; and determine and authorize actions for remediation and improvement.
- **ACT** – Take corrective and preventive actions, based on the results of the internal management system audit and management review, re-appraising the scope of the
business continuity management system and business continuity policy and objectives to achieve continual improvement of the management system.¹

Figure 2: Plan, Do, Check, Act Cycle

Culture

For business continuity planning to be effective and to meet the requirements of Section 4.1 of the ANSI/AWWA G430 Standard, it needs to become part of the utility’s organizational culture.² Every organization, including water utilities, has a culture. Although culture is intangible and often taken for granted, it provides a core set of values and assumptions, and guides day-to-day activities of personnel in the workplace.³

Organizational cultures that have been developed over many years are generally difficult, but not impossible, to change. Certain conditions encourage change, such as turnover in leadership or experiencing a significant crisis, such as a catastrophic incident.⁴ Too often, it is not until such an incident occurs that an organization changes their practices in emergency management and begins developing a BCP. In these cases, business continuity planning is typically embraced in earnest.

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A catastrophic incident is not necessary to shift a culture. Once water utility leadership commits to developing a BCP, there are best practices to change the culture and make the plan more effective. Key practices to facilitate this shift include:

Utilizing top management role models – Employees will look to the behavior of top management as a benchmark. When senior management promotes business continuity planning for the sake of mission continuity and serves as active participants in the process, it provides a clear message to all employees.

Encouraging employee participation – Provide employees access to business continuity planning documents in accordance with security protocols and include employee representatives from all key business areas in business continuity planning meetings.

Providing business continuity training – Provide training, workshops, and exercises to communicate each employee’s roles and responsibilities under the business continuity program.

Recognizing value of business continuity – After the BCP is activated during an exercise or real incident, it is important to review performance and provide constructive feedback to business continuity participants not only to develop recommendations for improvement, but also to recognize the value of past business continuity planning efforts.

It is important to remember that such cultural change needs to be measured in years, not months.

Business Continuity Planning Committee

In most utilities, multiple people will need to provide input in the BCP development process. For the purposes of this document, the people providing input on the BCP Development are referred to as the Business Continuity Planning Committee. More guidance on the Business Continuity Planning Committee is provided in Section 2.0

How to Use the Guidance Document, BCP Template, and Training Modules

The Guidance Document is meant to be used with the BCP Template and Video Training Modules. The information here should be used as guidance. Users should also think beyond the examples and suggestions given. Not all portions of this Guidance Document and the Template will apply to all water utilities. BCP developers should utilize what works best for them.

Each section of the Template corresponds to a section in the Guidance Document. The Guidance Document gives explanations, examples, and other information that helps developers of a BCP use the Template. It should be noted that there are call-out boxes throughout the document to provide guidance on how to scale certain aspects of the BCP depending on the size of the utility, or to provide real world examples of how different aspects of the business continuity planning process have been implemented by different water utilities. Additionally, certain supplemental materials that may help with the collection of information for the BCP development have been provided in the appendices of this document.
In the corresponding Template, there are empty tables and bullets. If additional rows are needed in the tables, hit the “Tab” key while the cursor is in the bottom right cell, and an additional row will appear. A checklist for the completion of the section is included at the end of each section of the Template – this is for the user’s review, and is not to remain in the utility’s final BCP document.

The appendices of the Guidance Document are to assist with the development of the BCP and do not correspond directly to the appendices of the Template, which are examples of supplemental materials for the BCP. Section 13 of the Guidance Document provides information on the development and incorporation of the BCP appendices and annexes. Appendix F of this Guidance Document addresses the maintenance of a BCP.

These documents are provided to assist with the development of a BCP to help utilities be more resilient in the face of sudden incidents that impact the utility and its mission essential functions. The goal of these documents is to simplify the process, but input and evaluation by stakeholders is necessary for the BCP to be effective.

**Research Partners**

- AWWA
- U.S. Environmental Protection Agency