



## Preparing for a Water Emergency

*A tool for food processors, food manufacturers, and other large volume water users to be better prepared for water shortage and contamination emergencies*

Good business planning includes reducing risk and strengthening resiliency to overcome adverse events. Water supply rarely gets the attention it deserves, despite being a critical component of food processor enterprises. For food processors, potable water may be the material needed in the greatest amounts, either as an ingredient or as part of the processing.

This tool consists of a set of questions that can help you evaluate the importance of a constant supply of good quality water for your operation, and how you can become better prepared to respond effectively if your water supply is compromised.

### **How would you answer the following questions about your business?**

1. *Do you know how long your business could operate if water use was restricted or if the water supply was suddenly and completely interrupted?*
2. *Do you have a plan to help minimize business disruption if there is a problem with your normal water supply?*
3. *Do you have an emergency shut-down procedure for a water supply emergency? Have employees been trained and have they recently practiced the procedure?*
4. *Do you have a crisis management team that is authorized to provide information to stakeholders (suppliers, employees, customers and other affected parties), and authorized to make critical business decisions to respond to a water emergency? Is there cross training and backup for these individuals?*

**If you cannot answer “yes” to these questions, then this Water Emergency Planning Tool can help you become better prepared for a water shortage or water contamination situation.**

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## **WATER EMERGENCY PLANNING TOOL**

Planning for uncertainty is often called continuity of operations planning (COOP). What will you do in response to a situation that could interrupt your business? For many businesses, continuity of operations planning is usually focused on the more obvious business components: workers, materials, process, etc. One very important factor that is often overlooked is the critical need for a constant supply of good quality water. This tool is focused on water emergencies. Whether or not your business has a COOP, this tool will help your business be better prepared to prevent, mitigate, or respond to a water emergency.

The first step in evaluating your water emergency preparedness is to answer the questions in the tool to the best of your ability. You may have to do some background work to find some of the answers. Questions to which you have no answer will highlight areas that need more attention and planning to become more prepared for a water supply disruption.

The tool is divided into three sections: ASSESSING YOUR CURRENT SITUATION, PREPAREDNESS PLANNING, and ACTIVATING YOUR WATER EMERGENCY OPERATIONS PLAN. The majority of functions in your operation will fit into these areas, but your operation may have some unique functions. We encourage you to identify any additional or unique functions within your processing or manufacturing operation and assess the vulnerability and risk associated with any production and management functions that are not included in this tool.

If you need to upgrade an existing plan, or create a new plan, the questions in this tool can serve as an outline of topics to be included in your water emergency operations plan.

*The purpose of this tool is to help you become better prepared so you can continue to be a viable operation, should you face a loss of normal water service.*

## ASSESSING YOUR CURRENT SITUATION

This section provides an assessment or “snapshot” of the importance of water for your operation.

The assessment includes the water system, any process in which water is added to a product, and the need for water for start up, clean up, cooling, or any other function in which water is used.

1. Who is your water utility? *[Name, street address, email address, phone number, cell phone number, after hours contact, account number. For some areas, there are networks of water utilities. Your local water utility may obtain water from a larger water utility.]*

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2. What is your water utility’s water source? *[well, spring, stream or river, lake, reservoir, another water utility]*

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3. Has your water utility experienced curtailments or interruptions in the water supply? (yes/no)

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a) If yes, what was the reason for the interruption or curtailment?

b) Has an interruption or curtailment affected your business, and if so, how?

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4. How long could you continue to run your operation under the following water supply reduction scenarios?

25% reduction \_\_\_\_\_

50% reduction \_\_\_\_\_

100% loss of water service \_\_\_\_\_

5. Is your water utility required to preferentially restore service to critical services such as hospitals, residential, institutions, etc. before service to your business? *[ask your water utility for their policy]*

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6. Does your water utility have inter-connections with other utilities that can provide back-up water service during an emergency?

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7. Does your facility have a valve system for water coming into the plant that can be easily and quickly closed so that you can prevent contaminated water from entering your facility?

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a) Do designated employees know where the valve system is located and how to operate it?

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b) When was the last time the valve was operated? Did the valve fully close and seal?

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8. How much potable water is typically held in storage at your site?

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a) What is this stored water used for?

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b) How long could your business operate using stored water?

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c) Can the volume of stored water be readily increased?

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d) How do you maintain this stored water safely?

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9. Can you store or hold waste water on site? How much?

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10. Do you have a plan for how to minimize the generation of waste water should the need arise [i.e., difficulty at the waste water treatment plant that receives your discharge]?

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11. Under what circumstances would a water emergency be declared for your operation?

	YES	NO
a) Reduced availability		
• Volume curtailment		
• Lower pressure		
b) No availability		
• Short term (hours)		
• Long term (days)		
c) Contamination (e.g., boil order)		
d) Discoloration, cloudy, turbid		
e) Sediment		
f) Stored water supply runs out		
g) Other		

## **PREPAREDNESS PLANNING**

An effective plan and exercise program identifies areas that can be improved, and then plant managers and owners can implement necessary changes. If you do not have a water emergency operations plan, the information gathered by using this tool can help you develop one. If you already have a water emergency plan, using this tool can help you evaluate and improve your plan.

Any plan designed for your operation should be fully understood by your employees. Employees should know the procedure for dealing with water availability or water quality problems. The plan should be exercised to ensure that everyone knows what to do and who to contact in the event of a water emergency.

### **PROCESS**

This section describes the operations that occur in your business, including production line processing, in which water is an ingredient, or is needed for start up, clean up, sanitation, heating, or cooling.

1. How much water do you use per week, per month, per year? *[Use your monthly bill if based on volume or metered volume to determine how much you use.]*

per Week	per Month	per Year

2. Is the daily/monthly/yearly water use relatively constant, or does it vary? If it varies predictably over time (for example, seasonally) when and by how much?

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3. How much water is needed to complete an orderly shutdown of the facility? Do you have the ability to store this amount of water on site? If no, what are the implications of running out of water before an orderly shutdown is completed?

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4. Have you developed various water supply reduction/ loss scenarios and evaluated their impact?

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5. Have you identified and evaluated steps you could take to lessen the potential impact of an interruption of water supply to your business? Consider the following examples:

- a) With advanced warning, increase production and stockpile production for critical customer accounts

- b) Shift to on-site water sources *[e.g., stored water or emergency wells]*

- c) Build up water volumes held in on-site water storage

- d) Begin an orderly shutdown using available on-site supplies, to allow for an efficient start up

- e) Shift critical production to other unaffected locations

- f) Selectively shift site production scheduling to less water intensive products, shut down shifts, and prioritize critical segments of production

- g) Continue some production with limited or no water available

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b) If it is a Water Emergency Operations team, has this responsibility been formally designated and their role communicated to the organization?

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3. Does the Water Emergency Operations team include all critical business functions and are they authorized to make decisions and provide important information to employees, customers, suppliers, the media, government agencies, and other stakeholders?

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4. Is there cross training and/or back up for the individual(s) with responsibility for water emergency operations?

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5. How are workers notified about activation of the water emergency operations plan?

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6. Do you have an emergency shut-down procedure?

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a) Who is the shut-down manager for each shift?

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b) Who is the back up in their absence?

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c) Are workers on all shifts trained to be able to initiate emergency shut-down procedures?

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d) When was the last time the procedure was fully executed? Did all systems function as required?

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7. Water supply emergencies can result from technological failures, human error, acts of nature, or intentionally harmful actions. Do workers know how, and to whom, to report suspicious activities or operational abnormalities?

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8. Have all water related critical or sensitive areas of the facility been identified?

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a) Has security been evaluated for these areas?

b) Is access to critical or sensitive areas of your facility controlled/limited to designated personnel? [List those with access and authorization.]

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## ACTIVATING YOUR WATER EMERGENCY OPERATIONS PLAN

1. If your water emergency operations plan needs to be activated, does your business have a written procedure that describes how to:

a) Notify key customers and suppliers?

b) Halt or redirect shipments/supply chain?

c) Implement alternative water source?

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2. Can the water emergency operations plan be activated in stages until the extent of the emergency is determined?

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3. When did you last exercise your water emergency operations plan, and what changes were made to improve emergency preparedness?

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4. Have you included these partners in developing a water emergency operations plan?

*[If you have not included these partners, you should consider doing so.]*

	YES	NO
Current water supplier, (water authority, municipality, etc.)		
Local Emergency Management Agency		
Local municipal or government officials		
Your customers		
Your suppliers		
Potential alternative water suppliers		
Transport providers for product, supplies, and water		
Insurance provider		
<i>(other, please list)</i>		

5. Do you have an up-to-date emergency call list including water utilities, workers, suppliers, and customers?

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- a) If you have a list, how often do you update it?

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**Emergency Contact Information**

<b>Emergency Phone List</b>	<b>Phone number</b>	<b>Cell or 24/7 emergency number</b>
Internal water emergency operations team members		
911 for emergencies: Fire, accident, rescue, police		
Local Emergency Management Agency		
Water utility		
Government or Regulatory agency		
• EPA		
• USDA/FSIS		
• FDA		
• Other		
<b>Date updated:</b> _____		

**KEEP IN MIND ....**

*The information gathered in this tool can be critical for your operation in the event of a water emergency. You may want to share this information with your management team, and make it available to decisions makers. You can also incorporate the information from this tool into an existing water emergency operations plan, or incorporate the information into a broader Continuity of Operations Plan, or use the questions as an outline of topics to be included in a water emergency operations plan.*

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