

Loss of Water Service in Schools Resource

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Background

This document was designed to provide school nutrition programs with a resource for planning, maintaining operations, and recovering from a loss of water service. It was adapted from the *Emergency Action Plan for Retail Food Establishments Second Edition* created by the Conference of Food Protection located at <http://www.foodprotect.org/media/guide/Emergency%20Action%20Plan%20for%20Retail%20Food%20Est.pdf>.

Additional resources have been created to supplement this document and to make it easier to plan, maintain service, and recover from a water service loss. Please visit www.theicn.org for these additional resources.

Glossary

Imminent public health hazard: a perceived significant threat or danger to health when there is evidence that a product, practice, circumstance, or event requires immediate correction or stopping operations to prevent injury because of the number of potential injuries, and the nature, severity, and duration of the anticipated injury.

Person in Charge (PIC): the individual present in a school kitchen who is responsible for the operation.

Potable: also refers to safe drinking water that meets criteria as specified in 40 CFR 141 National Primary Drinking Water Regulations.

Prepackaged food: food that comes to a school nutrition program already packaged by the manufacturer or distributor in a way that the food does not come into direct contact with hands and is ready to give to the consumer.

Ready-to-eat food: food that do not require any additional preparation to be safely eaten, i.e. salads, properly cooked casserole, apples, etc.

Regulatory Authority: the local, state, or federal enforcement body or authorized representative having jurisdiction over the school nutrition operation.

Type I public water supply: provides year-round service to no less than 25 residents OR no less than 15 living units.

Type II non-community water supply:

- Nontransient: serves no less than 25 of the same people for at least six months per year.
- Transient: serves no less than 25 people OR no less than 15 connections for at least 60 days per year.

Type III non-community water supply: anything not considered a Type I or Type II water supply; serves less than 25 people AND 15 connections, or operates for less than 60 days per year.

Introduction

It is important to plan ahead and be prepared for dealing with a water loss emergency. During a water loss emergency, it is important to have safe, potable water available. Safe water is needed for handwashing, drinking water, cleaning solutions, adding as a food ingredient, dishwashing (pots, pans, and other items that are not disposable), and much more. Having clean water can help prevent people from becoming ill from contaminated water.

When there is a loss of water service, it is recommended that the date and time of the event be documented. The Person in Charge (PIC) such as the on-site school nutrition manager should assess the situation in coordination with the school nutrition director. Brief interruptions that do not impact food safety may not require emergency procedures.

When there is an extended interruption of water service of 4 hours or more, it is recommended that emergency procedures be implemented according to the district's established plan. Immediately discontinue operations if food safety standards cannot be met. If there is a significant threat or danger to health (i.e., "Imminent Public Health Hazard") operations should be discontinued immediately. Notify the designated person who is responsible for contacting the Regulatory Authority. Regulatory Authority means the local, state, or federal enforcement body or authorized representative having jurisdiction over the school nutrition operation. For example, the local health department that conducts inspections.

Consider discussing your emergency plan with the Regulatory Authority. Emergency action plans should be available on-site for review. In some cases, the Regulatory Authority may want to pre-approve your plan.

Food Safety Considerations

During an interruption of water service, the primary concern is for food safety. It must be determined if there is an imminent public health hazard that would not permit a safe operation, and if so, the Regulatory Authority should be contacted by the designated person. It should be determined if your food safety plan can be maintained under the circumstances of the water emergency.

The PIC is responsible for conducting both initial and ongoing assessments to ensure consistent compliance with food safety requirements.

Planning for Response to a Loss of Water Service

In developing your written water emergency plan, think about the decisions you will have to make if there is a short or long-term loss in water service. Consider how water can be obtained to support continued operation in accordance with your food safety plan and local regulatory requirements. The following are some tasks you may want to include in your plan.

- Identify the appropriate chain of command for the emergency and when to notify contacts; include the State agency and Regulatory Authority, as appropriate.
- Develop a plan to prepare menus that require no water or minimal amounts of water that meets USDA Meal Pattern requirements.
- Determine how much water is needed for handwashing, warewashing, food preparation, cleaning and sanitizing, etc. during a water loss.
- Review the list of equipment from your food safety plan that use water in your establishment. Develop a contingency plan that describes what you would do if the water is either lost or contaminated with chemical, physical, or biological hazards.
- Determine the types of alternate water sources that may be available.
- Identify contact information, address, directions and equipment/supplies needed to obtain alternate commercial, private or public water supplies and points where containers can be filled with potable water.
- Develop a procurement plan for alternate water and ice supplies.
- Locate public water supplies in your area and points where containers can be filled with drinking water.
- Establish and maintain an inventory of bottled water, containers suitable for hauling water and/or containers for storing water if delivered from a bulk carrier.
- Establish and maintain a minimum inventory of disposable gloves and hand sanitizer for use after washing hands with an alternative water source at each location.
- Establish and maintain a minimum inventory of single-use items. Example items include disposable utensils, plates, and napkins.
- Develop a contingency plan for toilets, as necessary.
- Develop a response checklist for site.

- Develop a training plan for the on-site school nutrition manager and staff. Practice mock drills to ensure the validity of your plan.

Private Water Source (Non-community water supply)

Food establishments using a Type II or Type III non-community water supply, such as a well, must follow the disinfection and sampling requirements of the Safe Drinking Water Act as found in 40 CFR 141 and 142 (Code of Federal Regulations). Contact your Regulatory Authority for specific instructions. Some municipalities may rely on other organizations such as the Environmental Protection Agency (EPA) or the local environmental authority for assuring the safety of non-community water supplies.

Assessing a Loss of Water Service

In assessing the loss of water service, consider the nature, scope and anticipated duration of the emergency; the potential impact on your operation; and your ability to ensure the safety of food.

Nature, scope and duration

The nature and scope of the water loss will determine which steps in the emergency procedures need to be implemented. Loss of water service can be placed into three broad categories and you should plan for each of them.

- Short term or localized emergencies such as a water loss at one facility that will be short in duration (less than four hours) and will not disrupt infrastructure services to the general community.
- Large area water loss without disruption of community infrastructure that may be of unknown duration.
- Large area water loss with disruption of community infrastructure, services, and anticipated longer duration, for example emergencies due to storms, floods, fires and earthquakes.

Potential Impact on Operations

Determine what equipment, procedures, and systems will be affected by the loss of water service.

- Identify which equipment are dependent on the availability of water. For example, sinks (handwashing, prep, etc.), warewashing equipment, combi-ovens, steamers, ice makers, beverage mixing/dispensing machines, washing machines, toilets, water cooled refrigerators, and freezers (low water pressure), and other equipment will most likely be unusable.
- Identify which procedures will be affected by the loss of water service. For example, without sufficient safe water supplies, cleaning and sanitizing procedures will be disrupted.
- Assess systems that require water, but which may not use potable or drinking quality water such as heating/air conditioning equipment and refrigerator/freezer; develop a contingency plan, as necessary.

Determine whether the facility can remain open or if parts of the facility can remain operational.

Consider the following:

- Are back-up or temporary systems or locations available?
- Has there been an evacuation or other order that would require the facility to close?
- Does continued operation provide assistance to the community and those in need?

Maintaining Operations During a Loss of Water Service

The following are temporary alternative procedures that can be used by affected school nutrition operations during a loss of water service. The Regulatory Authority may want to pre-approve your plan or temporary procedures and may be able to help facilitate emergency response.

Drinking Water and Approved Water Sources

During an emergency, other approved sources of water may be available. Examples include:

- Commercially bottled water.
 - Large water bottles used for water dispenser units. Some dispenser units have lever type faucets for hot or cold water, but usually only work when connected to electricity. A service company can provide delivery of large water bottles.
 - Individual retail sized containers of bottled water.
- Municipal or approved water delivered in bulk using a tanker truck, water buffalo style water tank that is pulled by a motor vehicle, approved portable water containers, covered

sanitized bulk water containers, or other approved sanitary means of transporting water.

- Haul water from an approved public water supply in a covered, food-grade container that has been cleaned and sanitized.
- Use of an approved water supply from a neighboring location using approved sanitary hose(s) and fittings.
- Use of fire system water when approved by the Regulatory Authority. This water is not usually considered potable and may require additional treatment prior to use.
- Use commercially manufactured ice or ice made from potable water.

Water as a Food Ingredient

The same alternative water sources listed under Drinking Water and Approved Water Sources can also be used for food preparation and as an ingredient. Determine how safe drinking water will be provided and how this water will be stored and dispensed. Alternatively, restrict the menu or food preparation to items that don't require water. For example, if pasta with meat sauce is a menu item consider changing it to a sandwich.

Handwashing

If handwashing sinks are not operational and alternative handwashing facilities cannot be set up, food preparation should cease, and only prepackaged food may be served unless otherwise noted by the Regulatory Authority. When prepackaged foods are provided, the following must also be available if handwashing facilities are unavailable in the immediate area where the prepackaged food is handled:

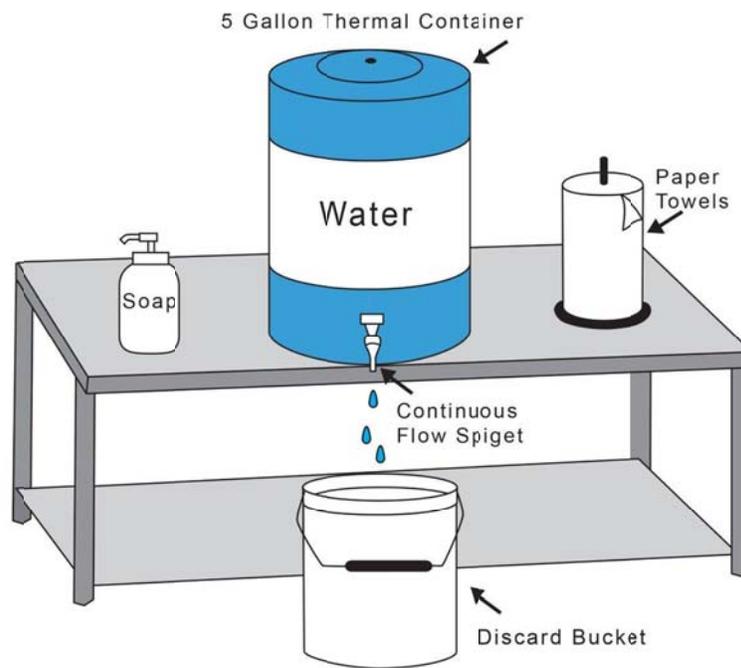
- approved hand antiseptics or chemically treated towelettes must be used for cleaning hands;
- an operational handwashing sink or an alternative handwashing set-up such as a temporary handwashing station must be provided for use in the immediate area of a toilet facility; and
- a toilet facility, as described in the toilet section, must be conveniently located and accessible. For example, locate the toilet facility within 200 feet of the cafeteria.

Temporary Handwashing Station

To set up an alternative handwashing facility, check with the local Regulatory Agency to determine acceptable handwashing methods. These procedures should be followed if food production is to continue.

- A “gravity flow” handwashing set-up using potable water (e.g. commercially bottled water) in a clean, sanitized container with a continuous-flow type spigot allowing water to flow over one’s hands into a catch bucket.
- The catch bucket must be emptied into an operational drain such as a janitor sink or toilet.
- Hands must be washed after emptying the catch bucket and before returning to food handling operations.
- Suitable, dispensable hand soap, disposable towels, and a waste receptacle must be provided at designated handwashing stations.

Temporary Handwashing Station



- Ready-to-eat foods may not be touched with bare hands.
- Suspend bare hand contact even if this process has been approved as an alternate procedure.
- A handwashing sink that is backing up or not draining properly must not be used and must be labeled or otherwise identified to prevent its use until draining issues are resolved.

Toilet Facilities

If a toilet is not operational, an “out of order” sign must be properly posted to prevent further use. Operational toilets should be accessible to employees during all hours of operation.

When permitted or approved by the Regulatory Authority, use of portable mobile toilet facilities or alternate toilet facilities are acceptable provided they:

- Are conveniently located and accessible. For example, locate the toilet facility within 200 feet of the cafeteria.
- Are properly ventilated, maintained, and serviced in a manner that will not contaminate food or create a nuisance.
- Have adequate handwashing facilities in the immediate vicinity of the toilet(s). Adequate handwashing facilities can include a “gravity flow” handwashing set-up as described in the Handwashing section.

When toilet facilities are not working due to a lack of water for flushing, their use may be continued provided:

- There is no sewage backup, **and**
- There is an alternate supply of potable water that can be dumped into the toilet to flush waste down the drain.

Beverage Machines

Discontinue service.

Cleaning/Sanitizing Equipment, Utensils, and Tableware

- Use single-use items.
- Use only water from an alternate approved source for cleaning equipment, utensils, tableware and surfaces that may contact food.
- Determine the volume or quantity of water needed. A standard utensil sink can require 10 to 20 gallons of water for each compartment. Water temperature must be at least at or above the minimum temperature stated in the *Food Code* for that class of sanitizers (i.e. 75 °F for Quaternary Ammonias), unless a different temperature is listed on the usage instructions on the EPA registered label.
- If water from an alternate source can be obtained, then follow established procedures to wash, rinse, and sanitize. Pre-scrape prior to washing as necessary.

- Discontinue operations as inventories of clean equipment, utensils, and tableware are exhausted.
- Discontinue operations when cleaning and sanitizing procedures can no longer ensure food safety.

Cleaning Physical Facility

- Determine water use needs to maintain a clean facility. Using a mop bucket with detergent solution may require three to five gallons of water. After use, additional water may be needed to clean the mop and bucket. Follow manufacturer's instructions for use of chemicals.
- Discontinue operations if cleanliness of the physical facility could jeopardize food safety.

Recovery Following a Loss of Water Service

Recovery involves the necessary steps for returning to normal, safe operations including re-opening if the facility had to close as a result of the loss of water service.

The Regulatory Authority may have to approve returning to regular operations; check local requirements. The school nutrition operation or an area within the facility that was ordered to cease operations due to an imminent health hazard may not re-open until authorization has been granted by the Regulatory Authority

Key actions to consider for returning to normal operation.

- Document the date and time water service was restored.
- Assure that all equipment and facilities are operating properly.
- Assure that tools and equipment used for cleaning and sanitizing are clean and sanitized prior to use for the rest of the facility.
- Flush pipes/faucets.
- Follow the directions from your water municipality or, as general guidance, run cold water faucets for at least five minutes.
- Flush, clean, and sanitize, in accordance with manufacturer's instructions, equipment with waterline connections such as post-mix beverage machines, coffee or tea urns, ice machines, dishwashers, and other equipment with water connections.

- Clean and sanitize food contact surfaces, utensils and other equipment before use.
- Run water softeners through a regeneration cycle.
- Drain reservoirs or water storage units.
- Replace all water filters.
- Flush beverage machines.
- Flush water fountains by running water continuously for five minutes followed by sanitization of the water dispensing spigots.

Ice Machine Sanitation

- Follow the manufacturer's instructions for flushing and cleaning ice machines.
- Below is a general example of a written cleaning/sanitizing procedure for an ice machine.
 1. Flush the water line to the machine inlet.
 - a. Close the valve on the water line behind the machine and disconnect the water line from the machine inlet.
 - b. Open the valve, run water through the valve for 10-15 minutes and dispose of the water.
 - c. Close the valve.
 - d. Reconnect the water line to the machine inlet.
 - e. Open the valve.
 2. Flush the water lines in the machine.
 3. Remove and replace all filters on equipment if not designed to be cleaned in place.
 4. Turn on the machine.
 5. Discard the first three batches of ice that the machine makes.
 6. Clean and sanitize all parts and surfaces that come in contact with water and ice, following the manufacturer's instructions.
- Alternatively, contact maintenance or equipment service provider to clean equipment before putting back into service.

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