



ALABAMA MUNICIPAL INSURANCE CORPORATION MUNICIPAL WORKERS COMPENSATION FUND, INC.



Loss Control Division

SAFETY and Your Municipal Water Operations

PUBLIC SERVICES

Public services are often marked by public structures such as police stations, firehouses, city halls, and water tanks. What once marked the presence of local government now presents a complex number of liability exposures and concerns.

Safety in all areas of operations should be a top priority for municipal water operations due to the financial and legal implications in today's environment. Water board/council members and employees should support and implement safety as an ongoing part of daily operations.

UNAUTHORIZED ACCESS

As municipalities and water systems have expanded, the need for physical protection of the water facilities has increased. Municipalities are expected to take reasonable precautions to prevent unauthorized entry into facilities such as well house areas, booster pump stations, and water tanks.

Some of the physical controls that can be used to reduce the potential for unauthorized access are:

Fences

Although fences will not assure that persons will not enter the water facilities, they are a deterrent for most potential intruders. Maintain the fencing well and lock the gate at all times. Fencing should be at least 6 feet in height with barbed wire strands on top.

Signs

Proper marking of the facilities should be placed to note hazards and to prevent access into the unauthorized areas. Post Keep Out, No Trespassing and Danger warnings. In addition, use Chlorine and High Voltage markings when applicable.

Lighting

Maintaining proper lighting in the facilities to keep the areas highly visible is essential. Warning lights should be functional at all times.

Positive Climbing Prevention

All water tanks should have physical restraints in place to prevent unauthorized persons from climbing onto the water tanks and towers. Preventive measures include ladder blocks, wrapping the legs of older tower tanks with wire mesh, or cutting ladders to prevent access. Periodic inspections should be initiated on tanks to insure that the hatches and ladder blocks are locked.

CHLORINE SAFETY HIGHLIGHTS

Chlorine is a strong oxidizer. It is an extremely reactive and a highly toxic chemical used to treat water bacteria. Exposure to small amounts can cause burning eyes, coughing, tearing, flushed skin, sneezing and hoarseness. Inhaling the chemical in higher concentrations can cause severe lung and skin irritation. Chlorine can also negatively affect the environment including vegetation, animals, and aquatic life.

Take the following precautions when transporting, handling and using chlorine:

- Keep cylinders in a cool place. If temperatures reach 158 degrees F, the fusible plug will melt resulting in a release of chlorine.
- Label cylinders and store them upright and secured so they do not fall.

- Store full cylinders separately from empty ones and label the cylinders as full or empty.
- Instruct employees in proper hook-up and changing techniques. Provide proper emergency showers and breathing apparatus in a location outside the chlorine room.
- Implement a "buddy system" during container changeover procedures.
- Give immediate attention to leaks.
- Provide and train employees in the proper use of emergency repair kits.
- If the wall of a cylinder leaks, turn the unit so that the vapor, not the liquid, escapes. Gaseous chlorine escapes at about one-fifth the rate of liquid chlorine.

Self Contained breathing apparatus (SCUBA) should be available for emergency rescue. The equipment should be inspected periodically and properly maintained.

EMERGENCY PLANS AND CRISIS COMMUNICATIONS

An emergency plan should be developed to protect the public and workers from a disaster and to minimize response time. A well developed emergency plan helps the water operations to get back in service sooner enabling the municipality to do a better job while protecting the public health and safety.

Emergency plans should address all possible disasters. Natural disasters would include tornadoes, hurricanes, fires, and extremes of weather. Man-made disasters that can occur include sabotage, chemical leaks, and epidemics. Normal emergencies such as broken lines, non-functional controls and inoperative pumps should also be included in emergency plans.

Emergency Planning Process

1. **Identify** your water systems or processes that are vulnerable to specific disasters.
2. **Implement**, when possible, protective measures for each identified hazard. A disaster can result in contaminated water, power outages, communications disruptions, transportation problems, and plant damages. Protective measures can include limited access to water facilities, adequate structural design of facilities, and development of multiple water sources
3. **Prepare a plan.** Prior planning and agreement is essential to timely, responsive action should an emergency occur. Key measures to consider include: assignment of leadership roles, notification of proper authorities, procedures for notifying the public, training of employees, and reviewing and monitoring of the emergency plan.
4. **Train staff.** Conduct drills and simulated disasters to assure that training is adequate and the plan works.

Crisis communication should be an essential element of an emergency plan. A poorly handled crisis can damage the operation's image and credibility and expose the municipally or board to increased liability, large fines, and increased industry regulations.

NOTE: This document is not intended to be legal advice. It does not identify all the issues surrounding the particular topic. Public agencies are encouraged to review their procedures with an expert or an attorney who is knowledgeable about the topic. Reliance on this information is at the sole risk of the user.¹