# AP 9 Water Supply Interruption

**ACTION PLAN SUMMARY**

This action plan applies to water supply interruptions. These events will vary in scale from compromised incremental supply volumes to complete, catastrophic loss of water supply. The ability for a utility to successfully respond to a catastrophic water supply interruption will be highly correlated to the existence of interconnections and alternative sources of supply.

**INITIATION AND NOTIFICATION**

Catastrophic water supply interruptions will generally be identified by other events, such as physical equipment damage, severe weather, or others, which are likely to have a specific direct action plan. Incremental interruptions due to longer-term events such as drought or acute loss of one source, will lead to a prescribed series of contingency measures, as outlined below. It is recognized that many utilities will already have an action plan in place to address this event.

Notification phone numbers can be obtained from the Organization Contact List in the Appendices as well as from Section III.D of the ERP.

**EQUIPMENT IDENTIFIED**

This equipment is available to assist in the execution of this Action Plan.

|  |  |
| --- | --- |
| **Equipment:** | **[Insert Name of Equipment]** |
| **Location:** | **[Insert Location of Equipment]** |

**SPECIFIC ACTIVITIES**

**I. Assess the Problem**

There are a number of potential levels of severity involved in a water supply interruption. A series of stages of action corresponding to increasing impacts on water are:

• Normal Conditions

• Water Alert

• Water Warning

• Water Crisis

• Water Emergency

**II. Isolate and Fix the Problem**

Each stage has specific customized definitions, in terms of percent of Water Supply reduction, with appropriate actions or restrictions at each stage. Utilities will have a series of escalating penalties for successive violations of restrictions. These stages are:

**Normal Conditions –** Normal conditions apply. Water is available; but in arid environments there are specific watering days for various addresses or penalties for excess watering.

**Water Alert --** A 5% or greater reduction in water usage is to meet the immediate needs of customers. Voluntary conservation encouraged. The water shortage situation is explained to the public and voluntary water conservation is requested (see standard press releases). [UTILITY ABBREVIATION] maintains an ongoing public information campaign consisting of distribution of literature, speaking engagements, bill inserts, and conversation messages printed in local newspapers.

**Water Warning --** A 15% or greater reduction in water usage is to meet the immediate needs of customers. Water supply shortage is moderate. The utility aggressively continues its public information and education programs. Consumers are asked for a 15 percent or greater voluntary or mandatory water use reduction. Additional landscape irrigation restrictions may be implemented. Businesses may be asked not to serve water in restaurants unless requested.

**Water Crisis –** A 30% or greater reduction in water usage is to meet the immediate needs of customers. Water supply shortage is severe. Additional requirements may include: Dramatic landscape irrigation restrictions; Restrictions on use of potable water to fill or refill new swimming pools, artificial lakes, ponds, or streams until the water crisis is declared over; Prohibition of water use for ornamental ponds and fountains; Restrictions on washing of automobiles and equipment (such as requiring that it shall be done on the lawn or at a commercial establishment that uses recycled or reclaimed water); Restriction of flushing of sewers or fire hydrants to cases of emergency and essential operations, and; Introduction of a permanent water meter on existing non-metered services and/or flow restrictors on existing metered services at customer’s expense upon receipt of the second water violation.

**Water Emergency --** A 50% or greater reduction in water usage is to meet the immediate needs of customers. Water shortage is critical. Additional requirements may include: Disallowing all landscape irrigation; Disallowing potable water use for construction purposes such as dust control, compaction, or trench jetting. In addition, large industrial users, for example canneries and other food manufacturers, may be required to reduce or cease all water use.

In addition to these incremental stages, the Utility should prepare for a catastrophic interruption of water supplies. A catastrophic event that constitutes a proclamation of a water shortage would be any event, either natural or manmade, that causes a severe water supply interruption, synonymous with or with greater severity than the “Water Warning” water supply shortage condition outlined above.

**III. Monitoring**

Communication of water supply interruption stages should be handled according to the identified public notification procedures.

Press releases should also be handled according to the identified utility procedures. See ERP section D.

See Section VIII.A.1 for Press Releases

**IV. Recovery and Return to Safety**

Alternative water supply options have been identified in the utility emergency response plan (ERP). In the event of a catastrophic, immediate need, it is likely these will be utilized. This includes information on local interconnections with neighboring sources, area water haulers, temporary storage options, etc.

If there have been lines with no water or negative pressures, a precautionary boil order should be issued by the utility until line tests on two consecutive days show the lines to be safe. Chlorine residuals should be increased temporarily.

The water system may have to valve off portions of the distribution system until above ground storage tanks are refilled. Valved off areas have the potential for external contamination to enter the system through leaking joints or cracked pipe. Before placing a valved off area back in service, the system should issue a precautionary boil order, increase the chlorine residual throughout the system and obtain safe bacteriological samples from representative areas of the system on two consecutive days. The precautionary boil order may be lifted once the required safe samples are obtained.

The system should be repressurized slowly to avoid water hammer and the potential for damage to the lines.

Air should be bled from lines as they refill since entrapped air can impede flows and may cause line damage. See ERP Alternative Water Sources, Section III.G

See boil order release Section VIII.A.1 Press Releases.

See boil order release

Section VIII.A.1 Press Releases.

**V. Report of Findings**

In addition to completing the appropriate filings with local authorities and agencies, it is recommended that the Utility assemble the relevant personnel to review the effectiveness of the action plan and reinforce lessons learned in the process.

**VI. Action Plan 9 Revision Dates**

**[Insert Dates of Revision of Action Plan 9]**