THE EMERGENCY PLANNING PROCESS

The emergency planning process is described in the following section. Some of the items listed under each step may not be applicable to your water system or there may be other items that you need to add.

STEP 1 - ESTABLISH A PLANNING TEAM
• Form the Team
• Establish Authority
• Issue a Mission Statement
• Establish a Schedule and Budget

STEP 2 - ANALYZE CAPABILITIES AND HAZARDS
• Where Do You Stand Right Now?
• Review Internal Plans and Policies
• Meet with Outside Groups
• Identify Codes and Regulations
• Identify Critical Products, Services and Operations
• Identify Internal Resources and Capabilities
• Identify External Resources
• Conduct a Vulnerability Analysis
• List Potential Emergencies
• Estimate Probability
• Assess the Potential Human Impact
• Assess the Potential Property Impact
• Assess the Potential Business Impact
• Assess Internal and External Resources

STEP 3 - DEVELOP THE PLAN
• Plan Components
• Emergency Management Elements
• Emergency Response Procedures
• Support Documents
• The Development Process
• Identify Challenges and Prioritize Activities
• Write the Plan
• Establish a Training Schedule
• Continue to Coordinate with Outside Organizations
• Maintain Contact with other Corporate Offices
• Review, Conduct Training and Revise
• Seek Final Approval
• Distribute the Plan

STEP 4 - IMPLEMENT THE PLAN
• Integrate the Plan into Company Operations
• Conduct Training
• Planning Considerations
• Training Activities
• Employee Training
• Evaluate and Modify the Plan

HAZARD SPECIFIC INFORMATION
This section lists common hazards that your emergency plan should specifically address. All of these emergencies could affect your water system, although the impact of a Hurricane will probably be less than the impact of the Hurricane on a water system located in a coastal area. For each of these items, your emergency plan should include a page or section for response to that item.

• Life Safety
• Fire
• Hazardous Materials Incidents
• Floods and Flash floods
• Hurricanes
• Tornadoes
• Severe Winter Storms
• Earthquakes
• Technological Emergencies
• Terrorist Attacks / Vandalism
• Failure of major equipment
• Loss of electrical power
• Contamination of the water system

HAZARDOUS SUBSTANCES
This part contains a partial listing of "Extremely Hazardous Substances" from the list maintained by U.S. EPA's Chemical Emergency Preparedness and Prevention office. This sub-listing is of chemicals commonly used by public water systems. If your water system stores or uses these chemicals in excess of the poundage shown, your water system most likely is a "**facility**" and has to meet emergency planning and reporting requirements under SARA Title III. Note that since gaseous chlorine normally comes in 150 pound or 2000 pound cylinders, water systems using gaseous chlorine are probably affected.

NAME	TPQ, pounds	EHS RQ, pounds
Ammonia	500	100
Chlorine	100	10
Ozone	100	100

TPQ = Threshold Planning Quantity
EHS RQ = Extremely Hazardous Substances, Reporting Quantity

INFORMATION SOURCES
Most of parts of this section are taken from publications of the Federal Emergency Management Agency (FEMA). Contact information for FEMA and other information sources are listed below:

FEMA Headquarters
Federal Emergency Management Agency
500 C Street SW
Washington, DC 20472
(202) 646-2500

FEMA Region VI Offices
Denton, TX
(817) 898-5104

USEPA
Mail Code 5101
401 M Street SW
Washington, DC 20460
(202) 260-0030

USEPA
Region VI
1445 Ross Avenue
Dallas, TX
(214) 665-2283
(214) 665-8338

Federal Bureau of Investigation
Little Rock Field Office
Two Financial Center, Suite 200
10825 Financial Centre Parkway
Little Rock, Arkansas 72211
(501) 221-9100

U.S. Department of Labor
Occupational Safety and Health Administration
425 West Capitol
Little Rock, Arkansas
(501) 324-6256

Hazardous Materials Spills or Pipeline Leaks
National Response Center 24 hours a day
(800) 424-8802

Arkansas Department of Emergency Management
P. O. Box 758
Conway, Arkansas 72032
(Previously known as the Office of Emergency Services)
(501) 329-5601

Arkansas Department of Health Numbers are Listed Below:

Arkansas Department of Health
(501) 661-2000
(800) 462-0599
After Hours Emergency (800) 554-5738

Engineering Section
(501) 661-2623
(800) 462-0599

Radiation Control and Emergency Management
(501) 661-2301

Division of Epidemiology
(501) 661-2893

Division of Emergency Medical Services
(501) 661-2262

OTHER RESOURCES

County Judge's Office
County Department of Emergency Management
Department of Health, Local Health Unit
Local Hospitals
The Red Cross
Local Law Enforcement
Local Utilities

PUBLICATIONS
AWWA M19 Emergency planning for Water Utility Management
AWWA Minimizing Earthquake Damage, A Guide for Water Utilities
FEMA Emergency Management Guide for Business and Industry

MODEL EMERGENCY PLAN (SMALL SYSTEMS)

EMERGENCY ACTION PLAN AND PROCEDURES

_____Waterworks

PWS #_____

STREET _____.
TELEPHONE _____.
CITY/STATE _____.
FAX _____.

PURPOSE AND OBJECTIVE

The purpose of this emergency plan is to develop the capability to deliver water to our customers under emergency conditions. The objective of this plan is to minimize the effects of natural or caused disasters on the water system. Prior planning and training will allow the water utility to respond in a more efficient and timely manner to emergency situations in order to maintain a quality water at a sufficient quantity. It is to that end that this emergency plan is developed.

This emergency plan should be updated annually to meet the changing needs and requirements of the water system. In addition, emergency equipment (i.e. generators, etc.) should be checked to verify it is in working order on a routine schedule.

This emergency plan was last updated on _____.

RESPONSIBILITIES AND CHAIN-OF-COMMAND

If a disaster occurs during regular business hours, all utility personnel will be utilized in areas of need, and whenever possible, all employees are expected to stay at their work stations unless instructed otherwise.

If a disaster occurs outside of regular business hours, employees should, when possible, report for their regularly scheduled work shift, unless called back to work before then.

If a disaster occurs outside of regular business hours, and the disaster is of such magnitude in the Association that the phone communications with the water system manager or emergency contact person cannot be established, all employees of the _____ Waterworks should report to the office at _____Location, Address, City, State).

PERSONS TO NOTIFY

Notify the following individuals of the emergency situation as soon as possible following the emergency. The persons are listed below in order of CHAIN-OF-COMMAND.

1. UTILITIES DIRECTOR _____
OFFICE PHONE NUMBER _____
HOME PHONE NUMBER _____
24 HOUR EMERGENCY NUMBER _____

2. WATER SUPERINTENDENT _____
OFFICE PHONE NUMBER _____
HOME PHONE NUMBER _____
24 HOUR EMERGENCY NUMBER _____

3. DISTRIBUTION AND MAINTENANCE DIRECTOR _____
OFFICE PHONE NUMBER _____
HOME PHONE NUMBER _____
24 HOUR EMERGENCY NUMBER _____

4. CHIEF WATER TREATMENT PLANT OPERATOR _____
OFFICE PHONE NUMBER _____
HOME PHONE NUMBER _____
24 HOUR EMERGENCY NUMBER _____

5. WATER TREATMENT PLANT OPERATOR _____
OFFICE PHONE NUMBER _____
HOME PHONE NUMBER _____
24 HOUR EMERGENCY NUMBER _____

6. SEWER TREATMENT PLANT OPERATOR _____
OFFICE PHONE NUMBER _____
HOME PHONE NUMBER _____
24 HOUR EMERGENCY NUMBER _____

7. OFFICE MANAGER _____
OFFICE PHONE NUMBER _____
HOME PHONE NUMBER _____
24 HOUR EMERGENCY NUMBER _____

8. WATER ASSOCIATION BOARD PRESIDENT _____
OFFICE PHONE NUMBER _____
HOME PHONE NUMBER _____
24 HOUR EMERGENCY NUMBER _____

EMERGENCY PHONE NUMBERS

The following list of telephone numbers are provided for quick reference in the event of a major emergency.
POST THESE EMERGENCY NUMBERS NEAR TELEPHONES FOR QUICK REFERENCE.

ARKANSAS DEPARTMENT OF HEALTH	1-501-661-2623
(EMERGENCY/AFTER HOURS)	1-800-554-5738
OFFICE OF EMERGENCY SERVICES	
ARKANSAS ONE CALL	1-800-482-8998
ARKANSAS STATE POLICE	_____
COUNTY SHERIFF'S DEPARTMENT	_____
CITY POLICE DEPARTMENT	_____
CITY FIRE DEPARTMENT	_____
HOSPITAL NAME	_____
PHONE NUMBER	_____
24 HOUR EMERGENCY PHONE NUMBER	_____
ELECTRIC COMPANY	_____
PHONE NUMBER	_____
24 HOUR EMERGENCY PHONE NUMBER	_____
GAS COMPANY	_____
PHONE NUMBER	_____
24 HOUR EMERGENCY PHONE NUMBER	_____
TELEPHONE COMPANY	_____
PHONE NUMBER	_____
24 HOUR EMERGENCY PHONE NUMBER	_____
RADIO STATION	_____
PHONE NUMBER	_____
24 HOUR EMERGENCY PHONE NUMBER	_____
TELEVISION STATION	_____
PHONE NUMBER	_____
24 HOUR EMERGENCY PHONE NUMBER	_____
NEWSPAPER COMPANY	_____
PHONE NUMBER	_____
24 HOUR EMERGENCY PHONE NUMBER	_____

As soon as possible, the water system _____ (Manager) or_____(other designated person/s) should notify all consecutive systems to which water is sold of the emergency situation and advise them of what steps are being taken to deal with the emergency.

Consecutive System	Operator	Office/Home Phone
_____	_____	_____
Consecutive System	Operator	Office/Home Phone
_____	_____	_____

RESPONSES TO EMERGENCIES

IN THE EVENT OF AN EMERGENCY:

1. Assess the situation. Determine what type of emergency exists.

2. Try to remain CALM.

3. Follow the instructions in the emergency plan and contact the necessary personnel listed in RESPONSIBILITLIES AND CHAIN-OF-COMMAND.

The first step in responding to an emergency situation is making an assessment of the situation. An accurate assessment requires accurate and complete information. The Manager or Designated person/s of the _____ Waterworks, will advise you of what areas of the water system to assess. Damage to one component of the system may affect other components of the system as well. Therefore, be as complete and concise as you can when evaluating damage to the water system. Dependent on the magnitude of the disaster, be prepared to respond to customer calls as soon as possible.

In event of an emergency which results in the inability of the water system to provide water service to a large segment area for a prolonged period of time, water points will be established to provide water for essential human needs. These water points will be established by:

1. Connection 2-inch steel pipe headers with multiple faucets to fire hydrants at locations where the distribution system remains pressurized. If possible, sterilize before use.

2. Locating water trailers at various locations throughout areas where service is not available. Preferable locations for water points are at or near fire stations so firemen could provide some supervision and control. If necessary, water personnel will be assigned to man the trailers.

The following persons will be responsible for establishing water distribution points and installing pipe headers with multiple faucets where needed.

NAME _____ NAME _____
NAME _____ NAME _____

Water trailers will be obtained from:

COMPANY/MILITARY UNIT _____
CONTACT PERSON _____
WORK PHONE _____HOME PHONE _____
24 HOUR EMERGENCY PHONE NUMBER _____

COMPANY/MILITARY UNIT _____
CONTACT PERSON _____
WORK PHONE _____HOME PHONE _____
24 HOUR EMERGENCY PHONE NUMBER _____

TERRORIST ACTS OR INTENTIONAL CONTAMINATION OF WATER SUPPLY BY POINSONS OR TOXIC AGENTS AND HAZARDOUS CHEMICAL SPILLS.

TAKE ALL TERRORISTIC ACTS SERIOUSLY.
Terroristic acts are usually reported by telephone. The receiver of such calls should get as much information from the caller as possible. In case of a hazardous chemical spill, follow the same procedures. Every attempt should be made to get the following information:

1. Has the poison or agent already been placed in the system?
2. What kind of contaminant was used or proposed to be used?
3. Where was the material introduced into the system.?
4. How much of the material was used?
5. When was the material applied?
6. How was the material applied?
7. Who is the caller and where do they live?
8. What organization does the caller represent and how can he/she be contacted?

If the contaminant has been introduced into the raw water supply:

1. Immediately shut off the raw water pumps.

2. Shut off all pumps and components of the water treatment plant. Isolate water treatment plant from distribution system.

3. Notify the person in charge (Utility Director/Water Manager or Designated person/s) as soon as possible of the threat/Terroristic activity. He/She will immediately notify the following people or will assign someone to make notifications:

   a. The news media is to issue an order to not consume and/or use water due to the possibility of contaminants being present in the water. Hold press conference and issue news releases so those customers in the affected areas will be notified to not consume and/or use the water until further notice.

   b. Call the Arkansas Department of Health , Engineering Section, at 1-501-661-2623 or 1-800-554-5738 (after hours/weekends). Tell them as much information as you have on the contaminant which has been introduced in to the water supply. Give Department personnel a telephone number where they can contact the Manager or Operator on duty.

   c. The Poison Information Center in Little Rock will determine adverse health effects of the contaminant.

   d. State Office of Emergency Services.

   e. Local and State Police.

4. Be prepared to collect samples and transport them to the Arkansas Department of Health (ADH) for analysis. If analysis indicates there is no contaminant present, the ADH will lift the NO WATER consumption order.

If laboratory tests indicate positive results:

a. Notify the media to advise customers in the affected areas to continue to not consume and/or use the water.

b. Flush the sample distribution system until negative results are obtained.

c. Increase chlorine concentrations in the distribution system.

If the contaminant has been introduced into the distribution system follow steps 3 and 4.
In addition:

1. Immediately isolate the facility where the contaminant was reported to have been introduced.

2. Isolate storage tanks. Close critical distribution system valves to isolate segments of the system to minimized contaminants spread throughout the distribution system.

3. Open fire hydrants to flush contaminants out of the water mains.

DO NOT ALLOW customers to consume water from the system until the Arkansas Department of Health has determined the water is safe for human consumption again.

MAJOR TRANSMISSION LINE LEAKS OR BREAKS

1. Isolate the damaged pipeline section through valving, and maintain service to the rest of the water system.

2. If necessary, shut off pumps and valve off storage tanks that feed water to areas where there are major line breaks to conserve water until repairs can be completed.

3. If any portion of the system suffers negative pressure and/or lack of pressure on the distribution system, notify the Arkansas Department of Health and the County Sanitarian. A BOILING WATER ORDER will be issued to the public and the news media. See Appendix A for Boil Water Order procedures.

4. Restore water to hospital and critical care facilities as soon as possible.

5. Repair main breaks as soon as possible. If amounts of unaccounted for water becomes excessive, continue to look for breaks in the distribution system.

6. If supplies are needed above those available at the time emergency, a list of suppliers is located in Appendix C. Contact the supplier and inform him of the emergency situation to expedite shipment of new supplies.

7. A list of local contractors and plumbing companies is attached in Appendix D in the event that water system employees are unable to respond to the emergency due to the extent of the emergency or personal injury. The Utility Manager _____or Designated person/s _____will be responsible for contracting with these companies for services in an emergency.

POWER OUTAGE/MAJOR ELECTRICAL PROBLEMS

1. Determine what part/s of the water distribution system are affected by the outage. Contact the Electric Company of the area affected, as listed under EMERGENCY NUMBERS, immediately so that power can be restored as soon as possible. Determine the length of time the failure will exist.

    a. If sufficient water supply exists in the storage tanks to adequately cover the period of power outage, no other action will be necessary.

    b. If the expected repair time exceeds water storage supply estimates, immediately notify the persons listed in the CHAIN-OF –COMMAND at the beginning of this document.

2. Start auxiliary generator as soon as possible if one is available. If the water department does not have an emergency generator, a portable generator will be made available to the water department through:

COMPANY/MILITARY UNIT _____
CONTACT PERSON _____
WORK PHONE HOME PHONE _____
24 HOURS EMERGENCY PHONE NUMBER _____

Following instructions in the operational manual for starting and connecting the generator to pumping facilities

3. Monitor the water levels in storage tanks. If there is a loss of pressure or negative water pressure occurs in any part of the system, contact the Arkansas Department of Health . A BOIL WATER ORDER will be issued immediately for the affected areas of the distribution system. See Appendix A for Boil Water Order Procedures.

4. Issue a CONSERVATION OF WATER ORDER through the news media and by direct notification to large industrial water users.

5. If an extended outage occurs, establish water distribution points from water trailers. Notify the news media of locations of water distribution points for citizen's use.

6. If a major equipment electrical problem exists (i.e. raw water pump, high service pump, or critical booster pump) assess the water treatment plants ability to continue operation using the remaining equipment. If the plant is unable to continue operation at adequate water supply levels, follow instructions above.

7. Call the following contractors to make major electrical repairs for the water system:

COMPANY/MILITARY UNIT _____
CONTACT PERSON _____
WORK PHONE HOME PHONE _____
24 HOURS EMERGENCY PHONE NUMBER_____

INTERRUPTED TELEPHONE SERVICE

1. If a telemetering problem occurs immediately, contact the persons in the CHAIN-OF-COMMAND at the beginning of this document.
2. If the telemetering problem cannot be fixed by system personnel immediately contact the following repair services:

COMPANY/MILITARY UNIT _____
CONTACT PERSON _____
WORK PHONE HOME PHONE _____
24 HOURS EMERGENCY PHONE NUMBER_____

COMPANY/MILITARY UNIT _____
CONTACT PERSON _____
WORK PHONE HOME PHONE _____
24 HOURS EMERGENCY PHONE NUMBER_____

3. Monitor water levels in storage tanks and manually control the water level if necessary until the telemetering system is repaired.

4. Monitor water pressure in the distribution system. If at any time, the water pressure falls below 20-psi contact the Arkansas Department of Health . A BOIL WATER ORDER will be issued for the area of the system which has experienced low water pressure. See Appendix A for procedures for Boil Water Orders. Remember only the Arkansas Department of Health can lift Boil Water Orders.

CHLORINE LEAKS AND CHLORINE EQUIPMENT FAILURE

Any chlorine leak is **extremely dangerous and maximum caution** should be used when repairing chlorine leaks. Use only SELF-CONTAINED BREATHING APPARATUSES when repairing chlorine leaks. Do not use canister-type-breathing masks.

For minor chlorine leaks:

1. Immediately determine the location of the leak. Then call the persons in the CHAIN-OF-COMMAND and notify them of the leak. Do not attempt to fix the leak until at least two persons are present.

2. Turn on floor level exhaust fan to vent chlorine gas from the room before entering.

3. One of the two persons should enter the leak location with a SCBA on. The second person should watch from a safe distance with a SCBA unit ready in case the first person requires assistance.

4. Turn valve on leaking tank off. Determine location of leak on cylinder or Chlorinator assembly.
5. When gases have been evacuated from chlorination room, proceed to fix the leak, replacing gaskets, lines, and/or valves as necessary to repair a leak. After repairing the leak, check for additional leaks before putting unit back in service via use of an ammonia bottle or a rag soaked with 26% ammonia.

In the event of a major chlorine leak additional steps should be taken:

1. Immediately evacuate all personnel by first moving at right angles to the wind direction.

2. Call the Utility Director _____or Designated person/s_____and state that there is a Major Chlorine Leak at (site). Request that chlorine leak personnel be dispatched to the site of the leak.

3. If a major chlorine leak occurs which requires evacuation, contact the Utility Director or Designated person/s _____and should contact the departments and agencies listed in the EMERGENCY PHONE NUMBERS section of this document. Advise them on the radius of the area that requires evacuation. In addition, all schools, hospitals, and industries in the evacuation zone should be contacted directly.

4. Only trained personnel wearing SCBA operated in the positive pressure mode should be permitted in the area.

5. Determine source of leak. Rotate leaks in cylinders and ton containers upward so only gaseous chlorine escapes.

6. Install Emergency capping kit appropriate for cylinder container that is leaking. Kit includes step-by-step instructions and tools.

DAMAGED PUMP STATIONS

1. Determine which pump stations contain damaged pumps. Prioritize order in which pump would be repaired based on areas of distribution system which contain critical water users such as hospitals and nursing homes and areas containing water storage facilities.

2. If possible reroute water so that the distribution system will remain pressurized while pump repairs are made. This may only involve engaging an auxiliary pump in the pump station or may involve transferring from one part of the system to another where they are interconnected.

3. If total pump failure occurs at stations where there is no interconnection to supply water low water pressure or loss of water pressure may occur. If water pressure falls below 20 psi, contact the Arkansas Department of Health (ADH). A BOIL WATER ORDER will be issued for the area of the system affected. See Appendix A for Boil Water Order Procedures. Remember only the Arkansas Department of Health can lift Boil Water Orders.

4. If pump repairs are expected to take more than two days arrange to establish emergency water stations in the areas without water. See Appendix for pump information and suppliers.

STRUCTURAL DAMAGE

Structural damage to a water treatment facility will be caused by earthquakes or explosions.

1. Assess structural damage throughout the water system as soon as possible following any disaster. Notify the Utility Director or Designated person/s structural damage assessment.

2. Prioritize repair of all damaged structures including water treatment facilities, pump station buildings, and storage facilities. Do not enter buildings that appear to have severe structural problems and might be in danger of collapsing.

3. If an elevated storage tank appears to be threatened and supports are undermined or weakened, shut off the control valve and drain the tank.

4. Check the damaged facilities for natural gas, electrical, water and fuel lines for ruptures or leaks. If leaks are found, shut off the utility service affected. Do not use electrical switches or appliances if gas leaks are suspected because sparks can ignite gas from broken or leaking line.

5. Check the facilities for spilled chemicals and liquids. If chemicals have spilled, clean them up if they are creating a hazardous situation. Check for chlorine leaks and repair immediately. If this is not possible evacuate the building and contact the Utilities Director or Designated person/s .

6. If the facility or equipment had been damaged to an extent that safety has been compromised, secure the area to avoid anyone from inadvertently being injured

7. Contact the Arkansas Department of Health (ADH). If the possibility of contaminated water entering the distribution system or loss of pressure in the system has occurred, a BOIL WATER ORDER will be issued. See Boil Water Order Procedures.

8. Issue WATER CONSERVATION ORDER through the news media if necessary.

WEAKENED DAMS

1. In the event that the raw water reservoir dam for surface water systems becomes compromised, lower the lake as rapidly as possible.

2. Contact:
   OFFICE OF EMERGENCY SERVICE _____
   ARKANSAS DEPARTMENT OF HEALTH 1-501-661-2623
   (EMERGENCY/AFTER HOURS) 1-800-554-5738

   SOIL AND WATER CONSERVATION SERVICE _____
   COUNTY SHERIFF _____
   CITY POLICE _____

3. Draw water from the lower intake ports to maintain a constant water supply to the water treatment facility. If an adequate water level cannot be maintained in the raw water reservoir shut down the water treatment facility.

4. Implement plan to haul water in tanker trucks. Notify public.

5. Contact the following contractor/s to repair the dam:

COMPANY/MILITARY UNIT _____
CONTACT PERSON _____
WORK PHONE HOME PHONE _____
24 HOURS EMERGENCY PHONE NUMBER_____

COMPANY/MILITARY UNIT _____
CONTACT PERSON _____
WORK PHONE HOME PHONE _____
24 HOURS EMERGENCY PHONE NUMBER_____

FROZEN MAINS AND PIPES

1. Determine what areas of the distribution system are impacted. Notify the Utilities Director or Designated person/s _____of what lines are frozen and/or damaged. Prioritize thawing and/or repair of these lines. Thaw and/or repair impacting critical care facilities first.

2. Keep the water flowing in the distribution system whenever possible to prevent further freezing of lines. If this is not possible isolate areas with frozen and/or damaged mains (i.e. leaking or broken mains).

3. Be prepared to respond to customers with meters that have frozen and broken.

4. If a loss of pressure occurs in any areas(s) of the distribution system, contact the Arkansas Department of Health . A BOIL WATER ORDER will be issued for the affected area(s) of the water system. See Boil Water Order Procedures.

CHEMICAL OUTAGE

If the water treatment plant runs out of a critical chemical for any reason or if the chemicals are unavailable from the primary supplier follow the steps listed below to avoid an emergency. See chemical inventory and suppliers section.

1. Contact the closest water treatment facility to this one and see if chemicals can be procured from them until shipment arrives or a new supplier can be procured.

2. Determine when the water treatment facility will be able to get delivery of chemicals. If the chemicals will be unavailable for an extended period of time, contact the Arkansas Department of Health to determine if other chemicals can be temporarily substituted.

3. Some form of chlorine must be fed at all times. If unchlorinated water enters the system contact, the Arkansas Department of Health immediately and a BOIL WATER ORDER will be issued. See Boil Water Order Procedures.

4.

LACK OF PERSONNEL

During a period in which there is a shortage of personnel, construction and maintenance activities can be suspended to reduce the manpower requirements dramatically. Cross-train personnel so that they can work several different job positions in emergency situations.

City managers and other designated persons should be trained to operate the water treatment facility in the event of a strike by utility employees.

MUTUAL AID AGREEMENTS

Initiate mutual aid agreements and other cooperative agreements.

1. Provide agreements with related utility, service and civil defense agencies.

2. Define and assign responsibilities in emergencies.

3. Provide for exchange or assignment of personnel, equipment and materials.

4. Provide for coordination of communications, training, reconnaissance, assessment, inventory taking, etc.

5. Consider legal problems.

6. Plan to provide interconnections with adjacent systems.