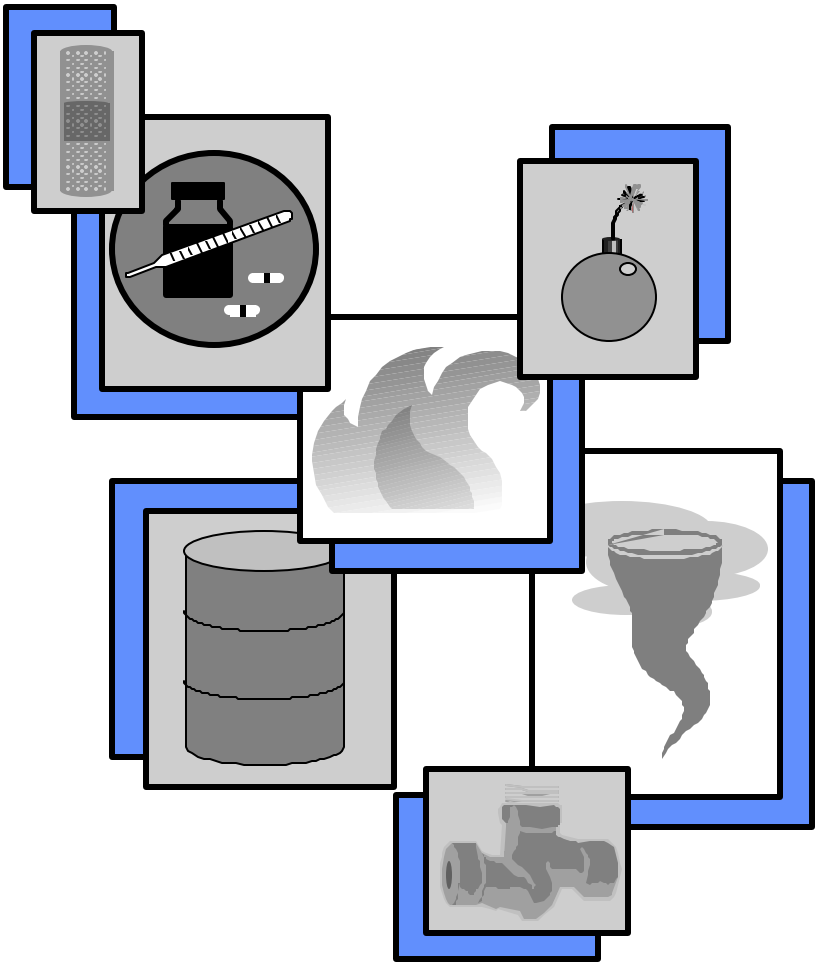
MODEL PLAN



Emergency Preparedness:
Preparing for the Unanticipated

An emergency preparedness plan for water utilities

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DNR
IOWA DEPARTMENT OF NATURAL RESOURCES

Prepared by Des Moines Water Works

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Introduction to Emergency Preparedness

What is Emergency Preparedness?

An *emergency* can be defined as an unanticipated event that calls for immediate action. Emergencies take on many forms: fire, flood, chemical spill, water main break, winter storm. Emergencies are almost never pre-planned and almost always require some action by someone. In the case of drinking water emergencies, the party most often required to act, or respond, is your water utility. *Preparedness* can be defined as having in mind actions for a particular event; knowing what to do in case a specific event occurs. So, *emergency preparedness* can be defined as: *to have in mind actions for unanticipated events that call for an immediate response*. Emergency preparedness for water utilities involves:

- recognizing the emergencies most likely to occur in your community,
- training employees on responses to be taken during and after these emergencies,
- identifying other resources to be called upon when needed, and
- communicating with your community about the impact the emergency will have on them and their role in the emergency process.

Why is Emergency Planning Important?

Every water utility is in business to provide safe, quality drinking water to their community. Customers expect to receive high quality water -- even during emergencies. To meet these expectations, water utilities must prepare for situations that might prevent them from delivering the water their customers rely upon. Planning for emergencies and knowing how to respond in an emergency situation is just as important as hiring workers, preparing budgets, and all the other tasks performed every day to meet the needs of consumers.

Purpose of the Emergency Preparedness Model Plan

The primary purpose of this emergency preparedness model plan is to promote advanced planning. It also is a guide, once completed, for utility personnel and community officials to follow *during* emergency situations. The model plan can also serve as a good starting point for developing documents that may be needed to meet other regulatory standards, such as Occupational Safety and Health Administration (OSHA) requirements for fire prevention planning, or a contingency plan for Superfund Amendment and Reauthorization Act (SARA Title III). This model plan is *not* intended to serve as a regulatory compliance document. Instead, it has been designed to help utilities think, plan, and prepare strategies for dealing with emergencies.

The second section of this model plan, ***Using This Model Plan to Develop an Emergency Plan***, presents detailed instructions for completing a series of emergency forms. At first glance, the task to develop an emergency plan may seem pretty overwhelming, BUT DON'T STOP NOW! The instructions in the next section indicate which forms should be completed first, second, and so on. Take the process one step at a time. The sooner you complete your model plan, the more valuable it will be to your utility.

Who Should Initiate an Emergency Response?

Beyond the expectations of customers, there are several other good reasons why water utilities must respond to emergency situations affecting their utility or community. Even though counties and states have far more resources available to respond, in a major emergency affecting a large area, these resources may already be committed to another community. Water utility personnel are knowledgeable about their community and the resources that are available to help. For these reasons, it is important for your utility to think about the people, materials, and equipment needed when an emergency does occur.

Forming an Emergency Response Team

An Emergency Response Team should be formed using the current utility staff and others in the community such as the mayor, council members, board members, or citizen volunteers. One person may serve in more than one role, depending on the situation and the community, and there may be need to hire specialized personnel, depending on the emergency. Using the ***Emergency Response Sheets*** in this model plan, your community can identify in advance who these special resources may be and know how to contact them if their services are needed. Overall, in selecting the emergency response team, it is important to choose people who:

- are available to respond quickly,
- have knowledge in the area for which they are responsible, and
- are willing to work in a cooperative team environment.

Basic Emergency Responsibilities

Several key responsibilities must be addressed in any emergency response. These responsibilities are described in the following table.

To hold the confidence of the community during an emergency, it is very important that a person be identified to fulfill each of the key responsibilities. The designated person should be aware of the tasks involved. Also, customers, community officials, and others involved in the emergency response should recognize that the specific person has been charged with these key duties.

Key Responsibilities	Basic Tasks to be Carried Out
Emergency Coordination (Possible people: utility superintendent, mayor, city manager, or other community official)	• Serves as the utility's emergency authority; has approval to spend money on behalf of your utility • Calls together the Emergency Response Team • Works with the team to set priorities in the recovery process • Coordinates efforts among utility, city, county, state, and federal agencies • Provides leadership to the response team
Public Communication (Possible people: utility superintendent, mayor, city manager, council member, board member)	• Communicates with customers, employees, regulatory officials, and other community officials to keep them aware of the emergency efforts • Coordinates involvement with media when needed • Provides for communications equipment, such as cellular phones or portable radios
Operations Management (Possible people: utility superintendent, operator, consultant)	• Coordinates all work activities to restore water service - includes both field activities and administrative activities, such as plant operations, plant maintenance, purchasing, human resources, and computer operations
Damage Assessment (Possible people: utility superintendent, operator, consultant)	• Reviews damage caused by an emergency and summarizes damage information to utility and community officials • Arranges for work with outside contractors or engineers to recover from an emergency • Directs repairs done by outside agencies • Coordinates with insurance carriers regarding damages/losses

Using This Model Plan to Develop an Emergency Plan

How Can This Model Plan Be Used In Every Utility or Community?

This model plan provides suggestions for emergency organizing, prioritizing, planning, and training. Simple template-style forms included in this section of the model plan require information from your utility or community and need to be completed as part of your utility's emergency preparedness effort. When all forms pertaining to your utility have been completed, this model plan can serve as an effective "first action" emergency plan. It will detail the critical information about your water utility necessary to recover from an emergency, prioritize the potential hazards for your utility, identify appropriate resources in your community to be called upon for specific emergencies, and list measures to keep the plan up-to-date and useful for your community.

Follow these steps to complete the model plan's forms:

1. Complete the ***Water Supplier General Information Sheet*** first. This form will provide basic information about your water utility and community which may be needed when communicating with others in an emergency situation. Include data necessary to contact the following individuals or groups 24 hours a day:

    - the Emergency Response Team members (the people who will perform each of the key responsibilities outlined);
    - the support agencies and personnel (such as police, County Emergency Coordinator, DOT) called upon to directly assist in recovering from the emergency;
    - other companies, vendors, suppliers, etc., frequently used by your utility;
    - the gas, power and general communication providers for your water utility;
    - the communities that have contracted with your water utility to provide mutual aid, emergency water, equipment or materials;
    - your utility's critical business and individual water users (such as hospitals or nursing homes). At a glance, the form will reveal facilities or individuals involved, the specific water needs, and information to contact them, again 24 hours a day.

2. Complete the ***Failure Analysis*** form. The completed form will help prioritize the severity of the emergencies likely to impact your utility or community. Include information about an emergency's frequency or duration (the more often a specific emergency occurs, or the longer it lasts, the higher priority it becomes), impact on health, property, and business, as well as your water utility's reliance upon internal and external resources to respond to each emergency. The priorities on the form will determine which hazards should be addressed in the final emergency preparedness plan, and in what order.

3. Complete the ***Emergency Response Sheets*** for each emergency applicable to your water utility (e.g. flood, thunderstorm, tornado, main break, etc.), according to the priority

established by the completed ***Failure Analysis*** form. Each particular emergency has a three-page set of forms to help prepare your utility. They are:

- ***Things to Consider Before an Emergency/Mitigation To Do List*** and the ***Emergency Response Sheet Instructions.*** This is a two-sided form. ***The Things to Consider Before an Emergency*** list should be used to stimulate discussion about each specific emergency. The questions have been developed to assist your utility in preparing the ***Mitigation To Do List***, which is simply a list of things to do relating to your utility *before* an emergency occurs. For example, make sure fire extinguishers are checked on an annual basis, would be a notation on the ***Fire & Explosion Mitigation To Do List***. The ***Emergency Response Sheet Instructions*** are a step-by-step guide for filling in the ***Emergency Response Sheet*** on the facing page.

- ***Emergency Response Sheet/Trouble Shooting Guide.*** This is also a two-sided form. Each ***Emergency Response Sheet*** contains information vital to your utility and community to respond quickly in case of that specific emergency. The information requested, such as names, telephone numbers, etc. may already be recorded in your files, and can just be transferred to the appropriate sheet. The ***Trouble Shooting Guide*** on the back side of each ***Emergency Response Sheet*** contains a series of Yes/No statements to help your utility determine the scope of each emergency and to think about the people, materials, and equipment that will be needed for response or recovery.

- ***Response/Recovery To Do List*** will help you prepare a list appropriate for your utility in response to, or to recover from, a specific emergency. For example, a water main break at your utility may require you to discontinue water service to several critical customers. On the corresponding Response/Recovery To Do List, you should note to restore water service to those customers, and check for further damage to the main.

4. Complete the ***Training Plan*** form. This form will outline the strategies for training employees and other members of the Emergency Response Team in their roles and responsibilities during an emergency. Include information about the individuals assigned to respond to each specific task in each particular emergency and the training they'll need to become proficient at each assigned task. Also include information about the trainer, the type of training that will be received, when it will occur, and how effective and informative the training session was (does the individual know what to do and how to do it).

When completing all forms, it is important to remember that enough information must be provided to allow someone in a back-up capacity to function in an emergency. The regular staff person or designated team member may be on vacation, ill, or otherwise unavailable when an emergency occurs.

Water Supplier General Information Sheet Instructions

The *Water Supplier General Information Sheet* is to be used to list important information about the water utility, who to contact for direct response and support during an emergency, and to list your utility's critical water users.

In the *Utility name* section, fill in the appropriate response with regard to your water utility's:

- *Public water supply ID number (PWSID)* - the Iowa Department of Natural Resources issues this number.
- *Water source* - check the box that describes your utility's raw water source.
- *Population served* - fill in the population number your utility serves.
- *Water storage tank capacity* - enter storage capacity in gallons.
- *Average daily pumpage* - enter the average daily pumpage in gallons per day.

In the *Treatment process* section check the applicable process types for your water utility.

In the *Emergency telephone notification listing* section, fill in the appropriate responses in as much detail as possible, including daytime and after-hours phone numbers for:

- *Basic Emergency Response Team* - list the personnel who are employed by your utility or in the community who would be directly involved in responding to an emergency.
- *Officials outside the utility* - list the support agencies and personnel who can be called for direct assistance in responding to recover from an emergency.
- *Contracted services/supplies* - list the companies, vendors, lab services, contractors, suppliers frequently used by your utility.
- *Utilities* - list the utilities that provide power, gas or general communication services for your water utility.
- *Mutual aid coordination* - list the communities that have entered into an agreement with your water utility to provide equipment, water or materials in an emergency.
- *Critical water users* - list the users in the service area that require a continuous water supply in an emergency. Also include what the water is used for and the volume that is needed.

Water Supplier General Information Sheet

Utility name:				**Date:**
Public water supply ID number (PWSID)	Water source	Population served	Water storage tank capacity (gallons)	Average daily pumpage (gallons per day)
	❑ **Surface** ❑ **Groundwater**			

Treatment process			
Iron removal	❑ Yes ❑ No	Chlorination	❑ Yes ❑ No
Coagulation, sedimentation, filtration	❑ Yes ❑ No	Fluoridation	❑ Yes ❑ No
Softening	❑ Yes ❑ No	Other	❑ Yes ❑ No

Emergency telephone notification listing

Positions	**Name**	**Work**	**Pager**	**Cellular**	**Fax**	**Home**
Basic Emergency Response Team						
Emergency Coordination						
Public Communication						
Operations Management						
Damage Assessment						
Officials outside the utility						
Fire department						
Police/Sheriff						
County Emergency Coordinator						
State Office of Emergency Management		515-281-3231				
IDNR - Field Office						
Department of Transportation						
Contracted services/supplies						
Plumber						
Electrician						
Well driller						
University Hygienic Lab (UHL)		319-335-4500				

Contracted laboratory						

Contracted services/suppliers						
Positions	**Name**	**Work**	**Pager**	**Cellular**	**Fax**	**Home**
Engineering firm(s)						
Water storage tank manufacturer						
Property & casualty insurance						
Materials & equipment						
Chemicals						
Fuel						
Utilities						
Iowa One-Call						
Power company						
Gas company						
Telephone						
Radio/Cellular						
Mutual aid coordination						
Equipment						
Water						
Materials						
Critical water users						
Health care						
Critical use:					Volume:	
Nursing home						
Critical use:					Volume:	
Public shelter						
Critical use:					Volume:	
Other						
Critical use:					Volume:	

Failure Analysis Instructions

The *Failure Analysis* is used to assess your utility's risk and ability to respond quickly in any emergency. Think about your operation, your community and surrounding communities to determine what types of emergencies your utility needs to plan for, what impacts those emergencies will have on your utility, and who to call for help.

In the *Emergency type* section, consider these four elements in your answers:

- Historical
  List the types of emergencies that have happened in the past -- fires, severe weather, power outages, hazardous material spills, water quality problems, etc. Think about the number of occurrences and identify hazards that have happened in nearby towns that could occur in your town, too.

- Location
  Consider the location of your facilities. Determine if they are located in areas that often flood or near companies that produce, store, use or transport hazardous materials.

- Physical facilities
  Decide which buildings or structures could be affected. Think about what effects the emergency will have on telephone or radio communications, and computer systems.

- Human error
  Human error is the single largest cause of workplace emergencies and can result from poor training or by using equipment in the wrong way. Fatigue and stress can also contribute to human error.

In the *Frequency* section, rate the likelihood of each emergency happening, or the length of time each emergency will go on, using a scale of 1 to 5. Use a rating of 1 for emergencies that might occur infrequently, for example, once every 10-15 years. And, when they do occur, will only last for a short period of time. Use a 5 rating for emergencies that are very likely to occur, for example, one or more times every five years. Again, think about the duration of the emergencies. The extended loss of a critical piece of equipment, chemical feed system, or water storage may influence the frequency rating for a particular emergency.

In the *Health, Property and Business* sections, determine the impact the emergency has on your water utility's individual and commercial users, again using a scale of 1 to 5, with 1 having the lowest (or least destructive) and 5 having the highest (or most destructive) impact.

- Health
  If people might get sick, or even die, rate it a 5. If the emergency would put people out of water for 1-2 hours, rate it a 1.

- Property
  If property could be lost or destroyed, rate it a 5. If property has minor damage that can be repaired, rate it a 1. Think about the cost of replacing or repairing equipment, and the likelihood that your facility will need to be rebuilt following a particular emergency.

- Business
  If the emergency causes the business to close due to lack of water, rate it a 5. If the business is inconvenienced for 1-2 hours, rate it a 1.

In the *Internal resources* and *External resources* sections assess and list the individuals, groups and businesses where you can get assistance and support. Resources include both people and materials. Use the same rating scale of 1 to 5, with 1 being your strong resources, and 5 being your weak resources. In each case, determine if your utility can respond with your own employees, or if outside individuals are needed, also.

- Internal resources
  If your utility is able to respond to the emergency using its own staff and materials, even on a holiday weekend, rate it a 1. If your utility requires outside help to respond to the emergency, rate it a 5.

- External resources
  If it would require only 1-2 hours for the external resources to respond with materials or staff to the emergency, rate it a 1. If it would require more than 24 hours to obtain the outside resources to respond to the emergency, rate it a 5.

In a major emergency, it's important to remember that some of your external resources may be needed elsewhere, and may not be available to you right away.

In the *Index rating* section add each row (across) to determine the final rating for each emergency.

Finally, in the *Ranking* section, prioritize the emergency types in numerical order, beginning with the highest index rating as first priority, followed by the next highest index rating as second, etc.

Failure Analysis

Emergency type	Frequency	Health	Property	Business	Internal resources	External resources	Index rating	Ranking
List by name	Low 1-5 High	Low Impact 1 - 5 High Impact			Strong 1 - 5 Weak		Total	1,2,3,....

Things to Consider Before an Emergency

Bomb Threat

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- Who should be called when a bomb threat is received?
- What are the procedures that deny access to unauthorized personnel?
- Are all packages and materials inspected before taken into critical areas?
- Are you aware of objects, items, or parcels which look out of place or suspicious?
- Are facilities locked at all times when not occupied?
- Can local law enforcement agencies help develop a response plan?
- Are good housekeeping practices maintained?
- Is there a bomb threat checklist by the phone(s)?
- Is staff trained on how to respond to a bomb threat?
- How will staff be alerted in the event of a threat?
- What evacuation procedures are in place?
- Have you identified a gathering point for employees, a safe distance from the building?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Bomb threats are delivered in a variety of ways. The threat may or may not include the location of the bomb, the time for detonation, or an ultimatum related to the detonation/ignition of the device. Bombs can be constructed to look like almost anything.

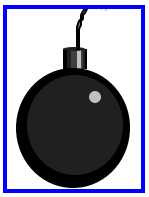
In the *Telephone numbers* section, determine whether your utility is located within the 911 emergency access area. If is not, fill in the appropriate sheriff, police, fire and ambulance telephone numbers.

In the *Evaluation team* area list the names and telephone numbers of the team members who would be called to evaluate the threat and conduct the search of the facilities.

In the *Public accessible areas to be searched* section list the facility(ies) and area(s) within the facility that need to be searched.

In the *Caller checklist* section, record the date, time and content of a threat. Include descriptive information about the caller.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



Bomb Threat

Telephone numbers			
Sheriff	**Police**	**Fire**	**Ambulance**
911 OR	911 OR	911 OR	911 OR

Evaluation team		Public accessible areas to be searched	
Name	Telephone		

Caller checklist

Today's date

Exact time of call

Exact words of caller

Questions to ask

When is bomb going to explode?

Where is the bomb?

What does it look like?

What kind of bomb is it?

What will cause it to explode?

Did you place the bomb? Why?

Where are you calling from?

What is your address?

What is your name?

Caller's voice

calm	disguised	nasal	angry	broken	stutter	slow
sincere	lisp	rapid	giggling	deep	crying	squeaky
excited	stressed	accent	loud	slurred	normal	

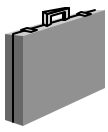
If voice is familiar, whom did it sound like?

Were there any background noises?

Remarks

Person receiving call

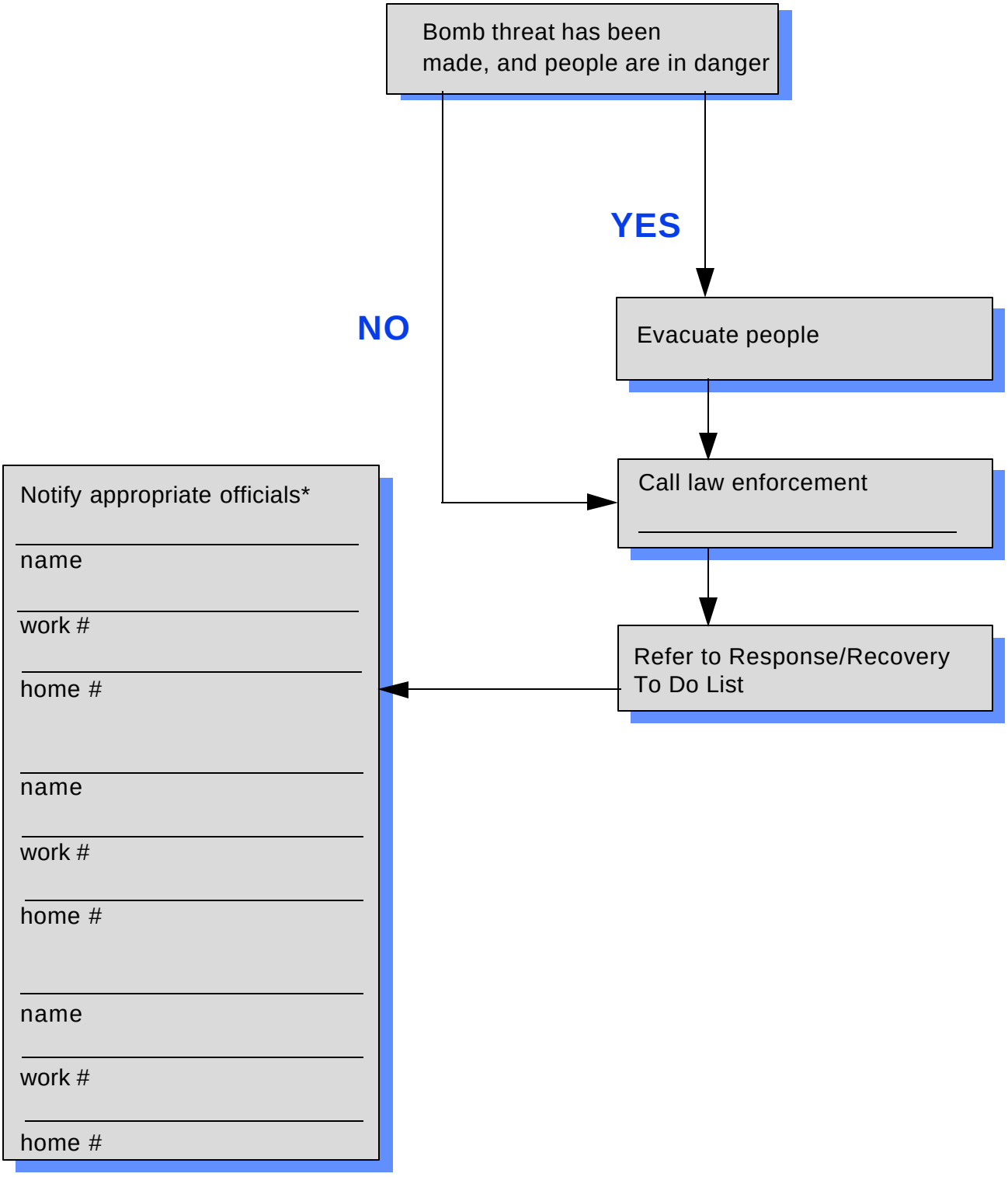
CAUTION



WHEN SEARCHING FOR A BOMB, SUSPECT ANYTHING THAT LOOKS UNUSUAL. LET A TRAINED BOMB TECHNICIAN DETERMINE WHAT IS OR IS NOT A BOMB. DO NOT REMOVE, MOVE, OR HANDLE THE BOMB, OR SUSPECTED OBJECT ONCE IT HAS BEEN DISCOVERED.

DO NOT USE RADIOS, REMOTE TELEPHONES OR ANY CELLULAR OR PORTABLE EQUIPMENT THAT USES RADIO FREQUENCIES IN THE VICINITY OF THE BOMB THREAT.

Trouble Shooting Guide



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Bomb Threat

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Cross Connection

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- Do you have a plumbing and cross connection control ordinance?
- What type of cross connection control program is in place (i.e. containment, isolation)?
- Is there a list of customers (such as clinics, hospitals, water-using industries) with potential backflow problems?
- Are there customers on private wells?
- Is there a systematic inspection of customers with backflow prevention devices on new and existing installations?
- Is training provided for cross connection control?
- Is there a public awareness and information program?
- Are you aware of any facilities using chemical treament systems that may be a cross connection hazard?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Cross Connection

As treated water is pumped from the treatment facility to the customer, it must be protected from contamination. One common means for such contamination is backflow of non-treated fluids through cross connection.

In the C*ross connection control program* section, indicate the control type that your municipality has in place.

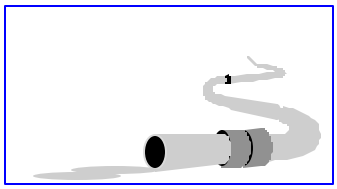
In the *Testing laboratory* section, enter the name, telephone number and address of the independent lab that your utility uses for testing and sampling.

In the *Customers with potential source of backflow* section, list those customers who have a cross connection control device. Also list the type of contamination possible.

In the *Backflow devices in utility* section, list the types, locations, and dates of installation for all devices.

In the *Active private wells* section, list those customers who have direct access and use private wells in conjunction with the public water supply.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



Cross Connection

Cross connection control program	Testing laboratory		
❑ Containment ❑ Isolation	Name	Telephone	Address

Customers with potential source of backflow

Name	Address	Telephone	Type of device installed	Type of contamination

Backflow devices in utility

Type	Location	Date installed

Active private wells

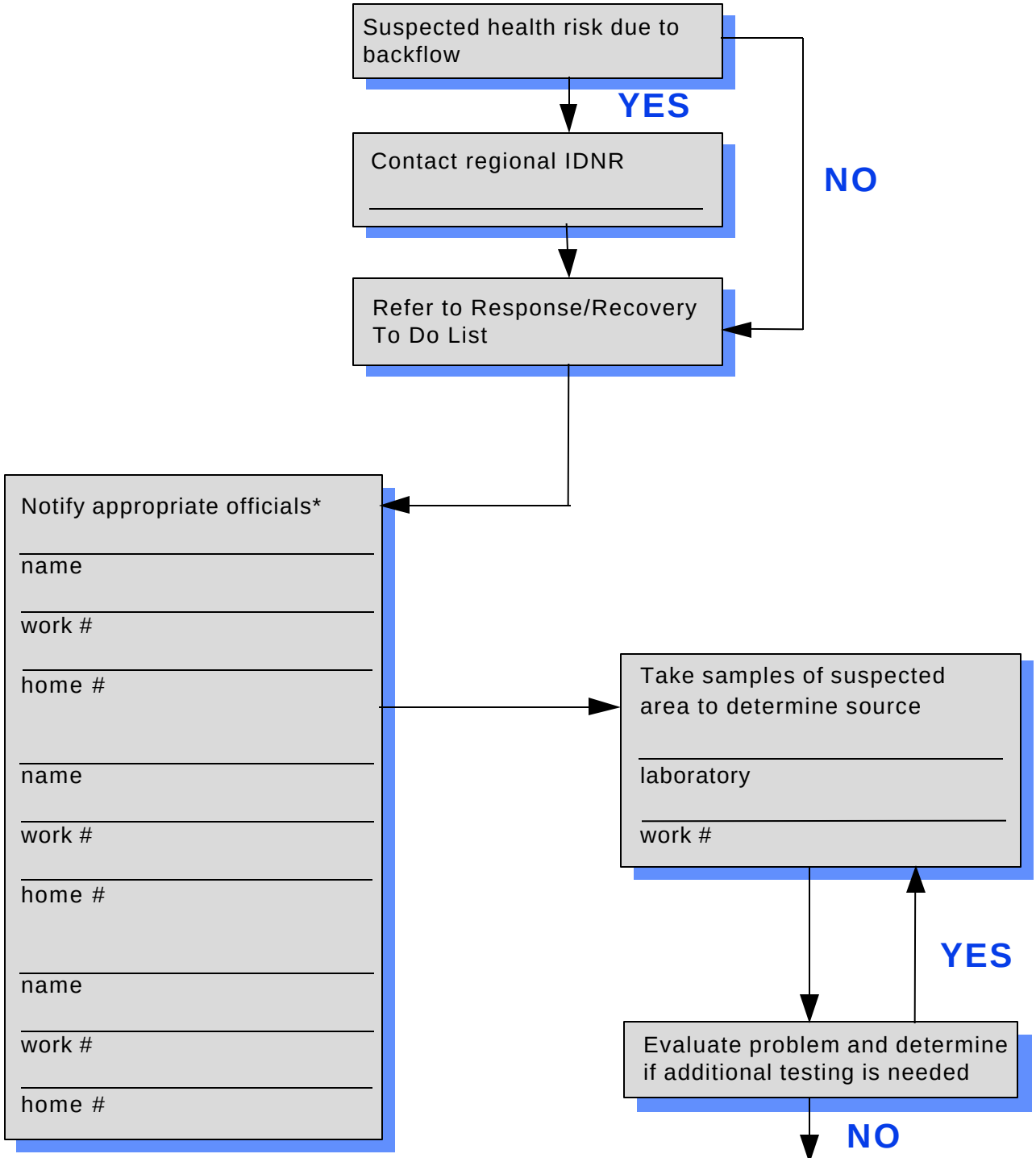
Name	Location	Telephone

CAUTION

WATER UTILITIES HAVE THE RESPONSIBILITY TO ENSURE THAT THE WATER SUPPLY IS PROTECTED FROM CONTAMINATION THROUGH THE TREATMENT PLANT AND WATER DISTRIBUTION SYSTEM. BECAUSE UTILITIES USUALLY CANNOT CONTROL WATER SYSTEMS AND USAGES ON PRVATE PROPERTIES, A CROSS CONNECTION CONTROL PROGRAM IS IMPORTANT.

contamination hazard

REMEMBER SAFETY FIRST



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Cross Connection

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Electric Power Failure

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- Where is the on-site main power disconnect?
- What are the power sources and their location?
- Is standby or duplicate power source available?
- What measures can be taken to protect on-site power source?
- Do motors have automatic shutdown to avoid voltage or phase fluctuation that may cause damage?
- If a generator is the standby power source, where is it stored?
  Who knows how to operate the generator?
- Is there a lock-out/tag-out program?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Electric Power Failure

Pumps, motors, and other water system equipment depend on electrical power to operate. Electrical power components such as above ground lines, switchgear, transformers, and circuit breakers are vulnerable to numerous disasters. Voltage and phase fluctuations may damage motors. Downed power lines can create access problems. You may want to contact your electric power company to help fill in the top section of this form.

In the *Power supply* section, indicate if the power supply is three (3) phase or single phase.

In the *Primary volts* section, fill in the voltage for the primary side of the transformer.

In the *Secondary volts* section, fill in the voltage for the secondary side of the transformer.

In the *Primary fuse/breaker (amps)* section, list the primary or high service amperage listed on the transformer.

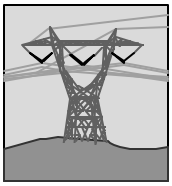
In the *Secondary service (amps)* section, list the secondary or low service amperage listed on the transformer.

In the *Circuit number* section, enter the circuit number or service number for your facility.

In the *Customers on same service*, list those customers who are connected to each of the phases serving your facility.

In the *Diagram of electric service* section, make a sketch that reflects your utility's electrical service.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



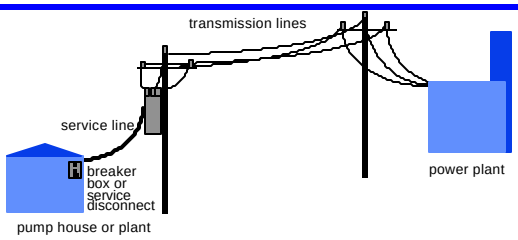
Electric Power Failure

Power supply	Primary volts	Secondary volts	Primary fuse/breaker (amps)	Secondary service (amps)	Circuit number
❑ 3 phase ❑ single phase					

Customers on same service

Phase A	Phase B	Phase C
Name	Name	Name
Address	Address	Address
Telephone number	Telephone number	Telephone number

Diagram of electric service

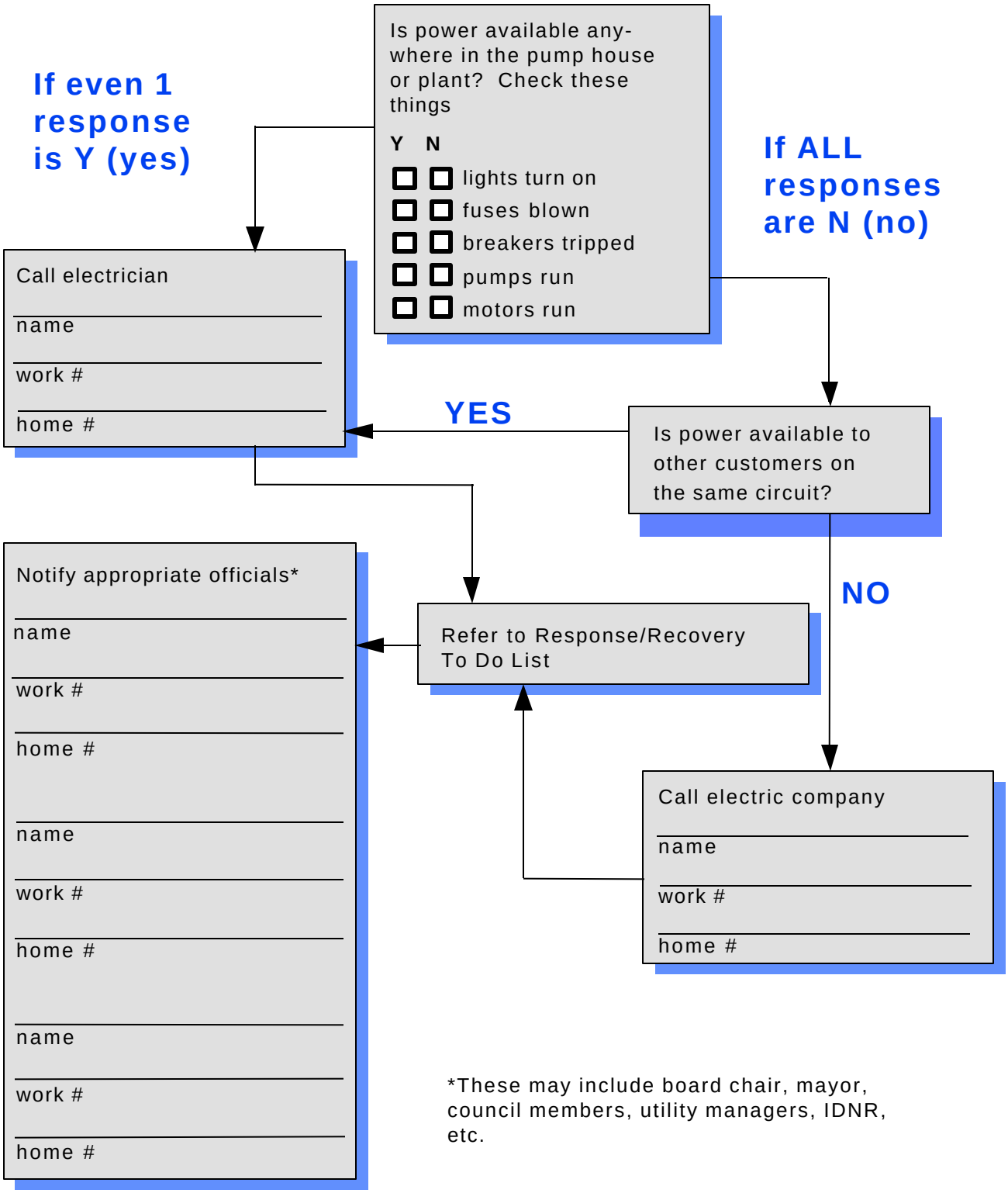


CAUTION

shock hazard

TO REDUCE THE RISK OF ELECTRIC SHOCK AND FIRE, USE EXTREME CAUTION . . . ELECTRICITY CAN BE DANGEROUS. DO NOT ATTEMPT TO SERVICE EQUIPMENT BY YOURSELF. OPENING OR REMOVING COVERS MAY EXPOSE YOU TO DANGEROUS VOLTAGE OR OTHER HAZARDS. IF YOU ARE UNFAMILIAR WITH THE ELECTRICAL SYSTEM, PLEASE CONTACT QUALIFIED SERVICE PERSONNEL.

REMEMBER SAFETY FIRST



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Electric Power Failure

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Equipment Failure

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- Is critical equipment inspected at least once a month?
- Is a log card or record system used to detail inspections, maintenance required, and the general operating condition of each piece of critical equipment?
- Are the following items checked during a motor and pump inspection?
  - Cleanliness
  - Alignment and balance
  - Temperature, lubrication
  - Bearings, vibration, noise, current
  - Connections, switches, circuitry

  (Are electrical circuits de-energized and "locked out" before any inspection and maintenance is performed?)
- Are the critical parts of the water treatment processes, which can fail, known (i.e. iron removal, filtration, chlorination)?
- What replacement parts are needed for major components in critical equipment?
- Do you have replacement equipment and parts on hand? If not, are they readily available? (Overnight availability may be sufficient.)

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Equipment Failure

Equipment such as pumps, motors and chemical feeders are vital in the operation of providing quality drinking water. In order to ensure equipment reliability, a preventive maintenance program should be set up for each piece of equipment. In addition to the preventive maintenance program, detailed records on major parts, who supplies these parts in inventory, and their availability should be maintained.

In the *Critical equipment* section, list the location of the equipment, the location of the equipment manual, the equipment's manufacturer, make, model, type and capacity of each piece of equipment.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.

Equipment Failure

Critical equipment			
	Equipment piece #1	Equipment piece #2	Equipment piece #3
Name of equipment			
Location of equipment			
Location of equipment manual			
Manufacturer			
Make			
Model			
Type			
Capacity			

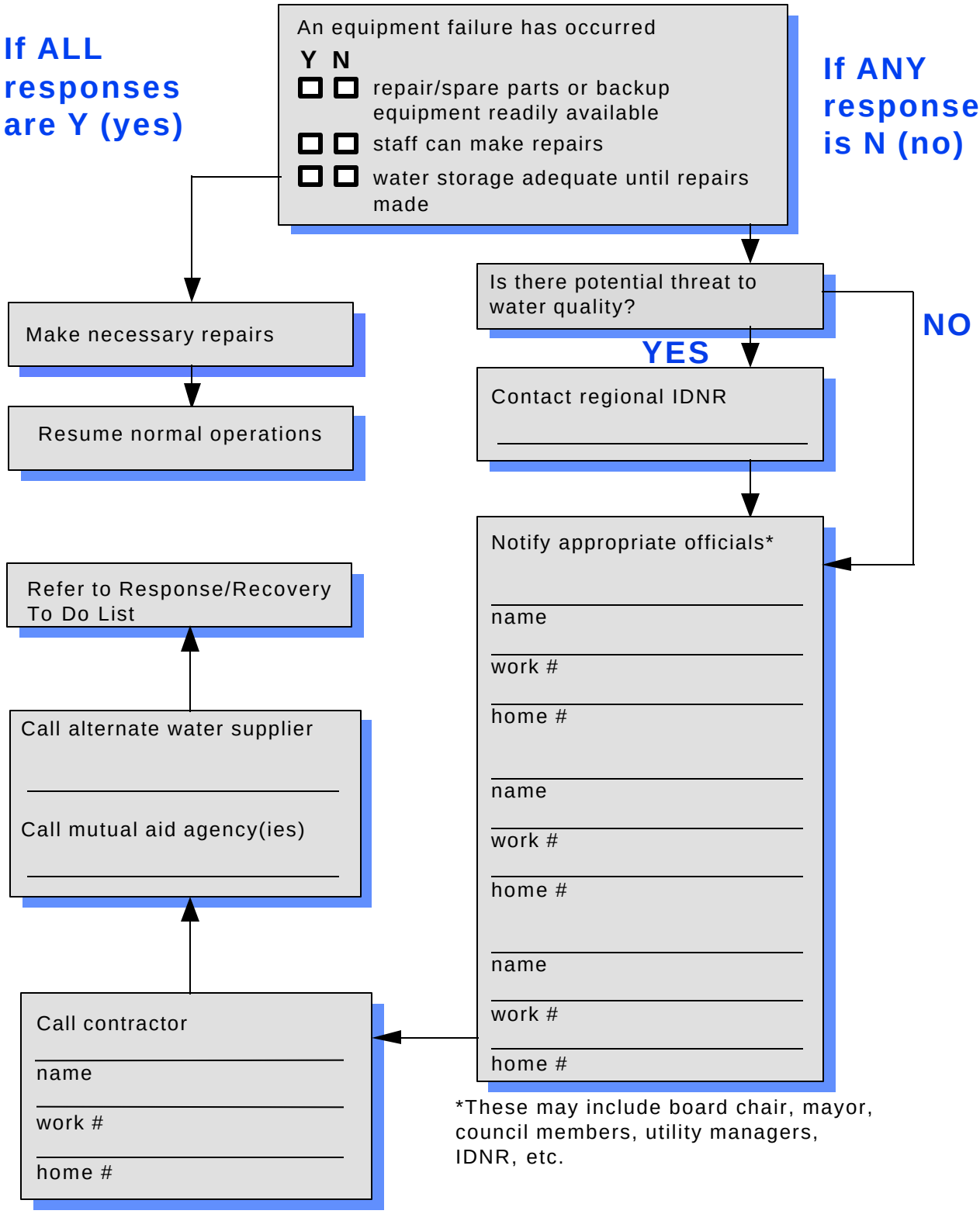
Critical equipment			
	Equipment piece #4	Equipment piece #5	Equipment piece #6
Name of equipment			
Location of equipment			
Location of equipment manual			
Manufacturer			
Make			
Model			
Type			
Capacity			

CAUTION

FOLLOW PROPER LOCK-OUT AND TAG-OUT PROCEDURES. IF EQUIPMENT IS IN A WELL OR PIT, FOLLOW PROPER CONFINED SPACE SAFETY PROCEDURES.

shock hazard

REMEMBER SAFETY FIRST


If ALL responses are Y (yes)
An equipment failure has occurred
Y N
repair/spare parts or backup equipment readily available
staff can make repairs
water storage adequate until repairs made
If ANY response is N (no)
Make necessary repairs
Resume normal operations
Is there potential threat to water quality?
NO
YES
Contact regional IDNR
Notify appropriate officials*
name
work #
home #
name
work #
home #
name
work #
home #
Refer to Response/Recovery To Do List
Call alternate water supplier
Call mutual aid agency(ies)
Call contractor
name
work #
home #
*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Equipment Failure

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Fire & Explosion

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- Has your facility been inspected by local fire department officials to identify potential fire hazards? Is there a list of all chemicals that are stored or used in your facilities? Where is this list stored?
- Are Material Safety Data Sheets (MSDS) available for each chemical used on site? Are employees aware of these chemicals and know where they are stored?
- Is Right-to-Know labeling posted for chemical storage?
- Have personnel been trained on the proper use of fire extinguishers and do they know the location of all fire extinguishers? Are routine checks performed to make sure the fire extinguishers are operable?
- Has an evacuation plan been prepared for each facility in an event of a fire? Is the plan posted in a place for all employees to see?
- Do you know the water pressure or flow rate at each fire hydrant at the plant or pump house?
- Do you know where your gas shut-off valve and electric disconnect are for each facility?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Fire & Explosion

Any employee observing smoke or fire should notify other building occupants and evacuate the building immediately. Measures should be taken to insure everyone has vacated the building. Once outside, notify the fire department. Due to toxic fumes, employees should move to a designated area away from smoke.

In the *Telephone numbers* section of the ***Emergency Response Sheet***, determine whether your utility is located within the 911 emergency access area. If it is not, fill in the appropriate telephone number for the fire, ambulance, sheriff and police departments for your area.

For each *Facility* section, list the location, associated water pressure, and flow of each hydrant. Next, list the location of the gas shut-off valve and electric disconnect for each facility. Then list the names of all chemicals stored on-site, as well as the location and quantity of each.

In the *Diagram of evacuation routes, shut-off valve and electrical disconnect locations* section, draw a sketch of your facilities that indicates evacuation routes, locations of gas shut-off valves and electric disconnects, and the chemical storage locations.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.

Fire & Explosion

Telephone numbers			
Sheriff	**Police**	**Fire**	**Ambulance**
911 OR	911 OR	911 OR	911 OR

Facility:

Hydrants			Utilities		Chemicals stored		
Location	Pressure	Flow	Shut-off valve location	Electric disconnect location	Chemical name	Quantity	Location

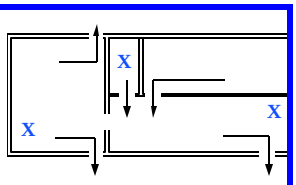
Facility:

Hydrants			Utilities		Chemicals stored		
Location	Pressure	Flow	Shut-off valve location	Electric disconnect location	Chemical name	Quantity	Location

Facility:

Hydrants			Utilities		Chemicals stored		
Location	Pressure	Flow	Shut-off valve location	Electric disconnect location	Chemical name	Quantity	Location

Diagram of evacuation routes, shut-off valve and electrical disconnect locations

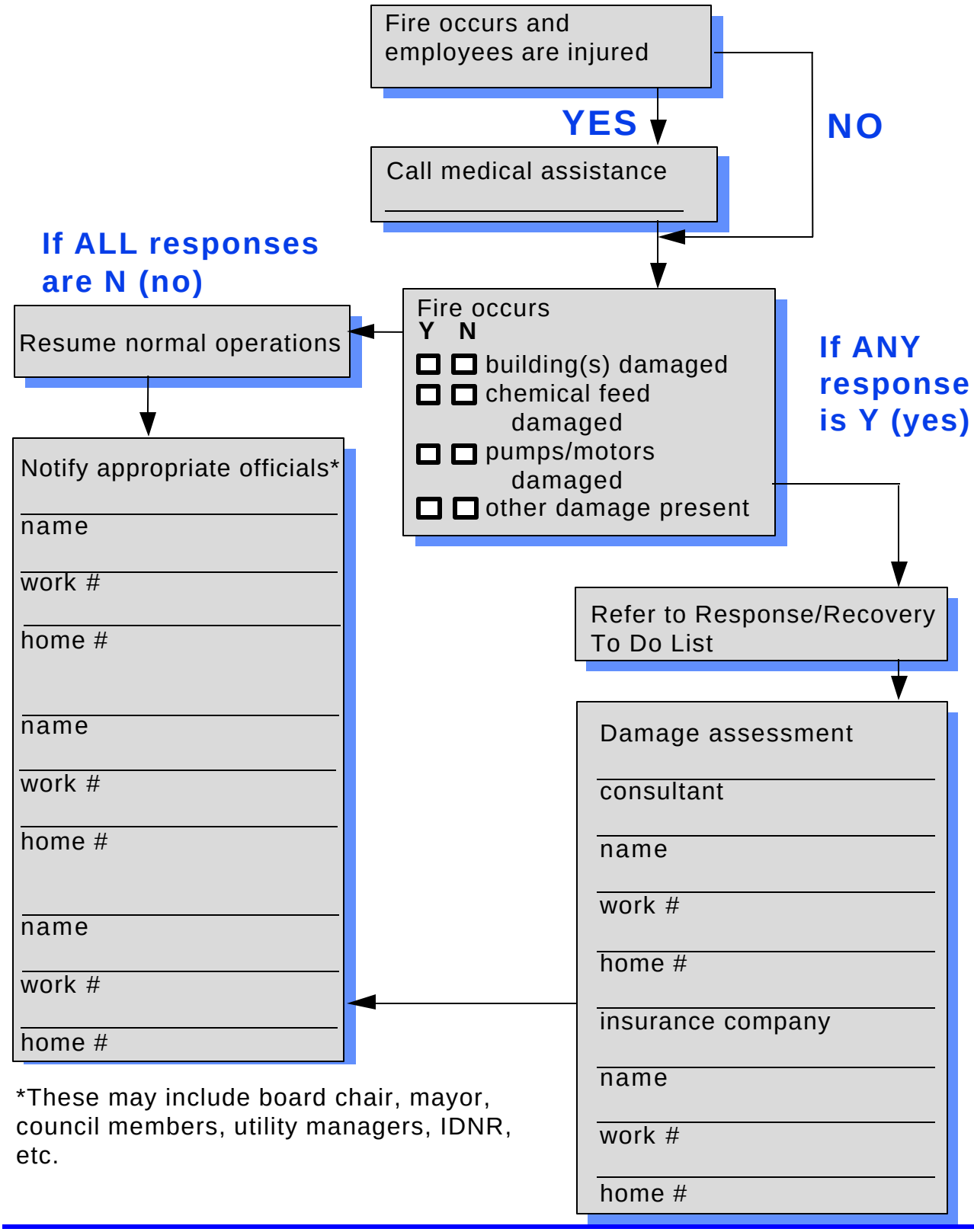


CAUTION

burn hazard

WHEN A FIRE ALARM SOUNDS OR A FIRE IS OBSERVED, NOTIFY OTHER BUILDING OCCUPANTS AND EVACUATE THE BUILDING IMMEDIATELY. REMAIN AT A SAFE DISTANCE AND DOWNWIND FROM THE FIRE. DO NOT ATTEMPT TO PUT THE FIRE OUT OR GO BACK INTO THE BUILDING UNLESS IT IS DEEMED SAFE TO DO SO.

REMEMBER SAFETY FIRST



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Fire & Explosion

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Flood

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- What is the history of flooding in your area?
- What is the elevation of your facility in relation to stream and river levels?
- What is the elevation of the top of the well casing and how do you protect the well if it is in the flood plain?
- Is power source located in the flood plain and what measures are in place to protect it?
- Does staff know where to shut off power to each facility in the event the facilities are flooded?
- What equipment and materials (i.e. sand, sandbags, sump pumps) are needed to protect your facilities? At what water level are these operations required?
- Do you know the location, type and number of turns for critical isolation valves in the flood plain? How will they be operated during high water?
- How will chemicals and other supplies be delivered to your utility in a flood?
- Are there underground tanks in the flood plain that will need to be filled to prevent tank damage from flotation?
- Do you know what people are available to assist you with flood recovery?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Flood

If flooding is predicted following heavy thunderstorms or winter snow thaws, flood elevations should be monitored with the assistance of the sheriff/police and the National Weather Service. Constant monitoring of river or stream elevations will determine the procedures necessary to take for protection of property and personnel. In preparation for a flood, protection of facilities and equipment should begin early. All records and equipment, which can be moved, should be relocated to a higher location if they risk being flooded. Equipment and materials needed to combat flooding should be brought to the site.

In the *Rivers/Streams* section, record the rivers/streams that can flood on-site facilities and known flood stages for each.

In the *Monitoring* section, list the location of the monitoring device and method of monitoring (telephone and number, manual read, etc.).

In the *Structures* section, list the facilities that are in the flood plain and the known elevations, and list if they have sump pumps that need monitoring for high groundwater.

In the *Telephone numbers* section, fill in the telephone numbers of the agencies listed.

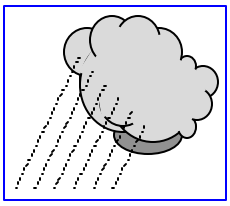
In the *Mobilization* section, list the people who would be notified to assist in protective measures, such as sandbagging operations or moving equipment and supplies to a safe area, and so on. The *Task assignment* section is to be filled in with the protective measure tasks assigned to that individual or group.

The *Critical valves* section is to be used to list the valves that would need to be operated during flooding conditions. These may be located near rivers or streams.

In the *Location of facilities and valve locations* section, draw in the river or streams that are prone to flooding, and draw in the facilities that would be affected by the flooding. Also include the major isolation valves.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.

Emergency Response Sheet



Flood

Rivers/streams		Monitoring	
Name	Flood stage	Site	Method

Structures			Telephone numbers	
Location	Elevation	Sump pump	National Weather Service	
		❑Yes ❑No	USGS	
		❑Yes ❑No	Corps of Engineers	

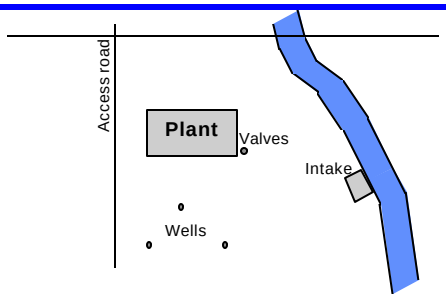
Mobilization

Name	Home	Office	Task assignment

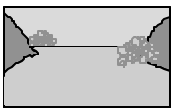
Critical valves

Location	Type	Number of turns	Direction of turns

Location of facilities and valve locations



CAUTION



flood hazard

FLOOD WATERS ARE EXTREMELY DANGEROUS BECAUSE OF STRONG CURRENTS AND DEBRIS. USE EXTREME CAUTION WHEN ENTERING FLOOD WATER.

REMEMBER SAFETY FIRST

Flooding is imminent

Y	N	
☐	☐	pumps in danger
☐	☐	wells in danger
☐	☐	power supply in danger
☐	☐	water mains in danger
☐	☐	chemical supply in danger

If ANY response is Y (yes)

Refer to Response/Recovery To Do List

Protective measures

electrician

work # home #

chemical supplier

work # home #

plumber

work # home #

consultant

work # home #

Damage assessment

County Emergency Coordinator

work #

home #

mutual aid agency(ies)

work #

home #

insurance company

work #

home #

If ALL responses are N (no)

Refer to Response/Recovery To Do List

Notify appropriate officials*

name

work #

home #

name

work #

home #

name

work #

home #

*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Flood

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Hazardous Chemical Spill

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- Has the staff been trained in the proper use and hazard of each chemical?
- Is each facility identified as to the types of chemicals stored?
- Is there a facility layout sketch that shows where the chemicals are stored, including quantities?
- Does your utility or community have spill response equipment?
- Has the fire department been briefed on the types and quantities stored, and do they have a sketch of facilities?
- Is there a spill response program in place? Has staff been trained on how to respond to a spill?
- How is your utility notified if a chemical spill occurs?
- Do you know the hazardous chemicals used in your community which could pose a threat to your utility?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Hazardous Chemical Spill

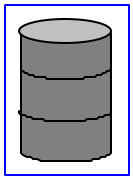
A chemical spill does not have to occur on-site to pose a threat to your utility. You need to be aware of the transportation routes and businesses that are adjacent to or near your facilities. When an on-site spill occurs, identify the substance and quantity without endangering employee health and safety.

In the *Telephone number* section, enter the telephone numbers for the fire department, the sheriff/police, and the County Emergency Coordinator. Also, the Iowa Department of Natural Resources needs to be notified in the event of a spill. The National Response Center is a federal agency that can provide assistance. Chemtrec is a private agency that can provide technical information regarding chemical handling.

In the *Chemicals in use* section, list the chemicals on hand, their location, quantity, hazard potential, the type of personal protection equipment required and any special instructions regarding those specific chemicals.

In the *Chemical locations* section, diagram where your chemicals are stored, what they are, and how much of each is stored there.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



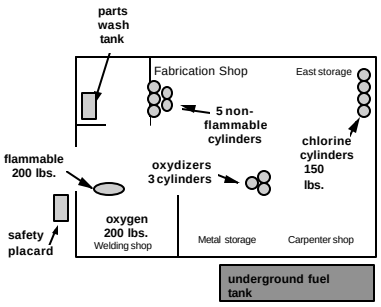
Hazardous Chemical Spill

Telephone numbers		
Fire department	Sheriff/Police	County Emergency Coordinator
IDNR	National Response Center	Chemtrec
515-281-8694	1-800-424-8802	1-800-424-9300

Chemicals in use

Chemical	Location	Type of storage	Potential type of release	Personal protective equipment recommended	Special instructions

Chemical locations

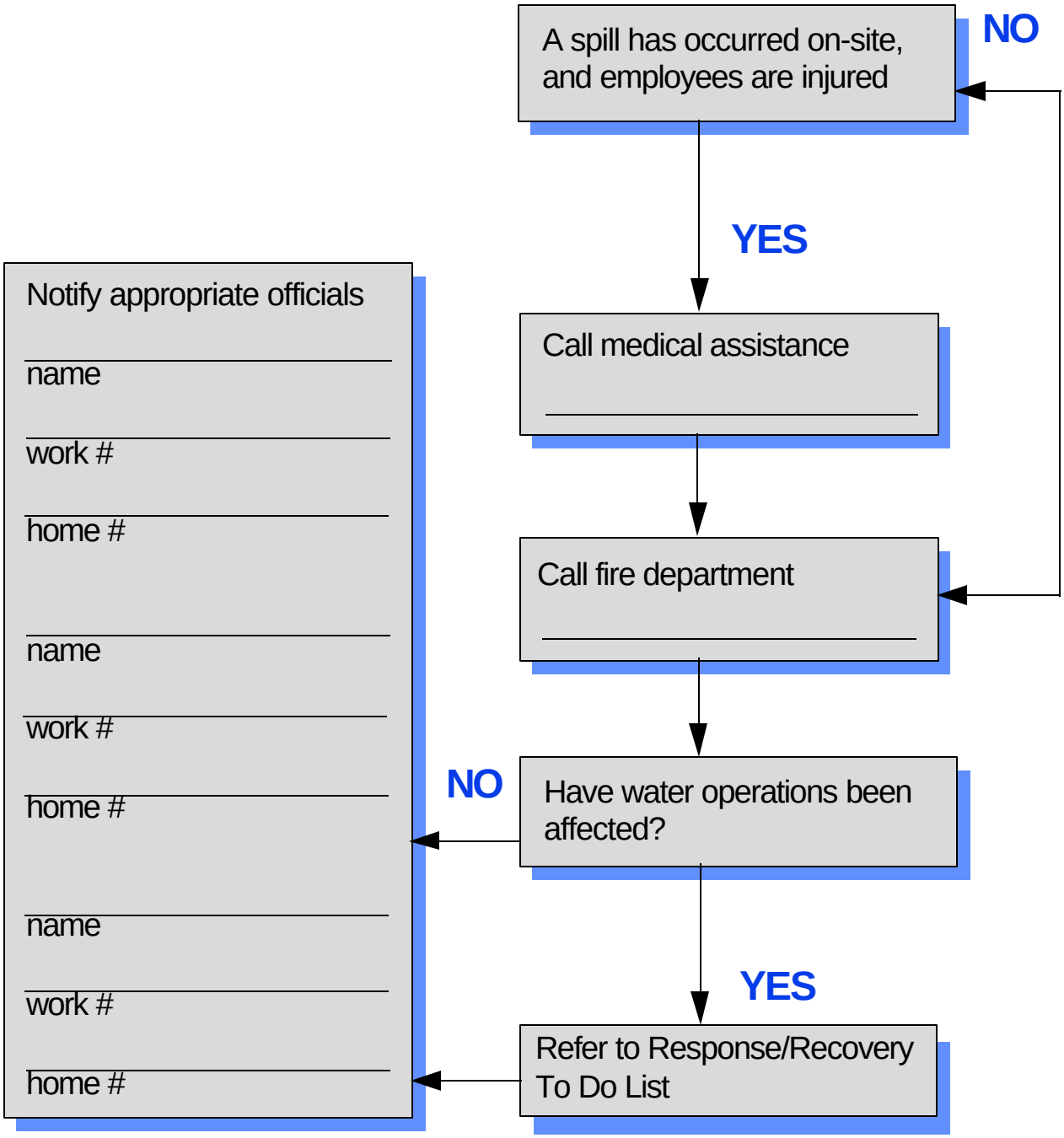


CAUTION

chemical hazard

AS A RESULT OF A SPILL, TOXIC VAPORS OR GASES COULD BE GENERATED. STAFF SHOULD MOVE UPWIND TO AWAIT FURTHER INSTRUCTIONS AFTER NOTIFICATION OF APPROPRIATE PERSONNEL. DO NOT ATTEMPT TO CONTAIN THE SPILL IF YOU ARE NOT QUALIFIED TO DO SO.

REMEMBER SAFETY FIRST



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Hazardous Chemical Spill

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Medical

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- Are first aid kits installed in facilities and equipment?
- Are staff trained in first aid/CPR?
- Does your staff know to provide the following information when calling for medical assistance:
  1. Location of facility (name and address).
  2. Phone number from which the call is being made.
  3. Type of emergency (fire, medical, chemical, vehicular).
  4. Extent of emergency.
  5. Do not hang up first; let the person you called hang up first.
- Have you identified a list of your utility's confined spaces and potential hazards, and depth at entry?
- Do you know if confined space has a "Confined Space Entry" permit?
- Have personnel been trained in confined space entry?
- Are you aware of the OSHA reporting guidelines in the event of a fatality or multiple hospitalization incident?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Medical

When a medical emergency arises it is very important that your response does not further endanger the victim or yourself. Do not administer first aid or CPR unless you have been properly trained. Only move the victim if a life-threatening situation exists. Unnecessary movement could result in increased severity of the injuries.

In the *Telephone numbers* section, determine whether your utility is located within the 911 emergency access area. If it is not, fill in the appropriate telephone number for fire (medical response), ambulance and IOSHA.

In the *Worker's compensation* section, record your utility's worker's compensation carrier and agent, and the agent's work and home phone numbers.

In the *Confined space* section, list confined spaces at your utility, their potential hazards, depth, and the size of the access opening. Also indicate if the confined space is permitted or non-permitted. Permitted confined space means that unremoveable hazards are present (hazards can be atmosphere, moving machinery, and converging walls, etc.). At least two people with proper equipment must be available before entry. Non-permitted confined space means that hazards do not exist or are controlled before entry.

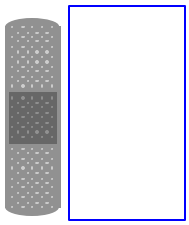
In the C*hemicals* section, list the type and location of each chemical stored in your facilities.

Use the *Family notification* section to list who should be contacted in case of a medical emergency.

In the *First aid kit and confined space locations* section, detail where first aid kits and confined spaces are located.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.

Emergency Response Sheet



Medical

Telephone numbers		
Fire	Ambulance	IOSHA
911 OR	911 OR	1-800-562-4692 OR 1-515-281-5668

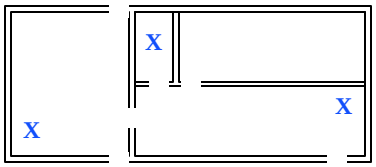
Worker's compensation			
Name of company	Agent's name	Work phone number	Home phone number

Confined space				
Location	Potential hazard	Depth	Access size	Permitted/Non-permitted
				❑Permitted ❑Non-permitted
				❑Permitted ❑Non-permitted
				❑Permitted ❑Non-permitted
				❑Permitted ❑Non-permitted

Chemicals			
Name	Location	Name	Location

Family notification			
Employee name	Contact	Telephone	Address

First aid kit and confined space locations



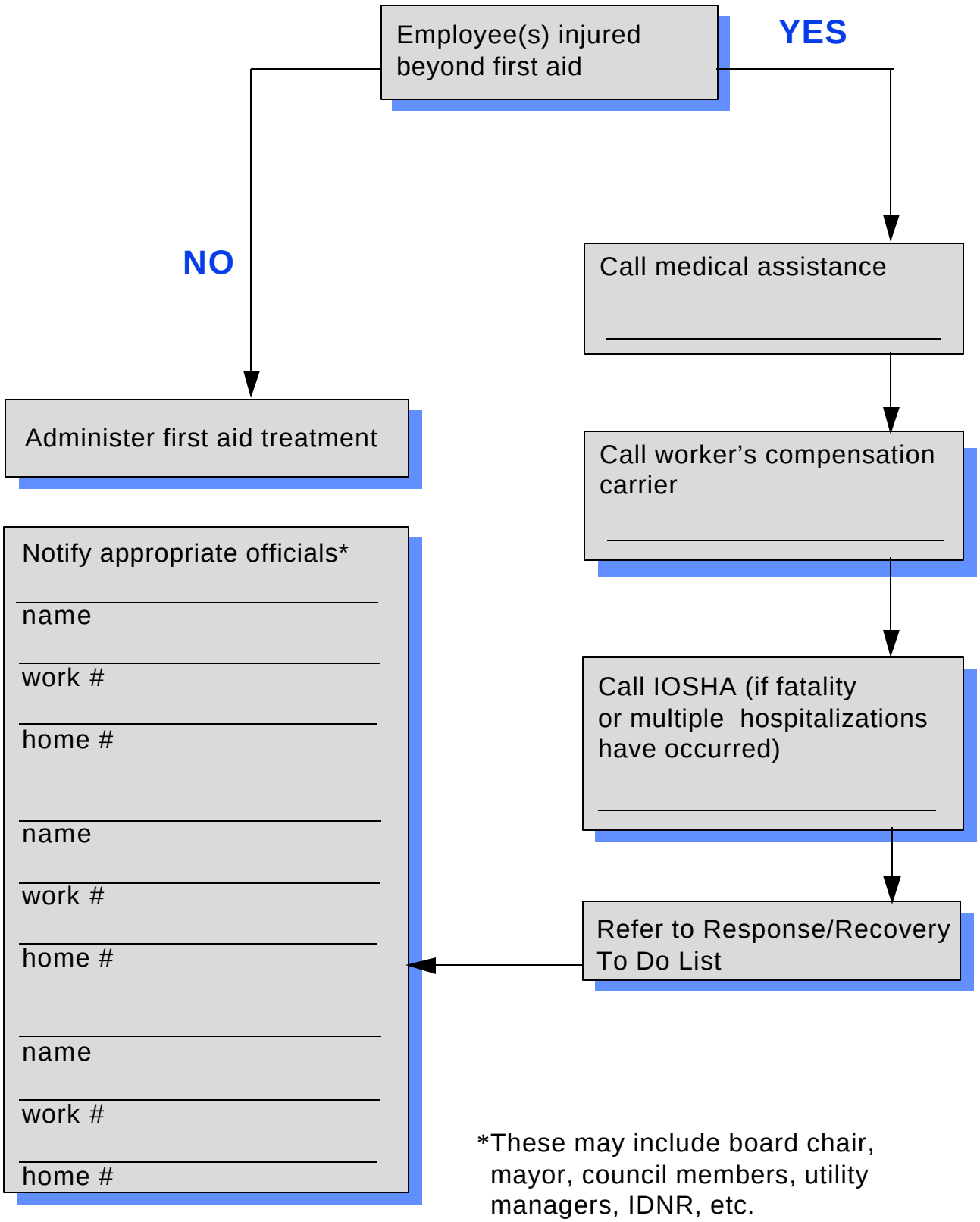
CAUTION

confined space

GET OR HAVE OTHERS GET MEDICAL ASSISTANCE TO THE SCENE. PROTECT YOURSELF FROM BLOODBORNE PATHOGENS.

IF THE PERSON IS IN A CONFINED SPACE, DO NOT ENTER THE SPACE TO PERFORM UNASSISTED INTERNAL RESCUE.

REMEMBER SAFETY FIRST



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Medical

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Personnel Succession

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- Does your utility have a mutual aid agreement for personnel support?
- Is someone in the community cross-trained and evaluated as an operator?
- What is the telephone and address of the newspaper for personnel recruitment?
- Does the IDNR have a list of eligible candidates who can be recruited?
- Is there a local plumber or contractor available who can provide temporary manpower assistance?
- Will the contracted laboratory provide temporary testing and sampling assistance?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

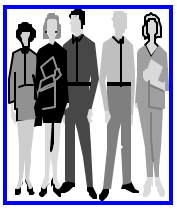
Personnel Succession

By law, a water utility must be operated by a certified operator. In the event of staff termination, a replacement needs to be found immediately. Cross-training among staff members can help to alleviate some of the problems caused when an operator leaves your utility.

In the *Mutual aid* section list organizations that can assist you by providing qualified personnel.

In the *Services* section, list newspapers where advertisements can be placed, laboratories where you can contract for sampling and testing services and plumbers, contractors, etc. who can provide you with temporary assistance.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



Personnel Succession

Mutual aid			
Name	Utility	Telephone	After-hours telephone

Services				
Services provided	Name	Company	Telephone	After-hours

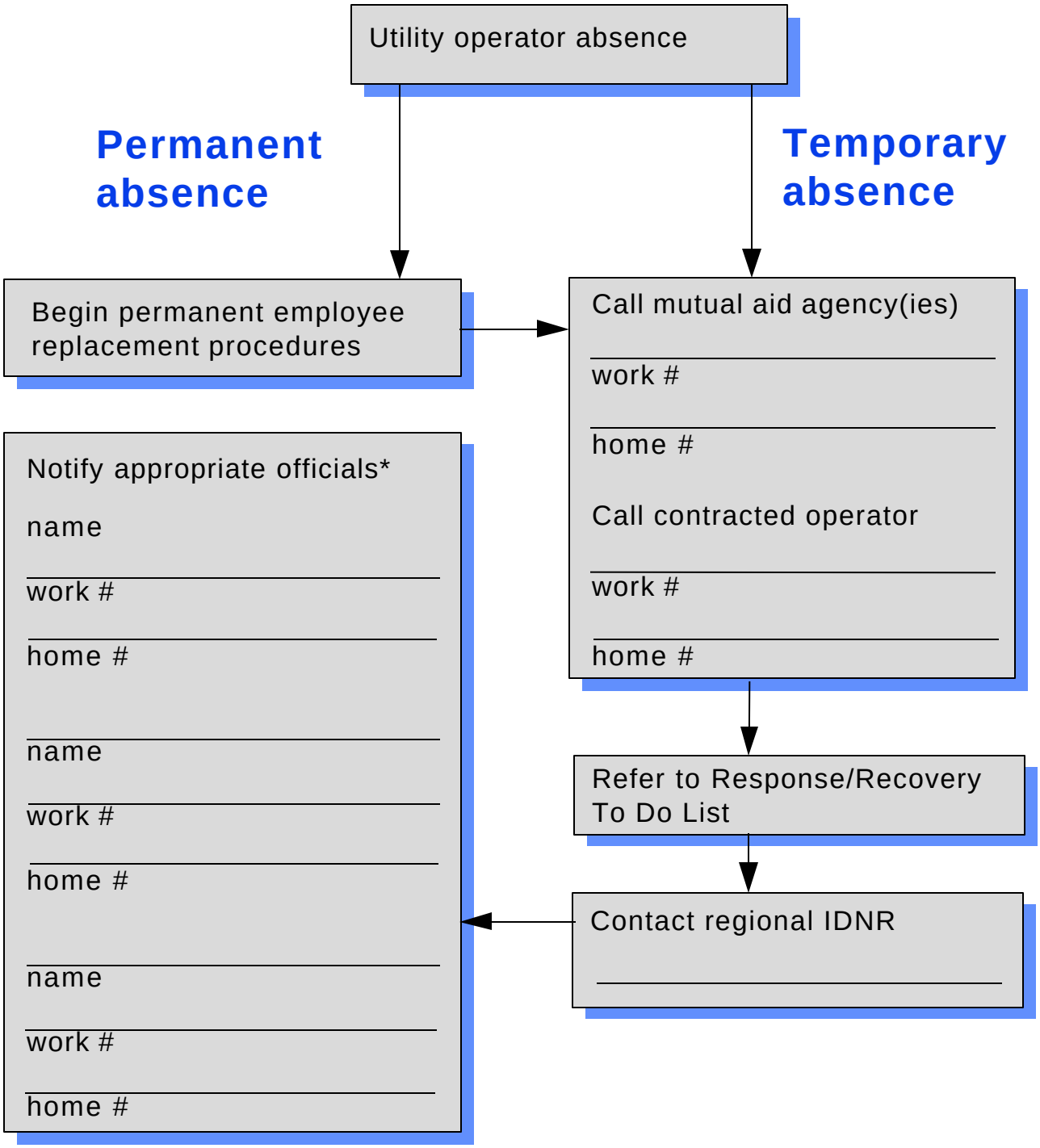
Organizational chart	Operator in charge grade required
	Shift operator grade required

CAUTION

WHEN EMPLOYEES NEED TO BE REPLACED, BE SURE YOUR TEMPORARY OR PERMANENT REPLACEMENT EMPLOYEES HAVE THE NECESSARY QUALIFICATIONS AND LICENSES, IN ORDER TO KEEP THE PUBLIC WATER SUPPLY SAFE.

REMEMBER SAFETY FIRST

necessary licensing



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Personnel Succession

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Thunderstorm & Tornado

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- What notification procedures are in place for alerting the community of severe weather? Who initiates the alarm? How is your utility notified?
- Where is the activation alarm located?
- What procedures are used to notify employees of severe weather conditions?
- Where are the designated "safe" shelter areas in your facility? Interior rooms and hallways away located on the lowest level, away from windows, equipment or hazardous materials, are best.
- Are there employees trained who can administer first aid? Who will call for medical assistance if required?
- How will existing weather conditions be monitored? Is scanner or weather radio equipment available?
- Do all personnel know the difference between a "watch" and a "warning" condition?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Thunderstorm & Tornado

When notified of a severe thunderstorm, all employees should seek the nearest protected area. Protected areas could consist of a vehicle, a building or any sound structure that would protect the employee from the elements.

In a tornado warning situation, once the Civil Defense Alarms are sounded, the employee should seek the nearest available public shelter and exit all vehicles.

In the *Employee notification* section, list the procedures to follow when the severe weather alarm is sounded.

In the *Telephone numbers* section, list the agencies and their telephone numbers that can provide direct forecasts.

In the *Diagram of shelter areas* section, draw a sketch of your facility and showing the shelter areas are.

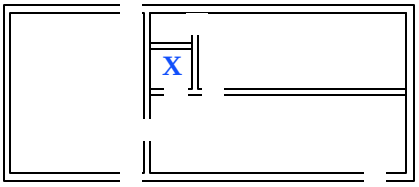
The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.

Thunderstorm & Tornado

Employee notification		
Thunderstorm warning	Tornado watch	Tornado warning

Telephone numbers			
National Weather Service		Sheriff/Police	

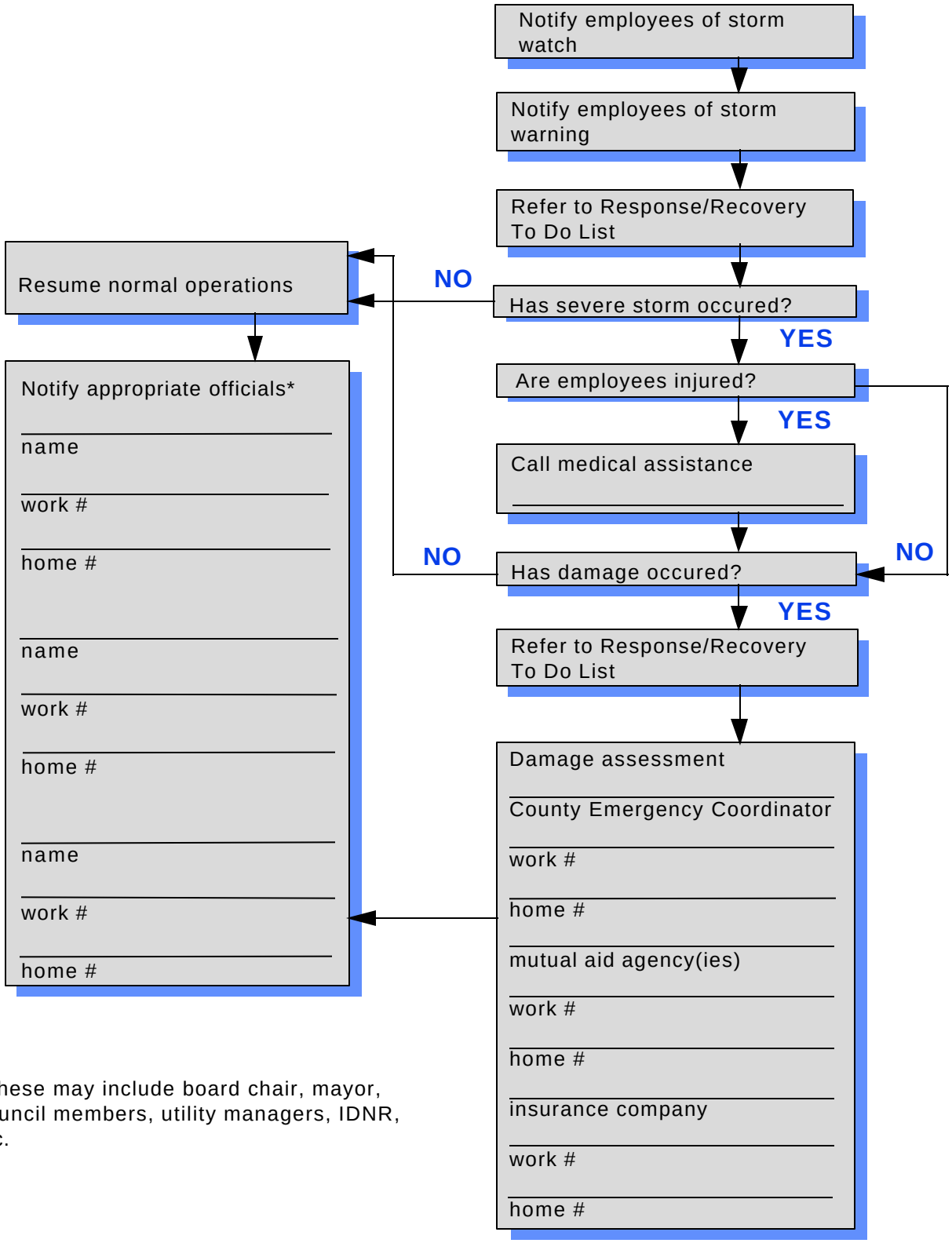
Diagram of shelter areas



CAUTION

THUNDERSTORMS AND TORNADOES CAN CAUSE INJURY AND DAMAGE FACILITIES. STAY TUNED TO WEATHER CONDITIONS DURING SEVERE WEATHER INCIDENTS. WHEN A TORNADO WARNING IS SOUNDED, PROCEED TO THE NEAREST SHELTER AREA. STAY IN THE SHELTER AREA UNTIL THE **ALL CLEAR SIGNAL** IS GIVEN.

Trouble Shooting Guide



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Thunderstorm & Tornado

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Water Contamination

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- Is there a public notification plan?
- Do you have a listing of all major highways and railways in your area?
- Is there a list of your utility's treated water quality information?
- Is there a list of alternate sources of treated water?
- Is staff trained in the proper techniques of providing quality water in case of a contaminated water situation?
- Do you have a list of water haulers?
- Have you made mutual aid agreements with any neighboring communities?
- Are you aware of possible contaminants in the surrounding area that influence the quality of your raw water source(s)?
- Do you have a list of water sampling and testing laboratories?
- Is your staff trained in proper sampling and testing techniques?
- Does your staff have an understanding of what needs to be done if your water storage or distribution systems become contaminated?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Water Contamination

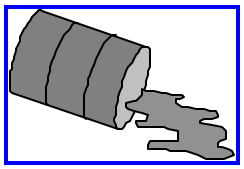
The first step in analyzing the quality of the water being delivered to your customers is the collection of samples. The selection of representative sample points within the distribution system is an important initial step in developing a program that will accurately reflect water quality and identify sources of contamination. One of the most common causes of error in water quality analysis is improper sampling. If you are uncertain of the agencies that should be on the list, call your regional IDNR representative.

In the *Public notification* section, list those agencies that need to be alerted of any health risks related to water contamination. This includes the regional IDNR office. It may also include an independent laboratory, contracted to conduct sampling and testing. Include their telephone, after-hours telephone, and fax numbers for these agencies.

In the *Media* section, list local media agencies, their contact person, and telephone and fax numbers.

Check the *EPA public notification guidelines* section to ensure your water quality statistics comply with the standards established by the EPA.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



Water Contamination

Public notification				
Contact person	Agency	Telephone	After-hours telephone	Fax
	Regional Iowa Department of Natural Resources			
	Laboratory			
	Iowa Department of Public Health			
	County Department of Public Health	(515) 281-4933	(515) 247-1732 (pager)	

Media				
Contact person	Company	Telephone	After-hours telephone	Fax

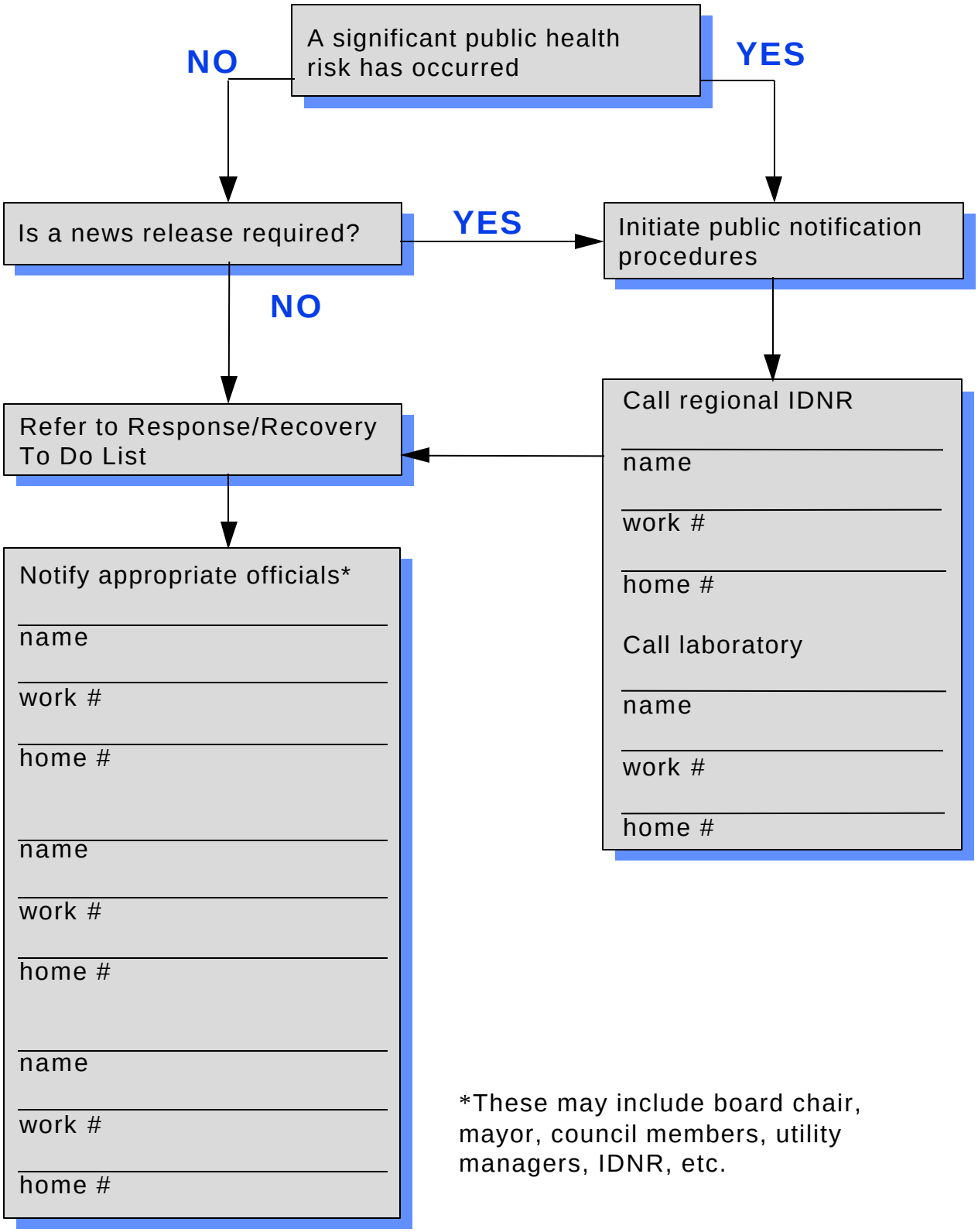
EPA public notification guidelines			
Violation category	Type	Notice must be given within*	Frequency of notice
Tier 1 1. Failure to comply with a Maximum Contaminant Level (MCL)	Newspaper	14 days	No repeat
2. Failure to comply with a treatment technique requirement established in lieu of an MCL	Mail or hand deliver	45 days	Quarterly (as long as violation continues
3. Failure to comply with a schedule prescribed under variance or exemption			
Tier 2 1. Failure to comply with monitoring requirements 2. Failure to comply with specified testing procedures 3. Operating under a variance or an exemption	Newspaper	3 months	Quarterly; but only by mail or hand delivery as long as violation continues

* Radio and television stations must be notified within 72 hours if an MCL violation poses an acute (immediate) health risk.

CAUTION ANY WATER CONTAMINATION SITUATION SHOULD BE TAKEN SERIOUSLY. PEOPLE CAN BECOME SICK, OR EVEN DIE.

health hazard

REMEMBER SAFETY FIRST



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Water Contamination

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Water Main Break

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- What is the size and location of water storage tanks for your community? (List size, location, and valve location.) What is the normal water level in each storage tank?
- How long can you serve customers from storage alone?
- Where are pump stations and wells located? (List size and valve location.)
- What are the normal discharge pressures at the pump station(s)?
- What is the size, depth, and location of critical water mains?
- Where are the critical valves located? What is the valve type, number, and direction of required turns?
- What types of repair parts are in stock or locally available?
- Where can repair parts be obtained that are not available locally?
- Is a periodic valve and hydrant operation program in place to insure proper operation?
- Is the distribution map part of the emergency plan?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Water Main Break

When a water main has failed, isolation of the break is important to maintain water capacity in the water storage facilities and to minimize the risk of water contamination in the distribution system. Information concerning the size of mains, pipe materials, valve locations, valve sizes, number of turns and direction to operate valves, and location of nearby hydrants is essential for recovery procedures. To begin, notify ONE-CALL and then initiate repair activities. Notify major customers affected by the main break and implement conservation measures if needed.

In the section titled *Critical water mains*, list the location, size, and water pressure that is maintained for the various water mains in the distribution system. This information can be used to compare significant drops in water pressure. (Note: pressure at the plant and/or water level in the storage tank may be the only data available to monitor changes in pressure and indicate a possible main break.)

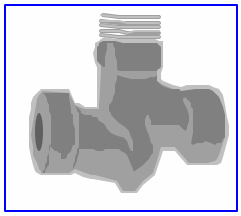
In the *Customers on critical main(s) s*ection, list the name, address and telephone number of the user on the critical mains listed to the left. This information will be needed if the water main break has an impact on their operations. Critical customers may include hospitals, health care facilities, or large commercial or industrial customers.

In the *Water storage facilities* section, list the location and capacity of each water storage facility. Capacity should reflect the number of gallons that can be stored in the storage facility. Also identify the type of water storage facility, whether it is above ground, elevated tank, etc.

In the *Critical valves* section, list the location, size, the number and direction of turns needed to operate the valve(s) in order to isolate a water main break.

In the *Diagram of distribution system* section, make a note to refer to the map(s) of your distribution system. List the map(s) that you have included in your emergency plan.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



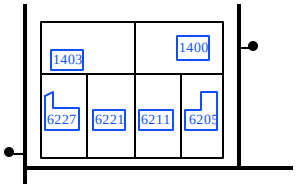
Water Main Break

Critical water mains			Customers on critical main(s)		
Street	Size	Pressure	Name	Address	Telephone number

Water storage facilities			Critical valves			
Location	Capacity (gallons)	Type	Location	Size	# of turns	Direction of turn

Diagram of distribution system

Refer to distribution map(s) in this plan, listed below:

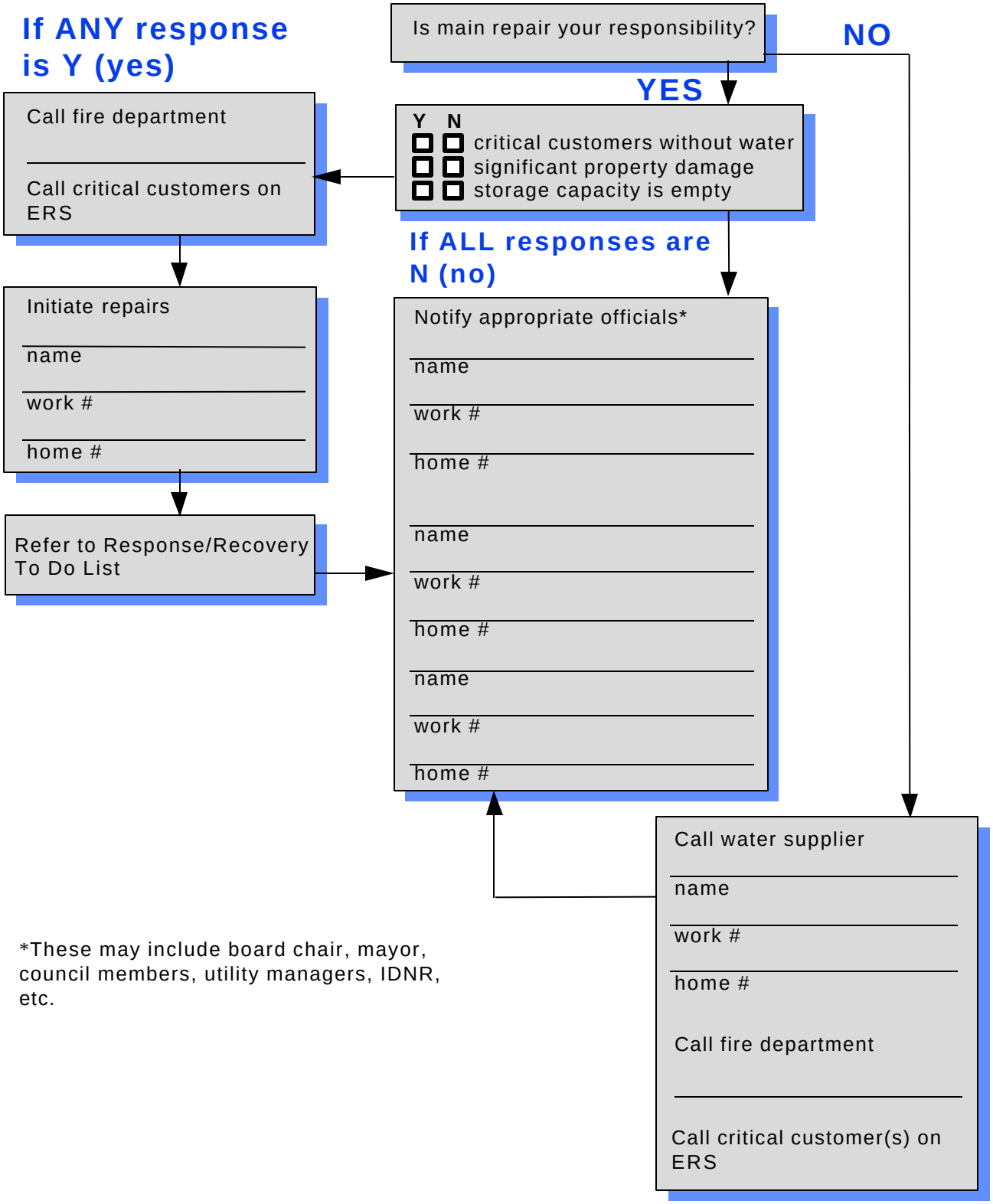


CAUTION

cave-in hazard

A MAJOR WATER MAIN BREAK CAN CAUSE SUBSTANTIAL DAMAGE. PROTECT PROPERTY WHEN POSSIBLE. DO NOT ENTER FLOODED BASEMENTS AND OTHER FACILITIES BECAUSE OF THE RISK OF ELECTRIC SHOCK AND LEAKING NATURAL GAS.

REMEMBER SAFETY FIRST



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Water Main Break

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Water Shortage

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete and ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- What are the alternate raw water source options?
- What is the storage capacity of these sources?
- What well/stream level indicates low water source?
- What other finished water supplies are available?
- What conditions of supply and demand indicate a water shortage?
- Is there a conservation plan that addresses water shortage conditions as required by state law?
- What are the critical water user demands?
- Is the minimum flow rate achievable through water conservation?
- What well or stream level is critical for meeting normal water demand?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

Water Shortage

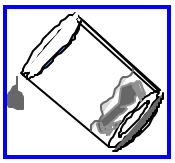
A water shortage can occur due to changes in climate and equipment failure. Not being able to provide an adequate supply of water to your customers can have an impact on their daily lives and on business operations. In these instances, public safety and the health of your customers is most important.

In the *County Emergency Coordinator* section, enter the name of the contact person, and list the name of the agency, telephone and fax numbers for the Emergency Coordinator in the county in which your utility is located.

In the *Media* section, list the name of the person to contact, the name of the company, and the telephone and fax numbers used for public information notification.

In the *Conservation plan* section, list the steps your utility will take to take care of the shortage.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



Water Shortage

County Emergency Coordinator				
Contact person	Agency	Telephone	After-hours telephone	Fax
Media				
Contact person	Company	Telephone	After-hours telephone	Fax

Conservation plan (as outlined in Code of Iowa 455B.266)

Suspend or restrict usage of water by category of use on a local or state-wide basis in the following order:

1) Water conveyed across state boundaries.
2) Uses of water primarily for recreational or aesthetic purposes.
3) Uses of water for the irrigation of hay, corn, soybeans, oats, grain sorghum or wheat.
4) Uses of water for the irrigation of crops other than hay, corn, soybeans, oats, grain sorghum or wheat.
5) Uses of water for manufacturing or other industrial processes.
6) Uses of water for generation of electrical power for public consumption.
7) Uses of water for livestock production.
8) Uses of water for human consumption and sanitation supplied by rural water districts, municipal water systems, or other public water supplies as defined in section 455B.171 of the Code of Iowa.
9) Uses of water for human consumption and sanitation supplied by a private water supply as defined in section 455B.171 of the Code of Iowa.

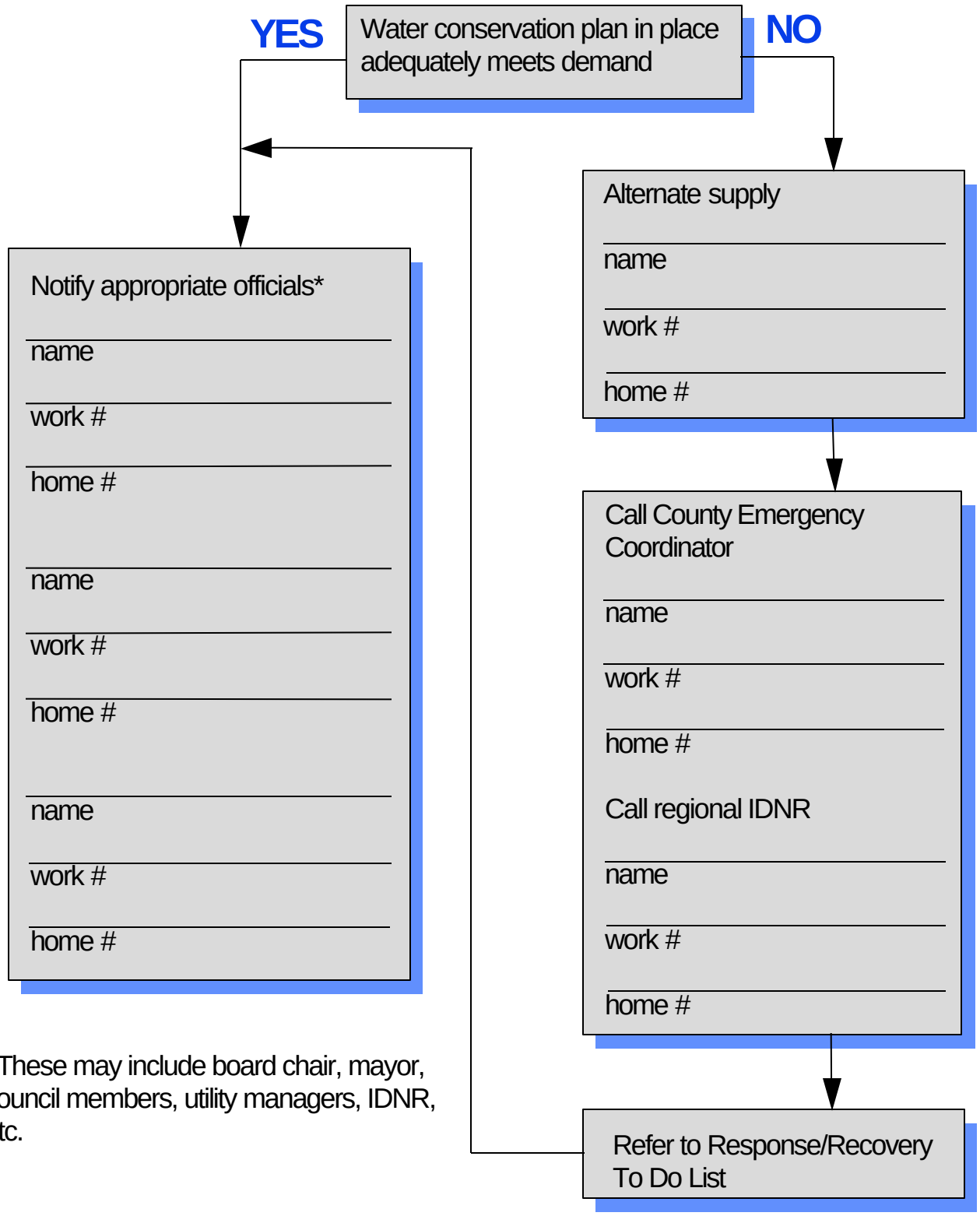
Attach your utility's conservation plan

CAUTION

DURING TIME OF WATER SHORTAGE, CONTACT YOUR FIRE DEPARTMENT AND KEEP THEM UPDATED ON THE SITUATION.

REMEMBER SAFETY FIRST

fire hazard



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Water Shortage

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Water Tower Icing

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- What steps can be taken to ensure the water continues to move in the tank?
- Will increasing the variation in the water level keep the water from freezing?
- Are water levels adjusted for winter capacity?
- If icing occurs, what process and equipment will be needed to melt the ice?
- Are storage tanks regularly inspected for internal and external wall damage, chipped or peeling paint, changes to cathodic protection, damage to ladders, damage to riser pipe, or damage to the overflow pipe inside of the tank?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

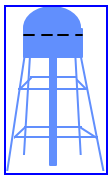
Water Tower Icing

Freezing water in water storage tanks can be a serious problem. Freezing is more likely in systems using surface water sources. However, groundwater supplies can also experience icing problems in storage tanks during very cold weather.

In the *Elevated water storage information* section, list the manufacturer, tank capacity, and winter and summer water level settings. Also, list the location of the tower sensor elevation, its location and overflow elevation.

In the *Location of elevated tank(s)* section, diagram the location of your storage tank(s) in your distribution system.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



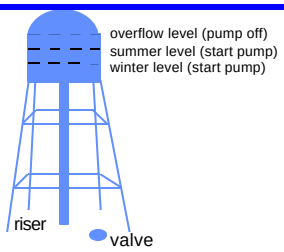
Water Tower Icing

Telephone Numbers			
Fire department	911 OR	Sheriff/Police	911 OR

Elevated water storage information			
Tower information	Tower #1	Tower #2	Tower #3
Manufacturer			
Capacity			
Water level settings	winter summer	winter summer	winter summer
Sensor elevation			
Sensor location			
Overflow elevation			

Elevated water storage information			
Tower information	Tower #4	Tower #5	Tower #6
Manufacturer			
Capacity			
Water level settings	winter summer	winter summer	winter summer
Sensor elevation			
Sensor location			
Overflow elevation			

Location of elevated tank(s)

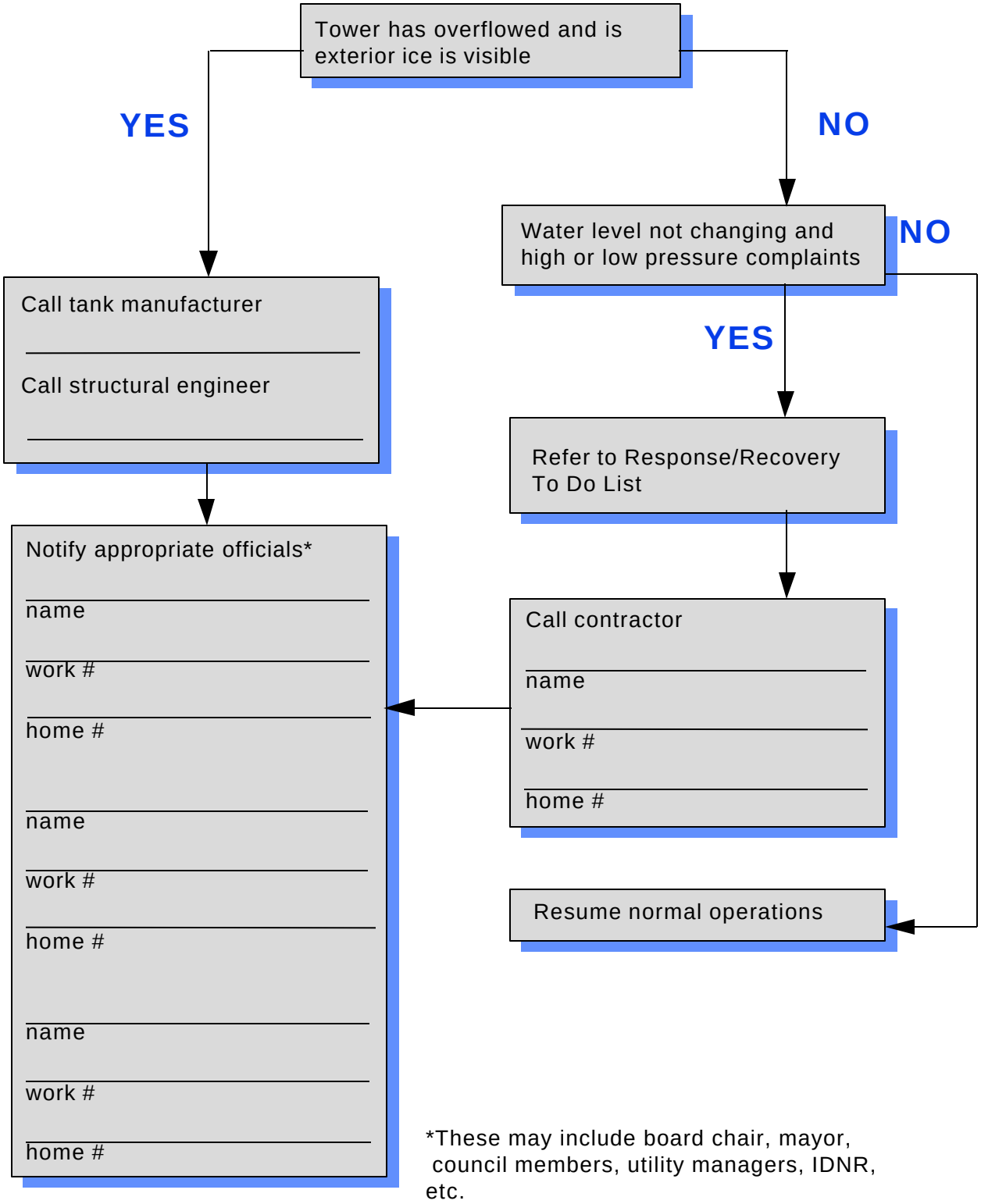


CAUTION

freezing hazard

TO REDUCE THE RISK OF INJURY, DO NOT ATTEMPT TO CLIMB ELEVATED TANKS WITHOUT THE APPROPRIATE SAFETY EQUIPMENT. IF HEAVILY LOADED WITH EXTERIOR ICE, STRUCTURAL FAILURE COULD BE A RISK.

REMEMBER SAFETY FIRST


Tower has overflowed and is exterior ice is visible
YES
NO
Water level not changing and high or low pressure complaints
NO
YES
Call tank manufacturer
Call structural engineer
Refer to Response/Recovery To Do List
Notify appropriate officials*
name
work #
home #
name
work #
home #
name
work #
home #
Call contractor
name
work #
home #
Resume normal operations
*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Water Tower Icing

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Things to Consider Before an Emergency

Workplace Violence

To reduce your water utility's exposure in an emergency, use the following suggestions and complete the ***Mitigation To Do List***. To further decrease your utility's vulnerability, complete an ***Emergency Response Sheet***, ***Trouble Shooting Guide*** and ***Response/Recovery To Do List*** for each specific emergency.

- What security measures are in place to deter violent acts?
- Have you talked with local law officials about violent acts or what constitutes workplace violence?
- Can local law enforcement agencies assist in developing security measures for violent threats?
- Is there a communication process to alert others if there is a threat of violent behavior?
- Do you know the warning signs of potentially violent employees and customers?
- What utility assets need to be protected?
- What are the priorities for providing protection of these assets?
- How fast can your utility respond to a violent act?
- Is there written policy that clearly communicates how threats will be handled?
- Has telephone training been provided for irate callers?
- Are you contracting with an agency for employee counseling and mediation services?

Mitigation To Do List

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Emergency Response Sheet Instructions

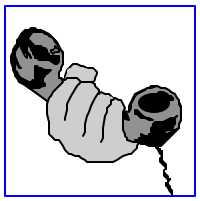
Workplace Violence

Incidents of workplace violence may include kidnapping, robbery, theft, and physical assault involving a co-worker or customer. In extreme cases, assassinations or arson can occur.

In the *Telephone numbers* section, determine whether your utility is located within the 911 emergency access area. If it is not, fill in the appropriate telephone number for the sheriff, police, fire and ambulance departments for your area.

Review the *Early warning signals* section for helpful information.

The ***Trouble Shooting Guide*** is located on the back of the ***Emergency Response Sheet*** and is designed to assist you in preparing your first plan of action.



Workplace Violence

Telephone numbers			
Sheriff	**Police**	**Fire**	**Ambulance**
911 OR	911 OR	911 OR	911 OR

Early warning signals

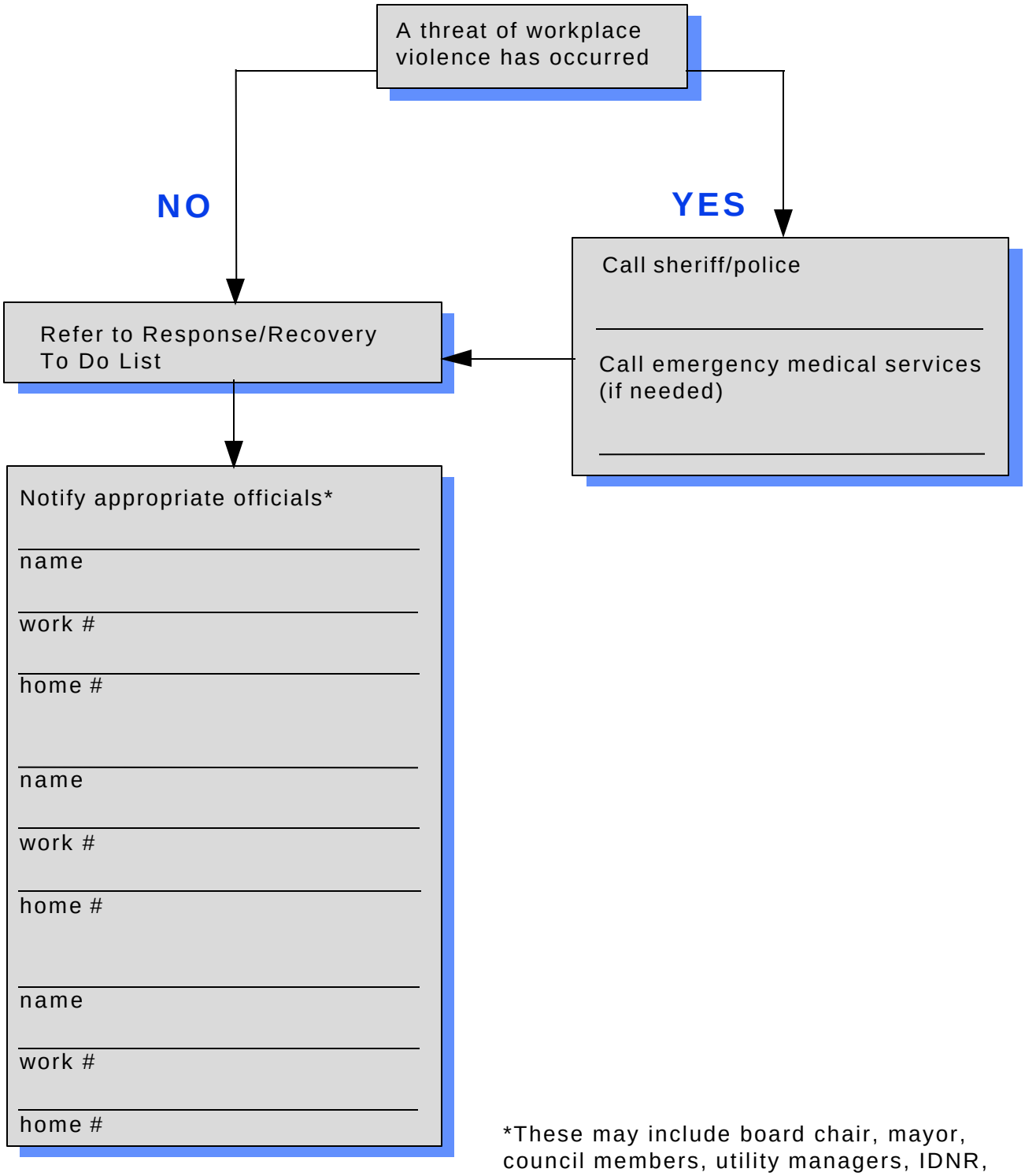
- Direct or veiled verbal threats of harm.
- Intimidation of others. (This can be physical or verbal intimidation. Harassing phone calls and stalking are obvious examples.)
- Carrying a concealed weapon or flashing a weapon to test reactions.
- Paranoid behavior. Perceiving that everyone is against them.
- Moral righteousness and believing the organization is not following the rules and procedures.
- Unable to take criticism of job performance. Holds a grudge, especially against a supervisor. Often verbalizes hope for something to happen to the person against whom the employee has the grudge.
- Expression of extreme desperation over recent family, financial, or personal problems.
- History of violent behavior.
- Extreme interest in semi-automatic weapons and their destructive power to people.
- Fascination with incidents of workplace violence and approval of the use of violence under similar circumstances.
- Disregard for the safety of co-workers.
- Obsessive involvement with the job, often uneven job performance and no apparent outside interests.
- Being a loner who has a romantic obsession with a co-worker who does not share this interest.

CAUTION

personal safety hazard

WHEN A THREAT IS MADE, TAKE IT SERIOUSLY AND CONTACT PROPER AUTHORITIES.

REMEMBER SAFETY FIRST



*These may include board chair, mayor, council members, utility managers, IDNR, etc.

Response/Recovery To Do List

Workplace Violence

Required Action:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____

Comments:

Planning Emergency Response Training

Training in emergency preparedness cannot be taken for granted. In emergency situations, people don't always react or think clearly; having experienced "dry-runs" or some other type of advanced exposure to likely emergencies will help to minimize confusion in a real emergency. Through training, people will have the opportunity to go through thought processes and form habits that can be followed when immediate responses are required.

By completing the fill-in-the blank forms contained in the previous section of this model plan, your community or utility can create its own unique emergency preparedness plan. These same forms, particularly the ***Failure Analysis*** and ***To Do Lists*** prepared for each ***Emergency Response Sheet***, can serve as the basis of your utility's emergency training plan. The training plan should identify who is to be trained, who will provide training, what types of training techniques are to be used, a schedule for training activities, and how the training will be evaluated to see if objectives were met.

It is important to prioritize training needs to address those areas where your utility or community may be most vulnerable. The ***Failure Analysis*** rating will identify those emergencies most likely to occur or affect your utility. Training needs associated with the highest priority emergency will also be of highest priority. In addition to prioritizing training, it is important to consider all emergency response roles that may require some education. For example, if a water main break is determined to be the highest ranking emergency, then training needs for each person/role involved in a water main break emergency response should be evaluated. The operator (or team member responsible for the Operations Management key responsibility) may require additional technical skills, or the mayor (or team member responsible for Public Communications) may need exposure to field repair conditions in order to communicate appropriately with the public or media.

In addition to training that may be needed related to a specific emergency, more extensive emergency training will likely be needed for Emergency Response Team members, especially as these roles shift from one person to another. This broader training should cover the individual emergency roles and duties established for each person, basic emergency notification procedures, basic communication plans, evacuation routes and shelter provisions, location of commonly used equipment, and procedures to be followed if a utility shutdown is required.

The ***Training Plan*** form included in this model plan will assist in recording training needs, priorities, and schedules. With a documented training plan, your utility can incorporate emergency response training into regular business processes and budgets as they are developed.

Training Plan

Name	Training needed	Trainer	Training technique	Schedule	Evaluation technique	
(staff/community member)	(topic)	(internal/ external)	(workshop/class)	(month/year)	(post-test/ observation)	

Conducting Emergency Response Training

Your utility does not have to spend large amounts of money to prepare Emergency Response Team members to fulfill their duties. Remember, utility personnel are often very knowledgeable about their community and the resources available in your utility or community to address an emergency. Use the resources available to begin training efforts, and bring in assistance from outside experts when it is needed.

Emergency response training can be provided in many forms. Organizations have used: orientation sessions, discussion groups, reading materials, tabletop exercises, scenarios, walk-through exercises or drills, demonstrations, external seminars, mock emergencies, etc. Depending on the specific need, one form of training may be more effective than another. To help team members become more familiar with broader emergency matters, such as notification routines or shelter sites, group question and answer sessions may work well. For specific emergency responses, more of a "hands-on" method may be needed, such as tabletop scenarios or walk-through exercises. These are also extremely valuable tools to discover details not considered when preparing ***Emergency Response Sheets*** or ***To Do Lists***. Choose the tool that best fits the particular training need and the people to be involved in the training.

Once a training session has been conducted, it is important to determine whether it achieved what was intended. Every training activity should be concluded with an evaluation of the training materials and methods to allow for fine-tuning. Additionally, a means of follow-up should be in place to ensure training needs have been satisfied. For example, if an operator needed technical training in water main repair, check to see if that team member can demonstrate the new ability learned from the training.

Training records, in some form, should be maintained for all members of the Emergency Response Team. By keeping track of this information, your utility can easily identify someone to serve in a back-up capacity for another team member, or identify how duties can be shifted to others.

Updating and Administering the Plan

As with any business that experiences change, water utilities can expect their emergency preparedness plans to become outdated. And, without up-to-date information, the plan will become useless as an aid in an emergency response. Therefore, it is recommended the plan be reviewed, and potentially modified, at least on an annual basis. The annual process should include:

- Review of the ***Failure Analysis*** - Be sure the emergency rankings from the previous analysis are accurate, and rerank, if necessary. Is the ***Failure Analysis*** list still complete, or should other emergencies be added to it? If actions taken in response to the ***To Do Lists*** or to fulfill the ***Training Plan*** cause these rankings to change, make the appropriate adjustments and reprioritize emergencies.

- Review Progress Toward ***To Do Lists*** - Determine if items listed on the ***To Do Lists*** have been accomplished. Delete items accomplished or no longer necessary due to

changes in operation or structure. For incomplete items remaining on the list, evaluate why those items were not achieved, make appropriate changes to allow them to be completed, and determine new priorities and schedules for completion.

- Review ***Emergency Response Sheets*** and ***To Do Lists*** - Consider how changes in team members, facilities, operational procedures, resources, and community officials may have affected the information contained in these forms. Update forms with appropriate information.

- Review ***Training Plan*** and Individual Training Evaluations - Determine if activities listed on the ***Training Plan*** have been accomplished. Delete items accomplished or no longer necessary due to changes in operation, personnel, or community resources. Consider the results of the training evaluations and determine changes needed in future programs to better meet the needs of participants. For training activities which were not completed, evaluate why those activities were not conducted, make appropriate changes to allow them to be completed, and determine new priorities and schedules for completion based upon the revised ***Failure Analysis*** and ***To Do Lists***.

The ***Water Supplier General Information Sheet*** should be reviewed monthly for up-to-date names and telephone numbers. Additionally, Emergency Response Team members should be aware of their responsibility to notify the person responsible for maintaining the plan whenever this basic contact information changes. If team members move, obtain new telephone numbers, or are no longer available for after-hours contact, the ***Water Supplier General Information Sheet*** should be updated immediately.

Specific events may occur which should cause the plan to be updated (and appropriate training to occur) without waiting for the annual review process. Examples may include: changes in water utility personnel, election of new utility or community officials, new facilities placed in operation, or significant operational changes.

Communicating the Plan to Others

The emergency preparedness plan for your utility needs to be communicated in a variety of ways. First, it must be written and distributed to the appropriate people in the community. Copies of the plan should be provided to members of the Emergency Response Team, utility officials, community officials, and representatives of other emergency organizations in the community, such as fire and police departments. As your utility goes through the annual review and updating process, revised copies of the plan or individual pages should be distributed. Also, it is important that Emergency Response Team members have copies available not only at their business or daytime locations, but also in their homes. Emergencies don't always occur during regular business hours so the plan information should be accessible to team members day and night.

Beyond circulation of the written plan, it is important to present the plan to your utility staff, community officials, and other community groups. Part of the presentation should include identifying the people who will serve in each of the key emergency responsibilities. By introducing team members to the community, a first step is made in assuring the public that

your utility will be prepared to do what is necessary to provide them with safe drinking water when an emergency does occur. Another benefit of sharing the plan within the community is the possible identification of additional resources, people and equipment, that may be available to help. In sharing the plan, special attention should be paid to educating consumers about their roles in the emergency response. Examples of specific actions can be shared, such as emergencies that may need property owners to assist in isolating their water services, or checking for potential contamination sources.

The ***Training Plan*** should be presented to Emergency Response Team members and utility officials at least annually. This will ensure members and officials understand the priorities placed on training and encourage more support for achieving the training goals.

Outcome

To meet the expectations of your customers, your utility and staff need to identify potential emergencies and plan for them. Emergency preparedness begins with identifying the emergencies most likely to occur at your utility, and then listing the people and other resources you need to have involved. By identifying contact people, telephone numbers and other information before an emergency, your utility can be prepared to respond when an emergency does occur.

Follow these steps to begin your emergency response planning:

- **Record facts about your utility.** By completing the ***Water Supplier General Information Sheet***, you have identified your Emergency Response Team, and provided vital information about your utility's operation and emergency resources available.

- **Anticipate emergencies.** By completing the ***Failure Analysis***, you and your team members can identify and prioritize emergencies most likely to occur at your facility.

- **Plan for response.** By completing the ***Emergency Response Sheets*** and ***Trouble Shooting Guides*** you and your team members will identify key individuals to assist in your emergency response. Using the ***Mitigation*** and ***Response/Recovery To Do Lists***, will help you outline and prioritize step-by-step actions that need to be taken.

- **Train team members.** As you are completing the specific emergency forms, identify training opportunities for your team members. Use the ***Training Plan*** form to record these needs and how you plan to accomplish them.

- **Keep your community informed.** As always, the members of your community are part of the team, although they may not have an active role. Keep them involved by holding press conferences, making public announcements, and using other communication methods. Remember, your community is counting on you to provide a quality product and quality service, even during an emergency.

Appendix 1

Iowa Department of Natural Resources
Field Office Directory

Region	Address & Phone	Name
Field Office 1	817 W. Fayette St. Manchester, IA 52057 (319) 927-2640	Shelli Grapp
Field Office 2	2300 15th St., S.W. P.O. Box 1443 Mason City, IA 50401 (515) 424-4073	Jeff Vansteenberg
Field Office 3	1900 N. Grand Ave. Spencer, IA 51301 (712) 262-4177	Bryon Whiting Gregory Olson
Field Office 4	706 Sunnyside Atlantic, IA 50022 (712) 243-1934	Mike Spetman Shellie Ferguson Jerry Jordison
Field Office 5	607 E. Second St. River Hills Business Park Des Moines, IA 50309 (515)281-9069	Jim Stricker Randy Lane
Field Office 6	1004 W. Madison Washington, IA 52353 (319) 653-2135	Dan Stipe
Central Office	900 E. Grand Ave. Des Moines, IA 50319	
	(515) 281-8998	Dennis Alt
	(515) 281-6599	Mike Anderson
	(515) 281-8863	William Brown
	(515) 281-5130	Keith Dohrmann
	(515) 281-8914	Charlotte Henderson
	(515) 281-8953	Jacob Matthew
	(515) 281-8945	Roy Ney
	(515) 281-8473	Joe Zerfas
	(515) 281-8891	Randy Clark
	(515) 281-6267	Diana Hansen

Appendix 2

County Emergency Management Agency Coordinators

County	Name & Address	Phone	
Adair	Chairman, Board of Supv. Adair Co. Emerg. Mngt. Agcy. Courthouse Greenfield, IA 50849	(515) 743-2148	
Adams	Brian Kannas, Coordinator Adams Co. Emerg. Mngt. Agcy. 1007 7th St. Corning, IA 50841	(515) 322-4444	Sheriff's Ofc.
Allamakee	Gregory A. Thiele, Coordinator Allamakee Co. Emerg. Mngt. Agcy. 19 3rd St., N.E. Waukon, IA 52172	(319) 568-4389 (319) 568-2430 (319) 568-3375	 After 6:00 p.m. Priority
Appanoose	Rick Butler, Coordinator Appanoose Co. Emerg. Mngt. Agcy. RR 1, P.O. Box 28B Exline, IA 52555-9714	(515) 856-2314 (515) 437-4450	24 hrs. work
Audubon	Lester Larsen, Coordinator Audubon Co. Emerg. Mngt. Agcy. 606 S. Division St. Audubon, IA 50025	(712) 563-3483 (712) 563-3730	24 hrs. FAX
Benton	Howard Stiegelmeyer, Coordinator Benton Co. Emerg. Mngt. Agcy. Courthouse EOC - P.O. Box 398 Vinton, IA 52349-0398	(319) 472-4519 (319) 472-5451	 FAX
Black Hawk	Gary V. Blair, Coordinator Black Hawk Co. Emerg. Mngt. Agcy. City Hall - 715 Mulberry Waterloo, IA 50703	(319) 291-4373 (319) 291-6104	 FAX
Boone	Clay North, Jr. Boone Co. Emerg. Mngt. Agcy. 909 W. 3rd Boone, IA 50036	(515) 433-0592 (515) 432-3405 (515) 432-8102	 24 hrs. FAX
County	**Name & Address**	**Phone**	

Bremer	Doug Bird, Coordinator Bremer Co. Emerg. Mngt. Agcy. Courthouse, 415 E. Bremer Ave. Waverly, IA 50677	(319) 352-5040, Ext. 32 (319) 352-5400 (319) 352-2708	 24 hrs. FAX (Sheriff's Ofc.)
Buchanan	Bob Hummel, Acting Coordinator Buchanan Co. Emerg. Mngt. Agcy. 210 5th Ave., N.E., Courthouse Independence, IA 50644	(319) 334-6411 (319) 334-6542 448	 FAX (Sheriff's Ofc.) Radio Call
Buena Vista	Ron Wilson, Coordinator Buena Vista Co. Emerg. Mngt. Agcy. 820 Oneida Storm Lake Fire Department Storm Lake, IA 50588	(712) 732-8024 (712) 749-2525 (712) 749-2557	 (C.D.) FAX
Butler	Kenneth W. Mahler, Coordinator Butler Co. Emerg. Mngt. Agcy. Sheriff's Office 428 6th St., P.O. Box 345 Allison, IA 50602	(319) 267-2410 (319) 240-9384 1-800-365-7789/ID 100193 (319) 267-2135	24 hrs. Cellular Pager FAX
Calhoun	Bruce Holm, Coordinator Calhoun Co. Emerg. Mngt. Agcy. 445 Hardin, P.O. Box 238 Farnhamville, IA 50538	(515) 544-3335 (712) 297-7583 (712) 830-0675 (712) 297-5000	 Alternate (24 hrs. LEC) Cellular FAX (LEC)
Carroll	Jeff Roetman, Coordinator Carroll Co. Emerg. Mngt. Agcy. P.O. Box 157, 108 Artz Breda, IA 51436	(712) 673-2703 (712) 792-1310	24 hrs. FAX
Cass	Phil Littler, Coordinator Cass Co. Emerg. Mngt. Agcy. Courthouse Atlantic, IA 50022	(712) 243-1500 (712) 243-2204 (712) 243-4736 (515) 742-3624	 24 hrs. FAX Shafer System
Cedar	Jill L.Randolph, Coordinator Cedar Co. Emerg. Mngt. Agcy. Sheriff's Office, Courthouse Tipton, IA 52772	(319) 886-2121 (319) 886-2095	24 hrs. FAX
Cerro Gordo	Donald Friest, Coordinator Cerro Gordo Co. Emerg. Mngt. Agcy. 78 S. Georgia Mason City, IA 50401	(515) 421-3665 (515) 421-3639	 FAX

County	**Name & Address**	**Phone**

Cherokee	Leon Klotz, Coordinator Cherokee Co. Emerg. Mngt. Agcy. Cherokee, IA 51012	(712) 225-3000 (712) 225-4890 (712) 225-3228	 Auditor's Ofc. FAX
Cherokee County All Mail To:	Phyllis Packard % SIMPCO Box 447-400 Orheum Electric Bldg. Sioux City, IA 51102	(712) 225-3000	
Chickasaw	Ken Rasing, Coordinator Chickasaw Co. Emerg. Mngt. Agcy. P.O. Box 214 New Hampton, IA 50659	(515) 394-2406 (515) 394-4171 (515) 394-4173	24 hrs. Sheriff's Ofc. FAX
Clarke	Allan Mathias, Coordinator Clarke Co. Emerg. Mngt. Agcy. Public Health Courthouse, 100 S. Main Osceloa, IA 50213	(515) 342-6654 (515) 342-2914 (515) 342-4071	Priority 24 hrs. FAX (Sheriff's Ofc.)
Clay	Gary Stover, Coordinator Clay Co. Emerg. Mngt. Agcy. 114 W. 13th St. Spencer, IA 51301	(712) 262-1019	
Clayton	Owen A. Pufahl, Coordinator Clayton Co. Emerg. Mngt. Agcy. 322 N. 1st St. Guttenberg, IA 52052-0736	 (319) 245-1630	 FAX
Clinton	Walter D. Henry, Coordinator Clinton Co. Emerg. Mngt. Agcy. Law Enforcement Ctr., P.O. Box 2957 Clinton, IA 52733-2957	(319) 242-5712 (319) 243-1458 (319) 242-3095	 24 hrs. FAX
Crawford	Gregory J. MIller, Coordinator Crawford Co. Emerg. Mngt. Agcy. P.O. Box 423 Denison, IA 51442-9401	(712) 269-1213 (712) 263-3195 (712) 263-8382	Priority 24 hrs. FAX
Dallas	Barry Halling, Coordinator Dallas Co. Emerg. Mngt. Agcy. 606 S. 8th St. Adel, IA 50003	(515) 360-0412	

County	**Name & Address**	**Phone**	
Davis	Craig C. Scott, Coordinator Davis Co. Emerg. Mngt. Agcy.	(515) 664-2700 (515) 664-2316	24 hrs. (will contact) FAX

	P.O. Box 184 Bloomfield, IA 52537		
Decatur	Don Forman, Coordinator Decatur Co. Emerg. Mngt. Agcy. P.O. Box 533 Leon, IA 50144	(515) 446-7178 (515) 446-7159	 FAX (Auditor's Ofc.)
Delaware	Garlyn Glanz, Coordinator Delaware Co. Emerg. Mngt. Agcy. % Co. Auditor's Ofc., Courthouse Manchester, IA 52057	(319) 927-3410 (319) 927-4072	
Des Moines	Gina Hardin, Coordinator Des Moines Co. Emerg. Mngt. Agcy. 512 N. Main Burlington, IA 52601	(319) 753-8206 (319) 754-6910	 FAX
Dickinson	Lynn Wallace, Coordinator Dickinson Co. Emerg. Mngt. Agcy. 1740 160th St. Spirit Lake, IA 51360	(712) 336-1675 (712) 336-1946	 FAX (Comm. Ctr.)
Dubuque	Robert P. Gooch, Coordinator Dubuque Co. Emerg. Mngt. Agcy. 11 W. 9th St. Dubuque, IA 52001	(319) 589-4170	
Emmet	Terry Reekers, Coordinator Emmet Co. Emerg. Mngt. Agcy. 508 S. 1st. Estherville, IA 51334	(712) 362-5702 (712) 362-3515 (712) 362-7271 (712) 362-7454	 Alt. (emergency) FAX (LEC) FAX
Fayette	Glen Boie, Coordinator Fayette Co. Emerg. Mngt. Agcy. P.O. Box 100, 131 E. Larrabee Hawkeye, IA 52147	(319) 422-3234 (319) 422-6069	24 hrs. FAX (Sheriff's Disp.)
Floyd	Neil Griffin, Coordinator Floyd Co. Emerg. Mngt. Agcy. Courthouse, 101 S. Main Charles City, IA 50616	(515) 257-6144 (515) 220-0030 (515) 257-6144 34-29	 Cellular FAX (call first) Radio (thru Comm. Ctr.)

County	**Name & Address**	**Phone**	
Franklin	Donald Friest, Coordinator Franklin Co. Emerg. Mngt. Agcy. 17 2nd St., N.W. Hampton, IA 50441	(515) 456-4254 (515) 456-2216	 FAX

Fremont	Don "Bart" Bartholomew, Coordinator Fremont Co. Emerg. Mngt. Agcy. Bart's Barber Shop, Box 461 Sidney, IA 51652	(712) 374-2801 (712) 375-2677	 FAX
Greene	Dennis Morlan, Coordinator Greene Co. Emerg. Mngt. Agcy. 204 N. Grimmell, P.O. Box 416 Jefferson, IA 50129	(515) 386-2535 (515) 386-4404 (515) 386-2136	 Alt. (Amb. Garage) 24 hrs.
Grundy	D. Sheridan Roberts, Coordinator Grundy Co. Emerg. Mngt. Agcy. 705 8th St. Grundy Center, IA 50638	(319) 824-6933	24 hrs. (will contact)
Guthrie	Stephen Patterson, Coordinator Guthrie Co. Emerg. Mngt. Agcy. 200 N. 5th St., Courthouse Guthrie Center, IA 50115	(515) 747-8320 (515) 747-3346	Priority FAX (Sheriff's Ofc.)
Hamilton	Terry A. Johnston, Coordinator Hamilton Co. Emerg. Mngt. Agcy. 919 Superior Webster City, IA 50595	(515) 832-9131	
Hancock	Clifford Smith, Coordinator Hancock Co. Emerg. Mngt. Agcy. 875 State St. Garner, IA 50438	(515) 923-2702 (515) 923-2460	 FAX (Disp. Ctr.)
Hardin	David D. Roelfs, Coordinator Hardin Co. Emerg. Mngt. Agcy. Box 173, Courthouse Eldora, IA 50627	(515) 858-3461, Ext. 214 (515) 858-5554	 FAX (Sheriff's Ofc.)
Harrison	Jim Unruh, Coordinator Harrison Co. Emerg. Mngt. Agcy. 116 N. 2nd Avenue Logan, IA 51546	(712) 644-2353 (712) 644-3711 1-800-365-7789/PIN 105482	 FAX Pager

County	Name & Address	Phone	
Henry	Ed Farley, Coordinator Henry Co. Emerg. Mngt. Agcy. 220 W. Monroe Mt. Pleasant, IA 52641	(319) 385-1479 (319) 385-1496 (319) 385-1466	 ph. patch FAX
Howard	James Kovarik, Coordinator Howard Co. Emerg. Mngt. Agcy. 205 East 2nd St. Cresco, IA 52136	(319) 547-2636 (319) 547-4711	 FAX
Humboldt	Doug Wood, Coordinator Humboldt Co. Emerg. Mngt. Agcy. Courthouse Dakota City, IA 50529	(515) 332-4809 (515) 254-3543 (515) 332-1738	 Pager
Ida	Richard Madsen, Coordinator Ida Co. Emerg. Mngt. Agcy. Courthouse, 401 Moorehead Ida Grove, IA 51445	(712) 364-3498 (712) 364-2746	 FAX
Iowa	Alan Husband, Coordinator Iowa Co. Emerg. Mngt. Agcy. 132 W. Marion Marengo, IA 52301	(319) 642-3151 (319) 642-3826	Sheriff's Ofc. FAX (Sheriff's Ofc.)
Jackson	Buddy Olson, Coordinator Jackson Co. Emerg. Mngt. Agcy. 16211 175th St, Maquoketa, IA 52060	(319) 686-4355 (319) 686-4355	 FAX
Jasper	Marlys DeVries, Coordinator Jasper Co. Emerg. Mngt. Agcy. 115 N. 2nd Ave., E. Newton, IA 50208	(515) 792-7555 (515) 792-3808 (515) 792-5254	 24 hrs. FAX
Jefferson	Ron Prill, Coordinator Jefferson Co. Emerg. Mngt. Agcy. 1005 S. 5th Fairfield, IA 52556	(515) 472-4723 (515) 472-6510	 FAX
Johnson	Jim McGinley, Coordinator Johnson Co. Emerg. Mngt. Agcy. P.O. Box 169, 511 S. Capitol Iowa City, IA 52244	(319) 356-6028 (319) 356-6020 (319) 356-6017	 24 hrs. FAX

County	Name & Address	Phone	
Jones	Dianna DeSotel, Coordinator Jones Co. Emerg. Mngt. Agcy. Courthouse Anamosa, IA 52205	(319) 462-2735 (319) 462-4766	 FAX
Keokuk	Larry Smith, Coordinator Keokuk Co. Emerg. Mngt. Agcy. P.O. Box 273 Sigourney, IA 52591	(515) 622-2727 (515) 622-3393	24 hrs. FAX
Kossuth	Jim Kelley, Coordinator Kossuth Co. Emerg. Mngt. Agcy. 112 W. Call Algona, IA 50511	(515) 295-5904 (515) 295-3514 (515) 295-9304	 Sheriff's Ofc. FAX
Lee	Frank Mohrfeld, Acting Coordinator Lee Co. Emerg. Mngt. Agcy. City Hall, P.O. Box 240 Ft. Madison, IA 52627	(319) 372-4124 (319) 524-6221	 FAX (Keokuk PD)
Linn	Walter "Ned" Wright, Coordinator Linn Co. Emerg. Mngt. Agcy. City Hall, CD Center Cedar Rapids, IA 52401	(319) 363-2671 (319) 368-5369 (319) 398-5316 or 0405	 Pager FAX
Louisa	Mary Lynn Gieselman, Coordinator Louisa Co. Emerg. Mngt. Agcy. 7771 County Rd. - X-37 Morning Sun, IA 52640	(319) 868-4114 (319) 523-3511 (319) 523-3713	 After 5 p.m. FAX
Lucas	Larry Davis, Coordinator Lucas Co. Emerg. Mngt. Agcy. Box 95, RR 2 Chariton, IA 50049	(515) 774-7261 (515) 774-5083 (515) 774-4111	HyVee Sheriff's Ofc. FAX
Lyon	Leroy Griesse, Coordinator Lyon Co. Emerg. Mngt. Agcy. 304 S. Tama Rock Rapids, IA 51246	(712) 472-3401 (712) 472-2521 (712) 472-2303	 24 hrs. Sheriff FAX (courthouse)
Madison	Marvin Schultz, Coordinator Madison Co. Emerg. Mngt. Agcy. 1008 N. John Wayne Dr. Winterset, IA 50273	(515) 462-2255 (515) 462-2252 (515) 462-2255	 24 hrs. FAX

County	Name & Address	Phone

Mahaska	Robert Elder, Coordinator Mahaska Co. Emerg. Mngt. Agcy. Courthouse, 108 S. 1st St. Oskaloosa, IA 52577	(515) 672-2625	
Marion	Mahala Cox, Coordinator Marion Co. Emerg. Mngt. Agcy. Marion Co. Courthouse Knoxville, IA 50138	(515) 828-2256 (515) 828-2220 or 2222 (515) 828-8453	 24 hrs. FAX
Marshall	Deanna Neldeberg, Coordinator Marshall Co. Emerg. Mngt. Agcy. City Hall, 24 N. Center St. Marshalltown, IA 50158	(515) 754-6385 (515) 754-6389	 FAX
Mills	Vern Knudtson, Coordinator Mills Co. Emerg. Mngt. Agcy. R.R. 3, Box 263 Glenwood, IA 51534	(712) 527-3643 (712) 527-3846 (712) 527-4600	Priority FAX
Mitchell	Ray Huftalin, Coordinator Mitchell Co. Emerg. Mngt. Agcy. Courthouse, 508 State St. Osage, IA 50461	(515) 732-5861 (515) 220-0245 (515) 732-3777 (515) 732-5218	Primary Cellular Radio (ask for 66-95) FAX
Monona	Claire Joines, Coordinator Monona Co. Emerg. Mngt. Agcy. 909 7th St. Onawa, IA 51040	(712) 423-1294 (712) 423-1398	 FAX (Sheriff's Ofc.)
Monroe	Bill Murphy, Coordinator Monroe Co. Emerg. Mngt. Agcy. 103 2nd Ave., W. Albia, IA 52531	(515) 932-7815	24 hrs.
Montgomery	Mr. S. Laverne Dickerson, Coordinator Montgomery Co. Emerg. Mngt. Agcy. 704 Oak Red Oak, IA 51566	(712) 623-4220	
Muscatine	Jeff Carter, Coordinator Muscatine Co. Emerg. Mngt. Agcy. Pubic Safety Bldg., 5th & Cedar Muscatine, IA 52761	(319) 263-5534 (319) 263-9922 (319) 263-9340	 Alt. (24 hrs.) FAX

County	**Name & Address**	**Phone**

O'Brien	Anne Koontz, Coordinator O'Brien Co. Emerg. Mngt. Agcy. O'Brien Co. Comm. Center Box 482, 240 1st St., N.E. Primghar, IA 51245	(712) 757-4305 (712) 757-3415 (712) 757-5445	 24 hrs. FAX
Osceola	Byron Lopau, Coordinator Osceola Co. Emerg. Mngt. Agcy. Courthouse Sibley, IA 51249	(712) 754-3345 (712) 754-2872	 FAX (Sheriff's Ofc.)
Page	Raymond Bryant, Coordinator Page Co. Emerg. Mngt. Agcy. P.O. Box 569, 815 W. Thomas Shenandoah, IA 51601	(712) 246-4254 (712) 246-3622	 24 hrs.
Palo Alto	Jarrett Lee, Coordinator Palo Alto Co. Emerg. Mngt. Agcy. 2707 17th St. Emmetsburg, IA 50536-1154	(712) 852-4997 (712) 852-3914	 FAX (Sheriff's Ofc.)
Plymouth	Kevin Rollins, Coordinator Plymouth Co. Emerg. Mngt. Agcy. 212 Lincoln Remsen, IA 51050	(712) 786-2136 1-800-352-4650 (712) 786-2390	 Alt. FAX
Pocahontas	Tim McKiernan, Coordinator Pocahontas Co. Emerg. Mngt. Agcy. 99 Court Square Pocahontas, IA 50574	(712) 335-3188 (712) 335-3308 (712) 335-4300	 Alt. (Sheriff's Ofc.) FAX (Sheriff's Ofc.)
Polk	Bob Plath, Coordinator Polk Co. Emerg. Mngt. Agcy. Polk County Office Building 1st & Court, Room 210 Des Moines, IA 50309	(515) 286-2107 (515) 242-1897 (515) 286-3436	 Pager FAX (Co. Comptroller)
Pottawattamie	Terry Hummel, Coordinator Pottawattamie Co. Emerg. Mngt. Agcy. Courthouse, 227 S. 6th St. Council Bluffs, IA 51501	(712) 328-5777 (712) 328-5737 (712) 328-4843	 Alt. 24 hrs. FAX
Poweshiek	Douglas Shutts, Coordinator Poweshiek Co. Emerg. Mngt. Agcy. Courthouse Montezuma, IA 50171	(515) 623-3061 (515) 236-2650 (515) 623-5120	 (Grinnell PD) FAX (Sheriff's Ofc.)

County	Name & Address	Phone	
	Ringgold Co. Emerg. Mngt. Agcy. Courthouse Mt. Ayr, IA 50854	(515) 464-3831	FAX
Sac	Jim Bullock, Coordinator Sac Co. Emerg. Mngt. Agcy. 116 S. State, Suite C Sac City, IA 50583	(712) 662-4422 (712) 662-4302 (712) 662-4320	 Alt. 24 hrs. FAX
Scott	H.L. "Bud" Whitfield, Coordinator Scott Co. Emerg. Mngt. Agcy. Courthouse, 416 W. 4th St. Davenport, IA 52801	(319) 326-8663 (319) 322-2848	 FAX
Shelby	Robert (Bob) Sievert, Coordinator Shelby Co. Emerg. Mngt. Agcy. 612 Court St. Harlan, IA 51537	(712) 755-5160 (712) 755-3800 (712) 755-2481	C.D. - Priority Alt. FAX
Sioux	Mark Dunlop, Coordinator Sioux Co. Emerg. Mngt. Agcy. Courthouse, Box B Orange City, IA 51041	(712) 737-4010 (712) 737-3006	 FAX
Story	Lori Morrisey, Coordinator Story Co. Emerg. Mngt. Agcy. Courthouse, 900 6th St. Nevada, IA 50201	(515) 382-6581, Ext. 310 (515) 382-6566 (515) 382-3349	 Sheriff's Ofc. FAX
Tama	Scott Bruns, Coordinator Tama Co. Emerg. Mngt. Agcy. P.O. Box 34, 100 N. Main Toledo, IA 52342	(515) 484-3760 (515) 750-1657 (515) 484-3254	 Cellular FAX (Sheriff's Ofc.)
Taylor	Michael Ware, Coordinator Taylor Co. Emerg. Mngt. Agcy. 1104 Dodge Bedford, IA 50833	(712) 523-3545	FAX
Union	Mike King, Acting Coordinator Union Co. Emerg. Mngt. Agcy. Courthouse Creston, IA 50801	(515) 782-7918 (515) 782-7717 (515) 782-8404	 FAX (Sheriff's Ofc.)

County	Name & Address	Phone

Van Buren	Donald Pool, Coordinator Van Buren Co. Emerg. Mngt. Agcy. Courthouse Keosauqua, IA 52565	(319) 293-3426	
Wapello	Dan Thompson, Coordinator Wapello Co. Emerg. Mngt. Agcy. 201 N. Wapello Ottumwa, IA 52501-0496	(515) 682-0124 (515) 683-0666 (515) 682-0124	 Alt. (Fire Station) FAX (call first)
Warren	Eldon Heaivilin, Coordinator Warren Co. Emerg. Mngt. Agcy. 1015 Angela Dr. Indianola, IA 50125	(515) 961-1105 (515) 961-1025	 FAX
Washington	Owen White, Coordinator Washington Co. Emerg. Mngt. Agcy. R #2 Ainsworth, IA 52201	(319) 653-3015 (319) 653-7780	C.D. FAX (LEC)
Wayne	Alan Griffith, Coordinator Wayne Co. Emerg. Mngt. Agcy. Highway 2 W. Promise City, IA 52583	(515) 874-5414 (515) 872-1566	 Alt. (Sheriff's Ofc.)
Webster	Ken Danner, Coordinator Webster Co. Emerg. Mngt. Agcy. LEC Building, 702 1st Ave., S. Ft. Dodge, IA 50501	(515) 573-1403 (515) 573-2011	24 hrs. FAX
Winnebago	Dan Davis, Coordinator Winnebago Co. Emerg. Mngt. Agcy. 246 E. Park Forest City, IA 50436	(515) 582-2113	
Winneshiek	Howard Ness, Coordinator Winneshiek Co. Emerg. Mngt. Agcy. 305 Montgomery St. Decorah, IA 52101	(319) 382-3511 or 9634 (319) 382-3717	 FAX (public library)
Woodbury	Gary Brown, Coordinator Woodbury Co. Emerg. Mngt. Agcy. Box 19, 121 Deer Run Trail Climbing Hill, IA 51015-0019	(712) 876-2212 (712) 279-6510 (712) 251-1038 or 1039 (712) 876-2228	 Alt. Cellular FAX

County	**Name & Address**	**Phone**

Worth	Beverly Kaduce, Coordinator Worth Co. Emerg. Mngt. Agcy. Courthouse, 1000 Central Ave. Northwood, IA 50459	(515) 324-1535 (515) 324-2162	 FAX
Wright	Dennis Borrill, Coordinator Wright Co. Emerg. Mngt. Agcy. 112 2nd Ave., N.E. Belmond, IA 50421	(515) 444-3357 1-800-365-7789/ID 100972 (515) 444-4775	24 hrs. Pager FAX

Appendix 3

Consulting Engineers Council of Iowa

ALLENDER BUTZKE ENGINEERS INC.
Milton Butzke, P.E., President
3660 109th St.
Urbandale, IA 50322
(515) 282-1885

AMENT ENGINEERING ASSOCIATES, INC.
Michael E. Ament, P.E., President
5825 Dry Creek Lane, N.E.
P.O. Box 10047
Cedar Rapids, IA 52410
(319) 378-1401

ANDERSON-BOGERT ENGINEERS
AND SURVEYORS, INC.
William Bogert, P.E., President
5340 N. Park Place, N.E.
Cedar Rapids, IA 52402
(319) 377-4629

BELING CONSULTANTS, INC.
Henry Mayer, P.E., Sr. Vice President
1218 E. 37th St., Suite 2
Davenport, IA 52807
(319) 386-0517

BOLTON & MENK, INC.
Gregory L. Sindt, P.E.
2730 Ford St., P.O. Box 668
Ames, IA 50010-0668
(515) 233-6100

BROWN ENGINEERING COMPANY
Jay R. Read, P.E., CEO
1051 Office Park Road
West Des Moines, IA 50265
(515) 225-6900

CALHOUN-BURNS AND ASSOCIATES, INC.
John C. Calhoun, P.E., President
1801 Fuller Road
West Des Moines, IA 50265
(515) 224-4344

FOX ENGINEERING ASSOCIATES, INC.
David M. Fox, P.E., President

CIMTECHNOLOGIES CORPORATION
David Sly, P.E., President
2501 N. Loop Drive, Suite 700
Ames, IA 50010
(515) 296-9914

CLAPSADDLE-GARBER ASSOCIATES
Dwayne C. Garber, P.E., President
16 E. Main, P.O. Box 754
Marshalltown, IA 50158
(515) 752-6701

CRAWFORD ENGINEERING AND SURVEYING, INC.
John Crawford, P.E., Vice President
205 2nd Ave., P.O. Box 793
Independence, IA 50644
(319) 334-7077

DeWILD GRANT RECKERT
AND ASSOCIATES COMPANY
John Madden, P.E., President
315 1st Ave.
Rock Rapids, IA 51246
(712) 472-2531

E & A CONSULTING GROUP
Randall Hulse, Office Manager
125 S. Main St., Suite 1
Council Bluffs, IA 51503
(712) 322-3060

ENGINEERING RESOURCE GROUP, INC.
Douglas Saltsgaver, P.E., President
601 S.W. 9th St., Suite H
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(515) 288-4823

ERDMAN ENGINEERING, P.C.
Lindsay C. Erdman, P.E., President
P.O. Box 246
Decorah, IA 52101-0246
(319) 382-4194

JACOBSON-WESTERGARD & ASSOC., INC.
James R. Blum, P.E., Vice President

1531 Airport Road
Ames, IA 50010
(515) 233-0000

FRENCH-RENEKER-ASSOCIATES, INC.
Kenneth D. Bucklin, P.E., President
1501 S. Main, P.O. Box 135
Fairfield, IA 52556-0135
(515) 472-5145

GARDEN AND ASSOCIATES, LTD.
David C. Nelson, P.E., President
1907 17th Ave. E., P.O. Box 451
Oskaloosa, IA 52577-0707
(515) 672-2526

GEOTECHNICAL SERVICES, INC.
Rick Ennis, P.E., Branch Mgr.
10052 Justin Dr., Suite L
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(515) 270-6542

GJERSVIK & ASSOCIATES, INC.
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HGM ASSOCIATES INC.
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HOWARD R. GREEN COMPANY
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JFSCO ENGINEERING
Jerry F. Shellberg, P.E., President
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PULLEY AND ASSOCIATES, INC.
John W. Pulley, P.E., President
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105 S. 6th St.
Estherville, IA 51334-0387
(712) 362-2647

KIRKHAM, MICHAEL & ASSOCIATES, INC.
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(515) 270-0848

KUEHL AND PAYER, LTD.
Neal R. Kuehl, P.E., President
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(712) 732-7745

MARR ENGINEERING, INC.
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McCLURE ENGINEERING COMPANY, P.C.
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JACK C. MILLER AND ASSOCIATES
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422 2nd Ave., S.E.
Cedar Rapids, IA 52401-1397
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MONTGOMERY WATSON, INC.
Allan R. Powers, President
Larry E. Crane, P.E., Vice President
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P & E ENGINEERING COMPANY
220 S. 1st St.
P.O. Box 620
Carlisle, IA 50047
(515) 989-3083

SNYDER AND ASSOCIATES, INC.
Dennis L. Snyder, P.E., President
501 S.W. Oralabor Road
Ankeny, IA 50021

(515) 225-9531

ROBINSON ENGINEERING COMPANY
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(319) 233-8551

RUST ENVIRONMENT & INFRASTRUCTURE
Joe A. Becker, P.E.
501 Sycamore St., Suite 222
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(319) 232-6531

SCHLOTFELDT ENGINEERING, INC.
Raymond Schlotfeldt, P.E., President
1440 2nd St., P.O. Box 220
Webster City, IA 50595
(515) 832-2471

SHIVE-HATTERY ENGINEERS ARCHITECTS, INC.
P.O. Box 1599
Cedar Rapids, IA 52406-1599
(319) 362-0313

SHOEMAKER & HAALAND
PROFESSIONAL ENGINEERS
Glenn D. Shoemaker, P.E., President
160 Holiday Road
Coralville, IA 52241
(319) 351-7150

SHUCK-BRITSON INC.
Robert A. Britson, P.E., President
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SMITH ENGINEERING ASSOCIATES, INC.
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WHKS & CO
Gerald Weiland, Jr., P.E., President
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STRUCTURAL ENGINEERS, P.C.
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Des Moines, IA 50309
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