

ANNEX L

ESF 12: ENERGY AND UTILITIES

PROMULGATION STATEMENT

Transmitted herewith is the ESF –12: Energy and Utilities Annex to the Caddo Parish Emergency Operations Plan (EOP). This annex supersedes any previous Annex promulgated for this purpose. It provides a framework in which Caddo Parish and its political subdivisions can plan and perform their respective functions during an emergency when EOC activation is necessary.

This annex is in accordance with existing federal, state, and local statutes and understandings of the various departments/agencies involved. It has been concurred by the Caddo Parish Sheriff’s Office of Homeland Security and Emergency Preparedness (OHSEP), Louisiana Governor’s Office of Homeland Security and Emergency Preparedness and the Federal Emergency Management Agency. All recipients of this annex are requested to advise Caddo Parish OHSEP as to changes that might result in its improvement or increase its usefulness.

This annex will be annually reviewed by the Caddo Parish OHSEP Deputy Director.

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ESF-12: Energy and Utilities

I. PURPOSE AND SCOPE

The purpose of ESF 12 is to establish for Caddo Parish a coordinated response to maintain or reestablish natural gas, electric and water and sewer utility services within a disaster area to best serve the needs of the population. Services under this ESF include and encompass the restoration of natural gas, electric and water and sewer utilities subjected to interruption or destruction by emergencies and disasters on a priority basis.

II. SITUATIONS AND ASSUMPTIONS

This section of the energy and utilities annex identifies broad considerations that the energy and utilities planning team addresses before developing a specific this annex. The situations section identifies disaster circumstances that could occur locally and would create a need for response by energy and utilities services. Assumptions, in turn, compensate for the lack of facts or probabilities. Although assumptions cannot be validated, lack of assumptions can influence the successful execution of emergency preparedness and response activities.

A. Situation

1. The requirement for emergency response by energy and utilities and services expands directly in proportion to the magnitude of the disaster.
2. In all major emergencies the energy and utilities function requirement will include, but not be limited to, providing water, sewerage, gas and electricity.
3. The city and parish governments in Caddo Parish have utilities capabilities and trained staff employees in their departments.

B. Assumptions

1. The assumption is made that local government and private utilities can handle the emergency structure. If local capabilities are exceeded, support will be requested from state and federal agencies and private industry.
2. Public Utilities personnel should receive hazardous materials training to at least the Awareness Level.

III. CONCEPT OF OPERATIONS

A. General

1. The day-to-day public utilities organizational structures will remain intact during a major emergency.
2. The city and parish governments in Caddo Parish will use all local manpower, equipment and material available to carry out their tasks.
3. The energy and utilities response activities will be coordinated from the Caddo Emergency Operations Center during disasters.

B. Phases of Emergency Management

1. Mitigation (Prevention)

- a. Keep roster of key personnel updated. Train personnel in emergency procedures.
- b. Identify resources and keep resource list updated.
- c. Work with legislative body to ensure that ordinances are created to protect public utilities systems.
- d. Participate in hazard analysis and identify vulnerabilities in public utilities.
- e. Initiate mutual aid agreements with neighboring jurisdictions.
- f. Identify local contractors who can provide support during emergencies. Acquaint them with emergency plans and procedures.
- g. Review and update emergency public utilities plans.
- h. Review other annexes to comprehensive emergency management plan and clarify public utilities role.
- i. Participate in design and execution of emergency preparedness exercises.
- j. Provide input into after-action reviews to improve preparedness, response, and recovery capabilities.
- k. Work with planning commission to ensure that new constructions do not increase hazard or vulnerability threat.
- l. Work with legislative body to improve building codes.

2. Preparedness

- a. Ensure that storm sewers are in good repair.
- b. Ensure that adequate barrier and roadblock materials and equipment are available.
- c. Review and update all utility maps of jurisdiction.
- d. Review emergency staffing plans.
- e. Secure all equipment against damage.
- f. Organize damage survey teams.
- g. Place standby equipment in operational readiness.
- h. Coordinate communications procedures with EOC.
- i. Review contingency plans and coordinate task assignments with other agencies and volunteer groups.
- j. Develop procedures to support accomplishment of tasks outlined in this annex.

3. Response

- a. Survey disaster areas and evaluate in terms of utilities repair estimates.
- b. Develop and make recommendations to alleviate problems. Implement efforts to contain or limit the spread of hazardous materials contamination.

- c. Maintain contact with Emergency Operations Center (EOC).
- d. Repair EOC facilities and equipment, as necessary.
- e. Assess damage.
- f. Conduct emergency repair of natural gas, electric, water and sewer systems, as necessary.
- g. Call out private contractors and other assistance, as necessary.

4. Recovery

- a. Continue damage assessment.
- b. Coordinate private and volunteer repair of utilities.
- c. Participate in compiling after-action report and critiques. Make necessary changes and improvements in disaster operations plans.
- d. Provide support for return to normal operations.
- e. Make recommendations to legislative body about changes in planning, zoning, and building code ordinances to mitigate impact of future disasters.

IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

This section of the utilities annex takes the operational considerations and recasts them as specific duties and responsibilities for city/parish departments and support agencies.

Fulfilling these assignments is the most important function that the public utilities departments perform because without them, confusion during a disaster could result in injury and death. The task assignments below are extensive but not exhaustive. Public utilities may modify the items on a periodic basis depending on the situation at hand.

A. General Organization

- 1. The public utilities organizational chart is shown as Appendix 1 of this annex.
- 2. The head of each department and the Parish President or Mayor of municipalities will retain control of their assigned personnel and equipment.

B. Assignment of Responsibilities

Local government is responsible for developing an emergency public utilities plan. Authority to execute the plan rests with the public utilities director for the affected jurisdiction. All disaster related activities should be coordinated through the Emergency Operations Center (EOC).

- 1. Caddo Parish OHSEP is responsible for:
 - a. Assemble a team of representatives from involved organizations to develop the public utilities annex.
 - b. Coordinate emergency activities with the public utilities director(s) and Emergency Operations Center (EOC) staff.

- c. Develop EOC resource list and mutual-aid agreements.
 - d. Review and update of emergency plans.
 - e. Develop emergency preparedness drills and exercises.
2. Water and Sewer Departments are responsible for:
 - a. Maintain emergency plan for all public utilities departments, accounting for key personnel and their assignments.
 - b. Maintain essential facilities of sewer-water-drainage, and securing against damage.
 - c. Maintain water pressure.
 - d. Provide potable water, as needed.
 - e. Maintain sewerage system.
 - f. Provide temporary sanitary facilities, as necessary.
 - g. Coordinate with health department on water testing.
 - h. Decontaminate water system, if necessary.
 - i. Providing public utilities representative, radio operators and the necessary radio equipment at the EOC.
 - j. Maintain emergency equipment and ensuring that all equipment is in good repair.
 - k. Assist other departments with emergency clean-up operations.
 - l. Situation reporting to the EOC.
 - m. Maintain detailed log for all department activities during duration of emergency.
 - n. Assist with damage assessment and development of a complete log for the Damage Assessment Officer.
 - o. Assist in providing shelter and food for key public utility workers if needed during the emergency.
 3. Damage Assessment Officer is responsible for:
 - a. Coordinate damage assessment activities with the public utilities and public utilities functions in the recovery phase.
 4. Solid Waste Departments and private solid waste handlers will:
 - a. Coordinate debris and garbage clearance with private contractors and public utilities and public utilities departments.
 5. Other governmental agencies and private companies may provide assistance, as needed, in their respective fields.

V. DIRECTION AND CONTROL

1. The usual supervisors will exercise operational control of public utilities forces; however, the public utilities coordinator shall set priorities for resources and coordinate activities of the various forces.
2. Mutual aid forces will operate under the direct supervision of their own supervisors. The public utilities coordinator will coordinate the call-up and deployment of mutual aid forces.

3. Volunteer and auxiliary forces will work under the supervision of the senior public utilities official in the jurisdiction where they are deployed. The public utilities coordinator will handle the call-up and deployment of all volunteer forces.
4. Assisting military forces will work under the direct supervision of their own superiors; but will serve under the direction of the senior public utilities official where they are deployed. The public utilities coordinator, through the Emergency Operations Center (EOC), will request the call-up and deployment of military forces.

VI. ADMINISTRATION AND LOGISTICS

In the event that an official or agency charged with participating in public utilities operations is unable to perform, lines of succession must be drawn to ensure that public utilities services are provided as needed. Public utilities activities during times of disasters should be coordinated through the Emergency Operations Center (EOC).

See Basic Plan.

A. Administration

1. There is a tremendous need for public utility services during emergencies. The public utilities coordinators will ensure that their activities are administered in an orderly and efficient manner. The Caddo OHSEP Director will give priority to requests by the public utilities directors for additional resources and personnel to support their activities.
2. The public utilities directors will ensure that procedures for the emergency hiring of private contractors and individuals to assist in response and recovery efforts are developed.

B. Logistics

1. Obtaining emergency supplies will be coordinated with the resource manager in the Emergency Operations Center (EOC).
2. Logs of all activities and records of all purchases will be maintained by each department.

VII. AUTHORITIES AND REFERENCES

A. Authority

See basic plan

B. References

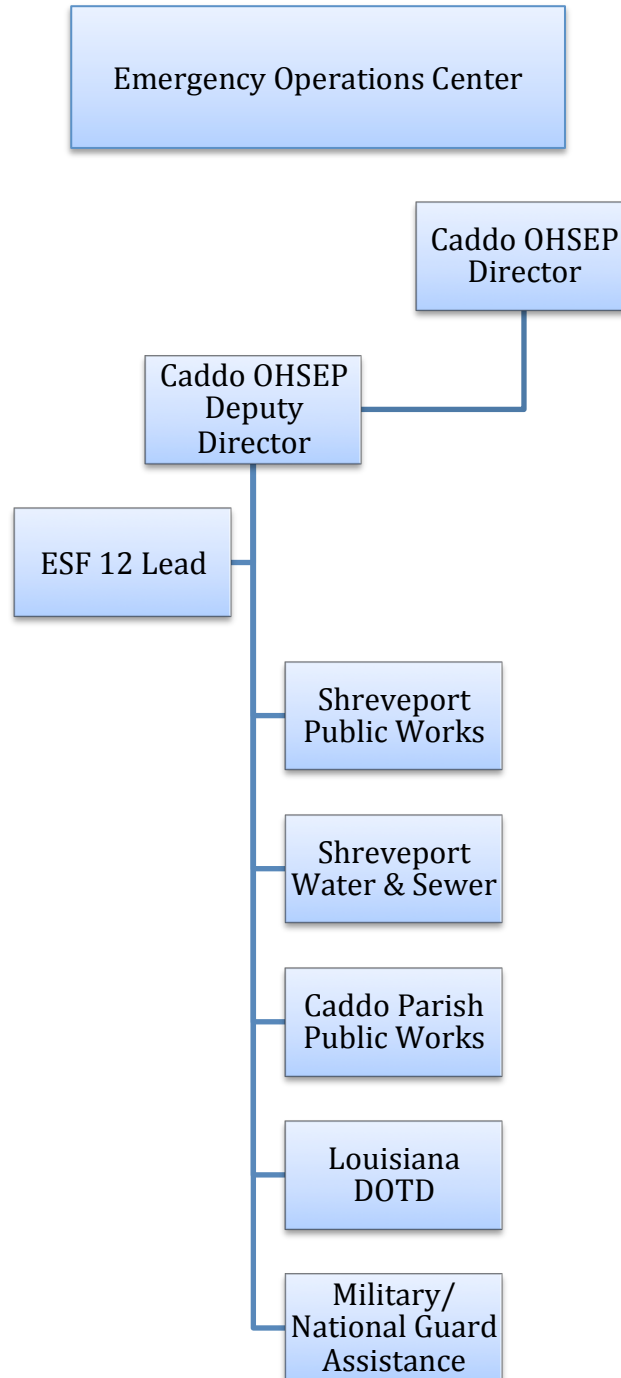
1. Standards for Local Civil Preparedness. CPG 1-5. Washington: FEMA, 1980.

2. Disaster Operations: A Handbook for Local Governments. CPG 1-6. Washington: FEMA, 1981.

VIII. APPENDICES

1. Organizational chart
2. Wastewater System Emergencies
3. Water System Emergencies
4. Electric System Emergencies
5. Natural Gas System Emergencies
6. Utilities Departments
7. Standard Operating Guidelines (SOGs)

Appendix 1 – Organizational Chart



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Appendix 2 – Wastewater System Emergencies

I. GENERAL

The community's wastewater system is a vital part of the mechanism to provide for the health and safety of the citizens. Its two principal parts, the collection network and the treatment works, are both vulnerable to routine and major emergency situations. The operation and maintenance of the wastewater system is the responsibility of trained and certified personnel who must follow guidelines promulgated by the U.S. Environmental Protection Agency and the LA Department of Environmental Quality. They are responsible for maintaining certain water quality standards; sewage must be collected and properly treated to meet applicable effluent standards as the processed wastewater is released to public waters.

Most problems occurring within the wastewater system will be overcome entirely by regularly assigned personnel. The response procedure is to facilitate the initial response to the trouble; the wastewater system management should assure that internal response procedures are established to guide in-system handling of problems.

II. LINE BLOCKAGE

Sanitary sewer lines become blocked frequently as a result of material becoming jammed at manholes, by broken pipes, by roots that have gotten into pipes and similar factors. These blockages can usually be easily removed using high-pressure water streams or special cleaning devices. Until the blockages are cleared, the back up in the system may cause localized sewer back-ups into locations along the affected lines.

Response procedures for a sanitary sewer line blockage will include referencing specific personnel call-out lists, resource manuals and standardized response procedures as outlined by the wastewater treatment plant.

III. TREATMENT PROBLEMS

Treatment problems at the wastewater plant can affect the community in several ways. There could be legal and public health implications if improperly treated sewage is discharged into public waters. If discharge is withheld, storage capacities at the plant could overflow, causing health risks there. If flow to the plant must be stopped, the collection system could be affected. Treatment problems could cause unusual and highly unpleasant odors, generating complaints to various local government officials. If the difficulties are beyond the ability of the regular personnel to handle, consulting engineers or technicians from nearby communities may need assistance. State resources are also available.

Treatment problems that may affect the public waters must be reported to the LA Department of Environmental Quality and additional state and federal environmental agencies depending on the nature of the release (i.e., U.S. EPA, LA

Dept. of Wildlife and Fisheries, LA State Police, etc.). While these agencies do have enforcement responsibilities, they also have the ability to help wastewater treatment staff solve the problems that are confronting them.

If public health problems might become a concern, the Caddo Health Unit and State Health Department should be notified immediately. If matters become serious, local government officials might consider making a public announcement of the situation. Other aspects of the Emergency Operations Plan may be implemented depending on the circumstances.

IV. MECHANICAL FAILURES

If mechanical failures occur at the treatment plant, the results will be similar to those experienced in the previous section on treatment problems. Mechanical problems may also occur in the collection system if pumps are used to help move the sewage through the pipes and/or if part of the system is pressurized due to terrain factors. Repair or replacement will be facilitated if needed reference information is contained in an in-house resource and emergency contact manual listing sources of supplies and service.

V. PERSONNEL PROBLEMS

Labor difficulties could cause problems for the wastewater system, particularly if tensions are running high. In most cases, supervisory personnel will be able to operate the system, but there may be concerns for security and supportive manpower. Wastewater treatment plant managers should develop specific plans to deal with personnel problems. It is recommended that these plans be maintained separately from this Emergency Operations Plan.

VI. POWER FAILURE

If at all possible, local wastewater treatment plants should have an emergency generator or some other alternative power source. Some plants in the U.S. have power lines feeding them from more than one direction in case one of the lines is knocked out of commission. Complete independence is the best solution. Remember to test generators by actual operation and on-line use on a regular basis. Be sure fuel tanks are kept filled. Chances are the pumps in the collection system won't be able to operate without electricity. In-house response procedures should provide for alternative means of pumping or getting power to the pumps if they're a critical part of the system. If a long-term electrical outage is anticipated, wastewater treatment plant in-house response procedures should reflect adequate pre-planning by including arrangements for independent operation of the wastewater system.

VII. TOXIC POLLUTANTS

There are several problems to be concerned with regarding toxic chemical pollutants, especially if the chemical composition affects the treatment processes. If possible, the material should be removed from the collection system before it reaches the treatment plant.

If the material is volatile, treatment plant personnel should be concerned with venting and cleaning the system as quickly and effectively as possible. If this procedure does not accomplish enough venting to dissipate the substance, an explosion may result. Reference Section IX - Explosion in Collection System for more information. Wastewater treatment plant in-house response procedures should include contacting the local fire department and hazardous materials response team, in recognition of these implications.

Toxic materials in the wastewater system could pose a serious threat to people in the affected area, over and beyond the danger of an explosion. If buildings are not equipped with traps, and even in some cases when they are, gases could move through the sewer pipes into buildings. If that kind of danger is present, a complete evacuation of the affected area may be appropriate. Reference the Evacuation Annex of the Emergency Operations Plan for more information.

VIII. WEATHER RELATED PROBLEMS

Even though the sanitary sewer collection pipes are underground weather can have a profound effect. Infiltration and inflow of storm water into sanitary lines can quickly overload the system, causing flooding with some difficult complications. The storm sewer system is designed to carry storm water (drainage) directly into streams, bayous, and rivers. The sanitary sewer system is separate, carrying wastewater to the treatment plant for processing before releasing into the public waters.

When storm water enters the sanitary system through improper connections, broken pipes, or open manhole covers the rapid increase in the volume can quickly overwhelm the sanitary system. The heavy flow entering the wastewater treatment plant taxes those facilities, sometimes threatening the efficiency of the processes that are designed to remove the impurities from wastewater. As the collection lines fill to capacity, it could prevent the entry of wastewater from buildings. The rising levels in the collection system push the diluted wastewater back through the lateral connection pipes and possibly causing flooding in homes and businesses. The pressure of the system surcharge also pops manhole covers from the inside, exposing open manholes. This could pose a serious hazard for motorists, pedestrians and emergency workers, especially if the area around the manhole is flooded or darkness prohibits recognition of the hazard.

IX. EXPLOSION IN COLLECTION SYSTEM

Sewer gases normally found in sanitary lines without adequate ventilation are not flammable or explosive. Problems of an explosive nature can develop from foreign substances being introduced into the system, deliberately or accidentally. The possibilities of impact are endless. Streets in the immediate area will probably be impassable in the area affected by the explosion, as the sanitary sewer lines are usually routed along the street right-of-way. Response procedures should include mobilization of street department to barricade affected areas. Depending of the nature of the substance, there may be fire to extinguish. Fire, rescue and emergency

medical requirements will arise, with the intensity of the need based on a variety of circumstances.

An explosion in the sanitary sewer system may cause a significant amount of secondary damage to other elements of the infrastructure located beneath the street. Water lines may burst. Buried cables may be broken—cables that carry electricity, telephone lines, or television cable lines may be broken and storm sewer lines may also be affected. The complications can be profound, with multiple hazards threatening responding emergency forces. Immediate steps should be taken to isolate the area...by all impacted utilities. Engineers should be summoned to advise on the best approach to restore wastewater services, as well as other utilities. Reconstruction will be a major concern. A massive disruption of sanitary sewer, or other services, as a result of an explosion, will involve numerous agencies. Notification and involvement will be generated by the circumstances of the explosion and its impacts.

X. EMERGENCY CONTACTS

Shreveport Office of Water & Sewerage

Director's Office: 673-7620

Emergency Assistance (24 Hours): 673-7600

2139 Greenwood Road, Shreveport, LA

Appendix 3 – Water System Emergencies

I. GENERAL

Response procedures to a water system emergency will be based on the water system's vulnerabilities. Most responses will be handled independently by the personnel responsible for the operation of the water utility. In more serious cases, other departments will be asked to provide support and the top officials may become involved.

II. RESPONSE PROCEDURES

In-house response procedures should address the most frequent types of emergencies likely to be received by the emergency/service dispatcher. For each category of problem, initial response procedures should be indicated, such as:

A. Water Line Break

- I. Obtain location of problem; observe nature of problem, time discovered, and any complications (water freezing into ice on street in winter, for example).
- II. Notify on-call person(s) with water utility.
- III. Advise law enforcement, fire, and emergency medical units of any hazards. Perhaps have patrol car check area to confirm report and conditions. Based on information from water personnel, warn fire department of threat to supply of water for fire suppression.
- IV. If severe, notify appropriate elected and appointed officials. Initiate notice to public. Notify the Caddo Office of Homeland Security and Emergency Preparedness so they may activate the Emergency Operations Center (EOC).

B. Pumping/Storage Problems

- I. Notify on-call person(s) with water utility.
- II. Depending on impact of water supply to the community:
 - a. Notify emergency services.
 - b. Advise citizens.
 - c. Inform municipal officials.
 - d. Activate Emergency Operations Center.

Most or the response to water system emergencies will be managed by water utility personnel. Water department in-house plans should include emergency procedures to follow for various incidents. Procedures should be based on anticipated reaction to "worst case" scenarios. A copy of these procedures should be kept on file at the Caddo Emergency Operations Center (EOC) for reference before and during emergency conditions.

III. WATER OUTAGE

When a water outage occurs, the lack of potable water causes an inconvenience to everyone. It can pose a health and safety hazard to some, and an economic hazard to others. Water department in-house plans should contain a list of critical users of water in the community, with contact names and telephone numbers.

IV. RESOURCES

A key to assuring positive response to water system emergencies is a comprehensive listing of resources that may be needed. Included should be generators, pumps, repair parts, chemicals, equipment such as welders and backhoes, emergency water supplies, and engineering and health unit support.

Caddo OHSEP maintains a resource manual in the Emergency Operations Center (EOC) that lists hundreds of area resources and emergency contacts at the local, state and federal levels of government and in the private sector. Also see the Resource Annex of the Caddo Emergency Operations Plan.

V. NOTIFICATION

Notification of the public will be more efficient if printed instructions are available for distribution to the media. Water departments should prepare instructions now and have them ready to be reproduced as needed. The news media should be contacted prior to the actual shut-off of water utilities for an extended time period so the public may take appropriate measures and arrange for water rationing. A positive response on the part of local government will help relieve citizens' concerns during a water outage/shortage, and will help safeguard the health of the community.

In the event it becomes necessary to shut-off water service in large areas, notifications should be made to local government emergency services and the Emergency Operations Center. The official authorizing the shut-off is also responsible for the resumption of service. When restoring service, care must be exercised that hazards are not created such as flooding from open water outlets, fire hydrants, etc.

VI. WATER PURIFICATION METHODS

The following is a fact sheet for public information in the event of an extended water supply shortage/outage:

Unless you are absolutely certain your home water supply is not contaminated, purify all water before using it for drinking, food preparation, brushing teeth, or dishwashing. If the water contains sediment or floating material, strain it through a cloth before treating it. Water can be purified by boiling it or by chemical treatment.

A. Boiling

Boil water at a rolling boil for 10 minutes to kill any disease-causing bacteria in the water. Add a pinch of salt to each quart of boiled water to improve the taste.

B. Chemical Treatment

If water cannot be boiled, treat it chemically. Two chemicals usually found in the home will purify water.

1. Chlorine Bleach

Household bleach, such as Clorox or Purex, is a good disinfectant for water. However, check the label to be sure that hypochlorite is the only active ingredient in the bleach. Do not use any bleach that contains soap.

Percent Chlorine	Add per gallon of water
1 %	40 drops
4-6 %	8 drops
7-10 %	4 drops
Unknown	10 drops

Mix the bleach thoroughly into the water. Let it stand for 30 minutes. The water should have a slight chlorine odor. If it doesn't, repeat the dose and let the water stand for an additional 15 minutes.

2. Iodine

Household iodine from the medicine chest or first aid kit will purify water. The iodine should be 2% United States Pharmacopoeia (U.S.P.) strength. Add 20 drops per gallon of clear water; add 40 drops per gallon of cloudy water.

3. Water Purification Tablets

Follow manufacturer's directions. Water purification tablets are available at drugstores and sporting goods stores.

VII. DRINKING WATER SOURCES

The following is a fact sheet for public information in the event of an extended water supply shortage/outage:

One of the most crucial life sustaining needs is a supply of safe water. Every person needs at least 2 quarts of water or other liquids daily (more in hot weather). Pure water is also needed for preparing food, brushing teeth and keeping clean.

When warned of a severe storm which could cause widespread flooding, prolonged ice storm, or some other factors which could disrupt water services, the public should insure an adequate supply of safe water for themselves by filling large clean containers, pots, pans, sinks and bathtubs with water. Then shut off the main water valve to protect the clean water already in the water system, and close the valves on the water lines leaving the house.

There may be other emergency sources of water, such as ice cubes, on hand. Soft drinks and fruit juices are water substitutes. In addition, the water in your pipes and

toilet flush tanks (NOT THE BOWLS) is safe to drink if you closed the valve on the main water line before any flooding occurs.

To use the water still in the pipes, turn on the faucet located in the highest point in the house – usually in an upstairs bathroom. This lets air into the system. Then draw water from the lowest faucet in the house.

Hot water heaters or water pressure tanks can supply many gallons of safe water in an emergency. Before using water from the water heater, switch off the gas or electricity that heats the water. Leaving the heating part on while the heater is empty could cause an explosion or burn out the elements. After turning off the gas or electricity, open the drain valve at the bottom of the tank. Do not turn the water heater on again until the water system is back in normal service.

VIII. EMERGENCY CONTACTS

Shreveport Office of Water & Sewerage

Director's Office: 673-7620

2139 Greenwood Road, Shreveport, LA

Emergency Assistance (24 Hours): 673-7600

Appendix 4 – Electric System Emergencies

I. **GENERAL**

The supply and distribution of the majority of electricity in Caddo Parish is provided by AEP Southwestern Electric Power Company (SWEPCO), a non-governmental, private-for-profit utility provider. SWEPCO’s parent company, Central and South West Systems, provides electrical service to portions of Texas, Arkansas, Oklahoma and Louisiana. Panola-Harrison Electric Cooperative, Inc., also provides electrical service to a portion of the western edge of Caddo Parish.

II. **TYPES OF POWER OUTAGES**

Electrical problems can be divided into three categories: short-term outage, long-term outage and shortage. Response procedures will be based on the impacts of each of these conditions.

A. **Short-Term Outage**

A short-term outage may result from a car hitting a power pole in an accident, from a storm or from internal problems in the electrical system.

B. **Long-Term Outage**

Long-term outages may result from heavy storm damage, vandalism, or terrorism or major problems in the electric distribution system (electric systems are linked together throughout the country, so utilities may obtain power from other systems if localized generation problems are experienced).

C. **Shortage**

Heavy demands on electric generation facilities, usually related to extreme weather conditions, can produce system-wide or area-wide reductions in the amount of power available. This temporary shortage has become better known as a “brown out”.

III. **RESPONSE PROCEDURES**

For each of the conditions listed above, the electrical service provider (AEP SWEPCO) should develop response procedures that list the impacts on the community and their reactions to these (potential) impacts. Copies of these procedures should be kept on file at the Caddo Emergency Operations Center (EOC). Potential impacts include:

Electrical System Failure Impacts	Result
Lack of streetlights and traffic control signals	Traffic hazards and increased crime
Reduced power for governmental operations and critical facilities within the community including hospitals, nursing homes, sensitive manufacturing processes in	Impact will depend on the number and condition of emergency generators, as well as what is fed by the emergency power.

local plants, water and wastewater utilities, media broadcasting stations, etc.

Lack of power for refrigeration in homes, restaurants, business (such as florists) and the coroner's morgue.

May need to transfer items to areas not affected by problem. May need alternative storage capacity.

Food preparation may be difficult wherever electrical stoves are used.

Food spoilage could cause public health problems. May need to arrange for disposal of large quantities of perishable items.

Kidney dialysis machines and similar equipment will not be operable without alternative power supplies.

May need to provide portable generators or move patients to a different facility.

Heating/air conditioning systems will not operate.

Living conditions may become poor enough to need to move people to shelter areas served by other fuels.

IV. EMERGENCY SHUT-OFF PROCEDURES

A. When Ordered

The shut-off of certain utilities, such as electricity, may be directed by a responsible official of the agency concerned, or in an emergency by the on-scene officer-in-charge, or the Emergency Operations Center (EOC) on the basis of information available that such action is necessary. Prior to such action, concurrence should be obtained from the other departments involved in the incident in order not to hamper operations.

B. Notification to Residents:

If possible, all residents and commercial occupants in the affected area should be notified prior to the actual shut-off of electrical service for an extended period of time.

Notification is usually made through press releases to the local news media. It is a good idea to advise the affected area to turn off appliances prior to restoring electrical power to prevent power surges and damage to electrical apparatuses. Before service is resumed, residents should again be notified. The OHSEP FirstCall Telephone Warning System can also be utilized for public notification purposes.

C. Responsibility for Shut-Off

The utility company concerned shall be responsible for discontinuing service. The official authorizing the shut-off is also responsible for the resumption of service. When restoring service, care must be given that additional hazardous conditions are not created.

D. Other Notifications

In the event it becomes necessary to shut-off electrical service to large areas of the community, the utility company should notify local government emergency services and the Emergency Operations Center.

V. SPECIAL HAZARDS – ICE STORMS

The most dangerous situations faced by electrical company crews are the conditions created by ice and snow in winter. While snow provides a lot of serious problems, ice is the most hazardous.

Disasters that affect the electric company facilities and transmission lines can present a number of challenging difficulties for electric utilities. Locally based crews provide maintenance service. In times of emergency, other crews are mobilized and dispatched from a wide area. Every effort is made to re-establish electric service as rapidly as possible.

The electric service utility should send a representative to the Emergency Operations Center (EOC) to coordinate recovery efforts. Depending on the nature and length of recovery operations, coordination of electrical company crews may become an issue. Assistance with lodging facilities, garage space, food, shelter, traffic control and similar logistical items may need addressing. The American Red Cross and Salvation Army are excellent resources for feeding vans and shelter.

VI. EMERGENCY CONTACTS

A. Emergency: 1-888-237-2221

B. LEPC Representatives

Chris Gray: (318) 862-2135

Jim Hewlett: (318) 862-2032

C. AEP SWEPCO

428 Travis, Shreveport, 71101

Office: 673-3000

Emergency: 1-888-218-3919

D. Panola-Harrison Cooperative

410 E. Houston, Marshal, TX 75670

Office: (903) 935-1540

Emergency: 1-800-972-1093

Appendix 5 – Natural Gas System Emergencies

I. **GENERAL**

Reliant Energy - Arkansas Louisiana Gas Company, a non-governmental, private-for-profit utility provider, provides the supply and distribution of residential natural gas in Caddo and Bossier Parishes. Several other companies maintain natural gas or natural gas liquids (NGL) pipelines through the two parishes. These companies include the following: El Paso Field Services, Gulf States Pipeline Corporation, Koch Gateway Pipeline Company, NorAm Gas Transmission, Mississippi River Transmission Corporation, Pan Energy Field Services and Seagull Field Services Company. An emergency manual prepared by The Pipeline Group is on-file at the Caddo Emergency Operations Center (EOC) for these companies.

II. **TYPES OF NATURAL GAS EMERGENCIES**

Natural gas emergencies can be divided into three categories: short-term outage, long-term outage and shortage. Response procedures will be based on the impacts of each of these conditions.

A. **Short-Term Outage**

A short-term outage may result from a car hitting a gas meter in an accident, power failure to a compressor station, or from other problems within the system.

B. **Long-Term Outage**

Long-term outages may result from transmission line damage, vandalism, terrorism or major disruptions in the distribution system.

C. **Shortage**

Heavy demands on natural gas generation facilities, usually related to extreme cold weather conditions, can produce system-wide or area-wide reductions in the amount of natural gas available.

III. **RESPONSE PROCEDURES**

For each of the conditions listed above, the natural gas service provider (ARKLA) should develop response procedures that list the impacts on the community and their reactions to those (potential) impacts. Copies of these procedures should be kept on file at the Caddo Emergency Operations Center (EOC). Potential impacts include:

Natural Gas System Failure Impacts	Result
Lack of heat in homes, businesses, nursing homes, hospitals, etc.	May affect economic health of community. Residents may need to be housed in shelters.
Lack of cooking facilities in homes,	Special arrangements may need to be

restaurants, and health care facilities.

made to feed those who need natural gas to prepare food.

In extreme temperatures, the natural gas supply may not be able to keep up with demand, resulting in wide-area shortages. This condition has been previously experienced in many parts of the country and may require action by local governments to protect the health and safety of their citizens. When significant shortages occur, natural gas suppliers will begin rationing the fuel. First, industrial users are asked to stop using natural gas. Those industries that are equipped to use alternative fuels (such as coal, electricity, or propane) will switch to the level for which they are prepared. Others will have to close temporarily, putting people out of work. This will build tensions in the community. Commercial establishments will be next, and residential users will be asked to turn thermostats down to a lower temperature. This may have an effect on older residents.

If sections of the community are without natural gas, due to a shortage or another problem, it may be necessary to open shelters to house affected citizens on a temporary basis. Shelter managers should know what kind of fuel is used for heating and cooking at each of the shelter areas. If the natural gas supply to an area is cut, gas company personnel will have to go to every user's location and shut-off the supply line at the street. A physical safety inspection will have to be made, by Gas Company personnel, for every user before their gas can be turned on again. Unlike electricity or water, natural gas cannot just be turned off and on again. Before gas service is reinstated, a safety check must be made to prevent explosions.

An official with the natural gas utility will need to serve on the Emergency Operations Center (EOC) team. Whenever the gas utility is – or might be – affected by the disaster or major emergency, the utility should be represented in the Emergency Operations Center.

IV. EMERGENCY SHUT-OFF PROCEDURES

A. When Ordered

The shut-off of certain utilities, such as natural gas, may be directed by a responsible official of the agency concerned, or in an emergency by the on-scene officer-in-charge or the EOC on the basis of information available that such action is necessary. Prior to such action, concurrence should be obtained from the other departments involved in the incident in order not to hamper operations.

B. Notification to Residents

If possible, all residents and commercial occupants in the affected area should be notified prior to the actual shut-off of natural gas service for an extended period of time.

Notification is usually made through press releases to the local news

media. It is a good idea to advise the affected area to extinguish ignition sources prior to restoring natural gas service to prevent possible explosions. Before service is resumed, residents should again be notified. The OHSEP First Call Telephone Warning System can also be utilized for public notification purposes. Activation of the system can be made by contacting the Emergency Operations Center.

C. Responsibility for Shut-Off

The utility company concerned shall be responsible for discontinuing service. The official authorizing the shut-off is also responsible for the resumption of service. When restoring service, care must be given that additional hazardous conditions are not created.

D. Other Notifications

In the event it becomes necessary to shut-off natural gas service to large areas of the community, the utility company should notify local government emergency services and the Emergency Operations Center (EOC). Entries of shut-off notifications should be noted on the EOC status boards. Specific information should include: name of utility, area affected, addresses of critical facilities affected, name and phone number of official ordering shut-off, location of shut off (i.e., location of main valve or terminal, etc.), and notifications made, including identity of persons notified and agencies concerned.

V. EMERGENCY CONTACTS

A. Reliant Energy – Arkansas Louisiana Gas Company

1262 Dalzell Street
Shreveport, LA 71103
Office: 227-2555
Emergency: 1-800-551-8261

Appendix 6 – Utilities Departments

The following is a partial list of public works and related departments in Caddo Parish.

Caddo Parish Public Works
P.O. Box 1127
Shreveport, LA 71101
226-6936

Shreveport Public Works
P.O. Box 31109
Shreveport, LA 71130
673-6300

Shreveport Water & Sewer
P.O. Box 31109
Shreveport, LA 71130
673-7660

Shreveport Streets & Drainage
P.O. Box 31109
Shreveport, LA 71130
673-6330

Caddo Parish Fleet Services
P.O. Box 1127
Shreveport, LA 71163
226-6936

Shreveport Fleet Services
P.O. Box 31109
Shreveport, LA 71130
673-6368

Shreveport City Engineer's Office
P.O. Box 31109
Shreveport, LA 71130
673-6000

LA DOTD - NW Louisiana
P.O. Box 38
Shreveport, LA 71161
746-6100

Appendix 7 – Standard Operating Guidelines (SOGs)

Each department/agency/organization listed in this annex will develop their own specific in-house Standard Operating Guidelines (SOGs) for dealing with Public Works/Utilities emergencies. These procedures should be kept on file in the Caddo Emergency Operations Center (EOC). Updates should be forwarded to Caddo OHSEP on a routine basis.