

# **ANNEX L**

# **UTILITIES**

**June 2006**

**BRAZOS COUNTY**

**INTERJURISDICTIONAL EMERGENCY MANAGEMENT**

# APPROVAL & IMPLEMENTATION

## Annex L UTILITIES

June 2006

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Brazos County EM Coordinator

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Date

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City of Bryan EM Coordinator

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Date

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City of College Station EM Coordinator

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Date

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City of Wixon Valley EM Coordinator

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City of Kurten EM Coordinator

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Texas A&M University EM Coordinator

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Date



# ANNEX L

## UTILITIES

### I. AUTHORITY

See Basic Plan, Section I.

16 TAC, Part 1, Chapter 7 (Gas Utilities), Subchapter B, Rule 7.45 (Quality of Service).

16 TAC, Part 2, Chapter 25 (Electric Service Providers), Subchapter C, Rules 25.52 (Reliability and Continuity of Service) and 25.53 (Emergency Operations Plan).

16 TAC, Part 2, Chapter 26 (Telecommunications Service Providers), Subchapter C, Rules 26.51 (Continuity of Service) and 26.52 (Emergency Operations).

### II. PURPOSE

The purpose of this annex is to describe the organization, operational concepts, responsibilities, and procedures to prevent, protect from, respond to, and recover from temporary disruptions in utility services that threaten public health or safety in the local area.

This annex is not intended to deal with persistent shortages of water due to drought or with prolonged statewide or regional shortages of electricity or natural gas. Measures to deal with protracted water shortages are addressed in the drought plans that must be maintained by each public water supply utility. Resolving protracted water shortages normally requires long-term efforts to improve supplies. Measures to deal with widespread energy shortages are normally promulgated by state and federal regulatory agencies. Local governments may support utility efforts to deal with long-term water and energy supply problems by enacting and enforcing conservation measures and providing the public information pertinent to the local situation.

### III. EXPLANATION OF TERMS

#### A. Acronyms

Co-Op	Cooperative
COOP	Continuity of Operations Plan
DD	Disaster District
DDC	Disaster District Committee
DSHS	Texas Department of State Health Services
EMC	Emergency Management Coordinator
GDEM	Governor's Division of Emergency Management
IC	Incident Commander
ICS	Incident Command System
ICP	Incident Command Post

MUD	Municipal Utility District
NIMS	National Incident Management System
NRP	National Response Plan
PUC	Public Utility Commission
RRC	Railroad Commission
SOC	State Operations Center
SOP	Standard Operating Procedures
TAC	Texas Administrative Code
TCEQ	Texas Commission of Environmental Quality

## B. Definitions

Electric Co-operatives. Member- owned non-profit electric utilities.

<b>IV. SITUATION &amp; ASSUMPTIONS</b>
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## A. Situation

1. As noted in the general situation statement and hazard summary in Section IV.A. and Figure 1 of the Basic Plan, our area is vulnerable to a number of hazards. These hazards could result in the disruption of electrical power, telephone service, water and wastewater services and natural gas service.
2. The loss of utility services, particularly extended utility outages, could adversely affect the capability of local personnel to respond to and recover from the emergency situation that caused the disruption of utility service and create additional health and safety risks for the general public.
3. Public utilities are defined as those companies and organizations authorized to provide utility services, including electricity, water, sewer service, natural gas, and telecommunications, to the general public in a specified geographic area. Utilities may be owned and/or operated by a municipality, a municipal utility district (MUD), a regional utility authority, investors, or by a private non-profit organization such as a member cooperative (co-op).

The public utilities serving our community include:

- a) Electric:
  - 1) Bryan Texas Utilities (BTU)
  - 2) City of College Station Utilities
  - 3) Texas A&M University Utilities
  - 4) Mid-South Synergy
- b) Water/Wastewater:
  - 1) City of Bryan Utilities (water & wastewater)
  - 2) City of College Station Utilities (water & wastewater)
  - 3) Texas A&M University Utilities (water & wastewater)
  - 4) Wixon Valley Special Utilities District
  - 5) Fairview-Smetana Water Supply Corp.
  - 6) Brushy Water Supply

- c) Telephone:
  - 1) United Telephone Company of Texas (Sprint)
  - 2) Valor Telecommunications of Texas
  - 3) Verizon Southwest
  - 4) TAMU Telecommunications
  
- d) Natural Gas:
  - 1) Atmos

Additional information on these utilities is provided in Appendix 1 to this annex.

- 4. The state and/or federal government regulate most utility providers. State regulators include:
  - a) The Public Utilities Commission (PUC) for telecommunications companies and most electrical utilities, other than municipal electric utilities.
  - b) The Texas Commission on Environmental Quality (TCEQ) for most water suppliers and wastewater utilities.
  - c) The Railroad Commission of Texas (RRC) for gas utilities.
  
- 5. Virtually all utilities are required by state regulations to have emergency operations plans for restoring disrupted service. Many utilities maintain emergency operations centers and those that do not normally have procedures to establish temporary facilities when they need them.
  
- 6. Extended electrical outages can directly impact other utility systems, particularly water and wastewater systems. In areas where telephone service is provided by above-ground lines that share poles with electrical distribution lines, telecommunications providers may not be able to make repairs to the telephone system until electric utilities restore power lines to a safe condition.
  
- 7. Municipal utilities and private non-profit utilities such as electric co-operatives, may be eligible for reimbursement of a portion of the costs for repair and restoration of damaged infrastructure in the event the emergency situation is approved for a Presidential disaster declaration that includes public assistance (PA).

**B. Assumptions:**

- 1. In the event of damage to or destruction of utility systems, utility operators will restore service to their customers as quickly as possible.
  
- 2. A major disaster or a disaster affecting a wide area may require extensive repairs and reconstruction of portions of utility systems that may take considerable time to complete.
  
- 3. Damage to electrical distribution systems and sewer and water systems may create secondary hazards such as increased risk of fire and public health hazards.

4. Each utility will direct and control its own resources and plan to carryout its own response operations, coordinating as necessary with local government and with other utilities.
5. Individual utility operators, particularly small companies, may not have sufficient physical or monetary resources to restore utility systems affected by a major disaster or one having widespread effects. Utilities typically obtain supplementary repair and restoration assistance from other utilities pursuant to mutual aid agreements and by using contractors hired by the utility.
6. Equipment and personnel from other city departments and agencies may be employed to assist a municipal utility in repairing its systems and restoring service to the public.

## **V. CONCEPT OF OPERATIONS**

### **A. General**

1. Incident activities for the utilities function will include work in an Incident Command System (ICS) environment with an Incident Commander (IC), maintaining communications with the IC and Emergency Operations Center (EOC), and implementing local and regional mutual aid agreements as required.
2. In the event of a loss of utility service for any reason, local government is expected to rapidly assess the possible impact on public health, safety, and property, and on private property, and take appropriate actions to prevent a critical situation from occurring or to minimize the impact in accordance with the Continuity of Operations Plan. Where utility service cannot be quickly restored, the County and/or City government will have to take timely action to protect people, property, and the environment from the effects of a loss of service.
3. Local governments are not expected to direct utility companies to repair utility problems. Utilities have a franchise that requires them to provide service to their customers and they have the ultimate responsibility for dealing with utility service outages. Virtually all utilities are required by state regulations to make all reasonable efforts to prevent interruptions of service and, if interruptions occur, to reestablish service in the shortest possible time. Utilities are required to inform state officials of significant service outages and expected to keep their customers and local officials informed of the extent of utility outages and, if possible, provide estimates of when service will be restored.
4. Local governments that own or operate utilities are responsible for restoring service to local customers and may commit both their utility and non-utility resources to accomplish that task.
5. For utilities that are not government-owned, local government is expected to coordinate with those utilities to facilitate their efforts to restore service to the local area.
6. The County and/or City should identify critical local facilities and establish general priorities for restoration of utility service. This list of priorities must be communicated to the utilities serving those facilities. Examples of critical facilities may include:

- a) The EOC
- b) Police, fire, and EMS stations
- c) Hospitals
- d) Water treatment and distribution facilities
- e) Sewage pumping and treatment facilities
- f) Buildings serving as public shelters or mass feeding facilities
- g) Fueling facilities

Appendix 2, Utility Restoration Priorities for Critical Facilities, provides a sample of initial utility restoration priorities for critical facilities. These priorities are based on general planning considerations; they should be reviewed and, if necessary, updated based on the needs of a specific situation.

7. Utility companies may not be able to restore service to all critical facilities in a timely manner, particularly if damage has been catastrophic and a substantial amount of equipment must be replaced or if repairs require specialized equipment or materials that are not readily available. In large-scale emergencies, utility companies may have to compete with individuals, businesses, industry, government, and other utility companies for manpower, equipment, and supplies.

## **B. Local Government Response to a Utility Outage**

1. It is essential for County and/or City officials to obtain an initial estimate of the likely duration of a major utility outage from the utility as soon as possible for response actions to begin. Once that estimate is obtained, local officials should make a determination of the anticipated impact and determine the actions required to protect public health and safety and public and private property.
2. Extended utilities outages may require the City and/or County to take action to protect public health and safety and public and private property. Such actions may include:
  - a) Water or Sewer Outage
    - 1) Curtail general water service to residents to retain water in tanks for firefighting and for controlled distribution to local residents in containers.
    - 2) Arrange for supplies of emergency drinking water for the general public and for bulk water for those critical facilities that require it to continue operations.
    - 3) If sewer service is disrupted, arrange for portable toilets and hand washing facilities to meet sanitary needs.
  - b) Electrical or Natural Gas Outage
    - 1) Obtain emergency generators to power water pumping stations, water treatment facilities, sewage lift stations, sewage treatment facilities, fueling facilities, and other critical sites. See Appendix 3 to this annex.

- 2) During period of cold weather, establish public shelters for residents who lack heat in their homes.
  - 3) During periods of extreme heat, establish “cooling sites” for residents who do not have air conditioning in their homes
  - 4) Request volunteer groups set-up mass feeding facilities for those without electrical or gas service and cannot prepare meals.
  - 5) Coordinate with ice distributors to ensure ice is available locally to help citizens preserve food and medicines.
  - 6) Arrange for fuel deliveries to keep emergency generators running at critical facilities.
- c) Telecommunications Outage
- 1) Request telecommunications providers implement priority service restoration plans.
  - 2) Activate amateur radio support.
  - 3) Request external assistance in obtaining additional radios and repeaters or satellite telephones.
- d) General
- 1) Isolate damaged portions of utility systems to restore service quickly to those areas where systems are substantially undamaged.
  - 2) In cooperation with utilities, institute utility conservation measures. See Appendix 4 to this annex.
  - 3) Disseminate emergency public information requesting conservation of utilities.
  - 4) Assist in relocating patients of medical facilities, residential schools, and similar institutions that cannot maintain the required level of service for their clients.
  - 5) Provide law enforcement personnel to control traffic at key intersections if traffic control devices are inoperative.
  - 6) Consider staging fire equipment in areas without electrical or water service.
  - 7) Consider increased security patrols in areas that have been evacuated due to lack of utility service.
3. See Appendix 1 to Annex M, Resource Management, for planning factors for emergency drinking water, ice, portable toilets, and food.

### **C. Facilitating Utility Response**

1. Local officials may facilitate utility response by:
  - a) Identifying utility outage areas reported to local government. Although many utility systems have equipment that reports system faults and customer service numbers for people to report problems, outage information reported to local government can also be helpful.
  - b) Asking citizens to minimize use of utilities that have been degraded by emergency situations. See Appendix 4 for utility conservation measures.
  - c) Identifying local facilities for priority restoration of utilities.

- d) Coordinating with the utility on priorities for clearing debris from roads which also provides access to damaged utility equipment.
- e) Providing access and traffic control in utility repair areas where appropriate.

## 2. Large-scale Emergency Situations.

In large-scale emergency situations which produce catastrophic damage in a limited area (such as a tornado) or severe damage over a wide area (such as an ice storm), utilities are typically faced with a massive repair and rebuilding effort that cannot be completed in a reasonable time without external support. In such circumstances, utilities typically bring in equipment and crews from other utilities and from specialized contractors. In these situations, utilities may request assistance from the County and/or City in:

- a) Identifying lodging for repair crews – hotels, motels, school dormitories, camp cabins, and other facilities.
- b) Identifying restaurants to feed crews or caterers who can prepare crew meals.
- c) Identifying or providing a staging area or areas for utility equipment coming from other locations and providing security for such areas.
- d) Obtaining water for repair crews.
- e) Identifying operational sources of fuel in the local area.

## **D. Protecting Resources and Preserving Capabilities**

In the event of a slowly developing emergency, it is possible that utilities may be able to mitigate some of the effects of a major emergency or disaster by protecting key facilities and equipment. The critical facilities and key resources within our community are identified in *Appendix 2*.

1. In the event of a flooding threat, facilities such as sewage or water-treatment constructing dikes, sandbagging, or using pumps to prevent water from entering the facility may protect facilities or electrical substations. In some cases, in an effort to preserve pumps, electrical control panels, and other vital equipment, it may also be prudent to remove that equipment from facilities to prevent damage due to rising water.
2. In the event of a hazardous materials spill in rivers or lakes used for water supplies, contamination of water distribution systems may be avoided by temporarily shutting down water intakes.
3. Loss of power could severely affect critical functions such as communications, water pumping, purification, and distribution; sewage disposal; traffic control; and operation of critical medical equipment. Critical facilities that require back-up electrical power should have appropriate generation equipment on site if possible. If this is not feasible, emergency generator requirements should be determined in advance to facilitate timely arrangements for such equipment during emergency situations. Appendix 3 provides forms to record information on existing backup generators and to identify

requirements for additional emergency generators. The Utility Coordinator will provide such forms to facility operators to complete and maintain a file of completed forms for both existing generators and potential generator requirements.

#### **E. Utility Support for Emergency Response Operations**

The assistance of utility providers may be needed to support other emergency response and recovery operations. Such assistance may include:

1. Rendering downed or damaged electric lines safe to facilitate debris removal from roadways.
2. Cutting off utilities to facilitate the emergency response to fires, explosions, building collapses, and other emergency situations.
3. Facilitating search and rescue operations by cutting off electrical power, gas, and water to areas to be searched.
4. Establishing temporary utility hookups to facilitate response activities.

#### **F. Utility Support for Disaster Recovery Operations**

Utilities play a primary role in the recovery process and must coordinate closely with local government to:

1. Render electrical lines and gas distribution lines safe before local officials authorize re-entry of property owners into affected areas to salvage belongings and repair damage to their homes and businesses.
2. Participate in inspections of affected structures to identify hazards created by damaged utilities and eliminate those hazards.
3. Determine the extent of damage to publicly owned utility infrastructure and equipment.
4. Restore utility systems to their pre-disaster condition.

#### **G. Public Information**

1. It is essential to provide the public current information on utility status, the anticipated time to restore service, recommendations on dealing with the consequences of a utility outage, conservation measures, and information on sources of essential life support items such as water. Locally developed emergency public information relating to utility outages should be developed in coordination with the utilities concerned to ensure that messages are accurate and consistent.
2. In some emergency situations, many of the normal means of disseminating emergency public information may be unavailable and alternative methods of getting information out to the public may have to be used.
3. Utilities are complex systems and service may be restored on a patchwork basis as damaged components are repaired or replaced. Some neighborhoods may have utility

service restored while adjacent neighborhoods are still without power or water. In some cases, one side of a street may have power and the opposite side may not. In these circumstances, the quality of life for local residents can often be significantly improved by using public information messages to encourage those who have working utilities to take in their neighbors who do not. This approach can also significantly reduce the number of people occupying public shelters and using mass feeding facilities.

## **H. Activities by Phases of Emergency Management:**

### 1. Prevention

#### a) All utilities. Local officials should:

Have emergency management personnel familiar with the local hazard assessment review proposed utility construction or renovation activities to determine if existing hazards will be increased by such activities.

#### b) Utilities owned or operated by the County and/or City. Utility officials should:

- 1) Assess the vulnerability of existing municipal electrical, gas, water, and sewer systems to known hazards and take actions to avoid or lessen such vulnerabilities.
- 2) Maintain portable generators and pumps to meet unexpected needs and/or identify rental sources for such equipment that can respond rapidly during an emergency to avoid and/or reduce the effects of other incidents.

### 2. Preparedness

#### a) All utilities. Local officials should:

- 1) Contact local utilities to determine the type of damage assessment information that they can normally provide in an emergency. Provide utilities with names of key officials and contact information for those officials and the local SOC that utilities can use to provide information to local government during an emergency.
- 2) Reduce vulnerability of new utility infrastructure to known hazards through proper site selection and facility design.
- 3) Coordinate with the emergency management staff to develop plans to protect public utility facilities and equipment at risk from known hazards, and to maintain supplies and equipment to carry out such plans.
- 4) Develop plans to install emergency generators in key facilities and identify emergency generator requirements for facilities where it is not possible to permanently install backup generators. See Appendix 3 for further information.
- 5) Ensure the Utility Coordinator and the local SOC have emergency contact numbers for utilities serving the local area other than published customer service numbers.
- 6) Coordinate with the occupants of critical governmental and non-government facilities to establish a tentative utility restoration priority list for such facilities; see Appendix 2 for utility restoration priorities for critical facilities. Provide the restoration priority list to appropriate utilities.

- 7) Cooperate with social service agencies and volunteer groups to identify local residents with potential health or safety problems that could be immediately affected by utility outages and provide such information to utilities for action.
  - 8) Request utilities brief local officials and members of the EOC staff on their emergency service restoration plans periodically.
  - 9) Encourage utilities to participate in local emergency drills and exercises.
  - 10) Train workers, especially supervisors, to be familiar with ICS incident site procedures.
  - 11) Ensure mutual aid agreements are completed.
- c) Utilities owned or operated by the County and/or City. Utility officials should:
- 1) Train and exercise personnel in emergency response operations.
  - 2) Plan for adequate staffing during and after emergencies.
  - 3) Ensure emergency plans are kept up-to-date.
  - 4) Ensure emergency equipment is in good repair and secured against damage from likely hazards.
  - 5) Stockpile adequate repair supplies for likely emergency situations.
  - 6) Conclude utility mutual aid agreements and establish procedures for requesting assistance from other utilities.

### 3. Response

- a) All utilities. Local officials should:
- 1) Request that each utility that serves the local area which has suffered system damage regularly report its operational status, the number of customers affected by service outages, and areas affected.
  - 2) Provide expedient substitutes for inoperable utilities at critical facilities to the extent possible or relocate those facilities if necessary. Update utility restoration priorities for critical facilities as necessary.
  - 3) If an extended utility outage is anticipated, take those actions necessary to protect public health and safety and private and public property and implement utility conservation measures. See Section V.B and Appendix 4 to this annex.
  - 4) Facilitate utility emergency response to the extent possible. See Section V.C of this annex.
  - 5) Include utility status information in the Initial Emergency Report and period Situation Reports produced during major emergencies and disasters. See Annex N, Direction & Control.
- b) Utilities owned or operated by the County and/or City. Utility officials should:
- 1) For slowly developing emergency situations, take appropriate action to protect utility infrastructure from the likely effects of the situation. See Section V.D of this annex.
  - 2) Make emergency utility repairs as necessary. If a large number of utility customers or a wide area is affected, use the critical facility utility restoration priorities in Appendix 2 to this annex, as modified by the EOC, as a basis for initial actions.
  - 3) Request mutual aid assistance or contractor support if needed.

- 4) If possible, provide trained utility crews to assist emergency services during emergency response operations.

#### 4. Recovery

##### a) All Utilities. Local officials should:

- 1) Continue to request regular reports from each utility serving the local area concerning its operational status, the number of customers affected by service outages, and areas affected.
- 2) For major emergencies and disasters, obtain estimates of damages from municipal utilities or member-owned non-profit utilities for inclusion in local requests for disaster assistance. See Annex J, Recovery.
- 3) Update utility restoration priorities for critical facilities as appropriate. See Appendix 2 to this annex
- 4) Request utilities that participate in major emergency operations to participate in any local post-incident review of such operations.

##### b) Utilities owned or operated by the County and/or City. Utility officials should:

- 1) Provide regular updates to the EOC on utility damages incurred, the number of customers affected, and areas affected.
- 2) Participate in utility damage assessment surveys with state and federal emergency management personnel.
- 3) In coordination with the EOC staff, request mutual aid resources, contractor support, or state assistance, if necessary.

## VI. ORGANIZATION & ASSIGNMENT OF RESPONSIBILITIES

### A. Organization

1. The operations of utilities owned or operated by local government will be directed by those individuals who manage the utility on a daily basis, including:
  - a) B/CS/TAMU Utilities Administrators
  - b) B/CS/TAMU Water & Wastewater Managers

These individuals are expected to continue to manage the operations of those utilities during emergency situations.

2. Individuals designated by the owners or operators of utilities that are not owned or operated by local government will manage the operation of those utilities.
3. The County Judge and/or Mayor shall appoint a Utility Coordinator to coordinate emergency preparedness activities with utilities, maintain this annex (with assistance from the EMC) and related utility data that may be needed during emergency, and act as a liaison with utilities during emergency operations.

## **B. Assignment of Responsibilities**

1. The Emergency Management Directors/City Managers will:
  - a) Provide general direction for the local response to major utility outages that may affect public health and safety or threaten public or private property and, within the limits of legal authority, implement measures to conserve utilities.
  - b) For city-owned or operated utilities, the Mayor/City Manager may provide general guidance and recommendations regarding the utility response to emergency situations in the local area through the Utility Coordinator or, where appropriate, through individual utility managers.
  
2. The Utility Coordinator will:
  - a) Coordinate with utilities to obtain utility emergency point of contact information and provide emergency contact information for key local officials and the EOC to utilities.
  - b) Maintain information on the utilities serving the local area, including maps of service areas. See Appendix 1
  - c) Maintain the Utility Restoration Priorities for Critical Facilities (Appendix 2). In coordination with the EMC, update utility restoration priorities for critical facilities in the aftermath of an emergency situation if required.
  - d) Maintain information on existing emergency generators and potential generator requirements. See Appendix 3.
  - e) Coordinate regularly with utilities during an emergency situation to determine utility status, customers and areas affected, and what response, repair, and restoration actions are being undertaken, and provide information to the EMC.
  - f) Advise the EMC what actions should be taken to obtain services for those without utilities or to relocate those where services cannot be restored where it appears outages will be long-term.
  - g) Coordinate with the EMC and respond to requests from utilities for assistance in facilitating their repair and reconstruction activities (see Section V.C of this annex) or coordinating their efforts with other emergency responders.
  - h) Ensure current information on utility assets is provided for inclusion in Annex M, Resource Management.
  - i) Request resource assistance from utilities during emergencies when requested by the Resource Management staff.
  - j) Develop and maintain this annex.
  
3. The Emergency Management Coordinator (EMC) will:

- a) Provide guidance to the Utility Coordinator on handling utility issues and obtaining utility status reports.
  - b) Assign utility-related problems to the Utility Coordinator for resolution.
4. Utility Managers are expected to:
- a) Ensure utility emergency plans comply with state regulations and are up-to-date.
  - b) Respond in a timely manner during emergency situations to restore utility service. Advise designated local officials or the Utility Coordinator in the SOC of utility status, number of customers affected, and areas affected so that local government may take action to assist residents that may be adversely affected by utility outages.
  - c) Train and equip utility personnel to conduct emergency operations.
  - d) Have utility personnel participate in periodic local emergency exercises to determine the adequacy of plans, training, equipment, and coordination procedures.
  - e) Maintain adequate stocks of needed emergency supplies and identify sources of timely re-supply of such supplies during an emergency.
  - f) Develop mutual aid agreements to obtain external response and recovery assistance and identify contractors that could assist in restoration of utilities for major disasters.
  - g) Ensure utility maps, blueprints, engineering records, and other materials needed to conduct emergency operations are available during emergencies.
  - h) Obtain utility restoration priorities for critical local facilities from the Utility Coordinator for consideration in utility response and recovery planning.
  - i) Take appropriate measures to protect and preserve utility equipment, personnel, and infrastructure, including increasing security when there is a threat of terrorism directed against utility facilities.
5. City owned or operated utilities will, in addition:
- a) Identify and train personnel to assist in damage assessment for public facilities.
  - b) Where possible, provide personnel with required technical skills to assist in restoring operational capabilities of other government departments and agencies and in search and rescue activities.
  - c) When requested, provide heavy equipment support for emergency response and recovery activities of local government.
  - d) Draft regulations or guidelines for the conservation of power, natural gas, or water during emergency situations. If local officials approve such rules or guidelines, assist the Public Information Officer in communicating them to the public.

- e) Maintain records of expenses for personnel, equipment, and supplies incurred in restoring public utilities damaged or destroyed in a major emergency or disaster as a basis for requesting state or federal financial assistance, if such assistance is authorized.
- 6. The Incident Commander will coordinate utility-related response issues through the Utility Coordinator if the EOC has been activated, or through the EMC or directly with the utility or utilities affected if that facility has not been activated. The Incident Commander may assign missions to utility crews that have been committed to an incident.
- 7. The Public Information Officer will:

Coordinate with the Utility Coordinator and utilities to provide timely, accurate, and consistent information to the public regarding utility outages, including communicating:

  - a) Protective measures, such as boil water orders.
  - b) Conservation guidance, such as that provided in Appendix 4.
  - c) Instructions, including where to obtain water, ice, and other essentials.
- 8. The Public Works Department and/or Road & Bridge Department will:

Upon request, provide heavy equipment and personnel support for restoration of government-owned or operated utilities.

<b>VII. DIRECTION &amp; CONTROL</b>
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- A.** The County Judge and/or Mayor will provide general direction for the local response to major utility outages that may affect public health and safety or threaten public or private property and may, within the limits of legal authority, direct implementation of local measures to conserve utilities.
- B.** The Incident Commander (IC), to protect lives and property, can make operational decisions affecting all incident activities and workers at the incident site. The Incident Commander normally may assign missions to utility crews from government-owned or operated utilities that utility managers have committed to an incident or request other utilities to perform specific tasks to facilitate the emergency response.
- C.** The Utility Coordinator will monitor utility response and recovery operations, receive situation reports from utilities and disseminate these to local officials and the SOC, identify local utility restoration priorities to utility providers, coordinate utility support for the Incident Command Post, facilitate local government support for utility response and recovery efforts, request resource support from utilities, and perform other tasks necessary to coordinate the response and recovery efforts of utilities and local government.

- D. Utility managers will normally direct the emergency response and recovery activities of their organizations. Utility crews will generally be directed by their normal supervisors.
- E. Utility crews responding from other areas pursuant to a utility mutual aid agreement and contractors hired by utilities to undertake repairs will normally receive their work assignments from the utility which summoned or hired them. Organized crews will normally work under the immediate control of their own supervisors.
- F. The line of succession for the Utility Coordinator is:
  - 1. City of Bryan
    - a) BTU General Manager
    - b) Group Manager of Distribution
    - c) Group Manager I.T.
  - 2. City of College Station
    - a) Director of Electric
    - b) Director of Water & Wastewater
    - c) Asst. Director of Electric
    - d) Asst. Director of Water & Wastewater
  - 3. Texas A&M University
    - a) Director of Utilities
    - b) Asst. Director of Utilities (Production & Distribution)
    - c) Supt. for Utilities Operations

<b>VIII. READINESS LEVELS</b>
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**A. Readiness Level IV – Normal Conditions**

See the mitigation and preparedness activities in section V.H. of this annex.

**B. Readiness Level III – Increased Readiness**

- 1. Government-owned or operated utilities:
  - a) Inform key utility staff members of the potential for an emergency.
  - b) Review emergency plans and procedures.
  - c) Check equipment status and correct deficiencies.
  - d) Review supply status and fill shortfalls.
  - e) Monitor the situation.
  - f) Ensure recall rosters are up-to-date.
- 2. For other utilities, the Utility Coordinator should:

- a) Ensure utility managers are aware of the possible impending threat.
- b) Check emergency contact information for each utility and ensure that each utility manager knows how to contact the local Utility Coordinator and the EOC.
- c) Ensure each utility has a copy of the current Utility Restoration Priorities for Critical Facilities and a list of any known special utility service needs.
- d) Request utilities keep the Utility Coordinator informed of any plans, protective actions, or preparedness activities that may affect the local area.

**C. Readiness Level II – High Readiness**

1. Government-owned or operated utilities:
  - a) Monitor the situation.
  - b) Increase short-term readiness of equipment if possible.
  - c) Alert utility response personnel for possible emergency duty.
  - d) Review mutual aid plans and advise mutual aid resources of possible emergency operations.
  - e) Review contractor and supplier lists and alert contractors and suppliers of possible emergency operations.
  - f) Identify personnel to the staff the Incident Command Post (ICP) and EOC.
2. For other utilities, the Utility Coordinator should:
  - a) Advise utilities them of the impending emergency.
  - b) Update them on the status of local preparedness actions.
  - c) Request utilities keep the Utility Coordinator informed of any plans, protective actions, or preparedness activities that may affect the local area.
  - d) Notify them if the SOC is activated.

**D. Readiness Level I – Maximum Readiness**

1. Government-owned or operated utilities:
  - a) Continue to monitor and review the impending situation.
  - b) Activate utility emergency control center, as appropriate, and, upon request, provide utility representation to the EOC if it is activated.
  - c) Place utility emergency response crews in alert status and off-duty personnel on standby.

- d) Implement planned protective measures for utility infrastructure and equipment.
  - e) Test utility communications systems.
  - f) Consider precautionary deployment of emergency response crews.
2. For other utilities, the Utility Coordinator should:
- a) Advise utilities of the impending situation and planned local response actions.
  - b) Advise utilities when the EOC or an Incident Command Post is activated.
  - c) Update point of contact information if necessary
  - d) Conduct communications checks.
  - e) If the primary impact of the impending hazard is likely to be on utilities, invite appropriate utilities to send a liaison officer to the local EOC.

<b>IX. ADMINISTRATION &amp; SUPPORT</b>
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**A. Resource Support and Readiness**

1. In general, utilities are responsible for obtaining and employing the resources needed to make repairs to or reconstruct their systems.
  - a) Local governments may commit their non-utility resources to assist the utilities they own or operate in responding to emergency situations. Local governments may also utilize their utility resources in responding to non-utility emergencies unless local statutes preclude this.
  - b) In general, local governments may not use public resources to perform work for privately owned companies, including utility companies. Privately owned utility companies are expected to use their own resources and additional resources obtained through mutual aid. They may also contract services in response to emergency situations. Most electric and telecommunications utilities are party to mutual aid agreements that allow them to request assistance from similar types of utilities within the region, within the State, or from other states. Some water and gas companies may also be party to mutual aid agreements. Many privately owned utility companies have contingency contracts with private contractors for repair and reconstruction.
  - c) Although local government may not use its resources to perform repair work for privately owned utilities, it may take certain actions to facilitate the response of utilities, whether public or private, to an emergency situation. Some of these actions are outlined in Section V.C of this annex.

2. In the event of a utility outage, the County and/or City is expected to use its own resources and those that it can obtain pursuant to mutual aid agreements or by contracting with commercial suppliers to protect public health and safety as well as public and private property. In the event that these resources are insufficient to deal with the situation, the County and/or City may request state resource assistance through the Disaster District Committee (DDC) Chairman in Bryan. Requests for state assistance should be made or authorized by the County Judge and/or Mayor; cities must first seek assistance from their County before requesting state assistance.

## **B. Coordination**

During emergency situations involving utility outages, the Utility Coordinator/EMC is expected to maintain communications with utilities by any means possible. When the County/City EOC is operational, that facility will act as the focal point for communications between the County and/or City and utilities. The utilities communication network is depicted in Appendix 5.

## **C. Critical Facilities List**

The Utility Coordinator will ensure all utilities that serve the County and/or City are provided copies of the restoration priorities for local critical facilities. See Appendix 2, Utility Restoration Priorities for Critical Facilities.

## **D. Reporting**

1. During major emergencies, the Utilities Coordinator should coordinate with utilities serving the local area to obtain information on their operational status, the number of customers and areas affected, and the estimated time for restoration of service. If possible, a schedule of periodic reporting should be established.
2. The Utilities Coordinator should provide utility status information to the EOC staff and provide utility status inputs for the Initial Emergency Report and periodic Situation Reports prepared during major emergencies and disasters. See Appendices 2 and 3 to Annex N, Direction & Control, for information regarding these reports.

## **E. Records**

1. Certain expenses incurred in carrying out emergency response and recovery operations for certain hazards may be recoverable from the responsible party or, in the event of a Presidential disaster declaration, partially reimbursed by the federal government. Therefore, all government-owned or operated utilities should keep records of labor, materials, and equipment used and goods and services contracted for during large-scale emergency operations to provide a basis for possible reimbursement, future program planning, and settlement of claims.
2. Municipal utility districts and electric cooperatives are also eligible for federal assistance in a Presidential declared disaster. Estimates of damage to these utilities should be included in damage reports submitted by the County and/or City to support a request for federal assistance. Hence, such utilities should be advised to maintain records of repair expenses as indicated in the previous paragraph in order to provide a basis for possible reimbursement of a portion of those expenses.

**F. Post-Incident Review**

Our Basic Plan provides that a post-incident review be conducted in the aftermath of a significant emergency event. The purpose of this review is to identify needed improvements in plans, procedures, facilities, and equipment. Utility managers and other key personnel who participate in major emergency operations should also participate in the post-incident review.

**X. ANNEX DEVELOPMENT & MAINTENANCE**

- A.** The Utility Coordinator, with assistance from the EMC, is responsible for developing and maintaining this annex with the support from individuals and organizations specified in Section VI.B.
- B.** This annex will be reviewed annually and updated in accordance with the schedule outlined in Section X of the Basic Plan.
- C.** Departments and agencies tasked in this annex will develop SOPs that address assigned tasks.

**XI. REFERENCES**

- A.** Annex L, Energy & Utilities, to the *State of Texas Emergency Management Plan*.
- B.** FEMA, Guide for All-Hazard Emergency Operations Planning (SLG-101)
- C.** GDEM, Disaster Recovery Texas Manual (DEM-62)

**APPENDICES:**

Appendix 1 .....Local Utility Information  
Appendix 2 .....Utility Restoration Priorities for Critical Facilities  
Appendix 3 ..... Emergency Generator Forms  
Appendix 4 ..... Utility Conservation Measures  
Appendix 5 ..... Utility Communications Network

<b>LOCAL UTILITY INFORMATION</b>
----------------------------------

**1. Electric**Utility Name: **Bryan Texas Utilities**

Approximate Number of Local Billed Customers: 35,000

Service Area: All of Brazos County, except City of College Station

Major Local Facilities: On File At Emergency Management Office

24-Hour Emergency Contact: 979 8221-3777

Contact Phone: 979 821-5715

Contact Fax: 979 821-5795

Utility Name: **Texas A&M University Utilities**

Approximate Number of Local Customers: 50,000

Service Area: One-half of Texas A&amp;M Campus

Major Local Facilities: On File at Emergency Management Office

24-Hour Emergency Contact: 979 845-0582

Contact Phone: 979 845-4311

Contact Fax: 979 845-1210

Utility Name: **City of College Station Utilities** (wholesale electricity supplied by TXU)

Approximate Number of Local Billed Customers: 26,000

Service Area: City of College Station

Major Local Facilities: On File at Emergency Management Office

24-Hour Emergency Contact: 979 764-3638

Contact Phone: 979 764-3638

Contact Fax: 979 764-3452

Utility Name: **Mid-South Synergy**

Approximate Number of Local Billed Customers: 772

Service Area: Southwestern Brazos County

Major Local Facilities: On File at Emergency Management Office

24-Hour Emergency Contact: 936 825-0635

Contact Phone: 936 825-5100

Contact Fax: 936 825-5128

Utility Name: **Navasota Valley Electric Co-op**

Approximate Number of Local Billed Customers: 73

Service Area: Extreme Northeast Brazos County

Major Local Facilities: On File at Emergency Management Office

24-Hour Emergency Contact: 979 828-3232; 800 443-9462

Contact Phone: 979 828-3232

Contact Fax: 979 828-5563

Utility Name: **Entergy**

Approximate Number of Local Billed Customers: 10

Service Area: Texas World Speedway

Major Local Facilities: On File at Emergency Management Office

24-Hour Emergency Contact: Ronnie Hale, 979 218-6839; 800 430-4911

Contact Phone: 979 218-6839

Contact Fax: 936 825-0693

## 2. Telephone

**Utility Name: United Telephone Company of Texas (Sprint)**

Approximate Number of Local Billed Customers: 300

Service Area: Southern Brazos County South of FM 159

Major Local Facilities: N/A

24-Hour Emergency Contact: 888 230-4404 (4<sup>th</sup> option is technical assistance)

Contact Phone: 888 230-4404 Contact Fax: 913 791-7417

**Utility Name: Valor Telecommunications of Texas**

Approximate Number of Local Billed Customers: 15

Service Area: Along O.S.R. – Northeast Brazos County

Major Local Facilities: N/A

24-Hour Emergency Contact: 866 616-9900

Contact Phone: 202 466-0940 Contact Fax: None

**Utility Name: Verizon Southwest**

Approximate Number of Local Billed Customers: 87,000

Service Area: All of Brazos County, except the services listed above.

Major Local Facilities: Bryan COs, College Station COs

24-Hour Emergency Contact: 800 483-1000

Contact Phone: 979 694-4744; 979 775-4663 Contact Fax: 979 694-8851

**Utility Name: TAMU Telecommunications**

Approximate Number of Local Billed Customers: 30,000

Service Area: TAMU Campus

Major Local Facilities: N/A

24-Hour Emergency Contact: 979-777-0999

Contact Phone: 979 845-1020 Contact Fax: 979 847-1111

## 3. Water

**Utility Name: City of Bryan Public Works**

Approximate Number of Local Billed Customers: 20,000

Service Area: City of Bryan

Major Local Facilities: On File at Emergency Management Office

24-Hour Emergency Contact: 979 822-3777

Contact Phone: 979 209-5900 Contact Fax: 979 209-5959

**Utility Name: City of College Station Utilities**

Approximate Number of Local Billed Customers: 16,800

Service Area: City of College Station

Major Local Facilities: On File at Emergency Management Office

24-Hour Emergency Contact: 979 764-3638

Contact Phone: 979 764-3660 Contact Fax: 979 764-3789

**Utility Name: Texas A&M University Utilities**

Approximate Number of Local Customers: 50,000

Service Area: University Property

Major Local Facilities: On File at Emergency Management Office  
24-Hour Emergency Contact: 979-845-0582; 979-845-4311  
Contact Phone: 979-845-1210 Contact Fax: 979-845-0051

**Utility Name: Wixon Creek Special Utility District**

Approximate Number of Local Billed Customers: 3500  
Service Area: Northeastern Brazos County  
Major Local Facilities: On File at Emergency Management Office  
24-Hour Emergency Contact: 979 589-3030  
Contact Phone: 979 589-3030 Contact Fax: 979 589-3275

**Utility Name: O.S.R. Water Supply Corp. (Fairview-Smetana Water Supply)**

Approximate Number of Local Billed Customers: 826  
Service Area: Northwestern Brazos County  
Major Local Facilities: On File at Emergency Management Office  
24-Hour Emergency Contact: 979 690-6055  
Contact Phone: 979 690-6055 Contact Fax: 979 690-1260

**Utility Name: Brushy Water Supply**

Approximate Number of Local Billed Customers: 643  
Service Area: Western Brazos County  
Major Local Facilities: On File at Emergency Management Office  
24-Hour Emergency Contact: 979 690-6140  
Contact Phone: 979 690-6140 Contact Fax: 979 690-1260

**Utility Name: Wellborn Special Utility District**

Approximate Number of Local Billed Customers: 2600  
Service Area: South Brazos County  
Major Local Facilities: On File at Emergency Management Office  
24-Hour Emergency Contact: 979 690-9799  
Contact Phone: 979 690-9799 Contact Fax: 979 690-1260

**4. Wastewater**

**Utility Name: City of Bryan Public Works**

Approximate Number of Local Billed Customers: 20,000  
Service Area: City of Bryan  
Major Local Facilities: On File at Emergency Management Office  
24-Hour Emergency Contact: 979 822-3777  
Contact Phone: 979 209-5900 Contact Fax: 979 209-5959

**Utility Name: City of College Station Utilities**

Approximate Number of Local Billed Customers: 23,500  
Service Area: City of College Station  
Major Local Facilities: On File at Emergency Management Office  
24-Hour Emergency Contact: 979 764-3660  
Contact Phone: 979 764-3638 Contact Fax: 979 764-3789

**Utility Name: Texas A&M Utilities**

Approximate Number of Local Billed Customers: 50,000  
Service Area: Texas A&M University

Major Local Facilities: On File at Emergency Management Office  
24-Hour Emergency Contact: 979-845-0582; 979-845-4311  
Contact Phone: 979-845-1210 Contact Fax: 979-845-0051

5. Natural Gas

Utility Name: **Atmos**

Approximate Number of Local Billed Customers: 40,000

Service Area: All of Brazos County

Major Local Facilities: On File at Emergency Management Office

24-Hour Emergency Contact: 800 817-8090

Contact Phone: 800 460-3030 Contact Fax: 979 774-2503

**LOCAL UTILITY SERVICE AREA MAP(S)**

**These maps are on file at the  
Emergency Management Offices and the E.O.C.**

<b>UTILITY RESTORATION PRIORITIES FOR CRITICAL FACILITIES</b>
---

Utility Service Restoration Priorities: 1 = Highest - 5 = Lowest

Emergency Generator:      Yes = Emergency Generator on site.  
    Ltd = Generator available, but powers only a limited portion of the facility

Facility Name & Address	Emer. Gen.	Elec.	Phone	Water	WW	Gas
City of Bryan						
Central Fire Station, 801 N. Bryan	Yes	3	2	1	1	1
Fire Station #2, 2813 Cavitt	Yes	3	2	1	1	1
Fire Station #3, 3211 Briarcrest Dr.	Yes	3	2	1	1	1
Fire Station #4, 5429 N. Texas Ave.	Yes	3	2	1	1	1
Municipal Building, 300 S. Texas Ave.	Yes	2	1	1	1	2
Police Station, 301 S. Texas Ave.	Yes	2	1	1	1	2
BTU Building, 205 E. 28 <sup>th</sup> St.	Yes	3	2	1	1	2
Communications Tower Bldg, 200 Morrison	Yes	1	NA	1	1	1
St. Joseph Hospital, 2801 Franciscan Dr.	Yes	1	1	1	1	1
Verizon Building, 101 Regent (EOC)	Yes	1	1	1	1	2
Brazos Co. Courthouse, 300 E. 26 <sup>th</sup> St.	Yes	2	1	1	1	2
The Physicians Centre, 3131 University Dr. E.	Yes	2	2	1	1	1
B.I.S.D. Schools	Yes	1	3	1	1	1
City of College Station						
City Hall Administration	Yes	2	1	1	1	2
City Hall	Yes	2	1	1	1	2
Central Fire Station	Yes	3	2	1	1	1
Police Station	Yes	2	1	1	1	2
Lincoln Center	Yes	3	3	1	1	1
Civic Center	Yes	3	3	1	1	1
USC	Yes	3	2	1	1	1
Greens Prairie Substation	Yes	3	3	2	2	2
Southwood Valley Substation	Yes	3	3	2	2	2
Post Oak Subdivision	No	1	1	1	1	1
Switch Station	Yes	1	1	2	3	1
Lick Creek Wastewater Plant	Yes	1	3	NA	NA	1
Dowling Road Pump Station	Yes	1	3	NA	NA	1
College Station Medical Center	Yes	1	1	1	1	1
Scott & White Clinic	Yes	2	2	1	1	1
C.S.I.S.D. Schools	Yes	1	3	1	1	1

## EMERGENCY GENERATOR FORMS

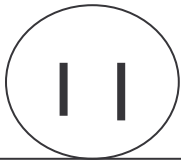
1. The emergency generator forms which follow are provided to facilitate pre-planning for emergency generator requirements, either to obtain a generator which does not have one or replace an existing generator which has failed.

The Emergency Generator Information – Existing Installation forms should be used to record information on existing emergency generators in case they must be replaced.

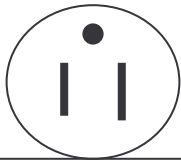
The Emergency Generator Information – Additional Equipment forms should be used to identify requirements for additional emergency generators for critical facilities that do not currently have such generators.

2. Forms should be completed by the owner or operator of the facility that has or may need a generator, and a copy provided to the local EMC. A separate form should be completed for each existing generator or additional generator that is required. The local Utility Coordinator will maintain completed forms for use during emergencies. It is suggested that individuals completing these forms retain a copy for their own records.
3. In completing these forms, keep the following in mind:
  - A. If in doubt about what type of capability is needed, consult a qualified electrician.
  - B. Generators are often quite heavy and should be emplaced on a firm, level site, and preferably a paved area.
  - C. A forklift is normally used to emplace a skid-mounted generator. The forklift operator must have adequate room to maneuver.
  - D. In considering emergency generator sites, remember that generators are often noisy and produce exhaust fumes that may be sucked into nearby ventilation intakes. Vehicle access will be needed to refuel.

<b>EMERGENCY GENERATOR INFORMATION (Existing Installation)</b>	
1	Facility Name:
2	Facility Address:
3	Facility Type: <input type="checkbox"/> EOC <input type="checkbox"/> Communications Ctr <input type="checkbox"/> Medical Facility <input type="checkbox"/> Fuel Facility <input type="checkbox"/> Law Enforcement <input type="checkbox"/> Fire/Rescue Facility <input type="checkbox"/> EMS Facility <input type="checkbox"/> Water Pumping /Treatment <input type="checkbox"/> Wastewater Pumping/Treatment <input type="checkbox"/> Other (specify)
4	Facility Point of Contact: <span style="float: right;">Phone:</span>
5	If more than one generator exists, provide generator number or location within facility:
6	Electrical Requirements; Kilowatts: <span style="margin-left: 100px;">Volts:</span> <span style="margin-left: 100px;">Amperes:</span> Phase: <input type="checkbox"/> Single <input type="checkbox"/> 3-Phase Wye <input type="checkbox"/> 3-Phase Delta <input type="checkbox"/> Other:
7	Fuel: <input type="checkbox"/> Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Propane <input type="checkbox"/> Other:
8	Fuel Tank Size: Gallons: <span style="margin-left: 100px;">Pounds:</span>
9	Fuel Tank Type: <input type="checkbox"/> Attached to generator <input type="checkbox"/> Separate tank
10	Generator Weight: <input type="checkbox"/> Pounds: <span style="margin-left: 100px;">Tons:</span>
11	Starting: <input type="checkbox"/> Automatic <input type="checkbox"/> Manual/Recoil <input type="checkbox"/> Other:
12	Generator Support: <input type="checkbox"/> Pad/Permanent Installation <input type="checkbox"/> Skid <input type="checkbox"/> Trailer
13	Generator in Weather Housing: <input type="checkbox"/> Yes <input type="checkbox"/> No
14	Electrician On-site or Available: <input type="checkbox"/> Yes <input type="checkbox"/> No
15	Is Generator Hard Wired to Electrical System? <input type="checkbox"/> Yes <input type="checkbox"/> No
16	Generator Receptacles Required (indicate numbers and types; see illustrations below):
17	Other Pertinent Information:



15A-125V  
NEMA 1-15R



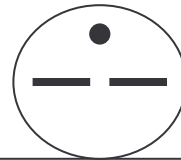
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NEMA 5-15R



20A-125V  
NEMA 5-20R



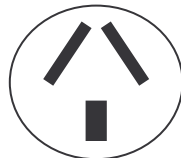
30A-125V  
NEMA 5-30R



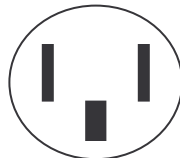
30A-250V  
NEMA 6-30R



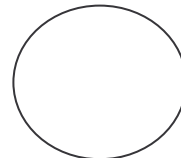
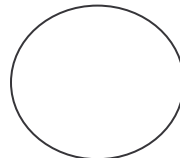
30A-125/250V  
NEMA 5-30R



50A-125/250V  
NEMA 10-50R

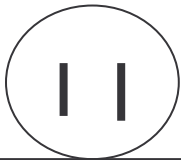


50A-250V  
NEMA 6-50R

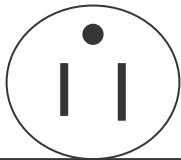


If illustrations don't match what you have, draw your receptacles here.

<b>EMERGENCY GENERATOR INFORMATION (Additional Equipment)</b>	
1	Facility Name:
2	Facility Address:
3	Facility Type: <input type="checkbox"/> EOC <input type="checkbox"/> Communications Ctr <input type="checkbox"/> Medical Facility <input type="checkbox"/> Fuel Facility <input type="checkbox"/> Law Enforcement <input type="checkbox"/> Fire/Rescue Facility <input type="checkbox"/> EMS Facility <input type="checkbox"/> Water Pumping /Treatment <input type="checkbox"/> Wastewater Pumping/Treatment <input type="checkbox"/> Other (specify)
4	Facility Point of Contact: <span style="float: right;">Phone:</span>
5	Electrical Requirements: Kilowatts: _____ Volts: _____ Amperes: _____ Phase: <input type="checkbox"/> Single <input type="checkbox"/> 3-Phase Wye <input type="checkbox"/> 3-Phase Delta <input type="checkbox"/> Other:
6	Fuel Available: <input type="checkbox"/> Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Propane <input type="checkbox"/> Other:
7	Site Access: Site accessible for emplacing trailer-mounted unit? <input type="checkbox"/> Yes <input type="checkbox"/> No Site accessible for unloading/positioning skid-mounted unit? <input type="checkbox"/> Yes <input type="checkbox"/> No
14	Electrician On-site or Available: <input type="checkbox"/> Yes <input type="checkbox"/> No
16	Generator Receptacles Needed (indicate numbers and types; see illustrations below):
17	Other Pertinent Information:



15A-125V  
NEMA 1-15R



15A-125V  
NEMA 5-15R



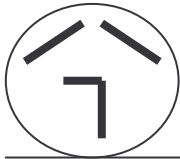
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NEMA 5-20R



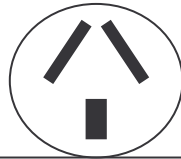
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NEMA 5-30R



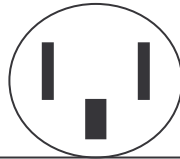
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NEMA 6-30R



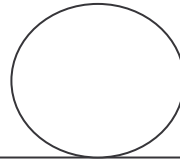
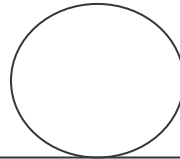
30A-125/250V  
NEMA 5-30R



50A-125/250V  
NEMA 10-50R



50A-250V  
NEMA 6-50R



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draw what you need here.

<b>UTILITY CONSERVATION MEASURES</b>
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The utility conservation measures outlined in this appendix are suggested measures. The specific measures to be implemented should be agreed upon by local government and the utilities concerned.

## 1. Conservation Measures for Natural Gas

### A. Step 1. Discontinue:

- 1) Use of gas-fueled air conditioning systems except where necessary to maintain the operation of critical equipment.
- 2) All residential uses of natural gas, except refrigeration, cooking, heating, and heating water.
- 3) Use of gas-fueled clothes dryers.

### B. Step 2. Reduce:

- 1) Thermostat settings for gas-heated buildings to 65 degrees during the day and 50 degrees at night.
- 2) Use of hot water from gas-fueled water heaters.

## 2. Conservation Measures for Electric Power

### A. Step 1. Discontinue:

- 1) All advertising, decorative, or display lighting.
- 2) Use of electric air conditioning systems except where necessary to maintain the operation of critical equipment.
- 3) Use of electric ovens and electric clothes dryers.
- 4) Use of all residential electric appliances, except those needed to store or cook food and televisions and radios.

### B. Step 2. Reduce:

- 1) Reduce thermostat setting for electrically heated buildings to a maximum of 65 degrees during the day and 50 degrees at night.
- 2) Minimize use of hot water in buildings that use electric water heaters.
- 3) Reduce both public and private outdoor lighting.
- 4) Reduce lighting by 50 percent in homes, commercial establishments, and public buildings.

### C. Step 3. Cut off electricity to:

- 1) Non-essential public facilities.
- 2) Recreational facilities and places of amusement such as theaters.

D. Step 4. Cut off electricity to:

- 1) Retail stores, offices, businesses, and warehouses, except those that distribute food, fuel, water, ice, pharmaceuticals, and medical supplies.
- 2) Industrial facilities that manufacture, process, or store goods other than food, ice, fuel, pharmaceuticals, or medical supplies or are determined to be essential to the response and recovery process.
- 3) Office buildings except those that house agencies or organizations providing essential services.

3. Water Conservation Measures

A. Step 1.

- 1) Restrict or prohibit outdoor watering and washing of cars.
- 2) Close car washes.

B. Step 2

- 1) Restrict or curtail water service to large industrial users, except those that provide essential goods and services.
- 2) Restrict or prohibit use of public water supplies for irrigation and filling of swimming pools.
- 3) Place limits on residential water use.

C. Step 3

- 1) Restrict or cut off water service to industrial facilities not previously addressed, except those that provide essential goods and services.
- 2) Restrict or cut off water service to offices and commercial establishments, except those that provide essential goods and services.

D. Step 4

- 1) Restrict or curtail residential water use.

**UTILITY COMMUNICATIONS DIAGRAM**

