

Figure: 30 TAC §290.47(g)(1)

Appendix G1: Emergency Preparedness Plan Template for Affected Utilities defined under TWC §13.1394

This appendix contains information to assist an affected utility, defined in TWC §13.1394, in preparing an emergency preparedness plan (EPP). A comprehensive guide and shell form, TCEO Form No. 20536B, for preparing a plan is available from the executive director upon request or by visiting the TCEO website. A cover letter containing the name of the affected utility; the affected utility representative's name, title, and contact telephone number; and, if applicable, the public water system's identification number (PWS ID) and district number must be included with the plan submittal.

Information provided by an affected utility relating to its emergency preparedness plan is confidential and is not subject to disclosure under Texas Government Code, Chapter 552.

Rules. All of 30 TAC Chapter 291, Subchapter L applies to affected utilities that are not public water systems. The following commission rules apply to affected utilities that are public water systems:

Definitions: §290.38

General Provisions: §290.39(a), (c)(4) and (o)

Water Distribution: §290.44(d)

Minimum Water System Capacity Requirements: 290.45(a)(7), (a)(8), (a)(9), (b)(3), (c)(3), (d)(4), (e)(3), (e)(4), (f)(6), (g)(5)(A)(i), (g)(5)(A)(iv), (g)(5)(B), (g)(5)(B)(i)-(iv), (g)(5)(C), and (i).

Minimum Acceptable Operating Practices for Public Drinking Water Systems: §290.46(f)(5), (m)(8), (m)(9), and (r).

Plan Options. An affected utility, as defined in TWC §13.1394, must choose from the 14 options listed under §290.45(h) and must be able to provide a minimum of 20 psi, or a pressure approved by the executive director, to its customers during a power outage lasting longer than 24 hours.

An affected utility must include one, or a combination of, the following in a submitted emergency preparedness plan:

(1) Auxiliary generators equipped with automatic start and switch over equipment. This equipment must have the ability to detect the failure of normal power from the electric grid; automatically start the generator; isolate necessary water equipment from the normal power grid; and switch the running generator's power to power the necessary water equipment to maintain the required minimum pressure.

(2) Direct pressure from another system. This option is only for systems that purchase water directly from another system and which may or may not repressurize the water to maintain at least 20 psi throughout the distribution system during an extended power outage. A distribution-only system that does not repressurize may choose to become a member of TXWARN in order to accept the assistance of certified operators or equipment loans to repair the distribution system during an extended power outage.

(3) Negotiated lease and contract agreements for emergency power equipment and any necessary fuel. This includes mutual aid agreements with other retail public utilities, exempt utilities, or providers or conveyors of potable or raw water service if the agreements provide for coordination with the division of emergency management in the governor's office. Consideration must be given to the location of where the other water supplier(s) are located as they may also be affected by the same natural disaster. In addition, when entering into a contract for leasing of emergency power equipment and necessary fuel, the contractual commitments of the supplier to other water suppliers and businesses within an area subject to the same natural disaster event must be taken into consideration.

(4) Portable generators capable of serving multiple facilities. The portable generator(s) and the necessary water equipment must be pre-equipped with quick-connect, mating electrical connectors to facilitate the rapid implementation of the EPP. The plan must address whether there is an adequate number of portable generators to operate all of the necessary water equipment in order to maintain the required minimum pressure in multiple pressure planes or at multiple systems, if affected by the same natural disaster event.

(5) In lieu of generators, alternative on-site electrical generation, or distributed electrical generation facilities, may be used. This may include the use of wind, solar or other power as a means of providing sufficient emergency power to operate the necessary water equipment to maintain the required minimum pressure.

(6) Hardening of the electric transmission and distribution system serving the affected utility. One alternative is to relocate electric transmission lines for the system from overhead to underground and protect them from flooding. Another alternative is to replace overhead transmission lines, poles, and related appurtenances with ones that can withstand historical hurricane-force wind velocities and ice accumulations, and trim or remove any trees next to and above the overhead transmission lines.

(7) Engines equipped with direct or right-angle drives can be used as auxiliary power sources. Each pump or other equipment must be equipped with appropriate mechanical fittings to facilitate the use of engines. The plan must address the operation of chemical feed pumps using a generator(s) and may need to be combined with another option.

(8) Designation of the water system as a critical load facility with the electrical provider, or a redundant, isolated, or dedicated electrical feed. This option will require documentation from your electrical provider indicating that your facility is protected from power loss lasting more than 24 hours. This will also require that another EPP option is chosen.

(9) Sufficient water capacity. Documentation of ground storage, elevated storage, or standpipe storage capacity to provide at least 20 psi, or a pressure approved by the executive director, to the entire distribution system during a power outage lasting more than 24 hours.

(10) Water delivery using an emergency interconnect or water hauler. This option must provide at least 20 psi, or a pressure approved by the executive director, to the entire distribution system during a power outage lasting more than 24 hours and may need to be combined with another option.

(11) Artesian flow. This option must provide at least 20 psi, or a pressure approved by the executive director, to the entire distribution system during a power outage lasting more than 24 hours and must be combined with another option.

(12) Redundant connection between pressure zones. Your distribution system must retain the ability to open valves between pressure zones to provide at least 20 psi, or a pressure approved by the executive director, to the entire distribution system during a power outage lasting more than 24 hours and may need to be combined with another option.

(13) Application of Emergency Demand rules. This option requires that a minimum of 0.35 gallons per minute (gpm) per connection is supplied to the distribution system while maintaining at least 20 psi, or a pressure approved by the executive director, to the entire distribution system during a power outage lasting more than 24 hours and must be combined with another option.

(14) Any other alternative determined by the executive director to be acceptable. This option requires that alternative solutions be proposed to the executive director as long as they meet the requirements of TWC §13.1394 and provide at least 20 psi, or a pressure approved by the executive director, to the entire distribution system during a power outage lasting more than 24 hours.

Plan Contents. Affected utilities, as defined in TWC §13.1394, should use TCEO Form 20536B and affected utilities, as defined in TWC §13.1395, should use TCEO Form 20536A. An EPP must provide for any applicable production, treatment, transfer and service pumps at an adequate flow rate and at a minimum pressure of 20 psi, or a pressure approved by the executive director, in the far reaches of an affected distribution system including multiple pressure planes. If applicable, provide the following information:

- Contact information, including names, emergency telephone numbers, and e-mail addresses.
- A time frame for the full implementation of the emergency preparedness plan.
- The location of distribution maps, diagram of the water system, and a copy of any necessary piping maps.
- All groundwater, surface water, and purchased water sources, with locations and individual capacities that will be used in response to a power outage lasting longer than 24 hours.
- All interconnections with other water providers, whether normally open or closed; size, whether wholesale, purchase, or both; available capacity, and any other pertinent information. When relying on a wholesaler to meet EPP requirements indicate if wholesaler intends to provide water or water and pressure, and any other pertinent information. Include the names of each interconnected entity and contact information, including names, titles, telephone numbers, and e-mail addresses.
- For each chemical used, list the type, location, volume of storage container, and volume required per day during emergency operations.
- All primary chemical supplier's contact information, including an alternate chemical supplier in case the primary supplier is unavailable.

- All equipment necessary to provide water to customers at the required minimum pressure and adequate flow rate. Include the capacity and power requirements of all treatment equipment to be used to meet the EPP requirements.
- The maximum and average daily demands. If the EPP is for a proposed affected utility, the minimum specified capacities in §290.45 of this title shall be used for the maximum daily demand.
- Any purchased water systems and the number of connections that your affected utility intends to provide with water, or with water and pressure, during a power outage lasting greater than 24 hours.
- All primary electrical power sources and include an electrical schematic.
- The size, location, and fuel requirement, in gallons per hour of diesel or gas, at the load necessary to maintain emergency operations for all on-site manual and automatic auxiliary power equipment. Provide information as to how your affected utility determined the necessary fuel quantity.
- Documentation as to how your affected utility will ensure that an adequate supply of fuel is maintained during emergency operations.
- For each fuel tank, provide the location, volume, name of fuel suppliers, contact names, titles, telephone numbers, and e-mail addresses.
- All shared auxiliary power equipment, list the size, location, fuel requirement, in gallons per hour of diesel or gas, at the load necessary to maintain emergency operations. List the name of the system sharing the equipment and the system's contact information including names, titles, emergency telephone numbers, and e-mail addresses.
- A copy of any leasing and contracting agreements, if the agreements provide for coordination with the division of emergency management in the governor's office, including mutual aid agreements with other retail public utilities, exempt utilities, providers, or conveyors of potable or raw water service. If leasing, include the vendor's name, location, and contact information.
- All portable generators' power, phase, type of quick-connect, fuel type, and fuel demand in gallons per hour.
- Specifications, a description, and detailed capacity information for all on-site electrical generation or distributive generation equipment. Include all fuel demands for this equipment.
- All direct or right-angle drive emergency power equipment with the name, type of engine, fuel type, and fuel demand in gallons per hour.
- Documentation from electric provider indicating the affected utility qualifies for critical load status, or has redundant, isolated, or dedicated electrical feeds, and is protected from power loss during a load shedding event.
- When relying on water storage, submit documentation demonstrating that the affected utility has sufficient ground, elevated, standpipe storage to provide water to the entire distribution system at the required 20 psi during a power outage lasting greater than 24 hours.

- When relying on an approved water hauler for service to the distribution system, the affected utility must demonstrate that it can provide water at 20 psi. When relying on a normally closed interconnect for water, provide system contact information, location, and capacity.
- For each approved artesian well, provide source information and location.
- When relying on redundant interconnectivity between pressure zones, provide the location of valves, how the affected utility intends to maintain 20 psi, and a system map with pressure planes and tank locations.
- When relying on emergency water demand rules, provide the restriction that the system will implement during an emergency response.
- Details for any other proposed alternative.
- All local and state emergency responders and their emergency contact information. Include medical facilities.
- All priority water users, such as hospitals and nursing homes, and their emergency contact names, titles, telephone numbers, and e-mail addresses.
- Contact information for primary certified laboratory and include an alternate lab in case primary lab is unavailable.
- Contact information for all utility providers to the affected utility.
- Any bulk water haulers that could be used, including contact names, telephone numbers, and e-mail addresses.
- The name of the system's designated media spokesperson and include a list of local media contact names, titles, type of media, telephone numbers, and e-mail addresses.