

EMERGENCY SUPPORT FUNCTION 12 ENERGY

Responsibility Summary:

Primary Agencies: Pacific Power Corporation (PPL)
Columbia Rural Electric Association (REA)
Puget Sound Energy (PSE)
Portland General Electric (PGE)
Gas Transmission Northwest (GTN)
US Army Corp of Engineers (USACE)

Supporting Agencies: Columbia County Emergency Management/ESF Coordinator
Columbia County Fire District #3
Columbia County Fire District #2
Columbia County Fire District #1
Columbia County Sheriff's Department
Coleman Oil and Dayton Chemicals Petroleum Bulk Plants
Bonneville Power Administration
Columbia County/City/Town Public Works Department

I. INTRODUCTION

Purpose

This ESF describes the roles and responsibilities of the primary agencies during an emergency or a major disaster. It further describes Columbia County Emergency Management's (EMD) responsibilities in coordinating and communicating the efforts of the support agencies during response and recovery efforts focused on restoring utilities required to meet essential needs before, during and after an emergency or major disaster.

Scope

This document applies to all primary and support agencies. Columbia County, other local municipalities and local private agencies respond to day-to-day emergencies and large-scale disasters affecting buildings, parks, roads and bridges, water, storm water, wastewater sewer systems, natural gas, liquid fuels, and electric services in Columbia County. ESF 12 outlines the capabilities and operating procedures for the coordination and implementation of those response and recovery efforts necessary to save lives, protect property and mitigate adverse impacts to the environment. This ESF also addresses coordination with state government and other agencies when additional resources are requested through the State EOC.

II. SITUATION

Hazard and Threat Analysis

Emergencies and disasters could damage the facilities and infrastructure, and disrupt the ability to distribute essential energy and utility supplies and services. Impacts from local as well as regional and out of area incidents may have adverse effects on the local capabilities as portions of these energy systems cross jurisdictional lines throughout the State of Washington.

As identified in Columbia County's Multi-Hazard Mitigation Plan, the County is exposed to severe weather conditions ranging from the commonly occurring thunderstorms to hail, tornados, high winds, drought, dense fog, lightening and snow storms. Winter storms with heavy snow, high winds, and/or extreme cold can have a considerable impact on the residents and businesses of the County. Power outages and unplowed roads are a frequent occurrence throughout many parts of the County. In these situations, the loss of power is further complicated by the transportation issues present in supplying the necessary resources in response and recovery missions. Prolonged periods of loss of electricity will make obtaining fuel difficult as local businesses, petroleum bulk plants and gas stations, cannot dispense fuel without electricity.

Columbia County is characterized by relatively mild and dry agricultural environments; as well forested communities within the County contain high fuel accumulations that have the potential to burn at moderate to high intensities. Highly variable topography coupled with dry, windy weather conditions typical of our community, is likely to create extreme fire behavior. Intensities can escalate dramatically, especially under the effect of slope and wind. These conditions can lead to control problems and potentially threaten lives, structures and other critical resources. Wildfires have the potential to damage or even destroy critical infrastructure necessary to provide life sustaining energy services.

Abnormal conditions, depending upon the severity, associated with dam infrastructure such as reservoir, earth embankments, and abutments, embankment and concrete structures, spillway gate operation and/or the powerhouse, increase the threat of downstream flooding. High water flow and initiated events, including dam failure of upriver dams, earthquakes, sabotage and terrorist acts elevate the flood threat level to residents and property significantly. On the other hand, low water elevations dropping below the minimum operating levels impacts energy generation capabilities within this infrastructure system which could impact the energy supply available to meet high demands existing during an emergency or major disaster.

Natural gas is highly flammable and easily ignited by heat or sparks. The hazards associated with a release of natural gas include fire which may produce an irritating and/or toxic gas; gas vapors are lighter than air and can migrate into enclosed areas; they may form an explosive mixture with the air and can displace oxygen levels and cause dizziness and asphyxiation without warning. Local pipeline facilities are remotely operated and it may take extended periods of time to receive onsite technical personnel.

The likelihood of an aircraft impact to a wind turbine or facility is low, however the potential does exist as this is an agricultural community with low flying aircraft present on a fairly regular

basis. In the event of impact, the hazards include medical emergency, fire and/or power outages. Another hazard, due to the location of the equipment and facilities for wind energy generation is structural fires. These have the potential to be related to equipment failure or the wildfire hazards addressed above. Also, fuels such as sulfuric acid, gasoline, oil and others used by wind energy producing equipment require special care to reduce the impacts of a potential toxic or chemical spill emergency.

Planning Assumptions

Ability to obtain situational awareness about the incident will be crucial to the planning capability of the ECC and/or individual agencies in restoring power and utility services in a timely manner. Regional coordination and communication will be required to identify assets within the Region that would be available to assist in the response. Yet, normal forms of communications may be severely interrupted during the early phases of an emergency.

For initial sustainability, County departments must be prepared to sustain themselves during the first 72 hours of an emergency. Households and businesses affected by the emergency are recommended to sustain themselves for extended period. Ongoing public information campaign will provide emergency preparedness to this population. The region's utilities (water, wastewater, electricity and telecommunications) could be significantly disrupted for weeks.

- A. In those situations, where more than one agency on the scene has jurisdictional responsibility, a Unified Command will be established according to the principles of the National Incident Management System.
- B. Natural events evolve in a generally predictable pattern where accidents and deliberate criminal acts are more difficult to predict and may include actions that hinder the response activities.
- C. During an emergency or major disaster, supplies and mutual aid resources may have difficulty reaching the areas the resources are needed.
- D. During periods of adverse weather, or in the event of multiple unanticipated outages, there may be occasional times when generating capacity is limited or falls below customer demand.
- E. There will likely be a need for emergency power to support the special needs communities whom are dependent upon life sustaining medical devices.
- F. There will likely be an urgent need for restoring power at critical facilities.
- G. There may be widespread and prolonged electrical power outages. With no or little electrical power, communications will be effected and traffic lights will not operate. Such outages will impact other public health and safety services, including the movement of petroleum products for transportation and emergency power generation.

- H. Occurrences and activities out of the local area may have an adverse affect on local operations, capabilities and activities.
- I. Priorities to provide efficient utilization of available services and supplies will need to be established and coordinated between private industry responders, Columbia County Public Works and EMD, other local municipalities and potentially, other appropriate authorities outside the local area.

III. CONCEPT OF OPERATIONS

General

Responding to energy or petroleum shortages or disruptions and their affects are necessary for preservation of public health, safety, and the general welfare of our residents as well as continuity of government operations. To the maximum extent possible during a disaster, utility and energy systems will continue to provide services through their normal channels. However, the occurrence of a major disaster has the potential to destroy or disrupt all or a portion of the county's energy systems. Energy and utility resources will be used to meet immediate local needs in prevention, protection, mitigation, response and recovery activities.

- A. The electrical power industry within Washington is organized into a network of public and private generation and distribution facilities. Through such networks, the electrical power industry has developed a capability to provide power under even the most extreme circumstances. Significant energy types and agencies are as follows:
 - 1. Wind Technology - Generation. PacifiCorp in addition to purchasing power for resale, owns and is responsible for the day-to-day management of 117 wind turbines, Portland General Electric and Puget Sound Energy are responsible for the day-to-day management of over 200 wind turbines all considered to be critical infrastructure located in Columbia County. Energy generated from both wind turbine systems is stored within power grids until transferred to its desired location. Wind farm energy in general is one component of the fuel mix of the Bonneville Power Administration system, which is in turn acquired by local power companies (Pacific Power and REA) as retail supplies for local residents, businesses and governmental entities.
 - 2. Lock and Dam-Generation. Little Goose Lock and Dam include a dam, navigation lock, power plant, fish ladder and appurtenant facilities. It provides navigation, hydroelectric power generation, recreation and incidental irrigation. It is located on the Snake River near Starbuck, Wash., and upstream of Lake West, the reservoir formed by Lower Monumental Dam. It is a concrete gravity dam with an earth fill abutment embankment. Also, located nearby, is the Lower Granite Dam in Pullman, WA. These energy producing systems are operated by the US Army Corp of Engineers. Energy generated from Dam operations represents a significant portion of the fuel mix of the Bonneville Power Administration.
 - 3. Natural Gas Pipeline-Generation. Natural gas is supplied by major energy corporations through common pipelines originating from the Western United States and Canada. Pipelines are primarily underground, which helps to keep them away from public contact and accidental damage. Gas Transmission Northwest (GTN) is a natural gas transmission company operating a pipeline from the Canadian border through the states of Idaho, Washington, and Oregon to California. Energy to move the gas is provided by 12 compressor stations located along the pipeline all of which

are designed for remote, unattended operation from GTN's Gas Control Center. Compressor Station #7 is located near the Town of Starbuck in Columbia County. It is highly likely due to the location of this facility that Columbia County responders would be first on the scene of an emergency or disaster at this facility.

4. Pacific Power-Generation/Distribution. Pacific Power Corporation's electric system is designed and built to deliver safe, reliable power to customers in Oregon, Washington and Northern California. A significant portion of Columbia County residents and businesses (those mostly in heavily populated areas) are served by Pacific Power. PPL has generation and distribution capabilities.
5. Columbia Rural Electric Association-Distribution. Columbia Rural Electric Association (REA) also provides electric services to farms, homes and businesses in Columbia and nearby Walla Walla (Washington) and Umatilla (Oregon) Counties. Columbia REA is a progressive, strategically focused member owned electric cooperative. REA's energy resources are substantially acquired through power purchase contracts.

- B. The Department of Transportation (WSDOT) can access local petroleum suppliers and major oil companies to facilitate the delivery of adequate amounts of emergency petroleum fuel supplies and resources, if needed. These resources would be requested through the State EOC. Locally, there are two regulated petroleum bulk plants that could provide alternative petroleum/oil resources in a local disaster or emergency.

Organization

- A. Columbia County Emergency Coordination Center (ECC)

The Unified Command will operate in the County ECC located at 341 E Main Street, Dayton WA 99328. The ECC will be comprised of representatives from each of the response private agencies and the Department of Public Works and will initially assume the lead role. The primary ECC function will be to facilitate and coordinate response and recovery missions. This will include:

- Initial assessment of the situation;
- Management decisions in regards to the level of activation of operations, logistics, planning and administration sections; and
- Coordinate resource allocation and tracking requested through the ECC;
- Tracking mission progress and coordinating the use of Mutual Aid Agreements or escalation to the State ECC, if needed.

The County Commissioners may establish an Emergency Resource Management Organization (ERMO) selecting public agency representative and representatives from the private sector representing the following interests: construction, utilities, industrial production, petroleum products, transportation, food, labor, medical and health, and communications.

B. Department/Agency Operations Centers (DOC)

Any department participating in response, in addition to being represented in the ECC, may activate a DOC to facilitate the coordination of department response and continuity operations. Intra-department management and coordination of resources are the responsibility of the involved department. They should utilize appropriate internal resources, available mutual aid resources and private sector/contractors before making a request to the ECC. Departments may allocate available resources in tactical situations in coordination with field logistics. Resource needs and shortfalls that go above and beyond the capability of the department should be requested through the ECC.

C. Incident Command Posts (ICP)

The Incident Commander will establish an Operations Section to coordinate response and recovery activities. The size of the incident, complexity of support needs and the incident length will determine the need for coordination at a higher level. Field logistics will acquire resources with the assistance of the dispatch center. Where resource needs and shortfalls are encountered at the field level, the ECC can provide support. In this situation, the resource requests will come from the Incident Commander directly to the ECC logistics section chief.

Additional guidelines include ESF 8 Public Health & Medical Services which provides guidelines for obtaining health and medical services that may be needed during an actual emergency or disaster in Columbia County to enhance response and recovery activities and ESF 15 Public Affairs which provides guidelines for an efficient and coordinated continuous flow of timely information and instruction to the public using all available communications media prior to, during and immediately following an emergency or disaster.

Procedures

The primary goal of emergency response is to protect lives and property, which is accomplished by executing an intensely coordinated effort. Functions and roles are delegated and/or shared between the County, other municipalities within the County, and other agencies to ensure all required actions are completed in an efficient and timely manner. It is critical, the Incident Command system (ICS), be understood and maintained by key personnel and all responding agencies to ensure interoperability and a common frame work for operations.

During ECC activations, WebEOC is used for end-to-end management including situational reporting, all resource requests to ECC logistics, and after action reporting. In the event WebEOC is unavailable, then required reporting should be submitted using the manual forms. Hard copies are maintained within the individual ESF folders at the EMD and are available online at <https://training.fema.gov/emiweb/is/icsresource/icsforms.htm>.

The need for resources may be identified at any level of the Incident Command System and will filter up the chain of command. The Operations and Planning Sections gather situational awareness of the incident and survey for damages. Resource needs and shortfalls are assessed at the County ECC level; a determination is made as to whether resources are available within the County or obtainable through existing agreements. Anticipating needs may be based on preliminary damage assessment and past experiences.

Columbia County EMD and its municipalities will maintain the capability to rapidly warn the public when disaster threatens so that residents may take necessary actions to protect themselves and their property. Columbia County EMD has SOPs to be followed for the activation of local mass notification systems in emergency or disaster situations when emergency evacuation procedures are required.

Various primary and support energy response agencies, groups, governmental organizations and communications/alert systems have their own standard operating procedures (SOPs) which will be activated, as determined necessary, under a unified command structure to ensure a coordinated response and recovery from an emergency and/or disaster.

Mitigation

The EMD in collaboration with other Counties within the region, County departments, governmental agencies, legislative participants, and private sector agencies have developed a regional Multi-Hazard Mitigation Plan which outlines the professional analyses undertaken to document the assessments of hazard risks respective to our locality. This important information is used to design operational plans within our communities to reduce the degree of long-term loss to human life and property from natural and technological/man-made hazards.

Columbia County EMD works with partner jurisdictions and local agencies in preparation for emergencies or disasters to establish and review departmental and agency roles and responsibilities for preparedness and in providing resource support during the response and recovery phases of an emergency or disaster by conducting and participating in hazard specific exercises. This includes efforts made to identify resource shortfalls, identify and bridge-the-gaps when multiple emergency operations plans are implemented during a response and working to identify strategies that can be implemented to mitigate the impacts of those gaps.

Columbia County EMD promotes community participation in plan development and exercises to practice plan implementation. Without effective community/private sector integration, operational response capabilities within the County will be marginalized. Columbia County works with support agencies and organizations to aid in the development of plans and conducting needs assessment analysis to identify their resource needs including identifying resources that can be provided to them during response and recovery phases of an emergency or disaster.

Preparedness

Primary and Support agencies will assist with development, coordination and support of energy and utility conservation policies and programs; and establishing priority systems for the curtailment or reduction of services, restoration of services, and provisions for emergency services.

Primary and Support agencies will prepare and update supply contingency plans for implementation in the event of energy shortages or emergencies.

Maintain alert rosters, restoration plans, and any standard operating plans necessary to implement this ESF. Develop and maintain a complete directory of all utility services and products associated with this ESF. This should include the names, addresses and telephone numbers of key personnel.

Conduct exercises designed to validate this ESF and test both personnel and equipment capabilities to ensure personnel are aware of emergency responsibilities and trained in emergency operations. Identify, train, and assign personnel necessary to execute missions in support of this ESF. Ensure all personnel that will be using WebEOC have had the proper level of training.

Establish a liaison with all support activities identified in this ESF.

Response

The Incident Commander is responsible for:

- Assessing the situation with caution and identifying any specific incident hazards. Also, noting other conditions such as weather, surrounding community and available resources.
- Employ NIMS and the ICS system as determined necessary, contacting other initial responders from the private sector to coordinate direction and control of the situation. Activates the ECC to facilitate the gathering and consolidation of information and the coordination of activities with responding agencies.
- Works closely with both onsite and offsite technical advisors/agencies and elevate the response when local and mutual aid resources have been expended.
- Works closely with the PIO, if needed to provide information directly to the public. If no PIO is activated, information will be furnished to emergency government officials at all levels for the dissemination of emergency, education and conservation information to residents and businesses.

Energy, utility and/or petroleum agencies will continue to provide services through their normal means based on established procedures to the maximum extent possible. Private agency representatives are responsible for:

- Establishing and maintaining a unified and coordinated operational structure and process that integrates all critical stakeholders;
- Assess the situation and identify incident specific threats and/or hazards. Coordinate with the ECC to provide decision-makers with decision-relevant information regarding the nature and extent of hazards.
- Determine the capabilities needed to provide life-sustaining services to the affected population. Coordinate resource/service needs with the ECC.
- Determine the ability to stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore vital systems and services.
- Employ/staff the operation section(s) where needed. Dispatch necessary personnel, equipment, and materials from agency resources, as available.
- Response and recovery activities are implemented in accordance with agency specific emergency operation plans and/or detail engineering guidelines.
- If additional resources, outside of established mutual aid or other agreements are needed, requests for assistance will be coordinated with the Columbia County ECC.
- Each private agency representative will prepare and update situational reports, damage reports and transmit to Columbia County ECC. These assessments will be relayed to the State EOC for evaluation, as appropriate.
- Coordinate the capabilities needed to return economic and business activities to a healthy state.
- Each private agency representative will ensure that After-Action Report/Improvement Plans are prepared and copies are forwarded to Columbia County ECC. These assessments will be relayed to the State EOC for evaluation, as appropriate.

Recovery Activities

The Incident Commander/ECC will:

- Continue to monitor energy organizations and the repair and restoration of utility services.
- Maintain coordination with all primary and supporting agencies, departments, and organizations on the operational priorities of the repair and restoration.
- Continue to provide emergency information, education, and conservation to the public through planned community events and in conjunction with the PIO.
- Continue to conduct restoration operations until all utility services have been restored.
- Ensure all documentation has been completed.
- Perform an After Action Review and revise existing plans or procedures as necessary.

Energy Providers will:

- Through coordination with the EMD/ECC determine priorities among users if adequate utility supply is not available to meet all essential needs;
- Assist in the administration of energy allocation programs in accordance with the Governor's emergency powers.
- Comply with damage and operational capability reports and provide copies to the EMD/ECC;

- Provide a liaison between the utilities and EMD/ECC
- Provide coordinated emergency public information to the EMD/ECC

IV. RESPONSIBILITIES

Primary

A. Primary County Agency/ECC

Policies and procedures utilized by the Department of Public Works/ECC in coordination of the response and recovery activities are based upon the Incident Command System (ICS) which is part of the National Incident Management System (NIMS). The Public Works department's role will be substantially related to coordinating continuity of government operations and necessary resources needed during response efforts. Resource procedures are outlined within ESF 7 (Logistics). Effective logistics management makes certain that all functions are executed in a unified manner in order to maintain accountability, ensure appropriate support actions are in place and improve resource distribution efficiency.

Under a unified command structure, this agency is responsible for executing the following services:

- Coordination of response and recovery actions to restore or maintain continuity of governmental operations;
- Coordination of response and recovery actions among all agencies involved in the incident response;
- Provide logistics and other support as needed and expand operations to include activation of a logistics, planning and administration centers if deemed necessary.

B. Energy Agencies

Energy generation and distribution agencies have detail engineering plans, standard operating guidelines, and emergency response plans utilized to guide response and recovery activities during an emergency or major disaster.

These organizations also maintain inventory consisting of specialized equipment necessary in response and recovery missions. Critical infrastructure include power poles, transformers, power lines, power grids, wind turbines, dams, pipelines and operating stations throughout Columbia County.

Under a unified command structure, electric, wind, natural gas and lock and dam agencies are responsible for executing the following services:

- Restore site specific energy outages;
- Coordinate the restoration priorities with the other responding agencies and the Emergency Coordination Center (ECC); and
- Coordinate energy related emergency initiatives with other county, city departments and jurisdictions.

V. RESOURCE REQUIREMENTS

- A. Logistical support will be provided through the activation of the Logistics section of the ECC and it is expected for smaller isolated incidents that resources will be obtained in sufficient quantities locally and through mutual aid agreements. For larger scale incidents logistics support will be requested through the State EOC.

- B. Departments, organizations, or agencies with a lead or support role for this ESF will track all costs based on guidance provided by their organization and the ECC. Reimbursements of costs are not guaranteed and, if provided, will likely not cover all costs incurred during an incident.

VI. REFERENCES

- A. US Army Corps of Engineers, Little Goose Lock and Dam Snake River, Washington, Dam Safety Program-Emergency Action Plan, March 2015

- B. Hopkins Ridge Wind Facility Emergency Response Procedure, Revised 12/31/2015

- C. Pipeline Association for Public Awareness, Pipeline Emergency Response Guidelines, 2016

- D. Portland General Electric, Siemens Energy, Tucannon River Wind Farm, Emergency Response Plan, 2014

- E. Bonneville Power Administration website www.bpa.gov

- F. Pacific Power website www.pacificpower.net

- G. Columbia Rural Electric Association Website www.columbiarea.com