



EF 3 – Construction and Engineering

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Tasked Agencies	
Primary County Agency(s)	Public Works/Roads Department
Supporting County Agency(s)	Lassen Municipal Utility District, Sanitation District
Primary City Agency(s)	Public Works Department
Supporting City Agency(s)	Lassen Municipal Utility District, Sanitation District
Community Partner(s)	Pacific Gas and Electric Company, Plumas Sierra Rural Electric, Surprise Valley Electric
State Agency(s)	California Government Operations – Department of General Services
Federal Agency(s)	Department of Defense/U.S. Army Corps of Engineers Department of Homeland Security

1 Introduction

1.1 Purpose

Emergency Support Function (EF) 3 describes how the County and City will provide the resources (human, technical, equipment, facilities, materials, and supplies) to support infrastructure and engineering services during a time of a major emergency or disaster.

Operational priorities for EF 3 include:

- Clear debris from roadways, and culverts and streams endangering bridges and other structures, as soon as possible, prioritizing vital and essential roadways, bridges, and facilities.
- Temporarily repair and stabilize arterial roadways and bridges.
- Restore vital and essential public facilities.
- Prohibit public access to roadways, other transportation infrastructure, and facilities determined unsafe as a result of current emergency conditions or damage, as directed.
- Provide equipment and operators to assist in life-saving activities.
- Ensure safe movement of vehicle traffic during response operations.

Preparedness, response, recovery, and mitigation activities that may be conducted to complete these priorities are listed in Appendix B.

1.2 Scope

The following activities are within the scope of EF 3:

- Monitor, assess, restore, and repair disaster-related impacts to construction and engineering infrastructure.
- Provide for inspection and repair of essential facilities.
- Determine the levels of damage to the following public owned systems (e.g., water, electrical, natural gas, sanitary sewage, storm water collection, generating, distribution systems, dams, levees, water control structures).

- Prioritize and initiate recovery efforts to restore, repair, and mitigate publicly owned infrastructure and systems (e.g., water, electrical, natural gas, sanitary sewage, storm water collection, generating, distribution systems, dams, levees, water control structures).
- Maintain undamaged or repaired construction and engineering infrastructure to ensure that additional hazards do not occur.
- Demolish or stabilize damaged structures (public and private) to facilitate search and rescue and/or protect the public's health and safety.
- Coordinate disaster debris management activities, including clearance of debris from construction and engineering infrastructure and development and initiation of emergency collection, sorting, and disposal routes and sites for debris cleared from public and private property.
- Prioritize and initiate recovery efforts to restore, repair, and mitigate the impact of the construction and engineering needs listed above.
- Provide technical assistance to response teams with respect to flooding, water management, structure integrity assessment, and impact assessments of infrastructure.

1.3 Policies and Authorities

1.3.1 Policies

The following policies are currently in place:

- California Government Code, Title 2, Division 1, Chapter 7 (California Emergency Services Act)
- Title 2, Division 1, Chapter 7.5 (California Natural Disaster Assistance Act)
- California Code of Regulations, Title 19, Division 2 (Standardized Emergency Management System Regulations)

1.3.2 Agreements

The following agreements are currently in place:

- The County maintains informal agreements with the California Department of Transportation to provide support to construction and engineering-related emergency operations.

2 Situation and Assumptions

2.1 Situation

Considerations that should be taken into account when planning for and implementing EF 3 activities include, but are not limited to, the following:

- Access to potable water and effective wastewater management plays a significant role in maintaining the health and safety of the public.
- A significant disaster or emergency situation may overwhelm local assessment and engineering capacity.

- Unsafe and unknown conditions may persist throughout a community as weakened or destroyed structures, homes, public buildings, roads, and bridges await assessment from engineers and emergency personnel.
- Debris may make transportation routes impassable, and local standardized equipment may not be capable of removing it, thus making it difficult or impossible to reach construction and engineering infrastructure or get necessary equipment to sites in need of repair/restoration.
- Local equipment used for repair and removal may have been damaged or inadequate for the disaster or emergency event.
- Local personnel may have personal safety and health concerns following a disaster or emergency event that make it impossible for them to perform their duties.

2.2 Assumptions

EF 3 is based on the following planning assumptions:

- A major emergency or disaster may cause extensive damage to property and infrastructure. Structures may be destroyed or severely weakened. Homes, public buildings, bridges, and other facilities may have to be reinforced or demolished to ensure safety. Debris may make streets and highways impassable. Public utilities may be damaged or be partially or fully inoperable.
- Each construction and engineering agency will utilize its existing directives and procedures in responding to major emergencies/disasters while working within the framework of their applicable emergency plans.
- Access to disaster-impacted construction and engineering infrastructure may depend on either the repair (permanent or temporary) of transportation routes or the establishment of ad-hoc alternatives.
- In many locations, debris clearance and emergency road repairs will be given top priority to support immediate life-saving emergency response activities.
- Damage to construction and engineering infrastructure may result in a public health emergency (e.g., lack of potable water, damage to wastewater systems).
- Damage assessment of the disaster area will be required to determine potential workload.
- Assistance may be needed to clear debris, perform damage assessments and structural evaluations, make emergency repairs to essential public facilities, reduce hazards by stabilizing or demolishing structures, and provide emergency water for human health needs and firefighting.
- Debris may include many different types of materials, including hazardous materials that require specialized equipment and personnel to remove.
- Following disasters that cause significant debris, existing disposal sites may not provide effective debris management solutions because of capacity limitations and their need to provide continuous waste management operations for day-to-day debris generation.
- Local contractors will be utilized by construction and engineering agencies in supplementing emergency response and recovery capabilities.

3 Roles and Responsibilities

See Appendix B for a checklist of responsibilities by phase of emergency management.

4 Concept of Operations

4.1 General

When construction and engineering–related activities are staffed in the Emergency Operations Center (EOC), the construction and engineering representatives will be responsible for the following:

- Serve as a liaison with supporting agencies and community partners.
- Provide a primary entry point for situational information related to construction and engineering.
- Share situation status updates related to construction and engineering to inform development of Situation Reports.
- Participate in, and provide construction and engineering–specific reports for, EOC briefings.
- Assist in development and communication of construction and engineering–related actions to tasked agencies.
- Monitor ongoing construction and engineering–related actions.
- Share construction and engineering–related information with the Public Information Officer to ensure consistent public messaging.
- Coordinate construction and engineering–related staffing to ensure that the function can be staffed across operational periods and into short-term recovery.

4.2 Pre-Disaster Operations

During the mitigation and preparedness phases, departments should develop internal emergency procedures to handle daily situations while also preparing for larger-scale events. This includes developing and maintaining emergency call-out lists, and contributing to and participating in the development and exercise of their jurisdictions' Emergency Operations Plans (EOPs) for major emergencies and disasters. Pre-disaster planning should include the development of mutual aid agreements and documentation of conditions, including photographic documentation of facilities, major culverts, bridges, etc. for Federal Emergency Management Association reimbursement purposes.

4.3 Disaster Response

Construction and engineering response will include all activities to restore vital lifeline systems to the community, focusing on critical bridges, roads, potable water systems, and wastewater systems. Protection of life will be the priority, which in many response situations will mean that construction and engineering departments will be providing direct support to police and fire units in rescue, evacuation, and traffic control.

4.4 Debris Management

Procedures to support the following should be developed:

- Coordinating debris collection and removal.
- Providing debris management instructions to the public.
- Identifying temporary storage trash collection and storage sites, as well as final landfill sites.

4.5 Contractors

Departments will use local contractors to supplement their emergency response capabilities, escalating unmet needs through the EOC and/or mutual aid partners.

4.6 Access and Functional Needs Populations

The County will seek technical assistance to ensure that accessibility standards are addressed during infrastructure restoration and activities. Existing plans and procedures will be used to reestablish critical human services for children, as well as others with access and functional needs.

4.7 Coordination with Other EFs

The following EFs support EF-3–related activities:

- **EF 1 – Transportation.** Identify impacts to the transportation infrastructure and develop priorities for repair and restoration.
- **EF 10 – Hazardous Materials.** Identify impacts to hazardous materials and hazardous waste sites and develop priorities for repair and restoration.
- **EF 12 – Utilities.** Identify impacts to utility infrastructure and develop priorities for repair and restoration.

5 Annex Development and Maintenance

The County Public Works/Roads Department will be responsible for coordinating regular review and maintenance of this annex. Each primary and supporting agency will be responsible for developing plans and procedures that address assigned tasks.

6 Appendices

- Appendix A – EF 3 Resources
- Appendix B – Roles and Responsibilities

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Appendix A EF 3 Resources

The following resources provide additional information regarding EF 3 and construction and engineering–related issues at the local, state, and federal level:

City

- None at this time

County

- None at this time

State

- Standardized Emergency Management System (SEMS)
- Disaster and Civil Defense Master Mutual Aid Agreement
- Emergency Plan: EF 1 – Transportation, EF 3 – Construction & Engineering, EF 12 – Utilities, and EF 14 – Recovery

Federal

- National Response Framework
- National Infrastructure Protection Plan
- Response Federal Interagency Operational Plan

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Appendix B Roles and Responsibilities

The following checklist identifies key roles and responsibilities for EF 3 – Construction and Engineering. It is broken out by phase of emergency management to inform tasked agencies of what activities they might be expected to perform before, during, and after an emergency to support EF 3 activities. All tasked agencies should maintain agency-specific plans and procedures that allow them to effectively accomplish these tasks.

Preparedness

Preparedness activities take place **before** an emergency occurs and include plans or preparations made to save lives and help response and recovery operations. Preparedness roles and responsibilities for EF 3 include the following:

- ☐ Maintain an inventory of available resources, including personnel and training within each department.
- ☐ Develop and maintain emergency notification lists of department personnel.
- ☐ Develop and maintain operating procedures for disaster response, including evacuation transportation requirements.
- ☐ Ensure that employees fully understand their obligations as emergency responders to report to work as soon as possible in the event of a major emergency or disaster.
- ☐ Provide appropriate training to personnel on the general concept of disaster response and self-preservation techniques and for utilization of the Incident Command System in disaster procedures for damage assessment.
- ☐ Ensure that employees are aware of the need for a family preparedness plan that will assist them and their families in dealing with the results of all hazards.
- ☐ Develop plans and procedures for EF 3 activities, as appropriate.
- ☐ Participate in EF 3–related trainings and exercises as appropriate.
- ☐ Identify vital and essential roadways, bridges, and facilities to establish repair priority in the event that any of these become damaged.
- ☐ Establish contact with private resources that could provide support during an emergency.
- ☐ Designate an emergency management program liaison that will be responsible for the department’s mitigation and preparedness activities, including participating in the development, maintenance, and exercise of the EOP.
- ☐ Designate one or more employees who will serve as EOC staff in support of EF 3 tasks whenever the EOC is activated, for the purpose of training, exercising, or coordinating an actual response to a major emergency or disaster. Staff shall also be responsible for developing and maintaining a working knowledge of resources available to the department through other local, State, and federal agencies for disaster response.
- ☐ Participate in training exercises to test the EOP.

Response

Response activities take place **during** an emergency and include actions taken to save lives and prevent further property damage in an emergency situation. Response roles and responsibilities for EF 3 include the following:

- ☐ Document personnel and other costs related to the emergency or disaster response for possible federal disaster assistance reimbursement.
- ☐ Provide a representative to operate from the EOC or other command location to ensure coordination with other agencies, as necessary.
- ☐ Provide staff to operate from the EOC or other command location to ensure coordination with other agencies, as necessary.
- ☐ Immediately recall off-duty personnel.
- ☐ Relocate equipment as necessary.
- ☐ Inspect bridges and report other infrastructure for structural damage immediately following the occurrence of a natural hazard such as earthquake or flood.
- ☐ Clear debris from roads, streets, culverts, and streams endangering bridges and other structures and coordinate with the EOC in matters of debris disposal.
- ☐ Perform temporary repairs of arterial routes and bridges.
- ☐ Make recommendations regarding the priority of repairs.
- ☐ Coordinate restoration of public facilities, roads, and bridges.
- ☐ Demolish or stabilize damaged and/or unsafe infrastructure.
- ☐ Furnish equipment and operators to assist fire and police in rescue operations.
- ☐ Close roads and construct barricades to secure areas of damaged infrastructure as directed to minimize health and safety risks.
- ☐ Support traffic control measures and provide signing for detours, shelters, routes, security, trespassing, etc.
- ☐ Ensure that emergency response activities and emergency public information are coordinated with the EOC, when it is operational.
- ☐ Keep other departments informed of construction and engineering–related aspects of the emergency or disaster.
- ☐ Support public messaging related to EF 3–related activities.
- ☐ Report suspicious devices found on infrastructure to Incident Command.
- ☐ Provide personnel and equipment to support emergency operations.
- ☐ Provide damage assessment information to EOC, as applicable.
- ☐ Notify regulatory agency or agencies, as appropriate.

Recovery Phase

Recovery activities take place **after** an emergency occurs and include actions to return to normal or even safer conditions following an emergency. Recovery roles and responsibilities for EF 3 include the following:

- ☐ Demobilize response activities.
- ☐ Provide support to recovery planning
- ☐ Maintain incident documentation to support any applicable public and/or individual assistance claims. Continue to repair infrastructure and buildings on a priority basis.
- ☐ Continue to repair infrastructure and buildings on a priority basis.
- ☐ Continue all activities in coordination with the EOC based on the requirements of the incident.
- ☐ Provide information concerning dangerous areas or other existing problems.
- ☐ Provide liaison between local agencies and federal damage assessment activities.

- ☐ Assist other agencies with recovery operations and damage assessment, as appropriate.
- ☐ Return the focus of service to maintenance of the publicly owned infrastructure as soon as possible, releasing personnel and equipment for return to normal operations.
- ☐ Establish control measures related to emergency solid waste disposal.
- ☐ Coordinate all after-action activities and implement corrective actions as appropriate.

Mitigation

Mitigation activities take place **before and after** an emergency occurs and include activities that prevent an emergency, reduce the chance of an emergency happening, or reduce the damaging effects of unavoidable emergencies. Mitigation roles and responsibilities for EF 3 include the following:

- ☐ Participate in the hazard/vulnerability identification and analysis process.
- ☐ Take steps to correct deficiencies identified during the hazard/vulnerability identification and analysis process as appropriate.
- ☐ Identify and seek funds for retrofitting critical facilities and providing auxiliary power.
- ☐ Recommend changes in planning, zoning, and building codes to prevent or lessen the effect of future disasters.
- ☐ Regularly maintain equipment to ensure it is in good running order.

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