



## Department of Energy Washington, D.C. 20585

### Mission:

The Department of Energy performs research and development and implements policies, standards, and practices to reduce effects of natural hazards on buildings, facilities with hazardous materials, and electric transmission structures. The focus is to identify the site-specific nature of natural hazards, develop criteria for design and evaluation of new and existing facilities, upgrade existing facilities, and encourage technology transfer through training, conferences, and technical newsletters.



*DOE's Continental Scientific Drilling Program unlocks ancient secrets of nature's hazards buried about 2 km underground at Valle Grande caldera in New Mexico.*

### Major Activities to Reduce Effects of Natural Hazards

- Developed the Seismic Safety Guide providing plant engineers with tools to develop and manage practical and cost-effective seismic safety programs, based on 20 years of actual experience at the Lawrence Berkeley Laboratory
- Developed computerized earthquake ground motion models for eastern United States tectonics; improved deterministic and probabilistic methods to obtain site-specific seismic loads for facility design
- Improved standards and guides for design and evaluation of structures, systems, and components using performance goals to provide a graded approach for building design and risk assessment
- Used experience data from earthquakes to provide cost-effective methods (vs. analysis/testing) to evaluate and qualify equipment for earthquake loads
- Evaluated the structural response of existing masonry buildings using results of destructive and nondestructive testing of unreinforced materials and structural systems

### Contact:

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## Federal Emergency Management Agency

500 C Street, SW  
Washington, D.C. 20472

### Mission:

The Federal Emergency Management Agency provides leadership and support to reduce the loss of life and property and to protect our institutions from all types of hazards through a comprehensive, risk-based, all-hazards emergency management program of mitigation, preparedness, response, and recovery.



*FEMA, State, and local government officials plan post-disaster hazard mitigation strategies in a Disaster Field Office.*

### Major Activities to Reduce Effects of Natural Hazards

- Provide continuing financial and technical assistance to State and local governments for natural hazard reduction activities
- Provide post-event grants to State and local governments for identification of hazards and risks and implementation of hazard mitigation measures
- Prepare and disseminate information on hazard-resistant building codes and practices
- Prepare and execute training, education, and public awareness programs in natural hazard reduction
- Plan and coordinate activities of the National Earthquake Hazards Reduction Program and National Hurricane Program
- Coordinate and lead a Unified National Program for floodplain management
- Administer the National Flood Insurance Program, including hazard identification, risk assessment, implementation of loss reduction measures, and the provision of flood insurance
- Develop and coordinate the execution of federal response and recovery plans for disasters

### Contact:

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## Federal Energy Regulatory Commission

825 N. Capitol Street, N.W.

Washington, D.C. 20426

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### **Mission:**

The Federal Energy Regulatory Commission, under the Federal Power Act, is mandated to regulate all non-federal public and private hydroelectric projects in the United States. The Commission has established a dam safety program to take appropriate actions to require repairs and/or modifications of projects, or changes in their operation, as may be necessary to ensure project safety and adequacy of project works and for the protection of life, health, property, and the environment.



*Licensed hydro project*

### **Major Activities to Reduce Effects of Natural Hazards**

- Develop engineering guidelines for dam safety analyses
- Establish methodology and criteria for determining probable maximum precipitation and probable maximum floods
- Conduct seismic analyses and evaluations and develop criteria for analyzing and protecting dams against failure due to seismic events
- Establish and maintain an emergency action plan program to provide early warning notification and provide training for conducting tests
- Provide criteria to promote public safety at jurisdictional projects

### **Contact:**

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