



Dam Safety and Security in the United States

National Dam Safety Program

<http://www.fema.gov/plan/prevent/damfailure/ndsp.shtm>

As lead Federal agency for the National Dam Safety Program, the Federal Emergency Management Agency (FEMA) is responsible for coordinating efforts to secure the safety of dams throughout the United States. Congress' passage of the Dam Safety and Security Act of 2002 reauthorized the program for a four-year period. The program makes Federal funds available to the States, which are primarily responsible for protecting the public from dam failures of non-Federal dams, and pursuing initiatives that enhance the safety and security of dams posing the greatest risk to people and property.

Federal support for state programs and dam professionals

FEMA provides financial assistance to States' dam safety programs under the Dam Safety and Security Act of 2002. National performance criteria are used to determine a State's eligibility. The funds are used for inspecting and monitoring dams, training dam operators, analyzing data, purchasing equipment, and assisting in the preparation of Emergency Action Plans (EAP) to be followed in the event of a dam failure. The grants have totaled approximately \$3.5 million per year over the last eight years.

Other program activities support stakeholders in the dam safety community:

- **Research** on risk assessment techniques, design and construction standards, seepage and internal erosion, hydrologic and earthquake threats, inspection techniques, monitoring equipment, maintenance and rehabilitation, impacts of vegetation and animals on embankment dams, new technologies, and other issues.
- **Training** in dam safety and security for dam operators, owners, and regulators.

In addition, FEMA works with its Federal and private sector partners to develop technologies to help secure dam safety and security. Examples are:

- **National Inventory of Dams (NID)** – A database of about 79,500 dams in the United States maintained by the U.S. Army Corps of Engineers. The database is used for water resource management, land use planning, floodplain management, risk management, and emergency action planning.
- **Dam Safety Program Management Tools** – An interactive software program used for assessing the effectiveness of state dam safety programs.

Classifications of Dams

Dams are classified as high, significant, and low hazard potential. Hazard potential does not reflect the condition of the dam but identifies the potential consequences of dam failure.

- Failure of a *high hazard* dam, for any reason, could result in loss of life, significant property damage, service disruptions, and environmental damage.
- If a *significant hazard* dam should fail for any reason, extensive property damage, service disruptions, and environmental damage would occur beyond the owner's property.
- Damages from a *low hazard* dam failure do not extend beyond the dam owner's property.



Dam safety professionals help guide federal policy

As part of its leadership role, FEMA chairs the following two organizations, which serve to guide the National Dam Safety Program:

The **National Dam Safety Review Board** advises FEMA on national dam safety priorities, coordinates Federal-State activities, and assesses States' progress in meeting performance criteria defined under the Dam Safety and Security Act of 2002. Board membership includes representatives from Federal and State agencies, and the private sector.

The **Interagency Committee on Dam Safety (ICODS)** coordinates Federal policies, guidelines, and activities related to dam safety and security. For example, the Committee developed, "Federal Guidelines for Dam Safety: Emergency Action Planning for Dam Owners." The guide provides information on how to prepare an EAP and describes procedures for early warning that can minimize property damage and loss of life in the event of a dam failure.

The group includes the following Federal agencies, which build, own, operate, or regulate dams: Department of Agriculture; Department of Defense; Department of Energy; Department of the Interior; Department of Labor; Mine Safety and Health Administration; Federal Energy Regulatory Commission; Department of State, International Boundary and Water Commission (U.S. Section); Nuclear Regulatory Commission; and Tennessee Valley Authority.

Dam safety and security: a shared responsibility

The National Inventory of Dams currently lists about 79,500 dams in the United States. The Federal government owns about 5% of the dams; States 5%; local governments 20%; and private entities about 56%. Owners are responsible for the safety, security, and maintenance of the dams.

Partnerships key to program success

In addition to the Dam National Safety Review Board and the Interagency Committee on Dam Safety, FEMA partners with professional organizations in the effort to secure the safety and security of dams.

The **Association of State Dam Safety Officers (ASDSO)** is a national non-profit organization of State and Federal dam safety regulators, dam owners and operators, engineering consultants, manufacturers and suppliers, academia, and contractors. The organization supports programs and policies designed to increase dam safety.

The **United States Society on Dams (USSD)** is a national professional organization that represents primarily private sector interests with representatives from the private sector and some governmental agencies. The USSD seeks to advance the technology of dam engineering, construction, operation, maintenance, and dam safety; to foster socially and environmentally responsible water resources projects; and to promote awareness of the role of dams in managing the Nation's water resources.