



INTRODUCTION TO THE DAMS SECTOR RISK MANAGEMENT AGENCY



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The Dams Sector delivers critical water retention and control services that support multiple critical infrastructure sectors in the United States. Sector functions include hydroelectric power generation, municipal and industrial water supplies, agricultural irrigation, sediment and flood control, river navigation for inland bulk shipping, industrial waste management, and recreation. The Federal Government’s responsibility in the Sector is diverse. Activities include providing timely threat information and working with organizations to develop standards and guidance for facility construction, operations, and security. The Cybersecurity and Infrastructure Security Agency (CISA), which serves as the Dams Sector Risk Management Agency (SRMA), and sector partners collaboratively develop guidance, resources, and training that support the security and resilience of our Nation’s critical dams, levees, navigation locks, and other water control facilities.

DAMS SECTOR COLLABORATION, RESOURCES, AND TRAINING

CISA offers many resources to help owners and operators manage risks, improve security, and aid the implementation and execution of protective and response measures across the Dams Sector. This fact sheet lists a sampling of sector collaboration mechanisms, resources, and training materials. Unless otherwise noted below, additional information can be obtained from the CISA website at cisa.gov/dams-sector.

Collaboration

Sector Coordinating Council (SCC), Levee Subsector Councils, and Working Groups convene regularly, share information, and develop tools, guidelines, and products. These groups work closely to plan, implement, and execute resilience and security programs within the Dams Sector.

The Homeland Security Information Network–Critical Infrastructure (HSIN-CI) Dams Portal allows Dams Sector partners to effectively collect and distribute security and resilience information for government and private sector partners.

The Dams Sector Information Sharing Drill tests the Sector’s information-sharing processes and procedures, including the ability to convene and share security-related information with vetted stakeholders. The virtual drill is held biannually and is open to owners, operators, emergency managers, and others with responsibility over dams and levees.

Resources

Dams Sector Security Guidelines consolidate effective industry security practices to reduce sector risk and improve the protection of personnel, public health, and public safety.

The Dams Sector Active and Passive Vehicle Barriers Guide assists dam owners and operators in understanding various types of active and passive vehicle barriers and incorporating them into their overall security plan.

The Dams Sector Cybersecurity Capability Maturity Model (C2M2) helps Dams Sector organizations evaluate and improve their cybersecurity programs, regardless of the type or size of organization.

Dams Sector Cybersecurity Framework Implementation Guidance provides a common language that Dams Sector owners and operators can use to assess and manage their cybersecurity risks and use the National Institute of Standards and Technology (NIST) voluntary Framework for Improving Critical Infrastructure Cybersecurity.

Training

Independent Study Courses:

- IS-870a Dams Sector Crisis Management** describes the basic elements of emergency action plans, recovery plans, and continuity plans.
- IS-871a Dams Sector Security Awareness** describes common vulnerabilities, threat indicators, surveillance detection, and reporting of incidents.
- IS-872a Dams Sector Protective Measures** describe the basic elements of a risk-management model.

Security and Protection of Dams and Levees highlights fundamental aspects of security and protection for Dams Sector facilities. The course is offered throughout the year in two formats: an in-person workshop and a virtual webinar.

The Dams Sector Tabletop Exercise Toolbox (DSTET) provides exercise planning resources to address sector-specific threats, issues, and concerns related to the protection of dams.

SECTOR PROFILE

Assets in the Sector include dam projects (dams), navigation locks, and levees, as well as hydropower projects, dikes, hurricane barriers, tailings dams, and other industrial waste impoundments. Dams Sector assets irrigate at least 10 percent of U.S. cropland, help protect more than 43 percent of the U.S. population from flooding, and generate about 60 percent of electricity in the Pacific Northwest. While there are more than 90,000 dams in the National Inventory of Dams database, there are more than 100,000 dams across the United States and Puerto Rico. A large and diverse set of public and private entities own and operate these facilities under highly distributed regulatory oversight from federal, state, and local entities.

Sector Assets

Dams



The purpose of a dam is to store water, wastewater, or liquid-borne materials for any of several reasons, such as flood control, human water supply, irrigation, livestock water supply, energy generation, containment of mine tailings, recreation, or pollution control. Many dams fulfill a combination of the above functions. **There are more than 100,000 dams in the United States.**

Levees



Levees, hurricane barriers, and other flood protection systems contain, control, or divert the flow of water to reduce public safety risks from seasonal floods, storm surges, rain, and other extreme weather. Every state in the United States relies on levees for flood control to protect homes, businesses, and property. **There are nearly 50,000 levee structures in the United States protecting \$1.3 trillion in property.**

Locks



Navigation locks make inland waterways viable transportation corridors by allowing commercial and recreational traffic to move safely between river pools and harbors. The U.S. Army Corps of Engineers (USACE) oversees locks as part of a larger marine highway network that stretches across the country. **Over 600 million tons of U.S. cargo valued at \$229 billion is moved annually by inland marine network.**

CRITICAL INFRASTRUCTURE SECURITY CONSIDERATIONS

- **Natural Hazards and Extreme Weather:** Potential impacts include increased frequency of extreme weather, extreme weather, reduced water tables, increased droughts, and more frequent earthquakes. Combined with an increased population using sector resources, safe operations may be stressed.
- **Technological Hazards:** For the Dams Sector, these include a higher risk of systems failure; erosion and instability related to changing environments or industry practices; maintenance and rehabilitation of decades-old infrastructure; and threats from population growth and development.
- **Cybersecurity:** Key cyber risks include cyberattacks that target inadequate security controls, outdated patches, and unknown vulnerabilities; social engineering attempts designed to gain operator credentials; and intrusions from insider threats. All such attempts could allow attackers to access critical control systems and disrupt or control physical components and processes.
- **Aging Infrastructure and Workforce:** Many Dams Sector assets were built decades ago and require routine maintenance to operate safely. Some may require rehabilitation to meet improved safety criteria or address new risks from extreme weather and downstream population development. Many Dams Sector jobs are highly technical or specialized and have limited turnover. Facilities are losing institutional knowledge as experienced workers retire.
- **Criminal Activities and Terrorism:** Though the catastrophic failure of a dam would be difficult to achieve through a conventional terrorist attack, recent international events suggest terrorists still consider dams attractive targets because of the potential for significant economic, environmental, and public safety disruption.

FOR MORE INFORMATION ON THE DAMS SECTOR

Contact the Dams Sector Management Team at DamsSector@cisa.dhs.gov or learn more at cisa.gov/dams-sector. For additional information about the Dams Sector, view the Dams Sector-Specific Plan at cisa.gov/publication/nipp-ssp-dams-2015.