



Maryland Department of the Environment

Maryland's Dam Safety Program

Maryland's Dam Safety Program ensures all dams are designed, constructed, operated and maintained safely to prevent failures and the resulting consequences. The Maryland Department of the Environment's (MDE) responsibilities include conducting safety inspections of dams based on their "hazard classification," evaluating downstream hazard conditions, issuing permits for new construction and repairs to existing structures; and conducting construction inspections. MDE also works with dam owners and emergency management professionals to develop and exercise an "Emergency Action Plan" for dams to be used in the event of imminent dam failure.



A dam is defined as any obstruction, wall, or embankment, together with its abutments and appurtenant works, constructed for the purpose of storing water. Dams may be constructed of earth, concrete, wood, or rock. Most dams in Maryland consist of an earthen embankment to store water and a combination of spillways designed to pass water safely around or through the facility.

Dams provide many benefits for Maryland's citizens including water supply, flood control, hydroelectric power, and recreation. However, dams can also be a threat to the safety of downstream property and people if they are not properly constructed or maintained. Maryland has been assuring the safety of dams since 1934 through a permit and inspection program. The laws governing dam safety are administered by MDE's Dam Safety Division.

Examples of Maryland Dams: There are nearly 500 dams in Maryland, ranging in height from 6 to 296 feet. The majority of Maryland's dams are earthen embankments (or a combination of earth and rockfill), such as Savage River Dam. There are also several large concrete gravity dams such as Liberty and Prettyboy dams, and a few "slab and buttress" dams like Brighton Dam that provide storage for drinking water.

Dam Hazard Classification and Description:

High Hazard (81 dams*): Probable loss of life; major increases in existing flood levels at houses, buildings, major interstates and state roads

Significant Hazard (114 dams*): Possible loss of life, significant increased flood risks to roads and buildings with no more than 2 houses

Low Hazard (244 dams*): Unlikely loss of life; minor increases to existing flood levels at road and buildings.

*as of February 2015

Owner's Liability

The owner of a dam is liable for the damages resulting from mis-operation or failure that would result in a sudden release of water downstream. In assessing the legal liability for a dam failure, there are two basic Common Law theories that apply: *strict liability* and *negligence*.

The Maryland General Assembly has added statutory requirements on top of the Common Law strict liability and negligence doctrines. Construction and repair of dams require state permits and those permits contain specific conditions for maintenance. Size, location, design, and public safety are all issues addressed by State law and regulations. MDE may order structures built without permission to be drained and removed.

Also, it is the owner's responsibility and obligation to act in a reasonable manner to inspect and maintain the dam and its appurtenances. MDE's Dam Safety Division performs periodic safety inspections. High hazard dams are inspected every year, significant hazard dams every three years, and low hazard dams every 5 to 7 years. After each inspection the owner is presented with a summary of findings and maintenance recommendations. If a dam is considered "unsafe" and is in danger of failure then immediate measures or precautions will be required (e.g., the facility must be drained, breached, or modified to minimize the danger).

Public Safety

In addition to the responsibility for dam maintenance, owners should also be aware of their responsibility for public safety. This includes the safety of people not authorized to use the facility. "No Trespassing" signs should be posted and fences and warning signs should be erected around dangerous areas. Liability insurance can also be purchased to protect the owner in the event of accidents.

Professional Assistance

A dam with its associated works is a complex structure. Engineers who are experienced in dam design, construction, and inspection should be consulted for operation guidelines and maintenance responsibilities. The owner or operator of a dam should always keep in mind that each structure is unique in its construction and operation. When contacting a professional for assistance, there can be no substitute for the availability of historical records and documentation on the operation of the facility.

For more information, please call MDE's Dam Safety Program at 410-537-3538.

**Or write to: Maryland Department of the Environment
Dam Safety Division
1800 Washington Boulevard
Baltimore, Maryland 21230**

Or visit www.mde.maryland.gov/damsafety