

FACTS ABOUT....

Maryland's Dam Safety Program- ensures all dams are designed, constructed, operated and maintained safely to prevent dam failures and the resulting consequences. Maryland



Department of the Environment's (MDE) responsibilities include conducting inspections of dams based on their "hazard class," issuing permits for construction, repairs or for modifying dam structures; conducting construction inspections and working with dam owners and emergency management professionals to develop and exercise "Emergency Action Plan" to be used in the event of 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, fishing and recreation. However, dams can also be a great threat to the safety and well being of downstream property and people if they are not properly constructed or maintained. The State of 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 over 400 dams in Maryland, ranging in height from 6 to 296 feet. The majority of Maryland's dams are earthfill or earth and rockfill embankment dams 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.

Little Seneca Dam, pictured above, is an earthfill embankment dam that provides recreation and supplemental releases to the Potomac River during low flow conditions on the Potomac River.

Dam Hazard Classification and Description:

High Hazard Dams (71 High Hazard Dams*): Probable loss of life; major increases in existing flood levels at houses, buildings, major interstates and state roads with more than 6 lives in jeopardy.

Significant Hazard Dams (100 Significant Hazard Dams*): Possible loss of life, significant increased flood risks to roads and buildings with no more than 2 houses or 6 lives in jeopardy.

Low Hazard Dams (i.e., 232 Low Hazard Dams*): Unlikely loss of life; minor increases to existing flood levels at road and buildings.

* as of 11/4/09



Owner's Liability

The dam owner is liable for the damages resulting from a dam's 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 theories that are used, strict liability and negligence.

In Maryland, the 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 or 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. Additionally, MDE's Dam Safety Division performs periodic safety inspections (i.e., High Hazard Dams every year, Significant Hazard Dams every three years, and low hazard dams every 5 to 7 years) of Maryland dams. 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 immediate measures or precautions will be requested (e.g., the facility will be drained, breached, modified to minimize the danger) of the dam owner. These recommendations should be implemented to insure the dam's continuing safety.



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 the design, construction, and inspection of dams should be consulted for many of the operation guidelines and maintenance techniques identified in the [Maryland Dam Safety Manual](#). The owner or operator of the 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. Therefore, it is extremely important to follow the guidelines suggested in this manual.



For more information about Dam Safety Program or publications, please contact the Water Management Administration's Sediment, Stormwater, and Dam Safety Program at **(410) 537-3538** or see MDE's Web Page (<http://www.mde.state.md.us>).



Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
Shari T. Wilson, Secretary
Robert M. Summers, Deputy Secretary

1800 Washington Blvd.
Baltimore, MD 21230
410-537-3000
www.mde.state.md.us