

WD-DB-15

2011

## Classification of Dams in New Hampshire

The NH Department of Environmental Services Water Division is charged with the responsibility of inspecting all dams in the state that by reason of their physical condition, height and location may be a threat to the public safety. Presently there are over 3,075 active dams throughout the state.

### Four Categories

Every dam is categorized into one of four classifications, which are differentiated by the degree of potential damages that a failure of the dam is expected to cause. The classifications are designated as non menace, low hazard, significant hazard and high hazard. A detailed breakdown of the classifications is as follows.

**Non-Menace structure** means a dam that is not a menace because it is in a location and of a size that failure or misoperation of the dam would not result in probable loss of life or loss to property, provided the dam is:

- Less than six feet in height if it has a storage capacity greater than 50 acre-feet; or
- Less than 25 feet in height if it has a storage capacity of 15 to 50 acre-feet.

**Low Hazard structure** means a dam that has a low hazard potential because it is in a location and of a size that failure or misoperation of the dam would result in any of the following:

- No possible loss of life.
- Low economic loss to structures or property.
- Structural damage to a town or city road or private road accessing property other than the dam owner's that could render the road impassable or otherwise interrupt public safety services.
- The release of liquid industrial, agricultural, or commercial wastes, septage, or contaminated sediment if the storage capacity is less than two-acre-feet and is located more than 250 feet from a water body or water course.
- Reversible environmental losses to environmentally-sensitive sites.

**Significant Hazard structure** means a dam that has a significant hazard potential because it is in a location and of a size that failure or misoperation of the dam would result in any of the following:

- No probable loss of lives.
- Major economic loss to structures or property.

- Structural damage to a Class I or Class II road that could render the road impassable or otherwise interrupt public safety services.
- Major environmental or public health losses, including one or more of the following:
  - Damage to a public water system, as defined by RSA 485:1-a, XV, which will take longer than 48 hours to repair.
  - The release of liquid industrial, agricultural, or commercial wastes, septage, sewage, or contaminated sediments if the storage capacity is 2 acre-feet or more.
  - Damage to an environmentally-sensitive site that does not meet the definition of reversible environmental losses.

**High Hazard** means a dam that has a high hazard potential because it is in a location and of a size that failure or misoperation of the dam would result in probable loss of human life as a result of:

- Water levels and velocities causing the structural failure of a foundation of a habitable residential structure or commercial or industrial structure, which is occupied under normal conditions.
- Water levels rising above the first floor elevation of a habitable residential structure or a commercial or industrial structure, which is occupied under normal conditions when the rise due to dam failure is greater than one foot.
- Structural damage to an interstate highway, which could render the roadway impassable or otherwise interrupt public safety services.
- The release of a quantity and concentration of material, which qualify as “hazardous waste” as defined by RSA 471-A:2 VI.
- Any other circumstance that would more likely than not cause one or more deaths.

### Inspections

All hazardous dams in the state are inspected at regular intervals, which vary according to their classification. These intervals are:

Hazard Classification	Inspection Interval in Years
High	1
Significant	2
Low	5
Non Menace – if certain criteria are met	5

Prior to the regularly scheduled inspection of a dam, the owner is notified of the impending inspection in writing and is offered the opportunity to accompany the inspector on the dam inspection. After each inspection the dam owner is notified of the results and, if necessary, requested to complete any repairs that may be required to ensure the safe operation of the dam.

For more information relative to the design, construction, maintenance and operation of dams, please contact the DES Dam Bureau at (603) 271-3406 or email [damsafety@des.nh.gov](mailto:damsafety@des.nh.gov). General information is available at <http://des.nh.gov/organization/divisions/water/dam/index.htm>. You may also visit our office at 29 Hazen Drive, Concord, NH.