

## Hazard / Definition

### Dam Failure:

The collapse or failure of an impoundment that causes downstream flooding. Risk area is the downstream inundation area as mapped by the Corps of Engineers or State/Local agencies.

### High Hazard Dams (Class I)

Barker Meadow  
Baseline Reservoir  
Beaver Park Reservoir  
Boulder Reservoir  
Buttonrock Reservoir  
Clover Basin Reservoir  
Foothills Reservoir  
Gross Reservoir  
Harper Lake  
Hayden  
Ish Reservoir  
Jasper Lake  
Lagerman Reservoir  
Lefthand Park  
Lefthand Valley Reservoir  
Leggett & Hillcrest  
Marshall Lake  
McCall Lake  
Pleasant Valley (Terry Lake)  
Silver Lake  
Six Mile Reservoir  
Superior Reservoir  
Valmont "A"  
Waneka Reservoir

## Description / Frequency

Approximately 27,000 dams exist in Colorado and at least 130 dams are known to have failed in Colorado since 1890. There are 24 High Hazard (Class I) and 16 Moderate Hazard (Class II) dams in Boulder County. The high hazard class does not mean the dams are unsafe, but that lives would be lost and extensive property damage would be suffered if any one of these dams should fail. Dam failures usually occur as a secondary effect of storms or earthquakes. During the Lawn Lake disaster in 1982 in Estes Park, just North of Boulder County, 3 lives were lost and damages were estimated at \$30 Million.

### **Historical Score: 0**

There has never been a dam failure in Boulder County. Two dams, in the past, were listed as unsafe but the deficiencies that caused this rating were corrected and the unsafe rating removed.

### **Potential Score: 5**

Even though this score does not fall in the high hazard range, it has been rated high because of the potential for loss of life and property. A flash flood would quickly follow a dam failure, threatening those living below the dam. The speed and devastating power of large amounts of water suddenly unleashed would have catastrophic effects on roads, bridges and homes.

### **Impact on Life and Property:**

If any one of the high hazard dams (Class I Dams) in Boulder County were to fail, extensive damage would occur and the lives of the people who live below them would be endangered.

## Mitigation Options / Strategies

- C All dam owners are required to have emergency response plans which include inundation zones.
- C Training programs are available for dam owners so that they may learn how to develop and exercise emergency action plans.
- C Monitoring of new dam construction done by the State when the dam is built.
- C Members of a committee on dam safety meet quarterly to discuss national dam safety issues and recommend mitigation policies.
- C Land use management practices established and promoted to decrease the potential for damage from a dam collapse.
- C Public education programs to inform the public of dam safety measures and preparedness activities.
- C The Cities of Boulder, Louisville, Lafayette and Longmont have outdoor warning sirens to warn the public in case of a disaster. This warning system is tested on a regular basis during the months of April, May, June, July and August.
- C The Office of Emergency Management is developing warning and evacuation plans for all the high hazard dams in Boulder County. These are in addition to the plans that are developed by individual dams owners.
- C The Boulder County Multiple Agency Coordinating System (MACS) group, consists of representatives from all agencies and jurisdictions within the County. This group makes plans and agreements for the procurement of resources needed during emergencies.

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**Dam Failure.....Page 2:**

**Mitigation Options / Strategies**

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C SCC Communications and US West partnered together for a warning and evacuation system for Boulder County. It is called the Emergency Warning and Evacuation Service (EWES) and is part of the Emergency Preparedness Network (EPN). The existing 9-1-1 database of telephone numbers and addresses is used in combination with detailed maps to help determine the geographic boundaries of an area impacted. The system is capable of calling up to 2,000 numbers in one minute. It is designed to deliver recorded information to endangered people in advance of a disaster or any major event. Messages can be delivered in various languages, as well as to pagers or the Emergency Alert System (EAS). Multiple floodplain areas can be handled during a single event with priority given to the area most impacted.

**Revised 2000**