

# Dam Failure

There are more than 80,000 dams in the United States, according to the 2007 update to the National Inventory of Dams. Approximately one third of these pose a "high" or "significant" hazard to life and property if failure occurs.

Dam failure or levee breaches can occur with little warning. Intense storms may produce a flood in a few hours or even minutes for upstream locations. Flash floods occur within six hours of the beginning of heavy rainfall, and dam failure may occur within hours of the first signs of breaching.

Other failures and breaches can take much longer to occur, from days to weeks, as a result of debris jams or the accumulation of melting snow.

## What to Do Before a Dam Failure

Knowing your risk, making sure an Emergency Action Plan (EAP) is in place, and evacuating when directed by emergency response officials are the most important steps you can take to staying safe from a dam failure.

### Ways to Plan Ahead

- Know your risk. Do you live downstream from a dam? Is the dam a high-hazard or significant-hazard potential dam? To find out, contact your state or county emergency management agency or visit the National Inventory of Dams (NID) or the Association of State Dam Safety Officials (ASDSO).
- Find out who owns the dam and who regulates the dam. This information also should be available from your state or county emergency management agency, NID, or ASDSO.
- Once you determine that you live downstream from a high-hazard or significant-hazard potential dam and find out who owns the dam, see if a current EAP is in place for the dam. An EAP is a formal document that identifies potential emergency conditions at a dam and specifies preplanned actions to be followed to reduce property damage and loss of life. An EAP specifies actions the dam owner should take to take care of problems at the dam. It also includes steps to assist the dam owner in issuing early warning and notification messages to responsible downstream emergency management authorities of the emergency.
- If there is a dam failure or an imminent dam failure and you need to evacuate, know your evacuation route and get out of harm's way. In general, evacuation planning and implementation are the responsibility of the state and local officials responsible for your safety. However, there may be situations where recreational facilities, campgrounds, or residences are located below a dam and local authorities will not be able to issue a timely warning. In this case, the dam owner should coordinate with local emergency management officials to determine who will warn you and in what priority.

# During a Flood

If a flood is likely in your area, you should:

- Listen to the radio or television for information.
- Be aware that flash flooding can occur. If there is any possibility of a flash flood, move immediately to higher ground. Do not wait for instructions to move.
- Be aware of streams, drainage channels, canyons, and other areas known to flood suddenly. Flash floods can occur in these areas with or without such typical warnings as rain clouds or heavy rain.

If you must prepare to evacuate, you should do the following:

- Secure your home. If you have time, bring in outdoor furniture. Move essential items to an upper floor.
- Turn off utilities at the main switches or valves if instructed to do so. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water.

If you have to leave your home, remember these evacuation tips:

- Do not walk through moving water. Six inches of moving water can make you fall. If you have to walk in water, walk where the water is not moving. Use a stick to check the firmness of the ground in front of you.
- Do not drive into flooded areas. If floodwaters rise around your car, abandon the car and move to higher ground if you can do so safely. You and the vehicle can be quickly swept away.

## Driving Flood Facts

The following are important points to remember when driving in flood conditions:

- Six inches of water will reach the bottom of most passenger cars causing loss of control and possible stalling.
- A foot of water will float many vehicles.
- Two feet of rushing water can carry away most vehicles including sport utility vehicles (SUV's) and pick-ups.

# After a Flood

The following are guidelines for the period following a flood:

- Listen for news reports to learn whether the community's water supply is safe to drink.
- Avoid floodwaters; water may be contaminated by oil, gasoline, or raw sewage. Water may also be electrically charged from underground or downed power lines.
- Avoid moving water.
- Be aware of areas where floodwaters have receded. Roads may have weakened and could collapse under the weight of a car.
- Stay away from downed power lines, and report them to the power company.
- Return home only when authorities indicate it is safe.
- Stay out of any building if it is surrounded by floodwaters.
- Use extreme caution when entering buildings; there may be hidden damage, particularly in foundations.
- Service damaged septic tanks, cesspools, pits, and leaching systems as soon as possible. Damaged sewage systems are serious health hazards.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage and chemicals.