



DAM SAFETY

2018

General Information

The purpose of a dam is to impound (store) water, wastewater, or liquid-borne materials for several reasons. Flood control, human water supply, irrigation, livestock water supply, energy generations, containment of mine tailing, recreation or pollution control are all examples. Many dams fulfill a combination of the above functions.

Manmade dams may be classified according to the type of construction material used, the methods used in construction, the slope or cross-section of the dam, the way the dam resists the forces of the water pressure behind it, or the means used for controlling seepage.

Dams are unique components of the U.S. infrastructure in that most dams are privately-owned. Dam owners are solely responsible for keeping their dams safe and financing maintenance, repairs and upgrades. Maintaining dams can be a heavy burden on dam owners. The older dams get the more costly the expenses become.

Emergency preparedness is lacking. Only 55 percent of non-federally owned dams considered high hazard in the U.S. have emergency action plans. That means that most dam owners and local authorities are not prepared for a sudden dam failure and the ensuing downstream consequences.

Dams must be maintained to keep them safe. Occasional upgrade or rehabilitation is necessary due to deterioration, changing technical standards and improved techniques, better understanding of the area's precipitation conditions, increases in downstream populations, and changing land use. The age of the dam is not necessarily a direct indicator of its condition. Age is indirectly an indicator in that old dams were not built to the standards of today. Some older dams are considered in poor condition for this reason alone; others may have been inadequately maintained as well.



Portage County has eight Class 1 dams. Dams are classified in this category based on one of the following: higher than 60 feet, water storage capacity of more than 5,000 acre-feet or potential downstream hazards if the dam should fail. Berlin Dam in the southeast corner of the county on Berlin Lake is the highest at 96 feet and has the largest capacity of 140,000 acre feet. The smallest is Whispering Pines Lake Dam, 13 feet high with 33 acre feet and located in Atwater Township.

The other dams from next largest to smallest are: Michael J. Kirwan Dam, Mogadore Reservoir Dam, Lake Rockwell Dam, Tucaway Dam, Hickory Lake Dam and Brimfield Lake Dam.



Why do dams fail?

Dam failures are most likely to happen for one of five reasons:

- Overtopping caused by water spilling over the top of a dam
- Structural failure of materials used in dam construction
- Cracking caused by movements like the natural setting of a dam
- Inadequate maintenance and upkeep
- Piping – when seepage through a dam is not properly filtered and soil particles continue to progress and form sink holes in the dam
- More information about dam safety at [fema.gov/dam-safety](https://www.fema.gov/dam-safety)

How to Prepare Your Home and Family

Preparing for a dam failure can be difficult. It is not like your typical disaster that has a warning attached to it. If you are within a flood zone of a dam it is important that you prepare. Some ways you can prepare your home and family are by:

- Inform your family of dam failure flood risks, and make sure each family member knows what to do in the event of an emergency
- Elevate your furnace, water heater and electrical panel if they are susceptible to flooding
- Install “check valves” in sewer traps to prevent floodwater from backing up into the drains
- Seal basement walls with waterproofing compounds to avoid seepage
- Keep valued possessions and important papers on an upper level of your home or in a safety deposit box
- Prepare an emergency kit

Make a plan and practice! Make a plan today! Your family may not be together if a disaster strikes, so it's important to know which [types of disasters](#) could affect your area. Know how you'll contact one another and reconnect if separated. Go here to make your plan: [ready.gov/make-a-plan](https://www.ready.gov/make-a-plan)

Turn Around, Don't Drown Watch this video from the National Weather Service to learn why you never drive into flood waters. Click [here](#) or paste and copy this link: <https://yhoo.it/2BypgHZ>. Don't underestimate the power of water.

Preparing businesses Planning and preparing can make a big difference in being safe and continuing operations after a disaster. The ability to maintain or quickly reestablish business operations or organization missions requires a focus on preparedness, advance planning, and relationships with external partners and community leaders. Click here for a guide: bit.ly/2GmFGT7

Prepare pets for evacuation! Prepare your pets for emergencies. Learn more at [ready.gov/pets](https://www.ready.gov/pets).

Portage County EMA is committed to community preparedness! Check out our resources on line: EMA WEBSITE: co.portage.oh.us/homeland-security-emergency-management PORTAGE PREPARES WEBPAGE: co.portage.oh.us/portage-prepares More newsletters at: co.portage.oh.us/portage-prepares Download the Portage County Emergency App for iPhone and Android at the iPhone App Store and Google+.



A publication of the Portage County Office of Homeland Security and Emergency Management, 8240 Infirmary Road, Ravenna, Ohio 44262, PHONE: 330-297-3607, FAX: 330-297-4596