

Recreation Near Dams



UNDERSTANDING THE RISKS

All Dams are Potentially Dangerous

Each year, dozens of lives are lost at dams on America's waterways. People are often unaware of the dangers, or they underestimate their risk of falling victim to them. It may be a case of a simple lack of knowledge, reckless behaviors, lack of warning or just being in the wrong place at the wrong time. Regardless of the cause or intention, outings on waterways can be dangerous — even deadly — without proper planning and care.

UNDERSTANDING DAMS

Larger dams are categorized primarily by the structure of the dam and the material used to build it. Some more common materials include earth, rockfill and concrete. There can be many hazards at these dams caused by water flows, human activities, environmental factors and the structures themselves. However, often these larger dams are fenced off to protect the public from hazards.

Many of the most dangerous dams are not the massive structures people often first think of when considering dams. Many are low-head dams, also called run-of-the-river dams or "drowning machines." Low-head dams are dams characterized by their low height — usually with a 1-foot to 15-foot drop-off — that allows water to flow over the top of the dam. Below the surface, the water falling over the dam creates highly aerated, circulating currents (rollers or eddies) that trap people and objects underwater against the face of the dam. These forces are a practically inescapable trap for even the strongest, lifejacket-clad swimmer and often boats and kayaks.

Low-head dams have a variety of purposes, including hydroelectric power generation, irrigation control and, historically, powering mills. While some dams no longer serve their original purposes, many others across the United States are still important components of our national water infrastructure.



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COMMON SAFETY HAZARDS AT AND NEAR DAMS

In addition to rollers and eddies, dams present a variety of hazards to recreationists, swimmers and boaters. Dams have spillways and pipes that can create a current that forces them into a confined space and may result in drowning. Other dams may not be visible from the surface but create an artificially shallow area that can result in injury or death to jumpers and divers. It is better to stay off dams not designed specifically for pedestrians as they may have slippery surfaces, grates, indentations and other hazards. Even playing below dams can be dangerous as unexpected releases of water may occur, turning a shallow, slow moving area into a deeper and faster moving zone. Often a concrete pad is poured below a dam to absorb the energy of the falling water, and this also poses a waterway hazard to jumpers and divers. Never drive motorcycles or all-terrain vehicles for recreation on dams as these may leave dangerous ruts that can cause channels to form on a dam causing erosion that can affect the integrity of a dam.

KEEPING YOURSELF SAFE

It is critically important to understand the scope of this danger and to be aware of the many ways to keep yourself safe when recreating near dams.

There are many things that may go wrong near dams, so it is always best to avoid them. Always stay a safe distance from dams, upstream and downstream, to avoid drowning. If you need to go around a dam, walk and carry your boat over land to a safe distance downstream. If you choose to use a waterway for recreation, follow these tips:

1. **Know the area.** Check maps and talk with locals about hazards on the waterway. If swimming or fishing, always remain safely away from the structure to avoid sudden currents. If kayaking, canoeing or boating, always carry your boat around the structure or turn around well before reaching the dam to avoid being pulled over.
2. **Read the signs.** Obey posted signage and barriers in the area, including flood warnings, restricted-access signs, portage signs or other posted signs.
3. **Dress and protect for danger.** Wear a personal floatation device (such as a lifejacket) if you are boating, fishing, swimming or otherwise recreating in or around a waterway. Use insect repellent.
4. **Tell someone your plans.** Let a friend or family member know when and to where you are heading out. Include your return time so they know you are safe. Use the buddy system.
5. **If you see someone in trouble, do not enter.** Never enter the water yourself to try and help someone. Instead, call 911 and use a remote assistive device, such as a life preserver, rope or throw bag, to try and pull them back to safety.



RESOURCES

- DCR Division of Dam Safety and Floodplain Management (www.dcr.virginia.gov/dam-safety-and-floodplains)
- Information on reported deaths at low-head dams (<https://krcproject.groups.et.byu.net>)
- Division of Dam Safety and Floodplain Management 804-371-6095 | dam@dcr.virginia.gov

Information courtesy of the Association of State Dam Safety Officials.

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