EVERY HIGH-HAZARD POTENTIAL DAM NEEDS AN EAP

ARE YOU AT RISK?

Dam safety officials categorize dams according to the potential hazard risk to lives and property should the dam fail. A High-Hazard Potential (HHP) dam is one whose failure likely would take lives as well as property. An EAP may save lives and property damage through timely evacuations of those who live, work, or enjoy recreation near a HHP dam.

DO YOU HAVE A STAKE IN DAM SAFETY?

Stakeholders are citizens, business owners, and recreationists in harm's way at times, often without realizing it. Do you like to hunt game in areas below or near a dam? Like to RV or camp out along the shores of a lake or stream? Enjoy swimming or fishing in a North Carolina lake or canoeing one of its rivers? Do you farm land or raise livestock in a floodplain? Do you manage a nursing home, hospital or school in a community near a dam? Are you an emergency responder? Do you volunteer for the Red Cross or Salvation Army? Do you regularly need to travel across or have access to an area below a dam?
If so, you have a stake in whether a HHP dam has an EAP.

DamSafetyAction.org

LEARN MORE ABOUT EMERGENCY ACTION PLANS

You can find out more about EAPs, dam safety programs in North Carolina, and initiatives to increase the number of EAPs on HHP dams. Websites of the North Carolina Department of Environment and Natural Resources (DENR), the Federal Emergency Management Agency, and the Association of State Dam Safety Officials (ASDSO) have information on EAPs.

The website www.damsafetyaction.org contains extensive EAP information and examples, plus links to other sources of EAP documents. This website is part of an outreach and communications program produced as an information and educational source for dam owners, emergency managers, and the public. Supported by FEMA, this program will assist DENR dam safety officials in reaching a goal of 100 percent completion of EAPs on HHP dams.

Lives depend on Emergency Action Plans. Be an involved citizen.

QUESTIONS OR COMMENTS
Phone toll-free 877-410-3551
Email: info@damsafetyaction.org

MORE THAN 800 HIGH-HAZARD DAMS IN NORTH CAROLINA NEED EMERGENCY ACTION PLANS

YOUR SUPPORT AND INVOLVEMENT CAN HELP CLOSE THE GAP

DamSafetyAction.org

WHAT IS AN EMERGENCY ACTION PLAN?

An EAP is a plan of action to reduce potential property damage and loss of lives in an area affected by a dam failure. A complete EAP includes a map of the potential inundation areas, procedures and information for warning downstream emergency management authorities, and other crucial information. At their discretion, emergency managers may add directions to the dam, evacuation routes, and the locations of shelters, emergency resources, businesses, schools, hospitals, nursing homes, residences, and highways at risk.

Federally regulated Falls Lake Dam has an Emergency Action Plan.

North Carolina has hundreds of smaller state-regulated High-Hazard Potential dams that need EAPs. Many are in suburban areas.

The North Carolina Department of Environment and Natural Resources (DENR) lacks the authority to compel dam owners to create EAPs unless the dam is new construction, being repaired, or a mine tailings dam. DENR does have an initiative underway to increase the number of EAPs for state-regulated dams over the next few years. DENR engineers have created a new EAP form available online and on CD-ROM. Workshops are being held to help dam owners use the form. Local Emergency Management Directors also can be helpful to dam owners in completing lists of those who need to be notified if a dam is failing.

AN EAP IS A GUIDELINE AND A LIFELINE

Emergency Action Plans are a Public Health and Safety Benefit for all North Carolinians

WHY AN EAP?

- **EAPs save lives.** They provide crucial written warning procedures that can help emergency managers evacuate schools, hospitals, nursing homes, and summer camps as needed.
- **EAPs are good for business.** They may provide warning time for orderly shutdown and perhaps even to remove or secure some assets, data, and equipment.
- **EAPs are required for dam safety.** Without an EAP all those in the inundation zone may not receive warning. Evacuation and response may be needlessly complicated or even compromised. Transportation, sheltering, food, water and other supplies may be delayed.
- **An EAP can protect you, your family, your job, your business, your peace of mind.** Any time you're downstream of a dam you're at risk. Even when hiking, fishing, hunting, camping or motoring, an EAP can help get you to safety.

AN EAP IS THOROUGH, URGENT, AND UPDATED

North Carolina guidelines and documents for emergency action planning may be found at: http://www.dlr.enr.state.nc.us/pages/damsafety program.html

These documents include dam safety laws and regulations, forms, checklists and other helpful information.

HIGH-HAZARD POTENTIAL

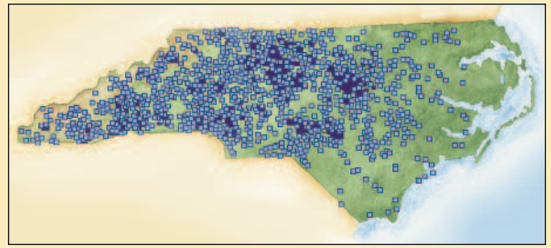
Each state has a system to determine a dam's Hazard Potential – a situation which creates the potential for consequences such as loss of life, property damage, or other adverse impacts. These adverse impacts may occur in a defined area downstream of a dam or upstream of the dam if there is backwater flooding or a landslide around the reservoir perimeter.

Classification of a dam as High-Hazard Potential (HHP) does not reflect in any way the current condition of the dam (i.e., safety, structural integrity). HHP dams receive more frequent safety inspections.

In North Carolina, dams are regulated by the state if they are 15 feet or more in height and impound 10 acre-feet or more. Dams and impoundments smaller than that may fall under state regulation if failure of the dam could result in loss of human life or significant damage to property below the dam. Dams are assigned one of three classes based on the nature of their hazard potential:

1. **Class A** (Low Hazard) includes dams located where failure may damage uninhabited low value non-residential buildings, agricultural land, or low volume roads.
2. **Class B** (Intermediate Hazard) includes dams located where failure may damage highways or secondary railroads, cause interruption of use or service of public utilities, cause minor damage to isolated homes, or cause minor damage to commercial and industrial buildings
3. **Class C** (High Hazard) includes dams located where failure will likely cause loss of life or serious damage to homes, industrial and commercial buildings, important public utilities, primary highways, or major railroads.

The classification of dams can be changed if the hazard potential has changed. When the failure of an upper dam would likely cause failure of a lower dam ("cascading"), the consequence of the lower dam's failure determines the upper dam's hazard classification



Dark blue dots are HHP dams.

IDENTIFY HHP DAMS NEAR YOU

HHP dams are scattered across North Carolina, but tend to cluster around population centers. To see a list of dams in North Carolina by county, including whether they are classified as HHP, visit the state Dam Safety Program website: www.dlr.enr.state.nc.us/pages/damsafetyprogram.html and click on North Carolina Dam Inventory for an Excel spreadsheet that lists the state's dams by county and by hazard classification. This list is updated each year.

If you can identify a HHP dam near an area where you live, work, travel or have recreational activities, it is important that the dam have an EAP. The spreadsheet will show the county where the dam is located, the town nearest to the dam, the dam owner, the dam's hazard potential and whether the dam has an EAP.

When you know the county where a dam is located and a nearby town, using Geographic Information Systems (GIS) software such as Google Earth can often provide a "bird's eye view" of the area terrain. The website Lat-Long.com (www.lat-long.com/ListLocations-1-North_Carolina-Dam.html) has a list of North Carolina dams, with links to maps and satellite views of the dams. Using the map to zoom in on the impoundment and then the satellite image can provide more visual understanding of the terrain. Another helpful tool for determining whether an area is at risk is the North Carolina Floodplain Mapping website, www.ncfloodmaps.com.

Knowing the location of a HHP dam that may impact your home, business, or favorite recreational area is important. But knowing the boundaries of the "hazard area" also is important. This information may not be clearly defined unless there is an EAP for that dam. A thorough EAP will include an "inundation map" that shows the hazard area.

MAKE CONTACT

Once you have identified the HHP dam of interest, you can determine the current EAP status for that dam by contacting:

NC State Dam Safety Program
Dept. of Environment and Natural Resources
Division of Land Resources - Land Quality
512 North Salisbury Street
Raleigh, NC 27604-1148
Phone 919-733-4574
Email: Tami.idol@ncdenr.gov
Steve.McEvoy@ncdenr.gov

Another contact is the Emergency Management Director (EMD) of the county or city where the dam is situated. A call to the county courthouse or city hall should result in the name and phone number of the EMD. When EAPs are in process or have been completed, the EMD will be involved or have the EAP on file. If you are among those at risk, make sure the EMD knows how to reach you in an emergency.

If the dam owner is known, you may contact that person or office directly. Phone numbers and addresses of dam owners should be available through the Dam Safety Program or the EMD's office. Most dam owners are anxious to complete an EAP when they realize the importance for public safety and their own liability. You or an organization you know may even be able to help an owner with some of the detail work on an EAP.