

## EVERY HIGH-HAZARD POTENTIAL DAM NEEDS AN IEAP



### 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 IEAP 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 an Indiana 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 IEAP.**



**DamSafetyAction.org**

### LEARN MORE ABOUT AN INCIDENT AND EMERGENCY ACTION PLAN

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

The website [www.damsafetyaction.org](http://www.damsafetyaction.org) contains extensive IEAP information and examples, plus links to other sources of IEAP documents. This website is part of an outreach and communications program produced as an information and educational resource for dam owners, emergency managers, and the public. Supported by FEMA, this program will assist DNR dam safety officials in reaching a goal of 100 percent completion of IEAPs on HHP dams.



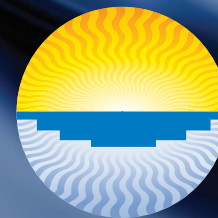
**Lives depend on Emergency Action Plans.  
Be an involved citizen.**

### QUESTIONS OR COMMENTS

Phone toll-free 877-410-3551  
Email: [info@damsafetyaction.org](mailto:info@damsafetyaction.org)

# MORE THAN 200 HIGH-HAZARD DAMS IN INDIANA NEED AN INCIDENT AND EMERGENCY ACTION PLAN

## YOUR SUPPORT AND INVOLVEMENT CAN HELP CLOSE THE GAP



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## WHAT IS AN INCIDENT AND EMERGENCY ACTION PLAN?

An IEAP is a plan of action to reduce potential property damage and loss of lives in an area affected by a dam failure. A complete IEAP includes a map of the potential inundation areas, procedures and information for warning downstream emergency management authorities, and other crucial information. The plan details the types of incidents that must be promptly addressed so they do not escalate into an emergency situation. At their discretion, emergency managers may add more information to the IEAP, such as 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 Oakdale Dam has an Incident and Emergency Action Plan.



Indiana has hundreds of smaller state-regulated High-Hazard Potential dams that need IEAPs. Many are in suburban areas.

The Indiana Department of Natural Resources (DNR) lacks the authority to compel dam owners to create IEAPs unless the dam is new construction. DNR does have an initiative underway to increase the number of IEAPs for state-regulated dams over the next few years. DNR engineers have developed an IEAP form and will help dam owners complete an IEAP. 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 IEAP IS A GUIDELINE AND A LIFELINE

*Incident and Emergency Action Plans are a Public Health and Safety Benefit for all Indianans*

## WHY AN IEAP?

- **IEAPs save lives.** They provide crucial written warning procedures that can help emergency managers evacuate schools, hospitals, nursing homes, and summer camps as needed.
- **IEAPs are good for business.** They may provide warning time for orderly shutdown and perhaps even to remove or secure some assets, data, and equipment.
- **IEAPs are required for dam safety.** Without an IEAP 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 IEAP 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 IEAP can help get you to safety.

## AN IEAP IS THOROUGH, UPDATED, AND TESTED

IEAPs contain an extensive amount of technical and emergency response information. Indiana DNR dam safety engineers and local emergency managers develop most of the information in partnership with the dam owner. IEAPs should be reviewed and updated annually, then tested periodically with workshops and drills involving those who will need to respond to an emergency situation.

Indiana guidelines and documents for emergency action planning may be found at the DNR Dams and Levees website: <http://www.in.gov/dnr/water/2458.htm>. These documents include dam safety laws and regulations, forms, 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 Indiana, dams are regulated by the DNR if they meet any one of the following criteria: (1) the drainage area above the dam is greater than 1 square mile, (2) the dam embankment is greater than 20 feet high, or (3) the dam impounds more than 100 acre-feet. Indiana currently places all dams into one of three hazard classifications:

1. **High hazard:** A structure the failure of which may cause the loss of life and serious damage to homes, industrial and commercial buildings, public utilities, major highways, or railroads.
2. **Significant hazard:** A structure the failure of which may damage isolated homes and highways, or cause the temporary interruption of public utility services.
3. **Low hazard:** A structure the failure of which may damage farm buildings, agricultural land, or local roads.

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.



## IDENTIFY HHP DAMS NEAR YOU

HHP dams are scattered across Indiana, but tend to cluster around population centers. A list of dams in Indiana and their county can be found at the website [www.Lat-Long.com](http://www.Lat-Long.com). Select Indiana and the feature Dams, or narrow the list by selecting the county. Selecting a dam provides a map and satellite view of the dam. Using the map to zoom in on the impoundment and then the satellite image can provide more visual understanding of the terrain.

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. Another helpful tool for determining whether an area is at risk is the Indiana Floodplain Mapping website (<http://www.in.gov/dnr/water/5647.htm>).

Knowing where a HHP dam is located 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 IEAP for that dam. A thorough IEAP 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 IEAP status for that dam by contacting:

Kenneth E. Smith, P.E., Assistant Director  
IN Dept. of Natural Resources  
Division of Water  
402 W. Washington St. Rm W264  
Indianapolis, IN 46204  
Phone: (317) 232-4160  
Email: [kesmith@dnr.IN.gov](mailto:kesmith@dnr.IN.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 should result in the name and phone number of the EMD. When IEAPs are in process or have been completed, the EMD will be involved or have the IEAP on file.

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 IEAP 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 IEAP.



An "incident" can quickly become an emergency requiring an IEAP.