



US Army Corps  
of Engineers®

# USACE Dam Safety Facts for East Branch Dam

**Project location and description:** East Branch Dam was designed and built by the U.S. Army Corps of Engineers (USACE) and completed in 1952. USACE operates East Branch Dam for flood damage reduction, low flow augmentation, water quality, fish and wildlife habitat, and recreation.



The main components of the project are an earthen embankment section, which serves as the main water barrier composed of compacted earth, and an uncontrolled spillway, a segment of the structure used to provide additional release of water from the dam during major flood events. The earthen dam is 1,725 feet long, 184 feet high, and the top of the dam is 20 feet wide. The elevation of the top of the embankment is 1,706.5 feet North American Vertical Datum 1988 (or NAVD88). The foundation material consists of rock and soil. The ungated spillway is 250 feet wide and has a crest elevation of 1684.5 feet (NAVD88). The spillway can pass up to 266,306 gallons per second (35,600 cubic feet per second) or approximately half the volume of an Olympic size swimming pool each second.

During the fall and winter months, when excessive rainfall is likely, the lake is kept at a relatively low level (referred to as winter pool). Should heavy rains occur, surface water runoff is stored in the lake until the swollen streams and rivers below the dam recede and can handle the release of stored water without damage to lives, property or the environment. Sometimes water must be released to protect the dam's integrity even though streams and rivers may have already reached or exceeded their capacity.

**Benefits associated with East Branch Dam:** This dam has provided \$5.9 million\* in average annual flood damage reduction since placed into service. Low flow augmentation benefits are estimated at \$48.4 million\*. Annual recreational benefits to the area are \$1.8 million\*. (\*2012 price level)

**Risks associated with dams in general:** Dams reduce but do not eliminate the risk of economic and environmental damages and loss of life from flood events. When a flood exceeds the reservoir's storage capacity, large amounts of water may have to be released that could cause damaging flooding downstream. A fully-functioning dam could be overtopped when a rare, large flood occurs, or a dam could breach because of a deficiency, both of which pose risk of property damage and life loss. This means there will always be flood risk that has to be managed. To manage these risks, USACE has a routine program that inspects and monitors its dams regularly. USACE implements short- and long-term actions, on a prioritized basis, when unacceptable risks are found at any of its dams.

**Risk associated with East Branch Dam:** Based upon the most recent risk assessment in 2009, USACE considers this dam to be a high risk dam among its more than 700 dams primarily due to the risks associated with re-initiation of internal erosion at or near an embankment void grouted during a 1957 internal erosion event; internal erosion at any location along the right abutment; and internal erosion near the left abutment. USACE has implemented interim risk-reduction measures (IRRM) and/or long-term measures to reduce this risk. One IRRM, implemented in 2008, is a reduced reservoir level; the summer pool was reduced by approximately 20 feet and the winter pool was reduced by approximately 28 feet.

FOR PUBLIC RELEASE

U.S. ARMY CORPS OF ENGINEERS – PITTSBURGH DISTRICT

1000 LIBERTY AVE, PITTSBURGH, PA 15222-4186 / Phone (412) 395-7500

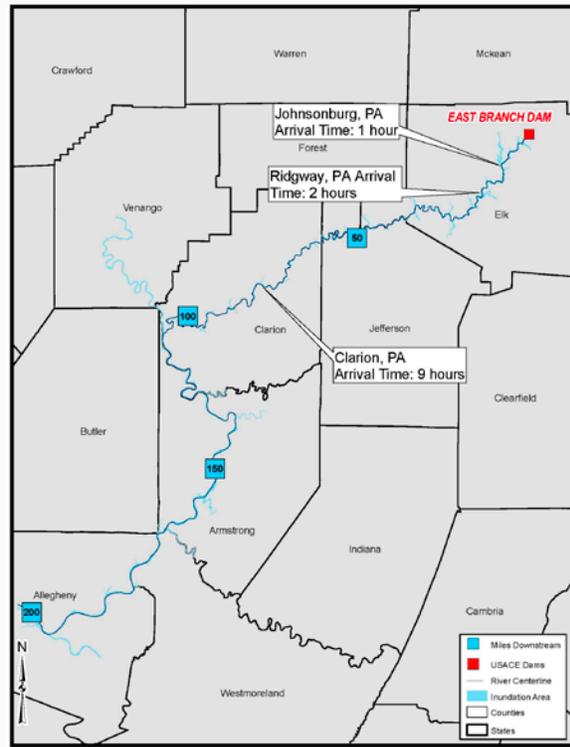
[HTTP://WWW.LRP.USACE.ARMY.MIL](http://www.lrp.usace.army.mil)

FACT SHEET DATE OF RELEASE– 16 FEB 2016

**What residents should know:** Dams do not eliminate all flood risk, so it is important that residents downstream from the dam are aware of the potential consequences should the dam breach, not perform as intended, or experience major spillway or outlet works flows. The high risk in Glen Hazel, Johnsonburg, and Ridgway, Pennsylvania, and the related consequences further downstream warrant increased efforts on the part of USACE, local emergency management officials, and residents to heighten awareness of the potential flood risk associated with the dam.

The primary areas impacted should the dam breach with a normal high pool are shown on the map. The potential for loss of life is highest within approximately 15 miles of the dam with the loss of life concerns decreasing substantially beyond 60 miles downstream of the dam. Advanced warning of problems and events plays a major role in protecting life and property. See the map for a general indication of flooding from a dam breach at normal high pool.

**Public awareness:** Dams are designed to pass large amounts of water on a regular basis, and this means there will always be flood risk that has to be managed (see facts below).



Flooded area with rare flood event and breach is displayed on the map. Map Disclaimer: Actual areas flooded and flood arrival times will depend on specific flooding and failure conditions and may differ from the areas shown on the map.

Recommendations for Residents	East Branch Dam Facts
<ul style="list-style-type: none"> <li>• Living with flood risk-reduction infrastructure comes with risk – know your risk.</li> <li>• Living with flood risk-reduction infrastructure is a shared responsibility – know your role.</li> <li>• Know your risk, know your role, and take action to reduce your risk.</li> <li>• Listen to and follow instructions from local emergency management officials.</li> <li>• Strongly consider purchasing flood insurance.</li> <li>• Contact your elected local, county, and state officials to make sound flood risk management decisions in your area.</li> </ul>	<p>Estimated consequences of flooding from a dam breach at normal high pool:</p> <ul style="list-style-type: none"> <li>• Population at risk: ~3,300</li> <li>• Structures at risk: 2,000</li> <li>• Land and property at risk: \$423 million*</li> </ul> <p>Damages prevented: \$362 million* (1951 - 2010) National Inventory of Dams (NID) No.: PA00104</p> <p style="text-align: right;">*2012 price level</p>

Residents should listen to and follow instructions from local authorities. For more information, please contact the USACE Pittsburgh District office using the information on this fact sheet. You can also contact the Elk County Emergency Management Office at (814) 776-4600.

For additional information about dam safety and living with dams, please visit <http://www.usace.army.mil/Missions/CivilWorks/DamSafetyProgram.aspx> and [http://www.damsafety.org/media/Documents/DownloadableDocuments/LivingWithDams\\_ASDSO2012.pdf](http://www.damsafety.org/media/Documents/DownloadableDocuments/LivingWithDams_ASDSO2012.pdf)