



US Army Corps  
of Engineers®

# USACE Dam Safety Facts for West Point Dam

**Project Location and Description:** West Point Dam was designed and built by the U.S. Army Corps of Engineers (USACE) and completed in 1975. USACE operates West Point Dam for flood damage reduction, hydropower generation, and recreation.



The main components of the project are two earthen embankment with an integrated concrete dam and powerhouse. The concrete section includes a gated spillway section for releases during flood events. The gated spillway is located east of the powerhouse and is 350 feet wide along the dam with 6 spillway gates. The gates control the reservoir up to 635 feet above mean sea level and then are opened as inflow increases. The spillway can release up to 3.2 million gallons per second or approximately 5 times the volume of an Olympic-sized swimming pool each second. The east earthen dam is 900 feet long and 96 feet high, and the west earthen embankment is 5,220 feet long. The top of the embankments are approximately 25 feet wide. The elevation of the top of the earthen embankment is 652 feet above mean sea level. The foundation consists primarily of bedrock (under the concrete sections) and residual soil under the earthen embankments.

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). In the event that 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 West Point Dam:** West Point Dam has provided \$1.6 billion in flood damage reduction from 1986-2007. The dam provides about 620,000 acre-feet of storage at maximum operating reservoir levels. Annual recreational benefits to the area are about \$29.3 million. The dam also provides \$11 million annually in hydropower generation benefits.

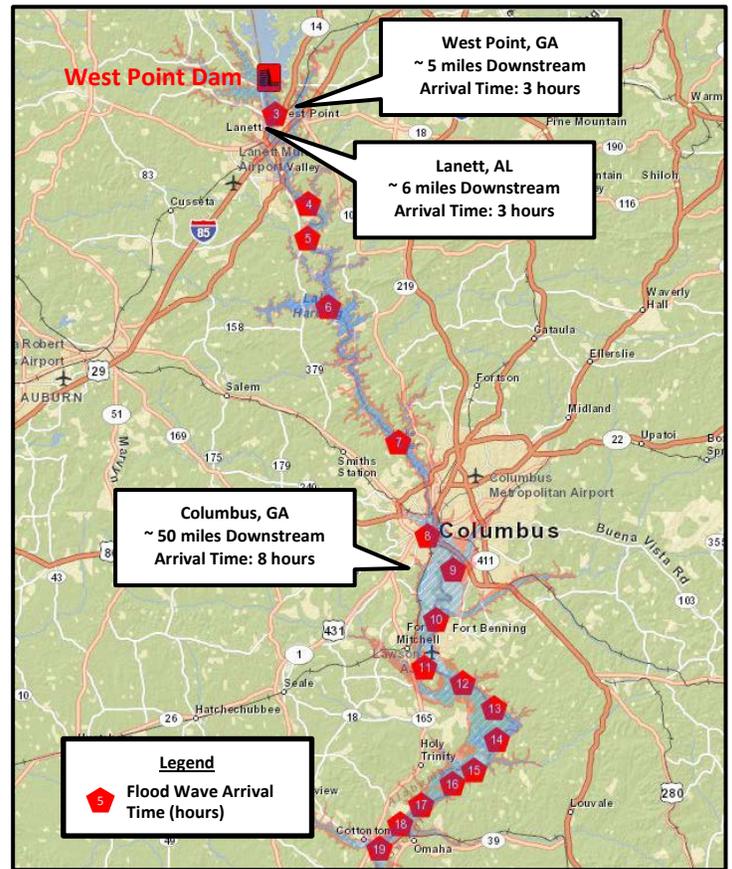
**Risks associated with dams in general:** Dams reduce the risk of damages and loss of life from inundation due to floods but do not eliminate this risk. Large amounts of water that could cause flooding downstream may have to be released when a flood exceeds the reservoir's storage capacity (such as during a large flood or storm event). This release could be damaging. A fully functioning dam could be overtopped when a very rare or infrequent, large flood occurs, or a dam could breach because of a deficiency, which raises the risk of property damage and life loss even further. This means there will always be inundation 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.

**Risk associated with West Point Dam:** Based upon the most recent risk assessment of West Point Dam in 2015, USACE considers this dam to be a moderate to high risk dam among its more than 700 dams primarily due to the potential for powerhouse bulkhead failure. The risk does not impose downstream flood risk to the public, but to the personnel in the powerhouse. USACE manages this risk by conducting routine monitoring and has implemented interim risk-reduction measures and/or long-term measures to reduce this risk.

**What residents should know:** Dams do not eliminate all inundation risk, so it is important that residents downstream from the dam (especially West Point, GA; Lanett, AL; and Columbus, GA) are aware of the potential consequences should the dam breach, not perform as intended, or experience major spillway or outlet works flows.

The primary areas that would be impacted should the dam breach with a full reservoir during a rare flood event, not perform as intended, or experience major spillway or outlet works flows, are shown on the map at the right. The potential for loss of life is highest within a few miles of the dam with the potential decreasing substantially after 60 miles downstream of the dam. Advanced warning of problems and events plays a major role in protecting life and property. The map at right provides a general indication of breach with a full reservoir (max high pool) during a rare flood event (shown in blue).

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



Recommendations for Residents	West Point 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 for a dam breach with the reservoir at maximum high pool:</p> <ul style="list-style-type: none"> <li>• Population at risk: ~ 40,900</li> <li>• Structures at risk: ~ 18,200</li> <li>• Land and property at risk: ~ \$3.1 billion</li> </ul> <p>Estimated non-breach consequences for the maximum spillway release:</p> <ul style="list-style-type: none"> <li>• Population at risk: ~ 13,900</li> <li>• Structures at risk: ~ 7,700</li> <li>• Land and property at risk: ~ \$516 million</li> </ul> <p>Flood damages prevented: ~ \$1.6 billion (1986-2007)</p>

Residents should listen to and follow instructions from local authorities. For more information, please contact the local USACE district office using the information on this fact sheet. You can also contact your local emergency management office at (706) 298-3675.

For additional information about dam safety and living with dams, please visit <http://www.usace.army.mil/Missions/CivilWorks/DamSafetyProgram.aspx> and <https://damsafety.org/resourcecenter/asdso-resources>