



USACE Dam Safety

Facts for Allatoona Lake Dam & Powerhouse (3 October 2014)

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Project Location and Description: Allatoona Lake Dam and Powerhouse was designed and built by the U.S. Army Corps of Engineers (USACE) and completed in 1955. USACE operates Allatoona Lake Dam and Powerhouse for flood damage reduction, fish and wildlife, water supply, hydroelectric power and recreation.



The main components of the project are a concrete embankment section, which serves as the main water barrier composed of concrete; a gated spillway, a segment of the structure used to provide additional release of water from the dam during major flood events; outlet work gates that allow controlled water flow out of the dam; earthen dikes, and a powerhouse. The concrete dam is 1,250 feet long, 190 feet high, and top of the dam is 25 feet wide. The elevation of the top of the embankment is 875.1 feet ¹. The foundation is rock and soil. The gated spillway is 400 feet wide with a crest elevation of 835.1 feet ¹. The spillway can pass up to two million gallons per second (321,000 cubic feet per second) or approximately the equivalent of seven feet of water on a football field (not including the end zones) discharged every second. The outlet works consists of four five-foot, eight-inch by ten-foot sluice gates with a maximum combined discharge capacity of 17,300 cubic feet per second at a reservoir elevation of 860.1 feet ¹. There are three earthen dikes on the left bank between Allatoona and Pumpkinvine Creeks. The powerhouse contains three generating units that have a combined capacity of 82,000 kilowatts.

Benefits associated with Allatoona Lake Dam and Powerhouse: This dam has provided \$1.4 million in annual flood damage reduction since placed into service. Allatoona Lake provides 57,500 acre-feet (ac-ft) ² of water to a number of communities downstream of the dam. The annual water supply benefits gained from Allatoona Lake amount to nearly \$26.1 million. Annual recreational benefits to the area are \$43.6 million. Hydropower benefits equate to \$8.2 million each year.

Risks associated with all dams: 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 Allatoona Lake Dam and Powerhouse: Based upon the most recent risk assessment of Allatoona Lake Dam and Powerhouse in 2014, USACE considers this dam to be a low risk project among its more than 700 dam projects, primarily due to seismic related issues. USACE manages this risk by conducting routine monitoring, inspections, and evaluations.

¹ Mean Sea Level is the same as North American Vertical Datum 1988 (or NAVD88)

² One acre-foot is equal to 1/2 Olympic-size swimming pool

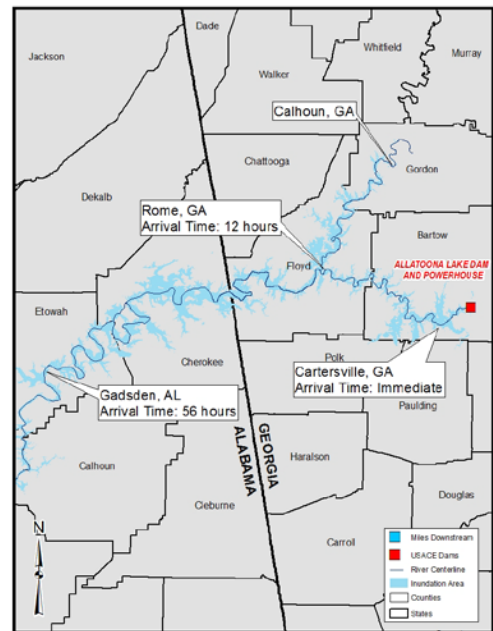
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U.S. ARMY CORPS OF ENGINEERS – MOBILE DISTRICT (SAM), SOUTH ATLANTIC DIVISION (SAD)
109 SAINT JOSEPH ST, MOBILE, AL 36602-3630, HTTP://WWW.SAM.USACE.ARMY.MIL/HOME.ASPX
FACT SHEET DATE OF RELEASE – November 19, 2018

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/gated outlet flows. The risk in Cartersville, Calhoun and Rome in Georgia; and Gadsden in Alabama; and the related consequences farther 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 full reservoir during a rare flood event; or experience major spillway/outlet works flows are shown in the map. The potential for loss of life is highest *within a couple of 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 with a rare flood event and breach.

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).



Map inundation area displayed is the rare flood event and breach. 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	Allatoona Lake Dam and Powerhouse Facts
<ul style="list-style-type: none"> • Living with flood risk reduction infrastructure comes with risk—know your risk. • Living with flood risk reduction infrastructure is a shared responsibility—know your role. • Know your risk, know your role and take action to reduce your risk. • Listen for and follow instructions from local emergency management officials. • Strongly consider purchasing flood insurance. • Contact your elected local, county and state officials to make sound flood risk management decisions in your area. 	<p>Estimated consequences with rare flood event and breach:</p> <ul style="list-style-type: none"> • Population at risk: ~48,400 • Structures at risk: 10,700 • Land and property at risk: \$3.1 billion <p>Estimated consequences with rare flood event and no breach:</p> <ul style="list-style-type: none"> • Population at risk: ~30,500 • Structures at risk: No data available • Land and property at risk: \$1.8 billion <p>Damages prevented to date: \$85 million (1950-2010) National Inventory of Dams # GA03742</p>

Residents should listen to and follow instructions from local authorities. For more information, please contact USACE Mobile district office using the information on this fact sheet. Also:

See 'Local EMA Info' on Georgia Emergency Management Agency website: <http://www.gema.ga.gov/>
See list of county coordinators for Alabama Emergency Management Agency: <http://ema.alabama.gov/county.cfm>

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>