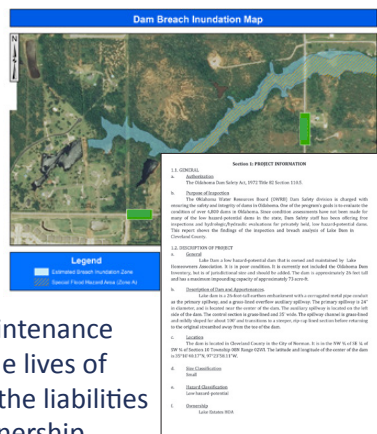


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Free Low Hazard-Potential Dam Inspection Registration Open

Registration is now open for free low hazard-potential dam inspections. This offer includes an on-site inspection, full inspection report, and a breach inundation map. Registrants will learn inspection and maintenance techniques to prolong the lives of their dams and manage the liabilities associated with dam ownership. Please visit www.owrb.ok.gov/damsafety or contact our dam safety staff for information and registration.



Hazard Reclassification Success Story

In 2014, OWRB Dam Safety engineers identified Smithson Lake Dam in McAlester for reclassification from low to high hazard-potential due to new downstream



development. Flood modeling software and GIS analyses confirmed the need to reclassify the dam, and the OWRB reached out to the dam owner,

Smithson Lake Dam after repairs. Spirit Aerosystems to begin the reclassification process. Spirit Aerosystems promptly hired an engineer to inspect the dam and a construction company to make modifications and repairs as recommended by the engineer. An Emergency Action Plan was also developed and filed with the OWRB. Dam Safety staff would like to express gratitude to Spirit Aerosystems for their cooperation and eagerness to satisfy the dam's high hazard-potential requirements and ensure the safety of people and property downstream.

ASDSO National Conference

In September, OWRB Dam Safety engineers attended the ASDSO's 2018 National Conference in Seattle, Washington and participated in various technical seminars on topics such as hydrologic and hydraulic modeling, probable maximum precipitation, and geotechnical, geologic, and seismic issues. Additionally, the OWRB's Emma Moradi spoke on a public outreach panel about Oklahoma's achievements in bridging the gap between the real estate industry and state programs like dam safety, floodplain management, and well driller and pump installer licensing by offering short, accessible workshops that are approved for continuing education credit. The OWRB will be providing guidance to other states that expressed interest in following Oklahoma's model. Conference attendees provided valuable feedback that will be integrated into future public outreach initiatives both in Oklahoma and nationwide.

Inspection Reports Due December 31

Dam Safety staff would like to remind dam owners and engineers to submit inspection reports by December 31, 2018. State law requires high hazard-potential dams to be inspected by a licensed Professional Engineer each year, and significant hazard-potential to be inspected every 3 years. Inspection reports must be submitted to the OWRB within 30 days of the inspection and must contain, at a minimum, the information in the [inspection checklist](#), a detailed list of deficiencies and recommended actions, and labeled and dated photographs.

Julie Cunningham, Executive Director
Oklahoma Water Resources Board

Kent Wilkins, Chief
Planning & Management Division

Yohanes Sugeng, P.E., Manager
Dam Safety Program

Piedmont Dam Breached Last August Due to Heavy Rains

On August 15, 2018, the Piedmont, Oklahoma Fire Chief and City Inspector informed Oklahoma Dam Safety staff that a small privately-owned, low hazard-potential dam had been reported to be severely damaged. The dam had a corrugated metal pipe conduit installed through the embankment that had been corroded, allowing water flow to erode the embankment under the pipe. Repairs to the dam had been previously approved by OWRB staff, but had not yet been completed. The previous night the reservoir received approximately 3 inches of rainfall.

OWRB Dam Safety engineers, Yohanes Sugeng and Zach Hollandsworth, arrived at the dam at about 5:30 p.m. and saw that erosion had encroached up to the dam



The state of the dam when OWRB Dam Safety engineers arrived on site August 15, 2018.

crest and the conduit had been sheared off. The primary spillway inlet was submerged and the auxiliary spillway was barely flowing.

The dam owners were able to hire an earth work company to bring a track hoe to the site. At 6:30 p.m.

they began excavating a channel through the auxiliary spillway in an attempt to lower the water surface elevation and slow down the flow of water at the primary spillway. By 8:00 p.m. a 4 foot by 4 foot channel had been cut into the auxiliary spillway and the reservoir was beginning to lower.

Meanwhile, local emergency management was contacting the residents of several homes that were downstream of the dam along the stream channel and closing a bridge immediately downstream of the dam to traffic. Although a recent analysis performed by the OWRB had confirmed that the dam was a low hazard-potential structure, precautions were taken to keep the nearby residents informed of the situation and prepared to evacuate. Some residents chose to go to higher ground, while others decided to stay in their homes.

Erosion continued along the spillway conduit. Approximately once per hour a large portion of the embankment would suddenly slough off from the downstream side of the dam until it finally reached the upstream side at about 12:00 a.m. and a total breach was declared. The increase in flow quickly widened the breached section to about 75 feet.



Total dam breach photographed two days after the rainfall event.

OWRB staff remained on site to determine if the breach was going to grow large enough to put the downstream bridge in danger of overtopping or have the potential to inundate the homes downstream of the dam. At about 3:00 a.m. it was apparent that the downstream bridge and homes were in no danger of flooding, and OWRB staff were able to leave the site.

Upcoming Events

- Nov 13 ASDSO Webinar: [Why Embankments Crack and How to Fix Them](#)
- Dec 5-6 Oklahoma Governor's Water Conference, Reed Center, Midwest City, OK
- Dec 11 ASDSO Webinar: [How to Conduct a Successful PFMA - Lessons Learned from Past Successes and Failures](#)

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The Oklahoma Dam Safety Act recognizes that properly constructed, operated, and maintained dams used to impound water and create reservoirs for public and private beneficial uses constitute vital parts of the State of Oklahoma's water resources, and authorizes the Oklahoma Water Resources Board to regulate the construction, operation, and maintenance of dams to protect lives and property. Please e-mail comments and article ideas to pubinfo@owrb.ok.gov.