#### **OKLAHOMA WATER RESOURCES BOARD** DAM SAFETY QUARTE Volume 3, Issue 4 Winter 2015



NEWSLETTER OF THE OKLAHOMA DAM SAFETY PROGRAM

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#### **Rule Refresh: Dam Inspections** After Earthquakes of 5.0+ Magnitude

According to earthquakes.ok.gov, Oklahoma experienced 585 magnitude 3+ earthquakes in 2014 compared to 109 events recorded in 2013. This rise in seismic events increases the potential for dam failure, and dams located near or on a fault line are at the greatest risk of structural damage. Section 785:25-9-1(d) of the OWRB rules states that the Board may require the owner to conduct an unscheduled, or non-periodic, inspection at the owner's expense in the event of an earthquake within 50 miles of a dam that measures 5.0 or greater on the Richter magnitude scale.

A visual inspection of the crest, abutments, upstream and downstream slopes, and the toe of the dam must be conducted by a registered professional engineer as soon as possible after the earthquake. The inspector shall be aware of any new or enlarged cracks, settlement, and leaks.

Owners of high and significant hazard-potential dams are encouraged to install instrumentation such as sensitive seismographs that measure local seismicity, and strong-motion accelerographs that record potentially destructive ground shaking and resulting dam vibrations.

For a list of engineers in your area or guidance on dam inspection requirements, please contact OWRB Dam Safety staff at (405)530-8800.

### Success Story: New Lake Dam

As part of the OWRB's free low hazard-potential dam inspection program. dam safety engineers recently visited New Lake Dam in Le Flore county owned by the Kerr Center for Sustainable Agriculture. In their inspection report, the engineers noted



New Lake Dam before inspection.



New Lake Dam after addressing deficiencies.

several deficiencies and provided recommendations to meet state requirements as detailed in Chapter 25 of the OWRB rules. The Kerr Center promptly addressed the dam's deficiencies by clearing trees from the embankment, backfilling voids left from the tree removal, eliminating beaver dens from the face of the dam, and laying the proper sod on the embankment in order to avoid future erosion. The OWRB would like to thank the Kerr Center for their participation and timely repairs to their dam.

The OWRB Dam Safety program offers free inspections for low hazardpotential dams in an effort to raise public awareness about proper maintenance and to encourage communication between our agency and private dam owners. This offer includes an on-site inspection, full inspection . report, and a breach inundation map. Please visit <u>www.owrb.ok.gov/</u> damsafety or contact our dam safety staff for information and registration.

## **Reminder: Register for DamWatch**

DamWatch software is a complimentary service furnished by the OWRB to all high hazard dam owners across the state. This software-as-a-service application enables authorized users to monitor their dams securely and access Emergency Action Plans, inspection reports, and other relevant information.

If you are a high hazard dam owner and have not registered for or have questions regarding the DamWatch software, please contact OWRB Dam Safety staff at (405)530-8800.

## **Upcoming Events**

February 9	ASDSO Webinar: Dam Safety with 3D Weirs
February 23-26	ASDSO Seminar: Basic HEC-RAS with an Intro to HEC-RAS 2D, Phoenix, AZ
March 8	ASDSO Webinar: Remedial Cutoff Walls for Dams and Levees
March 29-31	ASDSO Seminar: Fundamentals of Reinforced Concrete Design of Hydraulic Structures, Baltimore, MD
March 9-11	ASDSO 2016 West Regional Conference, Sacramento, CA

J.D. Strong, Executive Director Oklahoma Water Resources Board

Julie Cunningham, Chief **Planning & Management Division**  Yohanes Sugeng, P.E., Manager **Dam Safety Program** 

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.