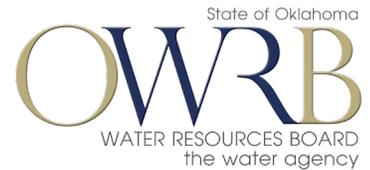


# OKLAHOMA WATER RESOURCES BOARD DAM SAFETY QUARTERLY

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## NEWSLETTER OF THE OKLAHOMA DAM SAFETY PROGRAM

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Trees and woody vegetation noted by an OWRB engineer during a low hazard-potential dam inspection.

### Low Hazard Dam Inspections

State dam safety engineers successfully inspected 25 low hazard-potential dams across Oklahoma last winter, and provided private dam owners with complete inspection reports and breach inundation maps. The free inspection program and accompanying publications can provide dam owners with tools to prolong the life of their dams and manage their liability. Dam owners are encouraged to utilize free inspections as opportunities to learn proper inspection and maintenance techniques that will help them to complete state-required dam inspections every five years.

The most common deficiency noted during inspections was heavy vegetation on dams, which can hinder the inspection process and hide structural deficiencies. In accordance with Oklahoma Administrative Code 785:25-3-10, "Trees and heavy vegetation shall be removed from the slopes and crest of earthen embankments and emergency spillway area. Trees and heavy vegetation should also be removed from an area a minimum distance from the toe of the embankment of 30 feet."

Trees and woody vegetation may reduce the structural integrity of a dam in the following ways:

- Producing large voids and lessening the cross section and freeboard;
- Creating seepage pathways and internal erosion when root systems decay;
- Damaging the emergency spillway and reducing flow capacity;
- Clogging the outlet works and under drain systems; and
- Cracking the foundation, groin, toe, conduit joints and concrete structures.

Please consult a qualified professional engineer before beginning the tree removal process.

For more information about our free low hazard dam inspection program, please visit [www.owrb.ok.gov/damsafety](http://www.owrb.ok.gov/damsafety) or call (405) 530-8800.

### Congratulations to Emma Moradi, CFM

We are pleased to announce that OWRB dam safety engineer Emma Moradi is now a National Certified Floodplain Manager (CFM). Emma completed the floodplain management course "Managing Floodplain through the National Flood Insurance Program" and passed the CFM test last January. Congratulations, Emma!

### FEMA Technical Seminar

In February, two OWRB dam safety engineers attended FEMA's National Dam Safety Program Technical Seminar in Emmitsburg, MD, where they met with other state dam safety officials and participated in the following discussions:

- Dam failure case histories;
- Regression models and physically based models for an embankment dam breach;
- Modeling software differences and requirements;
- Failure modes, breach parameters, and methods regarding dam breach mapping;
- Approaches and applications in dam breach modeling practiced by both the public and private sectors; and
- Risk assessment and economic impact modeling softwares regarding dam breach consequences.

For more information about FEMA's Dam Safety technical seminars visit <https://training.fema.gov>.

### Upcoming Events

- May 5-6 ASDSO Technical Seminar: [Plans & Specifications Review and Construction Inspections](#), Broomfield, CO
- May 11 ASDSO Webinar: [Event Tree Principles and Applications for Dam Safety Risk Assessment](#)
- June 2-3 ASDSO Technical Seminar: [Conduits, Gates, and Valves](#), Portland, ME
- June 9 ASDSO Webinar: [Waterproofing Systems for Dams](#)
- June 23-25 ASDSO Technical Seminar: [Soil Mechanics for Earth Dam Design and Analysis](#), Nashville, TN

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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](mailto:pubinfo@owrb.ok.gov).*