

Oroville Dam scale model at the UWRL helps test repair plans before construction

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Engineers at the Utah Water Research Laboratory at Utah State University have constructed a 1:50 scale model of the Oroville Dam spillway. The model initially featured the terrain conditions that were formed following the damaging flow events in February, and later tested the designs for the reconstruction plans. Lead engineers Dr. Michael Johnson and Dr. Zachary Sharp worked with a team of 15 engineers and technicians to construct the approximately 100-foot-long by 60-foot-wide model in just 40 days.



1:50 scale model of the damaged Oroville Dam spillway built at the Utah Water Research Laboratory.

Johnson, who specializes in fluid mechanics and experimental hydraulics, says the model will provide useful information about hydraulic conditions in and around the damaged spillway as the team in California work to repair the recent damage to the spillway.

"Our goal is to assist the design team in California in making the best decisions moving forward with data from the model," said Johnson. "Data from the model will provide useful information that will help engineers make better-informed decisions about repair and replacement."

This is the second time a Utah Water Research Laboratory team has been involved with engineering efforts at Oroville Dam. Johnson helped design an engineering solution that improves the river valve outlet system in low-level reservoir conditions. His work helped alleviate the effects of drought from 2014–16.

UWRL Media Day — The UWRL recently welcomed several news agencies to tour the model site:

- Deseret news (article) <http://www.deseretnews.com/article/865683173/Utah-State-engineers-design-solutions-to-repair-nations-tallest-dam.html>
- Fox13 News (video) <http://fox13now.com/2017/06/16/usu-constructs-giant-model-of-failed-dam/>
- HJ News (article) http://news.hjnews.com/allaccess/usu-builds-model-of-tallest-u-s-dam-to-help/article_707b25ec-cc86-532d-a27f-74e932c0cb85.html
- KSL 6 pm News (video) http://live.ksl.com/#/schedule/2017-06-16?_k=s2ta19
- Associated press (article) <http://hosted2.ap.org/...>

Other Recent News Coverage:

- CBS Sacramento (video) <http://sacramento.cbslocal.com/2017/06/01/oroville-dam-spillway-model/>
- NewsDeeply (article) <https://www.newsdeeply.com/water/articles/2017/05/29/oroville-dam-in-miniature-scale-model-helps-repair-damaged-spillway>
- Oroville MR News (article) <http://www.orovillemr.com/article/NB/20170601/NEWS/170609964>
- Phys.Org (article) <https://phys.org/news/2017-06-miniaturizing-america-tallest.html>
- USU College of Engineering (news release) <http://www.engineering.usu.edu/news/oroville-model>
- Oroville MR News (article/video) <http://www.orovillemr.com/article/NB/20170626/NEWS/170629840>
- Chico ER News (article) <http://www.chicoer.com/article/NA/20170601/NEWS/170609961>