



## Assessment of Channel Changes, Model of Historical Floods, and Effects of Backwater on Flood Stage, and Flood Mitigation Alternatives for the Wichita River at Wichita Falls, Texas: Usgs Scientific Investigations Report 2011-5175

By Karl E Winters, Stanley Baldys

Bibliogov, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.In cooperation with the City of Wichita Falls, the U.S. Geological Survey assessed channel changes on the Wichita River at Wichita Falls, Texas, and modeled historical floods to investigate possible causes and potential mitigation alternatives to higher flood stages in recent (2007 and 2008) floods. Extreme flooding occurred on the Wichita River on June 30, 2007, inundating 167 homes in Wichita Falls. Although a record flood stage was reached in June 2007, the peak discharge was much less than some historical floods at Wichita Falls. Streamflow and stage data from two gages on the Wichita River and one on Holliday Creek were used to assess the interaction of the two streams. Changes in the Wichita River channel were evaluated using historical aerial and ground photography, comparison of recent and historical cross sections, and comparison of channel roughness coefficients with those from earlier studies. The floods of 2007 and 2008 were modeled using a one-dimensional step-backwater model. Calibrated channel roughness was larger for the 2007 flood compared to the 2008 flood, and the 2007 flood peaked about 4 feet...

### Reviews

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