



Investigation of Land Subsidence in the Houston-Galveston Region of Texas by Using the Global Positioning System and Interferometric Synthetic Aperture Radar, 1993-2000: Usgs Scientific Investigations Report 2012-5211

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Bibliogov, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.Since the early 1900s, groundwater has been the primary source of municipal, industrial, and agricultural water supplies for the Houston-Galveston region, Texas. The region s combination of hydrogeology and nearly century-long use of groundwater has resulted in one of the largest areas of subsidence in the United States; by 1979, as much as 3 meters (m) of subsidence had occurred, and approximately 8,300 square kilometers of land had subsided more than 0.3 m. The U.S. Geological Survey, in cooperation with the Harris-Galveston Subsidence District, used interferometric synthetic aperture radar (InSAR) data obtained for four overlapping scenes from European remote sensing satellites ERS-1 and ERS-2 to analyze land subsidence in the Houston-Galveston region of Texas. The InSAR data were processed into 27 interferograms that delineate and quantify land-subsidence patterns and magnitudes. Contemporaneous data from the Global Positioning System (GPS) were reprocessed by the National Geodetic Survey and analyzed to support, verify, and provide temporal resolution to the InSAR investigation. The interferograms show that the area of historical subsidence in downtown Houston along the Houston Ship Channel has stabilized and...



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