

Tensed, Benewah County

Tensed, a small community in Benewah County, bordered by tribal lands and state lands, is identified in FEMA Flood Insurance Rate Maps (FIRMs) as being almost entirely in the Special Flood Hazard Area (SHFA). Since its entrance into the National Flood Insurance Program (NFIP) in 1978, the City of Tensed has never received a Flood Insurance Study (FIS). South Tensed is bordered by Hangman Creek, which might be the flooding source assumed to create a flood hazard as indicated in the county FIS, but this information is missing from the report. The insurance studies for Benewah County, completed in 1979 and updated in 1988, and the current preliminary DFIRM (2008) confirm that this city never received hydrologic analysis by FEMA.

Ten years before the city entered into the NFIP, Hangman creek was re-routed away from the city. In 1965 and 1966 the Army Corps of Engineers was tasked to do a study for flood control on the creek. This information is located with the ACOE Seattle District although it is not readily apparent they performed the work. Residents of the area believe the work was done by the Natural Resource Conservation Service in 1968 or shortly after, but other than a few newspaper articles from the time period there is no documentation of the project. Looking at satellite photography it is apparent that at some point the flood control project was completed.

Although USGS quads for Tensed were published in 1977 and 1988, they were not used to delineate the Tensed *Unnumbered A-Zone* flood hazard. The 1988 Flood Insurance study refers to a 1955 USGS survey as the basis for the elevation data used to create the A zone delineation. The 1955 USGS survey created 200 foot contour intervals with a +/- 50 percent margin of error (100 feet). Current topography for the area (1985) has 20 foot contour intervals with +/- 10 foot contour margin of error. This current survey was not included in the recent re-delineation that produced the 2008 DFIRM.

At this time FEMA Region 10 as agreed to do a new study of Tensed's floodplain in order to create a letter of map revision (LOMR) and revise the inaccurate DFIRM. The main element missing in this restudy is reliable topographic data. LiDAR data currently are the best source for creating an accurate DEM. If Tensed were able to offer this type of elevation information to FEMA the LOMR would be easily acquired and the city would be free of regulations and insurance requirement where there is no real threat.

Uncertainty over the flood hazard map has caused delay in building the community's new fire station, which according to the inaccurate FIRMs, would be in the flood hazard zone.

Indian Creek, Elmore, Ada and Canyon Counties

Indian Creek originates in the Danskin Mountains of Elmore County and flows through Ada County into Canyon County. When Canyon County received a new DFIRM from FEMA, the amount of water predicted to flow down Indian Creek over Orchard Dam near I-84 into Nampa and Caldwell was disputed by the cities of Nampa and Caldwell. One of the issues was whether there is a channel in the upper reaches of the Indian Creek watershed that would convey flood flow almost 20 miles to the urbanized areas of Canyon County. There is no stream gage data. LiDAR coverage of that area would have made it possible to do the analysis to answer that question and to more accurately

predict flood flows from the upper reaches of Indian Creek. Redevelopment of downtown is hinging on the mapped extent of the Indian Creek flood hazard in Caldwell.

Rattlesnake Creek, City of Mountain Home

In the past, Rattlesnake Creek flowed through the City of Mountain Home. At some time the creek was diverted away from the city. However, the technical documentation showing what was done has been lost. Consequently, new construction in the out-of-date mapped flood hazard area must meet standards for a flood hazard that no longer exists. Residents in the out-of-date mapped flood hazard area may be required to purchase flood insurance that is rated according to the 1992 map. Most of the area is an A zone, which has some of the highest insurance rates due to lack of detailed hydrologic and hydraulic information. Topography generated by LiDAR would make it possible to re-delineate the flood hazard area, remap the risk, and revise the insurance ratings to reflect the risk.

The upper reaches of Indian Creek and the Rattlesnake Creek watersheds are close together. It would be efficient to collect LiDAR on these streams at the same time.

Valley and Gem Counties

FEMA is beginning the process to produce DFIRMS for Valley and Gem Counties. In the absence of high resolution elevation data, the counties will be mapped using topography that may be from USGS quadrangle maps generated as long ago as 1970. Accurate topography, especially in the developing areas of the two counties, will result in more accurate flood hazard maps, which ultimately may save lives and property.

Levees are a national flooding safety issue. There is a levee in the City of Emmett along the Payette River. LiDAR data would provide necessary information to help evaluate the level of protection provided by the levee.

There are levees all over Idaho. LiDAR data collected statewide would provide information to inventory and start to classify levees.

Boise River

LiDAR collected in 2006 has been the foundation for visually realistic flood modeling on the Boise River. The accurate topography has made it possible to compare the model's predicted flooding with the mapped flood hazard areas on the Ada County DFIRM, which is based on studies done in 1997. In the Eagle Island area, the model predicts flooding of areas not shown as flood-prone on the current effective DFIRM. The 2006 LiDAR captures the changes in the floodplain from fill, road construction, and other activities, since 1997.