

IDAWRA Brownbag: Wed. April 9, 2014; 11:30 - 1:00 pm "Big Wood River Post-Fire Flood Damage Risk Impact Assessment from the 2013 Beaver Creek Fire near Hailey"

Speaker: Darrell Eidson, P.E., D.WRE, Hydraulic Engineer, U.S. Army Corps of Engineers, Walla Walla

Wednesday, April 9 , 11:30 -1 pm (talk will start at 11:45)

Location: Washington Group Plaza Training Room (turn right at the desk)  
720 Park Blvd  
Boise, ID 83712

Cost: Free

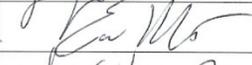
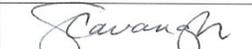
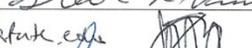
IDAWRA thanks the Corps of Engineers for providing the venue.

### **"Big Wood River Post-Fire Flood Damage Risk Impact Assessment from the 2013 Beaver Creek Fire near Hailey"**

In August 2013, the Beaver Creek wildfire burned more than 110,000 acres of public and private land northwest of Hailey, Idaho. The majority of the burned area drains to the Big Wood River, with an overall drainage area of over 600 square miles at Hailey, ID.

While increased runoff and erosional response within and immediately downstream of burned areas became readily apparent following September 2013 rainstorm activity, the more widespread increased flood risk along developed areas of the Big Wood River was not well understood. In cooperation with Federal and State agencies, and local governments, the U.S. Army Corps of Engineers leveraged existing models developed for previous studies to assess the relative hydrologic and hydraulic response of post-fire conditions to the existing flood risks along the Big Wood River. Using an existing numerical hydrologic model from an adjacent, and in many ways quite similar, watershed, adjustments of the modeling parameters to represent post-fire conditions within the Big Wood watershed facilitated estimation of the response and projection of frequency discharges at points of interest along the Big Wood River. These estimated increased discharges were then used with an existing numerical hydraulic model to project post-fire river stages. Relative changes in peak runoff and water surface elevations permitted determination of areas at increased risk for flood damages within developed areas along the river. As estimate of potential flood risk consequences associated with debris flow 'dam' formation and collapse was also performed, utilizing information developed by USGS in parallel support of the impacted communities.

While peak runoff increases at the sub-basin level were often significant, collective flow peaks following routing were more modest. River stage impacts were generally moderate, as well, though several areas where potential increased flood risk could be significant were identified. And while debris dam formation is less probable, the consequences in terms of potential for increased flood damages is quite significant.

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