

IDAWRA Brownbag: Wed. March 5, 2014; 11:30 - 1:00 pm " **Debris-Flow Hazard Assessment of the Area Burned by the 2013 Beaver Creek Fire near Hailey**"

Speaker: **Kenneth Skinner, Hydrologist, U.S. Geological Survey**

Wednesday, March 5, 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.

## **Debris-Flow Hazard Assessment of the Area Burned by the 2013 Beaver Creek Fire near Hailey**

In August 2013, the Beaver Creek wildfire burned more than 100,000 acres of public and private land northwest of Hailey, Idaho. According to the U.S. Forest Service, about 57 percent of the area is considered moderately burned, and the risk of post-fire soil erosion is high on more than 8,400 acres.

In cooperation with Blaine County, USGS developed a model to estimate the probability of occurrence, volume, and combined hazard ranking of debris flows in the burned area. This model uses topographic, soil, burn severity, and storm (rainfall) intensity variables to estimate the probability and volume of debris flows in subwatersheds. The probability and volume estimates are ranked and combined to estimate a relative hazard ranking for debris flows. The model identifies the part of the watershed with the highest probability of debris flow and estimates debris-flow volume for subwatersheds. The basins with the highest estimated debris flow volume are not the same as the high probability basins. Because many of the high probability and volume basins do not overlap, no combined hazard rankings had a high value of 5.

### **Products**

Skinner, K.D., 2013, Post-fire debris-flow hazard assessment of the area burned by the 2013 Beaver Creek fire, near Hailey, central Idaho: U.S. Geological Survey Open-File Report [2013-1273](#), 11 p., 9 pls.

<http://id.water.usgs.gov/projects/BeaverCreekFireDebrisFlow/index.html>

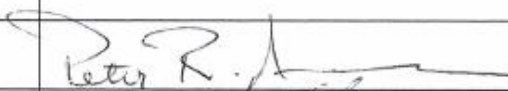
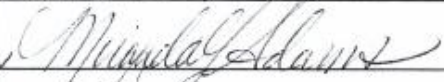

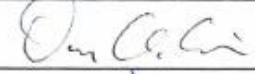
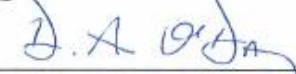


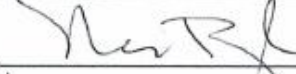

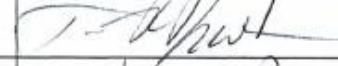
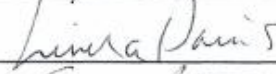
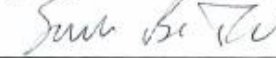
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**Debris-Flow Hazard Assessment of the Beaver Creek Fire near Hailey**

In August 2013, wildfire burned more than 100,000 acres of land northwest of Hailey, Idaho. According to the USFS, about 57 percent of the area is considered moderately burned, and the risk of post-fire soil erosion is high on more than 8,400 acres. Ken Skinner will present the results of the USGS model that estimates the probability of occurrence, volume, and combined hazard ranking of debris flows in the burned area.

### **Speaker biography:**

I am a native Idahoan that grew up in a small town in Southern Idaho. I received a Bachelor's of Science in Geophysics and Geology from Boise State University. During this time I got on as a student with the U.S. Geological Survey. When I wasn't working in the field for the survey I quickly picked up and excelled at GIS. When I finished my Bachelor's at Boise State the USGS offered to keep me on as a graduate student. Coincidentally the University of Idaho just started offering their Masters of Science in Environmental Science as a distance degree. So I was able to get my Masters from U of I while working for the USGS in Boise. My master's thesis with U of I was also a project with the USGS using heat to model groundwater/surface-water seepage in the lower Boise River. Once I obtained my Master's degree from U of I, the USGS hired me on as a full-time permanent employee working primarily on GIS and modeling projects. The latest modeling project was a groundwater nutrient transport model for the lower Snake River Plain Aquifer and now this GIS project involving debris flow modeling. When not working I try my best to be out hiking in the Boise foothills or in the Sawtooths. Also, I'm always looking out for the next great band to pass through Boise and play at our small venues.

|    | Name           | Organization     | Email                        | Signature   |
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| 10 | Tim DeWeese    | Uof I            | on file                      |    |
| 11 | Linda Davis    | IOWA             | " "                          |   |
| 12 | Sandra Thiel   | IOWA             | " "                          |  |

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|----|-----------------|-----------|-----------------|-----------------|
| 13 | Steve Hammula   | MWH       | on file         | Steve R Hammula |
| 14 | Lucas Spitz     | BSU       |                 |                 |
| 15 | James Weidt     | CH2M HILL |                 | James           |
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| 17 | Isabela Matosaj | CH2M HILL |                 | Isabela Matosaj |
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