



THE 2001 HEATHER DRIVE LANDSLIDE

Layton, Davis County, Utah

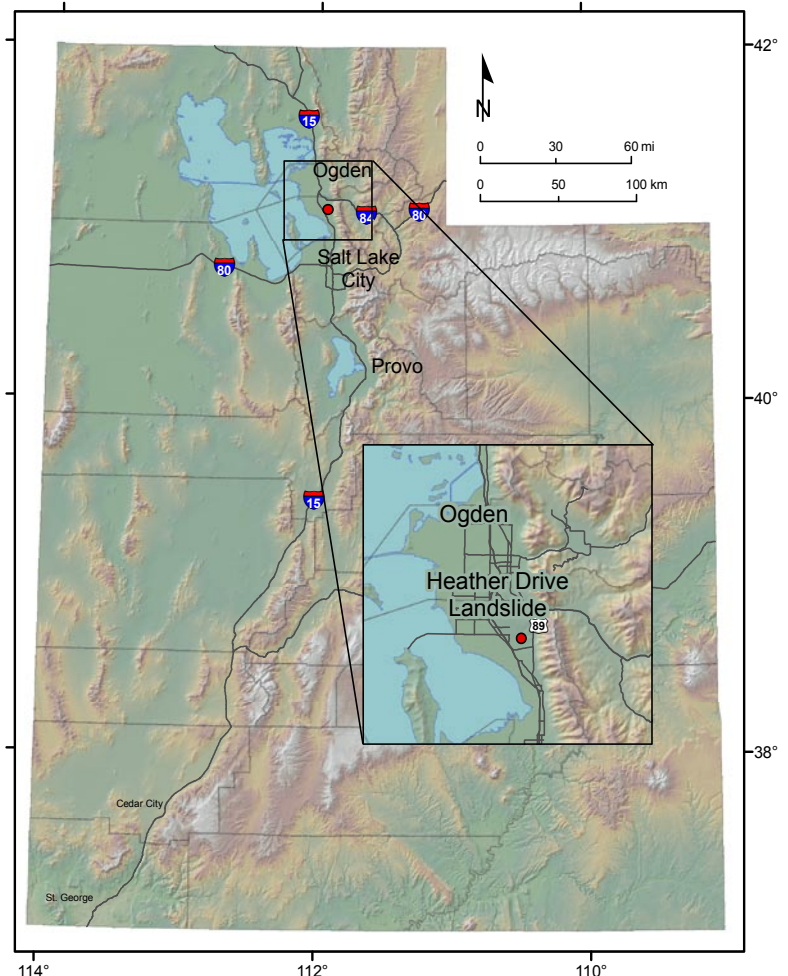
by Ashley Elliott

The August 2001 Heather Drive landslide in Layton damaged six houses, forcing homeowners to evacuate them. Three houses were saved and moved off the landslide, but the other three were so severely damaged they had to be demolished. Landslide movement also severed underground utility service to the houses. Estimates of homeowner equity loss, mortgage company loss, utility company costs, and Layton City costs exceed \$1 million. Unfortunately, although the landslide was identified in a 1970s geotechnical study, a detailed site investigation was not completed to determine safe locations for the houses to be built.



The Heather Drive landslide is on a northfacing slope above South Fork Kays Creek. The landslide is a partial reactivation of a prehistoric landslide in silt and clay sediments of ancient Lake Bonneville. Lake Bonneville sediments in the Layton area are prone to landsliding. In fact, several other landslides within one mile of Heather Drive reactivated recently, including the South Fork Kays Creek (1998), Hillsboro Drive (1998), Sunset Drive (1998 and 2006), and Beechwood Drive (2006) landslides.

Top: Landslide movement severely damaged this house, which was later demolished. Bottom: Location of the 2001 Heather Drive landslide.



The progression of landslide movement: Photo at left shows a slight roll in the grass (indicated by the dashed red line) on August 8, 2001, that became the head of the landslide. White arrow indicates direction of movement. Photo at right shows the head of the landslide on August 27, 2001, and the ground displacement produced by 19 days of movement.



The cause of the 2001 Heather Drive landslide movement is unclear. Other nearby landslides reactivated in 1998 as the result of above-normal precipitation and elevated ground-water levels.

However, the Heather Drive landslide occurred during a dry year,

and most of the movement took place in late August. This late-summer movement is unusual, as most landslide movement that occurs in northern Utah typically does so in the spring. However, homeowners did notice some slide movement as early as 1997 or 1998.

In response to damaging landslide movement, Layton City adopted regulations in 2000 that require detailed landslide investigations to be completed prior to development in landslide-prone areas.

ADDITIONAL INFORMATION

This fact sheet is available online at:
www.geology.utah.gov

For additional information see:

Landslides: What they are, why they occur:
<http://ugs.utah.gov/online/pdf/pi-74.pdf>

Movement history and preliminary hazard assessment of the Heather Drive landslide, Layton, Davis County, Utah: http://ugspub.nr.utah.gov/publications/reports_of_investigations/RI-251.pdf

Homeowner's guide to recognizing and reducing landslide damage on their property: http://geology.utah.gov/online_html/pi-58/index.htm



Aerial photo of the Heather Drive area prior to landslide movement. Red line indicates the top of the landslide. Blue line represents South Fork Kays Creek. White arrows indicate direction of landslide movement. Yellow X indicates a house that was demolished. Yellow M indicates a house that was moved off the landslide.