



# THE 2005-06 CREEKSIDE DRIVE AREA LANDSLIDES

## Mountain Green, Morgan County, Utah

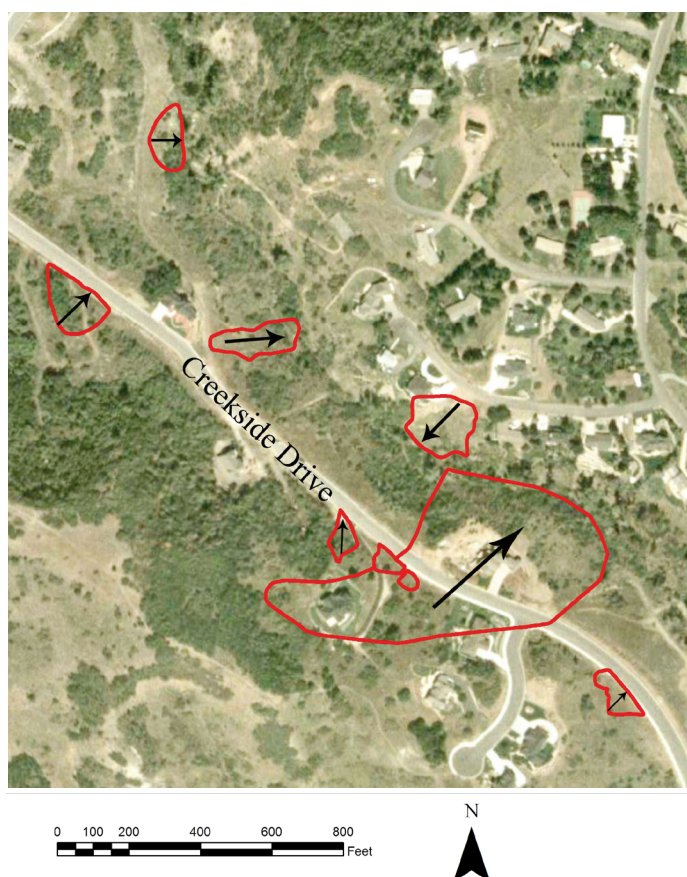
by Ashley Elliott

Early in 2005, several landslides occurred in the Creekside Drive area of Mountain Green located in western Morgan County. Initial movement of the landslides occurred during a period of above-normal precipitation and after most of the snow in the area had melted, which contributed to rising ground-water levels. Landslide movement slowed in late 2005, but a snowmelt-in-

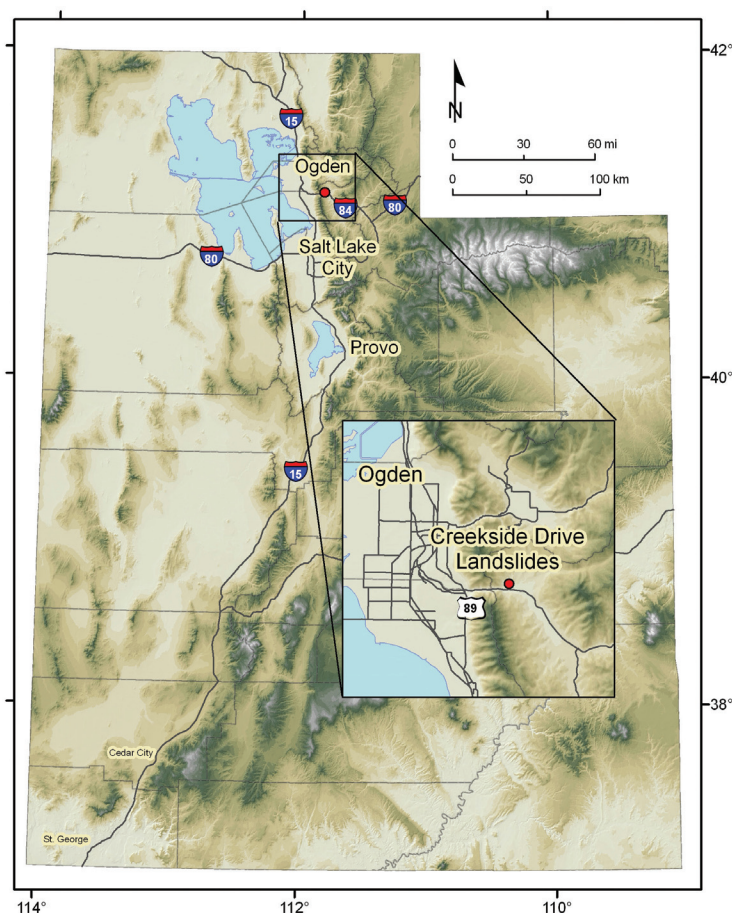
duced rise in ground-water levels in early 2006 again caused an increase in landslide movement and the formation of several new landslides.

Movement of the 2005-06 landslides damaged three houses, several other lots, buried utilities and pavement, and also threatened a buried sewer line. One house was so severely damaged

that the homeowner voluntarily abandoned it in April 2006. Landslide damage in the Creekside Drive area occurred despite subdivision-wide and lot-specific geologic hazard studies, many of which identified pre-existing landslides in the area. Losses to the homeowners, utility companies, and Morgan County likely exceed \$1 million.



*The 2005-06 landslides in the Creekside Drive area. Black arrows indicate direction of movement.*



*Location of the 2005-06 Creekside Drive area landslides.*



*The red line defines the upper edge of a Creekside Drive area landslide (located on Cascade Drive) that partly underlies a driveway slab. White arrow indicates direction of movement. Landslide movement left the slab unsupported.*

*Landslide movement caused severe structural damage to this house (located on Creekside Drive), including cracks in the walls and foundation. The nature and extent of damage led the owner to abandon the house in April 2006.*

The 2005-06 landslides were all partial or complete reactivations of pre-existing slides in the Tertiary-age Norwood Tuff, a weak geologic unit that includes easily weathered volcanic deposits and is highly prone to landsliding. Landslides had been identified and mapped in early geologic

reports in the area, and landslides are common in most places where the Norwood Tuff occurs in western Morgan County.

In response to damaging landslide movement, Morgan County adopted regulations in 2006 that require detailed landslide investi-

gations to be completed and reviewed prior to issuance of building permits in designated areas in the vicinity of Creekside Drive.

## ADDITIONAL INFORMATION

This fact sheet is available online at: [geology.utah.gov](http://geology.utah.gov)

For additional information see:

- **Landslides: What they are, why they occur:** <http://ugs.utah.gov/online/pdf/pi-74.pdf>
- **Homeowner's guide to recognizing and reducing landslide damage on their property:** [http://geology.utah.gov/online\\_html/pi/pi-58/index.htm](http://geology.utah.gov/online_html/pi/pi-58/index.htm)
- **Active landslides in the Creekside Drive area, Mountain Green, Morgan County, Utah, between June 2005 and December 2006:** <http://ugs.utah.gov/online/ri/ri-260.pdf>