

# 12. Landslide Reporting

## Reporting

Accurate and timely incident reporting of landslides is vital for communities to be able to prepare for and respond to them. Detailed landslide data also inform efforts to understand local landslide mechanisms and prevent or mitigate slide effects. Eventually such data may help insurers to calculate local landslide risks enough to offer insurance protection to homeowners and businesses from the high cost of landslide recovery.

**NOTE: Landowners and jurisdictions should record and report all known or suspected landslides in order that local emergency officials can properly assess the locations, frequencies and magnitudes of landslide hazards in their area of responsibility. A simple reporting format is included in this section.**

## Background

Unlike assessments for many other types of natural hazards, landslide hazard assessment has suffered from a long history of spotty or even non-existent reporting. Private landowners, including corporate landowners, often deal with landslide incidents on their own and never report them. Similarly, government highway departments often lump landslides into the roadway debris category and the incident data remains buried inside routine roadway maintenance records. Landslide data also hide as just one part of much larger and complex disaster events such as floods, earthquakes or other disasters. Too often, small landslides are seen as nuisances needing a quick clean up but not an incident report.

These reporting flaws result in a dangerous situation where an accurate local historical landslide record does not exist. Without such data, accurate hazard assessment cannot happen. When landslides do occur, they appear to be a surprise “out-of-nowhere” event, catching victims, landowners, responders and political leaders off guard. **It is important to report all landslides.**

## Insurance Claims

### Data Sources

Normally, an effective way for communities and households to understand the hazards they face is through the actuarial data of insurance companies. Insurance companies regularly evaluate hazards that could affect their policyholders and set appropriate rates to manage their financial risks. Recent aggregated claim histories refine and update insurance rates.

Claim data are often a good method to understand individual property risk for hazards such as hail, wind, fire and floods. Unfortunately, since landslide coverage is not available for homeowner insurance policies, actuarial data or claims-history information is not available to assist communities and property owners to understand their landslide risk. Until insurance companies can develop homeowner landslide insurance policies, claims data are not a source of landslide-risk information in Hennepin County.

## Transportation and Linear Infrastructure Sources

Linear infrastructure is often impacted by landslides. This includes highways, railroads and pipelines, plus electric power and telecommunications lines. These routes and lines frequently cross areas of higher landslide risk such as valley floors, ridge lines and steep hills. Line construction also makes cuts or fills in all of these features. Construction of linear infrastructure can worsen landslide susceptibility unless it is properly mitigated.

The impact of a landslide on infrastructure can be severe, including the disruption of the flow of critical commodities, energy, communications or people. Sometimes injuries or fatalities can also result when landslides strike these routes. Unfortunately, landslide effects and cost data for linear infrastructure is often spotty and difficult to access.

In organizational databases, landslides are often lumped together with a variety of functions under the banner of “maintenance.” The Federal Highway Administration, for example, considers “erosion damage” such as landslides to be “heavy maintenance” and therefore ineligible for emergency relief (FHWA, 2013). Therefore, landslides impacting roads and highways have been frequently hidden in a mass of general repair and maintenance data.

In the case of private infrastructure operators, landslide information is often hidden as well, usually under a general maintenance heading. Information about landslides usually does not emerge from a company unless it is first recognized by the media. Increasing accurate and open event reporting by operators of linear infrastructure would be a significant boost to understanding local landslide hazards for the benefit and protection of the entire community.

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*The Minnesota Department of Transportation (MnDOT) recently completed a slope stability GIS exercise using a 10m DEM for a different region in Minnesota in order to identify where transportation infrastructure intersects “challenging terrain.” Model results were ranked into four risk management categories: 1) action recommended, 2) further evaluation, 3) monitoring, and 4) no action recommended. Risk incorporates the model outputs with consequences to infrastructure including distance to roads and populated areas.*

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## Reporting Landslides in Emergency Situations

Dial 9-1-1 without delay if someone has been hurt or is in danger due to a landslide. This includes situations where landslide debris has been carried onto a road, when power lines have been toppled or when a slide threatens structures. Reporting an accurate location of a landslide may be difficult if it has happened far from roadways and street

addresses. Some parks in the Twin Cities have begun to set out trail markers that provide a known location reference point using the US National Grid (USNG). Location information from the caller’s cellular phone may also be helpful.

## Reporting Fresh Landslides

Landslides that do not pose a life-safety or destructive threat to structures should still be reported. Hennepin County Emergency Management wants these reports. Timely reporting of landslides is a key part of building the local capability to understand when and how landslides occur in order to better predict them. The slide location can be easily recorded with a cell phone, along with date and time. Photos and information should be reported according to procedures described below.

## Reporting Historic Landslides

Evidence of past landslide incidents may be discovered in old files, notes, sketch maps and photographs stored by government departments, utilities, other companies and even historical societies. Hennepin County Emergency Management also would like to obtain copies of these bits of information. Historical information is extremely valuable to establish when and how landslides have occurred in the local area. Please send copies of documents to Hennepin County Emergency Management. Even anecdotal tips are helpful where reports of landslides did not end up in written form but are in the memory of some long-time workers.

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**Reportable incidents for the Hennepin County Landslide Atlas include all forms of landslides, mudflows and rock falls.**

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## Hennepin County Landslide Hazard Atlas Database

Hennepin County Emergency Management created and maintains the Hennepin County Landslide Hazard Atlas. Data are updated at least annually. Atlas maintenance assistance comes from Hennepin County Information Technology/Geographic Information Systems (GIS) and other departments and agencies. The atlas data are readily available to emergency responders, researchers and the public online at [hennepin.us/landscape](http://hennepin.us/landscape) and print copy of the Hennepin County Landslide Hazard Atlas in the Hennepin County Library system and regional research libraries. The print version is planned to be updated every ten years, so while most of the written information will be current, users needing very current landslide data should consult the electronic version.

## Regional Landslide Database

Hennepin County Emergency Management has a hazard assessment and emergency response interest in the entire Twin Cities metro region. This department also collects reports of landslide incidents within the Twin Cities Metropolitan Area. This area includes Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne and Washington counties. Regional landslide data should be requested through the county emergency managers of the county of the landslide data request. That county's emergency manager will request the data from Hennepin County Emergency Management.

# Hennepin County Landslide Reporting Form

Date of report \_\_\_\_\_

Name of person reporting \_\_\_\_\_

Contact for the person reporting (phone/email) \_\_\_\_\_

Location of landslide: \_\_\_\_\_

\_\_\_\_\_

Date and time the landslide happened: \_\_\_\_\_

Width of the slide: \_\_\_\_\_

Length of the slide: \_\_\_\_\_

Vertical height of the slide: \_\_\_\_\_

Material involved (soil, mud, rock, sand, etc.): \_\_\_\_\_

Injuries to people: \_\_\_\_\_

Damage to property: \_\_\_\_\_

\_\_\_\_\_

Response (police, fire, public works, etc.): \_\_\_\_\_

Send reports to:

**Hennepin County Emergency Management**

1600 Prairie Drive, Medina, Minnesota 55340

FAX: 763-478-4001

612-596-0250

emergency.mgmt@hennepin.us



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[nextdoor.com/pages/hennepin-county-emergency-management](https://nextdoor.com/pages/hennepin-county-emergency-management)



*Note: Emergency response agencies can report immediate landslide incidents via Hennepin Watch or via dispatch to Hennepin County Emergency Management.*