

# Wyoming State Geological Survey

## Wyoming Landslides

Landslides are also known as mass wasting and are characterized by the downward movement of rock caused by gravity.

Landslides typically occur when a slope becomes unstable. Rock falls, debris flows, slumps, lateral spread, and creep are all types of landslides. Landslides can cause considerable damage.

Landslides can damage or destroy roads, pipelines, structures, and utility lines. They can also temporarily block rivers with earthen dams, which when over topped by backed up water can cause flash-flooding downstream.

The vast majority of landslides occur in remote parts of Wyoming, typically in sparsely populated areas that do not threaten people or property.

When landslides do occur they can cause major loss to infrastructure, such as roads and property, causing millions of dollars in damage.

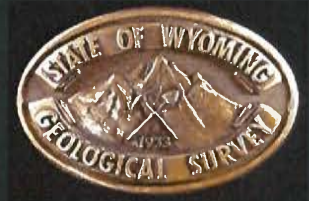
## Public Safety

Even in our sparsely populated state, landslides can affect Wyoming residents. Protect yourself and your property by knowing landslide types, their triggers and warning signs, how you can help prevent landslides, and how to react when one happens.

## Public Information

WSGS has mapped more than 30,000 landslides in Wyoming, and maintains a database and map of these locations, online at <http://www.wsgs.uwyo.edu/Research/hazards/Landslides.aspx>.

*Interpreting the  
past, providing for  
the future*



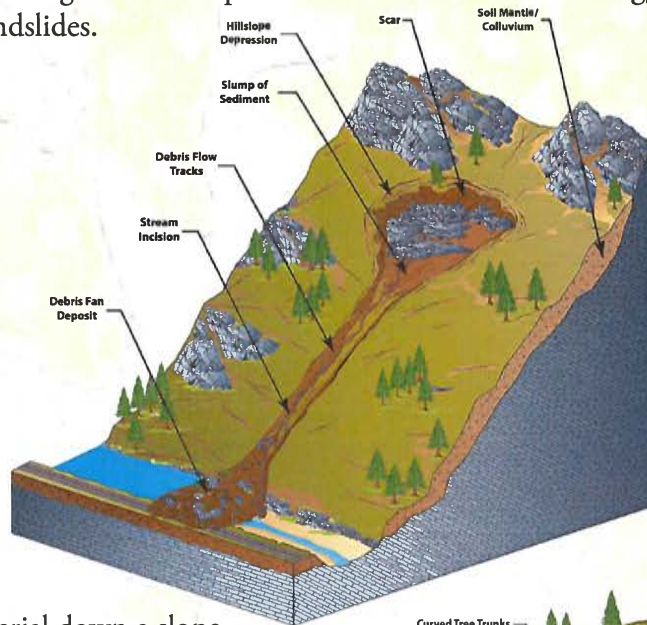
(307) 766-2286

Located on the University of  
Wyoming campus in Laramie

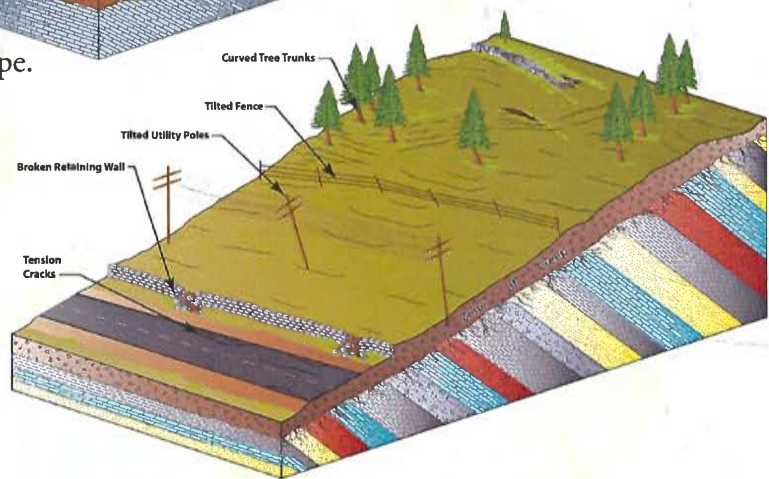
[www.wsgs.uwyo.edu](http://www.wsgs.uwyo.edu)

## Types of Landslides

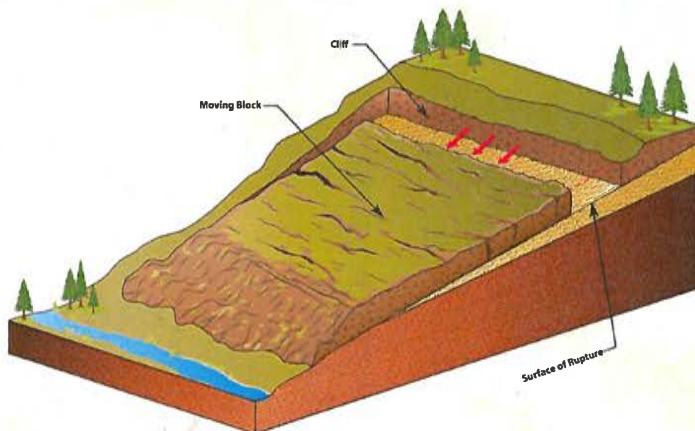
**Debris Flow:** A mass of loose, water-laden and poorly sorted debris of fragmented rock, soil, and mud that surges down a slope in response to gravitational processes. Debris flows can be triggered by heavy rainfall or rapid snowmelt or by other landslides.



**Creep:** Slow movement a material down a slope.



**Translational:** Block of material moving down-slope that occurs along a distinctive surface of weakness (soil horizon, bedding or fault) or parallel to the ground surface.



### Other Types:

**Falls:** Unexpected release of rock or coarse material from a steep slope.

**Topples:** Comparable to falls, but the primary motion involves forward rotation and mass movement of rock or debris out of a slope face.

**Rotational (slump):** Block of material moving down a slope along a concave surface.

