

New Geologic Hazards Website

By Chamois Andersen, Wyoming State Geological Survey (Winter 2014)

Geologic hazards are the products of natural processes that have occurred throughout Earth's history. They can happen suddenly or over a slow period of time. They can also result in natural disasters, and while such events can help shape the landscape on Earth, they can also pose a threat to people.

The Wyoming State Geological Survey (WSGS) has created a new **Geologic Hazards** website, a clearinghouse of information on Wyoming's geologic hazards and historical events. From earthquakes to landslides, expansive soils to the active Yellowstone environment, this new site includes a variety of information, including maps and photographs on Wyoming's geologic hazards.

Some hazards are rare events with high risk, others may not be life threatening but are more frequent and can cause considerable damage.

“Based on the geologic record and our current exposure to geologic processes, these phenomena can manifest themselves without warning, such as an earthquake or landslide,” said Martin Larsen, WSGS hazards geologist. “We want to be prepared to act appropriately to reduce damage and save lives,” he said. “This includes providing the public with the necessary information regarding geologic hazards in Wyoming.”

As part of the WSGS mission, geologists work to help protect the public and provide critical information about the state's geologic hazards. This effort involves producing reports, creating and updating geologic hazard maps, as well as working with many partners in order to provide timely information about geologic hazards that exist in Wyoming.

Geological processes are natural forces that shape the Earth's terrain and landscape. "Studying geologic processes can lead to better understanding of how geologic hazards work. This allows for mitigation measures to be developed to lower the risk to the public," Larsen said.

Such natural forces include plate tectonics, volcanic activity, erosional processes, and weathering. Earthquakes occur daily in Wyoming although most are not as strong to be felt by humans. Historically, they have also helped shape our landscape. Earthquakes occur during the movement of tectonic plates, volcanic activity or motion along a fault where energy is suddenly released within the Earth's crust and at times, reveals itself by ground shaking and sometimes causing surface offset or landslides.

Water also has a major influence in shaping the landscape. Running water from snowmelt or precipitation forms river valleys and gorges. It helps shape mountain ranges, and also contributes to surficial processes resulting in geologic hazards such as landslides. Such erosional events are part of nature's natural processes.

The WSGS has launched a new program involving the public and focused on documenting landslides in the state. Reports can be submitted electronically or by mail (**Report a Landslide**) (**WSGS Landslide Inventory**). The geologic hazards website also features a link to the U.S. Geological Survey's "**Did You Feel It**" program, allowing people to record information and help document if they have felt an earthquake.

The WSGS Geologic Hazards website has been designed for the public to receive timely information on hazardous events in Wyoming, as well as for accessing the agency's research and hazards maps and information. Check it out and please email any suggestions to Chamois Andersen, publications and outreach coordinator, at **chamois.andersen@wyo.gov**.