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DGGS receives federal grants for landslide hazard mapping

(Fairbanks, AK) – The Division of Geological and Geophysical Surveys (DGGS) has received a \$2.2 million federal grant to establish a cooperative program with the U.S. Geological Survey (USGS) to assess and map landslide hazards in Prince William Sound's Barry Arm and other locations.

"DGGS has never had a systematic landslide mapping program," said DGGS Director and State Geologist Steve Masterman. "With this funding and our strong cooperative relationship with USGS, we are hopeful this is the beginning of a long-term collaborative effort to map and understand landslides across our state."

The need to map such hazards came into sharper focus last year, when geologists drew on satellite evidence to see that a large mountainside in the Barry Arm, 28 miles northeast of Whittier, had begun to slide, creating the potential for a tsunami that could threaten coastal communities and boaters in the region.

As state and federal efforts to understand the Barry Arm landslide showed the need for a more formal assessment process, a fatal landslide in the Southeast Alaska town of Haines gave further impetus to the need for a more formal program. Masterman credited Alaska's congressional delegation and Governor Dunleavy's administration for supporting this work.

The program will involve a variety of sensing and measuring tools, including LIDAR (light detection and ranging) equipment, geological mapping and sonar surveys, he said. It will also include installing and using remote sensing equipment to monitor movement of slopes and comparing satellite images to seek and track movement of the land.

While DGGS and USGS will pay particular attention to Barry Arm landslide, they will also work to map other areas in Prince William Sound. Additionally, DGGS has received \$250,000 in grants from the Federal Emergency Management Administration (FEMA) to support landslide mapping efforts around select communities in Southcentral and Southeast Alaska, potentially susceptible to landslides.

If the program's tools are space age and high-tech, its benefits are very down to earth, Masterman said: it can save lives and money.

"Building a bridge or road only to see it impacted by a landslide that we might have anticipated had we done this kind of mapping is just not a prudent use of resources," he said. "Preventing this kind of injury and cost is part of our statutory mandate."

The program represents an important enhancement in service of DGGS's mission to collect, analyze and publish geologic information to benefit Alaskans by stimulating resource development and identifying geological hazards.

"We hope these grants will translate into a long-term cooperative program that expands beyond Price William Sound into other parts of the state where landslide hazards are present," Masterman said.

CONTACT: Steve Masterman, (907) 451-7007, steve.masterman@alaska.gov

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