The Washington Geological Survey LIDAR PROGRAM

Lidar stands for Light Detection And Ranging and describes a technique using a laser beam to measure the distance from a source to an object, similar to radar. When mounted on a light aircraft, lidar can very accurately measure the elevation of earth, even through lush vegetation.

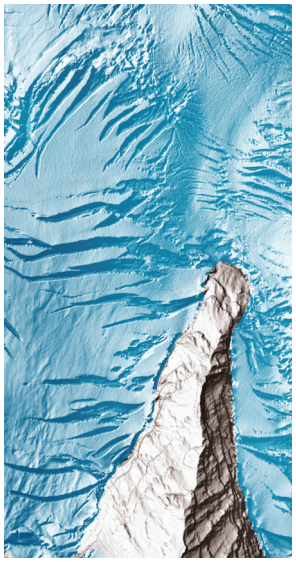
BACKGROUND

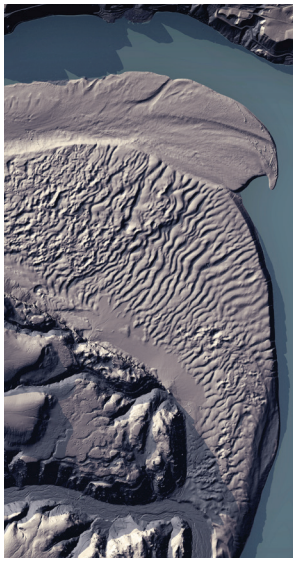
Lidar surveys are a vital source of information for many applications, including the mapping and monitoring of natural hazards.

The Washington Geological Survey (WGS) was granted funding in 2015 through 2021 for the collection and dissemination of lidar data and derived products.

WGS has developed a lidar program to support the legislation, with these goals:

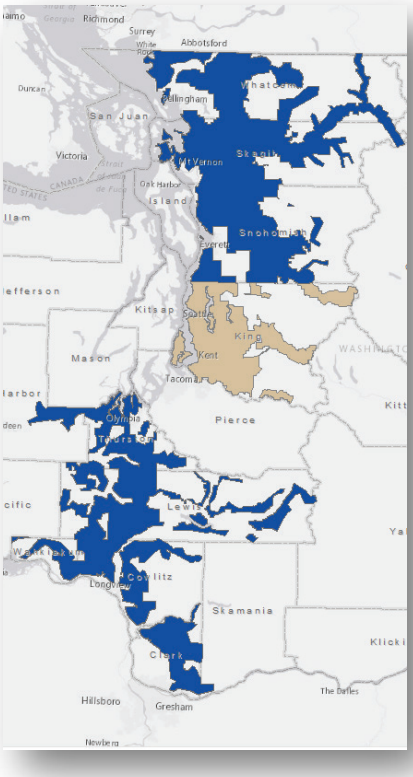
- Improve understanding of geologic hazards across the state
- Collect high-quality, consistent lidar datasets that can be applied to a wide variety of applications
- Create a centralized lidar database available to public
- Provide outreach to inform, educate, and assist with lidar collection and interpretation





Keep up with DGER LiDAR activities at www.dnr.wa.gov/lidar

CURRENT LIDAR PROJECTS



WGS has partnered with the Puget Sound Lidar Consortium, King County, and a group of local municipalities to collect more than 1,000 square miles of new elevation data in King County. More than 75 percent of the area of interest was collected this winter and spring.

WGS was also awarded a grant from the USGS through the 3D Elevation Program (3DEP) to collect more than 5,000 square miles of elevation data in the Puget Lowland, 47 percent of which was acquired this spring. WGS's partners for the 3DEP project are Whatcom, Skagit, Snohomish, and Lewis Counties, the Swinomish Tribe, Seattle City Light, and Sierra Pacific Industries.

Both projects will generate high-quality lidar data where geologic hazard mapping and monitoring is needed most.

WASHINGTON STATE DEPT OF NATURAL RESOURCES

www.dnr.wa.gov/geology

LIDAR WEBPAGE

More information on Survey's Lidar Program, as well as information on current and future projects and the development of the portal, is available on the lidar webpage:

http://www.dnr.wa.gov/lidar

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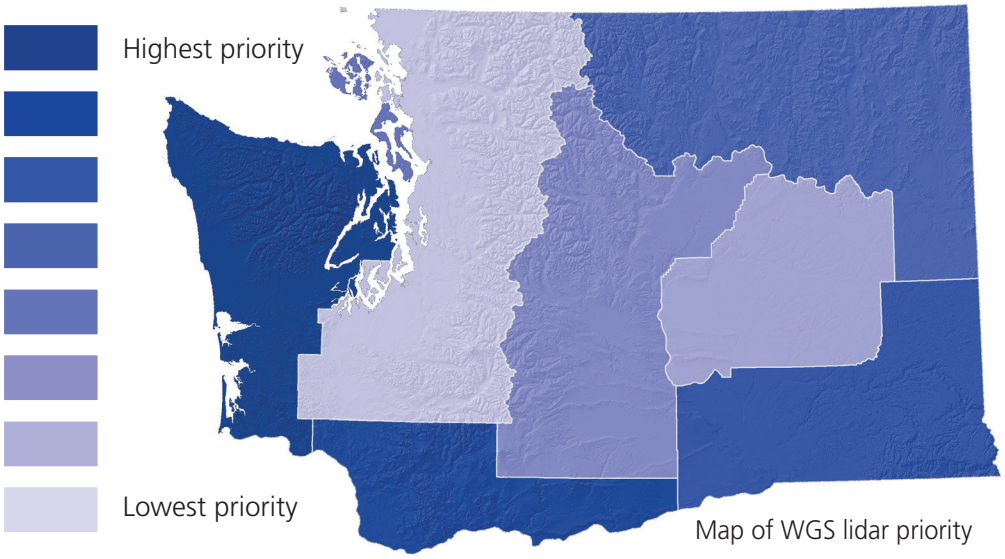
FUTURE LIDAR PROJECTS

WGS is looking forward to future lidar collection and is beginning to plan the acquisitions for the 2017–2018 biennium. Funding partnerships provide the best support for large-scale lidar surveys, and ensure that the highest quality data is gathered by taking into consideration multiple end-user applications.

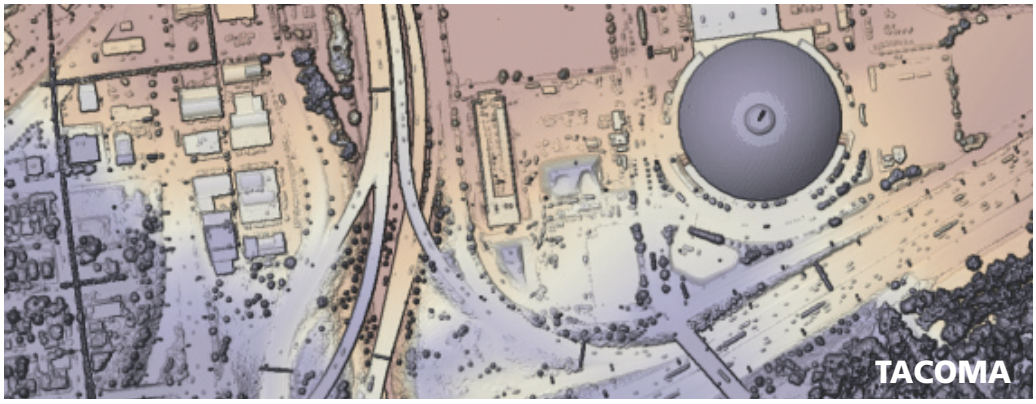
While the Survey's priorities are to map geologic hazards across the state, WGS is also soliciting for participation where partners need data the most. If you have a lidar project in mind, please contact the WGS Lidar Program.



Map of WGS lidar priority

LIDAR PORTAL

WGS has released a beta-version portal solution to disseminate lidar data. The portal provides users the option to download first-return and bare-earth DEMs, hillshades, and (coming soon!) LAZ (compressed LAS) files of original point-cloud data. http://lidarportal.dnr.wa.gov/

Available data served:

- Active lidar projects in Puget Lowland and King County
- DNR's lidar inventory from previous collections
- Puget Sound Lidar Consortium data
- Data donated from counties and cities