Expect flyovers in the Teanaway

by Jim Fossett

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TEANWAY – The Teanaway Community Forest Citizens Advisory Committee reports an air-to-ground mapping project is scheduled for the forest and may already be in progress. Firm dates for the flyovers have not been announced because all is dependent on weather.

Eric Winford, a forest planner with the Dept. of Natural Resources (DNR) in Ellensburg said, "The contracted air crew will be using LIDAR to map.

"Basically, we'll get data on the shape of the ground as well as the vegetation that covers it.

"With the data we can create detailed topographic maps that help with the identification of floodplains and old river channels.

"We'll also be able to identify old landslides, pinpoint steep slopes that could pose a danger, and get the height of trees in the forest and whether it is an open canopy, closed canopy, or multi-story canopy. That will help us understand forest conditions.

"With LIDAR data you can even pick out old roads and railroad beds. Detailed LIDAR data can show the shape of a riverbed."

Winford said once the data is collected forest managers can baseline conditions in the Teanaway Community Forest and prioritize projects umbrellaed by a management plan soon due for approval.

The science

LIDAR is an acronym that stands for *Light Detection and Ranging*, a science regularly used to collect data from the air.

"It's basically pulsed laser beams," said **Stephen Slaughter**, a hazards geologist with the Department of Natural Resources who will be collecting and evaluating the data."

Slaughter said the laser does it thing in harmony with a scanning device and a jury-rigged GPS that receives beams pulsed toward the ground and reflected back to the aircraft.

"For the project in the Teanaway the device will provide us with 3-by-3 foot grids of data. In the old days we could only get 30-by-30 grids, so you can imagine how excited we are with the advance in technology. Elevation measurements are accurate to an inch.

"To produce a topographic map with LIDAR data, we use Geographic Information System software. It's amazing. Old forest roads, old riverbeds and old floodplains and occasionally trails – just jump out at you. You can identify homes and any sort of earth works in the flight path.

"I once had to do a study on the physical features of the Chehalis River floodplain, which is huge, and LIDAR data was used for that. It was fascinating to see over the hundreds of years how the river had meandered, because LIDAR data makes those trace features jump out at you."

Asked what scientists

back in the day would have thought about LIDAR, Slaughter laughed, "They'd be flipping out over this," he laughed.

Slaughter put a little more detail on Winford's earlier remark about LIDAR data being able to identify old landslides. "We're talking about landslides that could be tens of thousands of years old."

State green lights expanded LIDAR topographic mapping Although the money isn't in the bank yet, both houses of the Washington State Legislature have passed a bill calling for, "The Washington State Dept. of Natural Resources to expand LIDAR mapping of geologic hazards such as landslides and fault lines, and then work with counties, cities and the public to disseminate that information."

According to DNR officials in Olympia, "The measure is the first of three critical first steps identified

by the Joint SR530 Landslide Commission convened by Governor Jay Inslee and Snohomish County Executive John Lovick to study emergency response to disaster."

The program, if and when funded, is estimated to cost taxpayers \$6.8 million. To date, according to an April 8 DNR press release, "A little more than a fourth of Washington has already been mapped, though much of that was done with lower quality imaging."



