



Barry Gerding/Black Press Anna Warwick Sears, executive director of the Okanagan Basin Water Board, talks to the media about the benefits of LiDAR aerial landscape imaging at Kinsmen Park in Kelowna on Tuesday.

Okanagan Valley receives \$1.45 million for floodplain mapping

LiDAR aerial imaging technology to help map valley landscape

BARRY GERDING / Apr. 10, 2018 3:38 p.m. / NEWS



The Okanagan Basin Water Board will enlist a radar technology tool to help valley communities plan and prepare for future flood events.

The technology is called LiDAR and it creates digital three-dimensional aerial imaging data to accurately map the landscape.

“The LiDAR will show where water is likely to flow. It will include modelling of how much water can be expected and help determine vulnerable locations,” said Anna Warwick Sears, executive director of the OBWB.

She said the LiDAR data will also be valuable to community planners and decision-makers in local government and First Nation communities where building should and should not be allowed from flood protection and prevention perspectives.

Speaking at a press conference Tuesday in Kinsmen Park in Kelowna, Warwick Sears said the OKWB's interest in LiDAR also caught the attention of provincial and federal government emergency planning strategy programs.

Beyond \$600,000 in flood mapping funds provided by the province to Okanagan local governments in December 2017 (administered by the Union of BC Municipalities), the province has now provided \$1.45 million to the OBWB for LiDAR, with GeoBC, a branch of the B.C. Ministry of Forests, Lands and Natural Resource Operations and Rural Development providing project and data management at no cost to Okanagan communities.

The National Disaster Mitigation Fund is currently reviewing almost \$2 million in additional funding applications for flood mapping and flood risk assessments from Okanagan civic governments and the Okanagan Nation Alliance.

Recent: [Water board seeks flooding impact support from NDP government](#)

If approved, these funds would be used to integrate the LiDAR data into floodplain maps and further develop flood risk assessments.

Warwick Sears cited the recent Calgary floods as a big turning point for government emergency preparedness agencies and the importance of LiDAR technology during a time of climate change.

“The weather in the Okanagan is changing. Last spring, we saw historic flooding in our valley, followed by a prolonged dry spell. Climate scientists have warned that extreme fluctuations are going to become more common. This project will help us plan for strong and safer communities,” she said.

The floodplain mapping that currently exists in the Central Okanagan is limited to Mill Creek and Mission Creek and a portion of the Westside, and is about 25 years old.

“We know just from last year that we had flooding issues with Powers Creek in West Kelowna, Trepanier Creek in Peachland and huge issues in Lake Country as well,” said OBWB communications director Corinne Jackson, explaining the need for updated maps.

Warwick Sears added flooding on floodplains of Mission and Mill Creeks have historically occurred, but rapid urban growth encroached on those floodplain areas.

“It's a complicated process in that within the valley, you want to have all the communities working in unison with shared information to reduce potential flood damage to our neighbours,” she said.

Shaun Reimer, in charge of Okanagan Lake dam operations for the province, said he is a champion of the LiDAR technology use because of its many benefits.

For the Okanagan project, Reimer cited the ability of the infrared imagery to collect landscape erosion data in the higher elevation areas, provide useful data for dam management in the upper watersheds, identify landslide potential particularly in the aftermath of wildfire areas.

“I think this step is really needed. As science becomes available, we have to take advantage of it,” Reimer said. “As a scientist, I think this is essential.”

Warwick Sears said the LiDAR imaging flights began this week for the low lying Okanagan Lake areas this week, a process expected to take several weeks.

“We hope the weather co-operates because the radar imaging doesn't get through if there is too much moisture in the air. Once the lakeshore is all done across the valley, then we will do the rest of the watershed starting in mid-July when the snow has melted. The snow on the ground interferes with the imaging being able to pick up the detailed contours of the landscape.

“Hopefully all the flights are done by the end of August and the data processing is done and delivered back to us by Dec. 31.”



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