

New elk survey takes flight

Researchers will use aerial drones to measure Skagit herd's size

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By Kimberly Cauvel | [0 comments](#)



Scott Terrell / Skagit Valley Herald Part of a herd of about 40 elk graze in a pasture off Challenger Road west of Concrete. Scott Terrell / Skagit Valley Herald, 2009

Unmanned aircraft will scout a section of state-managed forest land north of Hamilton next week on the lookout for elk — a known hell-raiser in eastern Skagit Valley.

For several years, a growing herd has caused trouble for farmers, landowners and drivers along Highway 20 and the upper Skagit River.

Collecting population counts from the air is nothing new; the state Department of Fish and Wildlife sends biologists up in helicopters each year. But researchers from Western Washington University, the U.S. Geological Survey, area tribes and several state agencies have partnered to give new flight research technology a whirl in the valley.

“That’s a fairly standard approach to doing wildlife surveys,” researcher David Wallin said. “It’s also expensive and potentially dangerous ... so we’re always looking for other ways to do wildlife research.”

Data collected during this first unmanned aircraft survey will be limited to a small section of state Department of Natural Resources’ forest land and will serve as a supplemental comparison to traditional helicopter flights.

The technology is relatively new and its skeptics worry about privacy, so the Federal Aviation Administration’s restrictions are extremely tight, Wallin said.

The battery-powered aircraft that will take flight next week have wingspans of up to 4 feet and are equipped with cameras that can record color video and infrared images.

“They’re quite small. They’ll probably be unnoticed — think model airplane,” Wallin said.



Elk graze in pasture land at Jim and Francis Carstens' ranch near Concrete in January 2013. The elk have become a daily menace, eating the grass meant for the Carstens' beef cattle and damaging fences. Scott Terrell / Skagit Valley Herald

From the ground, operators can watch the video live and change the automated GPS route of the aircraft accordingly.

“If you see something, if you see an elk, the operator can circle around to get a good look,” Wallin said.

Wallin is an environmental science professor at Western Washington University’s Huxley College of the Environment. He and a graduate student are researching elk in the valley in an effort to determine where they cross the highway, where they get hit by cars and what could be done about it.

The Washington State Patrol is very interested in traffic safety on Highway 20 because of the animals, Wallin said. Earlier this spring, the agency used its own to test infrared camera technology’s ability to detect elk along the highway.

“The infrared was really, really useful for being able to pick up elk in deciduous forests,” Wallin said.

The USGS Unmanned Aircraft Systems Project Office is coming to Skagit to provide the aircraft for this survey, on a request from the Stillaguamish Indian Tribe.

The office is evaluating the potential use of the technology for various aerial research purposes.

While the unmanned aircraft trial run in eastern Skagit County is restricted to a small space, the technology could be used on a much larger scale if successful.

“I’m convinced over the next five years or so, unmanned aircraft are going to be used very widely for a variety of things,” Wallin said.

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