

Northwest Guardian

Lessons in land management

By Rachel Young

May 31st, 2007

A 25-foot long, red blimp hovered over Training Area 3 South May 23, taking pictures of what is underground.

The blimp was part of a workshop in archaeological geophysics put on by the Washington State Department of Archaeology and Historic Preservation. Land managers from state agencies, like the Department of Transportation, gathered at Fort Lewis to learn a whole series of techniques for seeing beneath the surface of the ground, said Bret Ruby, cultural resources manager for Fort Lewis public works.

Participants learned how to use, and the advantages of, ground-penetrating radar, a magnetometer, a resistivity instrument and thermal and infrared imaging from the blimp. These are less destructive and more informative techniques to collect data from beneath the ground without having to move one shovel of dirt.

These are all ways to minimize the amount of excavation, or help you better target the excavation you're going to do," Ruby said.

Although excavation has been a main tool of archaeology, it is inherently destructive, not to mention expensive, Ruby said.

Once you start excavating and taking things out of the ground, you can never put them back, it's a limited resource," Ruby said.

The workshop used Fort Lewis land and content and equipment from Statistical Research, Inc., to help land managers in the state to learn the latest techniques in archaeological geophysics and how applicable those techniques might be," said Matthew Sterner, transportation archaeologist for DAHP. He hopes to make the workshop, the first of its kind, an annual event.

The site used for the workshop was once the location of several buildings from the reservation period where the Nisqually Indian Agency and other buildings sat.

The excitement for us is that we are here collecting real data for the fort," Sterner said.

"Imagine the information we could pass on to the fort about their own cultural resources that they are stewards for."

Like many Indian tribes around the state, the Nisqually do not want the soil disturbed by more invasive archaeological techniques. The information gathered at the workshop gives state agencies options on how to discover what resources there might be without the disturbances. Sterner hopes that the people who attended the workshop will use this information to improve their land-management.

These types of techniques just have not been used to their full potential within Washington," said Christopher Dore, chief marketing officer for Statistical Research, Inc. There have been incidents in the past in Washington where construction sites have turned into fiascos because not enough work was done up front to identify archaeological resources, Dore said. The state is interested in getting people trained up so they at least know enough to be able to consider using these types of techniques, Dore said.

Archaeological geophysics techniques allow for more environmental stewardship as well

as respecting the wishes of native tribes who do not want to see their land destroyed. In a preservation sense, we don't want to dig; we're trying not to as much as possible in archaeology," said Aaron Fogel, a graduate student from the University of Arkansas. "These methods allow that to happen much more easily because we can map entire sites without digging at all.

Fogel taught groups how to use the resistivity instrument, a pronged device that sends an electric current into the ground and measures the resistance of that current. Different rates of resistance can tell archaeologists if there is something of interest in a certain area. For Ruby and the cultural resources staff, this technology is particularly interesting. Because much of the land that Fort Lewis sits on once belonged to the Nisqually Tribe, the cultural resources staff works closely with the tribe to manage sites that might be historically significant. Specifically, the technology can help Ruby and the tribe find where there are human burial sites without disturbing the ground, which is sacred to the tribe.

For the Nisqually Tribe, there is a very strong desire to avoid disturbing human remains, but there are a lot of unmarked Indian cemeteries, or even unmarked pioneer cemeteries, that have been lost over time," Ruby said. "This is one way, through geophysics, to find those cemetery sites, and protect them without disturbing the remains that might be there."