

WEEKEND FOCUS: SCIENCE / HEALTH

# SLICE OF LIFE

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**Field trip participants board a helicopter** earlier this month at the Mica Creek clear-cut near Santa, Idaho. Potlatch Corp. provided the ride to the site, allowing University of Idaho scientists, Potlatch employees and journalists a look at the site of more than a decade of study and data collection.

E. Kirsten Peters/Daily News



# Clear-cut cooperation



E. Kirsten Peters/Daily News  
**The Mica Creek clear-cut as seen from the air.** Large healthy trees are left to act as sources of seeds in the area, Dead snags are left standing for the use of certain bats and other wildlife.

# Potlatch teams with university scientists for study near Santa; data should help both better understand effects of timber harvest

BY E. KIRSTEN PETERS  
Daily News Staff Writer

The idea of public-private cooperation is trendy these days, and it's become reality in a large swath of dense woods northeast of Santa, Idaho.

In 1990, Potlatch Corp., which owns the land throughout the Santa-Clarkia area, set aside some 85,000 acres of the Mica Creek watershed for a study project. The goal was to measure stream flow, stream temperature and stream sediment transport in the watershed, both before the woods were disturbed by human activity and after logging had begun.

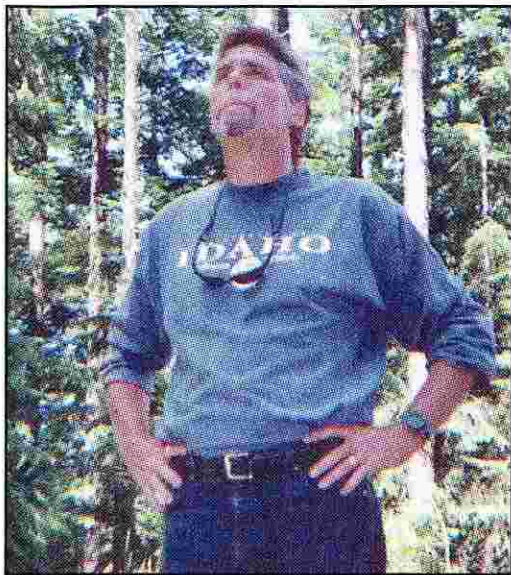
The good news is Potlatch has clear data from Mica Creek indicating it can harvest timber without disturbing the watershed. Now several researchers from the University of Idaho are setting up a variety of projects in the same area to better understand ecological relationships, the effect of timber harvests on the land, and to examine the research results produced by Potlatch.

When Potlatch began its effort in 1990, the company hired a technician and set up several different types of instruments at a number of places around the watershed. Potlatch built flumes to measure sediment transport on small tributaries of Mica Creek as well as on the main stream. For seven years, the data from the undisturbed woods rolled in.

In 1997, Potlatch crews built a modern logging road into the watershed as stream monitoring continued. By 2000 Potlatch realized it had a problem: the company had too much data and not enough expertise to analyze it.

Enter the academics at the University of Idaho.

"This is a great example of local relevance coupled with international significance because of the rigor of the science involved," UI College of Natural Resources Dean Steven Daley Laursen said on a recent field trip to the watershed.



E. Kirsten Peters/Daily News

**Steven Daley Laursen**, the dean of the UI's College of Natural Resources.

watershed studies in the intermountain west are 20 to 30 or more years old. Logging practices have changed a lot during that time so the studies don't reflect what we now do," Cundy said.

After logging the paired areas, Potlatch burned some of the land and sent in a crew to plant seedlings.

"This watershed had been logged in the 1920s," Cundy said. "Everything was taken except for some old growth cedar down along the lower portions of the creek. They had rotten cores so they didn't have any value. The cedar is still there and what we've harvested is second-growth on the hillsides."

The data gathered to date appear to show that the effect on the watershed of the logging road and the paired harvested areas has been minimal.

UI researchers.

One of the ongoing debates in the forest management field is whether logging increases stream flow and the frequency of flooding downstream by increasing runoff. Recently, some politicians in Colorado proposed increased logging as a way of increasing the water supply in local streams, according to *The Denver Post*.

Academics studying the question of stream flow below harvested areas have been divided, some find an increase in stream flow and flooding frequency while others find no such correlation.

UI forest resources professor Timothy Link is preparing to weigh in on this contentious field.

"The timing and volume of water flows from forested watersheds is especially sensitive in areas of what we call the transient snow zones, where the snowpack melts periodically during the winter (as at Mica Creek)," Link said.

Link and his graduate students will be intensively studying the Mica Creek watershed in the years to come. They also will go over the Potlatch data with a fine-tooth comb.

"Although the Potlatch results to date show little impact, these analyses are very preliminary and we have yet to take a hard, detailed look at the data," Link said. "I'm going to be hesitant to say that there are no detrimental impacts until we've been through reviews with our (scientific) peers elsewhere. That's just my scientific caution."

Link's work is funded largely by federal money.

In the years to come, Daley Laursen expects half a dozen UI faculty members and a score of graduate students to be involved in the Mica Creek project in one form or another, monitoring fish and amphibian populations or trying new approaches to remote-sensing techniques.

The minimal effects seen so far from harvest activities in the Mica Creek watershed

The field trip brought together scientists from the UI, Potlatch employees and local journalists. All participants toured the watershed at ground level and also in a helicopter provided by Potlatch.

After the seven years of baseline monitoring, Potlatch harvested trees in two paired areas of the watershed, one as a clear-cut and one as what is termed a partial cut. Technicians and academics monitored the streams and made measurements of air temperature on a transect line drawn straight through the watershed.

Potlatch has put \$1 million into the project to date, according to Potlatch's Terrance Cundy.

"Our motivation for this study was that the

"Temperature (in some parts of the stream) went up about 1 degree, but then it went down again lower in the watershed as groundwater mixing cooled the stream ... and the sediment load increase worked out to be about one pound per acre (of harvested land)," Cundy said.

That sediment figure is only about 10 percent of what has been reported elsewhere in the Northwest. No soot from burning on the hillsides could be found in the stream sediment, and fish populations in Mica Creek have been stable or even increased during the period studied.

These minimal impacts make the Mica Creek watershed a showcase for Potlatch as well as an ongoing natural laboratory for the

may actually be smaller than effects seen elsewhere in the Northwest from the recreational use of forested lands.

"The impact of ATVs (All-Terrain Vehicles) may be huge," said William Elliot of the U.S. Forest Service's soil and water engineering group in Moscow.

ATVs expose bare soil when they repeatedly drive over the same areas. Some ATV users like to drive straight up steep terrain, making powerful pathways for the erosion of sediment into lower-lying streams.

"The ATV impacts may be larger than careful harvesting of timber," Elliot said.

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