

# Selection cutting: Panacea or damage in disguise?

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by Betsy Herbert, *Earth Matters*

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*An aerial view of Ramsey Gulch, made in fall 2002, an area 'thinned' by loggers in the southeastern corner of Santa Cruz County. (AP Photo/Redwood Empire, HO)*

It's not difficult to convey the environmental impacts of clear-cut logging; just look at the big, ugly bald patches of scarred earth after a clear-cut and you get it. But too often, an alternative to clear-cutting — known as selection logging — is offered as a panacea. Wow, it looks so much better than a clear-cut, especially when you're looking at photos taken by timber companies doing the logging.

But if you get down into the weeds, so to speak, as forest scientists do, you start finding that selection logging also has problems...they're just not as visible. One of the biggest problems of selection logging is the ground disturbance from the haul roads and skid trails cut into the forest to take the trees out.

Perhaps the most generally ignored drawback of selection logging is that, in order to extract the same amount of timber, the selection logger has to cover a bigger area than the clearcut logger. It figures...if you're not taking all the trees out, you need to move further out around you to make up the difference. What follows is an expanded road network to cover the larger area.

Road density in forested watersheds is acknowledged nowadays as a good indicator of the health of native fisheries...the more miles of road per square mile of land, the worse off the fish are. The once abundant coho salmon are now virtually extinct in the Santa Cruz Mountains. The NOAA Fisheries Coho Recovery Plan currently lists roads as one of the most serious issues to be addressed to restore fisheries in Santa Cruz County.

In 2001, the City of Santa Cruz Water Department had for 30 years selectively logged its 3,995 acres of forested land surrounding Loch Lomond, which stores drinking water for the city. Then some citizens including myself demanded that the City Council commission a study to see if the logging was impacting the city's water supply.

The City Council agreed and hired a team of environmental consultants. The scientists found that the road network had contributed significantly to the sedimentation of the Loch Lomond reservoir and its feeder streams. The study recommended that the city stop the logging because of the impacts on water quality. It also recommended that the city consider getting rid of those logging roads — quite an expensive undertaking. So expensive, in fact, that the cost of getting rid of existing logging roads would likely exceed the total logging revenues gained by the Santa Cruz City Water Department over the previous 30 years.

As important as forests are to protecting public drinking water supplies, they are also “the only proven system that can remove and store vast amounts of carbon dioxide from the atmosphere at the scale necessary to keep global temperature rise below 1.5 degrees Celsius this century,” according to a national study by the Dogwood Alliance (2017).

Santa Cruz County residents are perhaps a little too optimistic about the state of our local forests, simply because we don't practice clearcutting here and the problems aren't as visible. But underestimating the human threats to forests is a worldwide phenomenon, mostly because there has been no way to measure the less visible damage — until recently. A Woods Hole Research Center paper published in *Science* last month explains how new tools have made it possible to measure the damage in degraded forests, beyond the more dramatic and visible sites of clear-cutting and

deforestation. Worldwide, forests are losing carbon, with 69 percent of the loss coming from smaller-scale degradation and disturbance.

“With degradation, you lose a few trees here and there — from selective logging, from people relying on wood for fuel, people foraging and collecting,” according to one of the researchers. “But you also have natural disturbance from drought, and increasingly, with climate change, you have fire where you didn’t before.”

*Betsy Herbert is a freelance writer who serves on the boards of the Santa Cruz Mountains Bioregional Council and the Center for Farmworker Families. You may contact her through her website at [www.betsyherbert.com](http://www.betsyherbert.com).*