Logging: Environmentalists seek federal study of harvests

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eral Accounting Office investigation of the role that timber harvests might have played in flood damage.

A review of forestry studies — and interviews with forest hydrologists, geologists, road builders and other experts — confirms that even without any logging the February storm still would have created widespread damage. Indeed, some forested areas, such as the Salmonberry drainage of the Tillamook State Forest, appeared in a recent helicopter fly-over to suffer more slides than nearby areas logged by Stimson Lumber Co.

But the studies and experts also indicate it's too simplistic to put all the blame on the storm. In some areas, acts of people — particularly road building — helped along this act of nature.

The biggest risks involve building roads on land that, due to its geology, is inherently unstable.

"That's the lesson we've learned from the '96 flood, and we have those unstable areas mapped and there's no reason to make the same mistake a second time," said Jack Gerstkemper, a Mount Hood road engineer.

The aerial survey counted 91 slides in clear-cut areas, 93 in roaded areas and only 59 in forested areas. The origins of another 11 slides could not be determined.

The survey findings reflect earlier, and more thorough, studies.

A 1975 study by Fred Swanson, a Forest Service resource geologist, looked at timber harvests in a federal forest watershed east of Eugene. Swanson found that the combined effects of logging and road-building "appear to have increased slide activity on road and clear-cut sites by about five times relative to forested areas over a period of about 20 years."

A 1984 study by G.W. Brown, now the forestry dean at Oregon State University, found that logging and roading of steep Coast Range land "increase the frequency and destructiveness of landsliding. Slides in clear-cuts move further and cause more damage than those in uncut timber."

Studies document sedimentation

Several studies also have documented increased sedimentation rates from heavily logged areas. That possibility troubles Salem Mayor Roger Gertenrich who is trying to restore the city's drinking water system.

The water flows from Detroit Reservoir, which received a huge slug of sediments following the February storm. He fears that the sediment problem might have been intensified by logging in some of the watershed drainages.

"Fundamentally, the people of Oregon know, and you'd have to be very dense not to see the relationship between logging, roads and turbidity," Gertenrich said.

In an effort to reduce the risks of logging, the past quarter-century has seen a kind of forest revolution with a variety of new techniques used by federal, state, and private-land loggers. Roads are better surfaced and often routed along ridgetops rather than winding their way up erosion-prone mountain faces. Excavated earth is hauled away rather than dumped off the sides of fresh-cut roads.

For the new roads, the storms were an acid test. And many appear to be doing pretty well.

"What we found in our aerial reconnaissance is that our newer construction is what stayed on the mountain," said Gerstkemper, the Mount Hood road engineer.

On public lands, the intensity of logging also is on decline. Current annual harvest levels have dropped by 80 percent compared with the '80s, according to Swanson, the Forest Service geologist. Where logging does occur, new techniques avoid the gouges that used to come from dragging cut timber uphill to staging areas.

Old roads troublesome

But the Forest Service, as well as state and private land managers, is still stuck with the legacy of past decades of logging. The biggest trouble spots are the miles of old roads, many of which don't meet current standards. These roads still need to be maintained because plugged culverts and eroding roads can actually trigger slides and washouts in big storms.

Most of those roads are the responsibility of the Forest Service. The agency is trying to shut down some roads and keep up the rest. But that all costs money, and that's harder and harder to come by.

The Forest Service road maintenance budget for Washington and Oregon has declined from $71.2 million in fiscal year 1985 to only $22 million in fiscal year 1995. "That's just about half of what we need to adequately maintain our current road system," said Gail Aschenbrenner, a Forest Service spokeswoman.

Poor maintenace might even have intensified some of the damage wrought by the storm.

"We just can't get to every single culvert. No way," said Deigh Bates, a Willamette National Forest hydrologist.

Peter D. Sleeth of The Oregonian staff contributed to this report.