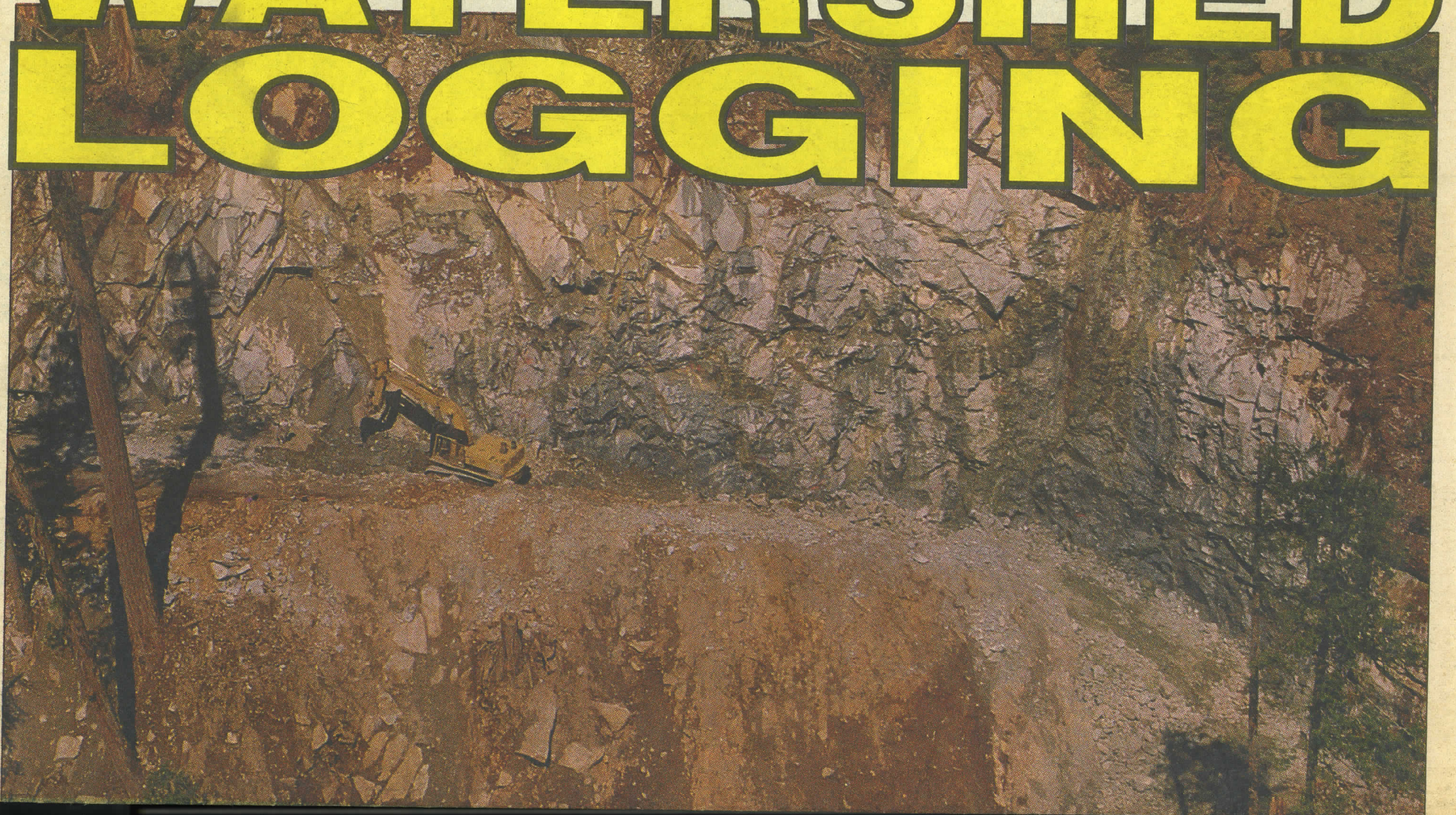
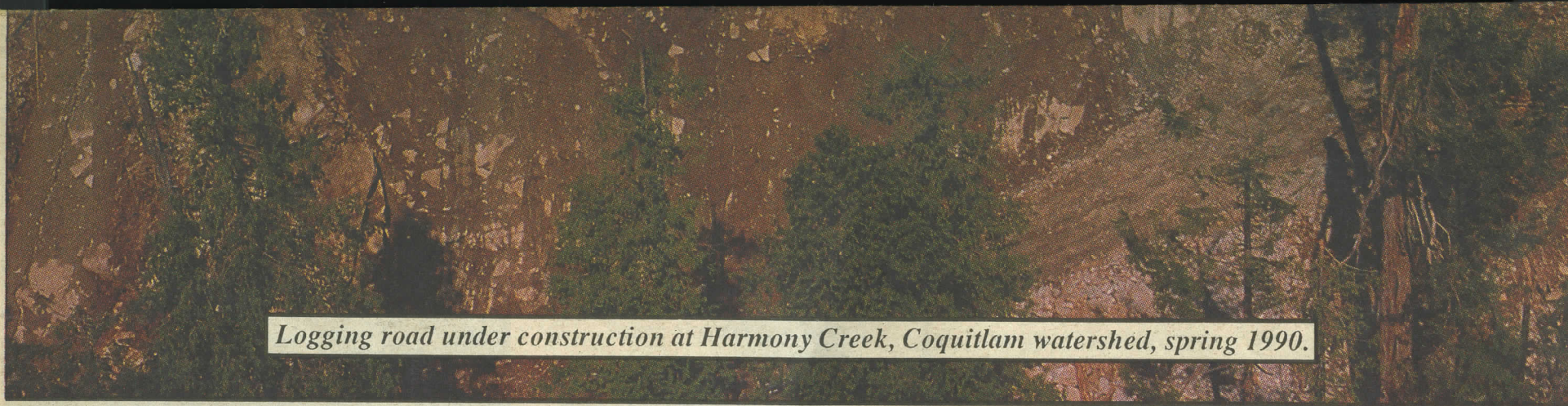


/// HALT /// WATERSHED LOGGING





Logging road under construction at Harmony Creek, Coquitlam watershed, spring 1990.

Evidence mounts linking your dirty tap water to CLEARCUT LOGGING!

Since 1961, the Greater Vancouver Regional District has conducted a program of clearcut logging and roadbuilding in the Capilano, Seymour and Coquitlam watersheds, the water supply areas for Greater Vancouver.

Never-before-logged wilderness forests, including some of the finest stands of ancient western red cedar, western hemlock, balsam and Douglas-fir left in the lower mainland, are being systematically clearcut and replaced with second-growth tree plantations; all under the guise of "good watershed management." Every year about 130 hectares of 300-year-old (or older) rainforest comes crashing to the ground in Greater

Vancouver's drinking water supply areas. That's an area one third the size of Stanley Park, equivalent to 2,700 city lots. To bring the chainsaws and their operators into these stands - a privilege denied the general public - several kilometres of 15-

foot-wide logging roads are blasted out of the steep, unstable mountainsides of the Capilano, Seymour and Coquitlam watersheds every year. Numerous scientific studies show that this constitutes extremely unwise and foolhardy watershed management.

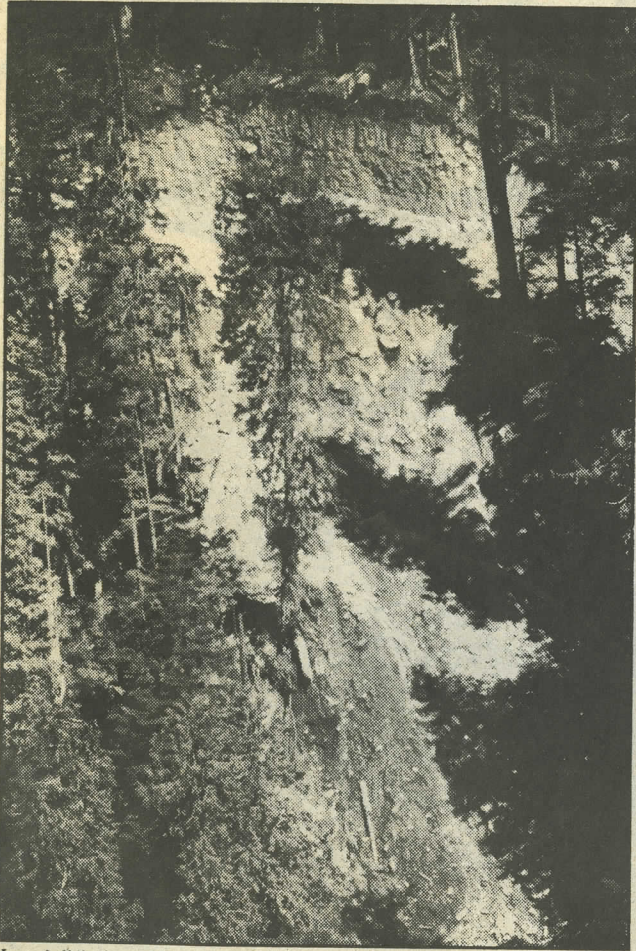
Inside...

- Is the GVRD breaking the law when it allows logging? *See page 2*
- Watershed myths and facts. *See page 2*
- Experts warn of damage. *See page 3*
- Logging triggers massive mudslide in Seymour watershed. *See page 4*
- Public opinion poll. *See page 4*

Your voice is needed now to request a full, independent public inquiry into the management of the Greater Vancouver water supply areas.

(See Public Enquiry: page 4)

Clearcut logging is negatively



Landslide into Harmony Creek directly off freshly cut logging road on steep slope, Coquitlam watershed, April 1990.



Healthy old-growth forest of giant cedar and hemlock in the upper Coquitlam watershed.

Is the GVRD breaking the law by permitting watershed logging?

The Greater Vancouver Water clearcuts into our reservoirs. Why The Greater Vancouver Water

Myths and Facts

MYTH: The GVRD is opposed to roadbuilding and pipeline construction in the watersheds on the grounds

legislation that overrides all others regarding the management of the three valleys which are the source of our drinking water. This Act established that all activities in these watersheds must be shown to maintain or improve drinking water quality.

Section 87 of this Act makes it an offence in the Capilano, Seymour and Coquitlam watersheds to *"throw or deposit any injurious or offensive matter into the water supply"*, and Section 88 makes it an offence to *"convey or cast, cause or throw, or put filth, dirt or other deleterious thing in any river from which the Greater Vancouver water supply is obtained."*

In 1972, when the watersheds were relatively lightly logged, the studies of Dr. O'Loughlin found that at that time logging and road construction were causing at least a 74 percent increase in soil erosion within logged areas. In light of this study, there appears to be a very good case for saying that the GVRD is breaking the law. How can this be? Does the extra soil erosion necessarily get into our drinking water? The answer is emphatically **YES** because both logging-caused landslides and peak stream flow rates occur *simultaneously*. Swollen creeks inevitably wash much of the extra mud from logging roads and

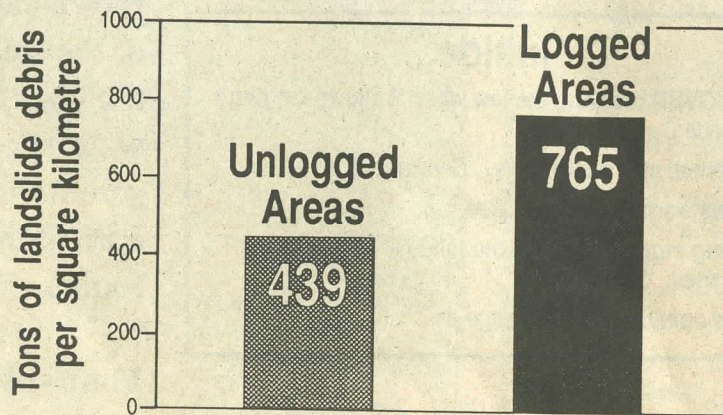
the debris to the creek, not being prosecuted? Greater Vancouverites should demand a halt to logging in their watersheds until the GVRD can demonstrate that its logging activities are, as it claims, maintaining or improving water quality.

Why did the provincial Ministry of Environment refuse, in September 1990, to act on the irrefutable evidence of GVRD-caused soil erosion supplied by WCWC's lawyers through the Regional Crown Council? Graphic photographs of a logging road under construction that had collapsed directly into Harmony Creek in the Coquitlam watershed failed to elicit a charge under

The ombudsman, approached by the WCWC which was becoming increasingly frustrated by the lack of action on this issue, advised the WCWC that he has no jurisdiction over the GVRD. The B.C. Forest Service, which issues GVRD logging permits, says it has nothing to do with water quality. Who then is the watchdog for our water supply areas?

It is surely time for the Ministry of Environment to stop abdicating its responsibility and to act to defend the drinking water quality of Greater Vancouverites, and indeed of all citizens of B.C. who are beset with problems caused by logging in their watersheds.

Impact of Logging and Road Building on Soil Erosion in the Capilano and Seymour Watersheds*



*From: "An Investigation of the Stability of the Steepland Forest Soils in the Coast Mountains, Southwest B.C." by Colin O'Loughlin, U.B.C. 1972

supply.

FACT: The GVRD has an annual program of logging road construction, much of it on steep terrain, that is resulting in increased levels of soil erosion in the watersheds.

MYTH: There are no potential health problems associated with drinking Greater Vancouver's tap water when it's murky.

FACT: "The water is safe to drink - but the potential (for a problem) is there."

— Dr. Bill Meekison, Boundary Health Unit.

"Silt-laden, cloudy water can carry harmful bacteria that can't be controlled with chlorine."

— Dr. John Blatherwick, Vancouver's chief medical officer.

MYTH: A forest management program in the watersheds culls diseased and decadent tree stands to maintain a healthy forest for the production of high quality water.

FACT: There have been no major insect attacks in the watersheds for many years. The current logging program involves clearcutting about 130 hectares of healthy old-growth rainforest per year. Logging roads and clearcutting are accelerating the erosion of water quality-reducing silt and clay.

MYTH: Logging reduces forest fire threats.

FACT: The chief fire hazard in the watersheds is the hundreds of hectares of unburned logging slash on the approximately 50 percent of logged areas that haven't been slashburned in the last 10 years.

MYTH: Better quality water will be provided by substituting a patchwork of even aged homogeneous plantations and natural regeneration for the relatively uneven aged, structurally diverse, old-growth forest.

FACT: "We produce a very high quality of water from an old-growth ecosystem."

-- Dr. Jerry Franklin, western North America's foremost expert on old-growth forests.

... affecting our drinking water



Clearcut with associated landslide, Eastcap Creek, Capilano watershed, Dec. 1988.

Experts warn of damage

"The combined impact of roads and clear-cut logging has constituted a fivefold increase in landslide erosion relative to undisturbed forested areas."

- *F.J. Swanson, C.T. Dyrness, Impact of clear-cutting and road construction on soil erosion by landslides in the western Cascade Range, Oregon*

"Even a 'full benched' road inevitably upsets the balance of forces within the soil mantle. A decision to build a road in an area of unstable topography constitutes a calculated risk no matter how well the road is designed and constructed to minimize damage."

- *R.L. Fredriksen, A Case History of a Mud and Rock Slide on an Experimental Watershed*

"In an area of southeastern Alaska, a drastic change in landslide pattern occurred after logging. In a period of 100 years before logging, 27.3 acres were affected, but in a period of only ten years after logging, 119 acres were affected, a 43-fold increase in area."

- *Daniel M. Bishop and Mervin E. Stevens, Landslides on Logged Areas in Southeast Alaska*

"In many cases, landslides have increased greatly 5 to 20 years after clearcutting. This is because part of the strength of a soil mass comes from the anchoring effect of the tree roots. As the roots decay, susceptibility to landslides gradually increases."

- *R.M. Rice, J.S. Rothacher and W.F. Megahan, Erosional Consequences of Timber Harvesting: An Appraisal. Proceedings on Watersheds in Transition*

"...experimental watersheds throughout the country (United States) show a pronounced increase in annual streamflow after clearcutting."

- *Jack Rothacher, Regimes of Streamflow and Their Modification by Logging*

The Greater Vancouver

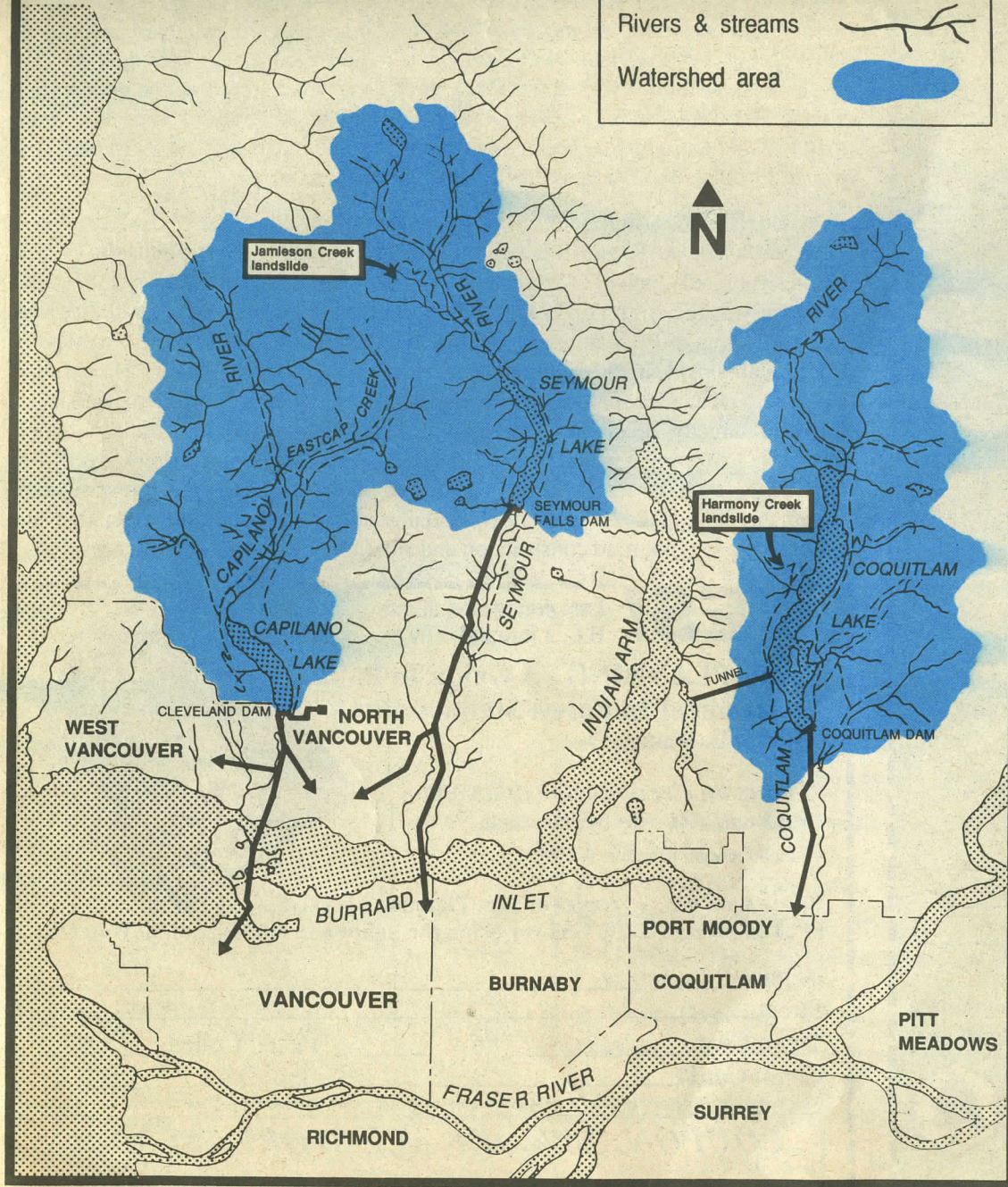
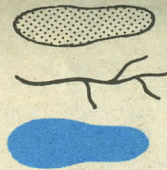
Legend

Main logging roads



Watersheds

Major water mains
Water
Rivers & streams
Watershed area



"It is extremely important to maintain ground cover and to practice uneven-aged management - if, indeed, any logging at all - with subalpine and alpine species and on steep terrain in snow country."

- Glen O. Klock, *Snowmelt Temperature Influence on Infiltration and Soil Water Retention*

"Type of logging has a tremendous influence on soil stability, as does the intensity of cut - whether the area has been clearcut or selectively logged."

- C.T. Dyrness, *Erodibility and Erosion Potential of Forest Watershed, International Symposium on Forest Hydrology*

"The rate of soil transfer during a heavy, but not unusual, storm was forty-one times as great on clearcut land as on undisturbed old-growth forest and forty-six times as great where road failures occurred."

- J.W. Schwab, *Mass Wasting: October-November 1978 Storm, Rennell Sound, Queen Charlotte Islands, British Columbia*

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Rationale for watershed logging discredited

Logging triggers massive mudslide in Seymour watershed

Sometime around Nov. 23, 1990, a massive new mudslide originating in a clearcut roared out of a UBC research area in the Seymour watershed. This slide may prove to be the final blow to the "scientific" arguments for continuing clearcut logging in the three valleys which supply the greater Vancouver area with its drinking water.

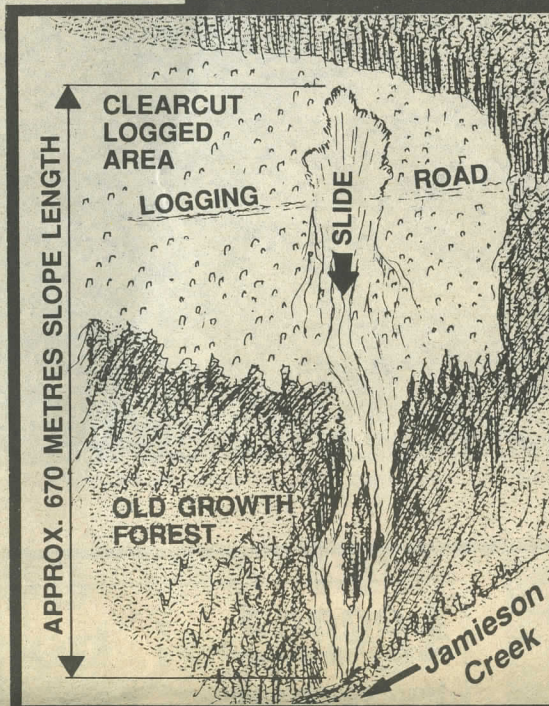
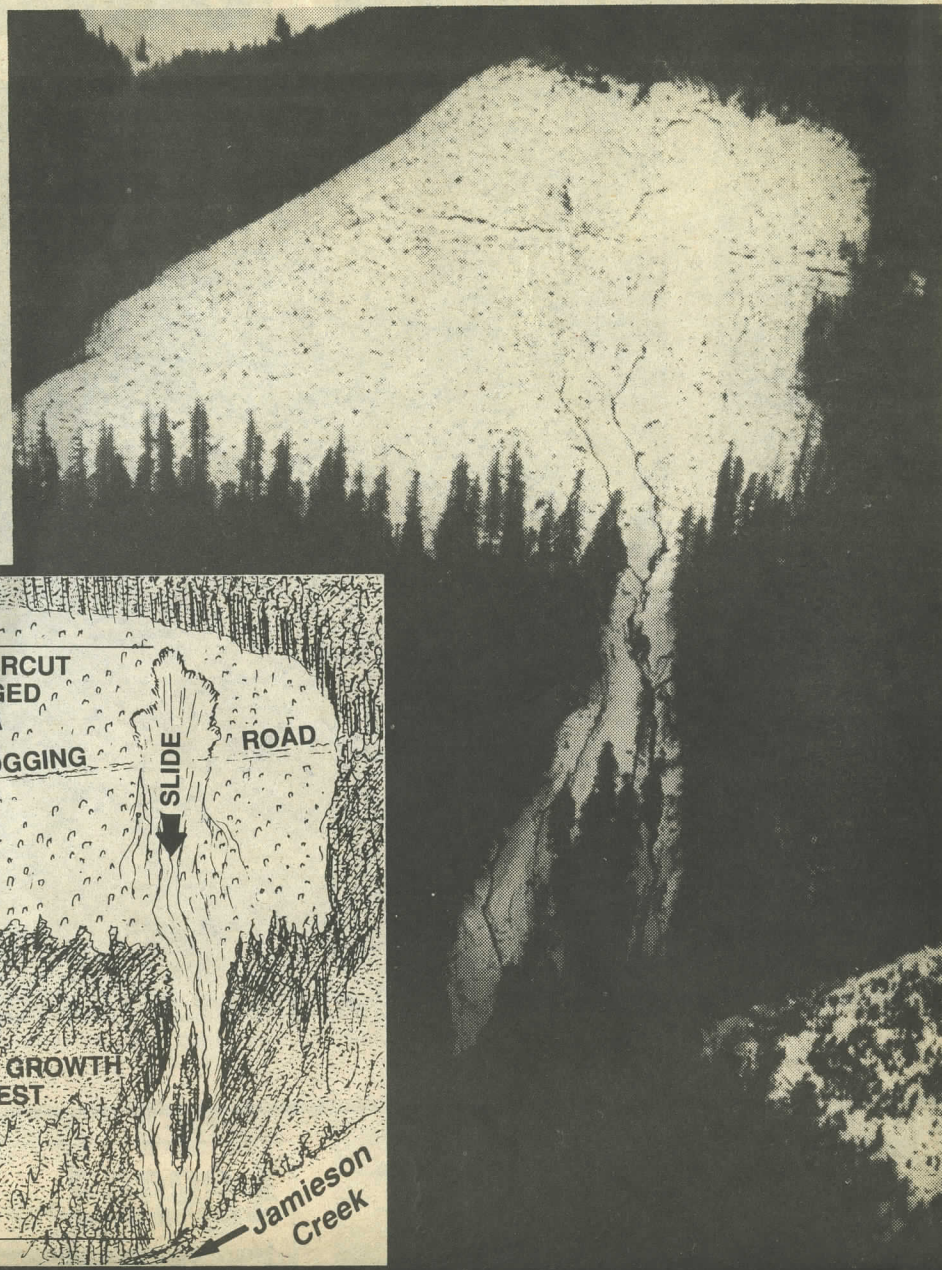
The new mudslide, photographed and videotaped from a helicopter on Dec. 6, 1990 by wilderness committee staff, occurred in the Jamieson Creek experimental watershed, the very valley which the GVWD has been using as "proof" that continued logging above our water supply reservoirs causes no harm.

Research in the Jamieson Creek watershed carried out by Prof. Doug Golding of UBC has, at least until now, satisfied the Greater Vancouver Regional District that clearcutting in the watershed should continue. An Aug. 18, 1989 report to the Greater Vancouver Water District (GVWD) Administration Board, from the Water and Waste Management Committee of the Regional District, quotes Dr. Golding as follows: "Only 19 percent of the Jamieson Creek watershed (Seymour) was logged, a much smaller percentage than is normally taken in coastal areas. The results of the post-logging study (1984-88) show no significant hydrological changes resulting from the harvest. The GVWD can be fairly confident that their forest management creates no deleterious effects."

Dr. Golding also said, in an article in the Vancouver Sun of Dec. 3, 1990, that he would like to see Jamieson Creek logged a lot more, up to 39 percent of the watershed area, "to determine what fraction of a watershed can be cut without causing deleterious effects to water and the stream environment."

It appears that no further clearcutting will be necessary to prove that Jamieson Creek has suffered massive damage to its water and stream environments. Dr. Golding's statements quoted in the August 18, 1989 GVRD report were premature and, in hindsight, totally incorrect. WCWC has no doubt that the massive new mudslide observed on Dec. 6th was a major source of the chocolate brown, muddy water observed in the lower half of the Seymour reservoir.

The Vancouver region's drinking water ran a murky brown for more than two weeks last fall and a \$500 million filtration system has been proposed to correct this problem. WCWC believes that we should suspend logging and roadbuilding for five years to see if the horrendous expense of water filtration can be avoided.



Jamieson Creek mudslide covered by new snow, Dec. 6, 1990.

What you can do!

Complete this public opinion poll:

I SUPPORT DO NOT SUPPORT

- An immediate five-year moratorium on logging and roadbuilding in the watersheds;
- The call for an **INDEPENDENT** public inquiry into the impacts of past and projected clearcut logging on water quality, forest productivity and ecosystem health; and
- Consideration of using selection logging, only if it is proven that it will not diminish water quality.

Signature: _____

Address: _____

...and send it to: Greater Vancouver Regional District
Board of Directors
4330 Kingsway, Burnaby, B.C. V5H 4G8

YES!

I want to help restore Greater Vancouver's heritage of crystal-clear, pure water.

Here's my: \$500 \$100 \$50 \$25 _____ Other tax-deductible contribution to help eliminate destructive logging practices in the Greater Vancouver watersheds.

Sign me up! Here's \$25 for an annual membership in the Western Canada Wilderness Committee.

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Thank you for supporting this campaign!

Canvasser's signature _____



Public Enquiry continued from page 1

According to a 1972 UBC forestry Ph. D. thesis by Dr. Colin O'Loughlin, soil erosion in the Seymour and Capilano watersheds is being increased in logged areas by at least 74 percent over natural erosion levels in unlogged areas. O'Loughlin stated that, "large landslides were more frequent on clearfelled areas than on undisturbed slopes. Road construction, which was responsible for 14 large landslides and more than 100 smaller failures, appeared to be more detrimental to the stability of the Coast Range slopes than other activities carried out by man."

In a Dec. 3, 1990 article in the Vancouver Sun, chief engineer John Morse of the Greater Vancouver Regional District (GVRD) is quoted as saying that "the GVRD has incorporated much of O'Loughlin's work in its logging plan." Why is it then, that as recently as the spring of 1990, the Western Canada Wilderness Committee was able to photograph a brand new logging road being gouged out of an excessively steep mountainside in the Coquitlam watershed? (photo on front cover) The extreme steepness and heavy rain resulted in a mudslide, originating right at the road, that had travelled directly down into Harmony Creek which flows into the Coquitlam reservoir. The point at which the mud and debris entered Harmony Creek is only 1.5 kilometres from the reservoir. When tons of mud enter a roaring, flood-swollen stream this close to the reservoir, there remains no doubt about the direct relationship between the logging road construction and siltation of the drinking water reservoir!

YES!

I am concerned about B.C.'s forests!

TREE PLANNING - A Guide To Public Involvement In Forest Stewardship
by Joan E. Vance

"This is an election issue that cannot - and will not - be overlooked."

— Paul George, founder, WCWC

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