



Logging YOUR watershed lands!



Niagara Creek - On GVWD lands (off-catchment) 1992.

Photo by Jim Gillespie



Judge Creek - Second largest tributary to Sooke Lake. 1991

Photo by Mehdi Najari

YOU CAN STOP IT

NEW RATIONALE — SAME OLD LOGGING

Once again logging interests are attempting to gain control of the Greater Victoria Water District. This time the attempt to start up logging operations comes in the form of "logging to control pests, disease and fire." This rationale to justify logging in our watershed is not based on facts and contradicts what we do know of forest ecology.

Understanding the relationship between natural forest systems and quality water is of paramount importance in deciding how our watershed lands are to be managed. Please read this paper, pass it on to a neighbor, and, as a stakeholder, make your opinion known to your public representative who will decide on your behalf how your watershed lands will be managed.

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The Greater Victoria Water District (GVWD) is 13,900 hectares, including the Sooke and Goldstream watersheds. This natural catchment area for drinking water is owned by, and supplies water to, Victoria, Saanich, Oak Bay, and Esquimalt. It also supplies water to other communities of Greater Victoria. (See map inside). In 1949 the Greater Victoria water District was established with the following mandate:

"The preservation and enhancement of water quality shall have priority over all management policies and programs. No human activities shall occur or be allowed to occur within the Greater Victoria Water Supply Area which may compromise, endanger or prevent the collection, storage and perpetual supply of water

which meets the highest possible standards required for domestic consumption."

Despite this mandate, for the past 40 years the watersheds have also been treated as a source of timber, in disregard of the impacts logging has on the natural functions a watershed performs in preserving water quality.

Until the algae bloom of 1988 — when drinking water that smelled and tasted 'fishy' alerted consumers to the practices in our water

shed — the GVWD conducted no monitoring of the effects of logging. Only after a surge of public protest did the GVWD begin to address the issue of logging's impact on water quality. Attempting to set up a monitoring program at this late stage, while it is essential for good watershed management in the future, will offer nothing in the way of comparisons with previous years as there is no historical data to use as a baseline.

'Before and after' studies

conducted elsewhere have given an indication of the profound effects that any intensive land use — including logging and road building — can have on water quality. At the same time, it has become known that old-growth forests provide water of the highest quality. That quality could be compromised to the extent that the natural system is disturbed.

Why the GVWD did not monitor the effects of their logging operations over the last 40 years is a source of grave concern. This lack of

monitoring has allowed logging interests to continue cutting, using the rationale that there is no data to prove their activities are affecting water quality. This backwards approach to watershed management must not be allowed to prevail in an area as precious as our watershed lands.

The present attempt to continue with logging operations in the endangered ecosystem of our watershed lands under the guise of improving forest health through managing for pests disease and fire is nothing more than a smoke-screen. Changing the language used for logging the watersheds to make it more acceptable to the public is not the answer. A natural watershed is the producer of quality water. The more we tamper with this delicate balance the greater the impact we have.

The Greater Victoria Water District mandate

"The preservation and enhancement of water quality shall have priority over all management policies and programs. No human activities shall occur or be allowed to occur within the Greater Victoria Water

Supply Area which may compromise, endanger or prevent the collection, storage and perpetual supply of water which meets the highest possible standards required for domestic consumption."



Douglas fir old growth at risk

With less than one per cent of the original area remaining, coastal old-growth Douglas fir forest is the most threatened of all in British Columbia. Greater Victoria Water District lands contain the largest stands of old-growth Douglas fir left on southern Vancouver Island, with a total area of approximately 45 square kilometres. As owners of this ecological treasure, the people of Greater Victoria have in their control a biologically unique legacy on southern Vancouver Island that will, if

kept as undisturbed as possible, play a crucial role in maintaining a source of quality drinking water for generations to come.

In the past, much emphasis has been placed on the diversity of the tropical rainforests, but we are now learning that our old growth forests are far more complex than we originally imagined. According to Dr. Michael Amaranthus, a leading soil scientist in the Pacific Northwest, if we include both above and below ground zones then our temperate forests are as diverse as any.

This complexity and diversity make the old

growth forests invaluable in providing quality water and very dynamic in dealing with pests and disease. The more we disturb this complex natural balance the more we encourage problems and enter into a vicious cycle of managing our management. Dr. Michael Feller, associate professor at the University of British Columbia's Forestry Faculty, comments: "Thousands of years of natural evolution have given us the old-growth forests of our watersheds which generally do an excellent job providing high quality water."

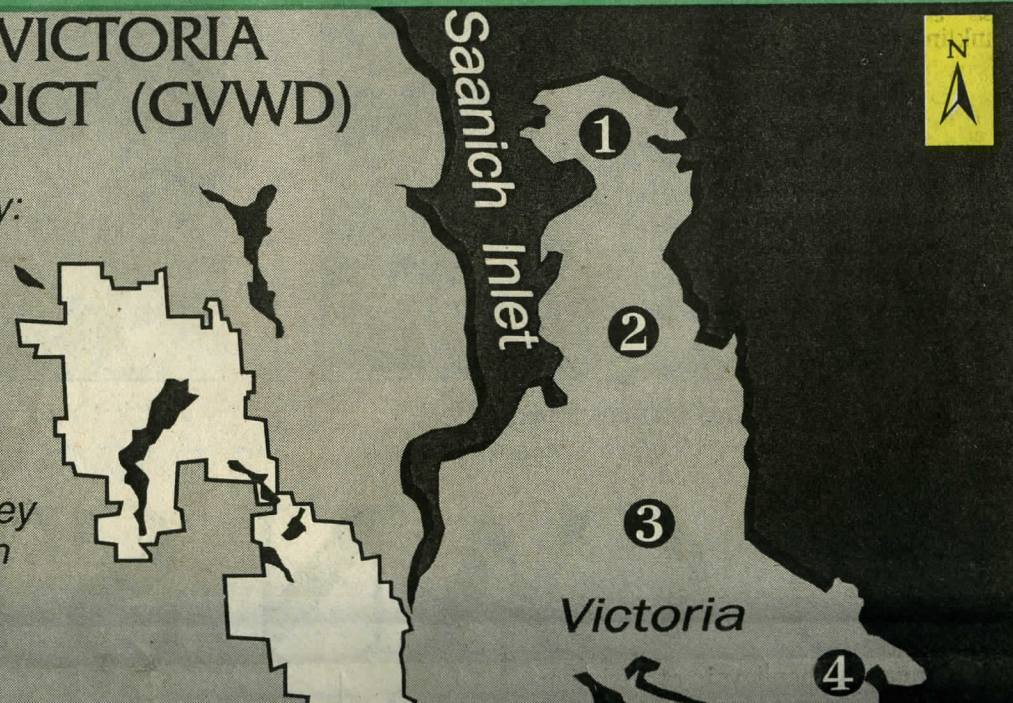
GREATER VICTORIA WATER DISTRICT (GVWD)

GVWD is owned by:

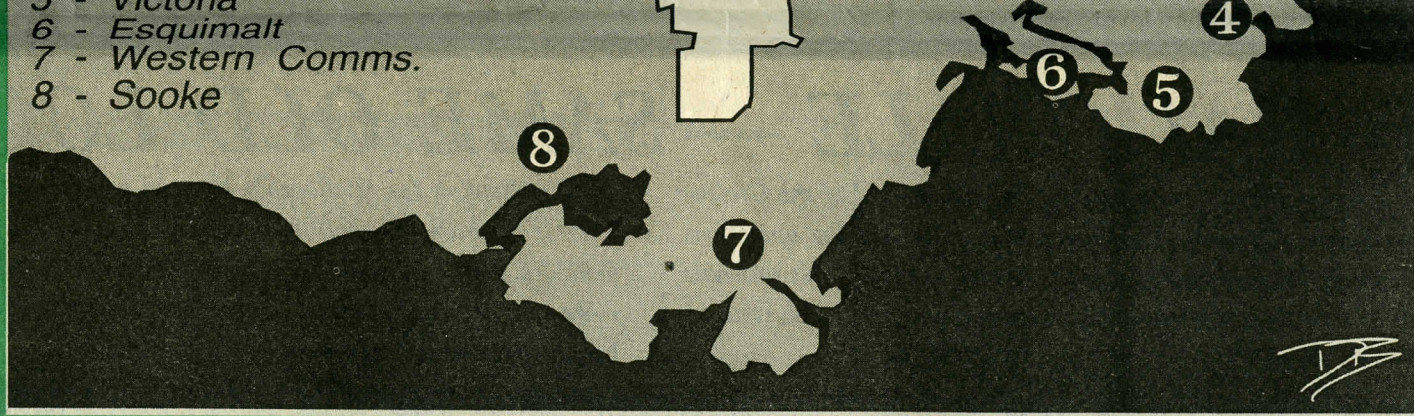
- 3 - Saanich
- 4 - Oak Bay
- 5 - Victoria
- 6 - Esquimalt

GVWD supplies water to:

- 1 - N.Saanich/Sidney
- 2 - Central Saanich
- 3 - Saanich
- 4 - Oak Bay
- 5 - Victoria
- 6 - Esquimalt



- 5 - Victoria
- 6 - Esquimalt
- 7 - Western Comms.
- 8 - Sooke



Approximate boundaries of the GVWD.

Scapegoats: Logging for pests, disease and fire

Pests, a term associated with naturally occurring plant-eating insects, are a part of any diverse system. From an industrial forester's perspective, these insects are viewed as competitors for valuable timber and thereby made out to be villains.

This is the common approach when trees are viewed in terms of dollars and cents. In the case of our watersheds, we must view the forests as an ecosystem made up of incredibly complex and diverse elements that function together, maintaining the ecological conditions of the old growth forests which result in high quality drinking water.

Dr. Tim Schowalter one of the Pacific Northwest's foremost experts on forest insects, speaking on pests in old-growth: "Contrary to numerous assertions, old-growth forests are highly productive and remarkably resistant to potential pests.

The resistance of these forests may be due largely to the diversity of plant and animal predator species."

On our watershed lands, logging interests constantly disregard and downplay the ecological approach because logging would then not have a dominant role. In turn, logging on our watershed lands is being touted as crucial to deal with pests and disease. Areas where insects have made impacts are not extensive in old-growth forests. These small areas can produce snags, or standing dead trees. But these trees are far from being void of life. They are home to a myriad of species, from birds through to insects and are part of the natural process that makes for a healthy ecosystem. These areas encourage and promote further diversity of plants and animals and are among the many attributes in an old growth forest that

make it remarkably resilient.

Disease is another word being used to promote logging on our watershed lands. 'Phellinus Weirri' is a naturally occurring native fungus which causes laminated root rot in Douglas fir. Again, to the forester who is looking for the greatest volume of timber as quickly as possible, this is regarded as a threat to timber production, and must be eradicated or controlled. Our watershed lands are not tree farms and this approach is counterproductive to maintaining the natural diversity that makes our watersheds ecologically healthy. In old growth forests this fungus is not a threat at all. In fact, it is part of the complex system that acts to encourage diversity. In the small areas that are affected, shrubs and younger trees of perhaps alder or red cedar, which are immune to this fungus, establish and provide a new

habitat and a new level of complexity. Snags and down logs are actually crucial in perpetuating the complex natural ecosystem. So this fungus acts as an agent to promote overall forest health. It just depends which perspective you look at the forests from; Timber production for maximum dollars, or a healthy ecosystem for quality water. It is on the heavily managed areas of plantations that root rot spreads over extensive areas. A joint federal and provincial forestry report found that, 'Young second growth forests are particularly vulnerable to root disease.' UBC's Dr. Michael Feller from the Faculty of Forestry sums it up this way: "On balance, the undisturbed old-growth forests of our watersheds are not particularly susceptible to insect or disease attack as evidenced by the fact that we never find extensive areas of such forests killed by

insects or disease."

Fire is a risk to the forests of our watershed lands, but again the forest type that is most resistant to its spread is the old-growth forest. Gaps and holes that exist naturally in the old-growth act as a retardant to the spread of fires. The closed nature of a managed young forest presents a high risk for fast spreading and more severe crown fires. Dr. Feller, an expert on the subject states: "Old-growth usually presents much less a fire hazard than managed forests unless extreme forms of management occur, and this is generally not done." It is widely recognized that logging and related activities actually increase risk of fire. Dr. Feller goes on to say: "Unequivocally, the net effect of forest management in the watersheds is to increase the risk of fire caused by people and logging related activities."



Water quality: It flows best from old growth

High quality water means cool temperatures and low levels of sediments, dissolved nutrients, and bacteriological contamination. Old-growth forests deliver this kind of high-quality water but, in the Greater Victoria Water District, they're at risk because of logging and the building of roads.

Logging and related activities have been shown to have considerable impacts on water quality. Do we, as water consumers and owners of the watershed lands, want any activities in our water source that could impact on the quality of our water?

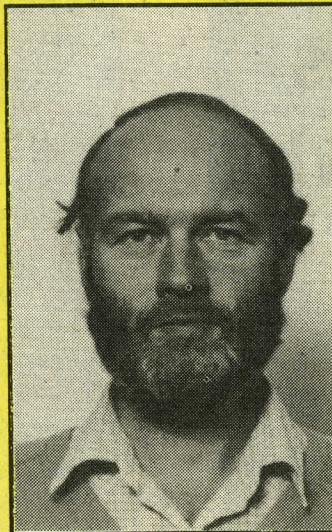
The question facing the citizens of Greater Victoria is no longer whether logging in the watersheds affects water quality. Dr. Jerry Franklin, chief ecologist for the U.S. forest service, states it this way: *"How much decrease in water quality or how much risk to water quality is...timber worth? Now that's a call your society is going to have to make."*

Water quality the priority

The over-riding priority in the mandate of the Greater Victoria Water District is to ensure the "preservation and enhancement of water quality." Pretending to accomplish that through logging or silviculture practices is a complete contradiction. Dr. Franklin sums it up this way: *"When we as foresters, talk about being able to improve water quality, we are generally blowing smoke. What we really mean is we believe we can do something without significantly reducing the water quality that is there."*

Sedimentation is a pollutant in drinking water. The U.S. Environment Protection Agency considers sediment, not toxic chemicals or municipal waste, as the

Three who know speak out



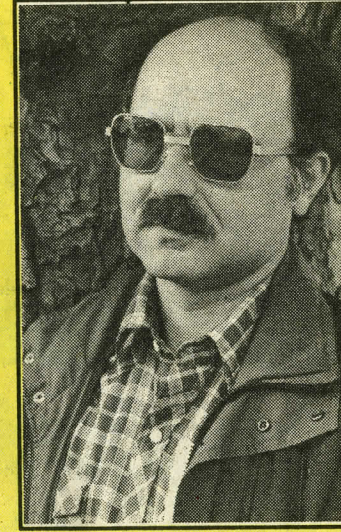
"Neither insects nor disease cause widespread death in the old growth forests of coastal B.C. Therefore, it is difficult to justify logging the old-growth forests to overcome this perceived threat."

Dr. Michael Feller,
Associate professor
University of British Columbia
Department of Forest Sciences
Faculty of Forestry



"Clearcutting damages the environment irreversibly...Clearcutting causes two kinds of ecological damage, one long lasting, and the other permanent. The long lasting damage is to the soil, the permanent damage is to biological (genetic) diversity."

Dr. E.C. Pielou
PhD D.Sc
Ecologist



"Precious little of the Douglas fir forest remains on Canada's coast. Remaining stands in the Greater Victoria Water District represent a significant piece of this endangered ecosystem. What reasons could justify eliminating some of the last major stands of coastal Douglas fir?"

Dr. Richard Hebda
Adjunct assistant
Professor of Biology
University of Victoria

ant which, in turn, can mean higher levels ingested by the consumer and increased risks associated with the byproducts of disinfection. Protecting the source of raw water from increases in sedimentation is crucial to maintaining water quality and minimizing the need for disinfectants.

Sources of sedimentation

Studies have found that logging and associated road construction immensely increase sedimentation. A B.C. forest service publication, quoting other research, reported "...a 250-fold increase in stream turbidity and sedimentation during the first rainstorms following construction of 2.5 kilometres of road on a 100 hectare watershed." The same publication, quotes other research that "soil erosion associated with forest road construction can annually remove about 200 cubic metres of material per hectare of exposed slope...much of this eroded material may eventually enter surface waters, causing water quality problems." The road density referred to in the forest service publication is about the same as the road density on our watershed lands. The GVWD itself admits, "Road construction is recognized as a major cause of stream sedimentation." According to their own management and working plans, more than 320 kilometres of road have been constructed in the district.

To eliminate the forest and much of the topsoil on more than five per cent of watershed areas then assume it does not have any impact on the water ignores the relevant research. It's mismanagement.

- *"Obviously the best risk for the watershed in terms of water quality is not to cut it at all."*
- Dr. Jerry Franklin, Chief ecologist, U.S. Forest Service.
- In 1990 over 2000 loaded logging trucks worth of timber was cut on our GVWD lands. Bumper to bumper that would be a 45 kilometre long line of loaded trucks.
- *"The poor payer of water rates is not organized, so God help him against the timber interests lobby."*
- William Angus, Former inspector and ranger, Greater Vancouver Water District
- According to the GVWD over 320 kilometres of road have been constructed on our watershed lands. Combined with hydro, railway, pipelines and construction sites on the same lands, these developments occupy an area larger than the land area of Esquimalt.
- *"The only people that have anything to lose from watershed logging are the water users."*
- Ministry of Environment official in conversation with Herb Hammond, author 'Seeing the Forest Among the Trees'
- *"Treatment units would be less than ten hectares in size."*
- GVWD chief forester's new way of referring to clearcuts while commenting on 1992 Forest Management Program.
- *"There is no scientific evidence known to the author that demonstrates that logging improves water quality."* - Ray Travers, Registered Professional Forester
- In Seattle, all of the city's old-growth forest in the watershed has been preserved. In the GVWD to date no old-growth has been preserved.
- During the recent logging moratorium the chief forester for the GVWD asked for and received permission to build more roads into the old growth.
- *"There are some things like Humpty Dumpty and watersheds, that cannot be put back together. Not even by experts."*
- Chris Frissell, fishery biologist, from 'Seeing The Forests Among the Trees', Herb Hammond
- After a major blowdown — that is, trees uprooted by wind — in the Portland, Oregon watershed, the U.S. Forest Service determined that 80 per cent of the damage could be linked directly to logging and roads.

Logging dollars don't add up

A financial report prepared for the GVWD by an accounting firm says "little effort was made to establish an accurate cost accounting system for forestry operations in the watershed."

The report, entitled 'Financial Impact of Forestry Operations on the GVWD, 1949-1991', was presented to the water district's board this spring.

Even using the questionable financial data from

the GVWD some quick calculations show how little money logging our water district lands has saved the water users. Between 1949 and 1991 (43 years) \$34 million was made from logging revenues. This makes for an annual average of nearly \$800,000. That would mean that for each water user (approximately 275,000 in '91) less than one cent per person per day was saved through logging in our Greater Victoria

Water District. What are the long term financial costs that would be passed on to the consumer if logging was to continue? We don't know. Estimates on potential costs for a filtration plant alone run anywhere from \$100 million to \$300 million. That's many times more than all combined logging profits. Watershed rehabilitation costs have not even been considered.



Here's how you can help

Who decides on watershed land use?

You and I

Citizens from the municipalities of
Victoria, Saanich, Oak Bay and Esquimalt.

Elect

Municipal governments

Mayors and council

Appoints representatives to

Greater Victoria Water Board

Number of municipal representatives:

Action alert

Decisions are now being made about the future of our water district lands. If you want to have your interests taken into account it's urgent that you write letters today. Please attend public meetings and make your voice count. Future generations are counting on you!

You make the difference

A permanent ban on logging in the Greater Victoria Water District is needed to protect this endangered ecosystem that provides us — as well as future generations of Greater Victorians — with quality water.

The good news is that the watershed lands are already owned by taxpayers in the four core municipalities of Victoria, Saanich, Oak Bay and Esquimalt. There's no need to lay out huge sums of new money to gain control over the watershed's future use and development.

Elected municipal officials from the four core municipalities sit on the water district board. The municipalities that don't actually share in the ownership of the watershed, buy their water from the GVWD.

As a resident of Greater Victoria, you have influence over your elected representatives. And they, in turn, have influence

Greater Victoria Water Board
Number of municipal representatives:
Victoria (3), Saanich (3), Oak Bay (1) and Esquimalt (1)

Directs and decides policies

Greater Victoria Water District

Citizens from the municipalities of
Victoria, Saanich, Oak Bay and Esquimalt.

Carries out policy

**It's up to citizens to inform elected representatives
on how our watershed lands are to be managed.**



World Wildlife Fund
Fonds Mondial pour la Nature

World Wildlife Fund gratefully acknowledges CIBC for its financial support of the Endangered Spaces Local Action Fund.

ENDANGERED



your elected representatives. And they, in turn, have influence over the operations of the water district. You can help stop logging on watershed lands by writing letters to the four municipal councils whose representatives sit on the board of the GVWD.

Municipal politicians can't afford to ignore letters from constituents demanding a permanent ban on logging. Be sure to send a copy of your letters to the GVWD Board.

Encourage friends and family members to write letters too, insisting that their water interests be protected. Write to more than one council.

Victoria Mayor and Council,
City Hall,
#1 Centennial Square, Victoria, B.C. V8P 1P6

Esquimalt Mayor and Council,
Municipal Hall,
1229 Esquimalt Road, Victoria, B.C. V9A 3P1

Saanich Mayor and Council,
Municipal Hall,
770 Vernon Avenue, Victoria, B.C. V8X 2W7

Oak Bay Mayor and Council,
Municipal Hall,
2167 Oak Bay Avenue, Victoria, B.C. V8R 1G2

Chairman and Board,
Greater Victoria Water District,
479 Island Highway, Victoria, B.C. V9B 1H7



To: Western Canada Wilderness Committee
Suite 201-19 Bastion Square, Victoria, B.C. V8W-1J1 Canada

YES! I want to help the campaign to halt watershed logging.

I enclose: \$25 \$35 \$50 \$100 \$250 \$500 \$ _____ Other

Sign me up! I enclose \$30 for an annual membership in the Western Canada Wilderness Committee

Name: _____

• Please make cheque or money order payable to **Western Canada Wilderness Committee.**

Address: _____

Thank you!

Postal Code: _____

• Tax receipts will be issued for donations of \$25 or more.

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