

THE *BIG* EDDY

Water District	Watershed Number*	Source	User	Reserve Area Requested**
Revelstoke	1a	Clachnacudainn Creek		15.3
"	1b	Greely Creek		20.3
"	1c	Hamilton Creek	City of Revelstoke	5.6
"	1d	Bridge Creek		1.7
"	1e	Napoleon Creek		1.2
"	2	Dolan Creek	Big Eddy W.W.D.***	1.7



A History of the Big Eddy Waterworks District and its Long-Standing Battles to Protect the Dolan Creek Watershed Reserve



By Will Koop, September 30, 2013
 B.C. Tap Water Alliance (<http://www.bctwa.org>)

CHAPTER 11. BATTLING THE NEW ORDER

Mr. Lloyd Good, Chairman of the Big Eddy Waterworks Ltd., has informed me that he has received a double registered letter indicating that the Big Eddy Waterworks did not meet B.C. Safe Drinking Water Regulations It seems a good part of the problem was as a result of a logging operation, on private land within the Dolan Creek watershed. This logging operation was not monitored by government, and this neglect led in turn to the problems of water purity.

Since 1994, the watershed has through the hard work of the Trustees been able to provide potable water to its water users. This is a hard working and dedicated group of Trustees who believe in responsible maintenance of their water source. If government had been vigilant [sic] over the years to protect this watershed, the Big Eddy Waterworks Ltd., would not be faced with double registered letters and the threat of Section 6 of the Safe Drinking Water Regulation.³³⁸

I, Norman Clarkson, Certified Public Health Inspector, Interior Health Authority, Vernon hereby Order, pursuant to Section 63 of the Health Act that upon receipt of this Order, you ... 1. Immediately stop using the Dolan Creek source ... 2. Sever the pipe supply water from the Dolan Creek source in the pump house, and fill the ends of the pipe with concrete by August 19, 2002.... Failure to comply will result in a report filed with Crown Counsel for action that their Office deems appropriate.³³⁹



As a result of the multiple incursions to drinking water sources from the provincial government's shady implementations of resource management policies, spearheaded by the Ministry of Forests, the 1990s witnessed a new directive by the government of the day and the Ministry of Health to unilaterally impose water disinfection and treatments as band-aids or remedies. This didn't sit very well with a number of water users/purveyors who were long accustomed to obtaining their water in its natural state, from primary sources they had long fought to protect.

Time had well demonstrated that these were simple, inexpensive, efficient, and dependable water systems, systems now under attack by political forces meant to stick it to them, to force them to be responsible for the irresponsible actions of others. The end of an era was thrust upon them and many put up a new fight to protect their heritage. Try as they may, they were all doomed to dance to the new provincial pipers.

³³⁸ Jim Doyle, Columbia River-Revelstoke MLA, to Andrew Petter, Minister of Health, March 24, 1996.

³³⁹ Norman Clarkson CPHI, Manager, Health Protection, Okanagan Service Area, Interior Health Authority, Vernon, B.C., to the Big Eddy Waterworks District, July 8, 2002.

11.1. IMPLEMENTATION OF THE 1992 SAFE DRINKING WATER REGULATION

Jack Bryck, president of the BC Water & Waste Association headquartered in Burnaby City, sent a letter to the Big Eddy Water District Trustees and provincial water users on December 18, 1990 to encourage their participation in an upcoming seminar to learn about the federal government's new *Canadian Drinking Water Guidelines*:

The recent mailout on small water systems brought a response indicating that there was a great deal of interest in improving water quality and learning about the impact of the new "Canadian Drinking Water Guidelines." I would like to bring your attention a seminar, which will take place on February 25th and 26th, 1991 at the Delta River Inn in Richmond on Drinking Water Quality. This seminar will deal with "state of the art" water quality procedures and should be of interest to anyone operating a water system and concerned with maintaining a high standard. Participants will come away with an in-depth appreciation of the factors involved in water quality and procedures necessary to ensure safe, high quality drinking water. This seminar provides an opportunity to meet other small system operators and water supply experts to discuss any problems or solutions you have experienced.

In 1973, the American Water Works Association (AWWA) set up shop in B.C. by forming the BC Water & Waste Association. Aside from private industry that largely steers the AWWA in the United States, professional membership includes representations from governments (local, State, National) and academia. The larger national group, the Canadian Water & Waste Association, was later formed in 1986 after other emerging provincial satellite groups banded together. According to information on its website posted in the mid-1990s, the AWWA, and its close affiliate the American based Water Environment Federation, have generally adopted the forest industry's views on integrated resource watershed management ("multiple use"/ "integrated use") for drinking water sources, along with their strong support for Private-Public Partnerships, as presented at their numerous more recent conferences and seminars. The AWWA's website stated in 2004 that it is "*dedicated to the safeguarding of public health and the environment through the sharing of skills, knowledge and experience in the water and wastewater industries.*"

The federal government's new *Drinking Water Guidelines*, however, failed to mention or advocate the protection of drinking water sources, and merely provided for what it described as "*high standards*" of water quality through artificial and technological "*treatment*". This technology, in its various forms, became a growing business in BC in the 1990s following, most of which was a direct response to the impacts and politics of increasing industrial and agricultural activities in hundreds of surface sources, impacts which were also affecting the Province's groundwater sources.

According to Ministry of Health statistics, the 1980s marked the beginning of a significant rise in water-borne illnesses in BC, mostly attributed to contamination by domestic livestock and a few isolated incidents of migrating beavers on water supply systems. In 1986, the Ministry of Health ordered 19 of BC's communities on "boil water advisories". By 1992, the number of community boil advisories had increased dramatically to 121. Aside from the impacts from a few transient beavers immediately removed by water purveyors from their water sources, medical health officials were concerned about the government's controversial policy, implemented through the Ministry of Forests, that permitted livestock grazing, and the long term repercussions from logging and mining practices, all of which had recently been integrated within the government's inter-ministerial policies for Crown land drinking watershed sources.

Following the government's interference on visionary calls in September 1975 by the Associated Boards of Health for veto powers over resource activities in community watersheds,³⁴⁰ the issues behind the water-borne illnesses began to loom and provoke a number of concerned provincial medical health officers and officials to formally express their united opposition to the BC and federal governments about cumulative commercial resource intrusions to drinking water sources. The **BC Committee for Safe Drinking Water** therefore began calling for a moratorium on all industrial activities. Both provincial and federal governments ignored them.

Andy Hazelwood, Executive Director of the Ministry of Health's Environmental Health Service, summarized those concerns in December 1992 at a public forum in Revelstoke:

*One of the areas that lobbied hard and long in trying to get government to address these issues as they saw it, was a coalition of groups called the BC Committee for Safe Drinking Water....That group got together and really tried to put a case forward that the economic impact and health issue that BC has largely not addressed over the years with a comprehensive safe drinking water policy and legislation to support it, that we were deficient in that area, and that we should get moving on that.*³⁴¹

The concern and controversy about the industrial and commercial operations in drinking water sources was also much debated by delegates at the annual conferences of the Union of BC Municipalities (UBCM) in the 1980s, primarily reflected in resolutions focussed on logging impacts on public and private forestland sources. By 1989, the ongoing concerns and acrimony raised through resolutions at the UBCM finally prompted the provincial government in late 1989 to initiate an inter-ministerial review body called the *Interagency Community Watershed Management Committee*. Nothing, however, was done to prohibit, reduce or curb the policies that permitted the degradations to drinking water sources – the issue was once again left to eddy, purposely, in committee meetings.

In May 2002, this report's author published *Doctoring Our Water - From a Policy of Protection to a Policy of Submission*,³⁴² in which he unearthed the general history of the Ministry of Health over a period of a century (1900-2000), beginning with its long-held former role as guardian and protector over public drinking water sources and its shady political transition to the opposite. Based on research findings, the Ministry's role was divided into four historical periods:

- guardianship over resource protection, 1900-1939;
- continued guardianship under pressure by professional foresters, 1940 to early 1960s;

³⁴⁰ *Resolution #15. RE: PROTECTION OF WATERSHEDS. WHEREAS many domestic waterworks systems depend upon surface supplies as a source of water, AND WHEREAS many conflicting activities prevail within the watersheds of these surface water supplies which may degrade the water quality and/damage the constructed works e.g. logging, cattle grazing, recreation, mining, residential development, etc., AND WHEREAS the Lands Service of the Department of Lands, Forests and Water Resources presently issue permits authorizing various activities within watersheds, THEREFORE BE IT RESOLVED that the Associated Boards of Health urge the provincial government to enact, or amend, legislation which: (a) would authorize the Medical Health Officer to restrict or prohibit any activity within a watershed which he feels may have a deleterious effect on the domestic water supply and, (b) would require the Lands Service to seek the concurrence of the Medical Health Officer before issuing a permit without authorizing any activity within a watershed.*

³⁴¹ Andy Hazelwood, Ministry of Health, December 2, 1992, videotape transcript. More below.

³⁴² Available on the BC Tap Water Alliance website and in the Vancouver Public Library.

- under pressure to conform to the provincial government's imposition of multiple use, early 1960s to late 1970s;
- finally, the period of darkness, late 1970s to present.

The report was a critical response to the Provincial Health Officer's *Annual Report for 2000 - Drinking Water Quality in British Columbia: The Public Health Perspective*, which the author interpreted as a continuing shameful compromise on the degradation and ruination of the public's greatest assets, with the questionable remedy by the Ministry of Health that technology is the saviour of all our problems, that is, at the expense of public coffers and watershed sources. Apparently, a new angle on the 'mental health' of forestry workers, the possible stress related to losing jobs in community watersheds, became a big concern to BC's health authorities.

Unlike most of Canada, the majority of British Columbia's surface drinking water sources are tapped from mountainous forest regions, where fresh water molecules are in generally rapid and constant movement, where water temperatures are usually very cool, especially if the forest canopy is left intact and the forest protected, conditions critical for excellent water quality. These features and conditions were proudly reported upon in earlier Ministry of Health annual reports of 1937, 1941 and 1953:

***WATER-SUPPLIES.** North Vancouver City and District receives its water-supply from seven sources, all located on a guarded watershed. The fact that the shed is not exposed to contamination by disease of human origin obviates the necessity of treatment by filtration and chlorination, thereby effecting a considerable saving to taxpayers. There have been no epidemics of water-borne disease in the history of the Health Unit; culture of water samples shows freedom of those germs which cause human disease.*³⁴³

***WATER-SUPPLIES.** In British Columbia, due to the nature of the terrain and the climatic conditions, the problem of obtaining a good water-supply from most communities is relatively easy. Centres of population are located close to mountainous watersheds, making possible in most cases a gravity supply. In addition, most of these watersheds are uninhabited, making the chances of contamination of the public water-supply relatively slight. Some of our watersheds have been created health districts for watershed purposes. These are guarded in order to keep the public off the watersheds.*³⁴⁴

*There are very few water-treatment plants in British Columbia. This is because in British Columbia most sources of water provide satisfactory water for domestic consumption without expensive treatment. It is estimated that 80 to 85 percent of the population of British Columbia receives water through public water-supply systems. The fact that there has been no evidence of water-borne illnesses in British Columbia for the past several years speaks well for the care that is being taken in British Columbia by water authorities to provide for a safe water for the citizens.*³⁴⁵

³⁴³ H.E. Young, Provincial Health Officer, Annual Provincial Board of Health Report, provincial Sessional Papers, 1937.

³⁴⁴ R. Bowering, Public Health Engineer and Chief Sanitary Inspector, Report of the Public Health Engineering Division, Annual Provincial Board of Health Report, provincial Sessional Papers, 1941.

³⁴⁵ Division of Public Health Engineering, Provincial Ministry of Health, Annual Report, 1953.

In a flimsy response to the increasing boil water advisories, and associated concerns by the **BC Committee for Safe Drinking Water** and BC's water purveyors about the government's inappropriate policies linked to the private forestry sector that were degrading their water sources, on July 3, 1992 the newly elected New Democratic Party (NDP) government issued Order-in-Council No. 1072, the *Safe Drinking Water Regulation*. It mandated by way of federal government directives that all provincial water users had to disinfect their "surface water" sources.

Section 6 of the *Safe Drinking Water Regulation* stated:

A water purveyor must

(a) disinfect all surface water,

(b) record the results of all analyses and tests required by the medical health officer or public health inspector to measure free chlorine residuals or the results of other approved disinfection treatment, and

(c) provide the results of all these analyses and tests to the medical health officer or public health inspector.

Information about the new *Regulation* was bulk-delivered by the government to BC water users with an explanation of its implications and when the *Regulation* would come into effect:

*The Regulation becomes effective October 1, 1992 and applies to all waterworks systems, water bottling plants, motels, and campgrounds, etc. It also applies to water delivery trucks. Waterworks systems which are in need of upgrading should be contacting their consulting engineers to submit plans for approval. It is our expectation that these improvements will be phased in, with the highest priority being the systems under a current boil advisory.*³⁴⁶

However, in the new *Safe Drinking Water Regulation* the provincial government once again refused to pay the medical health officers and water purveyor communities any heed in their demands to stop commercial and domestic livestock activities in drinking water sources, and no measures related to the protection of surface water sources were included or stated, despite the pre-election campaign promises by the newly instated NDP government to do so: the obfuscation merely continued, as it continued under previous and subsequent provincial government administrations.

On the spin-offs from this new climate of resource business opportunities, author Joyce Nelson, a long-time critic and investigator of international corporations and accompanying public relation schemes, published two articles in Victoria City's Monday Magazine in 1996 and in Vancouver's Georgia Straight in 1997. She drew attention to the cozy relationships of prominent BC forest company executives on the Board of BC Gas and the formation of a new merger with U.S. Denver-based CH2M Hill Inc., called the TAP Water Group. The new company was part of an emerging program in Canada by the new "water privateers", looking to profit by ventures in Public-Private-Partnerships. They were linked to the 1993 formation of the Canadian Council of Public Private Partnerships, an affiliate of the U.S. National Council of Public Private Partnerships. Nelson drew attention to the intrigue and conflict of interest between forest companies double profiting from logging in domestic watersheds and then by impositions placed on local governments to install elaborate water treatment facilities as a result of their water sources being degraded – they could have their cake and eat it too.

³⁴⁶ Norman Clarkson, Chief Environmental Health Officer, North Okanagan Health Unit, to All Community Water System Operators, North Okanagan Health Unit, July 20, 1992.

11.2. The Community that Did - The Battle Against the Devil's Chemical

*Since 1984, every watershed in B.C. has been under attack. A.G. Hazelwood, executive Director, Environmental Health Protection Service, stated when defending the safe drinking water regulation, that water borne diseases, like giardiasis have increased.... This increase can be attributed directly to traffic in watersheds, such as clearcut logging, mining, road building, power line right of way and recreation.*³⁴⁷

11.2.1. The Anti-Chlorination League

Despite what some might say otherwise, the anti-chlorine controversy is not a recent phenomenon, but has been a prevalent and long-standing issue in BC. For instance, in 1941 Greater Vancouver Water District Commissioner E.A. Cleveland emphatically stated, "*People here won't drink chlorinated water.*"³⁴⁸ Now forgotten by British Columbians, was a public movement some seventy years ago specifically against the use of chlorine as a disinfectant for public drinking water. It was called the Anti-Chlorination League.

Cleveland was heralded by many as the provincial spokesperson for this movement. Cleveland maintained a strong public position against the use of chlorine, which he and others wrote about in professional journals. Some fifty years later in 1994 when Greater Vancouver Health officials proposed chloramine as a disinfectant for Greater Vancouver residents, intense public opposition followed, with concurrent findings from federal fisheries scientists on the negative consequences and impacts to stream environments and fish from its prolonged residual contact time and toxic concentration levels. The Greater Vancouver Regional District then rejected the proposal.

Greater Vancouver's water supply never used chlorine as a disinfectant when its sources were first tapped in the late 1880s until the early 1940s.³⁴⁹ During the onset of the Second World War, the federal government announced that the Greater Vancouver Water District should protect its population against possible enemy sabotage by Japanese troops which might poison the region's water supply, and ordered that chlorine be implemented to counteract such a threat. It was not stated or argued at the time if chlorine would render those poisonous chemicals harmless. Cleveland put up a big fight, and the federal government used its legislative hammer against the Water District. The Water District insisted the federal government, as the initiator of the plan, pay all the attendant costs for the chlorine stations and chlorine supplies, and that after the War the Water District would remove the said stations and go back to natural. Some twenty years later after the end of the Second World War, when logging started again in the watersheds in the 1960s, the Water District began adding chlorine.

³⁴⁷ Submission by the Big Eddy Waterworks District to the Ministry of Environment's Technical Advisory Committee on Community Watersheds, March 11, 1993.

³⁴⁸ E.A. Cleveland, June 4, 1941, regarding metropolitan Vancouver residents' opposition to chlorine in their drinking water. Transcript of legal hearing at a public meeting regarding the proposed protection of Hollyburn Ridge. Vancouver Archives, 65-A-3, file #3.

³⁴⁹ There was a brief period in the early 1930s when chlorine was added to the water supply because of construction work by the B.C. Electric Railway Company for a hydro-electric transmission right-of-way through the Capilano watershed on private lands owned by the Capilano Timber Company. All expenses for the chlorinator and its usage was born by the Company at no cost to the Water District.

In the 1940s, taxpayers in Victoria established the Anti-Chlorination League, a large movement against the application of the devil's chemical in their drinking water. They also battled to keep Greater Victoria's drinking water source protected, which was under considerable threat from commercial logging by relentless timber lobbyists.

We have on hand a large file of letters from citizens everywhere. If you will permit it, I shall be pleased to read a summary or some of these letters, in order that the Editor of the Victoria Times may have the opportunity of knowing that there is serious evidence against chlorination, which he knows nothing about and which he has so often challenged.

I think we should discuss the pamphlet issued by the Department of Health, and distributed by Aldermen Worthington and others, with the avowed object of discrediting the vote of the people, and the work of the Anti-Chlorination League. It can now be definitely stated that this Council is pro-chlorinationist, as a result of listening to and reading the words of Health Officers, who have presented their own professional side. It is now time for this Council and the people to hear the answer to the allegations made, and this we are now ready to present to this Council, and to the people at large. We therefore ask that the same facilities for publicity be granted to our League, which represents the over-whelming vote of the people against chlorination. We make this suggestion, and we hope it may result in a motion before the Council, today, that the Anti-Chlorination League be asked to submit a pamphlet dealing with the subject of chlorination of Victoria water, and that such pamphlet shall be printed and distributed, at the expense of the City, to all electors on the city's voting list, together with the pamphlet, which I shall refer to as Alderman Worthington's pamphlet, in order that the citizens may be better informed on both sides of the question of chlorination, and in a position to vote "yea" or "nay" as their conscience dictates.

Reference should be made to correspondence, dealt with in part before the Council, and somewhat in full, as far as letters from Dr. Cleveland, of the Greater Vancouver Water Board, are concerned. The public, like myself, are mystified, and speaking for myself, we have been entirely misled by what has appeared in the press under such headings as "Mainland Water Commissioner Supports Victoria Chlorination", and editorially in the Times "Anti-Chlorination Epitaph". The Editor of that paper goes on to say: "Unless they search the rushes of adjoining lakes and ponds and emerge with a new Moses, it would appear that Greater Victoria's anti-chlorination forces might relegate to a dear departed past the theories that treatment of this community's water is unnecessary or ill-advised." This editorial is based on a statement by Dr. Hunter in the Council, that myself and the League have accepted Dr. Cleveland as our champion against chlorination. Alderman Hunter is credited with this statement:

In the first portion of his report, Dr. Hunter read excerpts from numerous briefs submitted to the council by Harry Langley, chairman of the Anti-Chlorination League, which referred to Dr. Cleveland as a 'bulwark' of the anti-chlorination group and a desirable expert whose opinion should be sought.

What is the scientific verdict in regard to Vancouver's water? Four inter-national water experts have reported that they differ entirely with Dr. Dolman's scientific findings of fact. Dr. Cleveland himself challenged our Provincial Bacteriologist, Dolman, and our Provincial Health Officer, Dr. Amyot, and Vancouver's numerous health officers, all of whom declared that Vancouver's water should be chlorinated. Do we need to refer to the

strong indictment referred to in the Cleveland Report, which leaves our Provincial chlorination experts in the sorry predicament, that they did not conduct a scientific investigation, that our chlorinators could not properly read and determine their own findings of fact, and finally, that Vancouver has such a fine water system and water supply, that it would be sacrilegious to poison it with chlorine and ammonia. Are these British Columbia chlorination scientists yet satisfied? Not at all. Chlorination in Vancouver has been stopped. Cleveland has won a great Victory - a noble victory. And the people were never so happy, after three years of suffering and shame; their water poisoned by order-in-council, without the slightest effort on the part of the great scientist who did it, taking the trouble to even visit the water sheds. Yet our noble editor, and some of our gallant aldermen would have the people believe that it is as if God had spoken, and God himself had declared that our water wasn't fit to drink, unless it is poisoned by chlorine and ammonia.

Never in the history of this Dominion was there a case where the scientists have been in such disagreement on principles; never have they been so divided; and I am sorry to add, that never before have there been such sharp reprisals, such words of reproach as have been hurled between scientist and scientist. The defeated scientists will not down, and their words are quoted by editors and aldermen, as if the Almighty had spoken in Sinai thunder, his warning to the people of this earth, not to drink of this water, because they who drink of it (like Adam and Eve in the garden, the forbidden fruit) shall surely die. But, there has been no death; Vancouver citizens have been singing songs of joy, and they are thankful to Cleveland and the American experts, who have saved their sparkling Capilano water from the vandalism of the pseudo-scientists. In a small way, it is, with God's Grace, our fervent hope, that with the help of the overwhelming majority of people in this community, we shall yet save (in spite of the Council) the pure and safe water, which has blessed the people of this community for over forty years, and which Mr. H.A. Leverin, an official of the Department of the Interior, declared, after a first hand examination of the watershed in 1938: "The water system of Victoria ranks with the finest in the world. The water is crystal clear and pure." The movement against chlorination in Vancouver was a layman's movement, and it is now declared to be a layman's victory, supported and subscribed to by honest scientists," who refuse to be threatened. So may ours be a Victory for the common people in Victoria. When experts disagree, it is peculiarly a matter for a jury. So say our great jurists. It is part of our democratic prerogative to determine questions of fact, and whether the editor of the Times likes it or not, the people will go on determining questions of fact, based on experience.

Our correspondence with the Council will disclose that we had sufficient confidence in Dr. Cleveland that we would recommend his employment to make a scientific investigation of our water-sheds, in order that he might assist us to determine what course of action should be taken to protect our water supply from the necessity for chlorination. And this only became important in relation to the gradually weakening position of the aldermen who believed the silly statements of the Health Officer concerning presumptive tests, to the extent that samples of water were sent to Vancouver and elsewhere for test, against the strong findings of fact contained in the Cleveland report, that water tests were only relevant in relation to an examination on the ground, and in relation to the history of water-borne disease, or otherwise. These reports still disclose no pathogenic bacteria, nothing disease-producing; and if we take the presumptive tests in relation to the history of our water, then it is a history of safety. Never have we had a single case of water-borne disease. Therefore it can be presumed, as Leverin said and as he found, that our water is not only safe, but lovely,

and we ought to be willing to give thanks for such crystal pure water, and we ought to be willing to believe and tell the world, as he did: "The water system of Victoria ranks with the finest in the world."

Dr. Cleveland goes on to speak on the uncontrolled character of the water-shed, due in part to the existence of public highways. And there is the rub. What has the city done to perfect its water system, such as Cleveland did in Vancouver? Nothing. There is a mere handful of people in the vicinity of these roads, and by arrangement with the Provincial Government, these roads can be closed. We can therefore do away with trespass. In Leechtown, there is only one property paying taxes, and this has been in default. An energetic water board would make overtures to the Government to have this water area closed, because it is important to the safety of our water, and it is the city's duty to protect these water sheds at all cost. Nothing has been done, and all our opponents say in reply to their ineptitude is, we don't care about the watersheds, we will just chlorinate. If we had the time to discuss it thoroughly, we should submit, strongly, that simply to chlorinate an unprotected area would be no guarantee of its safety. The inference to be taken from Dr. Cleveland's remarks is just this: Why don't you protect your watersheds? Why didn't you invite me over to Victoria and let me show you how to make your water safe, by protecting your watersheds, and making chlorination unnecessary -- as unnecessary as it is in Vancouver, because, I, Cleveland, made sure of the safety of my watersheds. But does Dr. Dolman agree with Cleveland and his safe watersheds? No. As the experts have said, "Water from Heaven would not satisfy Dolman." Hence, Dr. Cleveland only advises, if he advises at all, on a condition which results from our neglect, and he says in fact, "Well, gentlemen, if you can't perform the first essential of protection, well then, stupid people, of course, chlorinate." Had Cleveland been invited to make a thorough inspection of the watershed (Japan Gulch) there is no doubt he would recommend that the area should be enlarged, the roads closed at all cost. That our pure water is more important than preserving a few shacks. Then there is next the question of the Railway, which touches a portion of the shed. We discussed this objection with Dr. Cleveland, and his answer was quick and responsive. Why can't you have the Railway Company have these toilets closed by order when the train is crossing the water shed? That sounds reasonable, and it is a precaution taken by railway companies all over the world. But, gentlemen, when you are looking for a case, you can make one, if only you refuse to take precautions, and do nothing. Our water is our greatest asset, and if we do not soon protect it from danger, then the Government will soon take it over, and they will create a water board which will perfect a water system and water supply as good and safe as exists in Vancouver. Not anything that will be satisfactory to Dr. Dolman, and his satellites, but safe and satisfactory to the common people, who are the people concerned.

Having failed to comply with the repeated request that the city call in a water expert to investigate on the ground, and to make recommendations for the better protection of our pure water supply, the only value of this report of Cleveland's, and it is of value to our side, is the strong case which is made for the proper protection of the watersheds, by the elimination of roads, so little used, and the protection by closing the toilets on trains, or else the removal of the line altogether from the watershed. There is nothing too great which can be done to protect our pure water supply.

Looking at Dr. Cleveland's Report to the Provincial Govt. on the question of Joint Control of Water Supply to the Cities and Municipalities of Greater Vancouver, prior to the formation of a Greater Vancouver Water Board, we find the same conditions had to be

overcome as have been complained of at Japan Gulch and Humpback. Lumber interests, and areas which were occupied by a few settlers, had to be cleared up, and they were cleared up until Dr. Cleveland created what is stated to be the most magnificent Water system on the American Continent. Yet this did not please Dr. Dolman, although not long prior to chlorination Dr. Dolman had voiced the highest praise of Vancouver's water.

There is so much of prestige involved in this matter, so much of loyalty to the Department of Health, and to the particular school of thought, that the public should view with suspicion any and all attempts to pass on this question from the technical standpoint. Science has brought us to the most dangerous period in the history of man. It behooves our democracy to regain control and maintain absolute control where experts are concerned. The people are concerned in this, and before it is too late, we must call a halt to this base attempt, by experts, to doom mankind to a gainful existence, and perhaps to final extinction of man as living, vital, spiritual force, without faith, without hope, and without purpose.³⁵⁰

11.2.2. The Greater Revelstoke Revolt

About three months after the *Safe Drinking Water Regulation* was passed in July 1992, representatives from the City of Revelstoke and the community of Big Eddy began to mount a local community campaign against the intent of Section 6 in the new *Regulation* that mandated BC water purveyors apply chlorine as a disinfectant. The reason for the Revelstoke resident revolt, with its population of about 8,000, was because the City had never disinfected its drinking water source since tapping its water supply from Greeley Creek in 1931, an intact, or pristine, federal Watershed Reserve source protected since 1917 (protected 14 years before it was tapped) which the provincial government later re-reserved in late 1973, calling it a Category Two *Land Act* Watershed Map Reserve.

Revelstokians were extremely proud of their “pure” water from Greeley Creek because it was a “protected” source and had never been accessed before by roads or logging, and the public was barred from its boundaries. A water bottling company in Revelstoke had been marketing Greeley Creek water internationally, and was also proud of its high quality and its protected state. Though the neighbouring community of Big Eddy, with its population of some 1,000 residents, had been ordered to chlorinate its water for about two years in the early 1980s when BC Hydro constructed the transmission power line from the Revelstoke dam through the Dolan watershed, it had since terminated the chlorine treatment and the Big Eddy Trustees and residents were happily back to “normal”.



Four inter-community representatives, Shelby Harvey, Oscar Noblaw, Lloyd Good, and Clancy Battger organized a petition opposed to the new *Safe Drinking Water Regulation* that would force their inter-community water purveyors to chlorinate. They quickly canvassed over four thousand signatures, representing about one half of the combined populations of Big Eddy and the City of Revelstoke.

Shelby Harvie.

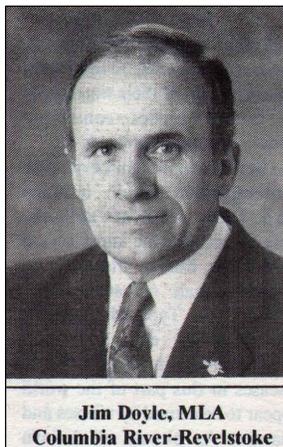
³⁵⁰ Presentation to Victoria City Council, September 12, 1946, Harry Langley, Chairman, Anti-Chlorination League.



Shelby Harvey, who later became the City's Mayor in the November 1993 municipal election as a result of her outspokenness, founded the Revelstoke Water Committee. Many letters were promptly sent to the Ministry of Health and to NDP Jim Doyle, the Revelstoke area MLA. Automobile bumper stickers were circulated gearing up the local campaign criticizing the Minister of Health, Elizabeth Cull, saying "I love our water - hands off Elizabeth!"

In November 1992, the Revelstoke Water Committee sent a copy of the large petition to Minister Cull, along with an invitation for her to come to a community meeting scheduled for December 2, 1992. On the day before the public meeting, the Revelstoke Times Review published two letters, one by Minister Cull, and the other by MLA Jim Doyle:

*Thankyou for your letter of Oct.2, 1992, regarding the safe drinking water regulation pursuant to the Health Act and your concerns about the requirement of this regulation that drinking water suppliers, including the City of Revelstoke, must disinfect surface water before delivery to its users. I can understand that you have concerns about this legislated requirement and, in particular, that your community will need to consider providing some form of disinfection and/or treatment, including, perhaps, chlorination, for the continuous protection of the public. You should be aware that this regulation was brought into force by government in response to many concerns raised about unsafe drinking water and, in particular, because of increasing concerns about waterborne disease outbreaks in British Columbia. Surface water sources are the most vulnerable to contamination by man and animals. If disinfection is not provided, the public is at risk, and will continue, regardless of a history that indicates to date that there have been no disease outbreaks. The safety of any community's water supply is a matter which requires assessment and evaluation, taking into consideration a number of factors. This is the responsibility of the local medical health officer in your area, as well as the water purveyor, who is required to ensure that the water he provides is potable, safe to drink, and fit for domestic purposes without further treatment. It is essential that the citizens of Revelstoke understand the risks, and what may be required to resolve them. I am sure that Dr. Andrew Ross, medical health officer for the City of Revelstoke, will be taking every opportunity to inform the residents of his concerns.*³⁵¹



I want to begin again stressing that I strongly believe that the new safe drinking water regulations announced by Health Minister Cull on July 8 of this year are an important part of this government's commitment to ensuring the highest levels of public health. Many communities in B.C. have long required additional water testing and treatment but, due to the cost or lack of community concern, the programs were never implemented. We've backed up our commitment to public health by offering to help regional districts and municipalities cover the costs associated with bringing their water systems up to the new standards. I

³⁵¹ Residents must understand risk of not disinfecting water, by Elizabeth Cull, Minister of Health. A copy of a letter to City of Revelstoke's lawyer, Christopher Johnston.

*also want to repeat something else I said in my press release - increased testing, and not treatment, is the priority, as drinking water quality is not currently a problem in Revelstoke. I was very pleased to note that your letter confirmed your own commitment to ensuring safe drinking water and that, should a problem with water quality develop, the health minister could count on your full support in correcting it as quick as possible. Based on the other concerns raised in your letter, I have again met with Health Ministry officials and they have initiated a comprehensive review of the discretionary authority available to local health staff. I will, of course, be reporting on the progress of that review when I meet with the community this week. That being said, it is already quite clear that the drinking water regulations do allow for a thorough review and discussion of all important factors, prior to requiring disinfection of surface water.*³⁵²

Many of the local residents who read the newspaper were very quick to note the plain-as-day oversight by both authors in failing to convey the fact that government policies were themselves responsible for ruining drinking water quality in British Columbia by allowing industrial and agricultural practices and human and recreational access in drinking water sources. Many other water user communities and purveyors outside of Revelstoke were also highly critical and suspicious of the government's intentions in the passing of the new *Regulation* and its neglect to protect drinking water sources.

As a result of the concerns raised over a period of two months by the community action group, the Revelstoke City Council, and the local newspaper, more than 500 people filled the December 2nd meeting in Revelstoke's community hall, overflowing its capacity and leaving people standing in the foyer. On the evening's panel were, in order of speakers:



- Revelstoke Mayor Dr. Geoff Battersby;
- Lloyd Good, Chairman of the Big Eddy Waterworks District;
- NDP MLA Jim Doyle;
- Andy Hazelwood, Executive Director of the Environmental Health Protection Service;
- Andrew Ross, Medical Health officer for the North Okanagan Health Unit;
- and John Miller, BC's Provincial Health Officer.

Health Minister Cull had ducked out from attending the public meeting and sent Andy Hazelwood as her substitute. Norm Clarkson, Chief Environmental Health Officer for the North Okanagan Health Unit, who sat at the far end of the table alongside other government panel members, did not rise to speak at the meeting, or may have been ordered not to.

Shelby Harvey, who chaired the meeting, began by summarizing the concerns of greater Revelstoke citizens:³⁵³

³⁵² *Testing, not treatment, the priority for Revelstoke's water*, by Jim Doyle. A copy of a letter to Revelstoke mayor Geoff Battersby.

³⁵³ I transcribed all the following quotations from the December meeting from a video tape provided by Lloyd Good.

The consensus of the residents of Revelstoke is that we are absolutely opposed to having any form of disinfection added to our water. If it isn't broken, don't fix it. As my mother would say, what is good for the goose is not necessarily good for the gander. The recent petition in Revelstoke circulated over a six-week period gathered 4,035 signatures. Yes, we had 4,035 signatures, half of our population. This was sent to the Ministry of Health, attention Elizabeth Cull, on November 19. To date, we have not received a reply, but I am certain that this had a tremendous impact in Victoria.



We Revelstokians want to share with our invited guests how important our water is to us. Our water is a commodity you do not find just anywhere in the world. Here are some points taken from Chris Boleos' hand-delivered letter to Elizabeth Cull. The first thing every morning, and the last thing every night, what the people of Revelstoke do is have a glass of Revelstoke water. The last thing when you leave Revelstoke, and the first thing when you get back home, we have a big glass of Revelstoke water. When we go on holidays, or when my children or your children go on to college, they've got their suitcase full of Revelstoke water. Our

water is being allowed to be shipped to those who don't have acceptable drinking water. Millions of gallons of Revelstoke water marketed throughout the world. My family is a third generation family, and we have many families that have lived here for five and six generations without ever having a case of beaver fever, or a disease of our water. The state of the purity of our precious water that has come tumbling down off a glacier has been continuously analyzed. The City of Revelstoke's public works department has always maintained a preventative maintenance program on our water and since 1960 has had tests done. And at one time it was bi-weekly, but now for a long time it has been done on a weekly basis by Jim Knox who is the public health officer.

To our invited guests. Is there any reason why you would truly want to spoil or ruin such a good thing? If it isn't broken, don't fix it! We question why the Order-In-Council 1072 cannot be amended, and why our City Council, to today's date, has not had a reply back from the Ministry of Health that they sent on September 17, 1992. Another factor that I have a big problem with is the cost. Hundreds of thousands of dollars that our government doesn't have, and certainly the City of Revelstoke doesn't have. The referendum that was held in Victoria in the last two weeks on the sewage plant was voted down due to the costs. If there should have been a referendum, it should have been here in Revelstoke over our water.

Revelstoke Mayor Geoff Battersby then rose to speak. Battersby endorsed his constituents' opposition to Section 6 of the *Safe Drinking Water Regulation*, elaborated on the high quality water from Greeley Creek, and on the importance of having the Greeley watershed protected from resource development and human entry:

Order-In-Council 1072 is the reason we are here tonight. Shelby has covered things most admirably.



It is quite obvious by the crowd that is here that City Council has full support of this community in adamantly opposed to have our water chlorinated or otherwise disinfected. We've always cooperated in all testing required and we've had virtually 100% record of contaminant free samples. An incident of unsatisfactory specimen in the Court House area a few years ago was attributed to taps within the building rather than something within our system. There has never been any cases of illnesses within our community that have been attributable to our water system. There have never been any cases of giardia attributable to our water system, and in fact, a few people from this area who have had giardia have traced the area of infection far removed from Revelstoke. I am not aware of any evidence from wildlife in the north Columbia mountains are infested with giardia. Giardia, better known as beaver fever, and any warm-blooded animal can be a host for that organism. There is little wildlife in the Greeley drainage to the point that Brian Jackson, the local trapper, who has trapping rights in the Greeley basin, doesn't even bother to set traps there because he says there is nothing to trap. This City's forefathers served long and hard for a water source for this City that they felt would stand the test of time and not becoming contaminated. Their wisdom has stood an eighty-year test. It was during the first decade of this century when that source was established.

With weather permitting, we are looking forward tomorrow morning in providing our visitors with a helicopter trip over the Greeley basin so that they can appreciate how naturally protected that area is. Our main lines from Greeley are in the final stages of complete upgrading. City Council is embarking on a proactive program on maintaining the security of the watershed. We are pleased that the Revelstoke Forest Service has declared the area inoperable in its current five-year plan, and we are seeking protection from logging at any time in the future. We will take what steps are available to us to keep people out of the watershed.

Gentlemen. The quality of our Revelstoke water has been bespoken to you by Shelby already. It is a great source of pride to this community. It is a local asset to be prized highly. We are adamant that we don't want disinfection without further need, we want the Order-In-Council changed to reflect proof of need before mandatory sterilization.



Lloyd Good, Chairman of the Big Eddy Trustees, was next to speak, and in his short presentation he summarized the history of high quality, unsterilized drinking water from Dolan Creek, with added concerns about BC Hydro's transmission line clearing:

When I first read the Safe Drinking Water Regulation I went from disgusted, to mad, to totally disappointed. I was more disappointed in what was not in the Bill than what is. How can highly educated professional people draw up a regulation that says that all surface water must be disinfected and no provision for the protection of clean coliform-free drinking water or no regulation pertaining to activities on private land within a watershed that provides community drinking water. This is the only province in Canada that gives the local population free access in posted watersheds that provide community drinking water. It is no wonder that the water-borne diseases outbreaks is higher in BC than any other place in Canada. The Big Eddy

Trustees have always been on the lookout for any conditions that could and will change the quality of the water.



The next speaker, MLA Jim Doyle, the elected provincial representative, made a surprise announcement to the audience. In a last-ditched effort before the highly publicized public meeting, the Ministry of Health drafted an amendment to the new *Safe Drinking Water Regulation* that would provide discretionary powers to a medical health officer whereby a drinking water source would not have to undergo disinfection:

I would like to, tonight, bring some good news to you, for I agree as was mentioned, as Mrs. Harvey mentioned so very, very well, that Revelstoke water doesn't need fixing, and that if it does need fixing, that none of us can see in the foreseeable future, we would gladly fix it. I was speaking with Elizabeth Cull. There is an amendment going to be made to the Order-In-Council 1072, and it is an assurance from - this hasn't yet gone to Cabinet, but it will be going - from Mrs. Cull to the Cabinet, as Minister of Health. The proposed amendment is, there will a waiver from the Medical Health Officer that the community may be considered for release, where the documents demonstrate measures to protect the safety of the water supplied, and ensures measures are in place to provide potable water during an emergency. I feel that this amendment to the Order-in-Council will, as I feel the mayor will also agree, that Revelstoke would not have their water treated if it does not need to. And I think that you, and most other people in the province, are now convinced of that, then Revelstoke water is just fine and leave it alone. I am here to say that your water will not be treated and I feel your water is as good as you say it is. There are many people here tonight that can better explain the tests that have gone on and will go on in the future to ensure that the water keeps up to the standard which we no doubt will and has in the last 80 years.

The announcement brought much cheering and applause from the audience. Andy Hazelwood elaborated on the nature of the amendment and provided the large audience with some background information on the recent rise in water-borne illnesses.

*The proposed amendment that will be going forward to Cabinet is really a clarification of the intent behind the Regulations in the first place. And if those Regulations weren't clear I guess I can shoulder much of the blame for that. The purpose behind that Regulation is really no different than what I heard discussed here tonight, and certainly what I've discussed with Shelby Harvey over the past several weeks, and that is safe potable drinking water.*³⁵⁴ There



³⁵⁴ Contrary to the concerns of Revelstokians, “potable” water, as Hazelwood stated, is actually defined in the new Regulation as fresh water that has been “treated” or “disinfected”. Health Canada: “Potable water” means water that is free of pathogenic bacteria and is of such a composition that, when five 10-millilitre portions thereof are examined according to the standard procedure outlined in the latest edition of *Standard Methods for the Examination of Water and Sewage*, published by the American Public Health Association,

are a variety of ways to ensure that, and certainly we can't change the system we have in BC overnight, and I'll go a bit into the history of how we got here today. And I think we do have problem, generally, with drinking water in BC.



A member of the audience immediately interrupted Hazelwood, who stood up and appropriately interjected: "Not in Revelstoke!" Unfazed, Hazelwood continued his delivery.

And the amendment will address that. Generally, I think there is an issue. Medical Health Officers can't deal with these issues overnight. We can't solve the problems in areas that do have a real problem to solve by looking at the risk or by passing a regulation. There needs to be that time, he or she needs that discretion in order to make those good judgements over time.

Certainly, somewhere in the process, that either got watered down or didn't get resolved to the rest of the regulations. The proposal that will go forward will make that very clear, that medical health officers do need that discretion that they have to deal with communities individually, rather than on a blanket. I think that has been consistent over history with public health. Part of the issue of what we talked about in British Columbia is the fact that the majority of the population gets their drinking water from surface supplies. That chart there says that 86 percent of the population gets their drinking water from a surface source which is subject to contamination, as compared to groundwater at 13 percent. The other issue we have to deal with, and again, this is on a provincial basis, is that we have over 1,200 drinking systems in the province. Most of those are very small. We have 638 drinking systems, community-owned systems, serving populations of less than 100. We have another 388 serving 100 to a 1,000, and again another small number serving a large part of the population. What we really have here is two inverse relationships. We have 638 systems serving 1 percent of the population, and 59 systems serving 68 percent. It is an awful lot of very small systems, very difficult to manage, all or the majority from surface water supplies. Here is a recent history of major water-borne outbreaks we've had in British Columbia. Just to go through some of the list. Nakusp, 100 Mile House, Kimberly, Chilliwack, Creston, Penticton, Black Mountain, Kelowna, Kamloops, Lytton, Kitimat, Creston, Fernie, Trail, Rossland, Matsqui, Barriere, Gran Isle, and Fort Fraser. The treatment options that are available, if there is a problem, again there is the disinfection, and again it could be either through the use of chlorine, ozone, or ultraviolet, and certainly the more expensive process of filtration. And again that is dependent upon the source and the quality of the water. The system, upside-down, by simply passing a regulation. We knew this would take consultation and discussion, which is



not more than one portion thereof shows the presence of organisms of the coliform group, that is to say, the most probable number is not greater than 2.2 per 100 millilitres; (eau potable). Raw Water: "means water that is not potable water; (eau brute)".



certainly this type of meeting, unfortunate that it had to occur because of this. But I think what we need are these type of events and this type of discussion throughout British Columbia over the next four or five and years beyond. I certainly share your concerns about drinking water. The concern that I have provincially is that we seem to have on average a deteriorating drinking water quality in BC and that would be a shame for that to continue. There are communities that really do need some form of protection and treatment - they need it now or should of had it some years ago. There are other communities

that through unique and visionary thinking years ago have water systems that you have here in Revelstoke.

Hazelwood failed to elaborate on the profound implications of his final sentence, nor did he elaborate on summarizing the central controversy about the provincial government's policy of integrated resource management. Although the majority of communities had that "visionary thinking" in place, the main problem was that it was being forcefully countered by provincial government authorities in their questionable determination for commercial resource developments and activities, reflected in the now-submissive policies of the Ministry of Health.

The final speaker, Provincial Health Officer Dr. John Miller, provided a very brief and placated diplomatic address, summarizing that the City of Revelstoke was a healthy community, not only in terms of its physical health, but also in its self-determination and its abilities to make good decisions:



It shows in my view a community that is obviously extremely healthy. I wish you the very best in remaining healthy with a good water supply. And I think the other side of this is in this particular instance you have been able to generate a great deal of interest in the issue of water in the community and bring people together, and then in Victoria to have a government that is willing to listen to you and make the appropriate changes.

Shelby Harvey ended the forum by reading a letter from one of Revelstoke's City Councillors who could not attend the meeting, with the emphasis on obtaining community control and maintaining protection of the Greeley watershed:

I support the maintenance of our pure water supply without disinfection. A reference to the letter from the North Okanagan Health Unit, July 20, 1992, it is in my opinion that Council supports fully all the points made, except No.7, "disinfection of all surface water". Citizens along with City Council must work hard to have Order-In-Council 1072, and in particular section 6(a), and on page four of the Regulation, Disinfection of Water, removed or amended for our sake. We must be proactive and attempt to achieve the following: Complete control of the Greeley watershed, establish a watershed management plan, work in cooperation with the

North Okanagan Health Unit to increase the testing of our water, and to search for improved testing methods and data.



TIMES REVIEW

SERVING THE COMMUNITY OF REVELSTOKE, BRITISH COLUMBIA

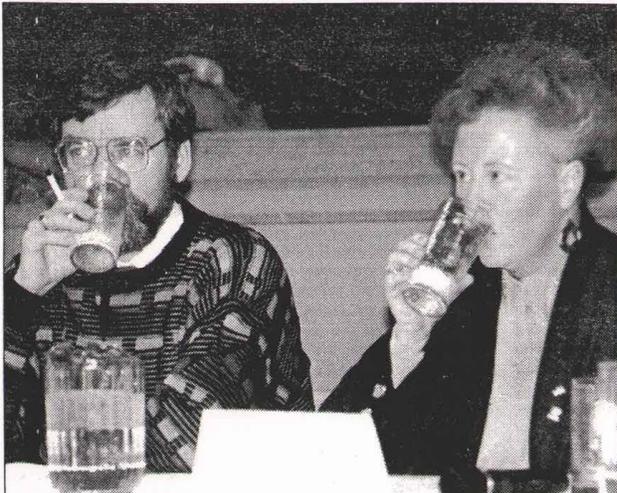
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Revelstoke claims win in water war



SANDRA SMITH/TIMES REVIEW

Gov't says it will amend safe drinking law to give local health officials power to waive disinfection rule

GREGG CHAMBERLAIN
Staff Writer

Revelstoke residents are claiming a victory this week in convincing the provincial government to change its mind about revising the new safe drinking water regulations for B.C.

During a public information meeting Wednesday, Columbia River-Revelstoke MLA Jim Doyle announced that Health Minister Elizabeth Cull has agreed to an amendment to the regulations which will exempt Revelstoke from the mandatory disinfection rule.

"Your water will not be treated," Doyle told a cheering crowd of more than 500 residents packed into the community centre auditorium.

"I do feel it is a victory," said Shelby Harvey of the Revelstoke Water Committee. She said the committee will now focus attention on seeing that "all the paperwork is done and the amendment is signed and sealed."

The original safe drinking water regulations required mandatory disinfection of water from surface sources like lakes and streams. The proposed amendment gives regional medical health officials the power to waive the rule for communities which can demonstrate their supply source is safe from contamination and that steps have been taken to prevent contamination in future and ensure clean drinking water is available in case of emergency.

"The wording of the amendment is fine," said Mayor Geoff Battersby. "We've just got to make sure it goes through."

The city already conducts twice-weekly water quality inspections and has indicated that it's willing to accept responsibility for ensuring the Greeley Creek watershed, which supplies the city's drinking water, is secure from activities which could contaminate the water.

Andrew Hazelwood of the provincial Health Ministry (left) and Revelstoke clean water lobbyist Shelby Harvey sip the city's water during Wednesday's public forum.

The Weekend Edition of the Times Review ran a photograph of Andy Hazelwood and Shelby Harvey sitting at the panel table both drinking "untreated Greeley Creek" water under the caption, *Revelstoke claims win in water war - Gov't says it will amend safe drinking law to give local health officials power to waive disinfection rule:*

Revelstoke residents are claiming a victory this week in convincing the provincial government to change its mind about revising the new drinking water regulations in B.C. During a public information meeting Wednesday, Columbia River-Revelstoke MLA Jim Doyle announced that Health Minister Elizabeth Cull has agreed to an amendment to the regulation which will exempt Revelstoke from the mandatory disinfection rule. "Your water will not be treated," Doyle told a cheering crowd of more than 500 residents packed into the community centre auditorium. "I do feel it is a victory," said Shelby Harvey of the Revelstoke Water Committee. She said the committee will now focus attention on seeing that "all the paperwork is done and the amendment is signed and sealed." The original safe drinking water regulations required mandatory disinfection of water from surface sources like lakes and streams. The proposed amendment gives regional medical health officials the power to waive the rule for communities which can demonstrate their supply source is safe from contamination in future and ensure

clean drinking water is available in case of emergency. "The wording of the amendment is fine," said Mayor Geoff Battersby. "We've just got to make sure it goes through." The city already conducts twice-weekly water quality inspections and has indicated that it's willing to accept responsibility for ensuring the Greeley Creek watershed, which supplies the city's drinking water, is secure from activities which could contaminate the water.

The newspaper's December 8th opinion page, *Recipe for Rage - Just Add Water*, offered a succinct rendering of the force of the public meeting regarding the new amendment:

The mandarins in Victoria know the name of Revelstoke. After the last couple of months, it's doubtful that they'll be able to forget it quickly, especially in the Health Ministry. It's not easy to get an entire town ticked off. But the provincial government managed to find the one issue in Revelstoke guaranteed to get every single resident up in arms. Threatening our water is the political equivalent of taking cubs from a mother grizzly. There aren't too many communities the size of Revelstoke which can boast that they made a provincial government back down on any of its plans. But Revelstoke did. We got what we wanted which is an amendment to the new safe drinking water regulations that will let us keep our water the way it is, pure and untouched by artificial disinfection when there isn't any reason for it. MLA Jim Doyle deserves applause for his efforts on our behalf in the halls of the legislature. City council, the Big Eddy water board and the members of the Revelstoke water committee proved tough and persistent fighters on the issue. But Lloyd Good, water board chairman and water committee member, said it best after last Wednesday's public meeting with representatives of the Health Ministry. "I don't think this amendment would have gone this route without us," Good said. He was referring to the 4,035 residents who signed a petition and bombarded the ministry with letters protesting the regulations. Without that kind of support, the amendment to the regulations might never have happened. Maybe now the folks in Victoria will know enough not to annoy the City of the Grizzly again.

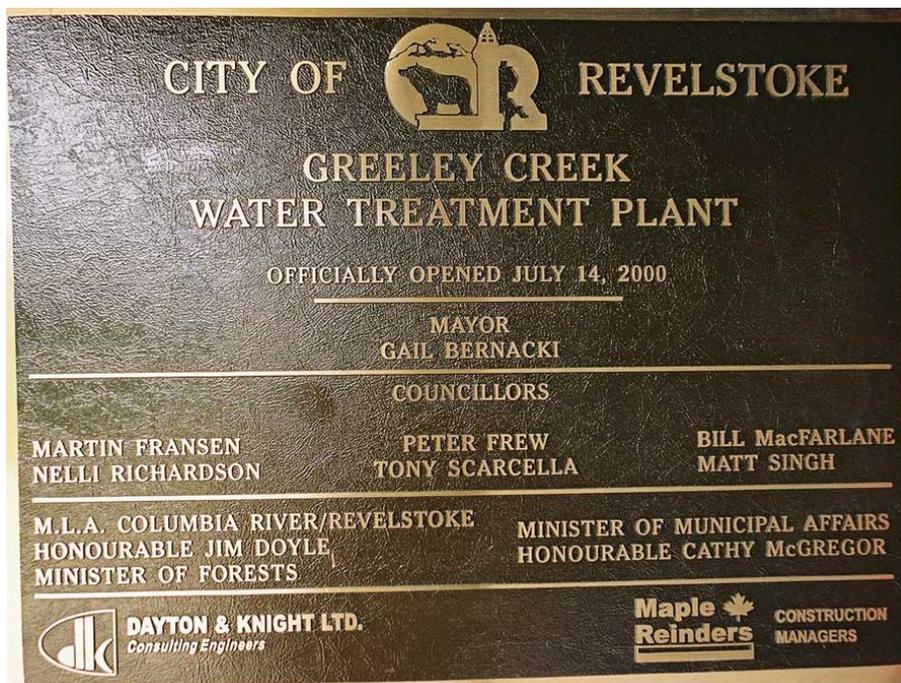


The amendment to the *Safe Drinking Water Regulation* was passed on February 24, 1993, as Order-in-Council 206, which stated the following:

(1) Section 6 is amended by renumbering it as subsection (1), and adding the following subsections: (2) Notwithstanding subsection (1), where, after receiving a written request and relevant supporting information from a water purveyor, the medical health officer considers that (a) the surface water does not require disinfection, (b) the water purveyor has taken adequate measures to protect and maintain the potability, quality and safety of the surface water and its source, storage, transmission and distribution facilities, and (c) the water purveyor has taken adequate measures to provide for the immediate disinfection of the surface water, or to otherwise provide potable water to all users, in the event of an emergency, the medical health officer may waive the requirement set out in subsection (1) (a) and may, at any time, attach terms and conditions to the waiver. (3) The medical health officer may, at any time, revoke a waiver given under subsection 2 if a term or condition is no longer being complied with.

In their position and challenge to the government concerning the amendment to the *Safe Drinking Water Regulation*, the Revelstokians and Big Eddyists accomplished something very critical for British Columbians. However, the main difficulty and inherent weakness of the amended *Regulation* for provincial water users was centred in subsection (2) (b), which identified the ambiguous matter of “*protection*”. The government, once again, neglected to include a reference to legislative powers for water users to protect drinking water sources in the *Regulation*, and once again, though not directly stated, the “onus” or “burden” for providing high quality water was being shouldered on water purveyors.

Another weakness of the amended *Regulation*, as water users were later to discover, were the discretionary powers given to Medical Health Officers, some of which later proved to be quite onerous with water purveyors, as the Erickson Improvement District tragically experienced in the late 1990s. The Revelstokians and Big Eddyists were also in for more trouble in following years.

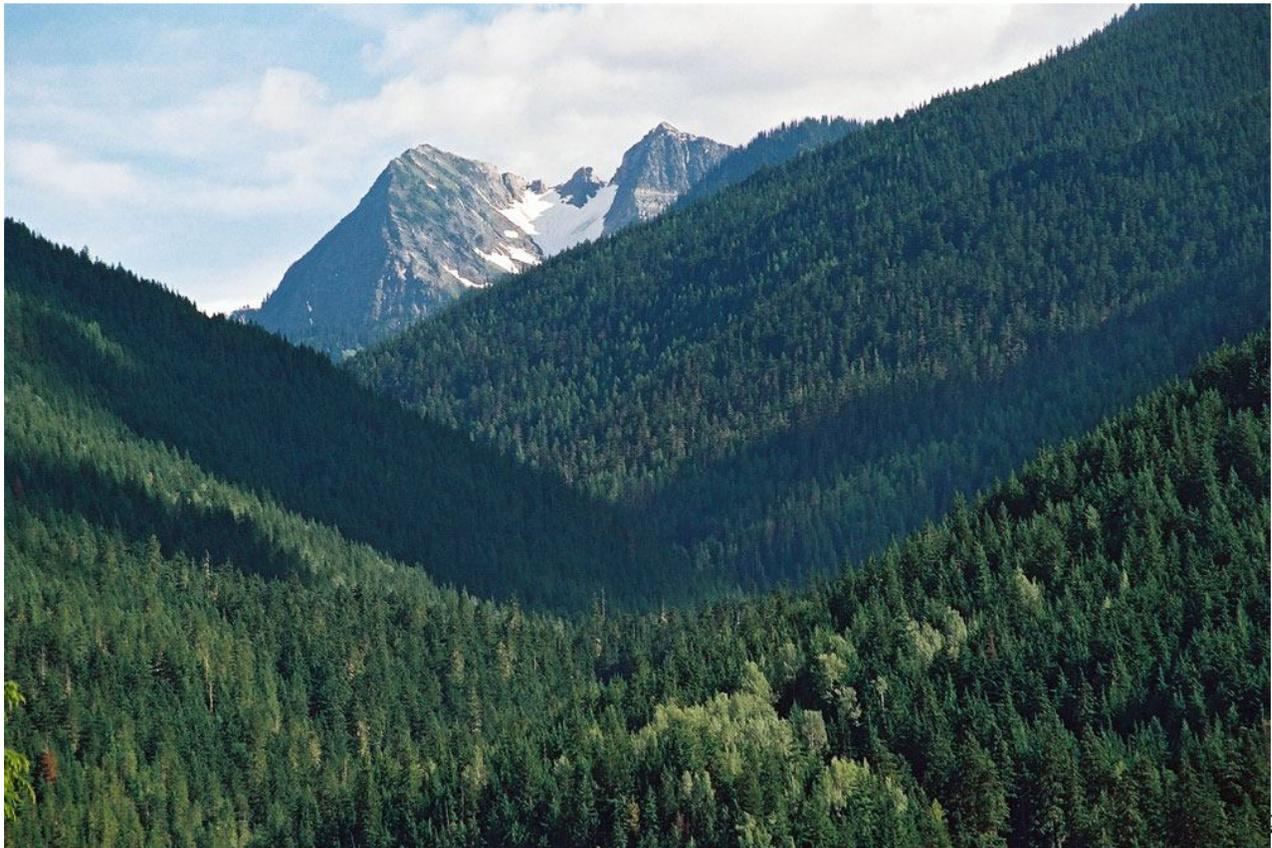


Unfortunately for Revelstokians, there was a mysterious water contamination issue in early 1995 that infected about 100 people, the source of which was left largely unidentified by health investigators. The incident brought swift judgement by the provincial government upon the advocates who had boasted of the City’s long historic record of high quality water and who were opposed to chlorination. This resulted

in orders to the City of Revelstoke to immediately treat their water supply. After deliberations, an expensive water filtration plant was eventually built, located near the Greeley Creek intake.



Photo, taken in 2002, of Revelstoke City's New water filtration plant and the plaque erected to the left of the main entrance doors, as shown on previous page. Below, the still-intact Greeley Creek Watershed Reserve.



11.3. The End of the Dolan?

According to a December 5, 1996 letter to Big Eddy Waterworks District Trustee chairman Lloyd Good from Dr. Andrew Ross, the assigned Medical Health Officer from the North Okanagan Health Unit, he was unwilling to *waive the disinfection requirements on the Dolan Creek supply* under Section 6(2) of the *Safe Drinking Water Regulation*. Ross made reference to the “*outbreak in Revelstoke last year.*” He also made reference to “*the Grandview Improvement District in Spallumcheen*” which apparently had a similar “*stream source with partial filtration*” as did Big Eddy on the Dolan’s intake.

For reasons cited in the letter, Ross stated:

I am not satisfied that the Dolan source can be operated safely without disinfection and therefore will not issue a waiver.... Accordingly, the use of Dolan Creek without disinfection is a violation of Section 6(1) of the Regulations. I must also note that the alteration of the intake structure without approval of the Public Health Engineer is a violation of Section 2(1) of the Regulations.

We now require from you, an operational plan to show how you will provide safe water for your consumers and bring the Waterworks District into compliance with the Safe Drinking Water Regulations. This may involve the continued use of the Creek with disinfection or restricting the use to the well sources. It may also involve a change to the water system. Any changes to the water system must be approved pursuant to the Safe Drinking Water Regulations. Have your design engineer submit sealed drawings to Mr. Ron Johnston, Public Health Engineer, if changes are proposed.

Ever since Big Eddy began using Dolan Creek as a domestic water source, this was the first time the community had ever received such an ultimatum from government. Big Eddy wasn’t about to give in, and the Trustees put up a fight. The following is Big Eddy’s letter of response, January 27, 1997.

Regarding your letter of December 5, 1996, received in our office on December 23, 1996. This letter raises far more questions than it gives answers. However, before dealing with them we would like a better explanation as to what part of Section 6(c) of the Safe Drinking Water Regulations have we not complied with.

Since the Order in Council No 1072, Safe Drinking Water Regulation effective October 1, 1992, the weekly test done by the Health Inspector has shown that all requirements to the Canadian Drinking Water Quality Guidelines have been met. As you know, Order in Council No. 0206 approved and ordered on February 24, 1992, B.C. Regulation #230/92 the Safe Drinking Water Regulation was the result of a public meeting held in Revelstoke on December 2, 1991. Present at that meeting was M.L.A., Jim Doyle and Andy Haselwood, Executive Director of Environment and Health, both of who promised we would not have to drink chlorinated water. Was this just a smoke screen to calm the crowd? Was the Order in Council No. 0206 just some kind of a joke?

You say Dolan Creek cannot be operated safely without disinfection. Please explain how it has provided safe, sanitary drinking water to the people of this district since 1944. Since the

intrusion of B.C. Hydro with its power line, there have been times during spring run off that we had to switch to ground water. Now with the 12 hectares of clear cut on the private portion this has happened more often. Even under these conditions, the Big Eddy Water Trustees have managed to maintain a <1 coliform count. You say your greatest concern is Giardia and Cryptosporidium. Last summer the water consumers of Penticton and Cranbrook experienced a terrible epidemic and I understand their water is chlorinated.

Because neither you nor Health Inspector will meet with the Big Eddy Waterworks consumers, or allow the news media to be present at any of our meetings with you, the Big Eddy Waterworks trustees have decided that all communications between our two offices will be published in the local paper. That way the water consumers will be kept informed as to what is happening with their water.

Copies of the letter were sent to Premier Glen Clark, to Minister of Health Joy MacPhail, to Rob Rounds in charge of Improvement Districts with the Ministry of Municipal Affairs, to Public Health Engineer Ron Johnston, to Environmental Health Officer Jim Knox in Revelstoke City, to Environment Minister Cathy McGregor, and to NDP MLA Jim Doyle.

Dr. Andrew Ross responded in February 3, 1997 as follows:

1. The section of the Safe Drinking Water Regulations that you have not complied with as stated in our December 5 letter is Section 6(1), not 6(c) as you quote. Section 6(1) requires the disinfection of all surface water supplies, but gives a Medical Health Officer the authority to grant a waiver if he feels it is justified.

2. At the public meeting in Revelstoke in 1992, it was announced that the Safe Drinking Water Regulations were amended to allow the Medical Health Officer to grant the waiver for the disinfection requirement if he feels it is not required. There was no promise that you would not have to disinfect your water. Also, if you use the wells, there would be no need to disinfect the water.

3. We have followed up on your request for the waiver for the Dolan Creek supply, and found that there are natural sources of contamination upstream of the intake. There has also been logging activity. Coliform sampling cannot protect your water users against a waterborne disease outbreak like the one which occurred in Revelstoke in 1995. This outbreak stopped when chlorination was added to the supply, and there has been no repeated outbreaks despite the regular occurrence of Giardia and Cryptosporidium organisms when tested at the Creek intake.

I don't agree that we have been avoiding the public on the issue of disinfection, since there have already been two public meetings on this issue in the City of Revelstoke last year. If you wish to give copies of our correspondence to the media, we have no objection, in fact we would encourage it, so that they are aware of the situation.

In our letter of December 5 1996 we requested an operational plan to show how you intend to provide safe water for the residents of Big Eddy, either with disinfection of the Dolan Creek source, or with the use of the wells. We are still waiting for a response on this.

Dr. Andrew Ross also forwarded the following to Rob Rounds, the Manager of Improvement District Services with the Ministry of Municipal Affairs:

On May 23, 1996, our staff met with the trustees of the Big Eddy Water District in an attempt to resolve the water quality issues.

The trustees said it was their intention to pursue a waiver from the chlorination requirements on the Dolan Creek supply. We agreed to inspect the watershed with Lloyd Good on August 22, 1996 and we reviewed the documentation submitted in support of the waiver. The request was denied and a copy of our letter to this effect is enclosed. It is our feeling that the creek cannot be operated safely without disinfection.

In our letter dated December 5, 1996 we requested an operational plan showing either disinfection of the creek supply or restricting the sources to the wells. The recent letter from Lloyd Good (enclosed) does not have this operational plan.

At this point we are growing concerned about the use of Dolan Creek, especially following the 1995 disease outbreak in Revelstoke. They are currently using the creek. We are now asking if there is anything your Ministry can do to assist us in achieving a safe water supply for the residents of Big Eddy.

Lloyd Good made good on Dr. Andrew Ross's challenge on his approval to bring in the media, so on February 20, 1997, the Revelstoke City Unique magazine published Dr. Andrew's letter of December 6, 1996 and Big Eddy's response letter of January 27, 1997.

On March 4, 1997, Big Eddy raised the matter up a notch. The Trustees fired off a letter to the federal East Kootenay Member of Parliament (MP) Jim Abbott, requesting that a "Cancer Study" be initiated on the use of chlorine as a water treatment disinfectant:

As trustees of the Big Eddy Waterworks District, we would like to present a proposal to the Federal Government in reference to chlorination of drinking water and its relationship to the risk of cancer.

For sometime there has been a growing concern about the risk of developing bladder, colon and rectal cancer from long term consumption of chlorinated drinking water. Studies have been done and are still being done in Ontario with some surprising results. Enclosed is a copy of a report put out by Health Canada. These studies were done with people who were all using water from a treated system.

We would like to propose a study comparing our untreated system to a treated one of comparable size and nature. We are enclosing a map of the City of Revelstoke showing the



City of Revelstoke

**Community Water
Advisory Committee**

The City of Revelstoke is establishing a new committee to assist Council in making the decisions preferred by the community regarding the long term supply, treatment and distribution of water.

If you would be interested in serving on this committee, please submit a letter and a brief resume outlining your qualifications and ideas.

All applications for this committee appointment should be submitted to the undersigned by 4:30 p.m. on Monday, March 3, 1997.

If you need further information concerning the work involved on this committee please contact:

**Bryant Yeomans
Public Works Superintendent
Box 170
Revelstoke, B.C.
V0E 2S0
Phone: 837-3637
Fax: 837-3632**

Big Eddy area. The City and the Big Eddy are divided by the Columbia River and use water from different mountain ranges and different terrain. Since we have one of the few untreated systems left in Canada, we feel that it would be of great value in helping to determine the benefits or hazards of chlorination. We have a fairly isolated system that services approximately 1000 people. It would not be difficult to monitor the results of its usage. We are proposing this study at this time because we may be forced to chlorinate in the near future. If this happens, any chance of a comprehensive and conclusive study will no longer be feasible. Please let us know if the Federal Government is interested in a study of this nature. With millions of dollars a year being spent on finding a cure for cancer, we feel this could provide vital information for preventing the disease.

Big Eddy also notified Dr. Andrew Ross of the same on March 6, 1997:

In response to your letter of February 3, 1997, the Big Eddy Waterworks District Trustees feel that they have complied with every part of Schedule B.C. Reg. 230/92 except the medical health officers personal opinion. Our drinking water has been safe for nearly 50 years and now it is suddenly a hazard to our health.

Because of the growing concern that chlorination can cause bladder and colon cancer, we are asking the Provincial Ministry of Health to do a study using our untreated water to help determine the actual risks involved in long term usage of chlorine. Health Canada did such a study in Ontario, but they did not have an un-chlorinated water source to compare with the chlorinated ones. Your estimate of one in a million cases does not agree with the results of the Health Canada tests. Perhaps a detailed study will bring a definitive answer to the question, "To chlorinate or not to chlorinate". We hope you will support us in this endeavour.

Big Eddy sent a letter to the Minister of Health, asking her to advocate the following:

Order in Council No. 1072 makes it mandatory that all surface water used for drinking must be disinfected and chlorination seems to be the method most economically feasible. The Medical Health Officers are demanding 4.5 P.P.M. of chlorine be used at this time, and there is a growing concern about the risks of cancer over the long term. In 1995 the Federal Government did a study in Ontario that indicated an increase in bladder and colon cancer occurring in people who were long term consumers of chlorinated water. Health Canada released the report on this study in December of 1995.

We would like to propose a study comparing our untreated system to a treated one of comparable size and nature. We are enclosing a map of the City of Revelstoke showing the Big Eddy area. The City and the Big Eddy are divided by the Columbia River and use water from different mountain ranges and different terrain. Since we have one of the few untreated systems left in British Columbia, we feel that it would be of great value in helping to determine the benefits or hazards of chlorination. We have a fairly isolated system that services approximately 1000 people. It would not be difficult to monitor the results of its usage.

It is our hope that your office could approach the Federal Government with this proposal and support us in doing a program of this nature.

The North Okanagan Chief Environmental Health Engineer Norman Clarkson responded on April 2, 1997, stating that “we see no value in repeating a study in the Big Eddy area with the small population using your water system:”

Health Canada has determined an interim maximum allowable concentration (IMAC) for total Trihalomethanes in their 1996 Guidelines for Canadian Drinking Water Quality. These are the by-products of chlorination, and the level established is 0.1 mg/l. The Supporting Documentation for the Guideline indicates that at this level the increased risk of cancer is about 1:275,000. The level of trihalomethanes in the City of Revelstoke water is substantially below 0.1 mg/l, even with the high level of chlorine used. The potential for forming trihalomethanes in the Dolan Creek water is unknown because chlorine is not being used, but none of the water supplies in the North Okanagan exceed the Guidelines for trihalomethanes.

As you are aware, the Medical Health Officer, Dr. Ross, has stated in a letter to you dated December 5, 1996, that in his opinion, the Dolan Creek water is not safe to use without disinfection, and that a disinfection waiver would not be issued.

If you return to the use of the well sources and can demonstrate that the Dolan Creek water has been successfully flushed from the reservoir and distribution system, we can discuss the relaxation of this requirement in writing on a temporary basis. Your Permit to Operate the Water System will therefore be altered and re-issued accordingly, stating that the customers must be notified on a monthly basis that the water needs to be boiled to make it safe for drinking.

I hope that you can appreciate our concern about the risk associated with using a creek water source without disinfection. If the waterborne disease outbreaks that have taken place in British Columbia and in the rest of the world haven't convinced you to take even the most fundamental precautions to protect your consumers, then stronger action may be needed in future.

The Big Eddy Trustees were faced with a big decision. They didn't want to use chlorine, and the government of the day exempted the use of chlorine if groundwater was used. Eventually they sent a letter to Norman Clarkson on June 2, 1997:

This is to advise that an Emergency Response Plan has been set up for this waterworks district, and a community Phone Tree has been set up and put into place. We have enclosed a copy of the Emergency Phone Contact List. All items on the Checklist for Emergency Response Plan Preparation have been covered. Should an emergency arise, the nature and response to it will be properly recorded.

In accordance with licence requirements, a 'Boil Water Advisory' is being issued to each user on a monthly basis whenever the system is using water from Dolan Creek. At the present, we are on the wells and project that we will be using them 75% of time. Plans are in the works to improve the wells so that they will be the primary source of water.

Eventually, Norman Clarkson sent a letter to Big Eddy on March 15, 2002 advising the Waterworks District to shut down Dolan Creek as a water source. In response, Big Eddy wrote on April 8, 2002 that:

The people of the Big Eddy have been drinking Dolan Creek water for 61 years with no sign of any adverse effects on their health. Tests showing the effects of chlorine on the human body do not show the same results. (Health Canada Tests, 1995/96).

The Big Eddy Trustees would appreciate any suggestions or advice on how to make the water in Dolan Creek any safer or purer than it already is. All disinfecting systems that we have studied appear to be cost prohibitive and chlorinated water is not an acceptable option.

The end of the Dolan was fast approaching. On May 29, 2002, R.H. Johnston, Public Health Engineer for the Okanagan Region, sent the following recommendation to Dr. David Bowering, the Medical Health Officer for Okanagan North:

The Dolan Creek source is not disinfected. The present practice of the District of issuing a boil advisory when they turn on Dolan Creek is not acceptable. With constant use, a boil advisory loses its effectiveness and some customers may ignore it. This could result in a waterborne disease outbreak and even death. It is recommended that this source not be used under any circumstances. It is further recommended that if the District wants to use this source, a treatment system be devised to provide a minimum of 3 log reduction of Giardia according to the USEPA guidelines. This proposal must be submitted to this office for approval prior to implementation.

It is recommended that the wells be used as the sole source of water for the District.

It is recommended that the intake line between Dolan Creek and the distribution system be completely severed so that it cannot be used.

On July 8, 2002, Norman Clarkson, of the Interior Health Authority, issued an *Order*. Among listed statements, it said that “*The Water System has been operated in a manner that poses a danger to the users of the System - namely the Dolan Creek source has been used extensively without the disinfection system required by the Safe Drinking Water Regulation.*”

Therefore, I hereby Order, pursuant to Section 63 of the Health Act that upon receipt of this Order, you:

- 1. Immediately stop using the Dolan Creek source, and all water thereafter supplied through the Water System must come from the well water sources. The Dolan Creek Source can not be used in future until and unless:
 - a. plans are prepared by a Professional Engineer licensed to practice in British Columbia, and the plans are approved by the Public Health Engineer for a disinfection system which is adequately designed to protect the health of the residents, and*
 - b. the disinfection system is installed, and the installation is inspected and certified by the Professional Engineer.**
- 2. Sever the pipe supplying water from the Dolan Creek source in the pump house, and fill the ends of the pipe with concrete by August 19, 2002. A key for the pump house must be supplied to our Public Health Inspector in Revelstoke.*

On July 15, 2002, Big Eddy responded with the following:

In response to the above mentioned order, the Trustees of the Big Eddy Waterworks

District are issuing an appeal to that order because of the following:

- 1. The Interior Health Authority has not, as promised in previous correspondence, met with the consumers to explain and discuss the discontinuation of Dolan Creek.*
- 2. Dolan Creek is needed as a backup source to the wells for purposes of fire fighting, or in the event of aquifer contamination.*

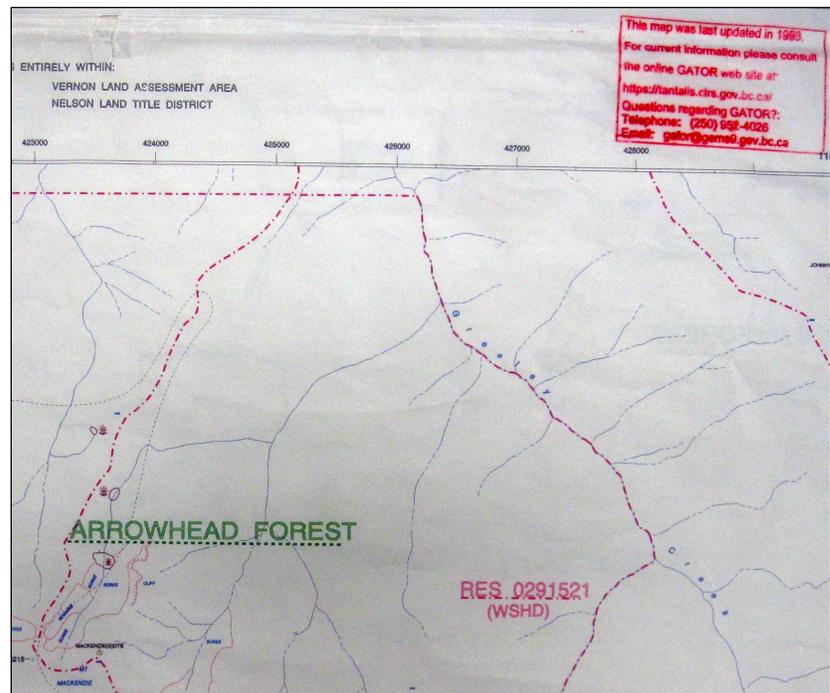
Please advise when and where a meeting can be arranged for these discussions.

11.4. The Disappearance Mystery of the Dolan and Greeley Reserves

As stated in *Appendix A* of this report, Policy Manager Bruce Morgan with the Ministry of Environment, Lands and Parks forwarded a long list of Watershed Reserves to the B.C. Tap Water Alliance in August 1997. Among a number of Reserves established by government since 1973 or earlier that were oddly no longer on Morgan’s “active” or “cancelled” Reserves category list, they also included the Dolan and Greeley Watershed Reserves, the statutory Reserves established for the Big Eddy Waterworks District since 1950 and the City of Revelstoke since 1917. Did these and other Watershed Reserve tenures simply vanish and disappear out of thin air?

No formal notification by government was found in Big Eddy’s files about a possible cancellation of its Reserve over Dolan Creek prior to 1998. The same is most likely true of Revelstoke City, as of June 3, 2013 Mayor David Raven, the former 20-year long Revelstoke Forest District Manager, with its operations headquarters in the hamlet of Big Eddy, thought his City still had an active Watershed Reserve tenure status over Greeley Creek.³⁵⁵ In calls to the Ministry of Lands Front Counter regional office in Cranbrook in late May 2013, the portfolio administrator confirmed that both the Greeley and Dolan Reserves were not registered or found on the government’s central computer data files.

When the B.C. Tap Water Alliance received a copy of the government’s Reserve file on Greeley Creek in late 2008, no paperwork was found to indicate or even suggest that the Reserve had been cancelled or made inactive. Secondly, information on Departmental Reference Maps dated May 5, 1994 registers Greeley Creek as an active Watershed Reserve (image, above).



³⁵⁵ Related, see Appendix E. Unbeknownst to the B.C. Tap Water Alliance in its June 4, 2013 letter to Revelstoke City Council, Mayor David Raven had sent a letter to government the previous day, June 3, making reference to the protection status of the Greeley Creek as a Watershed Reserve.

In aid of solving this profound mystery, particularly as it relates to the disappearance of two Reserves near Revelstoke City, some of the answers may lie within the two-or-so-year period of legal government planning related to the West Kootenay-Boundary Land Use Plan mandate and final report of October, 1994. In that report, no references, whatsoever, are made to community and irrigation Watershed Reserve tenures within the operational boundaries of the Nelson Forest Region, even though they were plainly registered on Departmental Reference and Forest Atlas Maps. Nothing is mentioned about them even in the Glossary section. This is particularly disconcerting for two reasons:

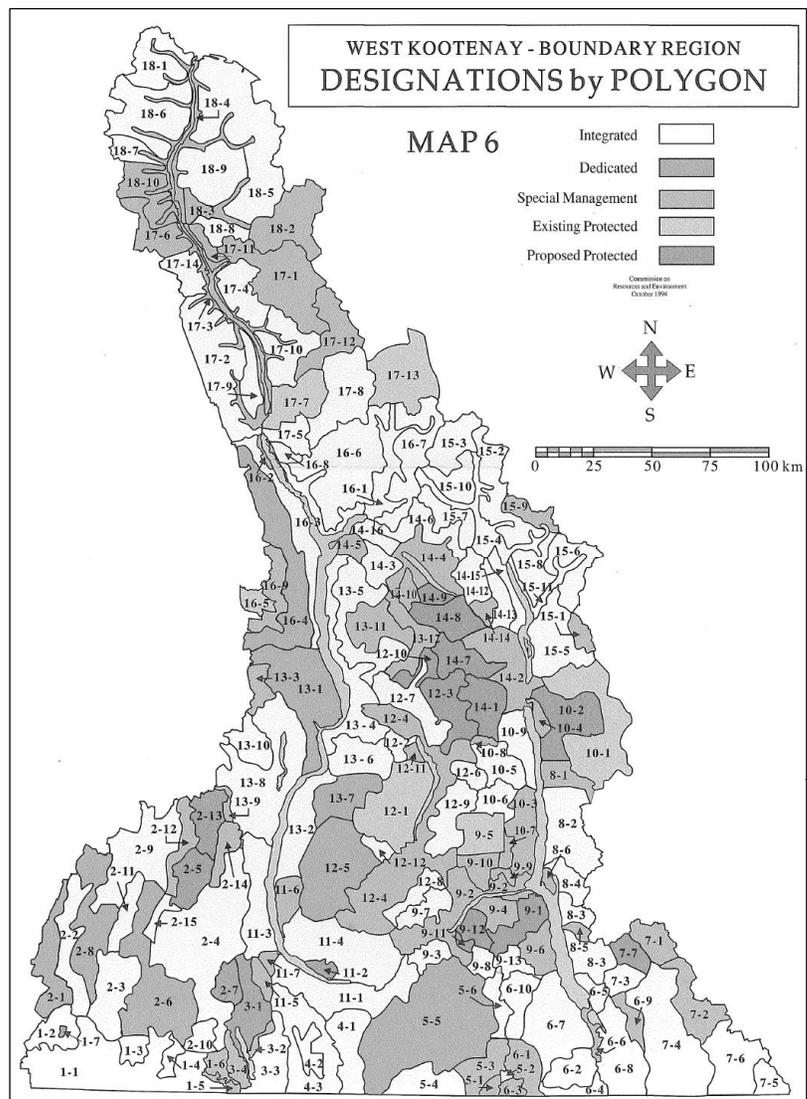
- As stated in Section 8.4.3., *Land Use Plans (LUPs) and Land Resource Management Plans (LRMPs)*, contained in Chapter 8 our book, *From Wisdom to Tyranny: A History of British Columbia's Watershed Reserves*, government agencies and committees were mandated to inform the public and stakeholders of all tenure information in the Kootenay Boundary Land Use Plan processes and reporting. For some unknown reason, government lapsed and apparently failed to report on the Watershed Reserve tenures, a serious and negligent oversight.

- Bruce Morgan's August 1997 Reserve list included a number of "Active" statutory Watershed Reserve tenures within the Nelson Forest Region.

Appendix 5, *Land Use Plan: Designation and Management Guidelines by Polygon*, in the October 1994 *West Kootenay-Boundary Land Use Plan*, all areas within the Nelson Forest Region were stautused with numbered polygons, detailed in Appendix 5, and cross-referenced in other sections of the report. All Watershed Reserve tenures under the *Land Act* were included in either one or two polygon

8.4. The 1990s: The Forest Resources Commission, Land Use Plans (LUPs), Land and Resource Management Plans (LRMPs) and the *Forest Practices Code Act*

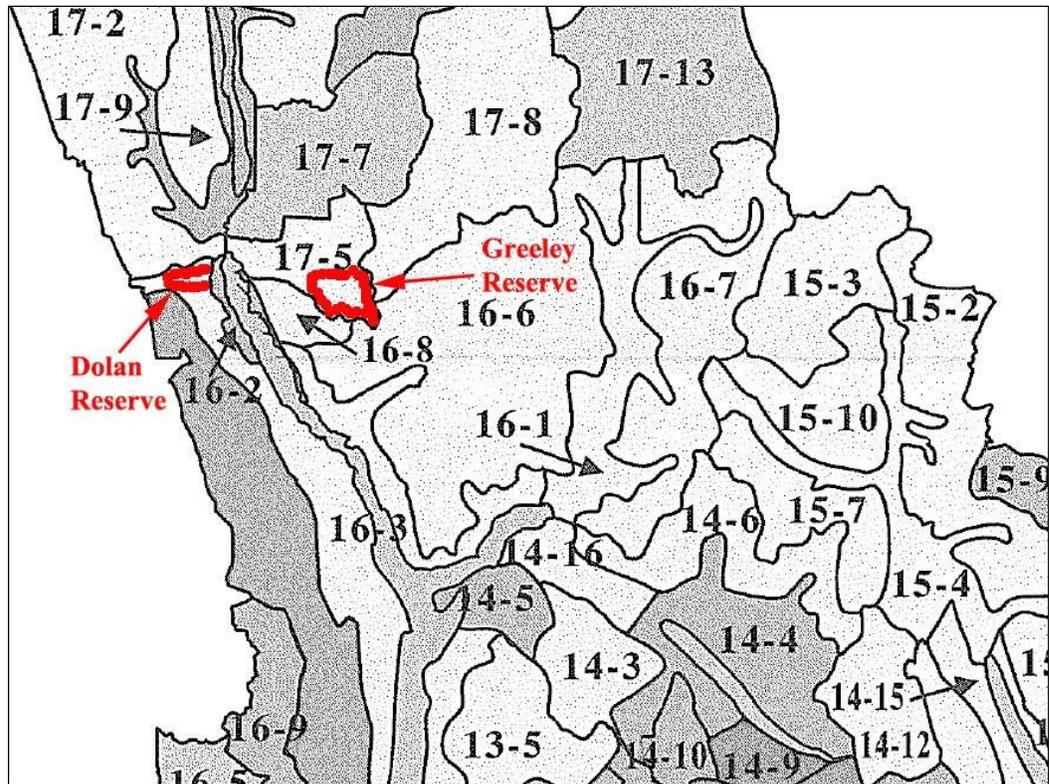
Land Act Community Watershed Reserves are legal and statutory entities. Because their status was not formally recognized and considered during the regional and sub-regional planning processes (and was, in fact, neglected and ignored), it can be argued that those processes were illegitimate.



categories, where community watersheds were now subject to land resource permit licensing, contrary to their statutory function:

- Integrated Management
- Special Management.

Excerpts / cut-outs from Appendix 5 of the October 1994 *West Kootenay-Boundary Land Use Plan*, showing the location of the Dolan and Greeley Watershed Reserve tenures now within conflicting Integrated Management zones that were placed overtop of the invisible Reserves.



Polygon Number	Unit Name	Designation	Enhanced Level Management Guidelines	Area (Hectares)
16-2	Revelstoke (bottom land to Grahams Creek)	Special Mgmt.	G,H,K,O	5024
<u>16-3</u>	Upper Arrow Lake (east and west side)	→ Integrated	K,L,N	54920
<u>17-5</u>	Illecillewaet River and Greeley Creek	→ Integrated	B,C,K,L,N	11028
17-6	Liberty Creek	Special Mgmt.	B,F,H,J,K,L,O	18167
17-7	Revelstoke National Park	Protected		26042
17-8	Illecillewaet, lower Tangier Rivers	Integrated	B,C,F,J,K,L,N	40325

It is as yet not known how government agency planners, administrators and managers overlooked the tenure status of all the Watershed Reserves long-registered by government within the legal boundaries of the West Kootenay-Boundary Land Use Plan area. Evidently, the public was being fooled about the Reserves. Obviously, some plan or agenda by unknown parties was underfoot to do so.