



## GOVERNMENT SERVICES COMMITTEE

MONDAY, JULY 18, 2011  
5:30 P.M.

COUNCIL CHAMBERS, CITY HALL  
410 ESPLANADE

*Mandate – To advise Council on a broad spectrum of issues related to departmental matters*

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COUNCILLOR STEVE ARNETT, CHAIR

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### CALL TO ORDER

#### 1. AGENDA APPROVAL

#### 2. MINUTES

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#### 3. DELEGATIONS

3.1. Mary Lowther 4 - 6  
Proposed Moratorium on Smart Meters (Correspondence attached)

#### 4. CITY MANAGER'S REPORT

#### 5. STAFF REPORTS

5.1. Financial Plan Update – June 2011 7 - 14

5.2. Annual Water Report for 2010 15 - 60

5.3. Proposed Building Bylaw Amendment – Low Consumption Toilets 61 - 63

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5.6. Fire Chief's Report – June 2011 66

5.7. Coastal Animal Control Services – June 2011 Pound Report 67 - 68

**6. MEMBER SUBMISSIONS**

**7. CORRESPONDENCE**

None

**8. NEW BUSINESS**

**9. UNFINISHED BUSINESS**

None

**ADJOURNMENT**



LADYSMITH

TOWN OF LADYSMITH  
MINUTES OF A REGULAR SESSION OF  
THE GOVERNMENT SERVICES COMMITTEE  
MONDAY, JUNE 20, 2011 – 5:30 P.M.

**COUNCIL MEMBERS PRESENT:**

Councillor Steve Arnett (Chair)  
Councillor Jillian Dashwood  
Councillor Bruce Whittington

Mayor Rob Hutchins  
Councillor Lori Evans

Councillor Scott Bastian  
Councillor Duck Paterson

**STAFF PRESENT:**

Ruth Malli  
Joanna Winter

Felicity Adams

Erin Anderson

**CALL TO ORDER**

Councillor Arnett called the meeting to order at 5:31 p.m.

**AGENDA APPROVAL**

Councillor Arnett requested Council's consideration of the following additions to the agenda:

- 6.1 Dog Park
- 6.2 Slack Point Security
- 6.3 Upkeep of Town-owned Lands
- 6.4 LaFF Delegation Request
- 6.5 Dogs at Public Events

2011-055

It was moved, seconded and carried that the agenda be adopted as amended.

**MINUTES**

2011-056

It was moved, seconded and carried that the Government Services Committee minutes for the meeting held May 16, 2011 be adopted as circulated.

**CITY MANAGER'S REPORT**

The City Manager reported that her priority projects are well underway. These currently include the Annual Report (including Community Profile and Financial Statements), the Grand Opening of the Ladysmith Spirit Square and Community Services Centre, the Town Hall meeting, the Sustainability Implementation Plan and the Final work to complete the Spirit Square and surrounding road work.

**REPORTS**

#### **Financial Plan Update**

It was requested that the Financial Plan report also include a summary of the status of the Town's reserve funds, and the amount of any applicable grants.

2011-057 It was moved, seconded and carried that the Financial Plan Update to the end of May 2011 be received.

#### **Building Inspector's Report for May 2011**

2011-058 It was moved, seconded and carried that the Building Inspector's Report for May 2011 be received.

#### **Trolley Report for May 2011**

2011-059 It was moved, seconded and carried that the Trolley Report for May 2011 be received.

#### **Fire Chief's Report for May 2011**

2011-060 It was moved, seconded and carried that the Fire Chief's Report for May 2011 be received.

#### **Animal Control / Pound Report for May 2011**

2011-061 It was moved, seconded and carried that the Animal Control / Pound Report for May 2011 be received.

### **MEMBER SUBMISSIONS**

#### **Dog Park**

2011-062 It was moved, seconded and carried that the Committee recommend to Council that the Parks and Recreation Commission consider the temporary use of one or more of the Ball Parks in the off-season as dog parks while the Commission is investigating an appropriate location for a fenced dog park.

#### **Security at Slack Point**

2011-063 It was moved, seconded and carried that the Committee recommend that Council request staff to consider ways to restrict recreational access to Slag Point due to the potential for fire and shoreline pollution.

Staff were requested to determine who is responsible for erecting appropriate signage.

#### **Upkeep of Town-Owned Lands**

Councillor Dashwood noted that some concerns have been expressed about the maintenance of boulevards and certain other Town properties. It was also noted that the regular maintenance schedule will be back in effect after the end of June.

2011-064 **Dogs at Public Events**

It was moved, seconded and carried that the Committee recommend that Council request the Ladysmith Festival of Lights and Celebrations be requested to investigate effective ways to remind people that dogs are not permitted at public events.

**Ladysmith Family and Friends Delegation Request**

It was suggested that Ladysmith Family and Friends contact the Town in order to request permission to appear as a delegation.

**CORRESPONDENCE**

**2011-065** **Joe Barry, Cowichan Valley Regional District**  
It was moved, seconded and carried that the Committee recommend that staff be requested to bring a recommendation for a revised question period procedure that incorporates the recommended Cowichan Valley Regional District policy.

**2011-066** **Les James**  
**Automatic Residential Sprinkler Controllers**  
It was moved, seconded and carried that Les James be advised that his suggested plan for watering restriction by day has been implemented effective in June 2011.

**2011-067** **Mayta Ryn**  
**Request to Introduce Cat Licensing in Ladysmith**  
It was moved, seconded and carried that the Committee recommend that the matter of proposed licensing of domestic cats be referred to the upcoming Town Hall meeting.

**ADJOURNMENT**

**2011-068** It was moved, seconded and carried that this meeting of the Government Services Committee be adjourned at 5:47 p.m.

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Chair (Councillor S. Arnett)

**CERTIFIED CORRECT**

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Corporate Officer (S. Bowden)

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**Subject:** BC Hydro's smart meters

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**From:** mary lowther []

**Sent:** Wed 6/29/2011 9:02 AM

**To:** Rob Hutchins; Steve Arnett; Scott Bastian; Jillian Dashwood; Lori Evans; Duck Paterson; Bruce Whittington

**Subject:** BC Hydro's smart meters

Hello,

I'm worried about the mandatory installation of "smart meters" that Hydro plans to place on every residence in BC by 2012. These wireless meters will replace our present electric meters and they will radiate radio frequency radiation all day, every day.

Cindy Sage, who has published "Sage Reports", measured these meters and found that they emit radiation many times a minute, all day and night, despite Hydro's insistence that they only send signals a few minutes each day. Please watch the video of Walter McGinnis on an interview on "Face to Face":

His interview starts just after three minutes.



<http://www.vimeo.com/24439968>

Lake Cowichan town council voted last night to send a letter to the Province requesting a moratorium be placed on the installation of these meters until they can be proven safe. The authority for local governments to do this comes from the Province's own legislation under their Public Health Act, Section 23, which says that local governments are required to take action when they "become aware of health hazards or health impediments within their jurisdictions."

Colwood city council has done the same.

Yours,

Mary Lowther,

Mesachie Lake, BC (just outside of Lake Cowichan in Area F)

## PRESENTATION REGARDING SMART METERS

Prepared by Mary Lowther

I am presenting this delegation to ask Ladysmith Council to place a moratorium on the mandatory installation of “smart meters” that BC Hydro plans to implement. Mary Lowther will make the presentation on behalf of the people in Ladysmith who are concerned about “smart meters”.

**Preamble:** BC Hydro plans to replace our present electrical meters with wireless meters on every building in BC by 2012. Hydro says these “smart meters” emit low frequency radiation a few minutes a day. Cindy Sage measured similar “smart meters” and found that spikes from signals being sent occur several times a minute. The power density of these spikes was measured at 4,000 microwatts per centimetre squared (sagereports.com). Health Canada’s Safety Code 6 allows 600 microwatts per centimetre squared.

Please watch the following discussion of “smart meters” by engineer Rob States. Some of you may have already seen this video:

<http://eon3emfblog.net/?p=1800>

**Request:** Given that:

- the World Health Organization has deemed radio frequency electromagnetic radiation as class 2b carcinogenic, the same category as lead and DDT,
- “smart meters” emit radio frequency electromagnetic radiation, and
- Provincial Bill 23 – 2008 of the Public Health Act, section 83 (1) requires a local government to take action should it become “aware of a health hazard or health impediment within its jurisdiction”,
- When it comes to our health we should follow the Hippocratic Oath: “First we do no harm” by implementing the Precautionary Principle.

Colwood and Lake Cowichan Councils have both voted to present the Honourable Michael de Jong, Premier Clark and the Honourable Rich Coleman with the requirement that they put a moratorium on the installation of smart meters. We ask the Ladysmith Council to do the same. Please find attached a sample letter for reference.

"Honourable Michael de Jong, Premier Clark and Honourable Mr. Coleman,

Bill 23-2008 of the Public Health Act, section 83 (1) requires a local government to take action should it become "aware of a health hazard or health impediment within its jurisdiction."

The World Health Organization announced on May 31, 2011 that radio frequency electromagnetic radiation (EMR) is a possible carcinogen to humans (Class 2B).

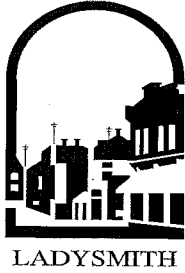
Given that:

- all wireless devices, including smart meters, emit EMR,
- smart meters emit EMR spikes many times a minute everyday, all day into the homes and apartments upon which they are attached,
- EMR spikes have been measured to drastically exceed the federal guidelines several meters from the smart meters (standard 600 uW/cm<sup>2</sup> vs. measured 4000uW/cm<sup>2</sup>),
- each smart meter will send wireless signals through adjacent homes or apartments to a gathering point (often a home which collects signals from hundreds of homes) thus exposing residents to EMR from multiple smart meters all day everyday,
- people who are electromagnetically hypersensitive have reported significant health effects from EMR from smart meters,
- those with medical and/or metal implants, children, pregnant women and those with impaired immune systems are particularly vulnerable to the effects of EMR,
- explosions and fires associated with smart meters have been reported in many cases,
- harmful interference with electronic appliances, including home security devices and medical devices, has been reported in many cases where smart meters have been installed,
- when there is doubt as to a product's safety we should invoke the "Precautionary Principle": at first do no harm,

Therefore, as required by the Public Health Act, the Ladysmith City Council hereby requests that the Ministry of Energy act to protect the health of the people within Ladysmith's jurisdiction by placing an immediate moratorium on the smart meter program for this region and its residents until all health and safety issues have been addressed and the meters operate safely in all respects..

Yours truly,  
The Ladysmith Town Council





Town of Ladysmith  
**STAFF REPORT**

To: Ruth Malli, City Manager  
From: Erin Anderson, Director of Financial Services  
Date: July 8, 2011  
File No:

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Re: Financial Update – June 2011

RECOMMENDATION(S):

That Government Services Committee receive this report.

PURPOSE:

To update Government Service Committee on the finances for the first half of 2011.

INTRODUCTION/BACKGROUND:

One of the goals for the Finance Department for 2011 is to provide timely financial information to both the Government Services Committee and management. This is the second monthly financial report for Government Services Committee to review.

Notes & Trends

Revenues:

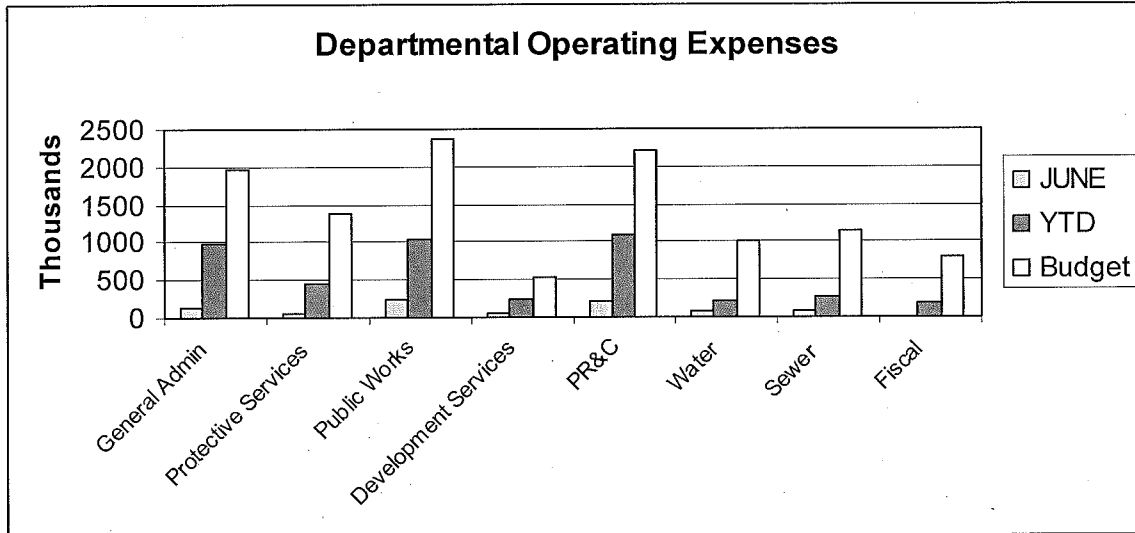
- At June 30th, 46% of property taxes were collected. This is slightly down from 2010, though the due-date was July 4th. Much of the property taxes were received (or post-dated) for the due-date.
- User Rate revenue (water, sewer & garbage fees) is expected to be on target. The latest billing was mailed out in early July, due in September.
- Additional non-conditional grant funds received from Traffic Fine Revenue Sharing and Small Communities Protection were greater than expected.
- Cemetery revenue continues to be down over last year at this time.
- Pool Rentals are lower than in previous years though overall facility rentals are greater than prior years.

Operating Expenses:

As mentioned in a previous report, it is difficult to analyze the expenses for only a portion of this year as it was a wet spring and most of the Public Works crew were working on finishing capital projects. Noted below are items in addition to previously reported expenses:

- Council Training & Travel and Materials & Supplies are greater in 2011 than this period in 2010, though it is projected to be on budget by the end of the year.

- FJCC Gas/Heating is higher than this period last year and could exceed budgeted dollars by 8%.
- Theft & vandalism costs continue to increase over last year.
- Forest Field Lights & Power will be over budget. This is due to prior year set-up charges being included on the first invoice received in 2011.



Other items:

- The Town's financial system, VADIM, will undergo a scheduled major upgrade in August.
- The electoral approval process for borrowing the \$1 million dollars for the water project is underway.

SCOPE OF WORK:

Individual analysis is performed by each Director.

ALTERNATIVES:

n/a

FINANCIAL IMPLICATIONS:

Keeping Council informed of the financial status of the organization.

LEGAL IMPLICATIONS:

This is a snap-shot of the Town finances for a point in time. No accruals have been made. Payments and deposits continue to be received which will change the financial figures. These statements are not audited.

CITIZEN/PUBLIC RELATIONS IMPLICATIONS:

The public is encouraged to review the report and provide comment.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS:

Coordination among the various departments to ensure all revenues and expenses are allocated properly and received by the Finance Department.

RESOURCE IMPLICATIONS:

The format of this report will evolve. Additional analysis time may be required by the Finance Department.

ALIGNMENT WITH SUSTAINABILITY VISIONING REPORT:

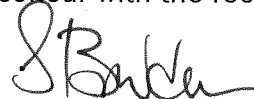
n/a

ALIGNMENT WITH STRATEGIC PRIORITIES:

This is within the Town strategy of "Wise Financial Management".

SUMMARY:

I concur with the recommendation.



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<sup>101</sup> Ruth Malli, City Manager

ATTACHMENTS:

- Capital Projects
- Consolidated Statement of Operations
- Consolidated Statement of Financial Position
- Reserve balances

Financial Status of Projects at June 30, 2011

<u>General Capital Projects</u>	<u>Committed 2011 YTD</u>	<u>2011 BUDGET</u>	<u>Grant</u>	<u>% complete</u>
Vehicle Replacements	43,062	\$120,000		On-going
Secondary Suite	30,236	42,000		70%
Zoning Bylaw	-	145,000	Y	0%
Waterfront Project Costs	42,234	30,000	Y	On-going
Property Sale Costs	3,965	41,600		10%
TB Bank Stabilization	-	2,000		
Park Bench/Pavers Program	8,366	-		On-going
CVRD Trail Program	20,207	20,000	Y	Complete
Municipal Signage Program	-	5,000		
Mosquito Sound Device	-	4,000		
FJCC Emerg Back Up	-	9,688		
Fire Equipment Replacement	-	48,186		5%
Aggie Hall Washroom Upgrade	-	15,000		
Lot 108 Playing Field	83,454	204,806	Y	41%
Lot 108 Road *	83,990	11,281		To be adjusted
RCMP Equipment	-	65,000		0%
High St Project	1,274,925	1,324,149	Y	96%
Spirit Square	632,679	553,531	Y	To be adjusted
High St Open Spaces	-	45,000	Y	
GIS Project	-	32,000	Y	
FJCC Energy Upgrade	2,147	59,000	Y	4%
Kinsmen Playground	60,043	60,000		99%
Website Upgrade	-	14,500		0%
Sustainability Visioning	11,193	71,500	Y	16%
High St Roads/Sidewalks/Storm	314,361	303,000		To be adjusted
HC Bridge Replacement	-	5,076		
LMS Second Access Road	-	40,000		
Flume Line	-	75,000		
FJCC Corner Wall Repairs	4,595	5,400		85%
Gourlay Jane Park Tree Remove	10,480	20,000		Complete
FJCC Fitness Equipment	7,631	7,000		Complete
FJCC Improvements	-	9,950		0%
Skateboard Park	18,136	12,100		Complete
	<b>2,608,642</b>	<b>\$3,400,767</b>		

\* the final projects costs will be re-allocated to the various funds.

<u>Sewer Capital Projects</u>	<u>2011 YTD</u>	<u>2011 BUDGET</u>	<u>Grant</u>	<u>% complete</u>
LMS Sewer-Contract Services	\$ -	\$17,000		
Liquid Waste Management Plan	3,205	20,000	Y	ongoing
Lift Station Upgrades	1,018	53,600		ongoing
MBBR/DAF Control Process	263,617	2,339,370	Y	ongoing
Lot 108-Sewer Services	25,435	144,200		95%
Sewer Upgrade-High St	23,148	18,700		95%
Main Upgrades (I&I)	17,845	150,000		ongoing
	334,268	\$2,742,870		

<u>Water Capital Projects</u>	<u>2011 YTD</u>	<u>2011 BUDGET</u>	<u>Grant</u>	<u>% complete</u>
Hydraulic Energy Recovery	\$ -	\$10,000	Y	
Holland Creek Crossing	-	176,000		Tendered
LMS Water	-	35,000		
Pipeline-HC to Stocking Lake	-	10,000		
Cassidy Aquifer	2,802	15,700		15%
Facilities-Low Flow Toilets	1,650	15,000		ongoing
Central Treatment Plant	25,736	706,000	Submitted	Designing
Power Supply to Arbutus	-	200,000	Submitted	Designing
Pipeline	13,361	1,388,545	Submitted	Tendered
Stocking Lake Dam Repair	1,410	24,000		
Lot 108-Water Services	21,132	48,000		95%
Water Upgrade-High St	25,128	31,850		95%
Arbutus Reservoir-Fencing	-	25,000		
	\$91,219	\$2,685,095		

Town Of Ladysmith  
Consolidated Statement of Operations  
For the period ended June 30, 2011.

	Actual YTD 2011	Budget 2011
<b>Revenue</b>		
Taxes (adjusted to Municipal portion only)	7,378,804	7,375,630
Fees and charges	1,091,049	1,789,400
Return on investments	36,538	30,000
Penalty and interest on tax	7,831	115,000
Grants	1,530,278	3,608,655
Donations, contributions and contributed property	174,952	392,059
Gain (loss) on disposal of tangible capital assets	-	338,707
Development fees	-	240,000
Local area improvements	8,922	8,922
	<u>10,228,374</u>	<u>13,898,373</u>
<b>Expenditures</b>		
General government services	940,600	1,964,702
Library	133,184	266,368
Protective services	495,960	1,492,683
Transportation services	443,644	1,146,255
Environmental health services	174,009	439,110
Public health	13,982	37,795
Development services	241,958	531,426
Recreation and cultural services	911,712	1,940,497
Parks operation services	268,041	627,537
Sewer	248,308	482,222
Water	208,399	474,318
Interest, net of actuarial adjustment	112,257	227,958
	<u>4,192,054</u>	<u>9,630,871</u>
Annual Surplus	6,036,321	
Prior Year Surplus	78,338,499	
Accumulated Surplus - end of year	<u><u>84,374,820</u></u>	

Town Of Ladysmith  
Consolidated Statement of Financial Position  
As at June 30, 2011

	2011	2010
<b>Financial Assets</b>		
Cash and short term deposits	10,720,309	\$ 10,129,101
Accounts receivable	7,437,873	4,753,896
	<u>18,158,183</u>	<u>14,882,997</u>
<b>Liabilities</b>		
Accounts payable	2,363,580	2,317,293
Post-employment benefits	172,300	172,300
Deferred revenue	1,331,113	1,386,463
Restricted reserves	2,396,041	2,242,345
Refundable deposits and other	380,721	348,902
Long term debt	3,211,321	3,211,321
	<u>9,855,077</u>	<u>9,678,624</u>
<b>Net Financial Assets</b>	<u>8,303,106</u>	<u>5,204,373</u>
<b>Non-Financial Assets</b>		
Tangible Capital Assets (unamortized)	75,934,501	72,978,203
Prepaid	24,095	46,514
Inventory	113,118	109,409
	<u>76,071,714</u>	<u>73,134,126</u>
<b>Accumulated Surplus</b>	<u>\$ 84,374,820</u>	<u>\$ 78,338,499</u>

Reserve & Appropriated Equity Balances  
As at June 30, 2011

Restricted Reserves	
DCC - Water	594,235
DCC - Parks	223,629
DCC - Roads	597,286
DCC - Sewer	45,758
DCC - Storm	308,006
Parking	60,834
Gas Tax	544,820
Green Streets	1,367
Amphitheatre	11,069
Trolley	4,809
Total Restricted	<u>\$ 2,391,813</u>
Other Reserves	\$ 204,810
General Appropriated Equity	\$ 1,793,630
Water Appropriated Equity	\$ 743,605
Sewer Appropriated Equity	\$ 2,730,774

Amounts do not reflect budgeted allocations.





Town of Ladysmith

**STAFF REPORT**

To: Ruth Malli, City Manager  
From: Joe Friesenhan, Director of Public Works  
Date: June 27, 2011  
File No:

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Re: ANNUAL WATER REPORT

RECOMMENDATION(S):

That the Committee recommend that Council approve the 2010 Annual Water Report for submission to the appropriate authorities, and that Council authorize the publication of the report.

PURPOSE:

To meet the requirements of the Drinking Water Protection Act

INTRODUCTION/BACKGROUND:

Section 15 of the Drinking Water Protection Act and Section 11 of the Drinking Water Protection Regulation require all water suppliers to provide annual reports to their users.

The report contains a description of the Town's water supply and distribution systems along with the accomplishments for the system over the past few years and especially the highlights and accomplishments for 2010.

Upon approval from Council, the report will be submitted to the Vancouver Island Health Authority (VIHA), uploaded to the Town's website and made available at City Hall for the public to view.

SCOPE OF WORK:

N/A

ALTERNATIVES:

N/A

FINANCIAL IMPLICATIONS:

N/A

LEGAL IMPLICATIONS:

As per the Drinking Water Protection Act, the Town must submit an annual water report to VIHA and make the report available to the public

CITIZEN/PUBLIC RELATIONS IMPLICATIONS:

Publishing the Annual Water Report not only shows that the Town is complying with VIHA requirements, but helps to keep the public informed about the town's water supply system.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS:

N/A

RESOURCE IMPLICATIONS:

N/A

ALIGNMENT WITH SUSTAINABILITY VISIONING REPORT:

Aligns with Sustainability Pillar #5, Innovative Infrastructure, of the Town's Sustainability Visioning Report.

ALIGNMENT WITH STRATEGIC PRIORITIES:

Aligns with Strategic Priority #4, Enhanced Standard of Infrastructure

SUMMARY:

To meet the requirements of the Drinking Water Protection Act, the Town must submit an annual report which describes the water supply and distribution system along with any tests and accomplishments for the prior year. A copy of the report is attached.

I concur with the recommendation.

  
\_\_\_\_\_  
Ruth Malli, City Manager

ATTACHMENTS:

2010 Annual Water Report.



**ANNUAL WATER REPORT 2010 - TOWN OF LADYSMITH**

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## INTRODUCTION

The 2010 Annual Water Report continues to demonstrate the Town of Ladysmith's effort towards achieving excellence through continued responsible construction, operation, monitoring, evaluation and management of its water system.

The Town currently meets all of its requirements under water regulations and endeavours to continually improve the water system and public awareness to meet changing needs of the community. The report also identifies areas for improvement which will increase the dependability and sustainability of our water system. Improvements in water initiatives including advanced water treatment, increased community awareness, enhanced customer service programs and more aggressive demand management projects are all major areas of improvement presented within this report.

This report is a working document for water system operations and management assisting the Town in working towards its established goals and mission statement. By increasing public awareness of the water system and service, this report will enable the community to participate in demand management strategies in an informed way. With the understanding and support of the community, the Town can work towards meeting set objectives of enhanced quality, quantity and efficiency.

Water safety is of utmost importance to the Town of Ladysmith. The supply of good, clean drinking water has been taken for granted by the general public in Canada until the events such as the Walkerton E. Coli outbreak brought the safety of the water supply into the public eye. These concerns were brought home to the citizens of the Town of Ladysmith in July, 2001, when the Arbutus Reservoir, the main treated reservoir serving the Town, was subject to a contamination event of unknown cause.

Although these events have brought the issues into the forefront of the public interest, the Town of Ladysmith has long recognized the need for significant upgrades to their existing water supply infrastructure, and have been proactively planning major upgrades to the water supply infrastructure for several years. To ensure an adequate supply of water for now and into the future, the Town commissioned a study to assess the geotechnical and hydrological conditions of the water supply lakes. The study also presented a comparison of the options considered to increase the reliability and quantity of the available surface water supply. A further study was undertaken to determine the feasibility of the Town tying into the Cassidy Aquifer.

## ANNUAL WATER REPORT PRINCIPLES

1. This report is an annual review and recommendation document encompassing all operations and management of the water system to ensure accountability to the community for services provided.
2. The mission statement, goals and targets presented in this report will be reviewed annually to provide clear direction for the water systems operation and management for the community.
3. This report will provide direction for improvement strategies for the present and future. The report will be a working document which has flexibility for change from ongoing input, updated research, evaluation and monitoring improvements.
4. The targets presented in this report are monitored each year to measure performance of the water system and if targets cannot be properly monitored to measure success, will be revised to provide effective performance management targets.
5. The improvement strategies, which identify current and future work projects, will be incorporated into their perspective budgets. The information provided to the public will be presented in a comprehensive and understandable form and will be consistent with operation and management budgets within the municipalities five year financial plan.
6. Water reports will contain financial information of the water system to ensure that financial resources are consistent with infrastructure and service planning.
7. This report will be distributed within the community to increase public support for water system improvement initiatives and to encourage public engagement on water conservation.

## MISSION STATEMENT & GOALS

### Mission Statement

The Town of Ladysmith will work to achieve excellence through continued responsible construction, operation, monitoring, evaluation and management of its water system.

### Objectives

- To ensure an adequate supply of high quality water to the community.
- To effectively treat the raw water to provide potable water of integrity to the community.
- To ensure the adequate delivery of high quality potable water delivery to all points within the system for domestic and emergency purposes.
- To ensure effective management of all water system aspects and provide excellent customer service and information to the community.
- To manage water demand by effectively assessing and managing water losses from leakage in the system.
- To develop an effective water conservation program for operations and the wider community.
- To maintain water rates that encourage conservation and resource awareness while providing quality accessible water to consumers.

# Chapter One

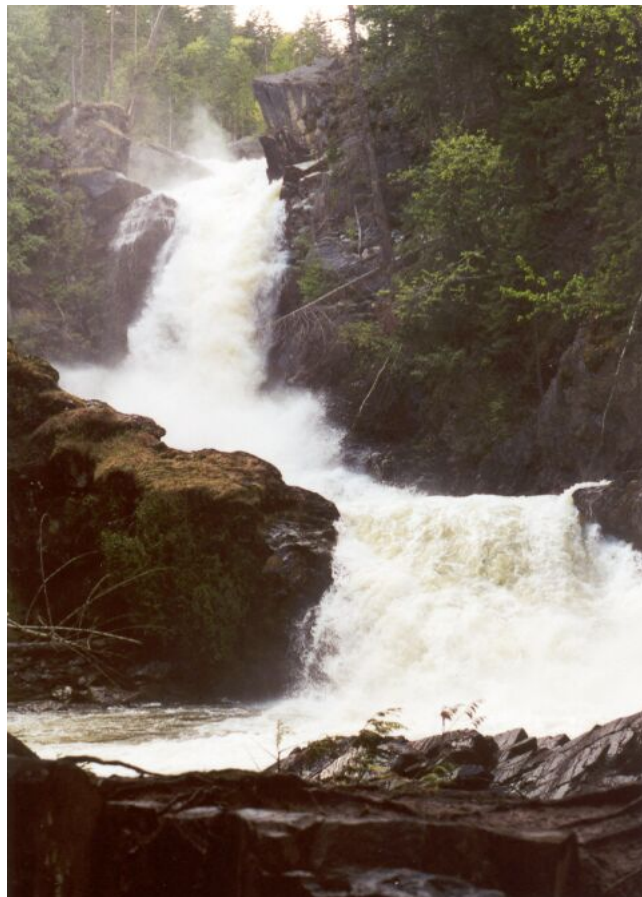
## PROVINCIAL REQUIREMENTS

All drinking water in the water system should meet the Canadian Guidelines for Drinking Water Quality. In British Columbia, the Ministry of Health regulates water suppliers through the Drinking Water Protection Act. This legislation ensures safe drinking water in the province. It requires that the water supplier monitor the drinking water source and distribution system to ensure compliance with the Drinking Water Protection Regulations and report all results to the Health Authority. Water monitoring, inspection and testing, emergency response planning, cross connection control and security standards are all regulated for persons operating a water system.

Changes in water systems must be approved by Vancouver Island Health Authority (VIHA), and conform to the Town's standards and specifications which meet the American Water Works Association (AWWA) standards. In addition, all works must conform to Town by-laws.

Under the BC Water Act, the Town must acquire licenses for withdrawal from water bodies and pay annual dues for the amount of water consumed.

Under the Community Charter the Town may by bylaw regulate, prohibit, and impose requirements in relation to municipal service and public health. The Town must make reports available to the public on request regarding fees imposed under this section.





# Chapter Two

## EXISTING INFRASTRUCTURE

### Supply

The Town of Ladysmith's water is drawn from two distinct sources, which provide water through separate facilities at the north and south ends of the Town. The majority of the Town at the north end is supplied by the Holland Lake and Holland Creek watershed which enters the water supply system at a diversion point at the Chicken Ladder Dam, a small stilling basin located approximately 2.5 km. from the Public Works yard. From this point the water is piped directly to the newly constructed enclosed Arbutus Reservoir, where it is chlorinated and distributed by gravity to North Ladysmith and the Diamond Improvement District.

The southern portion of the Town is supplied by an intake and pipeline from Stocking Lake, which also provides water for Saltair within the Cowichan Valley Regional District. The pipeline carries flow for Ladysmith to the Balancing Reservoir where the high pressure in the pipeline is released and a small amount of storage is provided. From there flow is piped to the chlorination and Contact Tank area and then piped to the distribution system at the south end of the Town of Ladysmith.



The Arbutus Reservoir and Contact Tank top water levels provide the static hydraulic grade lines for the north and south portions of the Town respectively. There is a 2700 m long, 200 mm diameter Asbestos Cement water main connecting these two points which is used, at times of poor water quality in Holland Creek, to fill the Arbutus Reservoir. Thus Stocking Lake becomes the only water source at these times. With increased activity in the Holland Creek watershed since 2000, records indicate that the Stocking Lake source is required for longer frequencies with longer periods of poor quality water in the Holland Creek watershed.

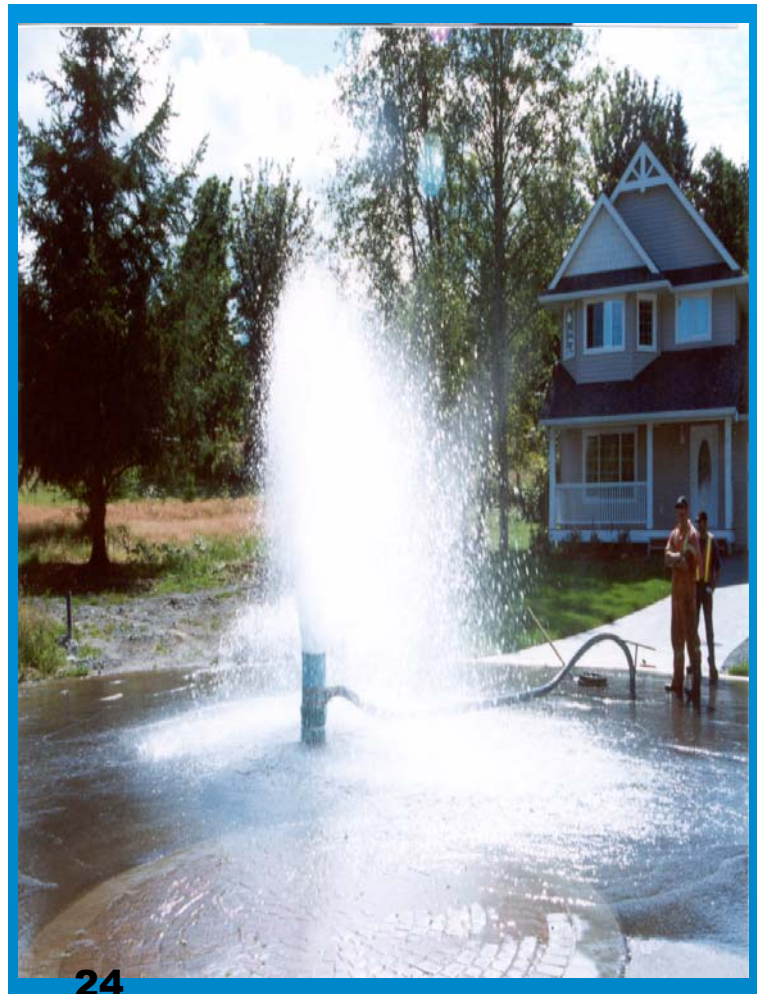
## EXISTING INFRASTRUCTURE

### Distribution

The topography of the Town of Ladysmith slopes steeply towards the waterfront, resulting in a large range in the water pressures within the Town's water system. With the completion of the new covered Arbutus Reservoir and subsequent increase in distribution pressure of 32 psi in 2008, the Town introduced two specific pressure zones within the system with the installation of four pressure reducing stations.

The distribution system for the Town consists of over 61 km of water main of varying sizes from 100mm to 250 mm. The mains are made of cast iron piping, asbestos cement piping or PVC piping. There are approximately 150 commercial, 3 industrial and 2700 residential water services connections. The cast iron (approximately 1 km.) and the asbestos cement (approximately 20 km.) piping are located mainly in the older section of Town and within the area that was amalgamated from Saltair in 1985. The majority of the asbestos cement piping is 100 mm in diameter and needs to be upgraded and upsized to allow for adequate flows throughout the system. The Town has been actively working on a replacement program since 2000 where a section of asbestos cement piping is replaced with proper sized PVC pipe annually.

Fire hydrants are situated throughout the distribution system at a spacing to offer adequate fire flows for all properties.



## 2010 EVALUATION

### Source Water

Over the past several years, the Town of Ladysmith has carried out considerable work to evaluate the condition and capacity of the Town's existing water supply. Initial work consisted of an evaluation of the existing storage reservoir dams to determine the feasibility and cost of upgrading of the dams and increasing storage volumes to provide possible additional withdrawals for the Town's water supply to determining the feasibility of accessing the Cassidy Aquifer for additional supply. The evaluation of Prevost Lake, which supplied



approximately two weeks of water to the north end of Ladysmith around the beginning of June, identified the need for some major dam repairs to make the dam safe for use. The cost of the repairs was deemed to be excessive for the volume of water provided and the dam was decommissioned in 2009.

A contamination event during the spring of 2006 prevented the Town from using its main source on Holland Creek for an extended period of time. A diversion pipeline from Holland Lake to Stocking Lake was investigated to make available additional storage volume to the limited Stocking Lake storage system. Normally, Stocking Lake is only used by north Ladysmith during periods of the winter and spring, when the turbidity and/or colour of the Holland Creek source is above 1.0 NTU and 15 TCU, respectively, and water demands are low. Work was completed in 2010 which upgraded the chlorine delivery system to allow for adequate chlorine delivery in the south end at high flows such as during a fire event. The Town also installed an online turbidity meter to provide for continuous turbidity monitoring in both the south end and at the Arbutus Reservoir. A review of the annual water use records of the past five years identified that the Town has been using progressively more water from Stocking Lake, from 36% of the total supply in 2002, to 61% of the total in 2007. This is a result of extended periods of high turbidity and colour in the Holland Creek supply. A watershed water quality review of the Holland Creek watershed identified a number of possible causes of the increase in turbidity and colour duration and in 2009 the Town developed a Water Quality Monitoring Plan, which included implementation of a long-term sampling program in the watershed, and initiated other protocols to address potential watershed and associated water quality issues. In 2008, the usage shifted back closer to historical volumes with 41% coming from Stocking Lake and 59% from Holland Creek. 2009 continued the shift with 35% coming from Stocking Lake and 65% from Holland Lake. More severe storms in 2010 brought the usage back up to 55% from Stocking Lake.

The new elevation of the Arbutus Reservoir allows for the entire distribution system to be serviced from one location. This allows the Town to look at centralized treatment which in turn will assist the Town in achieving its goal of reducing its carbon footprint. A grant application was submitted for works that included constructing a dual pipeline from the South End Chlorinator to the Arbutus Reservoir, phase I of the centralized treatment plant, and a new power supply. The application was unsuccessful. Council did authorize the detail design of the pipeline and centralized treatment process to go ahead without the a grant. The design showed that the elimination of the South End Chlorinator provides the ideal location for the Towns first in-line turbine for power generation. A hydraulic Energy Recovery Report was completed and adopted by Council.

The Town also completed a Watershed Protection Plan which identified the location and number of various testing protocol to ensure that the water supply for the Town was maintained at the highest quality. Regular sampling of the water supply started in mid February of 2010.



# Chapter Three

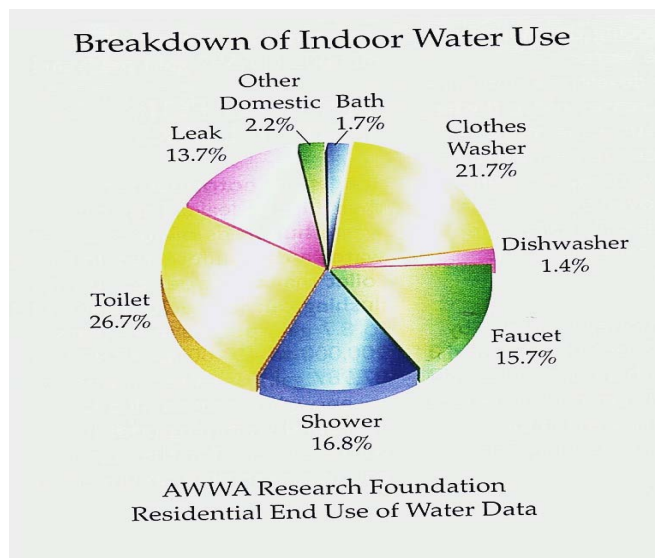
## 2010 EVALUATION

### Distribution

As part of an ongoing water main replacement program, the Town replaced the 100 mm asbestos cement water main on High street between 2nd Avenue and Third Avenue with a 150 mm PVC water main. The Town also completed replaced the 200 mm asbestos cement watermain with a 200 mm PVC watermain on Second Avenue between Buller Street and High Street. An additional 28 single family lots, 2 multi family lots and a 40 unit trailer park were developed at the Northwest end of Town in Lot 108.

In July, 2008, Council implemented a toilet rebate program with a \$20,000 budget allocation which provided \$75 to any resident of Ladysmith that replaced an existing toilet with an approved low flow toilet to a maximum of two toilets per residence. The program was to be completed in December 2009. The program was very well received and Council increased the budget and extended the program to December 31, 2010. A total of 2000 rebate requests were received by the end of December 2010.

A low flow toilet uses approximately 6,600 less gallons of water annually per person than the old standard toilets.



## 2010 EVALUATION

### Water Treatment

The higher elevation of the new Arbutus Reservoir provides an additional 32 psi pressure throughout the distribution system and allows the utility operators to chlorinate the water prior to entering the reservoir which allows for more contact time for the chlorine prior to consumption. This improves water quality and delivers a higher calibre product to customers.

The higher elevation also allows the Town to distribute water from the Arbutus Reservoir to the entire Town. This eliminates the need for a second reservoir at the south end and allows the Town to work towards a centralized treatment facility. The Town submitted an application to the Province for a grant to allow for the construction of a dual pipeline from the South End Chlorinator to the Arbutus Reservoir, the construction of the first phase of a centralized treatment facility, an upgrade to the power supply. The application was unsuccessful. Council authorized the detail design of the work in 2010. The design was completed and included a Hydraulic Energy Recovery component which was adopted by Council.

### Customer Service and Accountability

The Town of Ladysmith is committed to delivering high quality water in an accessible, safe, and sustainable manner. The ongoing water quality monitoring and the updated Waterworks Emergency Preparedness Report and the development of the annual water reporting system have all contributed to the high level of customer service and satisfaction in 2010.

Staff have been trained in chlorine handling, Workplace Hazardous Materials Information Systems, and Environmental Operators Certification Program training.

Customers are always welcome to provide feedback on the service they have received, by contacting the Public Works Department.

Development of a water system Standard Operating Procedures manual is underway and preventative maintenance scheduling program is in place to improve water system operations and increase the integrity of the system. Along with these programs there is need for an enhanced data management program and training.

Council approved an Increasing Block Rate water payment structure in 2009. The fourth quarter billing included both the single rate and the increasing block rate. The new billing standard was put into effect in January 2010.

# Chapter Three

## 2010 EVALUATION

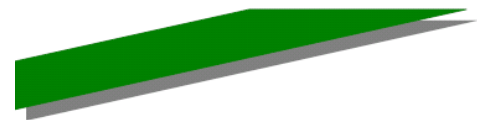
### Water Demand Management

The Town of Ladysmith has presented water demand management information to the public through events, Council presentations, appliance incentives, and water metering. Residents of Ladysmith have a keen interest in the health and security of their watershed, as was made clear during the Community Visioning sessions held during 2008. Awareness-building activities have proven effective in raising the public consciousness about water consumption.

In the spring of 2008, the Town introduced a low flow toilet rebate program where residents could submit their receipts for up to two toilets and receive a rebate to help offset the costs of their dual flush or low flow toilets. The program was extended till the end of 2010 due to its popularity.

All water customers of the Town of Ladysmith are connected to metered water systems. This helps track usage and provides an incentive for users to reduce their consumption in order to save money. The metering system is also effective in demand management by detecting leaks more quickly than un-metered systems. Waterworks employees and customers are more diligent with tracking their usage over time and will identify abnormally high quantities quickly after a leak has occurred. Water metering has had a positive effect on water demand management. Usage has been reduced from 1,720,171 cubic metres in 2002 to 1,313,950 cubic metres in 2010. This 23.6% decrease in water consumption occurred despite a 20.4 % increase in population.

The Town of Ladysmith is proud to be a leader in operational water conservation. The Increased Block Water Rates introduced by the Council in 2009 will continue to assist in the Towns sustainability goals.



### Low Flush Toilet Retrofit Rebate Program

**\$75**



LADYSMITH

ENCLOSED ARBUTUS RESERVOIR





## Chapter Four

ANNUAL WATER REPORT 2010 | TOWN OF LADYSMITH

### SOURCE WATER ACCOMPLISHMENTS

- **Completion of Watershed Protection Plan**  
The Watershed Protection Plan was completed by the Towns Consulting Engineers and adopted by Council. The plan has been submitted to VIHA
- **Completion of the Water Quality Monitoring Program.**  
The Water Quality Monitoring Program was completed and adopted by Council. The plan identifies various locations within the watershed for testing of the raw water and the number and types of tests proposed. Testing started in February, 2010.
- **Turbidity Analysers**  
The installation of turbidity analysers was completed for both the Arbutus Reservoir location and the South End Chlorinator. The installation allows for continuous reads at both locations.

### DISTRIBUTION ACCOMPLISHMENTS

- **Replacement of Water Main at High Street and Second Avenue**  
As part of our regular watermain replacement program, crews replaced the asbestos cement water main on High Street between Second and Third Avenue and also on Second Avenue between High Street and Buller Street..
- **Long Term Planning**  
A number of reports were initiated in 2008 to help the Town ensure a safe and adequate water supply for the present and into the distant future. These reports were completed by Koers & Associates in 2009 and subsequently adopted by Council.

### WATER TREATMENT ACCOMPLISHMENTS

#### **Centralized Water Treatment**

The construction of the enclosed Arbutus Reservoir at a higher elevation allowed the Town to supply treated water from the one location to the entire town. Council authorized the detail design for the dual pipeline between the south end chlorinator and Arbutus Reservoir, Phase I of the centralized treatment and an upgraded power supply to be completed in 2010.

## ACCOUNTABILITY AND CUSTOMER SERVICE ACCOMPLISHMENTS

- **Staff Training**  
Training in chlorine handling, Workplace Hazardous Materials Information Systems, and Environmental Operators Certification Program has improved the knowledge and skill of staff. Additionally, there have been training sessions in customer service, leadership, team dynamics, communication, and self and public awareness.



### WATER DEMAND MANAGEMENT ACCOMPLISHMENTS

- **Reduced Water Consumption**

Although 2009 showed a slight increase in water consumption due to a very dry summer, the previous six consecutive years of reduced consumption and an increased population is an indicator of the success of the Town's water demand management initiatives. The consumption in 2010 was the lowest since annual records were being kept.



- **Low-flow Toilet Rebate**

The low-flow/dual flush toilet rebate program was extended to the end of 2010. The program has been an effective way to engage residents in water demand management. A total of 311 rebates have been issued since the program was put in place in the spring of 2008.

- **Public Awareness Building**

Awareness activities at events, publications on water conservation, and public sessions such as the Community Visioning have all contributed to high public awareness of the watershed and the resource of water itself.

## IMPROVEMENT STRATEGY 2011

- **Increased training for Waterworks Staff with Environmental Operators Certification Program**

Continual training is an integral part of maintaining the highest standard of care for the waterworks system.

- **Complete the preventative and protective strategy for watershed**

A Risk Management Strategy for the Town's water source has been adopted. The completion of this strategy will initiate a new level of preventative measures to ensure the security and quality of the Town's water.

- **Complete Standard Operating Procedures Manual**

Consistent procedures and guidelines will provide continuity and preparedness in times of transition. The manual will work as a living document that can be updated as new knowledge is gained. It will act as a corporate memory to ensure high quality standards and effective succession planning.

- **Moving forward with Long Term Planning Initiatives**

Continuation of steps outlined in long term planning, such as Unidirectional Flushing program, Watershed Protection Plan, Preliminary pipeline design from Holland Lake to Stocking Lake, and the feasibility of bringing water to Ladysmith from the Cassidy Aquifer.

- **Internal Communications Strategy**

This strategy will be created to establish enhanced internal communications to the various departments for awareness, understanding and support of inter-departmental objectives for the water system. This strategy will discuss email, cell-phone, monthly reporting, and other communications and how they will be utilized in this internal communications strategy.



## GOALS FOR THE FUTURE

- **Continuation of the water main replacement program**  
Over the past few years, Council has approved the replacement and upgrade of the water distribution system. Crews have replaced between 400 and 600 metres of water main annually. In 2011, the section proposed to be replaced and/or upgraded is the watermain on Symonds Street between Second Avenue and Fourth Avenue.
- **Upgrading and replacing the supply lines**  
Work is underway to construct a new supply line from Holland Lake to Stocking Lake. This will allow the Town to obtain an adequate supply of water from the Holland Lake system during times of high turbidity and/or color within the watershed.
- **Centralizing the treatment system**  
The replacement of the existing raw water supply line from the south end chlorinator to the Arbutus Reservoir and the installation of a new potable water line in the same trench, will allow for a centralized treatment system that will reduce future operations costs.
- **Planning for generations**  
Tying into the Cassidy Aquifer will ensure a safe and adequate water supply for future generations.



## GLOSSARY

**E. Coli (Escherichia coli)** - are bacteria present in the intestine and feces of warm-blooded animals. E. coli are a member species of the fecal coliform group of indicator bacteria. Their concentrations are expressed as number of colonies per 100 ml of sample.

**Fecal Coliform**- A sub group of total coliform bacteria that are distinguished in laboratory tests at elevated temperatures. It is used as an indicator organism for potential waterborne disease risk.

**Filtration** - The process of passing water through a porous substance to remove solids in suspension, such as organics. Effectiveness is measured as a reduction of turbidity.

**Free Chlorine** - the quantity of chlorine remaining which has not been consumed in reactions with microorganisms or organic matter. Also referred to as residual chlorine.

**NTU (Nephelometric Turbidity Units)** - The standard unit of measurement for turbidity in water. It detects the amount of light that is scattered by finely suspended particles in water.

ved from rocks and minerals. Organic matter is characterized by its carbon-hydrogen structure.

**pH** - the expression of the acidity of a solution by the negative logarithm of the hydrogen ion concentration; pH of 1 is very acidic; pH of 14, very basic; pH 7 is neutral. The neutral point of 7 indicates the presence of equal concentrations of free hydrogen and free hydroxide ions.

**Potable Water** - Water which is considered safe and fit for human consumption, culinary and domestic purposes and meets the requirements of the health authority having jurisdiction, which is the Vancouver Island Health Authority in this region.

**Pressure Zone** - A zone where the pressure is constant. Pumps and valves in the distribution system, keep the pressure constant in each pressure zone.

**PRV** - Pressure reducing valve.

**PVC** - A type of plastic used to make pipes.

**Raw Water** - Untreated water from wells, surface sources or any water before it reaches a water treatment device or process.

**Reservoir** - A receptacle used for storing water within the distribution system.

**Residual Chlorine** - the quantity of chlorine remaining which has not been consumed in reactions with micro-organisms or organic matter. Also referred to as free chlorine.

**Total Chlorine** -The total amount of chlorine in a solution, which includes the chlorine demand as well as the residual chlorine.

**Total Coliform** - An indicator group of organisms mostly of intestinal origin used to appraise the microbiological risk to drinking water.

**Turbidity** - The measurement of how cloudy or murky water is. Its measurement relates to the optical property of water that causes light to be scattered and absorbed in a cloudy sample rather than transmitted in a straight line.

**APPENDIX 'A'**

# Water Sample Range Report

Vancouver Island Health Authority  
Central Island

**Facility Name:** TOWN OF LADYSMITH WATER WORKS  
**Facility Type:** DWT  
**Date Range:** Jan 1 2010 to Dec 31 2010  
**Date Created:** Feb 23 2011

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>606 OAKWOOD,</u>				
<u>Dist. site, Monthly</u>				
	01/06/2010	L1	L1	
	02/02/2010	L1	L1	
	03/03/2010	L1	L1	
	04/07/2010	L1	L1	
	05/04/2010	L1	L1	
	06/01/2010	L1	L1	
	07/14/2010	L1	L1	
	08/11/2010	L1	L1	
	09/14/2010	L1	L1	
	10/05/2010	L1	L1	
	11/03/2010	L1	L1	
	12/01/2010	<u>L1</u>	<u>L1</u>	
	<b>Total Positive:</b>	<b>0</b>	<b>0</b>	<b>0</b>
<u>Oyster Cove Road,</u>				
<u>Ladysmith, B.C.,</u>				
<u>Wastewater</u>				
<u>Treatment Plant,</u>				
<u>Dist. site, Monthly</u>				
	01/12/2010	L1	L1	
	02/16/2010	L1	L1	
	03/16/2010	L1	L1	
	04/14/2010	L1	L1	
	05/04/2010	L1	L1	
	06/01/2010	L1	L1	
	07/27/2010	L1	L1	
	08/24/2010	L1	L1	
	09/14/2010	L1	L1	
	10/19/2010	L1	L1	
	11/16/2010	L1	L1	
	12/14/2010	<u>L1</u>	<u>L1</u>	
	<b>Total Positive:</b>	<b>0</b>	<b>0</b>	<b>0</b>
<u>340 6Th Avenue,</u>				
<u>Ladysmith, B.C.,</u>				
<u>Public Works Yard,</u>				
<u>Dist. site, Monthly</u>				
	01/19/2010	L1	L1	
	02/09/2010	L1	L1	
	03/16/2010	L1	L1	
	04/14/2010	L1	L1	
	05/17/2010	L1	L1	
	06/15/2010	L1	L1	
	07/21/2010	L1	L1	
	08/04/2010	L1	L1	
	09/22/2010	L1	L1	
	10/13/2010	L1	L1	



12/C 010 L1 L1  
 Total Positive: 0 0 0

604 Farrell Road,  
Dist. site, Monthly

01/26/2010	L1	L1	
02/09/2010	L1	L1	
03/09/2010	2	L1	
03/16/2010	L1	L1	
04/07/2010	L1	L1	
05/12/2010	L1	L1	
06/01/2010	L1	L1	
07/14/2010	L1	L1	
08/11/2010	L1	L1	
09/22/2010	L1	L1	
10/05/2010	L1	L1	
11/08/2010	L1	L1	
12/07/2010	<u>L1</u>	<u>L1</u>	
Total Positive:	1	0	0

405 Blair Place,  
Dist. site, Monthly

01/06/2010	L1	L1	
02/09/2010	L1	L1	
03/09/2010	L1	L1	
04/07/2010	L1	L1	
05/12/2010	L1	L1	
06/29/2010	L1	L1	
07/27/2010	L1	L1	
08/31/2010	L1	L1	
09/14/2010	L1	L1	
10/19/2010	L1	L1	
11/16/2010	L1	L1	
12/01/2010	<u>L1</u>	<u>L1</u>	
Total Positive:	0	0	0

1280 Rocky Creek  
Road, Dist. site,  
Monthly

01/12/2010	L1	L1	
02/23/2010	L1	L1	
03/24/2010	L1	L1	
04/14/2010	L1	L1	
05/04/2010	L1	L1	
06/23/2010	L1	L1	
07/21/2010	L1	L1	
08/17/2010	L1	L1	
09/28/2010	L1	L1	
10/26/2010	L1	L1	
11/23/2010	L1	L1	
12/14/2010	<u>L1</u>	<u>L1</u>	
Total Positive:	0	0	0

Ladysmith, 558  
Hooper Place, Dist.  
site, Monthly

01/12/2010	L1	L1	
02/23/2010	L1	L1	
03/24/2010	L1	L1	
04/21/2010	L1	L1	

06/2/2010	L1	L1	
07/06/2010	L1	L1	
08/17/2010	L1	L1	
09/28/2010	L1	L1	
10/26/2010	L1	L1	
11/23/2010	L1	L1	
12/14/2010	7	L1	
12/20/2010	<u>L1</u>	<u>L1</u>	
<b>Total Positive:</b>	<b>1</b>	<b>0</b>	<b>0</b>

Kinsmen Park 1000  
Colonia Drive, Dist.  
site, Monthly

01/06/2010	L1	L1	
02/16/2010	L1	L1	
03/03/2010	L1	L1	
04/21/2010	L1	L1	
05/26/2010	L1	L1	
06/15/2010	L1	L1	
07/06/2010	L1	L1	
08/24/2010	L1	L1	
09/08/2010	L1	L1	
10/05/2010	L1	L1	
11/16/2010	L1	L1	
12/07/2010	<u>L1</u>	<u>L1</u>	
<b>Total Positive:</b>	<b>0</b>	<b>0</b>	<b>0</b>

City Hall 410  
Esplanade, Dist.  
site, Monthly

01/26/2010	L1	L1	
02/16/2010	L1	L1	
03/30/2010	L1	L1	
04/27/2010	L1	L1	
05/26/2010	L1	L1	
06/09/2010	L1	L1	
07/06/2010	L1	L1	
08/04/2010	L1	L1	
09/22/2010	L1	L1	
10/13/2010	L1	L1	
11/08/2010	L1	L1	
12/01/2010	<u>L1</u>	<u>L1</u>	
<b>Total Positive:</b>	<b>0</b>	<b>0</b>	<b>0</b>

432 DAVIS ROAD,  
Dist. site, Monthly

01/19/2010	L1	L1	
02/02/2010	L1	L1	
03/30/2010	L1	L1	
04/27/2010	L1	L1	
05/26/2010	L1	L1	
06/09/2010	L1	L1	
07/27/2010	L1	L1	
08/11/2010	L1	L1	
09/08/2010	L1	L1	
10/13/2010	L1	L1	
11/03/2010	L1	L1	
12/07/2010	<u>L1</u>	<u>L1</u>	
<b>Total Positive:</b>	<b>0</b>	<b>0</b>	<b>0</b>

11/09/2010                       $\frac{L1}{0}$                        $\frac{L1}{0}$                       0  
Total Positive:

Result Values:                      E - estimated                      L - less than                      G - greater than

Samples that contain total coliform:	2	1.63% of total
Samples that contain e. coli:	0	0.00% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	1/7	
Total number of samples:	123	

**Comments:**

Two positive total coliform results out of 123 samples.  
Bacteriologically satisfactory results - meets Drinking Water  
Protection Act's Regulatory Schedule A.

  
 Environmental Health Officer  
 Feb 23 2011

FOR FURTHER INFORMATION PLEASE CALL: Lucko, Jill (250) 755-6215 Nanaimo

**Operator**

Town Of Ladysmith  
 Box 220 STN MAIN  
 Ladysmith, BC  
 V9G 1A2

(250) 245-6400

**Facility Name:** TOWN OF LADYSMITH WATER WORKS  
**Facility Type:** DWT  
**Date Range:** Jan 1 2010 to Dec 31 2010  
**Date Created:** Feb 23 2011

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>Holland Creek,</u>				
<u>Ladysmith, B.C.,</u>				
<u>Chicken Ladder Dam</u>				
<u>RAW WATER,</u>				
<u>Source site,</u>				
<u>Quarterly</u>				
	03/30/2010	51.2	1.0	
	06/15/2010	88.2	5.2	
	09/27/2010	816.4	6.3	
	11/30/2010	1299.7	52.9	
	<b>Total Positive:</b>	<b>4</b>	<b>4</b>	<b>0</b>

**Result Values:**                      E - estimated                      L - less than                      G - greater than

Samples that contain total coliform:	4	100.00% of total
Samples that contain e. coli:	4	100.00% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	0/0	
Total number of samples:	4	

Comments:

*Raw water results*

  
Environmental Health Officer  
Feb 23 2011

FOR FURTHER INFORMATION PLEASE CALL: Lucko, Jill (250) 755-6215 Nanaimo

Operator

Town Of Ladysmith  
Box 220 STN MAIN  
Ladysmith, BC  
V9G 1A2

(250) 245-6400

**Water Sample Range Report**

Vancouver Island Health Authority  
Central Island

**Facility Name:** TOWN OF LADYSMITH WATER WORKS  
**Facility Type:** DWT  
**Date Range:** Jan 1 2010 to Dec 31 2010  
**Date Created:** Feb 23 2011

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>Lake, Stocking Lake</u>				
<u>RAW WATER,</u>				
<u>Source site,</u>				
<u>Quarterly</u>				
	03/30/2010	18.9	1.0	
	06/15/2010	21.1	L1	
	09/27/2010	198.9	1.0	
	11/30/2010	<u>49.6</u>	<u>L1</u>	
	<b>Total Positive:</b>	<b>4</b>	<b>2</b>	<b>0</b>

Result Values:                      E - estimated                      L - less than                      G - greater than

Samples that contain total coliform:	4	100.00% of total
Samples that contain e. coli:	2	50.00% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	0/0	
Total number of samples:	4	

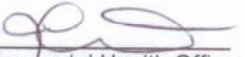
Comments:

*Raw water results.*

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Environmental Health Officer  
Feb 23 2011

FOR FURTHER INFORMATION PLEASE CALL: Lucko, Jill (250) 755-6215 Nanaimo

**Operator**

Town Of Ladysmith  
Box 220 STN MAIN  
Ladysmith, BC  
V9G 1A2

(250) 245-6400



**APPENDIX 'B'**

Ladysmith, Town of  
Box 220  
Ladysmith, BC  
V9G 1A2

23Mar10 2:49p  
FWS  
water  
2

W88416

TEL: (250) 245-3995  
FAX: (250) 245-3711  
cbaker@ladysmith.ca.

Arrival temp.: 6.0C  
Sampler: Perry Madsen

Sample: 1)1280 Rocky Creek Rd 23Mar10 08:10a 2)558 Hooper Pl 23Mar10 08:30a

TRIHALOMETHANES

COMPOUNDS	1 SAMPLE	2 SAMPLE	UNITS
1) Bromodichloromethane	1.45	<0.100	ug/L
2) Bromoform	<0.100	<0.100	ug/L
3) Chloroform	41.5	47.0	ug/L
4) Dibromochloromethane	<0.100	<0.100	ug/L

SURROGATE RECOVERY

1) Bromofluorobenzene	91.5	107	%
2) Toluene-d8	88.2	99.8	%

Comment: maximum allowable concentration of Total Trihalomethanes permitted is 100 ug/L  
(0.1 mg/L); Guidelines for Canadian Drinking Water Quality, 6th edition, 1996.

ND = not detected  
ug/L = micrograms per liter  
< = less than

\_\_\_\_\_  
R. Bilodeau  
Analytical Chemist

\_\_\_\_\_  
H. Hartmann  
Sr. Analytical Chemist

M.B. LABS LTD  
T: 656-1334 F: 656-0443 E: mblabs@pacificcoast.net W: www.mblabs.com

□

Ladysmith, Town of  
Box 220  
Ladysmith, BC  
V9G 1A2

22Jun10 2:23p W89920  
FWS  
water  
2

TEL: (250) 245-3995  
FAX: (250) 245-3711  
cbaker@ladysmith.ca.

Arrival temp.: 6.0C  
Sampler: P. Madsen

Samples: 1) 1280 Rocky Creek Rd 22Jun10 07:50a 2) 558 Hooper Pl. 22Jun10 08:23a

TRIHALOMETHANES

COMPOUNDS	1 SAMPLE	2 SAMPLE	UNITS
1) Bromodichloromethane	3.16	3.28	ug/L
2) Bromoform	<0.100	<0.100	ug/L
3) Chloroform	47.8	53.2	ug/L
4) Dibromochloromethane	<0.100	<0.100	ug/L

SURROGATE RECOVERY

1) Bromofluorobenzene	106	112	%
2) Toluene-d8	97.2	90.1	%

Comment: maximum allowable concentration of Total Trihalomethanes permitted is 100 ug/L (0.1 mg/L); Guidelines for Canadian Drinking Water Quality, 6th edition, 1996.

ND = not detected  
ug/L = micrograms per liter  
< = less than

\_\_\_\_\_  
R. Bilodeau  
Analytical Chemist

\_\_\_\_\_  
H. Hartmann  
Sr. Analytical Chemist

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□

Ladysmith, Town of  
Box 220  
Ladysmith, BC  
V9G 1A2

21Jul10 1:58p W90397  
FWS  
water  
2

TEL: (250) 245-3995  
FAX: (250) 245-3711  
cbaker@ladysmith.ca.

Arrival temp.: 5.0C  
Sampler: A. Schade

SAMPLE	DATE	TIME	MCAA (ug/L)	DCAA (ug/L)	MBAA (ug/L)	DBAA (ug/L)	BCAA (ug/L)
1280 Rocky Creek Rd.	21Jul10	08:30a	ND	17.8	ND	37.4	ND
558 Hooper Pl.	21Jul10	08:20a	ND	16.2	ND	45.2	ND
Lab Blank			ND	ND	ND	ND	ND
So			0.030	0.030	0.030	0.030	0.030
REF. VALUE			10.0	10.0	10.0	10.0	10.0
STD $\pm$ 2SD			9.87 $\pm$ 1.05	9.90 $\pm$ 1.04	9.91 $\pm$ 1.01	9.89 $\pm$ 0.991	9.90 $\pm$ 1.01

SAMPLE	DATE	TIME	TCAA (ug/L)
1280 Rocky Creek Rd.	21Jul10	08:30a	36.4
558 Hooper Pl.	21Jul10	08:20a	34.8
Lab Blank			ND
So			0.050
REF. VALUE			10.0
STD $\pm$ 2SD			9.87 $\pm$ 1.01

MCAA = Monochloro Acetic Acid  
MBAA = Mono2bromo Acetic Acid  
DCAA = Dichloro Acetic Acid  
BCAA = Bromochloro Acetic Acid  
DBAA = Dibromo Acetic Acid  
TCAA = Trichloro Acetic Acid

Comment: maximum allowable concentration of Total Haloacetic acids (HAA5) permitted is 60.0 ug/L (0.06 mg/L); EPA 816-F-01-010 May 2002.

ND = not detected  
ug/L = micrograms per liter  
< = less than

R. Bilodeau  
Analytical Chemist

H. Hartmann  
Sr. Analytical Chemist

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Ladysmith, Town of  
Box 220  
Ladysmith, BC  
V9G 1A2

29Sep10 2:17p W91657 pg2  
FWS  
water  
2

TEL: (250) 245-3995  
FAX: (250) 245-3711  
cbaker@ladysmith.ca.

Arrival temp.: 6.0C  
Sampler: P. Madsen

Samples: -1) 1280 Rocky Creek Rd 29Sep10 07:52a 2) 558 Hooper Place 29Sep10 08:30a

TRIHALOMETHANES

COMPOUNDS	1 SAMPLE	2 SAMPLE	UNITS
1) Bromodichloromethane	<0.100	<0.100	ug/L
2) Bromoform	<0.100	<0.100	ug/L
3) Chloroform	69.3	72.0	ug/L
4) Dibromochloromethane	<0.100	<0.100	ug/L

SURROGATE RECOVERY

1) Bromofluorobenzene	95.1	96.0	%
2) Toluene-d8	101	104	%

Comment: maximum allowable concentration of Total Trihalomethanes permitted is 100 ug/L (0.1 mg/L); Guidelines for Canadian Drinking Water Quality, 6th edition, 1996.

ND = not detected  
ug/L = micrograms per liter  
< = less than

R. Bilodeau  
Analytical Chemist

H. Hartmann  
Sr. Analytical Chemist

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□

Ladysmith, Town of  
Box 220  
Ladysmith, BC  
V9G 1A2

29Sep10 2:17p W91657  
FWS water  
2

TEL: (250) 245-3995  
FAX: (250) 245-3711  
cbaker@ladysmith.ca.

Arrival temp.: 6.0C  
Sampler: P. Madsen

SAMPLE	DATE	TIME	MCAA (ug/L)	DCAA (ug/L)	MBAA (ug/L)	DBAA (ug/L)	BCAA (ug/L)
1280 Rocky Creek Rd	29Sep10	07:52a	ND	26.7	ND	ND	ND
558 Hooper Place	29Sep10	08:30a	ND	15.3	ND	ND	ND
Lab Blank			ND	ND	ND	ND	ND
So			0.030	0.030	0.030	0.030	0.030
REF. VALUE			10.0	10.0	10.0	10.0	10.0
STD $\bar{n}$ 2SD			9.87 $\bar{n}$ 1.04	9.90 $\bar{n}$ 1.03	9.91 $\bar{n}$ 0.999	9.89 $\bar{n}$ 0.980	9.90 $\bar{n}$ 1.00

SAMPLE	DATE	TIME	TCAA (ug/L)
1280 Rocky Creek Rd	29Sep10	07:52a	43.8
558 Hooper Place	29Sep10	08:30a	50.4
Lab Blank			ND
So			0.050
REF. VALUE			10.0
STD $\bar{n}$ 2SD			9.87 $\bar{n}$ 0.999

SD = standard deviation  
STD = secondary standard calibrated to primary standard reference material  
So = standard deviation at zero analyte concentration; method detection limit  
is generally considered to be 3x So value  
ND = none detected n/a = not applicable

MCAA = Monochloro Acetic Acid  
MBAA = Mono2bromo Acetic Acid  
DCAA = Dichloro Acetic Acid  
BCAA = Bromochloro Acetic Acid  
DBAA = Dibromo Acetic Acid  
TCAA = Trichloro Acetic Acid

Comment: maximum allowable concentration of Total Haloacetic acids (HAA5) permitted is  
60.0 ug/L (0.06 mg/L); EPA 816-F-01-010 May 2002.

ND = not detected  
ug/L = micrograms per liter  
< = less than

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Analytical Chemist

H. Hartmann  
Sr. Analytical Chemist

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Ladysmith, Town of  
Box 220  
Ladysmith, BC  
V9G 1A2

15Dec10 2:05p W92862  
FWS  
water  
2

TEL: (250) 245-3995  
FAX: (250) 245-3711  
cbaker@ladysmith.ca.

Arrival temp.: 6.0C  
Sampler: Arnold

Samples: Quarterly

SAMPLE	DATE	TIME	MCAA (ug/L)	DCAA (ug/L)	MBAA (ug/L)	DBAA (ug/L)	BCAA (ug/L)
558 Hooper Pl.	15Dec10	08:00a	ND	ND	ND	3.09	ND
1280 Rocky Creek Rd	15Dec10	08:30a	ND	ND	ND	3.61	ND
1280 Rocky Creek Rd	DUP	08:30a	ND	ND	ND	4.19	ND
Lab Blank			ND	ND	ND	ND	ND
So			0.030	0.030	0.030	0.030	0.030
REF. VALUE			10.0	10.0	10.0	10.0	10.0
STD n 2SD			9.87 n 1.04	9.90 n 1.02	9.91 n 0.992	9.89 n 0.973	9.91 n 0.995

SAMPLE	DATE	TIME	TCAA (ug/L)
558 Hooper Pl.	15Dec10	08:00a	45.3
1280 Rocky Creek Rd	15Dec10	08:30a	44.6
1280 Rocky Creek Rd	DUP	08:30a	46.6
Lab Blank			ND
So			0.050
REF. VALUE			10.0
STD n 2SD			9.88 n 0.992

MCAA = Monochloro Acetic Acid MBAA = Mono2bromo Acetic Acid  
DCAA = Dichloro Acetic Acid BCAA = Bromochloro Acetic Acid  
DBAA = Dibromo Acetic Acid TCAA = Trichloro Acetic Acid

Comment: maximum allowable concentration of Total Haloacetic acids (HAA5) permitted is 60.0 ug/L (0.06 mg/L); EPA 816-F-01-010 May 2002.

ND = not detected  
ug/L = micrograms per liter  
< = less than

R. Bilodeau  
Analytical Chemist

H. Hartmann  
Sr. Analytical Chemist

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Ladysmith, Town of  
Box 220  
Ladysmith, BC  
V9G 1A2

15Dec10 2:05p W92862 pg2  
FWS  
water  
2

TEL: (250) 245-3995  
FAX: (250) 245-3711  
cbaker@ladysmith.ca.

Arrival temp.: 6.0C  
Sampler: Arnold

Samples: Quarterly 1) 558 Hooper Pl 15Dec10 08:00a 2) 1280 Rocky Creek Rd 15Dec10 08:30a

TRIHALOMETHANES

COMPOUNDS	1 SAMPLE	2 SAMPLE	UNITS
1) Bromodichloromethane	<0.100	<0.100	ug/L
2) Bromoform	<0.100	<0.100	ug/L
3) Chloroform	49.0	48.1	ug/L
4) Dibromochloromethane	<0.100	<0.100	ug/L

SURROGATE RECOVERY

1) Bromofluorobenzene	99.5	108	%
2) Toluene-d8	103	112	%

Comment: maximum allowable concentration of Total Trihalomethanes permitted is 100 ug/L (0.1 mg/L); Guidelines for Canadian Drinking Water Quality, 6th edition, 1996.

ND = not detected  
ug/L = micrograms per liter  
< = less than

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Analytical Chemist

H. Hartmann  
Sr. Analytical Chemist

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□



Ladysmith, Town of  
 Box 220  
 Ladysmith, BC  
 V9G 1A2

29Jul10 3:12p W90573  
 FWS water  
 3

TEL: (250) 245-3995  
 cbaker@ladysmith.ca.

Arrival temp.: 4.0C

Samples: 1) Holland Lake 29Jul10 08:30a 2) Stocking Lake 29Jul10 08:25a  
 3) Chicken Ladder 29Jul10 09:05a

ELEMENTS		1 SAMPLE	2 SAMPLE	3 SAMPLE	UNITS	Max. for Aquatic Life		Maximum Permissible In Effluent **
						Freshwater	Marine	
1) Aluminium	Al	<0.065	<0.065	<0.065	mg/L	n/a	1.50	4.00
2) Antimony	Sb	<0.500	<0.500	<0.500	ug/L	n/a	200	5.00
3) Arsenic	As	<0.500	<0.500	<0.500	ug/L	5.00	12.5	250
4) Barium	Ba	<0.009	<0.009	<0.009	mg/L	n/a	1.00	1.00
5) Beryllium	Be	<0.003	<0.003	<0.003	mg/L	0.010	1.50	no limit listed
6) Boron	B	<0.050	<0.050	<0.050	mg/L	n/a	5.00	5.00
7) Cadmium	Cd	0.415	<0.100	0.201	ug/L	1.05-2.11	0.12	10.0
8) Calcium	Ca	1.11	2.95	1.59	mg/L	n/a	n/a	no limit listed
9) Chromium	Cr	<0.010	<0.010	<0.010	mg/L	0.100	0.050	0.030
10) Cobalt	Co	<0.020	<0.020	<0.020	mg/L	1.32	n/a	0.500
11) Copper	Cu	<0.008	<0.008	<0.008	mg/L	0.030-0.127	0.050	0.500
12) Gold	Au	<0.040	<0.040	<0.040	mg/L	n/a	n/a	no limit listed
13) Iron	Fe	0.074	0.034	0.036	mg/L	1.00	0.300	1.00
14) Lanthanum	La	<0.020	<0.020	<0.020	mg/L	n/a	n/a	no limit listed
15) Lead	Pb	<0.500	<0.500	<0.500	ug/L	30.0	50.0	100
16) Magnesium	Mg	0.183	0.382	0.285	mg/L	n/a	n/a	no limit listed
17) Manganese	Mn	0.010	<0.004	<0.004	mg/L	n/a	0.100	0.050
18) Mercury	Hg	<0.100	<0.100	<0.100	ug/L	2.00	1.00	5.00
19) Molybdenum	Mo	<0.020	<0.020	<0.020	mg/L	n/a	n/a	0.500
20) Nickel	Ni	<0.050	<0.050	<0.050	mg/L	n/a	0.100	0.500
21) Phosphorus	P	<0.065	<0.065	<0.065	mg/L	n/a	0.050	1.50
22) Potassium	K	<0.030	0.036	<0.030	mg/L	n/a	n/a	no limit listed
23) Scandium	Sc	<0.050	<0.050	<0.050	mg/L	n/a	n/a	no limit listed
24) Selenium	Se	<0.500	<0.500	<0.500	ug/L	10.0	10.0	100
25) Silicon	Si	0.099	0.237	0.186	mg/L	n/a	n/a	no limit listed
26) Silver	Ag	<0.010	<0.010	<0.010	mg/L	0.010	0.005	1.00
27) Sodium	Na	<0.050	0.616	0.377	mg/L	n/a	n/a	no limit listed
28) Strontium	Sr	0.005	0.009	0.008	mg/L	75.0	n/a	no limit listed
29) Tin	Sn	<0.020	<0.020	<0.020	mg/L	n/a	n/a	no limit listed
30) Titanium	Ti	<0.010	<0.010	<0.010	mg/L	n/a	n/a	no limit listed
31) Tungsten	W	<0.050	<0.050	<0.050	mg/L	n/a	n/a	no limit listed
32) Vanadium	V	<0.010	<0.010	<0.010	mg/L	n/a	10.0	no limit listed
33) Zinc	Zn	<0.001	<0.001	<0.001	mg/L	0.490-1.35	0.100	5.00
Hardness (mg/L CaCO3)		3.51	8.94	5.14	mg/L	0-75 mg/L = soft		
pH		6.72	7.08	6.93	units	6.5-9.0	6.5-9.0	5.5-11.0

As per Canadian or B.C. limits Ministry of Environment - Water Quality Criteria, Report No. 80-9, 1980. Task Force of the Canadian Council of Resource & Envir. Ministers As per Canadian Environmental Quality Guidelines Summary Table. Updated Dec 2003 Chapter 4, Water: Aquatic Life. EPA-822-R-02-07 & US EPA 822/R-85-100; WHO Env.134 1992

R. Bilodeau  
 Analytical Chemist

H. Hartmann  
 Sr. Analytical Chemist

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**APPENDIX 'C'**

**Town of Ladysmith ANNUAL REPORT**

(Drinking Water System Name)

Reporting Period:	January 1, 2010 – December 31, 2010
Operating Permit Number:	759
Drinking Water System Owner:	Town of Ladysmith
Drinking Water System Contact:	
Name:	<u>Curtis Baker</u>
Phone No:	<u>(250) 245-3995</u>
Email:	<u>cbaker@ladysmith.ca</u>

- 1 Microbiological testing completed during this reporting period:
- a. bacteriological results attached to this report.
  - b. adverse bacteriological results: None detected  
     x Listed in table below:

**Adverse Results:**

Date	Total coliform	E. Coli	Reason	Corrective Action
12/14/10	7		Sampling error	Re-sampled
03/09/10	2		Sampling error	Re-sampled

- 2 Chemical results for this reporting period:
- a. most recent chemical analysis attached to this report.
  - b. chemical parameters listed in *The Guidelines for Canadian Drinking Water Quality* (“the Guidelines”) are:  
      all within Guidelines  
      above the Guidelines and are listed below:

**Parameters above the Guidelines:**

Parameter	Result	Max. Acceptable Concentration	Aesthetic Objective	Treatment/Corrective Action

**Town of Ladysmith ANNUAL REPORT**

(Drinking Water System Name)

3 Summarize additional testing and sampling carried out in accordance with the requirement of a Water Source approval, Written Order or as per the conditions of your *Operating Permit*.

- no additional testing  
 additional testing listed below:

**Additional testing:**

Description of parameter & reason for sampling	Health parameter or non-health related parameter	Corrective action necessary (Y/N?)	Corrective action taken

4 Water Quality Complaints:

- During the course of the year, the water system:  
 did not receive water quality complaints (ie taste, odour, colour, etc)  
 received water quality complaints and are listed below:

**Water Quality Complaints:**

Date	Water quality complaint	Corrective action taken

5 Adverse results: Total number of adverse results during this reporting period for insufficient water supply, malfunction of disinfection equipment or elevated turbidity:

- No adverse results  
 Adverse results listed below:

**Adverse Results:**

Incident date	Corrective action	Corrected by
06/24/10	Malfunction of valve (fixed)	Utilities Operators

**Town of Ladysmith ANNUAL REPORT**

(Drinking Water System Name)

**6 Description of the system:**

Sources of raw water:

- Groundwater
- Surface water
- Other (specify): \_\_\_\_\_

Does the drinking water system have disinfection?  Yes  No

Disinfection methods (check boxes that apply):

- Chlorination
- Ultraviolet light
- Ozonation
- Other (specify): \_\_\_\_\_

Does the drinking water system have treatment?  Yes  No

Treatment type (check boxes that apply):

- Particulate cartridge filters
- Membrane filtration
- Carbon filter
- Sand filtration
- Reverse osmosis
- Other (specify): \_\_\_\_\_

**7 Major expenses incurred during the period covered by the report:**

To purchase or install required equipment:         \$69,825        

To repair equipment: \_\_\_\_\_

To replace equipment: \_\_\_\_\_

To complete annual maintenance of system: *(system flushing, replacement of carbon filters, etc)*         \$453,373        

To complete specialist report (specify): \_\_\_\_\_

**8 Further communication with users:**

a. Indicate how you notified system users that your annual report is available, and is free of charge:

- hand delivered
- public access/ notice via web
- public access/notice via government office
- public access/notice via newspaper
- public access/notice via bill stuffer
- public access/ notice via other method (specify): \_\_\_\_\_

**Town of Ladysmith ANNUAL REPORT**

(Drinking Water System Name)

b. Improvements or remedial actions required by the Drinking Water Officer:

- no action required
- Drinking Water Officer inspection report attached to report
- actions required by Drinking Water Officer listed below:

**Improvements/Remedial Actions:**

Required action	Completion date

c. Future water system improvements:

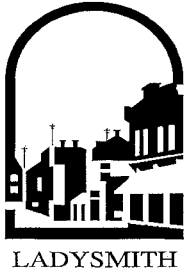
- no improvements planned
- improvements listed below:

**Future Improvements:**

Future plans	Planned completion date
Centralized Treatment Facility	March 31, 2012
Interconnecting Pipeline	December 31, 2011

d. Emergency Response Plan can be accessed by:

- posting on web
- posting at nearest government office
- contacting water system owner
- Other (specify): \_\_\_\_\_



Town of Ladysmith  
**STAFF REPORT**

To: Ruth Malli, City Manager  
From: Joe Friesenhan, Director of Public Works  
Date: June 29, 2011  
File No:

---

Re: LOW CONSUMPTION TOILETS

RECOMMENDATION(S):

That the Committee recommend that Council direct staff to prepare an amendment to Section 6.12, Water Conservation, of the Town of Ladysmith Building and Plumbing Bylaw 1994, No 1119 to reduce the average water consumption of a water closet or direct flush urinals from 6 litres per flush cycle to 4.8 litres per flush cycle, and from 3.8 litres per flush cycle to 1.9 litres per flush cycle respectively.

PURPOSE:

To update the Town of Ladysmith Building and Plumbing Bylaw 1994, to meet the new plumbing and fixture requirements in the BC Building Code.

INTRODUCTION/BACKGROUND:

In 2004, the Town amended the Building and Plumbing Bylaw 1994, No. 1119 by adding the following section:

**6.12 Water Conservation**

6.12.1 Every water closet, whether tank type or dual flush, must be a low consumption type that

- (a) conforms with the latest Canadian Standard Association (CSA) standards, and
- (b) has an average water consumption not exceeding 6 litres per flush cycle.

6.12.2 Direct flush urinals must be a low consumption type that

- (a) conforms with the latest Canadian Standards Association (CSA) standards and
- (b) has an average water consumption not exceeding 3.8 litres per flush cycle

The Province has recently announced that it is taking another step toward increased water efficiency through new high efficiency toilet and urinal requirements in the BC Building Code. Effective October 3, 2011, high efficiency toilets or dual flush toilets will be required in new residential buildings or when renovations involving plumbing fixtures occur. Whenever urinals are installed, high efficiency urinals will be required.

In order to meet the new requirements of the Building Code, the following addition to the Town of Ladysmith Building and Plumbing Bylaw 1994, No 1119 Amendment Bylaw (No. 11) 2004, No. 1551 is required:

6.12.1 (b) has an average water consumption not exceeding 4.8 litres per flush, and  
6.12.2 (b) has an average water consumption not exceeding 1.9 litres per flush,

SCOPE OF WORK:

N/A

ALTERNATIVES:

N/A

FINANCIAL IMPLICATIONS:

N/A

LEGAL IMPLICATIONS:

This bylaw amendment is required in order to maintain compliance with the BC Building Code.

CITIZEN/PUBLIC RELATIONS IMPLICATIONS:

Continued reduction in water consumption is consistent with the Town's sustainability initiatives and should be positively received by the general public. Builders/renovators could express concern about potential higher costs of the higher-efficiency fixtures.

INTERDEPARTMENTAL INVOLVEMENT/IMPLICATIONS:

N/A

RESOURCE IMPLICATIONS:

N/A

ALIGNMENT WITH SUSTAINABILITY VISIONING REPORT:

Aligns with Sustainability Pillars #3, Green Buildings, and #5, Innovative Infrastructure.

ALIGNMENT WITH STRATEGIC PRIORITIES:

The proposed bylaw amendment aligns with Strategic Direction D - Enhanced Standard of Infrastructure - Ensure a safe and sustainable water supply.



SUMMARY:

In order to meet the new requirements of the BC Building Code, which will come into effect on October 3, 2011, the following additions to the Building and Plumbing Bylaw 1994, 1119 are required:

6.12.1 (b) has an average water consumption not exceeding 4.8 litres and

6.12.2 (b) has an average water consumption net exceeding 1.9 litres

I concur with the recommendation.



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Ruth Malli, City Manager

ATTACHMENTS:

"None".



**TOWN OF LADYSMITH**  
Building Permit Summary - June 2011

Commercial	Industrial	Institutional	Residential (NEW)		Residential Add, Renos, Other		Dwelling Units	Total Permits	Bidg & Pibg Permit Fees This Month	Permit Values This Month	Permit Values Year to Date 2011		
			No. of Permits	Values	No. of Permits	Values							
JUN 1	\$60	0	\$0	0	7	\$1,146,082	5	\$31,900	7	13	\$9,641	\$1,178,042	\$4,882,852

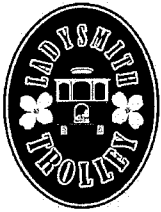
**Year to Date**

JAN	0	\$0	0	\$0	0	\$0	3	\$452,202	7	\$50,160	3	10	\$4,205	\$502,362	\$502,362
FEB	0	\$0	0	\$0	0	\$0	5	\$784,204	11	\$105,080	5	16	\$5,367	\$889,284	\$1,391,646
MAR	2	\$90,000	0	\$0	2	\$20,000	2	\$231,660	6	\$213,900	2	12	\$4,091	\$555,560	\$1,947,206
APR	2	\$202,200	0	\$0	0	\$0	1	\$160,920	4	\$56,184	2	7	\$3,043	\$419,304	\$2,366,510
MAY	0	\$0	0	\$0	0	\$0	9	\$1,256,620	14	\$81,680	9	23	\$10,773	\$1,338,300	\$3,704,810
JUN	1	\$60	0	\$0	0	\$0	7	\$1,146,082	5	\$31,900	7	13	\$9,641	\$1,178,042	\$4,882,852
JUL															
AUG															
SEP															
OCT															
NOV															
DEC															
TOTAL	5	\$292,260	0	\$0	2	\$20,000	27	\$4,031,688	47	\$538,904	28	81	\$37,120	\$4,882,852	

Demos Mth	0	Demos YTD	0
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Comparison	#DU	Value	#BP	Value
YTD 2011	28	\$4,031,688	81	\$4,882,852
YTD 2010	45	\$7,300,032	79	\$8,928,174
YTD 2009	16	\$2,063,149	46	\$4,486,270

Tom Skarvig, Building Inspector



**TOWN OF LADYSMITH**  
**TROLLEY BUS ACTIVITY REPORT - Trolleys 103/105**  
**June 2011**

Day	Date	Passenger Count	Fuel Litres	KM Start	KM Finish	Weather	Wheel Chairs	Service Dogs	Bikes
Wed	1	98	78	100905	101115	Sun/Cloud/Rain	0	1	2
Thur	2	90	84	101115	101323	Sun/Cloud/Rain	1	0	1
Fri	3	106	68	101323	101534	Sun/Cloud	1	0	2
Sat	4	73	72	101534	101746	Sun	0	0	2
Sun	5								
Mon	6	100	85	101746	101959	Sun	0	1	1
Tue	7	96	79	101959	102172	Sun/Cloud/Rain	1	1	3
Wed	8	86	80	102172	102383	Sun/Cloud	0	1	2
Thur	9	103	83	102383	102593	Sun/Cloud	0	0	3
Fri	10	103	82	102593	102804	Sun/Cloud	1	0	1
Sat	11	40	77	102804	103018	Sun/Rain	0	0	0
Sun	12								
Mon	13	97	65	103018	103229	Sun/Cloud	0	0	2
Tue	14	93	81	103229	103440	Sun/Cloud	0	1	1
Wed	15	87	80	103440	103651	Sun/Cloud	0	0	4
Thur	16	103	81	103651	103862	Sun	4	0	3
Fri	17	99	84	103862	104072	Sun/Cloud	0	1	4
Sat	18	85	62	104072	104284	Cloud/Rain	0	0	4
Sun	19								
Mon	20	95	66	104284	104495	Sun/Cloud	0	0	0
Tue	21	117	81	104495	104706	Sun/Cloud	1	0	1
Wed	22	143	92	104706	104914	Sun	2	1	4
Thur	23	77	78	104914	105121	Sun/Cloud	2	1	3
Fri	24	86	66	105121	105335	Sun/Cloud/Rain	0	0	1
Sat	25	73	67	105335	105549	Sun/Cloud	0	0	2
Sun	26								
Mon	27	86	69	105550	105763	Cloud/Rain	0	0	4
Tue	28	93	82	105763	105972	Sun/Cloud	2	1	2
Wed	29	88	77	105972	106186	Sun/Cloud	2	0	5
Thur	30	73	88	106186	106402	Sun/Cloud	0	1	2
<b>TOTAL</b>		<b>2390</b>	<b>2007</b>				<b>17</b>	<b>10</b>	<b>59</b>

DONATIONS FOR June 2011 - \$1057.46

DONATIONS YEAR-TO-DATE \$3961.68

AVERAGE DAILY RIDER COUNT FOR June 2011 - 91



# Ladysmith Fire / Rescue

P.O. Box 760 Ladysmith, B.C. V9G 1A5  
 Phone: 250-245-6436 • Fax: 250-245-0917



## FIRE CHIEF'S REPORT

MONTH: **June**, 2011

TYPE OF CALL OUT	J	F	M	A	M	J	J	A	S	O	N	D	YEAR'S TOTALS
Alarms Activated: Pulled Station			1										1
By mistake		2	3		3								8
Electrical problem	4	1		1	2								8
Due to cooking		1		1	1	2							5
Assistance													
Burning Complaint					1	9							10
Fire: Structure	2	1			1	1							5
Chimney	3		2										5
Interface / Bush					1	2							3
Vehicle		2	1										3
Other	1			1	2								4
Hazardous Materials	2	1		2	1	1							7
Hydro Lines: Down / Fire	2		1										3
Medical Aid	4	1	2	5	1								13
Mutual Aid	1		1		1								3
MVI	3	2	4	1	3	2							15
Rescue				2									2
<b>MONTH TOTALS (not incl. Practises)</b>	<b>22</b>	<b>11</b>	<b>15</b>	<b>13</b>	<b>17</b>	<b>17</b>							<b>95</b>
Practises (Totals for each Month)	4	4	5	4	5	4							26

### ALARMS ACTIVATED (location/owner):

1. Alarms activated – 840 Esplanade, due to cooking
2. Alarms activated – 840 Esplanade, due to burnt toast.

### COMPARISONS:

Year to Date / 11 95 (excl. practises)  
 Year to Date / 10 80 (excl. practises)  
 Year to Date / 09 78 (excl. practises)

APPROVED:

*Ray Delcourt*  
 Fire Chief

**COASTAL ANIMAL CONTROL SERVICES OF BC LTD**

2202 Herd Rd. Duncan, BC. V9L 6A6

(250) 748-3395

**TOWN OF LADYSMITH POUND REPORT RECEIVED**

June 2011

JUL 07 2011

<b>Disposition of Impounded Dogs</b>	<b>Current Month</b>	<b>2011 Totals</b>
Stray dogs impounded	2	12
Stray dogs claimed	2	11
Stray dogs put up for adoption	0	1
Stray dogs euthanized	0	0
Stray livestock / cats	0	0
Other	0	0
<b>Calls Received and Investigated</b>	<b>15</b>	<b>54</b>
Aggressive dogs	3	8
Dogs at large	3	16
Confined dog	2	8
Noise (barking) complaints	3	9
Other non specific dog related calls	3	12
Wildlife / livestock / cats	1	1
<b>After hour call outs</b>	<b>0</b>	<b>4</b>
<b>Monthly Pound and Board Fees Collected</b>	<b>\$200.00</b>	<b>\$1260.00</b>
Impound fees	\$150.00	\$900.00
Daily board fees	\$50.00	\$360.00
<b>Tickets issued</b>	<b>2</b>	<b>4</b>
Unlicenced dog	\$100.00	\$100.00
Dog at large	\$100.00	\$200.00
Dangerous dog not muzzled (12e)	\$0	\$250.00
Habitually noisy	\$0	\$0
<b>Licencing Statistics</b>		
	Tags	2
	Revenue	\$60.00
		23
		\$630.00

Judi Burnett

# CAS Summary of Service Calls, Ladysmith

15 calls in total

01-Jun-11 to 30-Jun-11

Issue	Call #	Received	Type	Completed
<b>Aggressive</b>		<b>3</b>		
	873	28-Jun-11	Dog	30-Jun-11
	864	13-Jun-11	Dog	24-Jun-11
	863	07-Jun-11	Dog	24-Jun-11
<b>At large</b>		<b>3</b>		
	871	24-Jun-11	Dog	27-Jun-11
	868	22-Jun-11	Dog	30-Jun-11
	867	20-Jun-11	Dog	21-Jun-11
<b>Cats/Wildlife/Livestock</b>		<b>1</b>		
	870	22-Jun-11	Dog	23-Jun-11
<b>Confined</b>		<b>2</b>		
	865	16-Jun-11	Dog	18-Jun-11
	861	02-Jun-11	Dog	03-Jun-11
<b>Noisy</b>		<b>3</b>		
	874	29-Jun-11	Dog	04-Jul-11
	872	28-Jun-11	Dog	
	866	20-Jun-11	Dog	22-Jun-11
<b>Other</b>		<b>3</b>		
	875	30-Jun-11	Dog	04-Jul-11
	869	23-Jun-11	Dog	06-Jul-11
	862	03-Jun-11	Dog	17-Jun-11