



THE VILLAGE OF  
**N A K U S P**

**2012**

# Domestic Water System Annual Report



Facility #211995

Village of Nakusp

1/1/2012

## OVERVIEW

The Village of Nakusp has experienced a busy year with regards to its water system. The following is a list of some of the water-related activities that have occurred:

- 1. Tie in of the Polmac Subdivision** - effectively looping the distribution system in the Nakusp East/Alexander Rd. area.
- 2. Participation in the Columbia Basin Trust WaterSmart Program:**
  - i. Water Meter Assessment Study – Currently being prepared by John Dumbrell of Urban Systems;
  - ii. Water Loss Management Plan – To be drafted by Kerr Wood Leidal Consulting Engineers
  - iii. “Know Your Watershed” Grade 8 Facility Tours
  - iv. Water Loss Management Training for Operators
  - v. Annual Conference for Elected Officials & Administration – October, 2012
- 3. Leak Detection Program** – the Village has identified and repaired 19 substantial leaks this year, (including a leaking hydrant and long section of pipe in one area). The majority of the leaks were caused by root intrusion and aging infrastructure.
- 4. Replacement/installation of two new fire hydrants.**
- 5. Expansion of the water system infrastructure across the Kuskanax Bridge and to the Sewer Treatment Plant, for future development.**
- 6. Continuing certification and education of our Public Works staff.**
- 7. Continued construction of a new Water Treatment Plant.**

Initial schedules projected the completion of this project to be March 2012, however, the Village has received a one-year extension. This facility should be completed in 2013. Once on-line, the treatment process will consist of two pre-filter units, two ultra-filtration treatment trains, followed by two ultraviolet disinfection units and chlorination.
- 8. Installation of Genset at Well #2**

A back-up generator has been installed to run Well #1 & #2, should Nakusp experience a power failure.

## SYSTEM OPERATORS:



The Village of Nakusp currently operates a Class II Water Distribution System. Operators of this system are certified through the Environmental Operators Certification Program (EOCP) and are members of the BC Water and Wastewater Association (BCWWA). All Operators are members in good standing and participate in obtaining the necessary Continuing Education Credits (CEUs).

### **Operators shown above:**

- Mike Pedersen, P/W Manager – EOCP Operator #1423, Class III WDS;
- Bobby Gresiuk, P/W Asst. Manager – ECCP Operator #5824, Class II WDS;
- Gilbert Battersby, Operator – EOCP Operator #4847, Class II WDS;
- Wesley Coleman, Operator – EOCP Operator #6640, Class I WDS;
- Warren Leigh, Operator – EOCP Operator# 7792, Class I WDS;
- Rachel George, P/W Assistant – EOCP Operator #7398, WD O.I.T.

## SOURCE PROTECTION:

The Village is working towards the development of a source protection plan that would encompass both the surface and ground water sources – Halfway Creek; Upper Brouse Creek; Lower Brouse Creek; Well #1 and Well #2.

## MONTHLY REPORTS TO IHA

The Village has been submitting monthly reports to the Interior Health Authority (IHA). These reports contain information on the weekly testing results for coliforms, chlorine residuals and monthly turbidity readings.

Two shipments were not received in time to conduct testing, however, subsequent testing revealed normal test results. Incidents of high turbidity were experienced due to extreme weather events/power outages – on one occasion the source was changed from surface to groundwater.

## TRIHALOMETHANE RESULTS

DATE	SITE	Chloroform/Bromodichloromethane mg/l
JAN	Carson's	0.014/-
FEB	Crescent Bay	0.052/0.001
MAR	Alexander Rd	0.029/-
APR	Alexander Rd	0.044/-
MAY	Carson's	0.095/-
JUN	Overwaitea	0.059/-
JUL	Alexander Rd	0.055/-
AUG	Crescent Bay	0.062/-
SEP	Esso	0.018/-
OCT	Esso	0.025/-
NOV	Crescent Bay	0.068/-
DEC	Arena	0.040/-

## Summary of Domestic Water Monitoring

### Daily:

Tests at the Million Gallon Reservoir for: Flow Rate; Total Flow; Free Chlorine; Chlorine Pump Setting & Turbidity.

Tests at the Well #1 station (seasonal) for Total Flow; Free Chlorine and Well Levels.

Online monitoring of pH, turbidity and chlorine residuals – monitored and logged by the Village Supervisory Control and Data Acquisition system (SCADA).

### Weekly:

Chlorine residual and coliform sample testing, at separate locations, on a rotational basis, throughout the system.

### Monthly:

Trihalomethane testing at separate locations, on a rotational basis, throughout the system.

## **CROSS CONNECTION CONTROL PROGRAM**

The Village of Nakusp has developed a Cross Connection Control Program (Bylaw 619), in compliance with the Interior Health Authority's – Permit to Operate a water system (Drinking Water Protection Act, Part 2, Section 8). The purpose of this program is to protect the public health, by ensuring that the safe clean water provided by the Village of Nakusp is not contaminated due to backflow after it is introduced into the water distribution system.

Mike Pedersen, Public Works Manager, is currently our certified Cross Connection Control Administrator. Wes Coleman is certified as a Backflow Assembly Tester and Bobby Gresiuk is undergoing similar training. Annual testing of backflow prevention devices occurs, in coordination with MTS from Vernon (FAST software management program). Deficiencies are being identified and rectified, as resources allow.

Once all municipal facilities have achieved compliance, the assessment of all existing Industrial, Commercial, Institutional and Agricultural facilities will be undertaken, with follow-up inspections to ensure proper protection is supplied. The recently completed municipal Emergency Services Building was outfitted with backflow prevention devices, which were inspected and tested.

## **ONLINE MONITORING PROGRAM**

The Village of Nakusp currently utilizes a Supervisory Control and Data Acquisition System (SCADA) to monitor the domestic water system online. Operators can access the system remotely or from the Public Works Office, which provides the potential to monitor the system 24/7. Adjustments to system settings can be made via the internet, allowing changes to be made without the physical attendance of an operator.

Readings are collected by the system, in order to monitor: turbidity, chlorine, pH, water temperature, room temperature of facilities, flow, reservoir levels, valve position, source control, telemetry status, pump run times, alarms, pump information/run times, aquifer levels and overall system functions. Data collected is analyzed, recorded and reported, as necessary, to the IHA on a monthly basis. Trend reports can be generated or date specific information can be extrapolated. The SCADA system can even call out to advise of system alarms and faults.

### ***DRINKING WATER OFFICER***

Monthly water sample reports are sent to Juliana Gola. Water results for the Nakusp Hot Springs are sent to Paul Geisler of IHA.

## GOALS FOR THE WATER SYSTEM

As water continues to be priority, the Village has identified the following goals for the near future:

1. Completion of the construction/installation of the new Water Treatment Plant; have the plant commissioned and tested; train crew on the operation and maintenance of the new process; link to SCADA system, document results; analyze results.
2. Adopt a Source Water/Groundwater Protection Plan.
3. Analyze the results of the impending Urban Systems Water Meter Assessment and pursue the appropriate actions.
4. Review the results of the Water Loss Management Plan. Follow-up with Acoustic Leak Detection, night-flow monitoring, draw-down testing, water audits, etc. to identify water loss/usage.
5. Continue education/training of Certified Operators – work towards certification in Water Treatment.
6. Continue to expand the Cross Connection Control Program and reach compliance within the municipal facilities.
7. Identify infrastructure requiring replacement, on a priority basis, as per a Capital Asset Management Plan.
8. Upgrade the waterline on Shakespeare Rd in 2013.
9. Provide water to the new Sewer Treatment Plant, once on line.
10. Continue to educate the public regarding water usage/restrictions – water billing inserts, advertising, brochures, tours, school programs.
11. Continue to participate in the Columbia Basin Trust WaterSmart Program – purpose: to reduce water usage throughout the Basin by 15% overall.
12. To hook Well #2 into the distribution system and get it on-line with SCADA.

## ANNUAL UPDATE OF EMERGENCY RESPONSE PLAN

The only changes required were made to the Contact List, see below.

Emergency Agency	Contact Person	Phone # (250)	Cell No. (250)	Emerg. # (250)	Fax # (250)
<b>Fire Dept/Police/Ambulance</b>	<b>Emergencies Only</b>			<b>9-1-1</b>	
Arrow Lakes Hospital	Susan McCombs, Facility Manager	265-3622			265-4435
Village of Nakusp: Main Office	Linda Tynan, CAO	265-3689	265-1727	265-1727	265-3788
Public Works Yard	Mike Pedersen, Manager	265-3556	265-1725	265-3861	265-3262
	Bobby Gresniuk, Asst. Manager	265-3556	265-8218	265-3861	265-3262
Fire Hall	Terry Warren	265-3563	265-1756	<b>9-1-1</b>	265-3571
Emergency Coordinator	Terry Warren	265-3563	265-1756	<b>P.E.P</b>	265-3571
Environmental Health Officer, IHA	Juliana Gola	364-6202	231-4525	231-4525	364-6218
Well Pump Installation & Repair	Value Contracting (B Pearce) AquaTech Services(R Woods)	497-8284	490-5719 765-4730		
Bottled Water Supplier	Kootenay Crystal Clear	265-4091			
Bulk Water Hauler	Diamond C Ventures Ltd.	835-8218			
Environmental Protection Service	Tamara Michel	354-6162	1-800-663-3456		354-6332
Excavation Services	Arrow Lakes Ready Mix	265-4615	265-1146	265-1146	
Extended Care Facility	Kardina Moskal	265-3692		265-8077	
Fisheries Department	Graham Knox	250-356-8383			
Health Clinic	Linda Nero	265-3608			265-3104
Nelson Health Unit Office	1-877-221-3388	505-7200			505-7211
Medical Health Officer, office hrs	1-250-420-2220				
Medical Health Officer, After Hrs	1-866-457-5648				
Newspaper	Arrow Lakes News	265-3823			265-3841
Plumbing Services	Dave's Plumbing	265-2113			
PEP Regional Office	1-800-663-3456				
BC Hydro	Power Outage: 1-888-769-3766	Emergency: 1-877-520-1355			
Radio Station	KBS	352-5510			352-9189
RCMP – Nakusp Detachment	Debra McCoy	265-3677		<b>9-1-1</b>	265-4292
Rotary Villa, Sr. Complex	Trish Cannon	265-2020	265-1247		
School District No. 10	Art Olson	265-3638	ext.1 followed by 3331		265-3701
Spill Reporting for BC	1-800-663-3456				
TV Station	Local Channel 13, Revelstoke	837-5246			
Water Stewardship Office	Virginia Stanford	354-6340		<b>P.E.P.</b>	354-6332