



Annual Report
2008



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Appendix A - Map of West Bay Water Local Service Area

Appendix B - Water Quality Testing Results

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1. Introduction

The following annual report describes the West Bay Water Local Service Area and summarizes the water quality and production data from 2008. This report also includes a summary of inquiries and complaints, completed and proposed maintenance activities, the Emergency Response Plan, and the Cross Connection Control Program.

This report is to be submitted to the Vancouver Island Health Authority by the Spring of 2009.

2. West Bay Water System

The West Bay Water Service Area was established in 1980 and comprises the Red Gap Shopping Centre and surrounding residential area on the Nanoose Peninsula. The water source for the West Bay Water Service Area comes from a series of groundwater wells located nearby. The water source is chlorinated and stored in two reservoirs. A map of the West Bay Water System is provided in Appendix A for reference.

The West Bay Water System was incorporated into the boundaries of the Nanoose Bay Peninsula Water Service Area in 2005, along with six other small water systems that the RDN operates in Nanoose Bay. The RDN is currently working with the local Vancouver Island Health Authority (VIHA) to combine these seven RDN water systems under one VIHA Operating Permit, to be known as the Nanoose Bay Peninsula Water Service Area (NBPWSA).

2.1 Groundwater Wells

One groundwater production well is present at 2475 Nanoose Road (behind the Firehall) in Nanoose Bay. A former groundwater production well is present in the parking lot of the Firehall at 2471 Nanoose Road. The well was closed permanently in 2007 by Fyfe’s Well & Water Services.

Well / Name	Well Depth	Wellhead Protection	Treated/Untreated with Chlorine
West Bay #3	75.6 m	Yes	Treated

2.2 Reservoirs

No reservoirs are present in the West Bay Water System. The groundwater from West Bay Well #3 is pumped to the Fairwinds reservoirs, and drinking water supply (mixed with Fairwinds well water) is fed back to the West Bay area through a dedicated watermain.

2.3 Distribution System

The water distribution system in West Bay is comprised of 100mm and 150mm asbestos-concrete watermains, and 150mm PVC watermains. Fire hydrants are located throughout the system.

3. Water Sampling and Testing Program

Water sampling and testing is carried out weekly in the distribution system. The following table includes a summary of all testing:

Timing	Location	Tests
Weekly	RDN (in-house) Laboratory	Total coliforms, E.Coli Temperature, pH, Conductivity Chlorine residual, Salinity Total Dissolved Solids Iron, Manganese
Weekly (Health Dept. Requirement)	North Island Labs	Total, Fecal coliforms
Annual Source Water Testing	North Island Labs	Complete potability testing of each well
Annual System Water Testing	North Island Labs	Complete potability testing of distribution system

4. Water Quality - Source Water and Distribution System

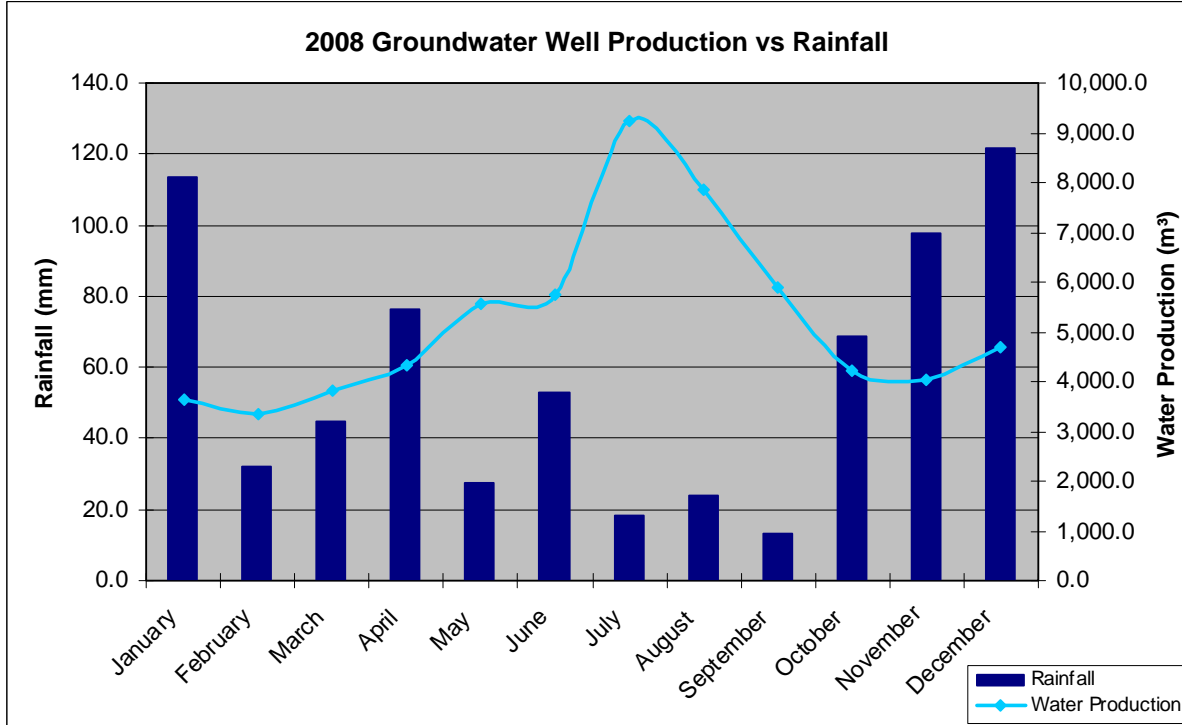
Up-to-date water quality reports and lab data are posted monthly on the RDN website at www.rdn.bc.ca in the WaterSmart section, under “Communities”. Tables of water quality testing results for both the source water and distribution system are provided at the end of this report under Appendix B.

5. Water Quality Inquiries and Complaints

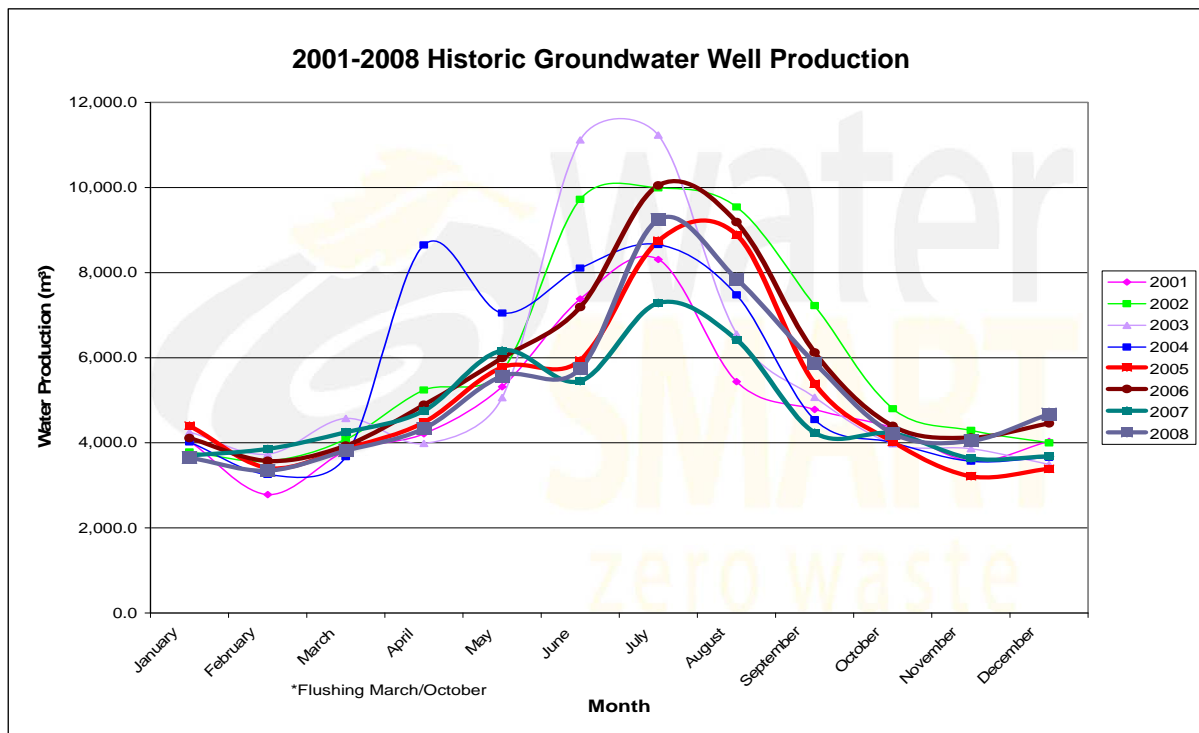
Very few complaints were received from the West Bay water service area, and were typically related to iron and manganese discolouration in the water.

6. Groundwater Production and Consumption

The 2008 monthly groundwater production for West Bay is shown in the chart below. Groundwater production has been charted against rainfall data from the City of Parksville website to show the correlation between rainfall and water consumption.



The monthly groundwater production for the West Bay area for the past 8 years is shown in the chart below. Groundwater production in 2008 was average in comparison to previous years.



Consumption

There are 180 service connections in West Bay. In the Fall/Winter of 2008, the average usage per home in the West Bay area was 0.49 cubic metres per day (108 imperial gallons). In the summer, the average water usage was 1.14 cubic metres per day (251 imperial gallons). Based on these figures, the annual consumption per capita is estimated to be 302 L/day. This consumption is 1.2% more than the RDN system average of 298.4 L/day/capita for 2008.

7. Maintenance Program

Regular maintenance and inspections are completed around the well site to reduce or eliminate the risk of contamination and system failure. Watermains are flushed twice annually; in the Spring and Fall.

8. Water System Projects

8.1 2008 Completed Studies & Projects

- Installed radio-read water meters at 40 commercial locations in Nanoose Bay.
- Replaced Fairwinds reservoir check valve.
- Upgraded the chlorine dosing pump in the Fairwinds Rechlorination Building.
- Completed the Nanoose Bay Peninsula Capital Plan.
- Replaced all facility signs.
- Began keyless door entry installation (card lock) at the Water Services field office, and all pumphouse sites.
- Re-keyed all gates and points of entry.
- Established electrical connections for the mobile generator at key sites.
- Completed 'B' fire hydrant maintenance.
- Completed semi-annual watermain flushing.
- Completed a comprehensive water conservation program (**Team WaterSmart**) from May to October.
- Initiated the WaterSmart school program in partnership with Nanaimo Recycling Exchange.
- Updated and improved the RDN **WaterSmart** website.
- Updated the Emergency Response Plan.
- Expanded the Operating Procedures binder.
- Completed the SCADA (Supervisory Control and Data Acquisition) Study.
- Completed the Innovative Water Supply and Re-Use study.
- Completed the *Action for Water* referendum process.
- Achieved Backflow Prevention Tester's Certification for 3 Operations staff.
- Renewed the water supply agreement with the City of Parksville.
- Created the Auto E-Message notification sign-up on the RDN website.

8.2 2009 Proposed Projects & Upgrades

- Complete the well sequencing program to improve water quality.
- Purchase well sequencing controllers.
- Establish the Drinking Water Protection Advisory Committee.
- Review the SCADA report and options for implementation.
- Complete the keyless door entry installations at all field sites.
- Commence the 2009 **Team WaterSmart** education program.

- Develop a rebate / incentive program.
- Develop the *Well Aware* well safety program.
- Re-develop one well.
- Install a stand-alone water sampling station.

8.3 2009 Proposed Studies

- Complete a flow modeling study within Fairwinds reservoir(s).
- Complete the well re-development study.
- Review and compare options for filtration/treatment of iron and manganese.

9. **Emergency Response Plan**

The Emergency Response Plan (ERP) was reviewed and updated in 2008. A copy of the ERP is attached in Appendix C.

10. **Cross Connection Control**

A formalized Cross Connection Control Program was initiated in 2007. Cross connection controls in-place include dual check valves at each service connection, fire hydrant use permits, and water supply bylaws noting discontinued service if a threat to the water supply is perceived by staff.

In 2008, a review and comparison of successful cross-connection control programs in other small water systems nearby was undertaken. A database of commercial customers was set-up in order to keep track of the maintenance history of testable backflow prevention assemblies at each site. Three RDN Operations staff achieved Backflow Prevention Tester's certification.

The program in 2009 will include:

- A survey of existing and potential cross-connections,
- An audit of RDN-owned facilities in each water service area,
- The preparation of a draft bylaw to allow enforcement of the Cross Connection Control Program.

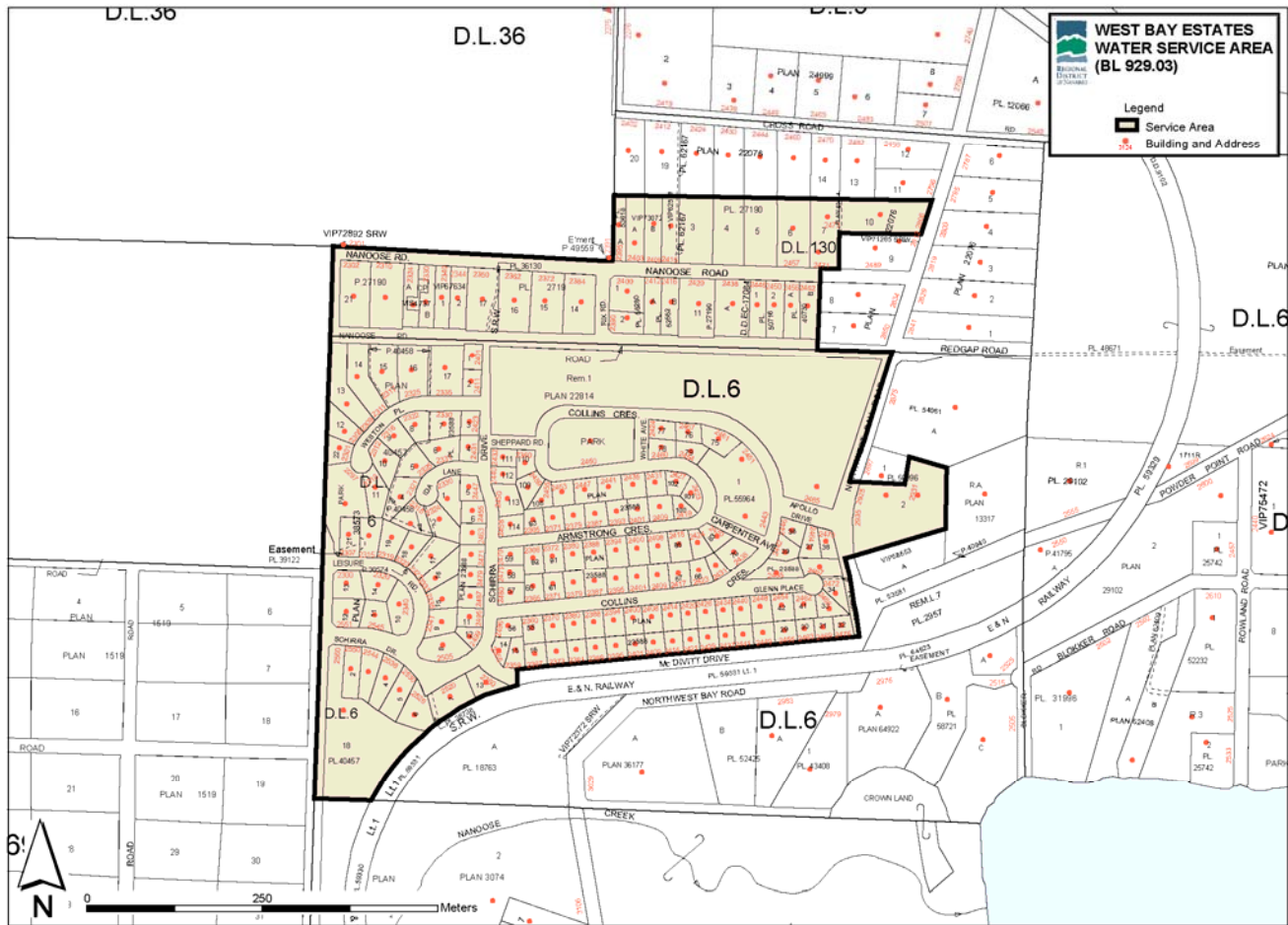
11. **Closing**

An annual report for the year 2009 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2010. Annual reports are also available on our website at www.rdn.bc.ca in the WaterSmart section, under "Communities".

APPENIDX A

**MAP OF WEST BAY
WATER LOCAL SERVICE AREA**

WEST BAY WATER LOCAL SERVICE AREA



APPENDIX B

WATER QUALITY TESTING RESULTS

Distribution Potability Test Results - Westbay

(Treated Drinking Water)

Test	Water Quality Guidelines				Date									
	Units	CDWG	BCAWQG		1999	2000	2001	2002	2003	2004	2005	May 17 2006	May 22 2007	May 27 2008
Color	CU	15	<=15	AO					11	8	6	18	14	20
Conductivity	uS		700	MAC					361	374	345	380	352	324
TDS	mg/L	500	<=500	AO					187	250	220	213	202	212
Hardness (CaCO3)	mg/L	80-100	<=500	AO					110.2	110	110	110	120	100
pH	pH units	6.5-8.5	6.5-8.5	AO					7.78	7.7	7.7	7.8	7.7	7.97
Turbidity	NTU's	5	1	MAC					0.16	0.6	<0.5	<0.5	<0.5	0.9
Alkalinity	mg/L								147	140	150	160	310	140
Chloride	mg/L	250	<=250	AO					17.62	24.3	17.7	27.3	19.3	10.8
Fluoride	mg/L	1.5	1.5	MAC					0.11	<1.0	<1.0	0.2	<1.0	<1.0
Sulfate	mg/L	500	<=500	AO					1.81	11.9	<2	2.6	2.9	<2.0
Nitrate	mg/L	10	10	MAC					<0.01	<0.1	<0.1	0.04	<0.1	<0.1
Nitrite	mg/L	1							<0.01	<0.1	<0.1	<0.01	<0.1	<0.1
T-Aluminum	mg/L		0.2	MAC					0.005	<0.005	<0.005	<0.005	<0.005	<0.05
T-Antimony	mg/L		0.006	MAC					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001
T-Arsenic	mg/L	0.025	0.025	IMAC					0.0009	0.0012	0.0009	0.0013	0.0008	0.002
T-Barium	mg/L	1.0	1	MAC					0.005	0.005	0.005	0.005	0.005	<0.005
T-Boron	mg/L	5.0	5	MAC					0.08	0.084	0.066	0.07	0.078	0.05
T-Cadmium	mg/L	0.005							<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0003
T-Calcium	mg/L								27.3	28.9	27.8	28.6	30.6	25.5
T-Chromium	mg/L	0.05	0.05	MAC					<0.0005	<0.0003	<0.0005	<0.0005	<0.0005	<0.003
T-Copper	mg/L	1.0	<=1	MAC					0.002	0.001	0.002	0.005	0.002	<0.005
T-Iron	mg/L	0.3	<=0.3	AO					0.2	<0.1	0.2	<0.1	<0.1	0.35
T-Lead	mg/L	0.01	0.01	MAC					0.0003	0.0001	0.0003	0.0001	0.0001	<0.0005
T-Magnesium	mg/L		<=700	AO					10.2	10.3	10.3	9.7	10.8	8.9
T-Manganese	mg/L	0.05	<=0.05	AO					0.174	0.142	0.15	0.087	0.099	0.208
T-Mercury	mg/L	0.001	0.001	MAC					<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.01
T-Potassium	mg/L								2.7	2.6	2	2.7	2.6	2.3
T-Selenium	mg/L	0.01	0.01	MAC					<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.003
T-Sodium	mg/L	200	<=200	AO					28.9	35.4	29	34.9	31.3	23.5
T-Uranium	mg/L	0.1	0.1	MAC					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
T-Zinc	mg/L	5	<5	AO					0.003	0.004	0.006	0.005	0.009	<0.005
Total Coliform	cfu/100ml	<1	<1	cfu/100ml					n/a	<1	<1	<1	<1	<1.0
Fecal Coliform	cfu/100ml	<1	<1	cfu/100ml					n/a	<1	<1	<1	<1	
E.coli	cfu/100ml	<1	<1	cfu/100ml								<1	<1	<1.0
Tannins & Lignins									n/a	n/a	n/a	n/a	n/a	n/a
Trihalomethanes	mg/l	0.1		MAC					n/a	n/a	n/a	0.03	n/a	n/a

BCAWQG - BC approved water quality guidelines
 MAC - maximum acceptable concentrations
 IMAC - interim maximum acceptable concentrations
 AO - aesthetic objective
 Red font indicates non-compliance.

West Bay Well #3 Water Analysis Results

Canadian Drinking Water Guidelines Package

Red font indicates non-compliance with Canadian Drinking Water Guidelines

MAC=Maximum Acceptable Concentration.

IMAC= Interim Maximum Acceptable Concentration.

AO= Asthetic Objective.

Parameter	Units	CDWG	BCAWQG		2002	2003	2004	2005	Oct 24 2006	Oct 23 2007	Oct 23 2008
Color	CU	15	</=15	AO	18	13	11	14	8	14	35
Conductivity	µS		700	MAC	310	308	304	301	296	301	301
Total Dissolved Solids	mg/L	500	</=500	AO	160	187	160	184	150	200	198
Hardness (CaCO3)	mg/L	80-100	</=500	AO	106	109	73	110	100	110	110
pH	pH units	6.5-8.5	6.5-8.5	AO	7.72	7.61	7.8	8	7.9	8.12	8.06
Turbidity	NTU's	5	1	MAC	0.76	0.76	1.1	0.7	0.6	0.6	1.8
Alkalinity	mg/L				144	160	150	150	150	140	140
Chloride	mg/L	250	</=250	AO	6.76	6.7	8.1	6.5	7	7.4	8.2
Fluoride	mg/L	1.5	1.5	MAC	0.17	<0.6	<1.0	<1.0	<1.0	<1.0	1.1
Sulfate	mg/L	500	</=500	AO	0.28	2.1	<2	<2	<2.0	<2.0	<2.0
Nitrate (N)	mg/L	10	10	MAC	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite (N)	mg/L	1			<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
T-Aluminum	mg/L		0.2	MAC	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
T-Antimony	mg/L		0.006	MAC	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002
T-Arsenic	mg/L	0.025	0.025	IMAC	0.0004	0.0004	0.0003	0.0004	0.0003	0.0003	0.0004
T-Barium	mg/L	1.0	1	MAC	0.006	0.006	0.005	0.006	0.006	0.006	0.006
T-Boron	mg/L	5.0	5	MAC	0.049	0.064	0.059	0.071	0.066	0.073	0.067
T-Cadmium	mg/L	0.005			<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	0.00012	0.00002
T-Calcium	mg/L				26.1	27.2	18.6	27.7	25.8	27.2	28.4
T-Chromium	mg/L	0.05	0.05	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004
T-Copper	mg/L	1.0	</=1	MAC	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
T-Iron	mg/L	0.3	</=0.3	AO	0.6	0.5	0.4	0.5	0.5	0.5	0.61
T-Lead	mg/L	0.01	0.01	MAC	0.0002	0.0002	0.0004	0.0002	0.0001	<0.0001	0.0014
T-Magnesium	mg/L		</=700	AO	9.9	10.1	6.5	9.4	9	9.4	10.3
T-Manganese	mg/L	0.05	</=0.05	AO	0.201	0.19	0.132	0.202	0.188	0.203	0.199
T-Mercury	mg/L	0.001	0.001	MAC	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<.01
T-Potassium	mg/L				2.2	2.5	1.6	2.4	2.3	2.4	2.4
T-Selenium	mg/L	0.01	0.01	MAC	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	0.0002	<0.0006
T-Sodium	mg/L	200	</=200	AO	19.6	20.1	14.2	21.6	20	20.8	22
T-Uranium	mg/L	0.1	0.1	MAC	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0004
T-Zinc	mg/L	5	<5	AO	0.008	0.009	0.001	0.004	0.006	0.007	0.114
Total Coliform	cfu/100ml	<1	<1	cfu/100ml			<1	<1	<1	<1	<1
Fecal Coliform	cfu/100ml	<1	<1	cfu/100ml			<1	<1	<1	<1	<1
E.coli	cfu/100ml	<1	<1	cfu/100ml					<1	<1	<1



Regional District of Nanaimo - Utilities Department

Westbay Water Analysis - Monthly Report



Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
08-Jan	2315 Ida Lane	0	0	0	0	9	7.1	0.05	165	0.2	346	0.13	0.162
15-Jan	2450 Nanoose Rd			0	0	8	7	0.03	159	0.2	337		
22-Jan	2315 Ida Lane					7	7	0.09	155	0.2	332		
	Average	0	0	0	0	8.0	7.0	0.06	159.7	0.2	338.3	0.13	0.162
	Maximum	0	0	0	0	9	7.1	0.09	165	0.2	346	0.13	0.162
	Minimum	0	0	0	0	7	7	0.03	155	0.2	332	0.13	0.162

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

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Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
Feb-08													
05-Feb	2315 Ida Ln	0	0	0	0	8	7	0.08	164	0.2	353	0.08	0.156
12-Feb	2450 Nanoose Rd			0	0	9	7	0.05	162	0.2	343		
20-Feb	2315 Ida Ln			0	0	8	6.9	0.09	165	0.2	349		
26-Feb	2450 Nanoose Rd			0	0	10	7	0.07	164	0.2	347		
Average		0	0	0	0	8.8	7.0	0.07	163.8	0.2	348.0	0.08	0.156
Maximum		0	0	0	0	10	7	0.09	165	0.2	353	0.08	0.156
Minimum		0	0	0	0	8	6.9	0.05	162	0.2	343	0.08	0.156

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Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
04-Mar	2315 Ida Ln	0	0	0	0	9	7	0.06	164	0.2	347	0.12	0.175
12-Mar	2450 Nanoose Rd			0	0	9	7	0.08	162	0.2	341		
18-Mar	2315 Ida Ln			0	0	9	7	0.05	163	0.2	345		
26-Mar	2450 Nanoose Rd					9	7	0.02	162	0.2	345		
Average		0	0	0	0	9.0	7.0	0.05	162.8	0.2	344.5	0.12	0.175
Maximum		0	0	0	0	9	7	0.08	164	0.2	347	0.12	0.175
Minimum		0	0	0	0	9	7	0.02	162	0.2	341	0.12	0.175

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Regional District of Nanaimo - Utilities Department

Westbay Water Analysis - Monthly Report



Date Apr-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
02-Apr	2315 Ida Ln	0	0	0	0	9	6.9	0.04	163	0.2	346	0.08	
08-Apr	2450 Nanoose Rd			0	0	10	6.9	0.04	160	0.2	339		
15-Apr	2315 Ida Ln			0	0	10	6.9	0.05	162	0.2	341		0.143
22-Apr	2450 Nanoose Rd			0	0	11	7	0.06	159	0.2	336		
	Average	0	0	0	0	10.0	6.9	0.05	161.0	0.2	340.5	0.08	0.143
	Maximum	0	0	0	0	11	7	0.06	163	0.2	346	0.08	0.143
	Minimum	0	0	0	0	9	6.9	0.04	159	0.2	336	0.08	0.143

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Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
06-May	2315 Ida Ln	0	0	0	0	11	7.1	0.08	160	0.2	338	0.13	0.145
21-May	2450 Nanoose Rd			0	0	12	6.8	0.02	134	0.1	282		
27-May	2315 Ida Ln			0	0	14	6.9	0.08	143	0.1	301		
	Average	0	0	0	0	12.3	6.9	0.06	145.7	0.1	307.0	0.13	0.145
	Maximum	0	0	0	0	14	7.1	0.08	160	0.2	338	0.13	0.145
	Minimum	0	0	0	0	11	6.8	0.02	134	0.1	282	0.13	0.145

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Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
04-Jun	2315 Ida Ln	0	0	0	0	14	6.9	0.04	162	0.2	341	0.1	0.163
11-Jun	2450 Nanoose Rd			0	0	14	6.7	0.04	54	0.1	114		
17-Jun	2315 Ida Ln			0	0	14	6.8	0.08	81	0.1	171		
24-Jun	2450 Nanoose Rd			0	0	15	6.7	0.06	34	0	72		
Average		0	0	0	0	14.3	6.8	0.06	82.8	0.1	174.5	0.10	0.163
Maximum		0	0	0	0	15	6.9	0.08	162	0.2	341	0.1	0.163
Minimum		0	0	0	0	14	6.7	0.04	34	0	72	0.1	0.163

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Westbay Water Analysis - Monthly Report



Date Jul-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
02-Jul	2315 Ida Ln	0	0										
09-Jul	2450 Nanoose Rd			0	0	17	6.6	0.02	33	0	71	0.32	0.037
15-Jul	2315 Ida Ln			0	0	16	6.7	0.03	72	0.1	150		
22-Jul	2450 Nanoose Rd			0	0	16	6.7	0.11	124	0.1	261	0.49	0.172
29-Jul	2315 Ida Ln			0	0	18	6.6	0.03	89	0.1	188	0.2	0.102
	Average	0	0	0	0	16.8	6.7	0.05	79.5	0.1	167.5	0.34	0.1037
	Maximum	0	0	0	0	18	6.7	0.11	124	0.1	261	0.49	0.172
	Minimum	0	0	0	0	16	6.6	0.02	33	0	71	0.2	0.037

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Comments:

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Regional District of Nanaimo - Utilities Department

Westbay Water Analysis - Monthly Report



Date Aug-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
06-Aug	2315 Ida Ln	0	0	0	0	18	6.8	0.03	97	0.1	203	0.19	0.076
12-Aug	2450 Nanoose Rd			0	0	17	6.6	0.06	75	0.1	158	0.67	0.095
19-Aug	2315 Ida Ln			0	0	18	6.7	0.01	74	0.1	156.4		0.055
26-Aug	2450 Nanoose Rd			0	0	17	6.7	0.05	109	0.1	229		0.14
	Average	0	0	0	0	17.5	6.7	0.04	88.8	0.1	186.6	0.43	0.0915
	Maximum	0	0	0	0	18	6.8	0.06	109	0.1	229	0.67	0.14
	Minimum	0	0	0	0	17	6.6	0.01	74	0.1	156.4	0.19	0.055

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Comments:

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Regional District of Nanaimo - Utilities Department

Westbay Water Analysis - Monthly Report



Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
Sep-08	2315 Ida Lane	0	0										
16-Sep	2450 Nanoose Rd			0	0	16	6.6	0.05	79	0.1	167	0.3	0.095
	Average	0	0	0	0	16.0	6.6	0.05	79.0	0.1	167.0	0.30	0.095
	Maximum	0	0	0	0	16	6.6	0.05	79	0.1	167	0.3	0.095
	Minimum	0	0	0	0	16	6.6	0.05	79	0.1	167	0.3	0.095

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Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

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Comments:

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Regional District of Nanaimo - Utilities Department

Westbay Water Analysis - Monthly Report



Date Oct-08	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
07-Oct	2315 Ida Ln	0	0	0	0	16	6.8	0.01	96	0.1	203	0.12	0.052
15-Oct	2450 Nanoose Rd			0	0	13	6.8	0.03	63	0.1	133		
21-Oct	2315 Ida Ln			0	0	14	7.1	0.03	94	0.1	199		
29-Oct	2450 Nanoose Rd			0	0	12	6.9	0.07	112	0.1	237		
	Average	0	0	0	0	13.8	6.9	0.04	91.3	0.1	193.0	0.12	0.052
	Maximum	0	0	0	0	16	7.1	0.07	112	0.1	237	0.12	0.052
	Minimum	0	0	0	0	12	6.8	0.01	63	0.1	133	0.12	0.052

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Regional District of Nanaimo - Utilities Department

Westbay Water Analysis - Monthly Report



Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
04-Nov	2315 Ida Ln	0	0	0	0	11	7	0.02	94	0.1	199	0.14	0.04
12-Nov	2450 Nanoose Rd			0	0	13	7	0.12	163	0.2	343		
18-Nov	2315 Ida Ln			0	0	12	6.9	0.03	167	0.2	350		
25-Nov	2450 Nanoose Rd			0	0	11	6.8	0.13	162	0.2	342		
	Average	0	0	0	0	11.8	6.9	0.08	146.5	0.2	308.5	0.14	0.04
	Maximum	0	0	0	0	13	7	0.13	167	0.2	350	0.14	0.04
	Minimum	0	0	0	0	11	6.8	0.02	94	0.1	199	0.14	0.04

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Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Westbay Water Analysis - Monthly Report



Date	Sample Location (Address)	Fecal Coli * Health Dep	Total Coli * Health Dep	Total Coli RDN	E Coli RDN	Temp ° C	pH	Cl ₂ ppm	TDS ppm	Sal %	Cond uS/cm	Fe ppm	Mn ppm
02-Dec	2315 Ida Ln	0	0	0	0	11	6.9	0.03	167	0.2	352	0.07	0.12
09-Dec	2450 Nanoose Dr			0	0	10	6.8	0.17	163	0.2	345		
	Average	0	0	0	0	10.5	6.9	0.10	165.0	0.2	348.5	0.07	0.12
	Maximum	0	0	0	0	11	6.9	0.17	167	0.2	352	0.07	0.12
	Minimum	0	0	0	0	10	6.8	0.03	163	0.2	345	0.07	0.12

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APPENDIX C

EMERGENCY RESPONSE PLAN

* Emergency Response Plan not included in Public Copy.