



WOODLEY RANGE WATER SYSTEM ANNUAL REPORT

Reporting Period:	January 1 – December 31, 2017
Operating Permit Number:	MHEN-7NXPPE
Drinking Water System Owner:	Cowichan Valley Regional District
Drinking Water System Contact:	
Name:	<u>Brian Dennison</u>
Phone No.:	<u>250-746-2532</u>
Email:	<u>bdennison@cvrld.bc.ca</u>

1. Microbiological testing completed during this reporting period:

- a. Bacteriological results attached to this report.
- b. Adverse bacteriological results: None detected
 Listed in table below:

Adverse Results

Date	Total Coliform	E. Coli	Reason	Corrective Action
Nov 15/17			Too long in transit	Resample

2. Chemical results for this reporting period:

- a. Most recent chemical analysis attached to this report sampled on: June 15, 2015
- b. chemical parameters listed in *The Guidelines for Canadian Drinking Water Quality* (“the Guidelines”) are:
 all within the GCDWQ
 above the GCDWQ and are listed below:

Parameters above the Guidelines:

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



WOODLEY RANGE WATER SYSTEM

ANNUAL REPORT

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 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

Incident Date	Corrective Action	Corrected by



WOODLEY RANGE WATER SYSTEM

ANNUAL REPORT

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 applicable boxes)

- Chlorination
- Ultraviolet light
- Ozonation
- Other (specify) _____

Does the drinking water system have treatment? Yes No

Treatment type (check applicable boxes):

- 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: Inlet mag meter installation.
- To repair equipment: _____
- To replace equipment: _____
- To complete annual maintenance of system: *(system flushing, replacement of carbon filters, etc.)* System flushing, hydrant maintenance.
- 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)



WOODLEY RANGE WATER SYSTEM

ANNUAL REPORT

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
Genset installation	2018
Remote access/SCADA	2018

d. Emergency Response Plan can be accessed by:

- posting on web
- posting at nearest government office
- contacting water system owner
- other (specify): 175 Ingram St, Duncan



WOODLEY RANGE WATER SYSTEM

Facility Location:

5005 Aho Road
Ladysmith

Facility Information:

Facility Type: 15-300 DWC

Facility Sampling History:

Location	Date	Total Coliform	E.Coli
4966 Aho Road Woodley Range, 4966 Aho Road	19-Dec-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	12-Dec-2017	L1	L1
AUDIT WOODLEY RANGE, Magdalena	6-Dec-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	5-Dec-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	27-Nov-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	21-Nov-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	15-Nov-2017	A	
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	7-Nov-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	25-Oct-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	17-Oct-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	11-Oct-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	2-Oct-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	26-Sep-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	26-Sep-2017	L1	L1



5120 Aho Road Woodley Range, 5120 Aho Road	12-Sep-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	6-Sep-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	28-Aug-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	21-Aug-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	15-Aug-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	8-Aug-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	31-Jul-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	24-Jul-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	18-Jul-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	11-Jul-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	5-Jul-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	26-Jun-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	19-Jun-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	12-Jun-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	6-Jun-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	6-Jun-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	30-May-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	23-May-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	16-May-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	8-May-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	1-May-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	24-Apr-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	18-Apr-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	10-Apr-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	3-Apr-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	28-Mar-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	20-Mar-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	13-Mar-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	6-Mar-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	27-Feb-2017	L1	L1



4966 Aho Road Woodley Range, 4966 Aho Road	21-Feb-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	14-Feb-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	7-Feb-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	31-Jan-2017	L1	L1
4966 Aho Road Woodley Range, 4966 Aho Road	23-Jan-2017	L1	L1
5120 Aho Road Woodley Range, 5120 Aho Road	17-Jan-2017	L1	L1
4828 Judiths Run - Woodley Range, 4828 Judiths Run	10-Jan-2017	L1	L1
Lot 53 Henry Roethel Road, Lot 53 Henry Roethel Road	3-Jan-2017	L1	L1

Alkalinity (total, as CaCO3)		Sampling Point Name
02/22/2017 11:05	170 mg/L	S-2 4828 Judith Run
Aluminum (total)		Sampling Point Name
02/22/2017 11:05	< 0.010 mg/L	S-2 4828 Judith Run
Ammonia (total, as N)		Sampling Point Name
02/22/2017 11:05	< 0.0050 mg/L	S-2 4828 Judith Run
Antimony (total)		Sampling Point Name
02/22/2017 11:05	< 0.00050 mg/L	S-2 4828 Judith Run
Arsenic (total)		Sampling Point Name
02/22/2017 11:05	0.00015 mg/L	S-2 4828 Judith Run
Background Bacteria		Sampling Point Name
02/22/2017 11:05	< 1 CFU/100ml	S-2 4828 Judith Run
Barium (total)		Sampling Point Name
02/22/2017 11:05	0.056 mg/L	S-2 4828 Judith Run
Beryllium (total)		Sampling Point Name
02/22/2017 11:05	< 0.0050 mg/L	S-2 4828 Judith Run
Bismuth (total)		Sampling Point Name
02/22/2017 11:05	< 0.20 mg/L	S-2 4828 Judith Run
Boron (total)		Sampling Point Name
02/22/2017 11:05	0.16 mg/L	S-2 4828 Judith Run
Bromide		Sampling Point Name
02/22/2017 11:05	< 0.050 mg/L	S-2 4828 Judith Run
Bromochloroacetic acid		Sampling Point Name
02/22/2017 11:05	0.0030 mg/L	S-2 4828 Judith Run
Bromodichloromethane		Sampling Point Name
02/22/2017 11:05	0.0076 mg/L	S-2 4828 Judith Run
Bromoform		Sampling Point Name
02/22/2017 11:05	< 0.0010 mg/L	S-2 4828 Judith Run
Cadmium (total)		Sampling Point Name
02/22/2017 11:05	< 0.00020 mg/L	S-2 4828 Judith Run

Calcium (total)		Sampling Point Name
02/22/2017 11:05	31.4 mg/L	S-2 4828 Judith Run
02/22/2017 11:05	35.5 mg/L	S-2 4828 Judith Run
Chloride		Sampling Point Name
02/22/2017 11:05	12.5 mg/L	S-2 4828 Judith Run
Chloroform		Sampling Point Name
02/22/2017 11:05	0.0304 mg/L	S-2 4828 Judith Run
Chromium (total)		Sampling Point Name
02/22/2017 11:05	< 0.0020 mg/L	S-2 4828 Judith Run
Cobalt (total)		Sampling Point Name
02/22/2017 11:05	< 0.010 mg/L	S-2 4828 Judith Run
Colour		Sampling Point Name
02/22/2017 11:05	< 5.0 TCU	S-2 4828 Judith Run
Conductivity		Sampling Point Name
02/22/2017 11:05	468 uS/cm	S-2 4828 Judith Run
Copper (total)		Sampling Point Name
02/22/2017 11:05	0.0982 mg/L	S-2 4828 Judith Run
Dibromoacetic acid		Sampling Point Name
02/22/2017 11:05	< 0.0010 mg/L	S-2 4828 Judith Run
Dibromochloromethane		Sampling Point Name
02/22/2017 11:05	0.0023 mg/L	S-2 4828 Judith Run
Dichloroacetic acid		Sampling Point Name
02/22/2017 11:05	0.0148 mg/L	S-2 4828 Judith Run
Escherichia coli / E. coli (counts)		Sampling Point Name
02/22/2017 11:05	< 1 counts/100ml	S-2 4828 Judith Run
Fecal Coliforms (counts)		Sampling Point Name
02/22/2017 11:05	< 1 counts/100ml	S-2 4828 Judith Run
Fluoride		Sampling Point Name
02/22/2017 11:05	0.186 mg/L	S-2 4828 Judith Run
Haloacetic acids 5 / HAA5		Sampling Point Name
02/22/2017 11:05	0.0252 mg/L	S-2 4828 Judith Run

Hardness (total, as CaCO3)		Sampling Point Name
02/22/2017 11:05	95.6 mg/L	S-2 4828 Judith Run
Heterotrophic Plate Count / HPC		Sampling Point Name
02/22/2017 11:05	< 100 CFU/100ml	S-2 4828 Judith Run
Iron (total)		Sampling Point Name
02/22/2017 11:05	< 0.030 mg/L	S-2 4828 Judith Run
Iron Bacteria (MPN / PA)		Sampling Point Name
02/22/2017 11:05	SC	S-2 4828 Judith Run
Langelier Index		Sampling Point Name
02/22/2017 11:05	0.055	S-2 4828 Judith Run
Langelier Index (@ 20 C)		Sampling Point Name
02/22/2017 11:05	5.6	S-2 4828 Judith Run
Lead (total)		Sampling Point Name
02/22/2017 11:05	0.00107 mg/L	S-2 4828 Judith Run
Lithium (total)		Sampling Point Name
02/22/2017 11:05	0.017 mg/L	S-2 4828 Judith Run
Magnesium (total)		Sampling Point Name
02/22/2017 11:05	1.62 mg/L	S-2 4828 Judith Run
02/22/2017 11:05	1.69 mg/L	S-2 4828 Judith Run
Manganese (total)		Sampling Point Name
02/22/2017 11:05	< 0.0020 mg/L	S-2 4828 Judith Run
Mercury (total)		Sampling Point Name
02/22/2017 11:05	< 0.00020 mg/L	S-2 4828 Judith Run
Molybdenum (total)		Sampling Point Name
02/22/2017 11:05	< 0.030 mg/L	S-2 4828 Judith Run
Monobromoacetic acid		Sampling Point Name
02/22/2017 11:05	< 0.0010 mg/L	S-2 4828 Judith Run
Monochloroacetic acid		Sampling Point Name
02/22/2017 11:05	< 0.0050 mg/L	S-2 4828 Judith Run
Nickel (total)		Sampling Point Name
02/22/2017 11:05	< 0.050 mg/L	S-2 4828 Judith Run

Nitrate (as N)		Sampling Point Name
02/22/2017 11:05	0.0085 mg/L	S-2 4828 Judith Run
Nitrate + Nitrite (as N)		Sampling Point Name
02/22/2017 11:05	0.0085 mg/L	S-2 4828 Judith Run
Nitrite (as N)		Sampling Point Name
02/22/2017 11:05	< 0.0010 mg/L	S-2 4828 Judith Run
pH		Sampling Point Name
02/22/2017 11:05	7.33	S-2 4828 Judith Run
02/22/2017 11:05	7.96	S-2 4828 Judith Run
Phosphorus (total)		Sampling Point Name
02/22/2017 11:05	< 0.30 mg/L	S-2 4828 Judith Run
Potassium (total)		Sampling Point Name
02/22/2017 11:05	0.42 mg/L	S-2 4828 Judith Run
Selenium (total)		Sampling Point Name
02/22/2017 11:05	< 0.0010 mg/L	S-2 4828 Judith Run
Silicon (total, as Si)		Sampling Point Name
02/22/2017 11:05	6.00 mg/L	S-2 4828 Judith Run
Silver (total)		Sampling Point Name
02/22/2017 11:05	< 0.010 mg/L	S-2 4828 Judith Run
Sodium (total)		Sampling Point Name
02/22/2017 11:05	72.9 mg/L	S-2 4828 Judith Run
Strontium (total)		Sampling Point Name
02/22/2017 11:05	0.475 mg/L	S-2 4828 Judith Run
Sulfate Reducing Bacteria		Sampling Point Name
02/22/2017 11:05	SC	S-2 4828 Judith Run
Sulphate		Sampling Point Name
02/22/2017 11:05	60.3 mg/L	S-2 4828 Judith Run
Sulphide (total, as S)		Sampling Point Name
02/22/2017 11:05	< 0.018 mg/L	S-2 4828 Judith Run
Tannins and Lignins		Sampling Point Name
02/22/2017 11:05	< 0.10 mg/L	S-2 4828 Judith Run

Thallium (total)		Sampling Point Name
02/22/2017 11:05	< 0.20 mg/L	S-2 4828 Judith Run
Tin (total)		Sampling Point Name
02/22/2017 11:05	< 0.030 mg/L	S-2 4828 Judith Run
Titanium (total)		Sampling Point Name
02/22/2017 11:05	< 0.010 mg/L	S-2 4828 Judith Run
Total Coliforms (counts)		Sampling Point Name
02/22/2017 11:05	< 1 counts/100ml	S-2 4828 Judith Run
Total Dissolved Solids / TDS		Sampling Point Name
02/22/2017 11:05	287 mg/L	S-2 4828 Judith Run
Total Kjeldahl Nitrogen / TKN		Sampling Point Name
02/22/2017 11:05	< 0.050 mg/L	S-2 4828 Judith Run
Total Organic Carbon / TOC		Sampling Point Name
02/22/2017 11:05	1.10 mg/L	S-2 4828 Judith Run
Total Trihalomethanes / TTHM		Sampling Point Name
02/22/2017 11:05	0.0403 mg/L	S-2 4828 Judith Run
Trichloroacetic acid		Sampling Point Name
02/22/2017 11:05	0.0104 mg/L	S-2 4828 Judith Run
Turbidity		Sampling Point Name
02/22/2017 11:05	0.22 NTU	S-2 4828 Judith Run
Uranium (total)		Sampling Point Name
02/22/2017 11:05	< 0.00010 mg/L	S-2 4828 Judith Run
Vanadium (total)		Sampling Point Name
02/22/2017 11:05	< 0.030 mg/L	S-2 4828 Judith Run
Zinc (total)		Sampling Point Name
02/22/2017 11:05	0.0341 mg/L	S-2 4828 Judith Run

Result Legend:

P=present, A=absent, PR=presumptive, ND=non-detect, U=non-detect, OR=over-range, OG=overgrown, Y=yes, N=no, TNTC=too numerous to count, NR=no result, NT=not tested, IG=ignore, ER=external report, SC=see comment

< means less than lower detection limit shown

> means greater than upper detection limit shown

« means detected & less than number shown

» means detected & greater than number shown

* Indicates Criteria is exceeded