Yuułu?ił?atḥ

2019 ANNUAL WATER QUALITY REPORT



COMPILED BY: JEREMY VALENTINE - CHIEF OPERATOR YUUŁU?IŁ?ATH GOVERNMENT

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INTRODUCTION

The Yuułu?ił?atḥ Assets Department aim to provide safe, clean drinking water to its citizens by maintaining, monitoring, and testing the water distribution systems throughout Hitacu and Yuułu?ił?atḥ Treaty Settlement Lands which provide potable water to the public. The Yuułu?ił?atḥ Assets department has three EOCP (Environmental Operator Certification Program) certified water operators: Jeremy Valentine, Jordan Touchie, and Spencer Touchie

THE ENVIRONMENTAL OPERATOR CERTIFICATION PROGRAM (EOCP)

The EOCP evolved in British Columbia from a handful of wastewater treatment plant operators who began the Program in 1966. Since then, the Program has grown along with similar programs throughout North America to include over 3,500 British Columbia and Yukon operators of:

- water distribution (WD)
- water treatment (WT)
- wastewater collection (WWC)
- municipal wastewater treatment (MWWT)
- industrial wastewater treatment (IWWT)
- small water systems (SWS), and
- small wastewater systems (SWWS).

The EOCP's objective is to protect human health, the environment, and the investment in facilities through increased knowledge, skill and proficiency of the members of the Program in all matters relating to water treatment and distribution and wastewater collection, treatment, and disposal.

OUR NATION'S EOCP CERTIFIED OPERATORS

With Yuułu?ił?ath having three EOCP certified operators on its staff it's able to ensure citizens, and the public, are provided with safe, clean drinking water year-round. Yuułu?ił?ath Water Operators train, and study throughout each year to maintain their EOCP certifications via CEU's (Continuing Education Units). Doing this ensures Yuułu?ił?ath Water Operators are continually growing, learning and improving their knowledge in order to provide safe, potable water.

JEREMY VALENTINE WD, WWC, SWS – CHIEF OPERATOR works as Water & Wastewater Operator for Yuułu?ił?ath and holds certifications in Level 1 Water Distribution, Level 1 Wastewater Collection, Small Water Systems, and Confined Space Entry.

JORDAN TOUCHIE SWS, SWWS – BACKUP WATER OPERATOR / WASTEWATER OPERATOR works both as the back-up Water & Wastewater Operator and as part of the asset department maintenance crew. Jordan maintains certification in **Small Water Systems** and **Small Wastewater Systems, Confined Space Entry.**

SPENCER TOUCHIE SWS- EMERGENCY BACKUP WATER OPERATOR is the Asset manager for Yuułu?ił?ath and also maintains certification in **Small Water Systems**. Spencer is able to provide emergency back-up and/or fill in as Water Operator if required.

YUUŁU?IŁ?ATH DRINKING WATER SYSTEMS

Hitacu's water system services approximately 260-300 permanent residents and has 99 service connections.

Hitacu relies on the District of Ucluelet to provide treated drinking water. This water supply is piped under Ucluelet harbour to Hitacu via the Bay St. water treatment plant in Ucluelet. A transmission main connects the Bay St. water treatment plant to the water main on Port Albion road. The water is then boosted by the pump house in Hitacu to the water reservoir on Reservoir Road.

The pump house has two automated pumps which alternate and take turns boosting the water to the reservoir ensuring fire protection levels in Hitacu are always met and safe drinking water is distributed to the community.

Other zones Yuułu?ił?ath monitors are the Wya Resort Lodge water dispensers, Wya Yurts, and Wya Surf shop. We also monitor sites at the junction; food truck, RV fill station, and coffee shop. The Wya Resort Lodges have refrigerated water coolers that are tested weekly as these are dispensing potable water to guest. The Junction property is provided with treated water from the District of Ucluelet and is tested weekly.

The Wya Surf Shop is supplied water from a well and is tested weekly when in operation.

WATER DISTRIBUTION SYSTEM

Water is distributed to Hitacu residents through a piped, gravity fed distribution system. The distribution system has one water storage reservoir located at the top end of Reservoir rd. The reservoir ensures the community always has enough water for fire protection and community use. The capacity of the reservoir is 598.6m3 or 598,600 litres. The reservoir has a shut off valve to isolate from the distribution system and a bypass valve which allows water to be pumped to the community if the reservoir has to be isolated for cleaning or emergency.

WATER QUALITY MONITORING

Yuułu?ił?ath works closely with the First Nations Health Authority (FNHA) to ensure drinking water is continually monitored and tested throughout the year. FNHA provides UFN with laboratory equipment and supplies to conduct in-house lab work and to also collect samples for a monthly test at Bureau Veritas Laboratories in Courtenay BC. These monthly tests a Bureau Veritas are a way of providing quality assurance and quality control and another step to ensure Yuułu?ił?ath is providing safe, clean water to its citizens. Each site tested has a Sample Point Locator Number (SPL#), and this number is used to identify sites when entering data collected for reporting that is tracked across Canada.

There is daily monitoring and recording of water flows, pump hours, chlorine levels, water lab temperatures, supplies, and community reservoir inspections.

There are 10 SPL sites in Hitacu. Each week we test the incoming water at the pumphouse, water at the end of the system, the daycare (when open), community kitchen and a random site throughout Hitacu. This enables good coverage of Hitacu's small water system to ensure everyone receives safe, potable water year-round.

There are also SPL sites at the junction property (Coffee shop, RV Fill Station, Food truck, campsites). Each week one of these sites are chosen for water quality monitoring.

WATER QUALITY STANDARDS FOR POTABLE WATER

Source: Drinking Water Protection Act Drinking Water Protection Regulation [includes amendments up to B.C. Reg. 237/2018, November 15, 2018] (sections 2 and 9)								
Parameter:	Standard:							
Fecal coliform bacteria	No detectable fecal coliform bacteria per 100 ml							
Escherichia coli	No detectable Escherichia coli per 100 ml							
Total coliform bacteria								
(a) 1 sample in a 30 day period	No detectable total coliform bacteria per 100 ml							
(b) more than 1 sample in a 30 day period	At least 90% of samples have no detectable total coliform bacteria per 100 ml and no sample has more than 10 total coliform bacteria per 100 ml							

WATER QUALITY RESULTS

2019		Ecoli/Fecal Coliform		Total C	oliform	2019	
SITE	Total Number of Samples	Number of Unsatisfactor y Samples	Percentage of Unsatisfactor y Samples	Number of Unsatisfactor y Samples	Percentage of Unsatisfactor y Samples	Consecutive Unsatisfactor y Result From Same Site?	Meets Health Canada Guidelines ?
Hitacu	245	0	0	0	0	N	Y
Wya Point Yurts	15	15	100	15	100	Y	N
Junction	37	0	0	0	0	N	Y
Wya Point Lodges	60	0	0	0	0	N	Y
Wya Point Surfshop	45	0	0	0	0	N	Y

YUUŁU?IŁ?ATH PUBLIC WORKS

HITACU CHLORINE RESIDUAL SUMMARY - 2019

YEAR MONTH	CO I	MMUN (ITCHEN	ITY N	SOL	ЛН НІТ	ACU	PUI	MP HO	USE	NOF	RTH НІТ	ACU
2019	Low	Avg	Hi	Low	Avg	Hi	Low	Avg	Hi	Low	Avg	Hi
Jan	0.32	0.5	0.66	0.35	0.46	0.62	0.14	0.5	0.68	0.4	0.49	0.55
Feb	0.24	0.4	0.56	0.22	0.39	0.42	0.39	0.58	0.83	0.41	0.48	0.53
Mar	0.32	0.49	0.61	0.57	0.58	0.59	0.23	0.59	0.69	0.53	0.57	0.65
Apr	0.3	0.42	0.48	0.23	0.3	0.47	0.06	0.43	0.66	0.13	0.33	0.49
May	0.32	0.44	0.52	0.34	0.38	0.45	0.46	0.6	0.72	0.28	0.35	0.45
lun	0.3	0.35	0.49	0.3	0.37	0.47	0.39	0.62	0.75	0.32	0.38	0.46
	0.29	0.00	0.66	0.27	0.35	0.41	0.2	0.55	0.68	0.22	0.38	0.10
Δυσ	0.23	0.4	0.00	0.27	0.33	0.71	0.2	0.55	0.65	0.22	0.30	0.45
Son	0.5	0.38	0.45	0.32	0.52	0.52	0.50	0.50	0.03	0.30	0.41	0.40
Sep	0.20	0.45	0.59	0.45	0.44	0.45	0.54	0.02	0.77	0.41	0.44	0.40
	0.42	0.48	0.59	0.37	0.47	0.6	0.36	0.51	0.71	0.38	0.5	0.59
Nov	0.26	0.47	0.58	0.32	0.38	0.44	0.3	0.49	1.02	0.39	0.42	0.45
Dec	0.32	0.51	0.62	0.5	0.51	0.54	0.37	0.5	0.56	0.26	0.48	0.57

Community:

Totals:

Ittatsoo

Ucluelet FN CWS

32

Water System :

Bacteriological Lab Samples Bacteriological Colilert Samples Year Month **Total Number Total Number** Percent Total Number **Total Number** Percent of Samples of Samples Analyzed of Samples of Samples Analyzed Analyzed Expected (%) Analyzed Expected (%) 2019 2 2 100.0 31 17 100.0 January 2 2 100.0 16 17 94.1 February 2 2 March 100.0 17 17 100.0 April 4 2 100.0 13 17 76.5 2 100.0 100.0 4 24 17 May June 3 2 100.0 15 17 88.2 July 5 2 100.0 19 17 100.0 August 0 2 0.0 12 17 70.6 September 2 2 100.0 16 17 94.1 2 2 100.0 100.0 October 19 17 November 3 2 100.0 14 17 82.4 December 3 2 100.0 17 88.2 15

24

100.0

211

204

100.0

Water System	n:	Wya Point Lodg	jes				
		Bacte	eriological Lab Saı	nples	Bacteriological Colilert Samples		
Year	Month	Total Number of Samples Analyzed	Total Number of Samples Expected	Percent Analyzed (%)	Total Number of Samples Analyzed	Total Number of Samples Expected	Percent Analyzed (%)
2019	January	1	2	50.0	3	4	75.0
	February	1	2	50.0	3	4	75.0
	March	1	2	50.0	4	4	100.0
	April	1	2	50.0	3	4	75.0
	May	1	2	50.0	6	4	100.0
	June	1	2	50.0	4	4	100.0
	July	2	2	100.0	5	4	100.0
	August	0	2	0.0	3	4	75.0
	September	1	2	50.0	4	4	100.0
	October	1	2	50.0	5	4	100.0
	November	1	2	50.0	4	4	100.0
	December	1	2	50.0	4	4	100.0
Totals:		12	24	50.0	48	48	100.0

Community: Wya Surfshop and Campground

Water System :

Wya Surfshop and Campground

		Bacteriological Lab Samples		Bacteriological Col		lert Samples	
Year	Month	Total Number of Samples Analyzed	Total Number of Samples Expected	Percent Analyzed (%)	Total Number of Samples Analyzed	Total Number of Samples Expected	Percent Analyzed (%)
2019	January	1	1	100.0	4	4	100.0
	February	1	1	100.0	4	4	100.0
	March	1	1	100.0	3	4	75.0
	April	1	1	100.0	3	4	75.0
	May	1	1	100.0	5	4	100.0
	June	1	1	100.0	4	4	100.0
	July	2	1	100.0	3	4	75.0
	August	0	1	0.0	5	4	100.0
	September	1	1	100.0	4	4	100.0
	October	0	1	0.0	1	4	25.0
	November	0	1	0.0	0	4	0.0
	December	0	1	0.0	0	4	0.0
Totals:		9	12	75.0	36	48	75.0

15 Bacteriological tests were taken from the Wya Resort Yurt bathroom site during the summer season of 2019. All 15 tested positive for Total Coliform and E.coli. This is a known contaminated source and has "Do not Consume" signs posted. Yuułu?ił?atḥ still monitors this site during operation even though it is labeled non potable water. There is a concern about the high levels of e.coli present and all parties are aware of the nonpotable water.

Water System : Wya Point Yurts							
		Bacteriological Lab Samples		Bacterio	iological Colilert Samples		
Year	Month	Total Number of Samples Analyzed	Total Number of Samples Expected	Percent Analyzed (%)	Total Number of Samples Analyzed	Total Number of Samples Expected	Percent Analyzed (%)
2019	January	0	2	0.0	0	4	0.0
	February	0	2	0.0	0	4	0.0
	March	0	2	0.0	0	4	0.0
	April	0	2	0.0	0	4	0.0
	Мау	0	2	0.0	0	4	0.0
	June	0	2	0.0	0	4	0.0
	July	2	2	100.0	4	4	100.0
	August	0	2	0.0	3	4	75.0
	September	1	2	50.0	5	4	100.0
	October	0	2	0.0	0	4	0.0
	November	0	2	0.0	0	4	0.0
	December	0	2	0.0	0	4	0.0
Totals:		3	24	12.5	12	48	25.0

WATER CONSUMPTION STATISTICS

Yuułu?ił?ath consumed 42,119.3 m³ during from Jan2019 – end of Dec 2019.

1m³ or cubic meter = 1000 Litres.

This equates to an average of $3510m^3$ / month, and $117m^3$ / day.



During 2019 we had two water emergencies that used a lot of water and has skewed the total flow and averages slightly.

2019 WATER CONSUMPTION (measured in cubic meters)

$1 m^{3} = 1000 Litres$	lm	3 =	1000	Litres
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MTH/YR	BEGINNING	END	TOTAL
Jan-19	5697.2	10158.7	4461.5 m ³
Feb-19	10158.7	13373.8	3215.1 m ³
Mar-19	13373.8	17334.5	3960.7 m ³
Apr-19	17334.5	20952.1	3617.6 m ³
May-19	20952.1	24432.4	3480.3 m ³
Jun-19	24432.4	27981.7	3549.3 m ³
Jul-19	27981.7	31104.5	3122.8 m ³
Aug-19	31104.5	34318.3	3213.8 m ³
Sept-19	34318.3	37905.8	3587.5 m ³
Oct-19	37905.8	41076.4	3170.6 m ³
Nov-19	41076.4	43901.8	2825.4 m ³
Dec-19	43901.8	47916.6	4014.8 m ³
		YEAR END TOTAL:	42219.4 m ³

During January 2019 there was a water main break while an infrastructure assessment was being conducted. And during December 2019 there was a house fire that used a lot of water to contain.

We also conducted hydrant flushing in March 2019 and Hydrant teardown/maintenance in April 2019 which shows increased consumption.

2019 NOTICES AND POSTINGS

WATER MAIN FLUSHING & MAINTENANCE NOTICE

The Ucluelet First Nation public works will be conducting spring maintenance on Hitacu's Water Distribution System in 3 phases this April, 2019.

- 1. April 4, 2019 9:00am to 12:00pm Low Point Flush-Outs
- 2. April 15-16, 2019 Hydrant Maintenance
- 3. April 29-30, 2019 Hydrant Flushing

The purpose of water distribution flushing and maintenance is to remove existing sediment and debris built up within the pipes. This will improve water quality and restore capacity. There will be no disruption of service but some discoloration may occur. Discoloration is an unavoidable effect of flushing, with an aesthetic value only, and is not considered a health hazard. The water should clear after a short period of time.

Residents may experience the following:

- Discolored water
- Water system pressure may change slightly throughout the process

If discoloration does occur we advise you to fully open an outside <u>cold water</u> faucet to flush discolored water out of your service piping/plumbing lines. In most cases the water should run clear in 15 - 30 minutes.

We apologize for the inconvenience and thank you for your patience.

Please check Facebook regularly for updates and/or call the office @ 250-726-2587 or 250-726-7342 if you have any questions.

UCLUELET FIRST NATION LEAK DETECTION PROGRAM

Hello, my name is Jeremy Valentine and I work in Ucluelet First Nation's Asset department as the Water and Wastewater Operator. While my main responsibility is to ensure residents of Hitacu, and customers at the Wya related businesses, receive clean, safe, potable drinking water 365 days of the year I must also look after water conservation. Our water is sourced by the District of Ucluelet and we pay monthly for our treated water supply and wastewater treatment.

While the Ucluelet First Nation Asset department has addressed some major and minor leaks as they arose, we know we can do better. In order to lower Ucluelet First Nations water costs and increase water conservation we will be implementing a leak detection program. For this we will require the help of homeowners and tenants throughout the community.

We are asking that residents of Hitacu take note of any leaks or suspected leaks they find and report them to the Ucluelet First Nation Asset department. It may be a leak in a sink faucet, a showerhead, an outside tap, or especially a toilet.

A toilet alone can use 27 percent of your average water consumption per day. And that's when it's working correctly. A slow leak can waste **115 litres a day**; a medium leak will go through roughly **950 litres per day**, and a toilet that continues to run after flushing could be wasting **20-40 litres per hour**. That is **175,000 to 350,000 litres per year!**

A leaky faucet that drips at the rate of one drip per second can waste more than 1135 litres per year. That is the amount of water needed to take more than 180 showers!

If you notice a leak, we ask that you call and report it. You can call 250-726-7342 (Main Office) or 250-726-2587 (Asset Department Office) and we will record the date, name & address, the location of the leak, and the time you first noticed it. Once we have the report on file we will investigate and fix the leak as soon as our department is able.

We also urge those who use the dock to please make sure the water is shut off when not in use. This will help greatly to conserve water.

Thank you very much for helping be leak detectives for our community!

If you have any questions, concerns or comments I can be reached at 250-726-2587, <u>jeremy.valentine@ufn.ca</u>, or you can stop me anytime when I am out and about in the field ⁽²⁾

Thank you for your time, consideration, and assistance.

Supervisor/Assets Manager Spencer Touchie Work: 250-726-2587, Cell: 250-522-0209

Water/Wastewater Operator Jeremy Valentine Work: 250-726-2587, Cell: 250-726-6129

Back-up W/WW Operator Jordan Touchie Work: 250-726-2587, Cell: 250-266-2490

> UFN Public Works Emergency On-Call W/WW Operator 250-726-6757

Public Works Labourer Henry Williams Work: 250-726-2587