## <u>Fernie Alpine Resort Utility Corporation</u> Potable Water System Operational Summary 2022

## **Potable Water System Operations Summary**

The potable water system continues to operate well, meeting all Canadian Drinking Water Standards. In 2022 there were no advisories or warnings issued.

Construction of the new reservoir is complete, and the reservoir is now in service. FARUC is currently reviewing the final costs with the BC Government's Comptroller of Water Rights.

Commissioning of the new Potable Water Treatment Plant is targeted for summer 2023. FARUC has now received a permit from BC Interior Health for the connection of well 2 and additional monitoring equipment to complete the assessment for installation of the UV unit. Upon completion of this facility, a levy will be applied to recover the existing customers cost share of the works. Further details on the cost recoveries can be found in the Comptroller of Water Rights decision letter referenced below.

## 2022 Water Rates

A review of FARUC's potable water system and rate structure was completed in 2018 and reviewed by the BC Government's Comptroller of Water Rights. The Comptroller approved a new Tariff and rate structure for the water system. A copy of the new Tariff and decision by the Comptroller can be viewed at <u>https://skifernie.com/utility-services/</u>. As such, the water rate for 2022 remains **\$50.00/BU**, with **\$18.00/BU** being deposited into the Water Replacement Trust Fund. Funds in the trust can only be released with the Comptroller's approval.

## 2022 Facility Classification & Emergency contact

The FARUC Water Treatment Plant is classified as a Level 1 Water Facility.

FARUC currently employs 1 full time manager and 2 operators. All three are fully qualified. Operators are either on duty or on-call 24 hrs./day.

## In case of Emergency, please contact FAR Security – 1 -250 – 423 – 9086.

## 2022 Potable Water System Improvements

Work was completed in the summer of 2022 of a replacement PRV station, across ski hill road from the mountain pantry. Further improvements for 2023 is the completion of the new WTP and related infrastructure, including new wireless controls and monitoring equipment.

## **2022 Fire Hydrant Testing**

Attached are the results of the annual fire hydrant testing.

## **2022 Bacterial Testing**

Weekly Bacterial Test samples were taken as required by BC Interior Health. There were no failed tests for either E. Coli or Coliforms and no boil water advisories were issued in 2022.

## Potable Water Quality – Well #1

Attached is a summary of water the water quality tests completed in fall of 2022. Next test to be completed in fall 2023. All samples are of raw water prior to treatment.

## Potable Water Quality – Well #2

Well # 2 has been approved as a water source but is currently not in use. There is additional maintenance work to be performed on this well in May 2023. After this work is completed, a full chemical analysis will be performed on Well # 2. The plan is to have this well in production in fall 2023.

	Fernie Alpine Resort Water Distribution 2022 Summary																												
									Chlo	orine Re	sidual (m	ig/L)									Wa	iter Usag	je (m <sup>3</sup> )		Turbidit	ty (NTU)		Indopond	ont Tosting
Month	Reservo	oir 1 CL <sub>2</sub>	Reserve	oir 2 CL <sub>2</sub>	River Pu	ump CL <sub>2</sub>	WW	TP CL <sub>2</sub>	Shop	o CL <sub>2</sub>	Tamar	ack CL <sub>2</sub>	Boome	rang CL <sub>2</sub>	Lizard C	reek CL <sub>2</sub>	Snow C	reek CL <sub>2</sub>	Pant	ry CL <sub>2</sub>		River P	р	Spi	ring	Riv	/er	independ	Jit resting
	Average	Median	Average	Median	Average	Median	Average	Median	Average	Median	Average	Median	Average	Median	Average	Median	Average	Median	Average	Median	Average	Median	Total	Average	Median	Average	Median	T. Coliform	E. Coli
Jan	1.00	1.03	0.71	0.69	0.31	0.28	0.32	0.32	0.37	0.38	0.47	0.46	0.55	0.57	0.58	0.65	0.65	0.59	0.42	0.40	379	321	11756	0.159	0.139	0.092	0.090	>1	>1
Feb	1.11	1.15	0.65	0.65	0.30	0.26	0.32	0.33	0.32	0.33	0.50	0.48	0.50	0.51	0.42	0.39	0.45	0.42	0.35	0.31	454	442	12700	0.116	0.112	0.115	0.112	>1	>1
Mar	0.85	0.90	0.62	0.61	0.48	0.51	0.35	0.34	0.30	0.31	0.40	0.39	0.51	0.47	0.44	0.47	0.50	0.48	0.46	0.42	405	420	12541	0.462	0.279	0.133	0.120	>1	>1
Apr	0.84	0.90	0.75	0.75	0.25	0.23	0.41	0.38	0.37	0.35	0.60	0.58	0.65	0.67	0.59	0.51	0.62	0.60	0.47	0.53	200	229	6008	0.232	0.189	0.106	0.108	>1	>1
May	0.89	0.86	0.80	0.78	0.35	0.28	0.37	0.35	0.36	0.36	0.48	0.44	0.71	0.66	0.61	0.65	0.56	0.54	0.39	0.37	191	169	5914	0.200	0.165	0.149	0.084	>1	>1
June	0.75	0.81	0.62	0.63	0.15	0.14	0.35	0.31	0.32	0.31	0.57	0.50	0.57	0.59	0.60	0.62	0.48	0.48	0.41	0.38	229	198	6866	0.267	0.154	0.156	0.084	>1	>1
July	1.44	1.40	0.86	0.92	0.30	0.17	0.43	0.42	0.44	0.44	0.67	0.62	0.67	0.62	0.74	0.71	0.72	0.72	0.53	0.54	468	478	14515	0.134	0.134	0.077	0.077	>1	>1
Aug	2.17	2.20	1.18	1.18	0.56	0.57	0.51	0.53	0.49	0.50	0.70	0.62	0.80	0.70	0.89	0.93	0.83	0.71	0.61	0.58	615	624	19057	0.149	0.137	0.090	0.090	>1	>1
Sept	2.20	2.20	0.67	0.62	0.73	0.71	0.60	0.58	0.54	0.52	0.64	0.62	0.52	0.52	0.59	0.58	0.58	0.58	0.71	0.68	465	426	13941	N/A	N/A	0.094	0.095	>1	>1
Oct	2.20	2.20	0.88	0.80	0.84	0.82	0.63	0.64	0.63	0.64	0.76	0.64	0.83	0.73	0.77	0.72	0.81	0.78	0.74	0.74	293	261	9096	0.845	0.147	0.101	0.100	>1	>1
Nov	1.74	1.95	0.76	0.79	0.61	0.58	0.62	0.66	0.51	0.50	0.67	0.67	0.65	0.65	0.62	0.64	0.68	0.63	0.64	0.65	246	245	7392	0.202	0.192	0.126	0.110	>1	>1
Dec	1.62	1.64	0.80	0.83	0.58	0.60	0.57	0.57	0.58	0.59	0.64	0.63	0.70	0.66	0.78	0.70	0.67	0.69	0.58	0.67	414	416	12821	0.168	0.166	0.109	0.105	>1	>1
Annual	1.40	1.27	0.78	0.77	0.45	0.40	0.46	0.40	0.43	0.41	0.59	0.60	0.64	0.64	0.64	0.65	0.63	0.60	0.53	0.53	363	369	132607	0.267	0.154	0.112	0.097	no	no



### FIRE HYDRANT INSPECTION REPORT

DATE: 28-Jun-2022

CUSTOMER BUILDING ADDRESS: Fernie Alpine Resorts c/o Resorts of the Canadian Rockies.

DESCRIPTION OF SYSTEM (No. of Hydrants, Manufacturer, Hydrant Type, Layout):

25) McAvity M67B (2017). 26) McAvity Brigadier (2021)

27) McAvity Brigadier (2021)

Hydrant List:							
No.25of25 Location	Entrance to Til	mber Land Es	states	Shut Off	Locatio	n: Approximately 10' S of	Hydrant
Visual Inspection	Visual Under Pr	essure	Inspection	Under Bon	nnet	Correct Drainage/Vacu	um
Paint Required	Leaks		Damage			Unacceptable	
Rusting 🗌	Ok	~	Rusting			Poor	
Leaks	Lubricate Nozzle	Caps	Leaks			Ok	~
Ok 🖌	YES 🖌 NO		Ok		~		
Static Pressure:	80 PSI	Inspect Pa	cking/ Hold do	wn Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 20 PSI	Replace Pa	icking		Gasket	Torn	
Pitot Pressure:	10 PSI	OK		~	Seat Sco	ored	
Calculated Flow:	533 GPM				OK		
No.26 Location:	C-1		SI	hut Off Lo	ocation:	New Hydrant to be designate	d
Visual Inspection	Visual Under Pr	essure	Inspection	Under Bor	nnet	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks 🗌	Lubricate Nozzle	Caps	Leaks			Ok	~
Ok 🖌	YES 🗌 NO	~	Ok		~		
Static Pressure:	100 PSI	Inspect Pa	cking/ Hold do	wn Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 60 PSI	Replace Pa	icking		Gasket	Torn	
Pitot Pressure:	20 PSI	OK			Seat Sco	ored	
Calculated Flow:	754 GPM				OK		
No.27 Location:	C-2		SI	hut Off Lo	ocation:	New Hydrant to be designated	
Visual Inspection	Visual Under Pr	essure	Inspection	Under Bor	nnet	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks	Lubricate Nozzle	Caps	Leaks			Ok	~
Ok 🖌	YES 🗌 NO	~	Ok		~		
Static Pressure:	PSI	Inspect Pa	cking/ Hold do	wn Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: PSI	Replace Pa	icking		Gasket	Torn	
Pitot Pressure:	PSI	OK		~	Seat Sc	ored	
Calculated Flow:	GPM				OK		~

REPAIRS (Replacing O-rings, Gaskets, Caps Missing, Valve Rubber, Internal Components):

NA

COMMENTS & RECOMMENDATIONS (Painting, Replacing Internal Components)

These Fire Hydrants are in a suitable condition for regular service as tested on June 28,2022

Sprouse Fire and Safety Corp assumes no further liability.

Hydra test #25 residual pressure is lower than expected.



### FIRE HYDRANT INSPECTION REPORT

DATE: 27-Jun-2022

CUSTOMER BUILDING ADDRESS: Fernie Alpine Resort c/o Resorts of the Canadian Rockies

DESCRIPTION OF SYSTEM (No. of Hydrants, Manufacturer, Hydrant Type, Layout):

1. McAvity M67 (1975). 2. Mueller Century (1981). 3. Mueller Century (1981)

Hydrant List:						
No.1 of 25 Location	At the Main Tick	et Kiosk Cent	er Court Shut C	Off Location	on: Approximately 3' behind	Hydrant
Visual Inspection	Visual Under Pr	essure	Inspection Under B	onnet	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks	Lubricate Nozzle	e Caps	Leaks		Ok	~
Ok 🖌	YES 🗹 NO		Ok	~		
Static Pressure:	95 PSI	Inspect Pa	cking/ Hold down Plate	e Inspect	t Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 85 PSI	Replace Pa	acking	Gasket	Torn	
Pitot Pressure:	36 PSI	OK	~	]   Seat Sc	ored	
Calculated Flow:	1012 <b>GPM</b>			OK		
No.2 of 25 Location:	At the Griz Inn Entra	ance	Shut Off	Location:	Unknown	
Visual Inspection	Visual Under Pr	essure	Inspection Under B	onnet	Correct Drainage/Vacu	um
Paint Required 🔲	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks	Lubricate Nozzle	e Caps	Leaks		Ok	~
Ok 🖌	YES 🗌 NO	<b>~</b>	Ok	~		
Static Pressure:	95 PSI	Inspect Pa	cking/ Hold down Plate	e   Inspect	t Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 85 PSI	Replace Pa	acking	Gasket	Torn	
Pitot Pressure:	36 PSI	OK		]   Seat Sc	ored	
Calculated Flow:	1012 <b>GPM</b>			OK		
No. 3 of 25 Location:	At the Entrance to parl	king lot of Ferni	ie Lodging Co. Shut Off	Location:	Approximately 3' West of Hyd	rant
Visual Inspection	Visual Under Pr	essure	Inspection Under B	onnet	Correct Drainage/Vacu	um
Paint Required	Leaks		Damage		Unacceptable	
Rusting	Ok	V	Rusting		Poor	
Leaks	Lubricate Nozzle	e Caps	Leaks		Ok	~
Ok 🖌	YES 🖌 NO		Ok	~		
Static Pressure:	70 PSI	Inspect Pa	cking/ Hold down Plate	e Inspect	t Main Gate/Valve Seat	
Residual Pres w/2.5" F.	0.: 45 PSI	Replace Pa	acking	]   Gasket	Torn	
Pitot Pressure:	20 PSI	OK	~	]   Seat Sc	ored	
<b>Calculated Flow:</b>	653 <b>GPM</b>			OK		~

REPAIRS (Replacing O-rings, Gaskets, Caps Missing, Valve Rubber, Internal Components):

NA

COMMENTS & RECOMMENDATIONS (Painting, Replacing Internal Components)

The Fire Hydrants at this location have been inspected and were found to be in a suitable condition for

regular service on June 27/28,2022.

Sprouse Fire and Safety orp assumes no further liability.



### FIRE HYDRANT INSPECTION REPORT

DATE: 27-Jun-2022

CUSTOMER BUILDING ADDRESS: Fernie Alpine Resort c/o Resorts of the Canadian Rockies

DESCRIPTION OF SYSTEM (No. of Hydrants, Manufacturer, Hydrant Type, Layout):

4. Mueller Century. 5. Mueller Century

6. Mueller Centur	у						
Hydrant List:							
No. 4 of 25 Location	: Timberline Crescent	(beside prem	ise #4553) S	hut Off	Locatio	n: Approximately 3' South o	f Hydrant
Visual Inspection	Visual Under Pr	essure	Inspection Ur	ıder Bon	inet	Correct Drainage/Vacu	ıum
Paint Required 🗌	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks	Lubricate Nozzle	e C <u>ap</u> s	Leaks			Ok	~
Ok 🖌	YES 🗹 NO		Ok		~		
Static Pressure:	80 PSI	Inspect Pa	cking/ Hold down	n Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 40 PSI	Replace Pa	icking		Gasket '	Torn	
Pitot Pressure:	20 PSI	OK		~	Seat Sco	ored	
Calculated Flow:	754 <b>GPM</b>				OK		
No. 5 of 25 Location:	Corner of Timberline	Crescent ( Pre	emise 4477). Shu	t Off Lo	ocation:	Approximately 3' South of Hy	drant
Visual Inspection	Visual Under Pr	essure	Inspection Ur	ider Bon	net	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks	Lubricate Nozzle	e C <u>ap</u> s	Leaks			Ok	~
Ok 🖌	YES 🖌 NO		Ok		~		
Static Pressure:	110 PSI	Inspect Pa	cking/ Hold down	n Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 40 PSI	Replace Pa	icking		Gasket '	Torn	
Pitot Pressure:	20 PSI	OK			Seat Sco	ored	
Calculated Flow:	754 GPM				OK		
No. 6 of 25 Location:	Timberline Crescent (	oeside premise	4427) Shu	t Off Lo	ocation:	Approximately 16" NE of Hyd	Irant
Visual Inspection	Visual Under Pr	essure	Inspection Ur	ıder Bon	net	Correct Drainage/Vacu	um
Paint Required	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks	Lubricate Nozzle	e C <u>ap</u> s	Leaks			Ok	٢
Ok 🖌	YES 🖌 NO		Ok		~		
Static Pressure:	110 PSI	Inspect Pa	cking/ Hold dowr	n Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 70 PSI	Replace Pa	icking		Gasket	Torn	
Pitot Pressure:	30 PSI	OK		<b>~</b>	Seat Sco	ored	
Calculated Flow:	924 GPM				OK		~

REPAIRS (Replacing O-rings, Gaskets, Caps Missing, Valve Rubber, Internal Components):

NA



### FIRE HYDRANT INSPECTION REPORT

DATE: 27-Jun-2022

CUSTOMER BUILDING ADDRESS: Fernie Alpine Resort c/o Resorts of the Canadian Rockies.

DESCRIPTION OF SYSTEM (No. of Hydrants, Manufacturer, Hydrant Type, Layout):

7. Mueller Centurion 8. McAvity 67 Brigadier (1995)

9. McAvity 67 Brigadier (1995)

Hydrant List:						
No.7 of 25 Location	: Timberline Cres	cent at premi	se 4389 Shut C	)ff Locati	on: 2' SW of Hydrant	
Visual Inspection	Visual Under Pr	essure	Inspection Under E	lonnet	Correct Drainage/Vacu	um
Paint Required 🔲	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🖌 NO		Ok	~		
Static Pressure:	80 PSI	Inspect Pa	cking/ Hold down Plate	e Inspec	t Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 65 PSI	Replace Pa	icking	Gasket	Torn	
Pitot Pressure:	28 PSI	OK	~	]   Seat So	cored	
Calculated Flow:	893 GPM			OK		
No.8 of 25 Location:	At Entrance to I	Maintenance S	Shop Shut Off	Location	Unknown	
Visual Inspection	Visual Under Pr	essure	Inspection Under E	onnet	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks 🗌	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🖌 NO		Ok	~		
Static Pressure:	60 PSI	Inspect Pa	cking/ Hold down Plate	e   Inspec	t Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 50 PSI	Replace Pa	icking	Gasket	Torn	
Pitot Pressure:	20 PSI	OK		Seat So	cored	
Calculated Flow:	754 GPM			OK		
No.9 of 25 Location:	Located at Poler Pe	eaks Lodge (Lo	odge #8) Shut Off	Location	Unknown (curb box at entranc	e?)
Visual Inspection	Visual Under Pr	essure	Inspection Under E	onnet	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks 🗌	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🖌 NO		Ok	~		
Static Pressure:	65 PSI	Inspect Pa	cking/ Hold down Plate	e   Inspec	t Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 42 PSI	Replace Pa	icking	Gasket	Torn	
Pitot Pressure:	18 PSI	OK	<b>v</b>	]   Seat So	cored	
Calculated Flow:	716 <b>GPM</b>			OK		<b>~</b>

REPAIRS (Replacing O-rings, Gaskets, Caps Missing, Valve Rubber, Internal Components):

NA



### FIRE HYDRANT INSPECTION REPORT

DATE: 15-Jun-2021

CUSTOMER BUILDING ADDRESS: Fernie Alpine Resorts c/oResorts of the Canadian Rockies

DESCRIPTION OF SYSTEM (No. of Hydrants, Manufacturer, Hydrant Type, Layout):

10. McAvity 67 Brigadier (1995). 11. McAvity 67 Brigadier (1995)

12. McAvity 67 Brigadier (1999)

Hydrant List:						
No. 10 of 25 Location	Right side of Cul	De Sac (at Fir	re Lane). Shut	<b>Off Locat</b>	ion: Approximately 2' N of I	Hydrant
Visual Inspection	Visual Under Pr	essure	Inspection Under	Bonnet	Correct Drainage/Vacu	ıum
Paint Required	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🖌 NO		Ok	~		
Static Pressure:	65 PSI	Inspect Pa	cking/ Hold down Pla	ite   Inspe	ct Main Gate/Valve Seat	
Residual Pres w/2.5" F.0	O.: 40 PSI	Replace Pa	icking	🗌   Gaske	et Torn	
Pitot Pressure:	18 PSI	OK		🗹   Seat S	Scored	
Calculated Flow:	716 GPM			OK		
No. 110f25 Location:	Highline Drive at prem	ise 5400	Shut Of	ff Location	1: Approximately 4' NW of Hydr	rant
Visual Inspection	Visual Under Pr	essure	Inspection Under	Bonnet	Correct Drainage/Vacu	ıum
Paint Required 🗌	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks 🗌	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🗹 NO		Ok	~		
Static Pressure:	110 PSI	Inspect Pa	cking/ Hold down Pla	ite   Inspe	ct Main Gate/Valve Seat	
Residual Pres w/2.5" F.0	O.: 100 PSI	Replace Pa	icking	🗌   Gaske	et Torn	
Pitot Pressure:	35 PSI	OK		🗹 🛛 Seat S	Scored	
Calculated Flow:	998 GPM			OK		
No. 120f25 Location:	Stone Creek Chalets	5423	Shut Of	ff Location	1: Approximately 3' N of Hydrant	
Visual Inspection	Visual Under Pr	essure	Inspection Under	Bonnet	Correct Drainage/Vacu	ıum
Paint Required 🗌	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🖌 NO		Ok	4		
Static Pressure:	95 PSI	Inspect Pa	cking/ Hold down Pla	ite   Inspe	ct Main Gate/Valve Seat	
Residual Pres w/2.5" F.C	O.: 60 PSI	Replace Pa	icking	🗌   Gaske	et Torn	
Pitot Pressure:	28 PSI	OK		🗹   Seat S	Scored	
Calculated Flow:	893 GPM			OK		~

REPAIRS (Replacing O-rings, Gaskets, Caps Missing, Valve Rubber, Internal Components):

NA

COMMENTS & RECOMMENDATIONS (Painting, Replacing Internal Components)

The Fire Hydrants at this location have been inspected and were found to be in a suitable condition

for regular service on June 27,2022. Sprouse Fire and Safety Corp assumes no further liability



### FIRE HYDRANT INSPECTION REPORT

DATE: 27-Jun-2022

CUSTOMER BUILDING ADDRESS: Fernie Alpine Resorts c/o Resorts of the Canadian Rockies

DESCRIPTION OF SYSTEM (No. of Hydrants, Manufacturer, Hydrant Type, Layout):

13. McAvity 67 Brigadier (1995). 14. McAvity 67 Brigadier (1995)

15. McAvity M67 (1995)

Hydrant List:							
No. 130f 25 Location	: Highline Drive at Liz	ard Creek Lo	dge Entrance Shut	Off	Locatio	n: Approximately 4' N of H	lydrant
Visual Inspection	Visual Under Pr	essure	Inspection Under	· Bon	net	<b>Correct Drainage/Vacu</b>	um
Paint Required 🔲	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks 🗌	Lubricate Nozzle	Caps	Leaks			Ok	~
Ok 🖌	YES 🗹 NO		Ok		~		
Static Pressure:	105 PSI	Inspect Pa	cking/ Hold down Pla	ate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 85 PSI	Replace Pa	icking		Gasket '	Torn	
Pitot Pressure:	35 PSI	OK		-	Seat Sco	ored	
Calculated Flow:	998 GPM				OK		
No. 140f25 Location: Highline Drive at Ingamo Lodge Shut Off Location: Approximately 2' SE of Hydrant							
Visual Inspection	Visual Under Pr	essure	Inspection Under	· Bon	net	<b>Correct Drainage/Vacu</b>	um
Paint Required 🗌	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks 🖌	Lubricate Nozzle	Caps	Leaks			Ok	~
Ok 🗌	YES 🖌 NO		Ok		~		
Static Pressure:	100 PSI	Inspect Pa	cking/ Hold down Pla	ate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 75 PSI	Replace Pa	icking		Gasket '	Forn	
Pitot Pressure:	30 PSI	OK			Seat Sco	ored	
Calculated Flow:	924 GPM				OK		
No. 150f25 Location:	Highline Drive at Pre	emise # 5281	Shut O	ff La	ocation:	Approximately 8' S of Hydrant	
Visual Inspection	Visual Under Pr	essure	Inspection Under	· Bon	net	<b>Correct Drainage/Vacu</b>	um
Paint Required 🔽	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks 🗌	Lubricate Nozzle	Caps	Leaks			Ok	~
Ok 🖌	YES 🖌 NO		Ok		~		
Static Pressure:	100 PSI	Inspect Pa	cking/ Hold down Pla	ate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 70 PSI	Replace Pa	icking	$\Box$	Gasket '	Torn	
Pitot Pressure:	30 PSI	OK		I	Seat Sco	ored	
Calculated Flow:	924 <b>GPM</b>				OK		~

REPAIRS (Replacing O-rings, Gaskets, Caps Missing, Valve Rubber, Internal Components):

NA

COMMENTS & RECOMMENDATIONS (Painting, Replacing Internal Components)

The Fire Hydrants at this location have been inspected and were found to be in a suitable condition

for regular service on June 27,2022. Sprouse Fire and Safety Corp assumes no further liability.



### FIRE HYDRANT INSPECTION REPORT

DATE: 27-Jun-2022

CUSTOMER BUILDING ADDRESS: Fernie Alpine Resorts c/o Resorts of the Canadian Rockies

DESCRIPTION OF SYSTEM (No. of Hydrants, Manufacturer, Hydrant Type, Layout):

16.McAvity 67 Brigadier (1995). 17.McAvity 67 Brigadier

18. McAvity 67 Brigadier

Hydrant List:						
No. 160f25 Location	Highline Drive at	Premise 5263	3 Shut Of	f Locatio	on: Approximately 5' NE of I	Hydrant
Visual Inspection	Visual Under Pr	essure	Inspection Under Bo	nnet	Correct Drainage/Vacu	um
Paint Required	Leaks		Damage		Unacceptable	
Rusting	Ok	<b>~</b>	Rusting		Poor	
Leaks	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🖌 NO	$\square$	Ok	~		
Static Pressure:	80 PSI	Inspect Pa	cking/ Hold down Plate	Inspect	t Main Gate/Valve Seat	
Residual Pres w/2.5" F.0	D.: 60 PSI	Replace Pa	icking	Gasket	Torn	
Pitot Pressure:	25 PSI	OK	~	Seat Sc	ored	
Calculated Flow:	843 GPM			OK		
No. 170f25 Location:	Snow Creek Lod	ge Entrance	Shut Off L	ocation:	Approximately 4' NE of Hydra	nt
Visual Inspection	Visual Under Pr	essure	Inspection Under Bo	nnet	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🗹 NO		Ok	~		
Static Pressure:	80 PSI	Inspect Pa	cking/ Hold down Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.0	O.: 50 PSI	Replace Pa	icking	Gasket	Torn	
Pitot Pressure:	30 PSI	OK		Seat Sc	ored	
<b>Calculated Flow:</b>	924 GPM			OK		
No. 180f25 Location:	5220 Highline Close	)	Shut Off L	ocation:	Approximately 3' NE of Hydran	t
Visual Inspection	Visual Under Pr	essure	Inspection Under Bo	nnet	Correct Drainage/Vacu	um
Paint Required 🗹	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🗹 NO		Ok	~		
Static Pressure:	60 PSI	Inspect Pa	cking/ Hold down Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.C	D.: 50 PSI	Replace Pa	icking	Gasket	Torn	
Pitot Pressure:	30 PSI	OK	<b>v</b>	Seat Sc	ored	
Calculated Flow:	924 GPM			OK		~

REPAIRS (Replacing O-rings, Gaskets, Caps Missing, Valve Rubber, Internal Components):

NA

COMMENTS & RECOMMENDATIONS (Painting, Replacing Internal Components)

The Fire Hydrants at this location have been inspected and were found to be in a suitable condition

for regular service on June 27,2022. Sprouse Fire and Safety Corp assumes no further liability



#### FIRE HYDRANT INSPECTION REPORT

DATE: 27-Jun-2022

CUSTOMER BUILDING ADDRESS: Fernie Alpine Resorts c/o Resorts of the Canadian Rockies

DESCRIPTION OF SYSTEM (No. of Hydrants, Manufacturer, Hydrant Type, Layout):

19. McAvity M67 Brigadier 20. McAvity M67 Brigadier

21. McAvity M67 Brigadier

Hydrant List:						
No. 190f25 Location	Bears Paw Lodge	e 5383 Highlin	e Drive Shut Of	f Locatio	on: Approximately 4' West of	Hydrant
Visual Inspection	Visual Under Pr	essure	Inspection Under Bo	nnet	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks 🗌	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🖌 NO	$\square$	Ok	~		
Static Pressure:	75 PSI	Inspect Pa	cking/ Hold down Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 50 PSI	Replace Pa	icking	Gasket	Torn	
Pitot Pressure:	20 PSI	OK	~	Seat Sc	ored	
Calculated Flow:	754 GPM			OK		
No. 200f25 Location:	5375 Snow Pines Dr	ive (Corner of	f Property). Shut Off L	ocation:	Approximately 7' SW of Hydra	ant
Visual Inspection	Visual Under Pr	essure	Inspection Under Bo	nnet	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks	Lubricate Nozzle	Caps	Leaks		Ok	~
Ok 🖌	YES 🖌 NO		Ok	~		
Static Pressure:	80 PSI	Inspect Pa	cking/ Hold down Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 50 PSI	Replace Pa	icking	Gasket	Torn	
Pitot Pressure:	25 PSI	OK		Seat Sc	ored	
<b>Calculated Flow:</b>	843 GPM			OK		
No. 210f25 Location:	Timberline Crescent at	t Balsam Lodg	e Shut Off L	ocation:	Approximately 4'East of Hydra	int
Visual Inspection	Visual Under Pr	essure	Inspection Under Bo	nnet	Correct Drainage/Vacu	um
Paint Required 🗌	Leaks		Damage		Unacceptable	
Rusting	Ok	~	Rusting		Poor	
Leaks	Lubricate Nozzle	Caps	Leaks		Ok	
Ok 🖌	YES 🖌 NO		Ok	~		
Static Pressure:	55 PSI	Inspect Pa	cking/ Hold down Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 25 PSI	Replace Pa	icking	Gasket	Torn	
Pitot Pressure:	18 PSI	OK		Seat Sc	ored	
Calculated Flow:	843 GPM			OK		

REPAIRS (Replacing O-rings, Gaskets, Caps Missing, Valve Rubber, Internal Components):

NA



### FIRE HYDRANT INSPECTION REPORT

DATE: 27-Jun-2022

CUSTOMER BUILDING ADDRESS: Fernie Alpine Resorts c/o Resorts of the Canadian Rockies

DESCRIPTION OF SYSTEM (No. of Hydrants, Manufacturer, Hydrant Type, Layout):

22). McAvity M67 Brigadier (2017). 24). McAvity M67B (2017)

23). McAvity M67B (2000)

Hydrant List:							
No.22 of 25 Location	1: 4613 Alpine Way		Sh	ut Off	<sup>*</sup> Locatio	n: Unknown	
Visual Inspection	Visual Under Pr	essure	Inspection Und	ler Bor	nnet	<b>Correct Drainage/Vacu</b>	um
Paint Required	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks	Lubricate Nozzle	Caps	Leaks			Ok	~
Ok 🖌	YES 🖌 NO		Ok		~		
Static Pressure:	90 PSI	Inspect Pa	cking/ Hold down ]	Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 70 PSI	Replace Pa	icking		Gasket '	Forn	
Pitot Pressure:	30 PSI	OK			Seat Sco	ored	
Calculated Flow:	924 GPM				OK		
No. 230f25 Location:	Timber landing at Cu	I de Sac	Shut	Off L	ocation:	Approximately 10' S of Hydra	nt
Visual Inspection	Visual Under Pr	essure	Inspection Und	ler Bor	nnet	Correct Drainage/Vacu	um
Paint Required	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks 🗌	Lubricate Nozzle	Caps	Leaks			Ok	~
Ok 🖌	YES 🖌 NO		Ok		~		
Static Pressure:	70 PSI	Inspect Pa	cking/ Hold down ]	Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 40 PSI	Replace Pa	icking		Gasket '	Forn	
Pitot Pressure:	18 PSI	OK			Seat Sco	ored	
<b>Calculated Flow:</b>	716 GPM				OK		
No. 240f25 Location:	5420 Timber Landing		Shut	Off L	ocation:	Approximately 10' S of Hydran	t
Visual Inspection	Visual Under Pr	essure	Inspection Und	ler Bor	nnet	Correct Drainage/Vacu	um
Paint Required	Leaks		Damage			Unacceptable	
Rusting	Ok	~	Rusting			Poor	
Leaks 🗌	Lubricate Nozzle	Caps	Leaks			Ok	~
Ok 🖌	YES 🗹 NO		Ok		~		
Static Pressure:	70 PSI	Inspect Pa	cking/ Hold down ]	Plate	Inspect	Main Gate/Valve Seat	
Residual Pres w/2.5" F.	O.: 40 PSI	Replace Pa	icking		Gasket '	Torn	
Pitot Pressure:	25 PSI	OK			Seat Sco	ored	
Calculated Flow:	843 GPM				OK		~

REPAIRS (Replacing O-rings, Gaskets, Caps Missing, Valve Rubber, Internal Components):

NA

# ALS Canada Ltd.



# **CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)**

Work Order	: CG2215643	Page	: 1 of 5
Client	: Fernie Alpine Resort Utilities Corporation	Laboratory	: Calgary - Environmental
Contact	: Patrick Majer	Account Manager	E Patryk Wojciak
Address	: 1505 - 17TH AVENUE SW	Address	2559 29th Street NE
	Calgary AB Canada T2T 0E2		Calgary, Alberta Canada T1Y 7B5
Telephone	: 403 254 7669	Telephone	: +1 403 407 1800
Project	: FARUC-	Date Samples Received	: 10-Nov-2022 09:55
PO	:	Date Analysis Commenced	: 10-Nov-2022
C-O-C number	:	Issue Date	: 18-Nov-2022 16:13
Sampler	: CH		
Site	:		
Quote number	: CG21-FARU100-0002		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

#### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Anthony Calero	Supervisor - Inorganic	Inorganics, Calgary, Alberta
Anthony Calero	Supervisor - Inorganic	Metals, Calgary, Alberta
Elke Tabora		Inorganics, Calgary, Alberta
Greg Pokocky	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Harpreet Chawla	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Jeanie Mark	Laboratory Analyst	Organics, Calgary, Alberta
Kevin Baxter	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Kevin Baxter	Team Leader - Inorganics	Metals, Calgary, Alberta
Miles Gropen	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
Parker Sgarbossa	Laboratory Analyst	Inorganics, Calgary, Alberta
Ruifang Zheng	Analyst	Inorganics, Calgary, Alberta
Sanja Risticevic	Department Manager - LCMS	LCMS, Waterloo, Ontario
Sunil Palak		Microbiology, Calgary, Alberta

#### **General Comments**

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : LOR: Limit of Reporting (detection limit).

Unit	Description
-	no unit
% T/cm	% transmittance per centimetre
°C	degrees celsius
µg/L	micrograms per litre
AU/cm	absorbance unit per cm
CU	colour units (1 cu = 1 mg/l pt)
mg/L	milligrams per litre
MPN/100mL	most probable number per 100 ml
NTU	nephelometric turbidity units

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .



# Analytical Results

			Client sample ID	RIVERWELL #1				
Sub-Matrix: Water			a san lina a slata (tina a	(UNIREATED)	-			
(Matrix: Water)		2	ampling date/time	10:45				
Analyte	Method	LOR	Unit	CG2215643-001	CDWG	CDWG		
					AO/OG	MAC		
Physical Tests								
absorbance, UV (@ 254nm)	E404	0.0050	AU/cm	0.0090			 	 
colour, true	E329	5.0	CU	<5.0	15 CU		 	 
hardness (as CaCO3), from total Ca/Mg	EC100A	0.50	mg/L	247			 	 
Langelier index (@ 4°C)	EC105A	0.010	-	0.686			 	 
solids, total dissolved [TDS]	E162	10	mg/L	269	500 mg/L		 	 
temperature, sample	E218	0.10	°C	31.8			 	 
turbidity	E121	0.10	NTU	0.11	1 NTU		 	 
transmittance, UV (@ 254nm)	E404	1.0	% T/cm	97.9			 	 
Anions and Nutrients								
ammonia, total (as N)	E298	0.0050	mg/L	<0.0050			 	 
chloride	E235.CI-L	0.10	mg/L	21.3	250 mg/L		 	 
nitrite (as N)	E235.NO2-L	0.0010	mg/L	<0.0010		1 mg/L	 	 
nitrogen, total organic	EC363	0.050	mg/L	<0.056			 	 
phosphorus, total	E372-U	0.0020	mg/L	0.0050			 	 
sulfate (as SO4)	E235.SO4-L	0.050	mg/L	14.1			 	 
nitrate (as N)	E235.NO3-L	0.0050	mg/L	0.168		10 mg/L	 	 
Kjeldahl nitrogen, total [TKN]	E318	0.050	mg/L	<0.050			 	 
nitrogen, total	EC368	0.050	mg/L	0.168			 	 
Organic / Inorganic Carbon								
carbon, total organic [TOC]	E355-L	0.50	mg/L	<0.50			 	 
Microbiological Tests								
coliforms, total	E010	1	MPN/100mL	<1		1 MPN/100mL	 	 
heterotrophic plate count [HPC]	E010.HPC	1	MPN/100mL	32			 	 
coliforms, Escherichia coli [E.	E010	1	MPN/100mL	<1		1 MPN/100mL	 	 
coli]								
Total Metals								
aluminum, total	E420	0.0030	mg/L	0.0051	0.1 mg/L	2.9 mg/L	 	 
antimony, total	E420	0.00010	mg/L	<0.00010		0.006 mg/L	 	 
arsenic, total	E420	0.00010	mg/L	0.00014		0.01 mg/L	 	 
barium, total	E420	0.00010	mg/L	0.120		2 mg/L	 	 

Page 4 of 5 1 CG2215643

Work Order :



Fernie Alpine Resort Utilities Corporation Client FARUC-

Project

Analyte	Method	LOR	Unit	CG2215643-001 (Continued)	CDWG AO/OG	CDWG MAC				
Total Metals - Continued										
boron, total	E420	0.010	mg/L	0.012		5 mg/L				
cadmium, total	E420	0.0000050	mg/L	0.0000155		0.007 mg/L				
calcium, total	E420	0.050	mg/L	72.9						
chromium, total	E420	0.00050	mg/L	<0.00050		0.05 mg/L				
copper, total	E420	0.00050	mg/L	0.00135	1 mg/L	2 mg/L				
iron, total	E420	0.010	mg/L	0.012	0.3 mg/L					
lead, total	E420	0.000050	mg/L	<0.000050		0.005 mg/L				
magnesium, total	E420	0.0050	mg/L	15.8						
manganese, total	E420	0.00010	mg/L	0.00481	0.02 mg/L	0.12 mg/L				
mercury, total	E508	0.0000050	mg/L	<0.000050		0.001 mg/L				
molybdenum, total	E420	0.000050	mg/L	0.000866						
potassium, total	E420	0.050	mg/L	0.817						
selenium, total	E420	0.000050	mg/L	0.000670		0.05 mg/L				
sodium, total	E420	0.050	mg/L	13.8	200 mg/L					
strontium, total	E420	0.00020	mg/L	0.200		7 mg/L				
uranium, total	E420	0.000010	mg/L	0.000539		0.02 mg/L				
zinc, total	E420	0.0030	mg/L	<0.0030	5 mg/L					

Please refer to the General Comments section for an explanation of any qualifiers detected.

### **No Breaches Found**

#### Key:

CDWG

Canada Guidelines for Canadian Drinking Water Quality (JUN, 2022)

AO/OG MAC

Aesthetic Objective/Operational Guideline

Maximum Acceptable Concentrations



## Analytical Results

			Client sample ID	TAMARAK BUILDING				
Sub-Matrix: Water		Sampling date/time		09-Nov-2022				
(Matrix: Water)			11:30					
Analyte	Method	LOR	Unit	CG2215643-002	CDWG			
					MAC			
Cyanides								
cyanide, strong acid	E333	0.0020	mg/L	<0.0020		 	 	
dissociable (total)								
Volatile Organic Compounds	s [THMs]							
bromodichloromethane	E611B	1.0	µg/L	2.7		 	 	
bromoform	E611B	1.0	µg/L	<1.0		 	 	
chloroform	E611B	1.0	µg/L	2.6		 	 	
dibromochloromethane	E611B	1.0	µg/L	3.7		 	 	
trihalomethanes [THMs], total	E611B	2.0	µg/L	9.0	100 µg/L	 	 	
bromofluorobenzene, 4-	E611B	1.0	%	83.1		 	 	
difluorobenzene, 1,4-	E611B	1.0	%	104		 	 	
Haloacetic Acids								
bromochloroacetic acid	E750	1.00	µg/L	1.35		 	 	
dibromoacetic acid	E750	1.00	µg/L	1.16		 	 	
dichloroacetic acid	E750	1.00	µg/L	1.26		 	 	
monobromoacetic acid	E750	1.00	µg/L	<1.00		 	 	
monochloroacetic acid	E750	1.00	µg/L	<1.00		 	 	
trichloroacetic acid	E750	1.00	μg/L	<1.00		 	 	
haloacetic acids, total [HAA5]	E750	5.00	μg/L	<5.00	80 µg/L	 	 	

Please refer to the General Comments section for an explanation of any qualifiers detected.

### **No Breaches Found**

#### Key:

CDWG

MAC

Canada Guidelines for Canadian Drinking Water Quality (JUN, 2022)

Maximum Acceptable Concentrations