The Corporation of the Village of Salmo

COMMITTEE-OF-THE-WHOLE MEETING

A Committee-of-the-Whole Meeting of the Council of the Village of Salmo to be held in Council Chambers at 423 Davies Avenue, Salmo, B.C. on **Monday, November 25, 2024** at **10:00 a.m.**

The public may attend in person or electronically. The electronic link will be available on our website on Friday.

Traditional Lands Acknowledgement Statement: We acknowledge and respect the indigenous peoples within whose traditional lands we are meeting today.

AGENDA:

1. **Call to Order**
2. **Adoption of the Agenda**

   STAFF RECOMMENDATION:

   That the agenda of the Committee-of-the-Whole meeting of Monday, November 25, 2024 be adopted as presented.
3. **Source Water Protection Plan Discussion**
4. **Public Question Period**
5. **Adjournment**

Given under my hand this 22nd day of November, 2024 and posted in accordance with Section 127 of the *Community Charter*.

Originally Signed By:

Derek Kwiatkowski

CAO/CO

SOURCE WATER PROTECTION PLAN, REVISION 1
VILLAGE OF SALMO, BRITISH COLUMBIA

Submitted To:

Village of Salmo
423 Davies Street
Salmo, British Columbia
V0G 1Z0

Submitted By:

Waterline Resources Inc.
Nanaimo, British Columbia
September 18, 2024
2640-24-001

TABLE OF CONTENTS

PAGE

LIST OF TABLES (IN-TEXT)

PAGE

LIST OF FIGURES

LIST OF APPENDICES

Waterline

1.0 INTRODUCTION

1.1 Background

The Village of Salmo (Salmo) is a community located in the central Kootenay region, in southeastern British Columbia (BC), within the territory of the Sinixt and Ktanaxa peoples. Salmo is located approximately 34 kilometres (km) south of Nelson, BC, and 22 km north of the Canada/United States (US) border (Figure 1). Based on 2016 census data, Salmo has a population of 1,141.

Salmo is currently diverting groundwater from two water supply wells identified in this report as the Glendale Well (Golder, 2005) and Sayward Well (Golder, 2008). The Glendale Well is located at the community recreation complex on Glendale Avenue and the Sayward Well is located on the west side of the community-owned Knights of Pythias Park, northeast of the intersection of 3rd Street and Sayward Avenue. Water from the wells is conveyed to a 380 cubic metre (m^3; 100,000 US gallons) closed reservoir for storage to meet demand during peak periods (Golder, 2005). The reservoir is located approximately 570 metres (m) northwest of the Sayward Well (Figure 1).

Salmo has a valid Permit to Operate from Interior Health (IH), for a water system with 301 to 10,000 connections (Appendix A). Section 5 (2) of the Drinking Water Protection Regulation (BC Government, 2018) indicates that water from a drinking water supply system must be disinfected by a water supplier if the water originates from groundwater, that in the opinion of the drinking water officer, is at a risk of containing pathogens. Currently, Salmo's drinking water system is untreated.

As the water supply wells produce high quality groundwater, proactive measures have been taken to protect the groundwater supply. As per Section 488 of the *Local Government Act* (BC Government, 2024a), Salmo has created an Aquifer Protection Development Permit Area within the municipal boundary (Appendix B), enforced under Salmo's Official Community Plan Bylaw 687 (Salmo, 2020). Salmo is also working with the Regional District of Central Kootenay, provincial ministries, property owners, and the private sector to prevent negative impacts on Salmo's aquifer from land use and development in the surrounding areas (Salmo, 2020).

Salmo retained Waterline Resources Inc. (Waterline) to develop a Source Water Protection Plan (SWPP) to satisfy Section 18 (2) (a)[1] of the *Drinking Water Protection Act* (BC Government, 2024b), as outlined by IH under Condition 1 of the Permit to Operate (Appendix A). The SWPP is intended to identify risks to the aquifer and recommend a variety of management strategies to help protect the aquifer and the water supply wells.

[1] The purpose of an assessment is to identify, inventory, and assess the drinking water source for the water supply system, including land use and other activities and conditions that may affect that source.

1.2 Regulatory Considerations

1.2.1 Source Water Protection Plan

The Ministry of Health, Leisure, and Sport (MHLS) Comprehensive Drinking Water Source-to-Tap Assessment (CS2TA) satisfies the requirements of a water source or system assessment that can be ordered by a drinking water officer when risks to a water system are identified (MHLS, 2010). The CS2TA serves as a tool for Salmo to develop a more comprehensive understanding of the measures that can be taken to ensure safety and security of their water supply.

As part of the SWPP, IH has instructed Salmo to complete several modules of the CS2TA for the Glendale and Sayward Wells, suitable for the size of their water system. These modules are listed in Table 1 below.

Table 1: CS2TA Requirements

Module	Glendale Well	Sayward Well
1) Delineate and characterize drinking water source(s)	X	X
2) Conduct contaminant source inventory	X	X
7) Characterize risks from source to tap	X	X
8) Recommend actions to improve drinking water protection	X	X

Notes: MHLS, 2010.

1.2.2 Groundwater at Risk of Containing Pathogens

Surface water contaminants such as pathogenic bacteria can be of concern to a community water supply, particularly when aquifers are found to be in direct hydraulic communication with the ground surface. Salmo is also required to complete a Groundwater at Risk of Containing Pathogens (GARP) preliminary Stage 1 Hazard Screening and Assessment in accordance with the latest Guidance Document for Determining GARP (Version 3), published by the Ministry of Health (MoH, 2017). The GARP guidance document identifies four main hazard categories to be considered in the assessment that, if present, could increase the risk to groundwater. Within the categories there are 13 equally weighted hazards that require consideration when determining whether the water supply is at risk of containing pathogens.

The GARP guidance document states that if none of the indicated hazards are identified during the Stage 1 screening level assessment, the water source is "at low risk" of containing pathogens. If one or more of the hazards are present, further assessment is needed.

In addition to the GARP guidance document, the Engineers, and Geoscientists British Columbia (EGBC) Professional Practice Guidelines for the Assessment of GARP (EGBC, 2019) outlines the appropriate standard of practice to be followed during the assessment, including the responsibilities of Salmo, the professional of record, and the approving authority.

1.2.3 BC Water Sustainability Act

The BC *Water Sustainability Act* (WSA) and associated regulations came into effect on February 29, 2016 (BC Government, 2024c). The WSA is intended to regulate and protect groundwater and surface water resources. The WSA requires licensing of non-domestic groundwater use in BC. Use of a groundwater source for supplying communities must be licensed under the WSA, and licensees must comply with provisions of the WSA and its regulations, the terms and conditions of a licence, and orders under the WSA.

1.3 Objectives and Scope of Work

The objective of Waterline's study was to provide Salmo with a SWPP to help protect the Village's water source, including the water supply wells and the aquifer. Waterline completed the following scope of work to develop the SWPP:

- Worked with Salmo's water technician, who conducted an initial site visit to collect the required hydrogeologic information related to the groundwater source, and Salmo's land use planning team to collect municipal information related to the Village's zoning and land use types;
- Reviewed and compiled available information on the site setting, hydrogeology, water supply, water use and water quality;
- Defined the well capture zone and well protection area for the Sayward Well based on a review of available hydrogeologic information from previous reporting, including the well log, historical pumping test results and aquifer mapping;
- Defined the well capture zone and well protection area for the Glendale Well based on a review of available hydrogeologic information from previous reporting, including the well log, historical pumping test results and aquifer mapping efforts;
- Completed a Stage 1 GARP Hazard Screening and Assessment for the water supply wells;
- Identified potential hazards to groundwater quality and quantity based on existing and proposed land use activities, historical contaminated sites, and input from Salmo;
- Developed a management plan to address groundwater hazards;
- Developed a groundwater monitoring program that will allow the community to detect changes in groundwater quality, well performance, and aquifer performance; and,
- Prepared a report outlining the SWPP.

2.0 CHARACTERIZATION OF DRINKING WATER SOURCES (MODULE 1)

2.1 Site Setting

Salmo is situated within a narrow, north-south trending valley that is relatively flat and is bounded by the Selkirk Mountains that rise to the east and west (Golder, 2005). Erie Creek runs through the community from the northwest, draining the Erie Creek watershed into the Salmo River just outside of Salmo's eastern municipal boundary (Figure 1). The Salmo River watershed is part of the larger Columbia River basin.

Floodplain mapping for the 1:200-year flooding event for the Salmo River, completed by the Ministry of Environment (ENV) in the 1990's, suggests that most of Salmo is situated withing the designated floodplain limits (see map in Appendix B). A topographical high at the center of the Village, including parts of the community north of Highway 3, which are also situated at higher elevations, are mapped as being above the floodplain.

2.2 Hydrogeology

ENV has mapped three aquifers around Salmo (Aquifers 496, 497, and 498), all of which are delineated in the provincial groundwater wells and aquifer mapping database (GWELLS; ENV, 2024; Figure 2). Table 2 lists details of the mapped aquifers in proximity to Salmo.

Table 2: Summary of Mapped Aquifer near the Village of Salmo

Aquifer Number	Aquifer Name	Aquifer Type	Aquifer Material	Vulnerability	Productivity	Comments
496	Salmo River	Unconfined	Sand and Gravel – Fluvial and Glaciofluvial	High	Moderate	15 correlated wells
497	Erie1, Salmo	Confined	Sand and Gravel - Glaciofluvial	Moderate	High	8 correlated wells
498	Erie2, Salmo		Sand and Gravel – Alluvial Fan		Moderate	2 correlated wells

Despite not being correlated with a mapped aquifer in the provincial database (ENV, 2024), the Sayward and Glendale Wells are believed to be associated with Aquifer 496, the largest mapped aquifer within the Salmo area. Additional information on Aquifer 496 includes:

- It has a footprint of approximately 15 square kilometres (km^2) and is located within the Salmo River and Erie Creek floodplains (Figure 2).
- Aquifer 496 is a two-layer unconfined aquifer, comprised of post-glacial fluvial sediments underlain by reworked and undisturbed glaciofluvial deposits.
- Based on lithology records reviewed, the sediments are differentiated between sandy/clayey gravel deposits and underlying sandy deposits. Semi-confined conditions may exist in some areas where clay lenses are present.
- Groundwater depths range between 1 to 17 metres below ground level (mbgl). Shallower portions of Aquifer 496 are likely hydraulically connected to surface water (nearby creeks and rivers), which could influence aquifer recharge during certain times of the year.

2.3 Water Supply Wells

Salmo's water supply well locations are shown on Figure 2. Well construction details are summarized in Table 3 and the well logs for the Sayward and Glendale Wells are provided for reference in Appendix C.

Table 3: Salmo Water Supply Wells Information

Well Name	Sayward Well	Glendale Well
BC Well Tag #	117160	117158
BC Well Identification Plate #	61715	61714
Construction Date	September 27, 2007	January 01, 1997
WSA Water Use Licence approved (Yes/No)	Yes	Yes
Easting (UTM Zone 11)	479969	480033
Northing (UTM Zone 11)	5449198	5448176
Ground Elevation (masl)[1]	661	657
Casing Diameter (mm)	250	200
Stick-up (magl)	0.6	0.8[2]
Screen Interval (mbgl)	39.1-54.4	36.8-46.0
Well Depth (mbgl)	51.4	46.0
Aquifer Name (Number)	Salmo Aquifer (Aquifer 496)	
Aquifer Type	Unconfined	
Groundwater Level from Well Drilling (mbgl)	2.4	4.0
Available Drawdown (m)[3]	36.7	32.8
Original Sustainable Well Yield Estimate (L/s)[4]	41.3	32.8

Notes: **masl** means metres above sea level; **magl** means metres above ground level; **mbgl** means metres below ground level; **m^3/day** means cubic metres per day; **L/s** means liters per second. [1]Canadian Digital Elevation Model (1:50,000 Scale); [2]information provided by Salmo's water technician; [3] available Drawdown indicates the distance from the non-pumping water level to the top of the well screens; [4]the listed well yields were obtained from the Golder reports (2005, 2008).

The Sayward and Glendale Wells are registered in GWELLS, and they are licensed for 'Waterworks; local provider' use under Conditional Use Licence No. 502393, which was issued by the Province on April 19, 2024 (Appendix D).

It should be noted that the original sustainable well yield estimates were assessed from well testing completed following well drilling and were not re-assessed based on current environmental conditions, nor do they consider possible well interference from simultaneous pumping. Changes in groundwater conditions may have occurred since well construction, due to increased demands from new or existing water users within the local watershed region or changes to recharge conditions and/or changes to well efficiency due to potential well deterioration.

2.3.1 Well Completion and Conformance with Regulatory Standards

The well completion details for the Sayward and Glendale Wells, including recent photographs of the wellhead configuration (Photograph E1 to E3; Appendix E) were compared with regulatory standards listed in the Groundwater Protection Regulation (GWPR; BC Government, 2022). The results of the assessment are summarized below in Table 4.

Table 4: Overview of Sayward and Glendale Wells Conformance with Regulatory Standards

Requirement	Meets Requirement?	
	Sayward Well	Glendale Well
The well casing extends greater than 0.3 m above ground level	Yes	Yes
The ground around is properly sloped to avoid pooling around the well casing	Yes	Yes
The well is capped and locked	Yes	Yes
There is a well seal installed around the well casing	Yes	No
The well has a well identification number	No	Yes

Notes: **m** means metres.

The Sayward and Glendale Wells are both located within fenced enclosures near their respective pumphouses. A proper well seal was not identified for the Glendale Well. It should be noted that best practices for Well Pumps and Related Works (Part 5) and Well Operation and Maintenance (Part 7), listed in the GWPR, were not evaluated as part of the well completion review.

2.4 Water Demand

Salmo's water demand has been assessed by several consultants since 2005. A summary of these assessments and their findings are provided below and in Table 5.

Table 5: Salmo's Water Demand Estimates

Data Year(s) – Consultant	ADD (m^3/day; L/s)	MDD (m^3/day; L/s)	PHD (m^3/day; L/s)	Annual Total (m^3/yr)
2003-2004 – USL[1]	1,022 (11.8)	2,839 (32.9)	4,259 (49.3)	373,030
2004 – Golder[2]	-	-	-	290,000
2023 – Waterline	1,364 (15.8)	2,189 (25.3)*	-	500,000

Notes: **ADD** means average day demand; **MDD** means maximum day demand; **PHD** means peak hour demand; **m^3/day** means cubic metres per day; **L/s** means litres per second; **m^3/yr** means cubic metres per year; [1]USL, 2005; [2]Golder, 2005; *2023 MDD recorded on August 3, 2023, but the highest usage month was July 2023 with an ADD of 2,004 m^3 for the month.

Further details of the water use assessments are listed below:

- A water conservation and drought management study was prepared by Urban Systems Ltd. (USL) in 2005 (USL, 2005). Water use data from 2003-2004 was used to estimate the Village's average day demand (ADD), maximum day demand (MDD), peak hour demand (PHD), and the total annual volume used for 2004 (Table 5).
- A community water wells management strategy was prepared by Golder Associates Ltd. (Golder) in 2005 (Golder, 2005). Available reservoir lift station flow data was used to estimate a total use volume for 2004 (Table 5). Golder's assessment of water use was more conservative, as they did not consider system leaks from the distribution system.
- As part of the SWPP revision, Waterline completed a review of Salmo's 2023 pumping records to determine the Village's ADD, MDD, and the total annual volume used in 2023 (Table 5). Waterline believes these usage values are more realistic than previously estimated values, as the water supply wells are now equipped with dedicated flow meters.

Salmo's installed well capacity (74.1 L/s or 6,402 m^3/day; Table 3) from the Sayward and Glendale Wells, based on the estimates determined after well drilling and excluding well interference, can meet the current water demand of the Village.

2.5 Groundwater Quality

A summary of the groundwater quality results from the Sayward and Glendale Wells (raw water samples) and the water supply system, are presented in Appendix F, Tables F1 – F3. All water samples collected during the various testing programs were compared to the Guidelines for Canadian Drinking Water Quality (GCDWQ; Health Canada, 2022). The GCDWQ set standards based on aesthetic objectives (AO) and on maximum acceptable concentrations (MAC). Key findings from the water quality results assessment are summarized below.

2.5.1 Water Quality Results From Salmo's Water Supply Wells

Comprehensive water quality testing for the Sayward Well was completed in 2007 by Golder (Golder, 2008) and the sampling results were transcribed into tables by Waterline. Sample parameters included:

- Physical tests (colour, conductivity, pH, turbidity, total dissolved solids, and total hardness);
- Anion scan (alkalinity as $CaCO_3$, chloride, fluoride, sulphate, and sulphide);
- Nutrients (ammonia as N, total kjeldahl nitrogen (TKN), nitrate and nitrite as N, organic nitrogen (TKN + ammonia), total nitrogen, and ortho-phosphate as P);
- Total cyanide, total organic carbon, and dissolved organic carbon;
- Total and dissolved metals;
- Radiological parameters (gross alpha and gross beta); and
- Bacteriological parameters (total coliforms and *Escherichia coli* (*E. coli*)).

Additional testing of the Sayward and Glendale Wells was completed in 2015 by Salmo and the data was also transcribed into tables by Waterline. The 2015 analytical suite included physical tests, major ions and nutrients, total cyanide, and total metals.

Testing of the Sayward and Glendale Wells suggests that the aquifer provides high quality groundwater. The following notable observations were made about the groundwater quality sampled from the water supply wells:

- All sampled parameters were under GCDWQ MAC (Tables E1 – E3).
- Turbidity results from both the Sayward and Glendale Wells ranged from 0.1 to 0.6 Nephelometric Turbidity Units (NTU; Table E1). Turbidity exceeded the GCDWQ AO of 0.1, which is the standard for treated water. However, the GCDWQ stipulates that to ensure effectiveness of disinfection and for good operation of the distribution system, it is recommended that water entering the distribution system have turbidity levels of <1.0 NTU. For systems that use groundwater, turbidity should generally be <1.0 NTU (Health Canada, 2022).

- The groundwater colour from both the Sayward and Glendale Wells was below the laboratory detection limit of 5 True Color Units (TCU) in both 2007 and 2015 (Table E1).
- Groundwater from Salmo's water supply wells is considered "soft", with:
    - Hardness concentrations ranging between 88 – 116 milligrams per liter (mg/L; Table E1), and
    - Relatively low total dissolved solids (TDS) concentrations, ranging between 100 – 139 mg/L (Table E1).
- Heavy metals such as total arsenic, lead, and mercury were below laboratory detection limits (Table E2).
- Only one microbiological sample has been collected from the water source wells, collected from the Sayward Well in 2007 (Table E3); total coliforms and *E. coli* were both non-detect.
- For samples collected from the Sayward Well in 2007 and 2015, the groundwater quality has stayed consistent over the 8-year period (Table E1 and E2).

2.5.2 Water Quality Results from Salmo's Water System

To help assess the water quality of the water distribution system and to satisfy Condition 3 of Salmo's operating permit (Appendix A), water samples are collected from one of the five water distribution system sampling locations on a weekly basis and analyzed for total coliforms and *E. coli*. The five different sample locations (Figure 2) are purposely situated at large distances from the wellheads to characterize water with the longest travel time within the water distribution network. The current sample locations include the following (Figure 2):

- Site 1: Village Office,
- Site 2: Village Shop,
- Site 3: Knights of Pythias (KP) Washroom,
- Site 4: Salmo Valley Youth & Community Centre (SCYCC), and
- Site 5: Motel Avenue.

Two sampling locations were 'deactivated' and re-established at new locations in 2021; Site 3: Sal-Crest Motel is now KP Washrooms, and Site 5: Reno Motel is now Motel Avenue (Figure 2).

The weekly water quality monitoring results from 2016 to 2024 are summarized in Table E3. Waterline was not involved in the collection, transportation, or quality control of the water samples collected from Salmo's water distribution system. All samples were collected and submitted to the lab by Salmo representatives. The summarized water quality results were emailed to Waterline by Salmo representatives. Exceedances of the GCDWQ MAC for samples collected between 2016 to 2024 are listed below in Table 6.

Table 6: Water Distribution System - GCDWQ MAC Exceedances

Sample Location	Sample Date	Total Coliforms[1] (MPN/100mL)
Site 5: Reno Motel	2016-02-23	1
Site 3: Sal-Crest Motel	2017-06-12	1
Site 2: Village Shop	2018-09-18	3
Site 5: Reno Motel	2020-09-22	1
Site 4: SVYCC	2021-01-26	1

Notes: **MPN/100mL** means most probable number per 100 millilitres. [1]The GCDWQ MAC for total coliforms is 0 (zero).

The following comments were provided by Salmo's acting CAO (pers. comm., April 29, 2024) to describe the exceedances observed from the weekly sampling program:

- February 23, 2016, Site 5 exceedance – A boil water advisory was issued. The sample port was flushed and re-tested thereafter for two weeks. The boil water advisory was lifted once samples came back negative for total coliforms.
- June 12, 2017, Site 3 exceedance – A boil water advisory was issued. The water was immediately re-tested and tested daily thereafter for two weeks. The boil water advisory was lifted once samples came back negative for total coliforms. The reason for the positive test result was determined to be from a poor connection between two pipes that were no longer in use. The connection has been repaired and the pipes removed.
- September 9, 2018, Site 2 exceedance – The site was re-tested upon notification of the exceedance and the results came back normal (less than 1). Re-testing was completed on September 20, 2018.
- September 22, 2020, Site 5 exceedance – The site was re-tested upon notification of the exceedance and the results came back normal (less than 1). Re-testing was completed on September 30, 2020.
- January 26, 2021, Site 4 exceedance – The site was re-tested upon notification of the exceedance and the results came back normal (less than 1). Re-testing was completed on February 2, 2021.
- Laboratory results that were less than detection limits and greater than the applied guidelines are not shown as exceedances.

2.6 Aquifer Evaluation

2.6.1 Conceptual Hydrogeologic Model

To provide an understanding of how water cycles through the aquifers, rivers, creeks, and streams in the Salmo Valley, a conceptual site model is useful. A north to south hydrogeological cross-section (A to A'; Figure 3) and a west to east hydrogeological cross-section (B- to B'; Figure 4) were created to illustrate Salmo's water supply wells in relation to the local and regional groundwater flow system. Cross-section traces are outlined on Figure 2.

The following provides some important facts about groundwater flow in the Salmo area that help to provide a framework for the conceptual site model:

- All the water in Aquifer 496 used by Salmo originates in upgradient catchment areas of the Salmo River and Erie Creek. Runoff from snowmelt and rainfall contributes to the recharge in the aquifer.
- Both surface and groundwater systems are gravity driven. Water entering an aquifer, river, stream and/or creek flows southward under the force of gravity towards Salmo if it is not captured by a water user along its path. The flow rate is directly dependant on the gradient (i.e., topography), and for aquifers, also dependant on the permeability of geologic materials.
- Groundwater and surface water flow is constrained by the extent of the Salmo valley, which is approximately 2.3 km in width near the town center, narrowing to approximately 0.9 km to the south.
- The lithology and stratigraphy of the Salmo valley sediments suggests that glacial deposits were re-worked in places, likely during post-glacial fluvial events. This re-working resulted in the erosion of the confining till, except for some isolated silt and clay lenses (Figure 3 and Figure 4). The re-worked glacial and post-glacial sediments are up to 12 m thick and provide the groundwater supply for most of the domestic wells within the Salmo valley (Figure 3 and Figure 4).
- The underlying water bearing glaciofluvial sands, which provide Salmo's municipal water supply, increase in thickness towards the center of the valley, with unknown mapped depths (Figure 3 and Figure 4).
- The unconsolidated sediments are underlain by bedrock from the Lower Jurassic Rossland Group (Sedimentary and Volcanic) in the central and western portions of Salmo, with the Cretaceous-age Anstey pluton to the east (Cui et. al., 2017). The bedrock is expected to provide minimal recharge to the aquifer system.
- Using the reported depth to bedrock in the Salmo area[2], the Glendale and Sayward Wells are likely completed in or near the thalweg of the valley (Figure 4). Based on the floodplain mapping by ENV, it appears that bedrock (Rossland Group) is outcropping in the center of the Village near the Glendale Well, altering the groundwater flow pattern (Figure 5).

2.6.2 Aquifer Parameter Estimates

Hydraulic parameters for Aquifer 496 were assessed from the constant rate pump test completed at the Sayward Well in 2007 (Golder, 2008). A 24-hour constant rate test was completed on October 17 and 18, 2007. The discharge rate was 47.9 L/s (4,139 m^3/day). The total available drawdown was approximately 30 m and the maximum drawdown observed during the test was 5 m. The drawdown stabilized after approximately 250 minutes of pumping. The well recovered in approximately 120 minutes after the pumping stopped. Waterline has assumed that the hydraulic parameters estimated from the Sayward Well aquifer test are relevant to the Glendale Well, given that both wells are screened in the same sandy material.

Based on the analysis of the aquifer test, the aquifer transmissivity (T) was estimated to be 3,000 m^2/d (0.035 m^2/s), and storativity (S) to be 0.017. The aquifer's hydraulic conductivity (K)

[2] On the west side of the Salmo valley, the depth to the bedrock sub-crop is approximately 18 m ((Well Tag #74868). On the east side of the Salmo valley, the depth to the bedrock sub-crop is approximately 3 mbgl (Well Tag #113397).

was calculated to be 50 m/d (5.8×10^{-4} m/s) using T (3,000 m^2/d) and an estimated aquifer thickness (b) of 61 m. These values are representative of a permeable sand aquifer (Freeze and Cherry, 1979). The hydraulic gradient (i) is estimated to be 0.005 m/m based on the water levels in the aquifer, the shallow topography of the valley and the gradient of the Salmo River in the catchment area upgradient of the Sayward Well.

2.6.3 Capture Zone Assessment

The well capture zone must be determined to provide the physical boundaries for the source water protection planning process. The capture zone defines the recharge area most vulnerable to contamination, whereby spills or other events occurring upgradient of the water supply wells could potentially be drawn into the aquifer and contaminate the water supply. Capture zone assessments have previously been completed for both the Glendale and the Sayward Wells, using the calculated fixed radius method, referenced in ENV's Well Protection Toolkit (2004) and detailed by Golder (2005, 2008).

Waterline has re-calculated the extent of both capture zones (Figure 5) using the sloped water table method referenced in Appendix 2.3 of Step 2 of the Well Protection Toolkit (ENV, 2004). This method provides a more representative capture zone assessment, as it considers groundwater flow directions, aquifer properties and pumping rates of each well. It should be noted that the sloped water table method is recommended for water systems with more than 100 connections.

Using the aquifer parameter estimates and long-term well yields from well testing (Golder, 2005 & 2008), the capture zone half widths for the Sayward and Glendale Wells were calculated using the following equation:

$$y = \frac{Q}{2000\,T\,i}$$

Where: y = the capture zone half width (m)
Q = pumping rate (L/s)
T = aquifer transmissivity (m^2/s)
i = hydraulic gradient in the aquifer (m/m)

The calculated half widths of the flow paths for the Sayward and Glendale Wells are summarized below in Table 7.

Table 7: Calculated Half Widths for the Water Supply Well Groundwater Flow Paths

Well	Calculated Half Width (m)
Sayward	137
Glendale	94

Notes: **m** means metres.

Using the calculated half widths of the capture zones, the distances to the downgradient limits of the capture zones for the Sayward and Glendale Wells were calculated using the following equation:

$$X = \frac{Y}{\pi}$$

Where: x = distance to the capture zone boundary down-gradient of the pumping well (m)
y = the capture zone half width (m)
π = pi (3.14159)

The calculated downgradient distances of the capture zones for the Sayward and Glendale Wells are summarized below in Table 8.

Table 8: Downgradient Limits for the Water Supply Well Capture Zones

Well	Downgradient limit (m)
Sayward	44
Glendale	30

Notes: **m** means metres.

The distances for the upgradient capture zones of the Sayward and Glendale Wells were calculated using the following equation:

$$d_{TOT} = \frac{t\,K\,i}{n}$$

Where: d_{TOT} = the distance representing the one-, two- or five-year time of travel (m)
t = specified time of travel (one, two, five years)
K = aquifer hydraulic conductivity (m/yr)
i = hydraulic gradient in the aquifer (m/m)
n = aquifer porosity (0.3)

The extent of the upgradient capture zones for the 200-day, 1-year, 2-year and 5-year travel times, for the Sayward and Glendale Wells are summarized below in Table 9 and shown on Figure 5.

Table 9: Capture Zone Assessment for the Water Supply Wells

Method	Capture Zone	Upgradient Capture Zone Extent (m)	
		Sayward	Glendale
Analytical Equation	200-day	167	167
	1-year	304	304
	2-year	609	609
	5-year	1522	1522

Notes: **m** means metres.

The extent of the capture zone upgradient of each water supply well was terminated at the aquifer boundary where the unconsolidated sediments contact bedrock (Figure 5).

2.6.4 Aquifer Vulnerability Assessment

Vulnerability mapping is a method used by the Province of BC to communicate high-risk activities and vulnerable hydrogeologic conditions. Table 10 is a re-creation of the potential aquifer classification (WLAP, 2002).

Table 10: Aquifer Classification

Class	I (Heavy Development)	II (Moderate Development)	III (Light Development)
A	IA - heavily developed, high vulnerability aquifer	IIA - moderately developed, high vulnerability aquifer	IIIA - lightly developed, high vulnerability aquifer
B	IB - heavily developed, moderate vulnerability aquifer	IIB - moderately developed, moderate vulnerability aquifer	IIIB - lightly developed, moderate vulnerability aquifer
C	IC - heavily developed, low vulnerability aquifer	IIC - moderately developed, low vulnerability aquifer	IIIC - lightly developed, low vulnerability aquifer

Notes: Yellow Highlight is the rating given to Aquifer 496 (WLAP, 2002).

The BC aquifer classification system categorizes aquifers according to the:

1. Level of aquifer development. Aquifer development is assessed based on the water balance of supply vs. water demand. If such assessment has not been completed, aquifer development can also be rated based on the number of registered groundwater wells. A rating of "I' suggest the water demand is high as compared to the water availability, and
2. Level of aquifer vulnerability to surface contamination. Vulnerability is based on the hydrogeological properties of the aquifer and not the type of surface contamination present.

Using this system, ENV has classified Aquifer 496 as "IIIA", indicating that despite the light development, the vulnerability to surface contamination is high, due to the lack of, or discontinuous nature of, any confining layer above the water producing zone (unconfined aquifer; Figure 2). Also, the water table is shallow and near surface, and therefore more susceptible to potential surface activities given the short travel time through the unsaturated zone.

2.7 Groundwater at Risk of Containing Pathogens (GARP)

Waterline has evaluated the Glendale and Sayward Wells against the Stage 1 Hazard Screening level criteria; the results are summarized in Table 11.

Table 11: GARP Hazard Screening for Groundwater Supplied By Salmo's Water Supply Wells

Risk Factors and Criteria	Glendale Well			Sayward Well		
	Yes: Potentially at Risk	No: Low Risk	Comments	Yes: Potentially at Risk	No: Low Risk	Comments
Water Quality Results						
A-1: Exhibits recurring presence of total coliform bacteria, fecal coliform bacteria, or *E. coli.*	X		Microbiological samples have not been collected from the well.		X	Lab results for microbiological samples collected on October 18, 2007, from the well were below the lab detection limits for total coliforms and *E. coli.*
A-2: Has reported intermittent turbidity or has a history of consistent turbidity greater than 1 NTU.		X	Turbidity was reported to be 0.3 NTU on February 03, 2015 (most recent groundwater sample).		X	Turbidity was reported to be 0.6 NTU on February 03, 2015 (most recent groundwater sample).
Source Type and Location						
B-1: Situated inside setback distances from possible sources of contamination, as per Section 8 of the HHR[1].		X	There are no sources of contamination (e.g. storage tanks, roads) within 30 m; the distance to the nearest dwellings is 50 m to the north; Salmo's landfill is located 1.5 km to the northwest, though contamination would be unlikely because of the physical conformation.		X	There are no sources of contamination (e.g. storage tanks, roads) within 30 m; the distance to the nearest dwellings is 35 m to the northwest; Salmo's landfill is located 1.6 km to the southwest, though contamination would be unlikely because of the physical conformation.
B-2: Has an intake depth <15 m below ground surface that is located within a natural boundary of surface water or a flood prone area.		X	The well is screened from 36.8 to 46.0 mbgl (see Appendix C).		X	The well is screened from 39.1 - 51.4 mbgl (see Appendix C).
B-3: Has an intake depth between the high-water mark and surface water bottom (or < 15 m below the normal water level), and located within, or less than 150 m from the natural boundary of any surface water.		X	Intake depth (approximately 620 mbgl) is 40 m below approximate depth of the Salmo River (660 masl); Well is >150 m from any natural surface water boundary.		X	The top of well screen (approximately 622 mbgl) is 33 m below the approximate depth of the Salmo River (660 masl); Well is >150 m from any natural surface water boundary.
B-4: Located within 300 m of a source of probable enteric viral contamination without a barrier to viral transport.		X	Well is >300 m from Erie Creek and the Salmo River; municipal effluent is directed to the water treatment plant and all pipes are lined; there are no septic systems located upgradient of the well.		X	Well is >300 m from Erie Creek and the Salmo River; municipal effluent is directed to the water treatment plant and all pipes are lined; well is 220 m downgradient from the nearest septic system[2], and outside the 200-day capture zone are
Well Construction						
C-1 Does not meet GWPR (Part 3, Division 3) for surface sealing.	X		Cannot verify; no well log or results from a well camera survey are available.		X	The well log indicates that there is a bentonite surface seal.
C-2: Does not meet GWPR (Part 4) for well caps and covers.		X	The well is capped and located behind a locked gate (Photograph E3, Appendix E).		X	The well is capped and located behind a locked gate (Photograph E1, Appendix E).
C-3: Does not meet DWPA or DWPR (Section 16 of the DWPA, Section 14 of the DWPR) for floodproofing.	X		It is unconfirmed if the well meets the GWPR surface sealing requirements, despite having the proper stick-up height. Therefore, entry from the surface could be possible; the well is located within the 200-year mapped floodplain area (Appendix B).		X	The well prevents contamination from the surface via proper surface sealing, stickup, and well covering criteria; the well is located within the 200-year mapped floodplain area (Appendix B).
C-4: Well does not meet GWPR (Division 5) for wellhead completion.		X	The well has a stickup of approximately 0.8 m; the well is located approximately 10 m from the pump house; the ground is slightly graded around the wellhead (Photograph E3, Appendix E).		X	The well has a stickup of approximately 0.6 m; the well is located approximately 4.5 m from the pump house; the ground is slightly graded around the wellhead (Photograph E1, Appendix E).
Aquifer Type and Setting						
D-1: Well with intake depth < 15 m below ground surface.		X	The well has a screen depth of 36.8 to 46.0 mbgl (see Appendix C).		X	The has a screen depth of 39.1 to 51.4 mbgl (see Appendix C).
D-2: Is situated in a highly vulnerable, unconfined, unconsolidated, or fractured bedrock aquifer.	X		Aquifer 496 is an unconsolidated, unconfined aquifer that is considered highly vulnerable.	X		Aquifer 496 is an unconsolidated, unconfined aquifer that is considered highly vulnerable.
D-3: Well completed in a karst bedrock aquifer, regardless of depth.		X	Well is completed in sand/gravel (unconsolidated) aquifer.		X	Well is completed in sand/gravel (unconsolidated) aquifer.

Notes: **NTU** means Nephelometric Turbidity Unit; **HHR** means Health Hazards Regulation (ENV, 2020); **GWPR** means Ground Water Protection Regulation (BC Government, 2022); **m** means meters; **masl** means meters above sea level; **mbgl** means meters below ground level; **magl** means meters above ground level; **DWPA** means *Drinking Water Protection Act* (BC Government, 2024b); **DWPR** means Drinking Water Protection Regulation (BC Government, 2022). [1] HHR Section 8 (MoH, 2020): (a) 30 m from any probable source of contamination, (b) 6 m from any private dwelling, and (c) unless contamination of the well would be impossible because of the physical conformation, 120 m from any cemetery or dumping ground; [2]personal communication with J. Brik (November 6, 2017).

Based on the criteria outlined in the Stage 1 screening level assessment, groundwater supplied from the Glendale and Sayward Wells is identified as being at risk because the wells are completed in a vulnerable aquifer. In addition, the Glendale Well does not meet some of the well construction standards listed in the GWPR. Microbiological samples have not been collected from the Glendale Well to assess the raw groundwater quality before it enters the water distribution system.

Although Salmo has taken actions to reduce risks from GARP by implementing regular wellhead inspections by the Water System Operator, more frequent sampling of the raw groundwater quality from the Sayward and Glendale Wells will help with early detection of pathogens that could be entering the water system.

3.0 CONTAMINANT INVENTORY & RISK CHARACTERIZATION (MODULE 2 & 7)

A well protection area boundary was developed for the Glendale and Sayward Wells as part of the contaminant source assessment (Figure 5). The well protection area includes the water supply wells' interpreted well capture zones and the lands immediately downgradient and side-gradient. The well protection area was created to encompass a larger zone of protection, due to the highly vulnerable nature of Aquifer 496 and the interpreted groundwater flow regime near the water supply wells. The larger well protection area provides a buffer in case pumping rates increase in the future to meet increasing water demands, leading to larger calculated well capture zone areas.

3.1 Land Use and Utilities

The land use designations map (Appendix B) indicates that land use is primarily residential in Salmo, with extensive rural areas zoned on the north side of Highway 3. The Sayward and Glendale Wells are in Park/Open Space/Institution zoned areas. Single and two family residential and estate residential zoned areas are located adjacent to and upgradient of the Sayward Well. A single and two family residential zoned area is located adjacent to and upgradient of the Glendale Well.

Residents are believed to use a variety of sources for heating, including electric, wood stoves, and gas and oil furnaces. A sewage treatment plant services Salmo's residents and businesses and is located south (i.e., downgradient) of Salmo. There are no known septic systems within Salmo's municipal boundaries; however, residences located outside of municipal boundaries are assumed to be serviced by septic systems.

3.2 Inventory of Potential Hazards

The most common hazards to groundwater and their associated land uses are summarized below:

- **Agricultural:** heavy chemical use farming, pesticides and fertilizers, manure storage;
- **Transportation Corridors**: fuel spills on highways, road salts;
- **Commercial:** gas stations, paint strippers, dry cleaners, auto body and repair;
- **Industrial:** chemical, petroleum, wood processing, food processing;

- **Municipal:** stormwater runoff, pesticides and fertilizers; and
- **Residential:** septic systems, abandoned wells, sewer mains.

Salmo's land use planning team has identified a list of potential hazards to groundwater from the various land use types within the identified well protection area (Table 12). The hazards include anthropogenic and natural sources.

Table 12: Potential Hazards to Groundwater

Hazard	Reason for Concern	Transport Mechanism
Agriculture	Manure storage and/or spreading manure for small-scale farming operations, small hobby farms and/or horse stables. These may be located to the north and east of Salmo's municipal boundaries within the well protection area	Runoff, Groundwater
Roads, Highway	Fuel or other contaminant spills	Runoff, Groundwater
Roads, Highway	2% road salt mixed with gravel is used in the winter; Magnesium chloride is used for dust suppression in the summer	Runoff, Groundwater
Septic System Discharge	Risk of pathogens; septic systems may be located upgradient of the Sayward Well	Groundwater
Salmo Wells (surface seal)	Potential surface water seepage around the wellhead between the borehole and the casing or direct entry into the well from human error due to unsecure well caps or major flooding	Wellbore, Annulus
Climate Change and Extreme Weather	Flooding: both water supply wells are within the 200-year floodplain boundary	Wellbore, Annulus

3.2.1 Contaminated Site Registry

Waterline completed a search of the BC Contaminated Site Registry (ENV, 2021a) within the municipal boundaries of Salmo (Figure 5). The database is administered by ENV and provides a record of sites that ENV has documented as contaminated or as having undergone a contaminated sites investigation. The database search returned nine registered contaminated sites within the municipal boundary. Details regarding the dates of the site registries, the actions taken to remediate the sites, and the outcome of the investigations can be found in Appendix G.

Of the nine sites, seven sites are located within the well protection area (Figure 5). Details of the seven sites are listed below:

- Contaminated Site ID 2742 – Former Shell Bulk Plant: large diesel fuel spill to ground;
- Contaminated Site ID 5095 – Former Esso Service Station: confirmed petroleum hydrocarbon contamination;
- Contaminated Site ID 5143 – Thrifty Gas on 223 Railway Avenue: suspected petroleum hydrocarbon contamination;
- Contaminated Site ID 5303 – The Coyote Café: potential hydrocarbon contamination from Site ID 5095;

- Contaminated Site ID 5311 – Main Street Video: confirmed hydrocarbon contamination from Site ID 5095;
- Contaminated Site ID 5313 – Waterstreet, Dennis and Norma: confirmed hydrocarbon contamination from Site ID 5095; and
- Contaminated Site ID 14499 – 416 Davies Avenue: potential hydrocarbon contamination from Site ID 5095.

As varying levels of investigation and site remediation have been completed at these sites, the potential risk to the water supply wells, specifically the Glendale Well, still exists. Further confirmation of the contamination potential from the individual landowners is required. The remaining two registered contaminated sites are located north of Erie Creek and are either downgradient or side-gradient from the well protection area, therefore, it is unlikely that these sites pose an environmental risk to Salmo's water supply wells.

3.2.2 Waste Management Database

Waterline completed a search of the BC Authorizations Management System (AMS; ENV, 2021b) to identify any active discharge permits, approvals, orders, and regulated sites under the *Environmental Management Act* (BC Government, 2024d). The search did not find any records related to active projects within Salmo's municipal boundaries and/or the well protection area (Figure 5). Authorizations within proximity to Salmo's municipal boundaries include:

1. Municipal solid waste management (municipal landfill; Authorization No. 18067);
2. Vehicle dismantling and recycling industry (Authorization No. 103169); and
3. Municipal sewage management (municipal sewage treatment facility; Authorization No. 2500).

The municipal landfill is located approximately 1.5 km west-northwest of the Glendale Well. The landfill is believed to be a low risk based on the groundwater conceptual model, as the site is side-gradient and cut off from the Glendale Well by a topographical high (expected bedrock outcropping; Figure 5). The vehicle dismantling/recycling facility and the municipal sewage treatment facility are located downgradient of the well protection area and are not considered a risk to Salmo's water supply (Figure 5).

3.3 Source Water Risk Assessment

The source water risk assessment is a technique that allows groundwater hazards to be assigned a relative magnitude in comparison to other hazards, based on the likelihood that a hazard will occur and the consequences or impact of that hazard. The hazards are then ranked from highest to lowest risk to prioritize management actions aimed at reducing the risks to the water source (MLHS, 2010).

Table 13 and Table 14 summarize how each hazard has been assessed using the likelihood of occurrence and magnitude of consequence methods.

Table 13: Likelihood of Occurrence

Level	Descriptor	Description	Probability of Occurrence in Next 10 Years
A	Almost Certain	Is expected to occur in most circumstances	>90%
B	Likely	Will probably occur in most circumstances	71-90%
C	Possible	Will probably occur at some time	31-70%
D	Unlikely	Could occur at some time	10-30%
E	Rare	May only occur in exceptional circumstances	<10%

Notes: MLHS, 2010.

Table 14: Magnitude of Consequence

Level	Descriptor	Description
1	Insignificant	Insignificant impact, no illness, little disruption to normal operation, little or no increase in normal operating costs
2	Minor	Minor impact for small population, mild illness moderately likely, some manageable operation disruption, minor increase in operating costs
3	Moderate	Minor impact for large population, mild to moderate illness probable, significant modification to normal operation but manageable, operating costs increase, increased monitoring
4	Major	Major impact for small population, severe illness probable, systems significantly compromised and abnormal operation if at all, high level monitoring required
5	Catastrophic	Major impact for large population, severe illness probable, complete failure of systems

Notes: MLHS, 2010.

Once a ranking for both the likelihood and consequence were assigned, the two were multiplied together to determine the risk assessment score based on the following equation:

$$Likelihood\ x\ Consequence = Risk\ Assessment\ Score$$

Table 15 shows the range of risk scores, which identify low, moderate, high, and very high risk.

Table 15: Risk Assessment Matrix

Likelihood	Consequences				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
A (Almost Certain)	Moderate	High	Very High	Very High	Very High
B (Likely)	Moderate	High	High	Very High	Very High
C (Possible)	Low	Moderate	High	Very High	Very High
D (Unlikely)	Low	Low	Moderate	High	Very High
E (Rare)	Low	Low	Moderate	High	High

Notes: MLHS, 2010.

3.3.1 Risk Ranking

Using the risk assessment matrix above, the potential hazards identified for Salmo's water supply were ranked from highest to lowest and are shown in Table 16.

Table 16: Risk Assessment Results

Hazard	Likelihood Level	Consequence Level	Risk Level	Comments
Agriculture runoff - manure, pesticides & herbicides	D	4	High	Unlikely to reach the water supply well screen depth but the impact of chemicals or pathogens in the aquifer could have major consequences (probable illness and increased operating costs). However, pathogen sources are outside the 200-day well capture zone areas.
Historical hydrocarbon contamination - Glendale Well	D	4	High	Unlikely the various contaminant plumes would migrate to the Glendale Well; however, the impact of hydrocarbons in the water system could cause illness.
Roads – fuel spill	E	4	High	Low likelihood spills would reach the water supply well screen depth but the impact of a hydrocarbon plume in the aquifer could have significant effects on the water system and could cause illness.
Climate change - extreme weather	C	2	Moderate	Extreme weather events (i.e., overland flooding) are possible but have historically had an insignificant impact to the wells and aquifer.
Salmo wells – well surface seal	D	3	Moderate	Unlikely that direct surface contaminants can enter the wells, as they are protected by well caps. The surface seal for the Glendale Well could not be confirmed, and therefore, surface water flow along the casing and towards the screen could lead to cross-contamination.
Septic system - ground disposal	E	3	Moderate	Low likelihood that sewage discharge would leach through to the aquifer and reach the well intake elevation; however, pathogens could cause illness.
Roads – road salt	E	2	Low	Low likelihood to reach water supply wells' screen depths. Risk of minor impact to water system at concentrations applied within well capture zones is low.

As some of the water supply elements related to the water distribution system were not assessed by Waterline, risk related to those engineered components were not evaluated in the SWPP.

4.0 ACTIONS TO IMPROVE DRINKING WATER PROTECTION (MODULE 8)

4.1 Groundwater Management Action Plan

Waterline has developed a management action plan aimed at reducing the groundwater risks to an acceptable level. Table 17 outlines the management actions and proposed timelines for implementation. Salmo is responsible for implementing these actions within the proposed timelines.

Table 17: Risk Management Actions and Implementation

Hazard	Recommended Management Action	Proposed Timeframe
Salmo wells - well surface seal	• Inspection of the water supply well caps, to ensure they are secure and surface drainage is directed away from the wellheads (monthly). • Contact a registered well driller to install a proper sanitary seal at the Glendale Well, as per Section 27 of the GWPR.	Immediate
Septic system – ground disposal	• Water quality monitoring of the water distribution system – total coliforms and *E. coli* (weekly)[1]. • Identify existing well(s)/install new well(s) upgradient of each water supply well to use as sentinel monitoring wells for early detection of changing groundwater quality (within 1-year). • Sampling at the water supply wells – Potability analysis (annual).	Immediate to 1-year
Agriculture runoff – manure, pesticides & herbicides	• Water quality monitoring of the water distribution system – total coliforms and *E. coli* (weekly)[1]. • Promote best practices for manure/chemical handling and storage within the well protection area (within 1-year). • Identify existing well(s)/install new well(s) upgradient of each water supply well to use as sentinel monitoring wells for early detection of changing groundwater quality (within 1-year). • Sampling of the water supply wells – Pesticides analysis (biennial).	Immediate to 2-years
Roads - fuel spill	• Spill response to be addressed in Salmo's ERP, as part of the IH Permit to Operate (within 1-year). • Sampling of the water supply wells – Hydrocarbons analysis (annual).	1-year
Roads – road salt	• Sampling of the water supply wells – Routine water quality analysis (annual).	1-year
Historical hydrocarbon contamination – Glendale Well	• Investigate compliance monitoring of registered contaminated sites within the well protection area (within 1-year). • Promote best practices for use and storage of fuel within the well protection area (within 1-year). • Sampling of the water supply wells – Hydrocarbons analysis (annual).	1-year
Climate change - extreme weather	• Groundwater and surface water level monitoring – Continuous data collection using pressure transducers and the hydrometric station (annual). • Water quality monitoring the Salmo River and Erie Creek – Routine water quality analysis (biennial). • Review of groundwater and surface water monitoring data (annual).	1-2 year

Notes: **GWPR** means Groundwater Protection Regulation (BC Government, 2022); **ERP** means Emergency Response Plan; **IH** means Interior Health; [1]currently in place for the water distribution system.

Further details of the groundwater management action plan are discussed below.

4.1.1 Groundwater Level and Production Monitoring

To ensure the SWPP is effective, upgrades to the Salmo water supply system includes installing a pressure transducer in the Glendale Well, like the Sayward Well, to measure water levels. The pressure transducer can be lowered in a drop tube to bypass any well infrastructure and should be downloaded quarterly with data complied annually. The wells are already equipped with flow meters to record pumping rates. This data can be tabulated and presented graphically to show the response of the water level in the wells to pumping, and if and how it varies throughout the year. The benefits of reviewing and compiling this data include:

- Advanced warning of potential water supply problems (e.g., declining water levels);
- Increased pump protection; and
- Long-term understanding of well and aquifer performance.

4.1.2 Surface Water Level Monitoring

Salmo should consider hiring a hydrologist (surface water consultant) to set up hydrometric stations on the Salmo River and Erie Creek near the Village, to further characterize the groundwater response to seasonally changing surface water levels. At present, there is an active Water Survey of Canada monitoring station (08NE074), located approximately 15 km south of Salmo on the Salmo River. This station, however, is outside of the Aquifer 496 footprint and at a lower elevation in the watershed.

4.1.3 Water Quality Monitoring

Water quality monitoring will provide an indication of the current and ongoing health of the aquifer and the community water supply. The Permit to Operate (Condition 3; Appendix A) requires completion of full chemical analysis on raw water from the water supply wells at least every five years. In addition, Salmo currently collects a single weekly sample for total coliforms and *E. coli* bacteria from various locations around the water distribution system.

Waterline's proposed sampling program suggests more frequent sampling of the Sayward and Glendale Wells, as it is important to establish baseline conditions to assess potential changes to Aquifer 496. Waterline also suggest biennial sampling of surface water from the Salmo River and Erie Creek, to help characterize how groundwater recharge could be changing from contamination or climate change. Waterline has listed the sampling parameters (Table 18) that should be collected as part of the groundwater and surface water sampling. All lab results should be compiled in a database system to assess future water quality changes or concerns.

Table 18: Proposed Water Quality Parameters

Sample Package	Parameters	Purpose of Sampling
Routine Water Quality Analysis	Physical parameters (pH, EC, TDS, etc.) Major anions (HCO_3, CO_3, Cl^-, SO_4^{2-}, F^-) Major cations (Ca^{2+}, Mg^{2+}, K^+, Na^{2+}) Nutrients (nitrate, nitrite, etc.) Total and dissolved metals	Help Characterize the groundwater and surface water types
Potability Analysis	Turbidity, routine water (parameters listed above) and microbiological parameters (total coliforms and *E. coli*)	Determine impacts to groundwater from septic disposal and agricultural runoff
Hydrocarbons	Volatile Organic Compounds (BTEX)	Determine impacts to groundwater from gasoline and solvents
	Extractible Hydrocarbons (LEPH, HEPH), Polycyclic Aromatic Hydrocarbons (PAH) Oil and Grease	Determine impacts to groundwater from gasoline, diesel, heating oil, and oil & grease
Pesticides	Various	Determine impacts to groundwater from agricultural runoff

Notes: **EC** means electrical conductivity; **TDS** means total dissolved solids; **HCO_3** means bicarbonate; **CO_3** means carbon trioxide; **Cl** means chloride; **SO_4** means sulfate; **F** means fluoride; **Ca** means calcium; **Mg** means magnesium; **K** means potassium; **Na** means sodium; **BTEX** means benzene, toluene, ethylbenzene, xylenes; **LEPH** means light extractable petroleum hydrocarbons; **HEPH** means heavy extractable petroleum hydrocarbons; **PAH** means polycyclic aromatic hydrocarbons.

4.1.4 Monitoring Well Installations

Monitoring water levels and water quality at other strategic locations within the aquifer provides information that can help to understand the aquifer's capacity to support future growth, as well as provides an early warning system for potential contaminants moving towards Salmo's water supply wells.

To reduce overall costs, Salmo could identify an existing well(s) completed upgradient and at similar depths to the water supply wells, to be used for monitoring purposes. Additional monitoring of a shallow well(s) to assess conditions in the shallow aquifer and the degree of connectivity with the deep aquifer and/or surface water bodies would improve the understanding of the vulnerability of the aquifer to contamination from surface. Alternatively, new wells could be drilled and used specifically for monitoring purposes.

4.1.5 Emergency Response Planning

An Emergency Response Plan (ERP) is required under Condition 6 of the Permit to Operate (Appendix A) and should be developed by the system owner (Village of Salmo) and the certified water system operator, with consultation by the IH drinking water officer. In general, the ERP should include the following elements:

- Contact information of key individuals and agencies involved in the water system and infrastructure, including:
    - System owners and operators;
    - Repair services;
    - Alternative water suppliers;
    - Media representatives;
    - Government agencies; and
    - Community water users.
- Location of the as-built drawings of the water system, which will include but are not limited to:
    - The water main;
    - Control points;
    - Access routes; and
    - Maintenance equipment.
- Standard operating procedures for using alternate or back-up water supplies and associated equipment.

An emergency response within the context of the SWPP could be triggered by several different events, including:

- The detection of contaminants in a water supply well during a routine sampling event;
- The detection of pathogens in the water distribution system during a weekly sampling event;
- A spill event within the well protection area; and
- Pump failure, power failure, broken water main, or other system malfunctions.

If there is a spill event within the well protection area or contamination is detected at a monitoring location, the following actions should be taken:

- The risk to the community water supply must be immediately assessed to determine if an alternative water source is required;
- Appropriate drinking water advisories and notifications should be issued to the community; and
- The source of contamination should be identified, and a plan should be initiated to remove the source and mitigate any impacts.

4.2 Groundwater Protection

4.2.1 Community Involvement and Awareness

The SWPP will be most successful if there is community interest and awareness regarding the need to prevent contaminants from entering the groundwater. The municipality is responsible to educate and promote awareness within the community. Through public outreach, Salmo can help raise community awareness with regards to groundwater protection. Some examples of public outreach initiatives include:

- Promote the SWPP by erecting warning signs to delineate the well protection area;
- Offer community outreach to advise residents on best management practices to protect groundwater using multi-media advertisements; and
- Educate youth through school-based activities (e.g., field trips to water supply facilities) and presentations on the aquifer and water system.

4.2.2 Other Regulatory Controls

Local council can develop bylaws and policies (e.g., an aquifer protection bylaw) to guide future land activities in the well protection area. The community planning team is responsible to advise local council members of such policies. Some examples include:

- Prevent commercial/industrial operations that present a high risk to groundwater contamination within the well protection area (i.e., gas stations, manufacturing/processing, waste storage facilities, etc.);
- Require future developments within the well protection area to conduct a hydrogeologic investigation prior to construction, to confirm the aquifer extent and vulnerability beneath their land. Any data from new piezometers/boreholes/test pits drilled should be provided to Salmo to help further characterize the local hydrogeological setting. All subsurface investigations should be completed by a registered contractor;
- Require current and future commercial/industrial operations to conduct environmental compliance audits and develop pollution prevention plans; and
- Enforce best management practices for storage and handling of potential groundwater contaminants in the community.

4.2.3 SWPP Review and Update

The SWPP is a living document that should be continually reviewed and updated. Each year Salmo should issue an annual report which includes a summary of site inspections, community outreach initiatives, any SWPP enforcement issues/orders, and the results of ongoing monitoring (water levels, flow rates, and water chemistry). Monitoring data should be reviewed by a qualified professional (QP) in groundwater. The annual report should serve as the basis for:

- Communicating the state of source water protection to the community;
- Maintaining water supply integrity;
- Integrating land use planning initiatives; and
- Evaluating and updating the SWPP, as required.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions were reached during the development of the SWPP:

- Waterline completed a SWPP for Salmo's two water supply wells, as requested by IH. The assessment followed ENV's Well Protection Toolkit guidelines (2004).
- Salmo's water supply wells are completed in Aquifer 496, which is a highly vulnerable and moderately developed, unconfined aquifer. The aquifer is comprised of glacial sands, reworked glacial till, and post-glacial sand and gravels. Some areas of the aquifer are locally confined by overlying clay lenses or layers.
- Groundwater from the water supply wells has relatively low total dissolved solids concentration (between 100 and 139 mg/L), suggesting the aquifer is recharged from precipitation and/or surface water. Samples collected in 2007 and 2015 indicated all chemical parameters were below Health Canada's drinking water guidelines (2022) for MAC.
- Capture zones for the Glendale and Sayward Wells were calculated to show the areas most vulnerable to contamination, where spills or other events occurring upgradient of the water supply wells could potentially be drawn into the aquifer and contaminate Salmo's water supply.
- The well protection area covers the areas designated by the theoretical well capture zones, the expected catchment areas associated with the Glendale and Sayward Wells, and additional buffer for potential future increase in well pumping. The well protection area terminates at the aquifer boundary where the bedrock is anticipated to contact the valley fill sediments.
- The well protection area within the municipal boundary is also part of an aquifer protection development permit area, which requires an approved development permit prior to receiving development approval from the municipality. This is to ensure that care will be taken in storing, handling, manufacturing, and using products within the area, and thereby, above the aquifer.
- Based on the Stage 1 screening level GARP assessment, the wells are considered "at risk" because they are completed in a highly vulnerable, unconfined, and unconsolidated aquifer. In addition, the Glendale Well is considered "at risk" because there is no information to confirm if the well meets the GWPR for surface sealing. Raw water samples from the Glendale Well have not been collected to document baseline conditions.
- Potential hazards to groundwater were identified within the well protection area. The groundwater hazards were ranked based on their likelihood to occur and the consequences or impact of the hazard. Of the seven hazards identified, three were ranked as high risk to the aquifer. The high-risk hazards are as follows:
    - Agricultural runoff and seepage from agricultural operations;
    - Large fuel spills most likely to occur along a major roadway; and
    - Historical hydrocarbon contamination upgradient of the Glendale Well.

Based on the conclusions above, the following recommendations are provided to Salmo:

- In the absence of a well log confirming that the Glendale Well meets the surface sealing requirements of the GWPR, Salmo should hire a licensed water well driller to upgrade/alter the surface seal according to Section 27 of the GWPR (Government of BC, 2022).
- Salmo should share the results of the Stage 1 GARP hazard and screening assessment with the drinking water officer from IH, to discuss proper procedures and operational guidelines for untreated water.
- Implement the management action plan outlined in Section 4.1 of the SWPP.
- Perform baseline well investigations for the Sayward and Glendale Wells, to confirm long-term sustainable well yields and assess well efficiencies. The investigation should include a camera survey of the well casings and screens to assess well integrity and determine if well rehabilitation is required. Data from the investigation and routine monitoring should be reviewed together to confirm if deteriorating well conditions may exist.
- Consult with local council about amending bylaws with additional requirements for development within the well protection area. Guidelines for development within the well protection area should enhance the requirements already outlined for the aquifer protection development permit area in Bylaw 687 (Salmo, 2017).
- Consult with local council to prevent commercial/industrial operations that present a high risk of groundwater contamination within the well protection area (i.e., gas stations, manufacturing/processing, waste storage facilities, etc.).
- Investigate compliance monitoring of registered contaminated sites within the well protection area with individual landowners.
- Promote the SWPP by placing warning signs to delineate the well protection area. Advise residents on best management practices to protect groundwater using multi-media advertisements.
- Engage with a registered QP to:
    - Help review the water system risks, based on EGBC's Preparation of One Water System Risk Management Plan in BC (EGBC, 2024).
    - Review the Village's water use requirements based on new population numbers and the recent water use monitoring from the Sayward and Glendale Wells.
- If the Village foresees a need for additional groundwater supply beyond their approved volume (Conditional Use Licence No. 502393; Appendix D), a WSA New Use Licence application must be submitted and approved by WLRS before the additional groundwater can be extracted and/or beneficially used.

6.0 CERTIFICATION

This document was prepared under the direction of a professional geoscientist registered in the Province of British Columbia.

Waterline Resources Inc. trusts that the information provided in this document is sufficient for your requirements. Should you have any questions or concerns, please do not hesitate to contact the undersigned.

Respectfully submitted,

Waterline Resources Inc.
EGBC Permit No. 1000669

Original Signed and Stamped

Simon Wing, B.Sc., P.Geo.
Senior Hydrogeologist

Original Signed

Steph Righi, B.NRP, RBTech
Regulatory Specialist

Reviewed By:

Original Signed

Dalton Pajak, B.Sc., P.Geo.
Senior Hydrogeologist

7.0 REFERENCES

British Columbia Ministry of Environment and Climate Change Strategy (ENV), 2024. Groundwater Wells and Aquifers database (GWELLS). Accessed April 2024. https://apps.nrs.gov.bc.ca/gwells

British Columbia Ministry of Environment and Climate Change Strategy (ENV), 2021a. Contaminated Sites Site Registry. Accessed April 2024.

British Columbia Ministry of Environment and Climate Change Strategy (ENV), 2021b. Authorization Management System (AMS). Accessed April 2024.

British Columbia Ministry of Environment and Climate Change Strategy (ENV), 2004. Well Protection Toolkit. Water Stewardship Division. A joint project of the Ministry of Environment, Lands and Parks, Ministry of Health, and Ministry of Municipal Affairs, with support from Environment Canada and the British Columbia Ground Water Association. ISBN 0-7726-5566-9.

British Columbia Ministry of Health (MoH), 2020. Public Heath Act – Health Hazards Regulation (HHR) deposited December 2, 2011. Included amendments up to B.C. Reg. 186/2020, July 20, 2020.

British Columbia Ministry of Health (MoH), 2017. Guidance Document for Determining Groundwater at Risk of Containing Pathogens (GARP) Version 3. September 2017.

British Columbia Ministry of Healthy Living and Sport (MHLS), 2010. Comprehensive Drinking Water Source-To-Tap Assessment Guideline (CS2TA).

British Columbia Ministry of Water, Land and Air Protection (WLAP), 2002. Guide to Using the BC Aquifer Classification Maps for the Protection and Management of Groundwater. Published by Berardinucci, J., Ronneseth, J., June 2002.

Cui, Y., Miller, D., Schiarizza, P., and Diakow, L.J., 2017. British Columbia Digital Geology. British Columbia Ministry of Energy, Mines and Petroleum Resources, British Columbia Geological Survey Open File 2017-8, 9p. Data version 2019-12-19.

Engineers and Geoscientists British Columbia (EGBC), 2024. Preparation of One Water System Risk Management Plan in British Columbia, Version 1.0. Published April 26, 2024.

Engineers and Geoscientists British Columbia (EGBC), 2019. Professional Practice Guidelines – Assessment of Groundwater At Risk Of Containing Pathogens (GARP), Version 1.0. Published July 16, 2019

Freeze, R.A. and J.A. Cherry, 1979. Groundwater. Prentice-Hall Inc., Englewood Cliffs, N.J.

Golder Associates Ltd. (Golder), 2008. Well Drilling, Installation, and Testing Village of Salmo Production Well No. 6, Knights of Pythias Park, Sayward Avenue, Salmo, British Columbia. Submitted to the Village of Salmo, January 8, 2008.

Golder Associates Ltd. (Golder), 2005. Village of Salmo Community Water Wells Management Strategy. Submitted to the Village of Salmo, November 5, 2005.

Government of British Columbia (BC Government), 2024a. Local Government Act. RSBC 2015 c 1. Current to April 9, 2024.

Government of British Columbia (BC Government), 2024b. Drinking Water Protection Act (DWPA). SBC 2001 c 9. Current to April 9, 2024.

Government of British Columbia (BC Government), 2024c. Water Sustainability Act (WSA). SBC 2014 c 15. Current to April 2, 2024.

Government of British Columbia (BC Government), 2024d. Environmental Management Act (EMA). SBC 2003 c 53. Current to June 16, 2024.

Government of British Columbia (BC Government), 2022. Groundwater Protection Regulation (GWPR). B.C. Reg. 39/2016. Current to November 29, 2022.

Government of British Columbia (BC Government), 2018. Drinking Water Protection Regulation (DWPR). B.C. Reg. 237/2018. Current to November 15, 2018.

Health Canada, 2022. Guidelines for Canadian Drinking Water Quality (GCDWQ) - Summary Table. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.

Urban Systems Ltd. (USL), 2005. The Village of Salmo, Water Conservation Drought Management Study. Submitted to the Village of Salmo, February 28, 2005.

Village of Salmo (Salmo), 2020. Official Community Plan Bylaw 687, 2020.

8.0 LIMITATIONS AND USE

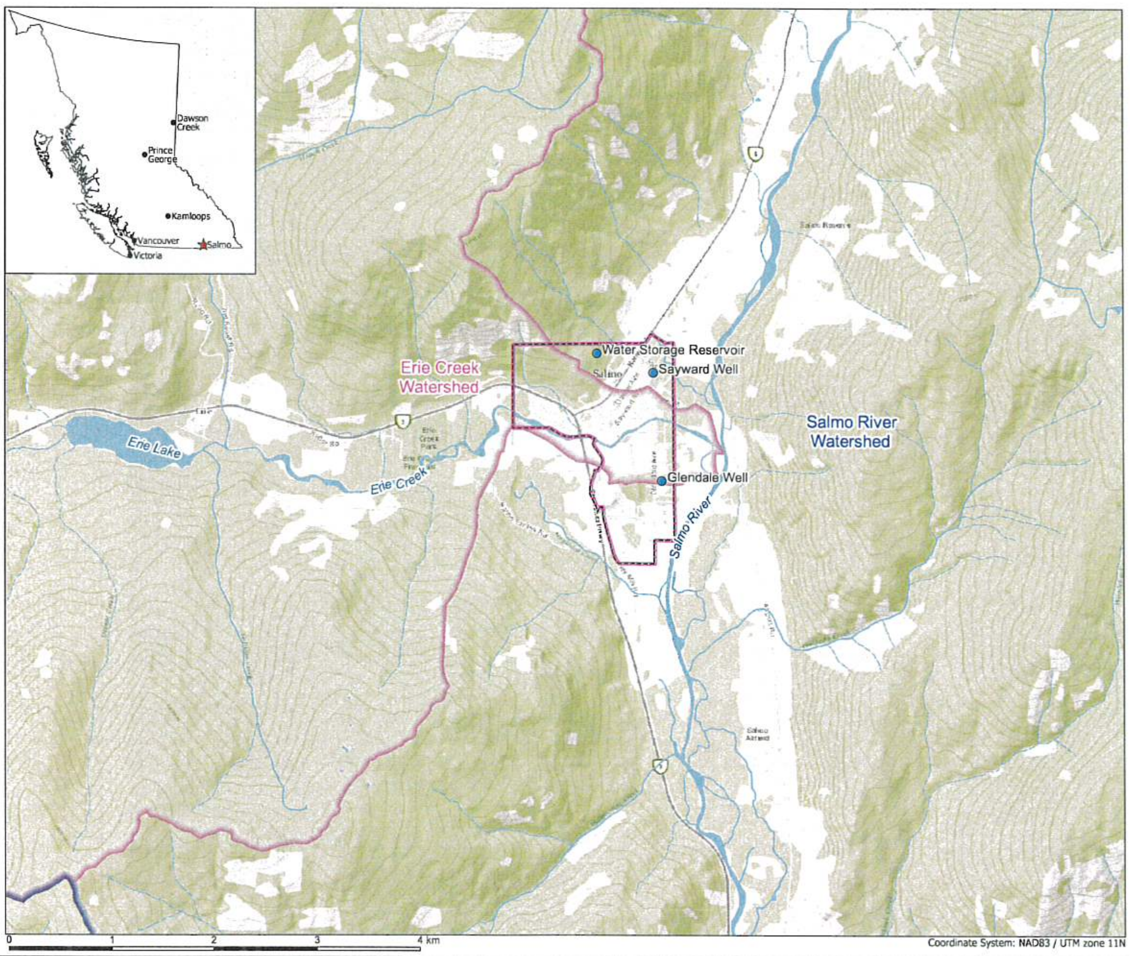
The information presented in this document was compiled exclusively for the Village of Salmo (the Client) by Waterline Resources Inc. (Waterline). This work was completed in accordance with the scope of work for this project that was agreed between Waterline and the Client. Waterline exercised reasonable skill, care, and diligence to assess the information acquired during the preparation of this document but makes no guarantees or warranties as to the accuracy or completeness of this information. The information contained in this document is based upon, and limited by, the circumstances and conditions acknowledged herein, and upon information available at the time of the preparation of this document. Any information provided by others is believed to be accurate but cannot be guaranteed. No other warranty, expressed or implied, is made as to the professional services provided to the Client.

Any use, reliance on, or decision made, by a third party based on this document is the sole responsibility of said third party. Waterline makes no representation or warranty to any third party with regard to this document and, or the work referred to in this document, and accepts no duty of care to any third party or any liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm that may be suffered or incurred as a result of the use of, reliance on, any decision made, or any action taken based on, this document or the work referred to in this document.

When Waterline submits instruments of professional service; including, reports, drawings and project-related deliverables, the Client agrees that only original signed and stamped paper versions shall be considered as original documents. The hard copy versions submitted by Waterline to the Client shall be considered as copies of the original documents, and in the event of a dispute or discrepancy, the signed and stamped original documents retained by Waterline shall govern over all copies, electronic or otherwise, provided to the Client.

This document is intended to be used in its entirety, and no individual part of the document may be taken as representative of the findings of the document. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form, by any third party, without the expressed written permission of the Client or Waterline.

FIGURES



Project Location
River/Stream - Definite
River/Stream - Intermittent
Lake
Erie Creek Watershed
Salmo River Watershed
Municipal Boundary

References:

AltaLIS Base Features (2015), National Road Network (2016), Esri World Topo, Contains information licensed under the Open Government Licence – British Columbia and the Open Government Licence – Canada

Source Water Project Plan
Village of Salmo
Salmo, BC

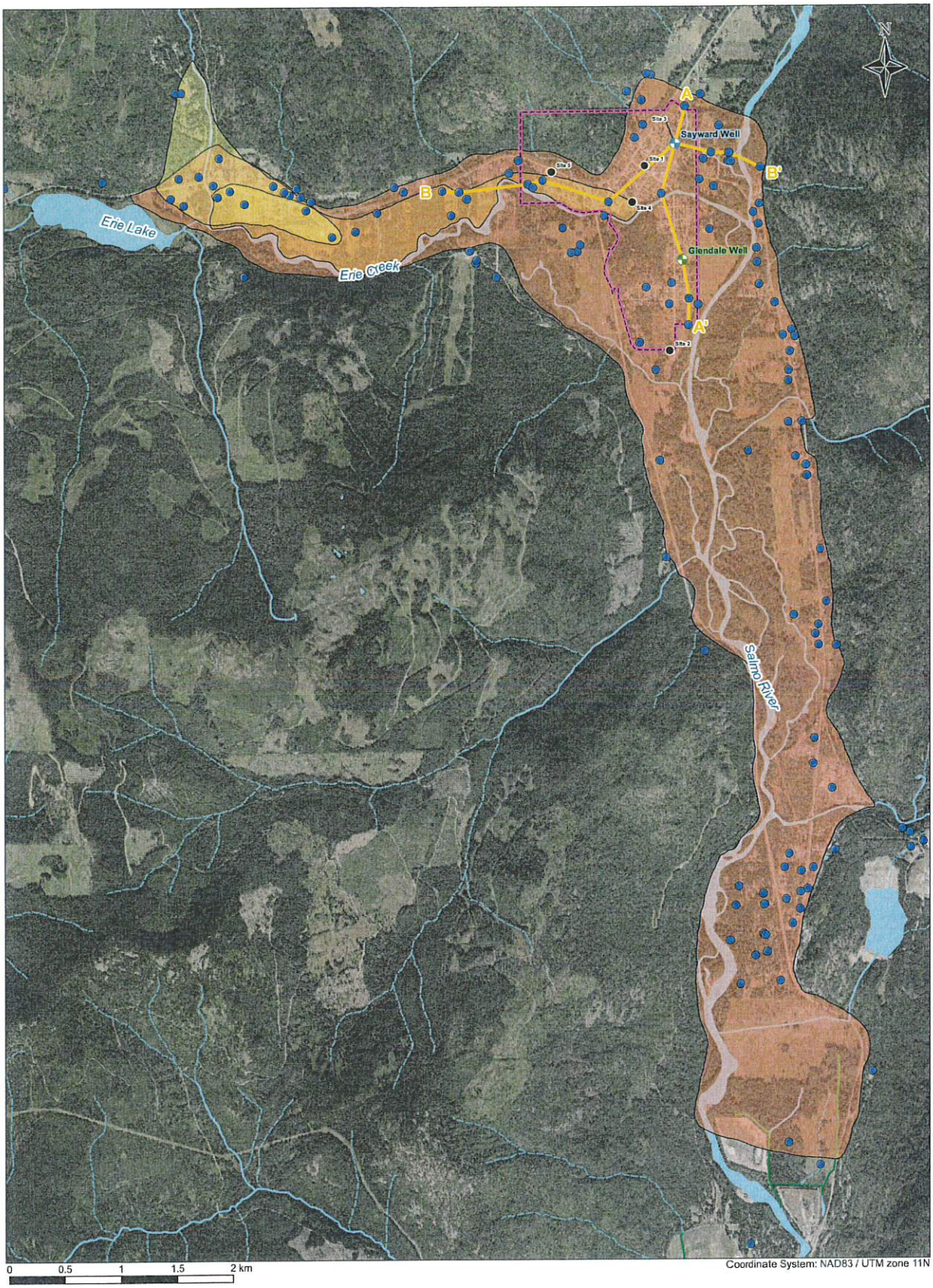
LOCATION PLAN

Waterline

Prepared By: Waterline Resources Inc.
Project Number: 2640-23-001
Compiled By:
Date Issued: 2024 May 15
Date Revised: –

FIGURE 1

G:\Projects\Projects_2024\2640-24-BC Salmo Source Water Protection Plan\figs.qgz



Coordinate System: NAD83 / UTM zone 11N

References:

ESRI World Imagery, Contains information licensed under the Open Government Licence – British Columbia and the Open Government Licence – Canada

- Glendale Well
- Sayward Well
- Water Distribution System Sampling Location
- Registered Groundwater Well
- Cross-Section Trace
- Municipal Boundary
- River/Stream - Definite
- River/Stream - Intermittent
- Canal/Ditch
- Lake/River

Aquifer in Overburden (Classification)
- IIA
- IIB
- IIIB

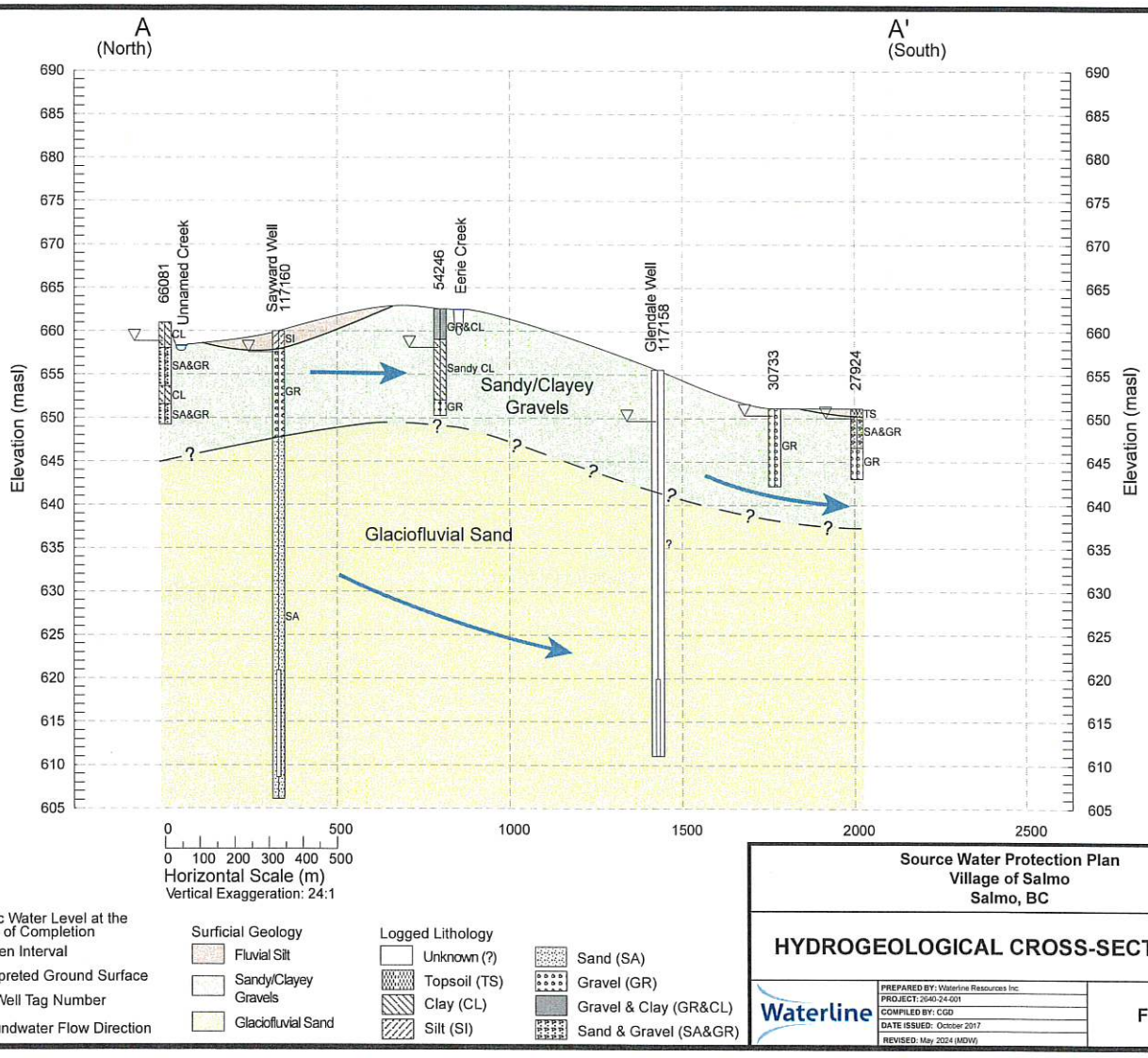
Source Water Project Plan
Village of Salmo
Salmo, BC

WATER SUPPLY WELL LOCATIONS AND MAPPED AQUIFERS

Waterline

Prepared By:	Waterline Resources Inc.
Project Number:	2640-24-001
Compiled By:	mwine
Date Issued:	2024-Jun-10
Date Revised:	--

FIGURE 2



LEGEND:

- Static Water Level at the Time of Completion
- Screen Interval
- Interpreted Ground Surface
- 66081 BC Well Tag Number
- Groundwater Flow Direction

Surficial Geology
- Fluvial Silt
- Sandy/Clayey Gravels
- Glaciofluvial Sand

Logged Lithology
- Unknown (?)
- Topsoil (TS)
- Clay (CL)
- Silt (SI)
- Sand (SA)
- Gravel (GR)
- Gravel & Clay (GR&CL)
- Sand & Gravel (SA&GR)

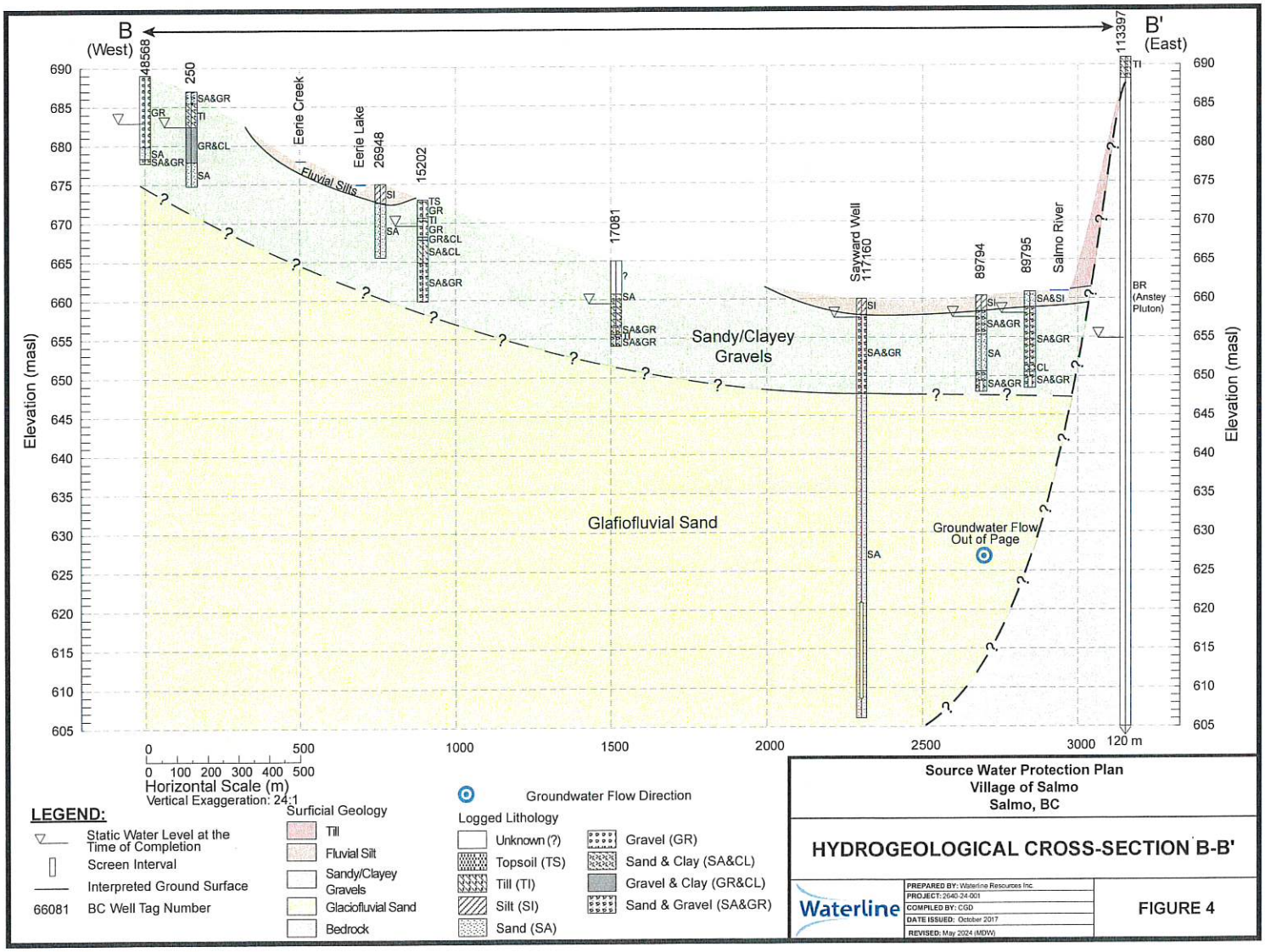
Source Water Protection Plan
Village of Salmo
Salmo, BC

HYDROGEOLOGICAL CROSS-SECTION A-A'

Waterline

PREPARED BY: Waterline Resources Inc
PROJECT: 2640.24-001
COMPILED BY: CGD
DATE ISSUED: October 2017
REVISED: May 2024 (MDW)

FIGURE 3



Source Water Protection Plan
Village of Salmo
Salmo, BC

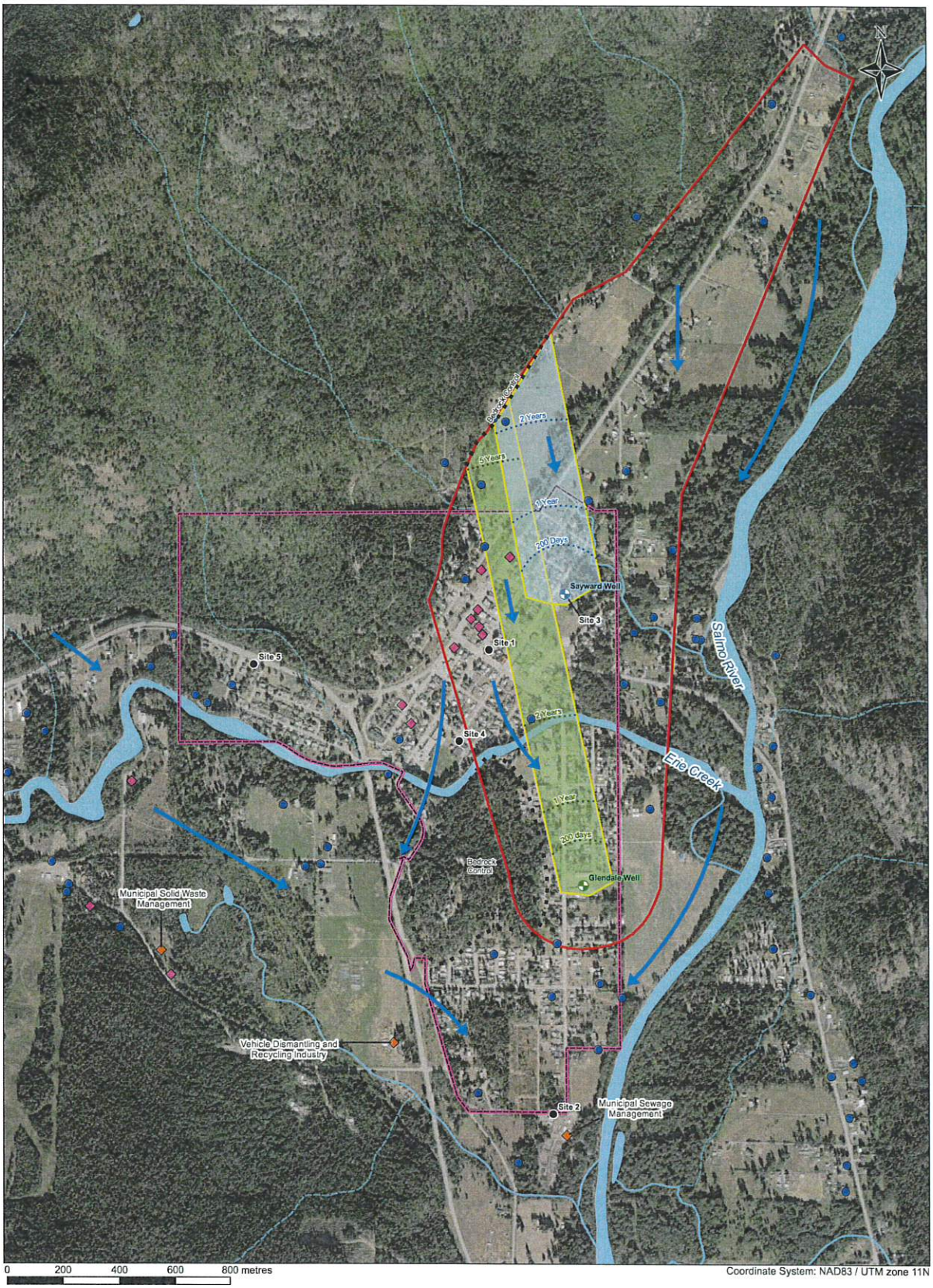
HYDROGEOLOGICAL CROSS-SECTION B-B'

Waterline

PREPARED BY:	Waterline Resources Inc.
PROJECT:	2640-24-001
COMPILED BY:	CGD
DATE ISSUED:	October 2017
REVISED:	May 2024 (MDW)

FIGURE 4

G:\Projects\Projects_2024\2646-24-BC Salmo Source Water Protection Plan\figs.egz



- Glendale Well
- Sayward Well
- Water Distribution System Sampling Location
- Registered Groundwater Well
- Waste Discharge Authorization
- Registered Contaminated Site
- Bedrock Control
- Sayward Well Groundwater Travel Time
- Glendale Well Groundwater Travel Time
- Groundwater Flow Direction
- Municipal Boundary
- Well Protection Area
- Sayward Well Capture Zone
- Glendale Well Capture Zone
- River/Stream - Definite
- River/Stream - Intermittent
- Lake/River

References:

ESRI World Imagery, Contains information licensed under the Open Government Licence – British Columbia and the Open Government Licence – Canada

Source Water Project Plan
Village of Salmo
Salmo, BC

WATER SUPPLY WELL CAPTURE ZONES AND ESTIMATED GROUNDWATER TRAVEL TIME

Waterline

Prepared By:	Waterline Resources Inc.
Project Number:	2646-24-001
Compiled By:	rhenne
Date Issued:	2024-Jun-10
Date Revised:	-

FIGURE 5

Appendix A

Permit to Operate Water System

Waterline

Interior Health

Health Protection

Permit To Operate

Drinking Water System 301 - 10,000 Connections

Facility Number:	0211640
Name of Facility:	Village of Salmo
Address:	414 Baker Salmo, BC V0G 1Z0
Owner:	Village of Salmo

Conditions:

The purveyor shall conform to the seven (7) operating conditions as per attached explanatory notes.

April 1, 2005

Effective Date

Public Health Inspector

This permit is nontransferable and must be displayed in a conspicuous place

807625 June 04

Interior Health

April 26, 2007

Andre Carrel
Village of Salmo
Box 1000
Salmo, BC V0G 1Z0

Dear Mr. Carrel:

Regarding: Conditions of Permit for the Salmo Water System

Enclosed are the 2007/2008 conditions of permit for the Salmo Water System which should be posted with the operating permit. The decal will follow from our finance department.

If you have any questions, please contact the undersigned at (250) 364-6202.

Sincerely,

Interior Health

Laurie Anne McClellan, C.P.H.I. (C)
Public Health Inspector

Enclosures

cc: P. Bailey, Ministry of Community, Aboriginal and Women's Services
Marianne Crowe, Public Health Engineer, Interior Health
Shaun Malakoe, Senior Public Health Inspector, Interior Health
Serge Zibin, Senior Drinking Water Officer, Interior Health

Interior Health

Conditions of Permit
2007/2008
Salmo Water System

1. Provide a source protection plan for each water source.
   - Confirm whether or not the wells are under the direct influence of surface water. Should well integrity prove to be questionable, plan for the disinfection of well water entering the distribution system.

2. Provide a certified operator to operate the system.
   - Continuously provide an operator(s) that meets the certification level recommended for your system by Environmental Operators Certification Program (EOCP).
   - Provide a back-up operator who meets the certification level recommended for your system or who is working towards this.
   - Provide EOCP certification documents for each operator or re-certified operator by December 31, annually.
   - Develop a plan for continuing education and training for operators.
   - Provide updated water system classification documents if your existing classification is older than ten years or if your water system has been altered in a way that would change the classification since it was last completed.

3. Operate according to your water quality sampling program.
   - Water samples are to be tested for specified microbiological parameters at least four times per month. Interior Health will continue to collect periodic audit samples, which are over and above the samples you are responsible for submitting.
   - A full chemical analysis is to be completed at least every five years on the raw water.

4. Develop a cross connection control program.
   - Submit a progress report with your annual summary. This report should include implementation dates indicating when various "milestones" in the program can be met.

Interior Health

5. Provide long-term plans for source, treatment and distribution system improvements.

   - Submit a maintenance schedule. This should include a yearly maintenance plan which will encompass cross connection control, main flushing, hydrant maintenance as well as planned replacement and/or improvements for the next five years.
   - Submit any changes or updates to the long term plans by December 31st annually.
   - Submit a copy of any proposals forwarded to the provincial government for water infrastructure funding.

6. Review and update your emergency response plan.

   - Submit an updated Emergency Response Plan by June 2007 to Interior Health for approval. This plan is to be reviewed and updated yearly and submitted to Interior Health by December 31st annually. This plan must contain the information specified in the *Drinking Water Protection Regulation* Section 13.

7. Provide monthly and annual summaries.

   - Provide a monthly summary report by the 15th of each month reporting on microbiological results, and comments on source, treatment and distribution system events.
   - A report on the status of the Salmo Water System is to be made available for the public before June 30th, annually. This report must include the information specified in the *Drinking Water Protection Act* Section 15.

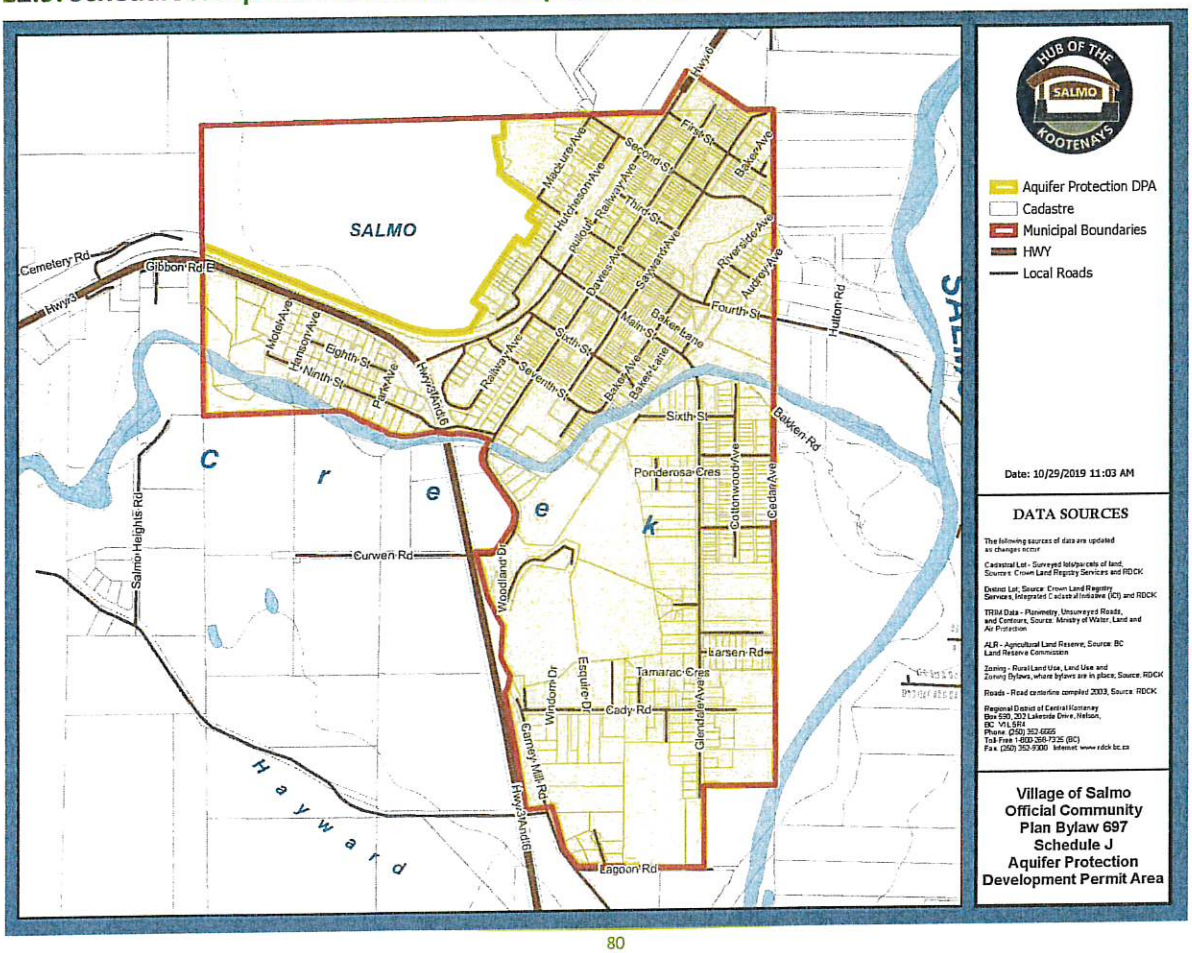
Laurie Anne McClellan, C.P.H.I. (C)
Public Health Inspector

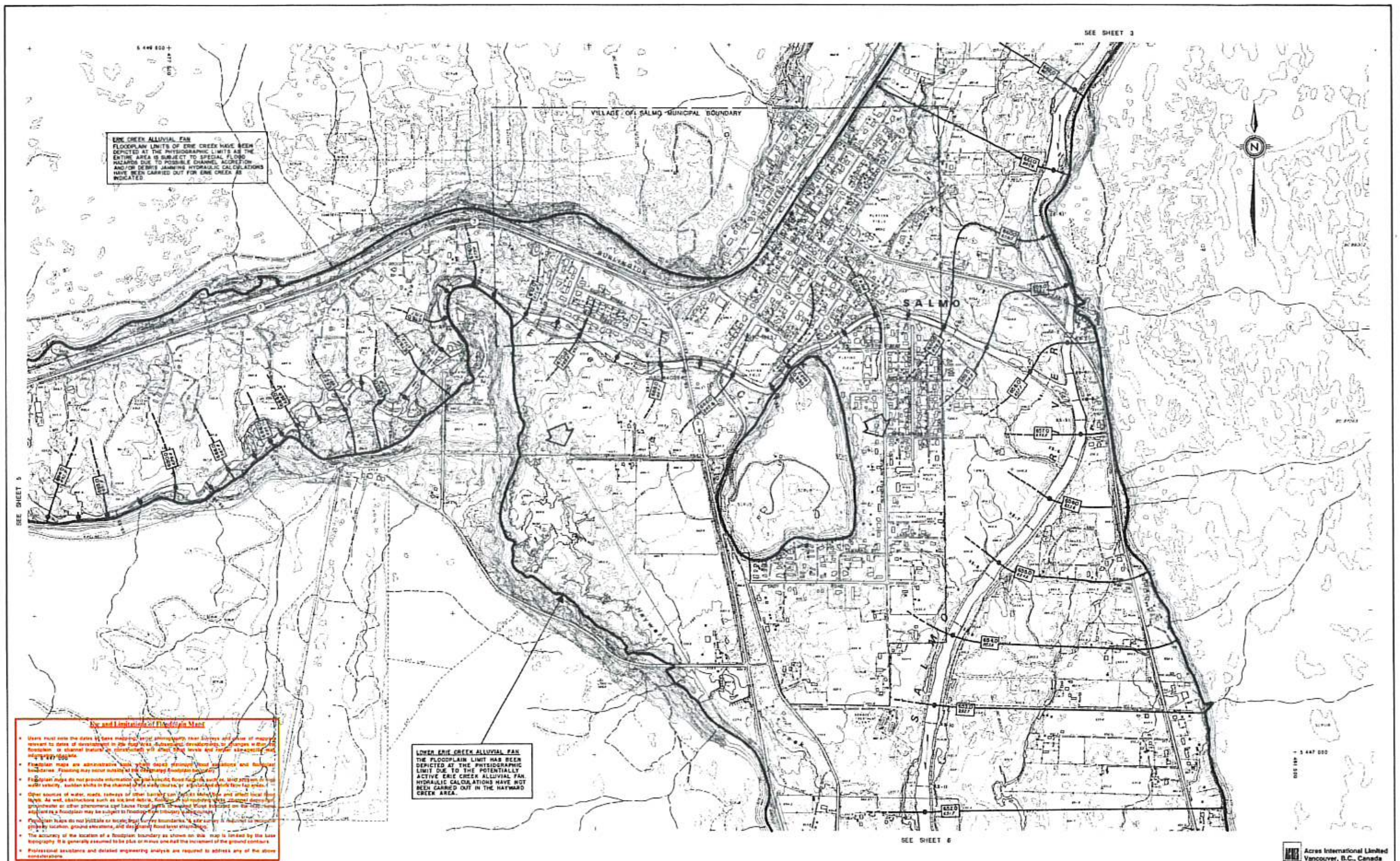
Appendix B

Area Maps

Aquifer Protection Development Permit Area
Land Use Designations
Floodplain Mapping

12.9. Schedule J: Aquifer Protection Development Permit Area





Acres International Limited
Vancouver, B.C., Canada

NOTES	FLOODPLAIN DATA	LEGEND	KEY MAP	REVISIONS
Produced by: Acres International Limited; Survey; Mapping	1.–9.	DESIGNATED FLOODPLAIN LIMIT; FLOOD LEVEL (Freeboard included) 200 Year Frequency; 20 Year Frequency; (METRES G.S.C. DATUM)		DESCRIPTION / DATE

Issue of mapping date: SEPT. 30, 1991

Drawn: T. E.
Checked: M.N.-P.
River survey: T. M. D.
Designed: D. D.

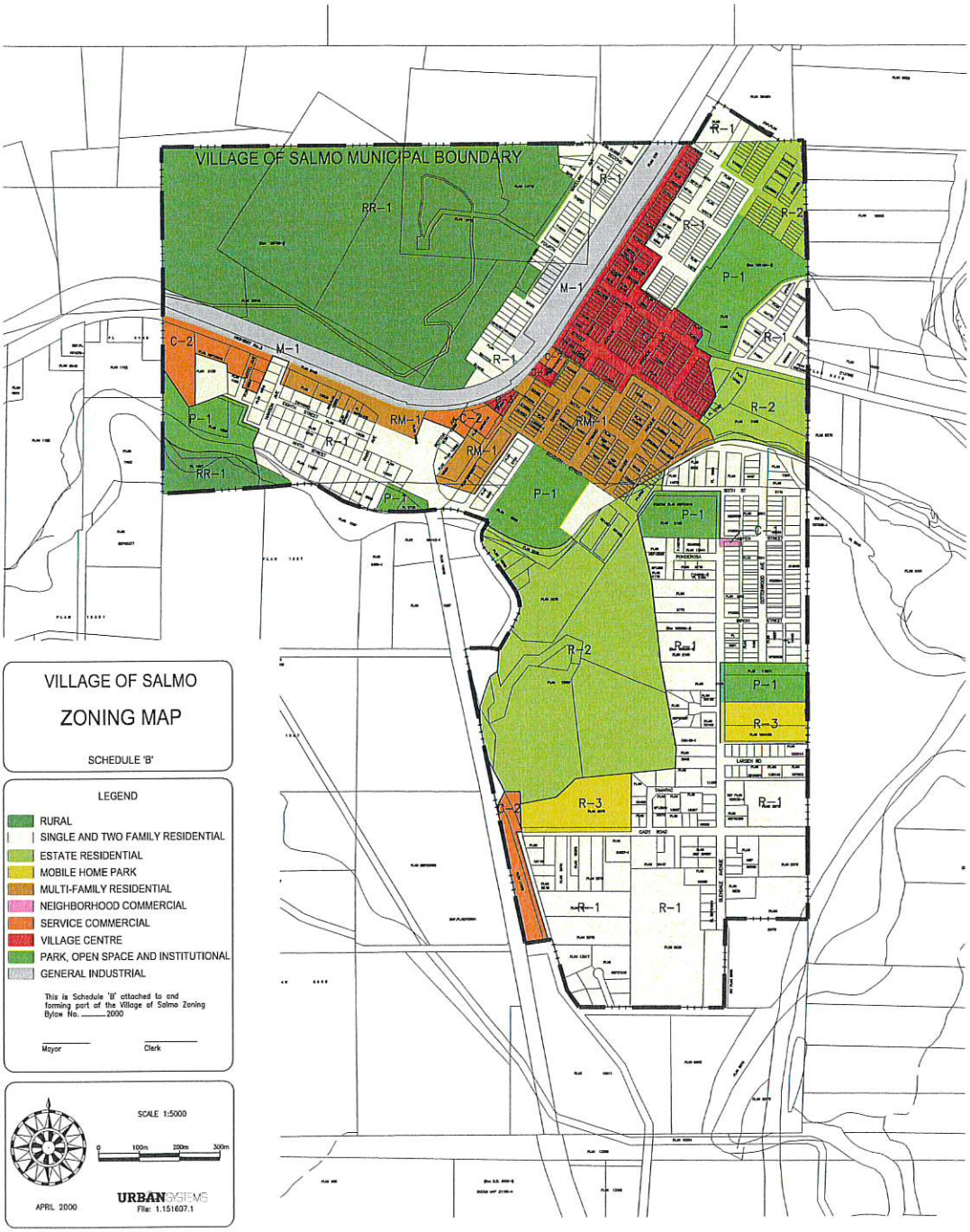
FLOODPLAIN MAPPING
SALMO RIVER
YMIR TO SOUTH SALMO RIVER
(Including Erie Creek)

100m 0 100 200 300 400 500m
Scale in metres

Engineer / Recommended / Approved

File No. 33-0200-5.2
N.T.S. Map No. 82F/3,6
Scale 1 : 5 000
Negative No.
Drawing No. 90-32-4 Rev.
Sheet 4 of 9

DDfmg



VILLAGE OF SALMO

ZONING MAP

SCHEDULE 'B'

LEGEND

- RURAL
- SINGLE AND TWO FAMILY RESIDENTIAL
- ESTATE RESIDENTIAL
- MOBILE HOME PARK
- MULTI-FAMILY RESIDENTIAL
- NEIGHBORHOOD COMMERCIAL
- SERVICE COMMERCIAL
- VILLAGE CENTRE
- PARK, OPEN SPACE AND INSTITUTIONAL
- GENERAL INDUSTRIAL

This is Schedule 'B' attached to and forming part of the Village of Salmo Zoning Bylaw No. _____ 2000

_____ Mayor

_____ Clerk

SCALE 1:5000

0 100m 200m 300m

APRIL 2000

URBAN SYSTEMS

File: 1.151607.1

Appendix C

Well Logs

Waterline

Golder Associates	CLIENT: Village of Salmo	BORING NUMBER: Salmo Production Well #6, KP Park	Sheet 1 of 3
		LITHOLOGIC LOG	

PROJECT : Village of Salmo Production Well Drilling — LOCATION : Sayward Ave., north of concession stand, west side of KP Park, Salmo, BC

GROUND ELEVATION : ~665 m above sea level — DRILLING CONTRACTOR : JR Drilling, Cranbrook, BC

DRILLING METHOD USED : Dual Air Rotary with Foremost DR24 Drill Rig — LOGGED BY : Garrett Brown

DEPTH TO WATER : 2.38 mbgs (Oct-03-2007) — START: Sep-27-07 — END: Sep-29-07 — TOTAL DEPTH DRILLED : 53.9 mbgs

DEPTH BELOW GROUND SURFACE (m)	SAMPLE INTERVAL (m)	SAMPLE TYPE	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, CONSISTENCY, AND SOIL STRUCTURE	COMMENTS
		All samples are grab samples collected from cuttings returned to the surface.	Brown dry silty top soil for first metre	Started drilling on Sep-27-07 at 15:10
	1.5		SILT (ML)- light brown, dry, loose, powdery silt, with some organic debris (roots); gravel beginning at 2.1 m	Drill and drive temporary 400 mm steel surface casing to 12.5 mbgs
2.5				The production well is located 5.2 m south of the test well
	3.0		SILTY GRAVEL (GM)- greenish brown, damp, loose, fine subangular to subrounded gravel with fine to very coarse sand and silt	First indication of groundwater at 3.0 m
	4.6		SILTY GRAVEL (GM)- as above, only wet and with coarser gravel	Moderately rapid drill rate
5				
	6.1		SANDY GRAVEL (GW)- greenish brown, free water, loose, fine to coarse subangular to subrounded gravel, with fine to very coarse sand and trace of silt	
7.5	7.6		SANDY GRAVEL (GW)- as above	
	9.1		GRAVELLY SAND (SW)- brown, free water, loose, fine to coarse sand with decreasing amount of fine to medium gravel	
10				
	10.7		GRAVELLY SAND (SW)- as above	
	12.2		SAND (SW)- med. brown, free water, loose, fine to medium grained, non-cohesive, trace of fine gravel	End of day at 17:00
12.5				Sep-28-07 at 07:30
	13.7		SAND (SW)- med. brown, free water, loose, fine to medium grained, non-cohesive, no gravel or silt	Lowered 250 mm steel casing (0.375" wall) w/ drive shoe, down inside 400 mm casing to 12.5 mbgs. Began drilling and driving the 250 mm casing, using air to lift cuttings.
15	15.2			Moderately rapid drill rate
				Water production at 5 to 10 USgpm
	16.8			
17.5				
	18.3			
20	19.8			

Golder Associates	PROJECT: Village of Salmo	BORING NUMBER: Salmo Production Well #6, KP Park	Sheet 2 of 3

LITHOLOGIC LOG

PROJECT : Village of Salmo Production Well Drilling
LOCATION : Sayward Ave., north of concession stand, west side of KP Park, Salmo, BC
GROUND ELEVATION : ~665 m above sea level
DRILLING CONTRACTOR : JR Drilling, Cranbrook, BC
DRILLING METHOD USED : Dual Air Rotary with Foremost DR24 Drill Rig
LOGGED BY : Garrett Brown
DEPTH TO WATER : 2.38 mbgs (Oct-03-2007)
START: Sep-27-07 END: Sep-29-07
TOTAL DEPTH DRILLED : 53.9 mbgs

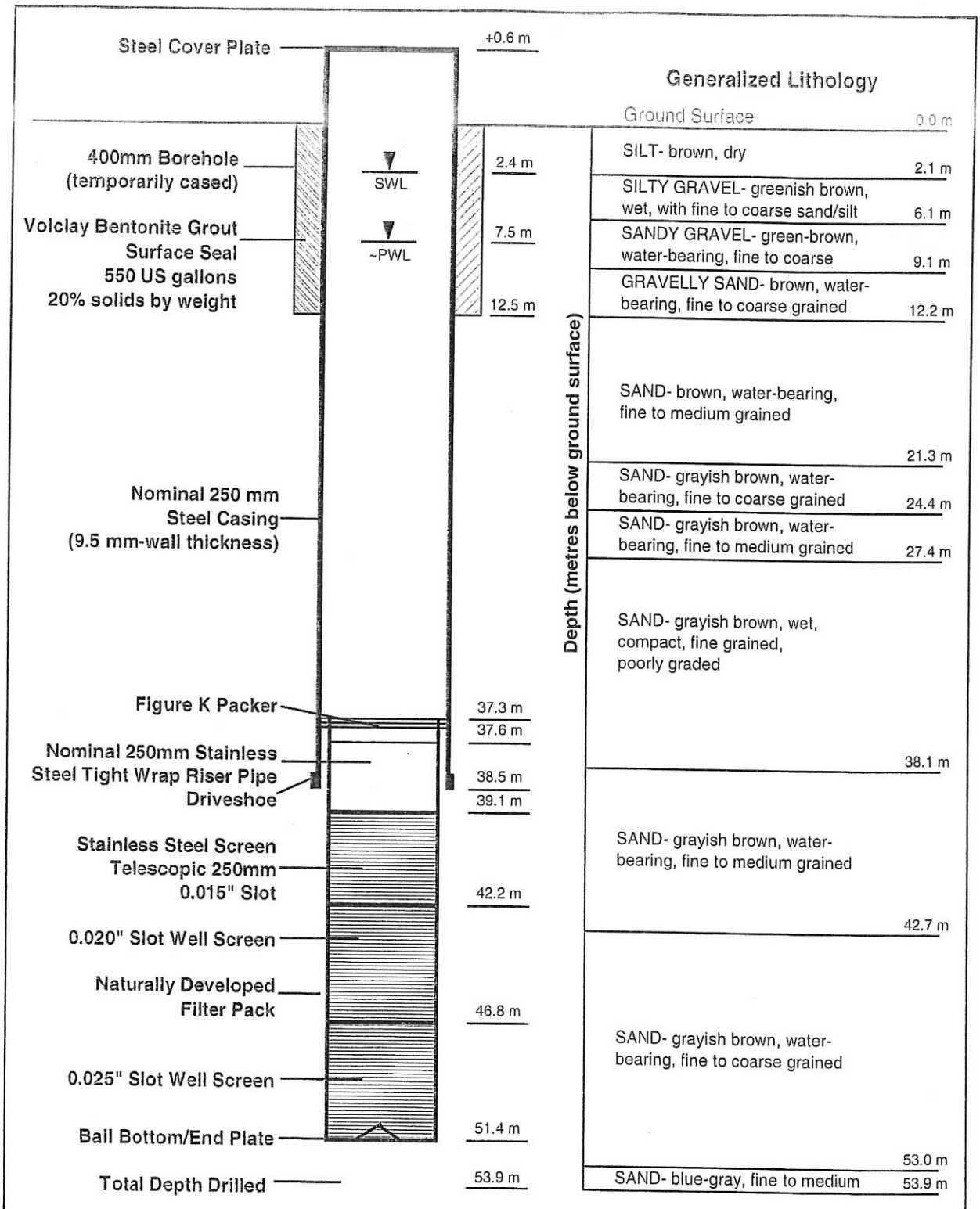
DEPTH BELOW GROUND SURFACE (m)	SAMPLE INTERVAL (m)	SAMPLE TYPE	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, CONSISTENCY, AND SOIL STRUCTURE	COMMENTS
	21.3	All samples are grab samples collected from cuttings returned to the surface.	SAND (SW)- grayish brown, free water, loose, fine to coarse grained, non-cohesive, no gravel or silt	Moderately rapid drill rate Water production at 10 to 20 USgpm
22.5	22.9		SAND (SW)- as above	
	24.4		SAND (SW)- grayish brown, free water, loose, fine to medium grained, non-cohesive, no gravel or silt	Water production at ~10 USgpm
25	25.9		SAND (SW)- as above	
27.5	27.4		SAND (SP)- grayish brown, free water, compact, fine grained, poorly graded, non-cohesive, trace of silt	Water production at 5 to 10 USgpm
	29.0			
30	30.5			Water production ceases
	32.0			
32.5	33.5			
35	35.1			
	36.6			
37.5	38.1		SAND (SW)- grayish brown, free water, loose, fine to medium grained, non-cohesive, no gravel or silt	Water production at ~5 USgpm
	39.6		SAND (SW)- as above	Water production at 5 to 10 USgpm
40				

Golder Associates	PROJECT: Village of Salmo	BORING NUMBER: Salmo Production Well #6, KP Park	Sheet 3 of 3

LITHOLOGIC LOG

PROJECT : Village of Salmo Production Well Drilling
LOCATION : Sayward Ave., north of concession stand, west side of KP Park, Salmo, BC
GROUND ELEVATION : ~665 m above sea level
DRILLING CONTRACTOR : JR Drilling, Cranbrook, BC
DRILLING METHOD USED : Dual Air Rotary with Foremost DR24 Drill Rig
LOGGED BY : Garrett Brown
DEPTH TO WATER : 2.38 mbgs (Oct-03-2007)
START: Sep-27-07 END: Sep-29-07
TOTAL DEPTH DRILLED : 53.9 mbgs

DEPTH BELOW GROUND SURFACE (m)	SAMPLE INTERVAL (m)	SAMPLE TYPE	CORE DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, CONSISTENCY, AND SOIL STRUCTURE	COMMENTS
	41.1	All samples are grab samples collected from cuttings returned to the surface.	SAND (SW)- grayish brown, free water, loose, fine to medium grained, non-cohesive, no gravel or silt	Moderately rapid drill rate
42.5	42.7		SAND (SW)- grayish brown, free water, loose, fine to coarse grained, non-cohesive, no gravel or silt	Water production at 10 to 20 USgpm
	44.2			
45	45.7			
	47.2			
47.5	48.8			
50	50.3			
	51.8			
52.5	53.0		SAND (SW)- gray to blue-gray, free water, loose, fine to medium grained, non-cohesive, no gravel or silt	Color change to blue-gray
	53.9		SAND (SW)- as above TOTAL DEPTH DRILLED= 53.9 mbgs	
55			Sept-30-07- Completed well with nominal 250-mm-diameter telescopic stainless steel well screen. Figure K packer w/ tight wrap riser- 37.3 to 39.1 mbgs 15-slot well screen- 39.1 to 42.2 mbgs	
57.5			20-slot well screen- 42.2 to 46.8 mbgs 25-slot well screen- 46.8 to 51.4 mbgs	
60			Sep-30-07 to Oct-3-07- Developed well (natural filter pack) using air lift pumping and surging techniques.	



Drawing not to scale
Constructed Sept 30, 2007

Golder Associates

As-built Well Construction
Salmo Production Well #6
Sayward Ave, KP Park, Salmo, BC

Design: WGB	Check: NS	Figure 2

N:\Active\8000\2007 Projects\07-1480-0060 Salmo Production Well\Reporting\Figure 2 As-built Well Construction.xls

Village of Salmo, British Columbia	Source Water Protection Plan	BOREHOLE: Glendale Well
INSTALLED BY: Unknown		PROJECT #: 2640-17
DRILL TYPE: Unknown	EAST: 480043.8812 NORTH: 5448165.6922	ELEVATION: 657.00 (masl)

FILL TYPE: Backfill | Bentonite | Grout | Open Hole | Cement | Sand | Slough | Unknown

SAMPLE TYPE: Shelby Tube | No Recovery | Split Spoon | Disturbed | Dynamic Cone | Core | Grab Sample

Depth (m)	SOIL DESCRIPTION	WELL INSTALLATION (Casing diam. = 0.020 m)
2	**Note**: Well completion infomation was obtained from the *Village of Salmo Community Water Wells Management Strategy* (Golder, 2005). In the absence of the original drilling or well completion report, this well log was used as a visual representation of the available well construction details.	
4		Static Water Level = 4.0 mbgl
6		
8		
10		
12		
14		Casing Diameter = 200 mm
16		
18		
20		
22		
24		
26		
28		
30		
32		
34		
36		Top of Screen at 36.8 mbgl
38		
40		Unconfined Aquifer
42		Drillers Estimated Well Yield = 2833.92 m3/d
44		
46		Bottom of Screen at 46.0 mbgl
	END OF HOLE AT 46.0 m	
48		

Waterline Resources Inc.	TYPE: Water Supply Well	COMPLETION DEPTH: 46.0 (m)
	LOGGED BY:	COMPLETION DATE: 1997
	CHECKED BY:	Date printed: 18-Oct-2017

Appendix D

Conditional Water Licence

Waterline

Province of British Columbia
Water Sustainability Act

CONDITIONAL WATER LICENCE

The Village of Salmo is hereby authorized to divert, use and store water as follows:

a) The aquifer on which the rights are granted is comprised of unconsolidated materials within the following watersheds: LARL - Erie Creek at a depth of 151 feet below surface and LARL - Salmo River at a depth of 169 feet below surface.

b) The points of well diversion (WTN 117158 & WTN 117160) are located as shown on the attached plan.

c) The date from which this licence shall have precedence is October 1, 1957.

d) The purpose for which this licence is issued is Waterworks: local provider.

e) The maximum quantity of water which may be diverted is 380,270 cubic meters per year cubic provided the maximum daily diversion does not exceed 1,632 cubic meters.

f) The period of the year during which the water may be used is the whole year.

g) The land upon which the water is to be used and to which this licence is appurtenant is all the land within the boundaries of the Village of Salmo.

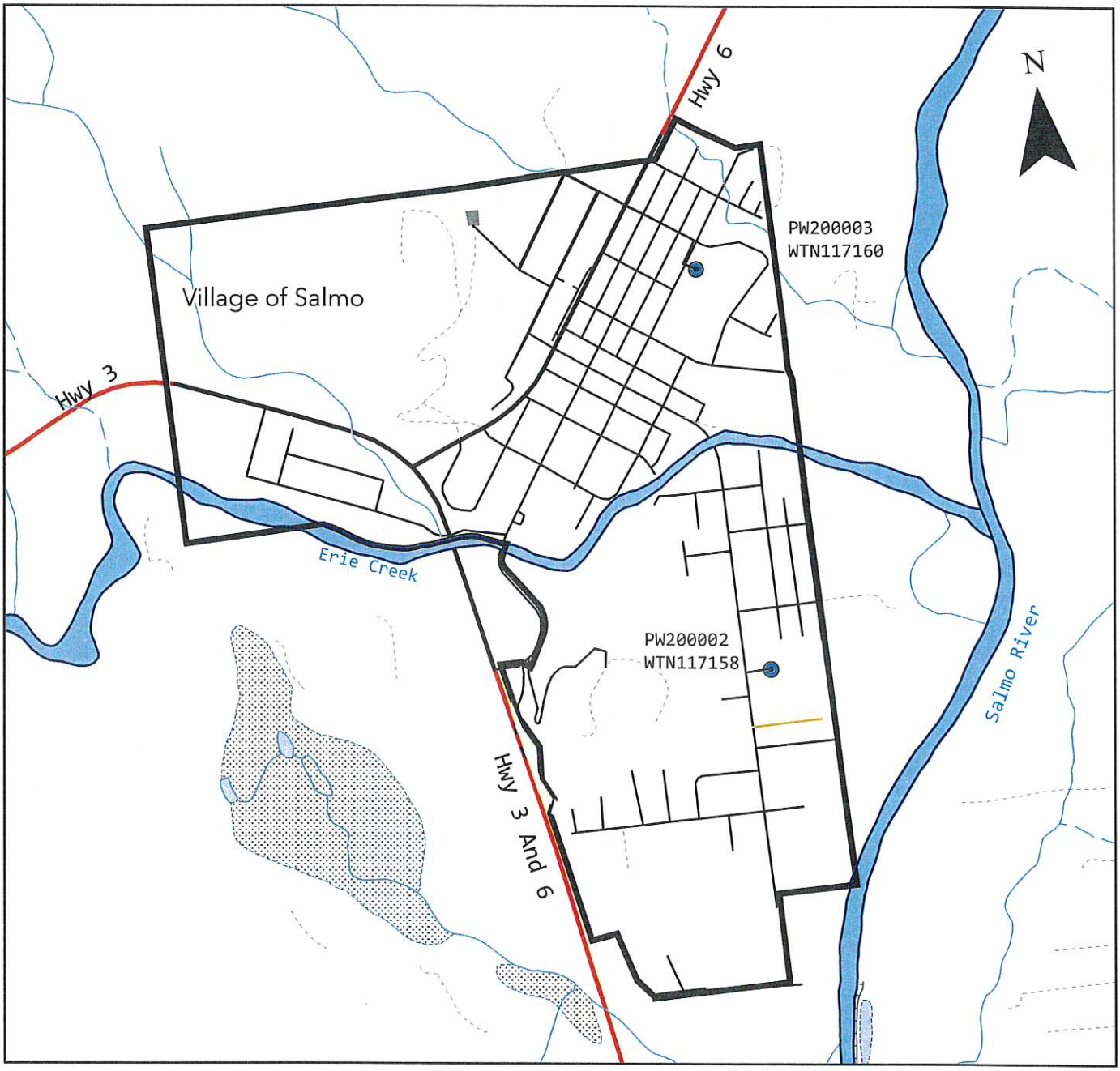
h) The authorized works are two wells, reservoir and a distribution system.

i) The construction of the said works has been completed and the water is being beneficially used. The licensee shall continue to make regular beneficial use of the water in a manner authorized herein.

j) The licensee shall retain flow meter records for inspection upon request by the Water Manager or an Engineer under the *Water Sustainability Act*.

Johanna Wick
Assistant Water Manager

BRITISH COLUMBIA



Water District: Nelson
Precinct: Ymir

LEGEND

- Point of Diversion
- Distribution System
- Reservoir

0 0.35 0.7 1.05 1.4
Kilometers

Scale: 1:15,000
Map Number: 82.F.014.2.4

Signature: [signature]
Date: April 19, 2024

Conditional Licence: 502393
Ground Water File: 20003518
Point of Well Diversion: PW200002, PW200003
Well Tag Number: 117158, 117160

Appendix E

Well Photos

Photograph E1 (Right): Looking down and southeast at the Sayward Wellhead (2024). The well is located behind a locked gate and the well is capped. **Photograph E2 (Left):** Looking at the Sayward Wellhead BC Well Identification Plate Number (2024).

Photograph E3: Looking down and towards the southeast at the Glendale Wellhead (2024). The well is located behind a locked gate and the well is capped.

Appendix F

Water Quality Results

Table F1: General Chemistry, Major Ions, and Other Parameters – Salmo Water Supply Wells
Table F2: Metals – Salmo Water Supply Wells
Table F3: Microbiology – Salmo Water Supply Wells and Test Sites

Table F1: General Chemistry, Major Ions, and Other Parameters - Salmo Water Supply Wells

Sample Location	Units	Guidelines		Glendale Well	Sayward Well	Sayward Well
Sample Date		GCDWQ MAC	GCDWQ AO	2015-02-03 11:00	2007-10-18 00:00	2015-02-03 11:00
Lab ID				5020223-02	710190088	5020223-01
General Chemistry						
Colour	TCU	-	15	<5	<5	<5
Alkalinity, Total (as $CaCO_3$)	mg/L	-	-	76	102	99
Conductivity (EC)	µS/cm	-	-	189	229	240
Hardness, Total (as $CaCO_3$)	mg/L	-	-	87.6	107	116
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	<1	-
Gross Alpha Activity	Bq/L	-	-	-	<0.06	-
Gross Beta Activity	Bq/L	-	-	-	0.09	-
Total Dissolved Solids-Calculated	mg/L	-	500	100	-	131
Total Dissolved Solids-Gravimetric	mg/L	-	500	-	139	-
Total Organic Carbon (TOC)	mg/L	-	-	-	2.3	-
Transmittance, UV (254 nm)		-	-	98.9	-	99
Turbidity	NTU	-	0.1	0.3	0.12	0.6
pH		-	7-10.5	7.64	7.87	7.86
Major Ions						
Ammonia (N)	mg/L	-	-	-	<0.01	-
Calcium (Ca)-Dissolved	mg/L	-	-	-	38.5	-
Chloride (Cl)	mg/L	-	250	3.06	2.54	2.16
Fluoride (F)	mg/L	1.5	-	<0.01	<0.05	<0.01
Iron (Fe)-Dissolved	mg/L	-	0.3	-	<0.05	-
Magnesium (Mg)-Dissolved	mg/L	-	-	-	3.17	-
Manganese (Mn)-Dissolved	mg/L	0.12	0.02	-	0.006	-
Nitrate-N	mg/L	10	-	0.134	0.11	0.142
Nitrite-N	mg/L	1	-	<0.01	<0.002	<0.01
Nitrogen-Total (as N)	mg/L	-	-	-	<0.2	-
Organic Nitrogen-Total (as N)	mg/L	-	-	-	<0.2	-
Orthophosphate (P)	mg/L	-	-	-	<0.02	-
Potassium (K)-Dissolved	mg/L	-	-	-	1.6	-
Sodium (Na)-Dissolved	mg/L	-	200	-	2.36	-
Sulphate (SO_4)	mg/L	-	500	13.6	19.7	20
Sulphide (as S)	mg/L	-	-	-	<0.05	-
Total Kjeldahl Nitrogen	mg/L	-	-	-	<0.2	-
Other Organics						
Cyanide (CN)-Total	mg/L	0.2	-	<0.01	<0.01	<0.01

Notes:

GCDWQ represents the Guidelines for Canadian Drinking Water Quality, Summary Table (Health Canada, September 2022). Guidelines are health based and listed as maximum acceptable concentrations (MAC), or based on aesthetic considerations and listed as aesthetic objectives (AO).

Red highlight - Value exceeds the Maximum Allowable Concentration (MAC).

Aqua highlight - Value exceeds the Aesthetic Objective (AO).

TCU means True Colour Unit, **mg/L** means milligrams per litre, **µS/cm** means micro Siemens per centimeter, Bq/L means becquerel per litre, **NTU** means Nephelometric Turbidity Unit

Table F2: Metals - Salmo Water Supply Wells

Sample Location	Units	Guidelines		Glendale Well	Sayward Well	Sayward Well
Sample Date		GCDWQ MAC	GCDWQ AO	2015-02-03 11:00	2007-10-18 00:00	2015-02-03 11:00
Lab ID				5020223-02	710190088	5020223-01
Metals						
Aluminum (Al)-Dissolved	mg/L	2.9	0.1	-	<0.005	-
Antimony (Sb)-Dissolved	mg/L	0.006	-	-	<0.001	-
Arsenic (As)-Dissolved	mg/L	0.01	-	-	<0.001	-
Barium (Ba)-Dissolved	mg/L	2	-	-	0.027	-
Beryllium (Be)-Dissolved	mg/L	-	-	-	<0.001	-
Bismuth (Bi)-Dissolved	mg/L	-	-	-	<0.001	-
Boron (B)-Dissolved	mg/L	5	-	-	<0.05	-
Cadmium (Cd)-Dissolved	mg/L	0.007	-	-	<0.0002	-
Chromium (Cr)-Dissolved	mg/L	0.05	-	-	<0.001	-
Cobalt (Co)-Dissolved	mg/L	-	-	-	<0.001	-
Copper (Cu)-Dissolved	mg/L	2	1	-	0.001	-
Lead (Pb)-Dissolved	mg/L	0.005	-	-	<0.001	-
Lithium (Li)-Dissolved	mg/L	-	-	-	0.001	-
Mercury (Hg)-Dissolved	mg/L	0.001	-	-	<0.00002	-
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	0.0011	-
Nickel (Ni)-Dissolved	mg/L	-	-	-	<0.001	-
Phosphorus (P)-Dissolved	mg/L	-	-	-	<0.15	-
Selenium (Se)-Dissolved	mg/L	0.05	-	-	0.002	-
Silicon (Si)-Dissolved	mg/L	-	-	-	4.8	-
Silver (Ag)-Dissolved	mg/L	-	-	-	<0.00025	-
Strontium (Sr)-Dissolved	mg/L	7	-	-	0.19	-
Tellurium (Te)-Dissolved	mg/L	-	-	-	<0.001	-
Thallium (Tl)-Dissolved	mg/L	-	-	-	<0.0001	-
Thorium (Th)-Dissolved	mg/L	-	-	-	<0.0005	-
Tin (Sn)-Dissolved	mg/L	-	-	-	<0.001	-
Titanium (Ti)-Dissolved	mg/L	-	-	-	<0.001	-
Uranium (U)-Dissolved	mg/L	0.02	-	-	0.0008	-
Vanadium (V)-Dissolved	mg/L	-	-	-	0.001	-
Zinc (Zn)-Dissolved	mg/L	-	5	-	<0.005	-
Zirconium (Zr)-Dissolved	mg/L	-	-	-	<0.01	-
Aluminum (Al)-Total	mg/L	2.9	0.1	<0.05	<0.005	<0.05
Antimony (Sb)-Total	mg/L	0.006	-	<0.001	<0.001	<0.001
Arsenic (As)-Total	mg/L	0.01	-	<0.005	<0.001	<0.005
Barium (Ba)-Total	mg/L	2	-	<0.05	0.026	<0.05
Beryllium (Be)-Total	mg/L	-	-	<0.001	<0.001	<0.001
Bismuth (Bi)-Total	mg/L	-	-	-	<0.001	-
Boron (B)-Total	mg/L	5	-	<0.04	<0.05	<0.04
Cadmium (Cd)-Total	mg/L	0.007	-	<0.0001	<0.0002	<0.0001
Calcium (Ca)-Total	mg/L	-	-	30.4	37.6	41.1
Chromium (Cr)-Total	mg/L	0.05	-	<0.005	<0.001	<0.005
Cobalt (Co)-Total	mg/L	-	-	<0.0005	<0.001	<0.0005
Copper (Cu)-Total	mg/L	2	1	0.003	<0.001	0.011
Iron (Fe)-Total	mg/L	-	0.3	<0.1	<0.05	<0.1
Lead (Pb)-Total	mg/L	0.005	-	<0.001	<0.001	0.002
Lithium (Li)-Total	mg/L	-	-	-	0.001	-
Magnesium (Mg)-Total	mg/L	-	-	2.8	3.1	3.2
Manganese (Mn)-Total	mg/L	0.12	0.02	<0.002	0.005	0.006
Mercury (Hg)-Total	mg/L	0.001	-	<0.00002	<0.00002	<0.00002
Molybdenum (Mo)-Total	mg/L	-	-	0.003	0.0011	0.002
Nickel (Ni)-Total	mg/L	-	-	<0.002	<0.001	<0.002
Phosphorus (P)-Total	mg/L	-	-	<0.2	<0.15	<0.2
Potassium (K)-Total	mg/L	-	-	1.2	1.5	1.5
Selenium (Se)-Total	mg/L	0.05	-	<0.005	0.002	<0.005
Silicon (Si)-Total	mg/L	-	-	<5	4.6	<5

Table F2: Metals - Salmo Water Supply Wells

Sample Location	Units	Guidelines		Glendale Well	Sayward Well	Sayward Well
Sample Date		GCDWQ MAC	GCDWQ AO	2015-02-03 11:00	2007-10-18 00:00	2015-02-03 11:00
Lab ID				5020223-02	710190088	5020223-01
Silver (Ag)-Total	mg/L	-	-	<0.0005	<0.00025	<0.0005
Sodium (Na)-Total	mg/L	-	200	2.5	2.31	2.8
Strontium (Sr)-Total	mg/L	7	-	-	0.16	-
Tellurium (Te)-Total	mg/L	-	-	-	<0.001	-
Thallium (Tl)-Total	mg/L	-	-	-	<0.0001	-
Thorium (Th)-Total	mg/L	-	-	-	<0.0005	-
Tin (Sn)-Total	mg/L	-	-	-	<0.001	-
Titanium (Ti)-Total	mg/L	-	-	-	<0.001	-
Uranium (U)-Total	mg/L	0.02	-	0.0007	0.0008	0.001
Vanadium (V)-Total	mg/L	-	-	<0.01	0.001	<0.01
Zinc (Zn)-Total	mg/L	-	5	<0.04	<0.005	<0.04
Zirconium (Zr)-Total	mg/L	-	-	-	<0.01	-

Notes:
GCDWQ represents the Guidelines for Canadian Drinking Water Quality, Summary Table (Health Canada, September 2022). Guidelines are health based and listed as maximum acceptable concentrations (MAC), or based on aesthetic considerations and listed as aesthetic objectives (AO).

Red highlight - Value exceeds the Maximum Allowable Concentration (MAC).

Aqua highlight - Value exceeds the Aesthetic Objective (AO).

mg/L means milligrams per litre

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		**0**	**0**
Sayward Well	2007-10-18	<2	<2
Site 1: Village Office	2016-01-05	<1	<1
Site 1: Village Office	2016-02-02	<1	<1
Site 1: Village Office	2016-03-15	<1	<1
Site 1: Village Office	2016-03-29	<1	<1
Site 1: Village Office	2016-06-07	<1	<1
Site 1: Village Office	2016-06-28	<1	<1
Site 1: Village Office	2016-08-02	<1	<1
Site 1: Village Office	2016-08-30	<1	<1
Site 1: Village Office	2016-09-27	<1	<1
Site 1: Village Office	2016-11-01	<1	<1
Site 1: Village Office	2016-12-13	<1	<1
Site 1: Village Office	2017-01-31	<1	<1
Site 1: Village Office	2017-02-27	<1	<1
Site 1: Village Office	2017-04-03	<1	<1
Site 1: Village Office	2017-05-16	<1	<1
Site 1: Village Office	2017-05-23	<1	<1
Site 1: Village Office	2017-06-27	<1	<1
Site 1: Village Office	2017-07-31	<1	<1
Site 1: Village Office	2018-01-03	<1	<1
Site 1: Village Office	2018-02-06	<1	<1
Site 1: Village Office	2018-02-15	<1	<1
Site 1: Village Office	2018-03-27	<1	<1
Site 1: Village Office	2018-04-17	<1	<1
Site 1: Village Office	2018-05-29	<1	<1
Site 1: Village Office	2018-07-03	<1	<1
Site 1: Village Office	2018-08-07	<1	<1
Site 1: Village Office	2018-09-11	<1	<1
Site 1: Village Office	2018-10-16	<1	<1
Site 1: Village Office	2018-10-30	<1	<1
Site 1: Village Office	2018-11-27	<1	<1
Site 1: Village Office	2019-01-15	<1	<1
Site 1: Village Office	2019-02-12	<1	<1
Site 1: Village Office	2019-03-12	<1	<1
Site 1: Village Office	2019-04-09	<1	<1
Site 1: Village Office	2019-05-14	<1	<1
Site 1: Village Office	2019-06-18	<1	<1
Site 1: Village Office	2019-07-16	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		**0**	**0**
Site 1: Village Office	2019-08-06	<1	<1
Site 1: Village Office	2019-09-03	<1	<1
Site 1: Village Office	2019-10-08	<1	<1
Site 1: Village Office	2019-11-12	<1	<1
Site 1: Village Office	2019-12-03	<1	<1
Site 1: Village Office	2020-01-07	<1	<1
Site 1: Village Office	2020-01-21	<1	<1
Site 1: Village Office	2020-03-17	<1	<1
Site 1: Village Office	2020-03-31	<1	<1
Site 1: Village Office	2020-04-14	<1	<1
Site 1: Village Office	2020-04-28	<1	<1
Site 1: Village Office	2020-05-26	<1	<1
Site 1: Village Office	2020-06-09	<1	<1
Site 1: Village Office	2020-07-07	<1	<1
Site 1: Village Office	2020-07-14	<1	<1
Site 1: Village Office	2020-07-28	<1	<1
Site 1: Village Office	2020-08-04	<1	<1
Site 1: Village Office	2020-08-18	<1	<1
Site 1: Village Office	2020-08-25	<1	<1
Site 1: Village Office	2020-09-08	<1	<1
Site 1: Village Office	2020-09-15	<1	<1
Site 1: Village Office	2020-09-29	<1	<1
Site 1: Village Office	2020-10-27	<1	<1
Site 1: Village Office	2020-11-12	<1	<1
Site 1: Village Office	2020-12-01	<1	<1
Site 1: Village Office	2020-12-15	<1	<1
Site 1: Village Office	2021-01-12	<1	<1
Site 1: Village Office	2021-02-16	<1	<1
Site 1: Village Office	2021-03-02	<1	<1
Site 1: Village Office	2021-03-16	<1	<1
Site 1: Village Office	2021-03-30	<1	<1
Site 1: Village Office	2021-04-20	<1	<1
Site 1: Village Office	2021-05-04	<1	<1
Site 1: Village Office	2021-05-18	<1	<1
Site 1: Village Office	2021-06-29	<1	<1
Site 1: Village Office	2021-07-13	<1	<1
Site 1: Village Office	2021-07-27	<1	<1
Site 1: Village Office	2021-08-10	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		**0**	**0**
Site 1: Village Office	2021-08-17	<1	<1
Site 1: Village Office	2021-09-14	<1	<1
Site 1: Village Office	2021-10-26	<1	<1
Site 1: Village Office	2021-11-23	<1	<1
Site 1: Village Office	2021-12-07	<1	<1
Site 1: Village Office	2022-01-04	<1	<1
Site 1: Village Office	2022-01-25	<1	<1
Site 1: Village Office	2022-02-22	<1	<1
Site 1: Village Office	2022-03-15	<1	<1
Site 1: Village Office	2022-03-29	<1	<1
Site 1: Village Office	2022-04-26	<1	<1
Site 1: Village Office	2022-06-07	<1	<1
Site 1: Village Office	2022-06-28	<1	<1
Site 1: Village Office	2022-08-09	<1	<1
Site 1: Village Office	2022-09-13	<1	<1
Site 1: Village Office	2022-09-27	<1	<1
Site 1: Village Office	2022-11-01	<1	<1
Site 1: Village Office	2022-11-22	<1	<1
Site 1: Village Office	2022-12-06	<1	<1
Site 1: Village Office	2023-01-24	<1	<1
Site 1: Village Office	2023-02-14	<1	<1
Site 1: Village Office	2023-03-14	<1	<1
Site 1: Village Office	2023-04-04	<1	<1
Site 1: Village Office	2023-04-11	<1	<1
Site 1: Village Office	2023-05-16	<1	<1
Site 1: Village Office	2023-06-27	<1	<1
Site 1: Village Office	2023-07-18	<1	<1
Site 1: Village Office	2023-07-25	<1	<1
Site 1: Village Office	2023-08-08	<1	<1
Site 1: Village Office	2023-09-12	<1	<1
Site 1: Village Office	2023-09-15	<1	<1
Site 1: Village Office	2023-10-10	<1	<1
Site 1: Village Office	2023-11-07	<1	<1
Site 1: Village Office	2023-12-05	<1	<1
Site 1: Village Office	2023-12-19	<1	<1
Site 1: Village Office	2024-01-09	<1	<1
Site 1: Village Office	2024-01-23	<1	<1
Site 1: Village Office	2024-02-06	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		0	0
Site 1: Village Office	2024-02-27	<1	<1
Site 1: Village Office	2024-03-19	<1	<1
Site 2: Village Shop	2016-01-12	<1	<1
Site 2: Village Shop	2016-02-09	<1	<1
Site 2: Village Shop	2016-03-08	<1	<1
Site 2: Village Shop	2016-04-19	<1	<1
Site 2: Village Shop	2016-07-05	<1	<1
Site 2: Village Shop	2016-07-26	<1	<1
Site 2: Village Shop	2016-08-09	<1	<1
Site 2: Village Shop	2016-09-06	<1	<1
Site 2: Village Shop	2016-10-04	<1	<1
Site 2: Village Shop	2016-11-08	<1	<1
Site 2: Village Shop	2016-12-06	<1	<1
Site 2: Village Shop	2017-01-17	<1	<1
Site 2: Village Shop	2017-02-06	<1	<1
Site 2: Village Shop	2017-03-13	<1	<1
Site 2: Village Shop	2017-04-24	<1	<1
Site 2: Village Shop	2017-05-01	<1	<1
Site 2: Village Shop	2017-05-29	<1	<1
Site 2: Village Shop	2017-07-10	<1	<1
Site 2: Village Shop	2018-01-09	<1	<1
Site 2: Village Shop	2018-02-15	<1	<1
Site 2: Village Shop	2018-03-20	<1	<1
Site 2: Village Shop	2018-05-01	<1	<1
Site 2: Village Shop	2018-06-05	<1	<1
Site 2: Village Shop	2018-07-10	<1	<1
Site 2: Village Shop	2018-08-14	<1	<1
Site 2: Village Shop	2018-09-18	<1	3
Site 2: Village Shop	2018-09-20	<1	<1
Site 2: Village Shop	2018-10-23	<1	<1
Site 2: Village Shop	2018-12-04	<1	<1
Site 2: Village Shop	2019-01-22	<1	<1
Site 2: Village Shop	2019-02-26	<1	<1
Site 2: Village Shop	2019-03-19	<1	<1
Site 2: Village Shop	2019-04-16	<1	<1
Site 2: Village Shop	2019-05-21	<1	<1
Site 2: Village Shop	2019-06-25	<1	<1
Site 2: Village Shop	2019-07-30	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		**0**	**0**
Site 2: Village Shop	2019-09-10	<1	<1
Site 2: Village Shop	2019-10-15	<1	<1
Site 2: Village Shop	2019-11-19	<1	<1
Site 2: Village Shop	2020-01-14	<1	<1
Site 2: Village Shop	2020-02-11	<1	<1
Site 2: Village Shop	2020-03-03	<1	<1
Site 2: Village Shop	2020-03-24	<1	<1
Site 2: Village Shop	2020-04-07	<1	<1
Site 2: Village Shop	2020-04-21	<1	<1
Site 2: Village Shop	2020-05-05	<1	<1
Site 2: Village Shop	2020-05-12	<1	<1
Site 2: Village Shop	2020-05-19	<1	<1
Site 2: Village Shop	2020-06-02	<1	<1
Site 2: Village Shop	2020-06-16	<1	<1
Site 2: Village Shop	2020-06-23	<1	<1
Site 2: Village Shop	2020-06-29	<1	<1
Site 2: Village Shop	2020-07-21	<1	<1
Site 2: Village Shop	2020-08-11	<1	<1
Site 2: Village Shop	2020-09-01	<1	<1
Site 2: Village Shop	2020-10-13	<1	<1
Site 2: Village Shop	2020-10-20	<1	<1
Site 2: Village Shop	2020-11-03	<1	<1
Site 2: Village Shop	2020-11-17	<1	<1
Site 2: Village Shop	2020-12-08	<1	<1
Site 2: Village Shop	2020-12-22	<1	<1
Site 2: Village Shop	2021-01-05	<1	<1
Site 2: Village Shop	2021-01-19	<1	<1
Site 2: Village Shop	2021-02-09	<1	<1
Site 2: Village Shop	2021-02-23	<1	<1
Site 2: Village Shop	2021-03-09	<1	<1
Site 2: Village Shop	2021-03-23	<1	<1
Site 2: Village Shop	2021-04-06	<1	<1
Site 2: Village Shop	2021-04-27	<1	<1
Site 2: Village Shop	2021-06-01	<1	<1
Site 2: Village Shop	2021-06-15	<1	<1
Site 2: Village Shop	2021-08-24	<1	<1
Site 2: Village Shop	2021-09-28	<1	<1
Site 2: Village Shop	2021-10-05	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		**0**	**0**
Site 2: Village Shop	2021-11-02	<1	<1
Site 2: Village Shop	2021-12-14	<1	<1
Site 2: Village Shop	2022-01-11	<1	<1
Site 2: Village Shop	2022-02-01	<1	<1
Site 2: Village Shop	2022-03-01	<1	<1
Site 2: Village Shop	2022-03-08	<1	<1
Site 2: Village Shop	2022-04-05	<1	<1
Site 2: Village Shop	2022-05-03	<1	<1
Site 2: Village Shop	2022-05-10	<1	<1
Site 2: Village Shop	2022-06-14	<1	<1
Site 2: Village Shop	2022-07-12	<1	<1
Site 2: Village Shop	2022-08-16	<1	<1
Site 2: Village Shop	2022-10-04	<1	<1
Site 2: Village Shop	2022-11-08	<1	<1
Site 2: Village Shop	2022-12-13	<1	<1
Site 2: Village Shop	2023-01-03	<1	<1
Site 2: Village Shop	2023-01-17	<1	<1
Site 2: Village Shop	2023-02-21	<1	<1
Site 2: Village Shop	2023-03-07	<1	<1
Site 2: Village Shop	2023-03-21	<1	<1
Site 2: Village Shop	2023-04-18	<1	<1
Site 2: Village Shop	2023-05-23	<1	<1
Site 2: Village Shop	2023-06-06	<1	<1
Site 2: Village Shop	2023-07-04	<1	<1
Site 2: Village Shop	2023-08-15	<1	<1
Site 2: Village Shop	2023-08-22	<1	<1
Site 2: Village Shop	2023-09-19	<1	<1
Site 2: Village Shop	2023-10-17	<1	<1
Site 2: Village Shop	2023-10-24	<1	<1
Site 2: Village Shop	2023-11-14	<1	<1
Site 2: Village Shop	2023-11-28	<1	<1
Site 2: Village Shop	2024-01-16	<1	<1
Site 2: Village Shop	2024-02-13	<1	<1
Site 2: Village Shop	2024-03-12	<1	<1
Site 3: Sal-Crest Motel	2016-01-26	<1	<1
Site 3: Sal-Crest Motel	2016-03-01	<1	<1
Site 3: Sal-Crest Motel	2016-04-26	<1	<1
Site 3: Sal-Crest Motel	2016-07-19	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		**0**	**0**
Site 3: Sal-Crest Motel	2016-08-16	<1	<1
Site 3: Sal-Crest Motel	2016-09-13	<1	<1
Site 3: Sal-Crest Motel	2016-10-11	<1	<1
Site 3: Sal-Crest Motel	2016-11-15	<1	<1
Site 3: Sal-Crest Motel	2017-01-03	<1	<1
Site 3: Sal-Crest Motel	2017-02-14	<1	<1
Site 3: Sal-Crest Motel	2017-03-20	<1	<1
Site 3: Sal-Crest Motel	2017-05-01	<1	<1
Site 3: Sal-Crest Motel	2017-06-05	<1	<1
Site 3: Sal-Crest Motel	2017-06-12	<1	1
Site 3: Sal-Crest Motel	2017-07-17	<1	<1
Site 3: Sal-Crest Motel	2018-01-30	<1	<1
Site 3: Sal-Crest Motel	2018-02-27	<1	<1
Site 3: Sal-Crest Motel	2018-04-03	<1	<1
Site 3: Sal-Crest Motel	2018-05-08	<1	<1
Site 3: Sal-Crest Motel	2018-06-12	<1	<1
Site 3: Sal-Crest Motel	2018-07-17	<1	<1
Site 3: Sal-Crest Motel	2018-08-21	<1	<1
Site 3: Sal-Crest Motel	2018-09-25	<1	<1
Site 3: Sal-Crest Motel	2018-11-06	<1	<1
Site 3: Sal-Crest Motel	2018-12-11	<1	<1
Site 3: Sal-Crest Motel	2019-01-29	<1	<1
Site 3: Sal-Crest Motel	2019-03-05	<1	<1
Site 3: Sal-Crest Motel	2019-03-26	<1	<1
Site 3: Sal-Crest Motel	2019-04-23	<1	<1
Site 3: Sal-Crest Motel	2019-05-28	<1	<1
Site 3: Sal-Crest Motel	2019-07-02	<1	<1
Site 3: Sal-Crest Motel	2019-08-20	<1	<1
Site 3: Sal-Crest Motel	2019-09-17	<1	<1
Site 3: Sal-Crest Motel	2019-10-29	<1	<1
Site 3: Sal-Crest Motel	2019-11-26	<1	<1
Site 3: Sal-Crest Motel	2020-01-28	<1	<1
Site 3: Sal-Crest Motel	2020-03-10	<1	<1
Site 3: Sal-Crest Motel	2020-10-06	<1	<1
Site 3: KP Washroom	2021-05-11	<1	<1
Site 3: KP Washroom	2021-05-25	<1	<1
Site 3: KP Washroom	2021-06-22	<1	<1
Site 3: KP Washroom	2021-07-06	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		**0**	**0**
Site 3: KP Washroom	2021-08-31	<1	<1
Site 3: KP Washroom	2021-09-21	<1	<1
Site 3: KP Washroom	2021-10-19	<1	<1
Site 3: KP Washroom	2021-11-16	<1	<1
Site 3: KP Washroom	2022-01-18	<1	<1
Site 3: KP Washroom	2022-02-15	<1	<1
Site 3: KP Washroom	2022-05-17	<1	<1
Site 3: KP Washroom	2022-06-21	<1	<1
Site 3: KP Washroom	2022-07-19	<1	<1
Site 3: KP Washroom	2022-09-06	<1	<1
Site 3: KP Washroom	2022-10-11	<1	<1
Site 3: KP Washroom	2022-11-15	<1	<1
Site 3: KP Washroom	2023-05-02	<1	<1
Site 3: KP Washroom	2023-05-30	<1	<1
Site 3: KP Washroom	2023-06-13	<1	<1
Site 3: KP Washroom	2023-07-11	<1	<1
Site 3: KP Washroom	2023-09-05	<1	<1
Site 3: KP Washroom	2023-09-26	<1	<1
Site 3: KP Washroom	2024-03-26	<1	<1
Site 4: SVYCC	2016-01-05	<1	<1
Site 4: SVYCC	2016-02-16	<1	<1
Site 4: SVYCC	2016-03-22	<1	<1
Site 4: SVYCC	2016-06-21	<1	<1
Site 4: SVYCC	2016-08-23	<1	<1
Site 4: SVYCC	2016-09-20	<1	<1
Site 4: SVYCC	2016-10-18	<1	<1
Site 4: SVYCC	2016-11-22	<1	<1
Site 4: SVYCC	2016-12-20	<1	<1
Site 4: SVYCC	2017-01-24	<1	<1
Site 4: SVYCC	2017-02-21	<1	<1
Site 4: SVYCC	2017-03-27	<1	<1
Site 4: SVYCC	2017-05-08	<1	<1
Site 4: SVYCC	2017-06-12	<1	<1
Site 4: SVYCC	2017-07-17	<1	<1
Site 4: SVYCC	2018-01-16	<1	<1
Site 4: SVYCC	2018-02-20	<1	<1
Site 4: SVYCC	2018-03-13	<1	<1
Site 4: SVYCC	2018-04-10	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		0	0
Site 4: SVYCC	2018-05-15	<1	<1
Site 4: SVYCC	2018-06-19	<1	<1
Site 4: SVYCC	2018-07-24	<1	<1
Site 4: SVYCC	2018-08-28	<1	<1
Site 4: SVYCC	2018-10-02	<1	<1
Site 4: SVYCC	2018-11-13	<1	<1
Site 4: SVYCC	2018-12-18	<1	<1
Site 4: SVYCC	2018-01-16	<1	<1
Site 4: SVYCC	2018-02-20	<1	<1
Site 4: SVYCC	2018-03-13	<1	<1
Site 4: SVYCC	2018-04-10	<1	<1
Site 4: SVYCC	2018-05-15	<1	<1
Site 4: SVYCC	2018-06-19	<1	<1
Site 4: SVYCC	2018-07-24	<1	<1
Site 4: SVYCC	2018-08-28	<1	<1
Site 4: SVYCC	2018-10-02	<1	<1
Site 4: SVYCC	2018-11-13	<1	<1
Site 4: SVYCC	2018-12-18	<1	<1
Site 4: SVYCC	2019-02-05	<1	<1
Site 4: SVYCC	2019-04-02	<1	<1
Site 4: SVYCC	2019-04-30	<1	<1
Site 4: SVYCC	2019-06-04	<1	<1
Site 4: SVYCC	2019-07-09	<1	<1
Site 4: SVYCC	2019-08-27	<1	<1
Site 4: SVYCC	2019-09-24	<1	<1
Site 4: SVYCC	2019-10-01	<1	<1
Site 4: SVYCC	2019-10-22	<1	<1
Site 4: SVYCC	2019-12-17	<1	<1
Site 4: SVYCC	2020-02-04	<1	<1
Site 4: SVYCC	2020-02-25	<1	<1
Site 4: SVYCC	2020-11-24	<1	<1
Site 4: SVYCC	2021-01-26	<1	1
Site 4: SVYCC	2021-02-02	<1	<1
Site 4: SVYCC	2021-04-13	<1	<1
Site 4: SVYCC	2021-07-20	<1	<1
Site 4: SVYCC	2021-08-03	<1	<1
Site 4: SVYCC	2021-09-07	<1	<1
Site 4: SVYCC	2021-10-12	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		**0**	**0**
Site 4: SVYCC	2021-11-09	<1	<1
Site 4: SVYCC	2021-12-21	<1	<1
Site 4: SVYCC	2022-03-22	<1	<1
Site 4: SVYCC	2022-04-19	<1	<1
Site 4: SVYCC	2022-05-24	<1	<1
Site 4: SVYCC	2022-07-05	<1	<1
Site 4: SVYCC	2022-08-23	<1	<1
Site 4: SVYCC	2022-10-18	<1	<1
Site 4: SVYCC	2022-12-20	<1	<1
Site 4: SVYCC	2023-01-31	<1	<1
Site 4: SVYCC	2023-03-28	<1	<1
Site 4: SVYCC	2023-05-09	<1	<1
Site 4: SVYCC	2023-08-01	<1	<1
Site 4: SVYCC	2023-10-03	<1	<1
Site 4: SVYCC	2023-11-21	<1	<1
Site 4: SVYCC	2023-12-12	<1	<1
Site 4: SVYCC	2024-01-30	<1	<1
Site 4: SVYCC	2024-02-20	<1	<1
Site 4: SVYCC	2024-03-05	<1	<1
Site 5: Reno Motel	2016-01-19	<1	<1
Site 5: Reno Motel	2016-02-23	<1	**1**
Site 5: Reno Motel	2016-04-05	<1	<1
Site 5: Reno Motel	2016-06-14	<1	<1
Site 5: Reno Motel	2016-07-12	<1	<1
Site 5: Reno Motel	2016-10-25	<1	<1
Site 5: Reno Motel	2016-11-29	<1	<1
Site 5: Reno Motel	2017-01-10	<1	<1
Site 5: Reno Motel	2017-03-07	<1	<1
Site 5: Reno Motel	2017-04-10	<1	<1
Site 5: Reno Motel	2017-05-15	<1	<1
Site 5: Reno Motel	2017-06-19	<1	<1
Site 5: Reno Motel	2017-07-24	<1	<1
Site 5: Reno Motel	2018-01-23	<1	<1
Site 5: Reno Motel	2018-03-06	<1	<1
Site 5: Reno Motel	2018-04-24	<1	<1
Site 5: Reno Motel	2018-05-22	<1	<1
Site 5: Reno Motel	2018-06-26	<1	<1
Site 5: Reno Motel	2018-07-31	<1	<1

Table F3: Microbiology - Salmo Water Supply Wells and Test Sites

		Microbiology	
Sample Location	**Sample Date**	**E. Coli**	**Total Coliforms**
Guidelines	**Units**	MPN/100mL	MPN/100mL
GCDWQ MAC		**0**	**0**
Site 5: Reno Motel	2018-09-04	<1	<1
Site 5: Reno Motel	2018-10-09	<1	<1
Site 5: Reno Motel	2018-11-20	<1	<1
Site 5: Reno Motel	2019-01-08	<1	<1
Site 5: Reno Motel	2019-02-19	<1	<1
Site 5: Reno Motel	2019-05-07	<1	<1
Site 5: Reno Motel	2019-06-11	<1	<1
Site 5: Reno Motel	2019-07-23	<1	<1
Site 5: Reno Motel	2019-08-13	<1	<1
Site 5: Reno Motel	2019-11-05	<1	<1
Site 5: Reno Motel	2019-12-10	<1	<1
Site 5: Reno Motel	2020-02-18	<1	<1
Site 5: Reno Motel	2020-09-22	<1	1
Site 5: Reno Motel	2020-09-30	<1	<1
Site 5: Motel Avenue	2021-06-08	<1	<1
Site 5: Motel Avenue	2021-11-30	<1	<1
Site 5: Motel Avenue	2022-02-08	<1	<1
Site 5: Motel Avenue	2022-04-12	<1	<1
Site 5: Motel Avenue	2022-05-31	<1	<1
Site 5: Motel Avenue	2022-07-26	<1	<1
Site 5: Motel Avenue	2022-09-20	<1	<1
Site 5: Motel Avenue	2022-10-25	<1	<1
Site 5: Motel Avenue	2022-11-29	<1	<1
Site 5: Motel Avenue	2023-01-10	<1	<1
Site 5: Motel Avenue	2023-02-07	<1	<1
Site 5: Motel Avenue	2023-04-25	<1	<1
Site 5: Motel Avenue	2023-06-20	<1	<1

Notes:

GCDWQ represents the Guidelines for Canadian Drinking Water Quality, Summary Table (Health Canada, September 2022). Guidelines are health based and listed as maximum acceptable concentrations (MAC), or based on aesthetic considerations and listed as aesthetic objectives (AO).

Laboratory results that were less than detection limits and greater than the applied guidelines are not shown as exceedances.

Red highlight - Value exceeds the Maximum Allowable Concentration (MAC).

MPN/100mL means Most Probable Number per 100 millilitres

Appendix G

BC Registered Contaminated Sites

Table G1: Registered Contaminated Sites: General Information
Table G2: Registered Contaminated Sites: Notations
Table G3: Registered Contaminated Sites: Documents

Table G1: Registered Contaminated Sites: General Information

Site ID	Address	Urban Area	Region File	Victoria File	Latitude and Longitude	Date Created
2742	Former Shell Bulk Plant - Salmo	SALMO	26250-20/2742	26250-20/2742	Verified	18/03/1996 0:00
3995	90 7th Street, Salmo	SALMO	26250-20/3995 26100-20/3995	No File	Unconfirmed	29/05/1997 12:35
5095	Former Esso Service Station	SALMO	26250-20/5095 26100-20/5095	26250-20/5095	Verified	27/05/1998 0:00
5143	Thrifty Gas - 223 Railway Avenue, Salmo	SALMO	26250-20/5143	No File	Unconfirmed	15/06/1998 0:00
5303	The Coyote Cafe	SALMO	26250-20/5303 26250-20/5095	26250-20/5303	Unconfirmed	13/08/1998 0:00
5311	Main Street Video	SALMO	26250-20/5311 26250-20/5095	No File	Unconfirmed	18/08/1998 0:00
5313	Waterstreet, Dennis And Norma	SALMO	26250-20/5313 26250-20/5095	No File	Unconfirmed	18/08/1998 0:00
8322	Salmo Highways Yard	SALMO	26250-20/8322	No File	Unconfirmed	11/07/2003 0:00
14499	416 Davies Avenue, Salmo	SALMO	No File	26250-20/14499	Verified	23/10/2012 0:00

Table G2: Registered Contaminated Sites: Notations

Site ID	Notations
2742	[SPILL REPORTED. Administrative,1988-03-02,Approximately 43,000 Litres Of Diesel Fuel Spilled To The Ground After A Valve Broke On A Fuel Storage Tank. Initial Response Recovered Approximately 90% Of The Fuel.,No Actions Entered] [SITE INVESTIGATION REQUESTED. Administrative,1988-03-02,No Notes Entered,Bc Environment Requested Shell To Test All Other Tanks And Pipes For Leakeage, And To Conduct A Subsurface Investigation Into The Potential Long Term Soil And Groundwater Impacts Of The Spill.] [REMEDIATION PLAN REQUESTED. Administrative,1988-05-16,No Notes Entered,Bc Environment Requests Esso (Located Adjacent To South) To Conduct A Subsurface Investigation To Determine If They Could Be A Possible Source Of Petroleum Hydrocarbon Contamination.] [SITE INVESTIGATION REPORT SUBMITTED. Administrative,1988-05-16,Detailed Site Investigation Report Submitted On Direction Of Bc Environment. Sample Analysis Identified Two Types Of Petroleum Hydrocarbon Contamination: Fresh Diesel Fuel And Old Gasoline. Consultant Concluded There Were At Least Two Sources Of Contamination, One Being The Diesel Spill. A Product Recovery Pump Was Installed In Two Wells And Is Now Operational.,No Actions Entered] [CASE MANAGEMENT ITEM. Administrative,1988-05-08,A Meeting Of All Affected Parties Indicated There Were No Records That Esso Ever Had An Operational Fuel Storage Tank On Its Site,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1988-09-26,Report Monitors Vapour Concentrations And Apparent Product Thickness.,Results Indicate A Third Recovery Sump Is Needed.] [MONITORING REPORT DUE. Administrative,1989-01-17,No Notes Entered,Bc Environment Requests All Subsequent Monitoring Reports And Remedial Progress Be Submitted.] [MONITORING REPORT SUBMITTED. Administrative,1989-04-10,Report Continues To Monitor Vapour Concentrations And Apparent Product Thickness.,As Significant Contamination Still Exists, Remedial Measures Should Be Reanalysed For Effectiveness.] [MONITORING REPORT SUBMITTED. Administrative,1989-04-13,Report Monitors Vapour Concentrations And Apparent Product Thickness.,Recommended That An Automated Recovery Pump System Be Installed] [MONITORING REPORT SUBMITTED. Administrative,1989-07-20,Report Monitors Vapour Concentrations And Apparent Product Thickness. Product Recovery Continues To Be Pumped From Wells.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1989-11-06,Report Monitors Vapour Concentrations And Apparent Product Thickness. Product Recovery Continues To Be Pumped From Wells.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1990-04-11,Report Monitors Vapour Concentrations And Apparent Product Thickness. Product Recovery Continues To Be Pumped From Wells.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1990-08-02,Report Monitors Vapour Concentrations And Apparent Product Thickness. Product Recovery Continues To Be Pumped From Wells.,Bulk Plant Was Closed July 15, 1990 And All On-Site Facilities Are To Be Removed Shortly.] [MONITORING REPORT SUBMITTED. Administrative,1991-08-13,Report Monitors Vapour Concentrations And Apparent Product Thickness. Product Recovery Continues To Be Pumped From Wells. All On-Site Structures Were Removed 90-10-07.,Morrow Requests Bc Environment Permission To Operate The Groundwater Depression And Rescharge System They Have Been Testing And Analysing.] [MONITORING REPORT DUE. Administrative,1991-10-31,Bc Environment Grants Permission To Discharge Groundwater To A Surface Depression Given That Relevant Parameters In The Groundwater Are Below Detection Limits And Will Be Continually Monitored.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1992-04-13,Report Monitors Vapour Concentrations And Apparent Product Thickness. Product Recovery Continues To Be Pumped From Wells.,No Actions Entered] [CONCENTRATION CRITERIA APPROACH USED. Administrative,1993-11-08,No Notes Entered,No Actions Entered] [REMEDIATION PLAN REPORT SUBMITTED. Administrative,1993-11-08,Detailed Plan For The Proposed Treated Water Discharge System.,Bc Environment Is Requested To Issue A Formal Approval For The Discharge Of Treated Groundwater.] [WASTE MANAGEMENT APPROVAL ISSUED. Legal Requirement,1993-11-16,As-12580 Authorization To Discharge Treated Water To Ground Subsurface For One Week As Of 93-11-19.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1996-04-23,4 Of Available 20 Monitoring Wells Were Sampled. No Indication Of Why These Four Were Selected. Morrow (Consultant) Recommends That All Monitoring Wells And Sumps Be Monitored For Potentiometric Level Twice Per Year.,No Actions Entered] [HISTORICAL SITE NOTIFICATION ISSUED (WMA 26.3(3)). Waste Management Act: Contaminated Sites Notations,1997-05-09,No Notes Entered,No Actions Entered] [NOTIFICATION RECEIVED ABOUT LIKELY OR ACTUAL SUBSTANCE MIGRATION TO NEIGHBOURING SITE. Environmental Management Act: General,2011-09-27,Hutcheson Street, Salmo(Do Not Flag) 643289 Bc Ltd. (Do Not Flag) Box 642 (Do Not Flag),No Actions Entered] [NOTICE OF INDEPENDENT REMEDIATION INITIATION SUBMITTED. Environmental Management Act: General,2011-09-27,Start: 2011-10-03,No Actions Entered] [NOTIFICATION RECEIVED ABOUT LIKELY OR ACTUAL SUBSTANCE MIGRATION TO NEIGHBOURING SITE. Environmental Management Act: General,2011-09-27,Hutcheson Street, Salmo (Do Not Flag) 423 Davies Avenue Po Box 1000 (Do Not Flag),No Actions Entered] [SITE RISK CLASSIFIED - AFFECTED SITE IS NON-HIGH RISK. Environmental Management Act: General,2011-10-03,No Notes Entered,No Actions Entered] [SITE RISK CLASSIFIED - SITE IS NON-HIGH RISK. Environmental Management Act: General,2011-10-03,No Notes Entered,No Actions Entered]
3995	[SITE PROFILE RECEIVED. Waste Management Act: Contaminated Sites Notations,1997-05-28,Notation Generated In Site Profile On 97-05-29 By Lhagel,No Actions Entered] [SITE PROFILE - FURTHER INVESTIGATION REQUIRED BY THE MINISTRY. Waste Management Act: Contaminated Sites Notations,1997-06-05,Auto Inserted From Site Profile.,Bc Environment Requires A Stage One And Stage Two Preliminary Site Investigation.] [PRELIMINARY SITE INVESTIGATION REPORT: INTERNAL REVIEW REQUESTED. Waste Management Act: Contaminated Sites Notations,1997-07-03,Phase I Environmental Site Assessment(Stage I Preliminary Site Investigation) Submitted On Bc Environment Request. Historic Review Found That 2 Underground Storage Tanks Were Removed In 1995 (Installed Around 1945). Consultant Inspected Tanks & Determined Tanks To Be Sound. Site Was Service Station Until 1973.,1997-07-22 - Bc Environment Completed Report Review And Concurred With Findings. Report Did Not Include Any Quantitative Assessment Or Analysis Of Soils In Proximity To Former Location Of Two Underground Fuel Storage Tanks Removed In 1995. Bc Environment Recommends That Quantitative Sub-Surface Assessment (Ie. Stage Ii) Preliminary Site Investigation Be Conducted In Future Should Area Of Former Underground Storage Tanks Be Involved In Re-Development.] [PRELIMINARY SITE INVESTIGATION REPORT ACCEPTED (WMA 26.2). Waste Management Act: Contaminated Sites Notations,1998-04-01,Letter Report Providing Phase Ii (Preliminary Site Investigation) Information In Support Of Information Provided On June 26,1997. Preliminary Site Investigation Report Submitted For Information Only, No Review Requested. Bc Environment Requires No Further Assessment At This Time.,No Actions Entered]

Table G2: Registered Contaminated Sites: Notations

Site ID	Notations
5095	[REMEDIATION PLAN REQUESTED. Administrative,1998-05-27,Bc Environment Received Written Commitment From Site Owners Accepting Responsibility For Historic Hydrocarbon Contamination And To Conduct Further Assessessment To Confirm The Extent Of Off-Site Contaminant Migration. Also, Site Owners Committed To Entering Into The Ministry Process Of Review/Supervision Of Site Works, Assessment Reports, And Commitment To Request An Approval In Principle For A Remedial Plan Addressing On-Site And Off-Site Contaminant Issues,Site Owners Are To Conduct Further Assessment To Delineate The Hydrocarbon Plume In Soils And Groundwater And Submit A Request For An Approval In Principle For A Comprehensive Remedial Plan Prior To October, 1998.] [PRELIMINARY SITE INVESTIGATION REPORT: INTERNAL REVIEW REQUESTED. Waste Management Act: Contaminated Sites Notations,1998-05-27,Stage 1 & 2 Preliminary Site Investigation Reports Submitted. Petroleum Hydrocarbon Contamination Exceeding Special Waste Levels Was Identified In Soil And Groundwater.,Detailed Assessment Of On-Site And Off-Site Contaminant Conditions Is To Be Pursued.] [DETAILED SITE INVESTIGATION REPORT: INTERNAL REVIEW REQUESTED. Waste Management Act: Contaminated Sites Notations,1998-05-27,Report Provides Results Of Off-Site Investigation Adjacent To 503 Railway Ave, Salmo, Bc. Analysis Of Ground-Water & Soils Conducted. Off-Site Hydrocarbon Contamination Of Groundwater Confirmed.,Additional Assessment Of Off-Site Groundwater Contaminant Levels (Ie. Further Down-Gradient) Is Required To Delineate Contaminant Plume.] [DETAILED SITE INVESTIGATION REPORT ACCEPTED (WMA 26.2). Waste Management Act: Contaminated Sites Notations,1998-08-12,Bc Environment Completed Review Of A Detailed Site Investigation Report. Review Was Limited To Information Specific To The 503 Railway Street Property. Review Comments Were Provided To 431386 Bc Ltd And Imperial Oil In A Letter Dated August 12, 1998.,Imperial Oil Has Conducted Additional Assessment Works To Characterize Impacts Of Off-Site Contaminant Migration. Upon Completion Of Site Assessment Works, Imperial Oil Must Submit A Detailed Site Assessment Report Characterizing Off-Site Contaminant Conditions. Also Required Shall Be An Application To Bc Environment For An Approval In Principle For A Remedial Plan Addressing On And Off-Site Contaminant Issues.] [PRELIMINARY SITE INVESTIGATION REPORT ACCEPTED (WMA 26.2). Waste Management Act: Contaminated Sites Notations,1998-08-12,Bc Environment Completed Review Of Report. Review Comments Provided To 431386 Bc Ltd. And Imperial Oil In Letter Dated August 12, 1998.,No Actions Entered] [SITE INVESTIGATION REQUESTED. Administrative,1998-08-31,Bc Environment Received Letter Report Prepared By Imperial Oil'S Consultant Explaining Rationale For Not Considering Numerical Standards Considerate Of Drinking Water Use Of Groundwater During The Assessment Of On-Site And Off-Site Remedial Requirements. Bc Environment Responded In Sept 18/98 Letter Confirming That Applicable Standards Are Those Protective Of Aquatic Life.,Esso - Imperial Oil Is To Prepare A Detailed Site Investigation Report Characterizing Off-Site Contaminant Issues And Submit To Bc Environment For Review.] [SITE PROFILE RECEIVED. Waste Management Act: Contaminated Sites Notations,1999-05-31,Submission Triggered By Request For Demolition Permit To Remove Building. Removal Of Structures Will Facilitate Completion Of Site Assessment And Remedial Works.,No Actions Entered] [SITE PROFILE - NO FURTHER INVESTIGATION REQUIRED BY THE MINISTRY. Waste Management Act: Contaminated Sites Notations,1999-06-02,No Further Investigation Requested As Site Assessment Already Initiated At Site And Development Of Remedial Plan Addressing On-Site And Off-Site Issues In Progress. Also, Demolition Of Building Will Assist Completion Of Site Assessment And Remedial Plan Development.,No Actions Entered] [REMEDIATION PLAN REPORT SUBMITTED. Administrative,1999-07-14,Imperial Oil Sent Letter To Regional Manager Providing Written Commitment To Remediation Of On-Site And Off-Site Petroleum Hydrocarbon Contaminant Issues Within The Ministry Process Of Review. The Letter Described Action Plan Leading Up To Development Of Remedial Plan And Formal Request For An Approval In Principle. The Submission Also Included Updated Schedule Of Planned Activities. Similar Notification Also Was Provided To Impacted Property Owners And Village Of Salmo.,The Updated Action Plan Commits To Submitting A Detailed Remedial Plan With Application For Approval In Principle Prior To April, 2000.] [MONITORING REPORT SUBMITTED. Administrative,1999-11-19,Submission Included An Updated Site Plan Showing Location Of All Existing Borehole And Monitoring Well Locations. It Also Includes A Summary Of Groundwater Analytical Results For Hydrocarbons, Dissolved Anions And Metals. Summary Included Data For All Wells With Exception Of New Monitoring Wells 99-6 Through 99-24.,No Actions Entered] [REMEDIATION PLAN REPORT SUBMITTED. Administrative,1999-11-25,Letter Received From Morrow Environmental Describing Pilot Scale Tests Intended To Identify Feasibility Of Remedial Approaches (Pump And Treat Groundwater And Soil Vapour Extraction).,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1999-12-22,Letter Report Summarizes Groundwater Monitoring Results From The Pilot Test Of The Air Sparging System (Well 99-12) As Sampled Between 1999-11-12 And 1999-11-14. The Monitoring Report Included Analysis Of Hydrocarbons And Total Metals.,No Actions Entered] [DETAILED SITE INVESTIGATION REPORT: INTERNAL REVIEW REQUESTED. Waste Management Act: Contaminated Sites Notations,2000-02-01,Site Investigation Report Summarizes Details And Results Of Subsurface Site Investigation Works Conducted At And Adjacent To The Former Salmo Service Station Between 1997 And 1999. Summary Includes Characterization Of Petroleum Hydrocarbons, Total And Dissolved Metals, Dissolved Anions And Pah Concentrations In Soils And Groundwater.,Bc Environment To Review Report And Provide Written Comment. Property Owner Is To Subsequently Submit A Detailed Remedial Plan Addressing On-Site And Off-Site Contaminant Issues Originating From The Service Station Site.] [RISK ASSESSMENT SUBMITTED. Administrative,2000-04-11,Draft Copy Of Human Health Risk Assessment Dated April 6/00 Was Submitted To Bc Environment.,A More Formally Documented Risk Assessment Report Must Be Provided To Bc Environment Prior To Review Of A Remedial Action Plan.] [REMEDIAL PLAN SUBMITTED WITH RISK ASSESSMENT: INTERNAL REVIEW REQUESTED. Waste Management Act: Contaminated Sites Notations,2000-04-26,Imperial Oil Submitted A Remedial Action Plan Outlining The Remedial Strategy For Addressing Subsurface Petroleum Hydrocarbon Contamination At The Former Service Station Site And On Down-Gradient Impacted Properties. The Remedial Plan Involves Removal Of Localized Liquid Petroleum Hydrocarbon And Monitoring Of Site Conditions. Proposed Remediation Will Rely Mainly On Natural Attentuation Of Contaminants And Will Be Supported By A Human Health And Ecological Risk Assessment.,The Human Health And Ecological Risk Assessment Must Be Provided To Bc Environment Prior To Final Review Of The Remedial Action Plan And Processing Of An Approval In Principle.] [APPROVAL IN PRINCIPLE REQUESTED.

Table G2: Registered Contaminated Sites: Notations

Site ID	Notations
5095 cont.	Waste Management Act: Contaminated Sites Notations,2000-04-26,Bc Environment Received An Application Dated April 20/00 Requesting That An Approval In Principle Be Issued For A Remedial Plan. Note That The Remedial Plan Was Not Complete At Time Of Application. Risk Assessment Supporting Plan Remains Under Development.,Application For Approval In Principle Is To Be Processed Following Review Of Final Remedial Plan And Risk Assessment Report.] [RISK ASSESSMENT SUBMITTED. Administrative,2000-07-17,Imperial Oil Submitted Copies Of Formal Human Health And Ecological Risk Assessment Report To Bc Environment In Support Of Application For An Approval In Principle Of Remedial Plan .,Bc Environment (Victoria Office) Is To Review Remedial Plan And Risk Assessment Report And Issue An Approval In Principle If Considered Appropriate.] [MONITORING REPORT DUE. Administrative,2000-07-24,Letter From Bc Environment Requesting Imperial Oil Ltd Conduct Petroleum Hydrocarbon Vapour Sampling/Monitoring In Soils Beneath Buildings On Properties Impacted By Contaminant Migration From The Former Salmo Esso Site, 503 Railway Avenue, Salmo, Bc. Properties Where Testing Is To Be Conducted Are Located At 419 Railway Avenue, 423 Railway Avenue And 111 Main Street.,Results Of Testing Along With An Interpretative Summary Is To Be Provided To Respective Property Owners And Any Correspondence Copied To The Bc Environment Office. 2000-08-01 - Letter Submitted By Imperial Oil Authorizing Morrow Environmental Counsultants Inc To Undertake Soil Vapour Sampling Beneath Main Street Video, At 423 Railway Avenue, Salmo, Bc.] [REMEDIATION ORDER ISSUED (WMA 27.1(1)). Waste Management Act: Contaminated Sites Notations,2001-06-14,No Notes Entered,No Actions Entered] [NOTICE OF APPEAL RECEIVED. Legal Requirement,2001-07-19,No Notes Entered,No Actions Entered] [REQUIREMENT(S) IMPOSED IN APPROVAL IN PRINCIPLE. Environmental Management Act: General,2002-03-14,No Notes Entered,Schedule B Condition 5 - "All Monitoring Data Will Be Submitted Quarterly In A Format Acceptable To The Regional Waste Manager Within 30 Days Following The End Of Each Quarter."] [APPROVAL IN PRINCIPLE ISSUED. Waste Management Act: Contaminated Sites Notations,2002-03-15,The Lands Covered By This Approval Are Located At: 503 Railway Avenue (Pids: 012 051 942, 012 051 985, 012 052 001), 423 Railway Avenue (Pid 008 342 514), 419 Railway Avenue (Pid 008 324 646), And 111 Main Street (Pid 023 954 485), Salmo.,Also See Instrument Schedule B Condition 6 - "The Ministry May Request The Development And Implementation Of An Alternative Remediation Plan If: (A) The Contaminant Plume Is Determined To Have Migrated Further Than Currently Delineated...; Or (B) The Concentrations Of Contaminants In The Plume Are Observed To Have Not Stabilized And The Trend Analysis Does Not Show Concentrations Decreasing Over The Time Period Envisaged In The Remedial Action Plan..."] [MONITORING REPORT SUBMITTED. Administrative,2002-08-27,Quarterly Monitoring Report For Period April - June, 2002. Sampling Was Performed As Requirement Of Approval In Principle.,No Actions Entered] [SITE INVESTIGATION REPORT SUBMITTED. Administrative,2002-09-06,No Notes Entered,Proposed Installation Of 4 New Shallow Vapour Monitoring Wells At Areas Stipulated In The Approval In Principle. Installation Will Allow Assessing Soil Vapour Levels Representative Of Potential Exposure To Occupants Of Nearby Residential And Commercial Properties.] [MONITORING REPORT SUBMITTED. Administrative,2002-10-07,Quarterly Monitoring Report For July-September, 2002. Sampling Was Performed As Requirement Of Approval In Principle.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2002-12-12,Quarterly Monitoring Report For October 21-23, 2002. Sampling Performed As Requirement Of Approval In Principle. Product Was Identified In 12 Monitoring Wells Located On Railway St And Main St.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2003-05-27,Quarterly Monitoring Report For March 24-27 Sampling Event. Sampling Was Performed As A Requirement Of The Approval In Principle.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2003-06-09,Additional Stage Of Assessment Former Esso Service Station At 503 Railway Avenue, Salmo, Bc (Location No. 990333/R02311),No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2003-09-23,Quarterly Monitoring Report. Sampling Dates August 11-14, 2003. Sampling Performed As A Requirement Of The Approval In Principle.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2003-09-25,Quarterly Monitoring Report. Sampling Dates June 9-13, 2003. Sampling Performed As A Requirement Of The Approval In Principle. Sampling Results Indicate That The Plume Is Stable.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2003-12-15,Quarterly Monitoring And Sampling Report For October 26 To 30, 2003 Event,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2007-07-27,Validation Monitoring Program Progress Report Years 2005 And 2006 Former Esso Service Station 503 Railway Avenue, Salmo, Bc (Location No. R02311),No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2008-03-30,Monitoring Report And Risk Calculation In Application For Cessation Of Vapour Monitoring. Application Was Denied Due To Technical Deficiencies.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2010-02-01,Submitted As A Requirement Of Approval In Principle Issued March 2002.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,2011-11-23,No Notes Entered,No Actions Entered] [SITE RISK CLASSIFIED - SITE IS NON-HIGH RISK. Environmental Management Act: General,2011-11-30,No Notes Entered,No Actions Entered] [NOTIFICATION RECEIVED ABOUT LIKELY OR ACTUAL SUBSTANCE MIGRATION TO NEIGHBOURING SITE. Environmental Management Act: General,2012-10-19,Affected Parcel 416 Davies Avenue, Salmo Site 14499,No Actions Entered]
5143	[CASE MANAGEMENT ITEM. Administrative,1998-06-15,Petroleum Hydrocarbon Contamination Suspected.,No Actions Entered]
5303	[CASE MANAGEMENT ITEM. Administrative,1998-05-27,Written Recognition That Coyote Cafe Property Has Potentially Received Petroleum Hydrocarbon Contamination From Salmo Esso, As Evident In Site Assessment Report Submitted By Morrow Environmental Consultants To Bc Environment.,Parties Responsible For Petroleum Contamination Shall Be Required To Develop A Remedial Plan Addressing Contaminant Issues On The Source (Salmo Esso) Site As Well As Down-Gradient Areas Impacted By Off-Site Migration. Remediation Shall Be Conducted In Accordance With A Remedial Plan Approved By Bc Environment.] [MONITORING REPORT SUBMITTED. Administrative,1999-09-02,This Is A Letter Report Provided To Myles Rubeniuk By Imperial Oil. Report Summarizes Groundwater Monitoring Results Specific To Well 98-16 As Sampled Between May 1998 And July 1999. The Monitoring Report Included Analysis Of Hydrocarbons, Dissolved Anions And Dissolved Metals.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1999-12-01,This Is A Letter Report Provided To Myles Rubeniuk By Imperial Oil. Report Summarizes Groundwater And Soil Monitoring Results Specific To Wells 98-16 And 99-10 As Sampled Between May 1998 And October 1999. The Monitoring Report Included Analysis Of Hydrocarbons, Dissolved Anions And Dissolved Metals.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1999-12-17,Letter Report Provided To Myles Rubeniuk By Imperial Oil Summarizing Groundwater Monitoring Results Specific To Wells 98-16 And 99-10 As Sampled Between May 1998 And November 1999. The Monitoring Report Includes Analysis Of Hydrocarbons, Dissolved Anions And Dissolved Metals.,No Actions Entered] [CASE MANAGEMENT ITEM. Administrative,2000-08-01,Letter Submitted By Imperial Oil Authorizing Morrow Environmental Counsultants Inc. To Undertake Soil Vapour Sampling Beneath Building At 419 Railway Avenue, Salmo, British Columbia.,No Actions Entered]
5311	[CASE MANAGEMENT ITEM. Administrative,1998-08-18,Site Is Located Down Gradient And Within An Identified Contaminant Plume Sourced From Salmo Esso (Site #5095). Information Provided To Bc Environment By Salmo Esso Site Owner Indicates Down-Gradient Migration Of Petroleum Hydrocarbon Contamination From The Salmo Esso Has Impacted This Site.,Parties Responsible For Petroleum Contamination Shall Be Required To Develop A Remedial Plan Addressing Contaminant Issues On The Source (Salmo Esso) Site As Well As Down-Gradient Areas Impacted By Off-Site Migration. Remediation Shall Be Conducted In Accordance With A Remedial Plan Approved By Bc Environment.] [MONITORING REPORT SUBMITTED. Administrative,1999-07-27,This Is A Letter Report Provided To 473984 Bc Ltd. By Imperial Oil. Report Summarizes Groundwater Monitoring Results Specific To Well 98-9 As Sampled Between May 1998 And June 1999. The Monitoring Report Included Analysis Of Hydrocarbons, Dissolved Anions And Dissolved Metals.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1999-08-23,This Is A Letter Report Provided To 473984 Bc Ltd. By Imperial Oil. Report Summarizes Groundwater Monitoring Results Specific To Well 98-9 As Sampled Between May 1998 And July 1999. The Monitoring Report Included Analysis Of Hydrocarbons, Dissolved Anions And Dissolved Metals.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1999-12-01,This Is A Letter Report Provided To 473984 Bc Ltd. By Imperial Oil. Report Summarizes Groundwater And Soil Monitoring Results Specific To Wells 98-9, 99-11 And 99-19 As Sampled Between May 1998 And October 1999. The Monitoring Report Included Analysis Of Hydrocarbons, Dissolved Anions, Total And Dissolved Metals.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1999-12-17,Letter Report Provided To 473984 Bc Ltd. By Imperial Oil Summarizing Groundwater Monitoring Results Specific To Wells 98-9, 99-11 And 99-19 As Sampled Between May 1998 And November 1999. The Monitoring Report Includes Analysis Of Hydrocarbons, Dissolved Anions And Dissolved Metals.,No Actions Entered] [CASE MANAGEMENT ITEM. Administrative,2000-08-01,Letter Submitted By Imperial Oil Authorizing Morrow Environmental Counsultants Inc. To Undertake Soil Vapour Sampling Beneath Main Street Video, At 423 Railway Avenue, Salmo, British Columbia.,No Actions Entered]

Table G2: Registered Contaminated Sites: Notations

Site ID	Notations
5313	[CASE MANAGEMENT ITEM. Administrative,1998-08-18,Site Is Located Down Gradient And Within An Identified Contaminant Plume Sourced From Salmo Esso (Site #5095). Information Provided To Bc Environment By Salmo Esso Site Owner Indicates Down-Gradient Migration Of Petroleum Hydrocarbon Contamination From The Salmo Esso Has Impacted This Site.,Parties Responsible For Petroleum Contamination Shall Be Required To Develop A Remedial Plan Addressing Contaminant Issues On The Source (Salmo Esso) Site As Well As Down-Gradient Areas Impacted By Off-Site Migration. Remediation Shall Be Conducted In Accordance With A Remedial Plan Approved By Bc Environment.] [MONITORING REPORT SUBMITTED. Administrative,1999-07-27,Letter Report Provided To The Waterstreets By Imperial Oil. Report Summarizes Groundwater Monitoring Results Specific To Well 98-11 As Sampled Between May 1998 And June 1999. The Monitoring Report Included Analysis Of Hydrocarbons, Dissolved Anions And Dissolved Metals.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1999-12-01,Letter Report Provided To The Waterstreets By Imperial Oil. Report Summarizes Groundwater And Soil Monitoring Results Specific To Wells 98-11, 99-8 And 99-9 As Sampled Between May 1998 And October 1999. The Monitoring Report Included Analysis Of Hydrocarbons, Dissolved Anions, Total And Dissolved Metals.,No Actions Entered] [MONITORING REPORT SUBMITTED. Administrative,1999-12-17,Letter Report Provided To The Waterstreets By Imperial Oil Summarizing Groundwater Monitoring Results Specific To Wells 98-11, 99-8 And 99-9 As Sampled Between May 1998 And November 1999. The Monitoring Report Includes Analysis Of Hydrocarbons, Dissolved Anions And Dissolved Metals.,No Actions Entered] [CASE MANAGEMENT ITEM. Administrative,2000-08-01,Letter Submitted By Imperial Oil Authorizing Morrow Environmental Counsultants Inc. To Undertake Soil Vapour Sampling Beneath The Residence Of Dennis And Norma Waterstreet, At 111 Main Street, Salmo, British Columbia..No Actions Entered]
8322	[NOTICE OF INDEPENDENT REMEDIATION INITIATION SUBMITTED (WMA 28(2)). Waste Management Act: Contaminated Sites Notations,2003-07-08,Areas Of Potential Concern Include Soil Surface Staining (Hydrocarbons) & Salt Issues. No Mention If Groundwater Encountered.,Remedial Plan Is To Excavate Impacted Soils And Either Remove To A Permitted Off-Site Facility Or Treat In A Biocell On Propetry Owned By Bcbc. Salt Impact Will Be Assessed And Delineated And A Separate Remedial Plan Will Be Drawn Up, If Needed.] [NOTICE OF INDEPENDENT REMEDIATION COMPLETION SUBMITTED (WMA 28(2)). Waste Management Act: Contaminated Sites Notations,2003-08-28,Re: Notice Of Completion Of Independent Remediation,No Actions Entered]
14499	[NOTIFICATION RECEIVED ABOUT LIKELY OR ACTUAL SUBSTANCE MIGRATION FROM NEIGHBOURING SITE. Environmental Management Act: General,2012-10-19,Source Parcel 503 Railway Avenue, Salmo Site 5095,No Actions Entered]

Table G3: Registered Contaminated Sites: Documents

Site ID	Documents
2742	["Satellite Bulk Plant, Salmo, Bc - Subsurface Contamination Assessment", 16-May-1988, Shell Canada Products Limited (Vancouver) - Commissioner; Jensen, Jim - Reviewer; Morrow Recovery Systems Inc (North Vancouver) - Author] ["Satellite Bulk Plant, Salmo, Bc - Subsurface Contamination Assessment - Progress Report # 2", 26-Sep-1988, Shell Canada Products Limited (Vancouver) - Commissioner; Jensen, Jim - Reviewer; Morrow Recovery Systems Inc (North Vancouver) - Author] ["Satellite Bulk Plant, Salmo, Bc Location Code 2835 - Subsurface Contamination Assesment, Progress Report 3", 15-Dec-1988, Shell Canada Products Limited (Vancouver) - Commissioner; Jensen, Jim - Reviewer; Morrow Recovery Systems Inc (North Vancouver) - Author] ["Satellite Bulk Plant, Salmo, Bc Location Code 2835 - Subsurface Contamination Assesment, Progress Report 4", 04-Apr-1989, Jensen, Jim - Reviewer; Shell Canada Products Limited (Vancouver) - Commissioner; Morrow Recovery Systems Inc (North Vancouver) - Author] ["Satellite Bulk Plant, Salmo, Bc Location Code 2835 - Subsurface Contamination Assesment, Progress Report 5", 26-Jun-1989, Shell Canada Products Limited (Vancouver) - Commissioner; Morrow Recovery Systems Inc (North Vancouver) - Author; Jensen, Jim - Reviewer] ["Satellite Bulk Plant, Salmo, Bc Location Code 2835 - Subsurface Contamination Assesment, Progress Report 6", 31-Oct-1989, Jensen, Jim - Reviewer; Morrow Recovery Systems Inc (North Vancouver) - Author; Shell Canada Products Limited (Vancouver) - Commissioner] ["Satellite Bulk Plant, Salmo, Bc Location Code 2835 - Progress Report 7", 28-Feb-1990, Jensen, Jim - Reviewer; Shell Canada Products Limited (Vancouver) - Commissioner; Morrow Recovery Systems Inc (North Vancouver) - Author] ["Satellite Bulk Plant, Salmo, Bc Location Code 2835 Progress Report 8", 27-Jul-1990, Jensen, Jim - Reviewer; Shell Canada Products Limited (Vancouver) - Commissioner; Morrow Recovery Systems Inc (North Vancouver) - Author] ["Satellite Bulk Plant, Salmo, Bc Location Code 2835 Progress Report 9", 06-Nov-1990, Morrow Environmental Consultants Inc (North Vancouver) - Author; Stockerl, Ed (Nelson) - Reviewer; Shell Canada Products Limited (Vancouver) - Commissioner] ["Satellite Bulk Plant, Salmo, Bc Location Code 2835 Progress Report 10", 01-Aug-1991, Morrow Environmental Consultants Inc (North Vancouver) - Author; Shell Canada Products Limited (Vancouver) - Commissioner; Stockerl, Ed (Nelson) - Reviewer] ["Former Shell Bulk Plant Salmo, Bc Progress Report 11", 19-Feb-1992, Shell Canada Products Limited (Vancouver) - Commissioner; Morrow Environmental Consultants Inc (North Vancouver) - Author; Stockerl, Ed (Nelson) - Reviewer] ["Former Shell Canada Bulk Plant, Salmo Bc, District Lot 206a, Lease No. 212044 K.L.D.", 08-Nov-1993, Shell Canada Products Limited (Vancouver) - Commissioner; Morrow Environmental Consultants Inc (North Vancouver) - Author; Stockerl, Ed (Nelson) - Reviewer] ["Environmental Management Program Salmo Former Bulk Plant - Location Code P00275", 29-Mar-1996, Stockerl, Ed (Nelson) - Recipient; Shell Canada Products Limited (Vancouver) - Commissioner; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author]
3995	["Phase I Environmental Site Assessment 80-7th Street Salmo, B.C.", 26-Jun-1997, Hanson, Merle And Corinne - Commissioner; Stockerl, Ed (Nelson) - Recipient; Kootenay Engineering Ltd. (Robson, B.C.) - Author]
5095	["Stage 2 Preliminary Site Investigation (Psi) Drilling Intrusive Assessment 501 Railway Avenue At Main Street, Salmo, Bc", 08-Oct-1997, Stockerl, Ed (Nelson) - Reviewer; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Imperial Oil Limited (Burnaby) - Commissioner] ["Supplementary Off-Site Investigation 501 Railway Avenue, Salmo, Bc", 31-Dec-1997, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Imperial Oil Limited (Burnaby) - Commissioner; Stockerl, Ed (Nelson) - Reviewer] ["Stage 1 Preliminary Site Investigation, Esso Service Station 503 Railway Avenue, Salmo, Bc", 21-May-1998, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Stockerl, Ed (Nelson) - Reviewer; Imperial Oil Limited (Burnaby) - Commissioner] ["Additional Off-Site Drilling Intrusive Assessment 503 Railway Avenue, Salmo, Bc Location No. 990333", 24-Jul-1998, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Stockerl, Ed (Nelson) - Recipient; Imperial Oil Limited (Burnaby) - Commissioner] ["Evaluation Of Applicable Groundwater Assessment And Remediation Critieria, 503 Railway Avenue, Salmo, Bc", 27-Aug-1998, Imperial Oil Limited (Burnaby) - Commissioner; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Stockerl, Ed (Nelson) - Reviewer] ["Pilot Scale Testing Program - 503 Railway Avenue, Salmo, Bc", 24-Nov-1999, Imperial Oil Limited (Burnaby) - Commissioner; Stockerl, Ed (Nelson) - Recipient; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Discharge To Storm Sewer From The Former Imperial Oil Service Station Located At 503 Railway Avenue, Salmo Bc", 22-Dec-1999, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Stockerl, Ed (Nelson) - Recipient] ["Volume 1 Detailed Site Investigation, Former Service Station, 503 Railway Avenue, Salmo Bc", 28-Jan-2000, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Detailed Site Investigation, Former Service Station, 503 Railway Avenue, Salmo, Bc V0g 1z0 (Location No. 990333/R02311)", 28-Jan-2000, Imperial Oil Limited (Burnaby) - Commissioner; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Stockerl, Ed (Nelson) - Recipient] ["Volume 2 Detailed Site Investigation, Former Service Station", 28-Jan-2000, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Human Health Risk Assessment, Former Essso Service Station, 503 Railway Avenue, Salmo, Bc", 06-Apr-2000, Imperial Oil Limited (Burnaby) - Commissioner; Wilson Scientific Consulting Inc. (Vancouver) - Co-Author; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Remedial Action Plan In Support Of An Application For Approval In Principle For The Former Service Station, 503 Railway Avenue, Salmo, Bc", 18-Apr-2000, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Imperial Oil Limited (Burnaby) - Commissioner; Stockerl, Ed (Nelson) - Recipient] ["Human Health And Ecological Risk Assessment, 503 Railway Avenue, Salmo, Bc", 27-Jun-2000, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Imperial Oil Limited (Burnaby) - Commissioner; Harris, Glenn E - Reviewer] ["Site Monitoring & Sampling Report", 26-Aug-2002, Imperial Oil Limited (Burnaby) - Commissioner; Stockerl, Ed (Nelson) - Reviewer; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Soil Vapour Sampling Methodology", 27-Aug-2002, Imperial Oil Limited (Burnaby) - Commissioner; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Stockerl, Ed (Nelson) - Reviewer] ["Quarterly Monitoring Report For The Periods Of July - September, 2002", 01-Oct-2002, Imperial Oil Limited (Burnaby) - Commissioner; Stockerl, Ed (Nelson) - Reviewer; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Site Monitoring & Sampling Report", 03-Dec-2002, Imperial Oil Limited (Burnaby) - Commissioner; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["503 Railway Avenue Salmo, Bc Mwlap File 26250-20/5095 Site 5095", 21-May-2003, Murdoch, Wendy R (Cranbrook) - Reviewer; Imperial Oil Limited (Burnaby) - Author] ["Additional Stage Of Assessment - Former Esso Service Station At 503 Railway Avenue, Salmo, Bc (Location No. 990333/R02311)", 03-Jun-2003, Murdoch, Wendy R (Cranbrook) - Recipient;

Table G3: Registered Contaminated Sites: Documents

Site ID	Documents
	Imperial Oil Limited (Burnaby) - Commissioner; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Site Monitoring And Sampling Report - 503 Railway Avenue, Salmo, Bc (Sampling Dates June 9-13, 2003)", 27-Aug-2003, Imperial Oil Limited (Burnaby) - Author] ["Site Monitoring And Sampling Report", 23-Sep-2003, Murdoch, Wendy R (Cranbrook) - Reviewer; Imperial Oil Limited - Author] ["Demonstration Monitoring Program Progress Report Years 2001-2003", 09-Mar-2004, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Demonstration Monitoring Program Progress Reort Years 2001-2003", 09-Mar-2004, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Site Monitoring & Sampling Report", 26-Apr-2004, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Site Monitoring & Sampling Report - March 9-11, 2004", 26-Apr-2004, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Monitoring And Sampling Report For The September & October 2004 Events", 07-Dec-2004, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Demonstration Monitoring Program Progess Report Year 2004", 26-Apr-2005, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Validation Monitoring Program Progress Report Years 2005 And 2006 Former Esso Service Station 503 Railway Avenue, Salmo, Bc (Location No. R02311)", 10-Jul-2007, Snc-Lavalin Morrow Environmental - Author] ["Validation Monitoring Phase Progress Report For 2009 503 Railway Avenue Salmo, Bc Loction No. 88002202 / Sap No. R02311", 28-Jan-2010, O'Connor Associates - Author] ["Validation Monitoring Phase Progress Report For 2010 503 Railway Avenue Salmo, Bc Loction No. 88002202 / Sap No. R02311validation", 27-Jan-2011, O'Connor Associates - Author] ["Validation Monitoring Phase Progress Report For 2011, 503 Railway Ave, Salmo", 30-Jan-2012, O'Connor Associates - Author; Imperial Oil - Commissioner] ["Validation Monitoring Phase Progress Report For 2011, 503 Railway Ave, Salmo", 31-Jan-2014, Parsons - Author] ["Validation Monitoring Phase Progress Report 2014 503 Railway Avenue Salmo, British Columbia Location No: 88004702/Sap No. Jf. 00531", 23-Jan-2015, Parsons - Author] ["Validation Monitoring Phase Progress Report 2015 503 Railway Avenue, Salmo, British Columbia Location No: 88004702/Sap No. Jf.00531", 20-Jan-2016, Parsons - Author] ["Approval In Principle Dated March 2002 503 Railway Salmo British Columbia Location No. 88002202 Sap No. Jf.00531", 26-Jan-2016, Parsons - Author]
5143	n.d.
5303	["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 31-Aug-1999, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Rubeniuk, Myles - Recipient; Imperial Oil Limited (Burnaby) - Commissioner] ["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 29-Nov-1999, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Imperial Oil Limited (Burnaby) - Commissioner; Rubeniuk, Myles - Recipient] ["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 16-Dec-1999, Rubeniuk, Myles - Recipient; Imperial Oil Limited (Burnaby) - Commissioner; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author]
5311	["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 27-Jul-1999, 473984 Bc Ltd (Salmo) - Recipient; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Imperial Oil Limited (Burnaby) - Commissioner] ["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 16-Aug-1999, Imperial Oil Limited (Burnaby) - Commissioner; 473984 Bc Ltd (Salmo) - Recipient; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 29-Nov-1999, Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; 473984 Bc Ltd (Salmo) - Recipient; Imperial Oil Limited (Burnaby) - Commissioner] ["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 16-Dec-1999, 473984 Bc Ltd (Salmo) - Recipient; Imperial Oil Limited (Burnaby) - Commissioner; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author]
5313	["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 27-Jul-1999, Waterstreet, Dennis And Norma - Recipient; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author; Imperial Oil Limited (Burnaby) - Commissioner] ["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 20-Nov-1999, Imperial Oil Limited (Burnaby) - Commissioner; Waterstreet, Dennis And Norma - Recipient; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author] ["Former Salmo Service Station, 503 Railway Avenue, Salmo, B.C.", 16-Dec-1999, Imperial Oil Limited (Burnaby) - Commissioner; Waterstreet, Dennis And Norma - Recipient; Morrow Environmental Consultants Inc (Burnaby (Commerce Court)) - Author]
8322	["Notice Of Independent Remediation: Salmo Highways Yard, Salmo, Bc", 26-Jun-2003, Technology Resource Inc (North Vancouver) - Author; Murdoch, Wendy R (Cranbrook) - Recipient; Bc Buildings Corporation (Victoria) - Commissioner] ["Notice Of Completion Of Independent Remediation.", 26-Aug-2003, Technology Resource Inc (North Vancouver) - Author; Stockerl, Ed (Nelson) - Recipient]
14499	n.d.