APPENDIX D: EXAMPLE GARP DETERMINATION FIELD FORM

The following is an example of what a field form might look like for the purposes of the Stage 1 screening and assessment. Actual fields for data collection may vary according to the needs of the health authority office.

WATER SYSTEM NAME: Cowichan Bay WaterWorks District

WELL NAME: Valley View 1

☐ **B.C. MoE Well Identification Plate Number:** 108356 -- 38473

☐ **B.C. MoE Aquifer:** 1 9 7 / none / unknown **Local Aquifer Name:** Cherry Point

Well Log: ■ Examined ☐ Attached NA ☐ Site Sanitary Survey Conducted Verbal / Measured

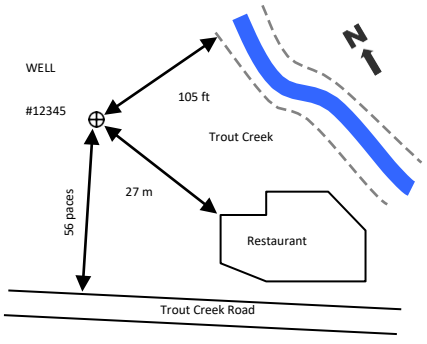
LATitude: 4 8 . 7 1 1 4 9 ° N , **LONG**itude: 1 2 3 . 6 0 8 9 ☐ ° W ☐ / ☐

Well Depth 198 ft ..... feet *or* metres below ground *or* ☐ unknown ☐ / ☐

Water Level in Well 40 ft ..... feet *or* metres below ground *or* ☐ unknown ☐ / ☐

Well Casing Diameter: 10 inches ..... inches *or* mm *or* ☐ unknown ☐ / ☐

Well Location Sketch



Sketch the well location and proximity to roads, buildings, waterways, sources of contamination, etc. Distances may be estimated in feet or metres or paced off.

Stage 1: Hazard Screening and Assessment

HAZARDS Water Supply System Well	SCREENING		ASSESSMENT		NOTES
	NOT PRESENT	PRESENT (Complete Assessment)	AT RISK (Water source potentially GARP)	AT LOW RISK	
A. Water Quality Results					
A1: Exhibits recurring presence of total coliform bacteria, fecal coliform bacteria, or *Escherichia coli* (*E. coli*).	X			X	1 sample Lt1 GT200 on July 25 2022
A2: Has reported intermittent turbidity or has a history of consistent turbidity greater than 1 NTU.	X				
B. Well Location					
B1: Situated inside setback distances from possible sources of contamination as per section 8 of the HHR.		X		X	On site wastewater treatment. Level 2 hydrogeological investigations indicate low risk.
B2: Has an intake depth <15 m below ground surface that is located within a natural boundary of surface water or a flood prone area. (Fig 1)	X				
B3: 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. (Fig 2)	X				Douggan lake 300 m away.
B4: Located within 300 m of a source of probable enteric viral contamination without a barrier to viral transport.		X		X	Low risk from Level 2 hydrogeological investigations.
C. Well Construction					
C1: Does not meet GWPR (Part 3 Div. 3) for surface sealing.	X				Bentonite seal
C2: Does not meet GWPR (Part 4) and WSA (section 54) for well caps and covers	X				
C3: Does not meet GWPR (section 63) and DWPA (Section 16) for floodproofing.	X				
C4: Does not meet GWPR (Part 3 and Part 7) for wellhead protection.	X				
D. Aquifer Type and Setting					
D1: Has an intake depth <15 m below ground surface.	X				
D2: Is situated in a highly vulnerable, unconfined, unconsolidated or fractured bedrock aquifer.	X				Aquifers 198 and 197 are low and moderate vulnerabilities respectively.
D3: Is completed in a karst bedrock aquifer, regardless of depth.	X				

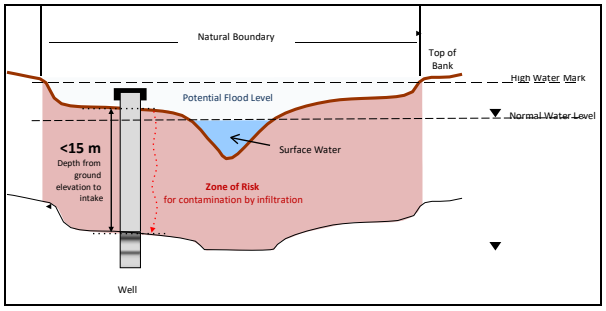


Figure 1: Hazard B2, Flood Risk

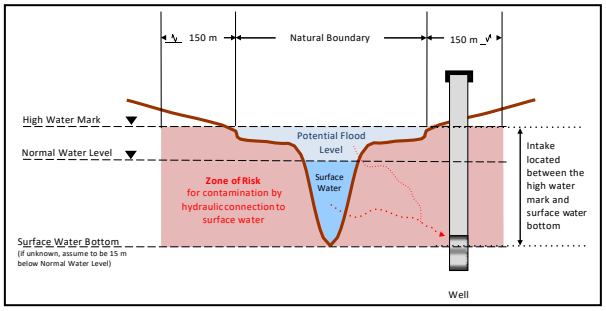


Figure 2: Hazard B3, Connection to Surface Water

Stage 2: GARP Determination

☐ At Risk (GARP) ☐ At Risk (GARP-viruses only) ■ At Low Risk

- If "at risk" the water supplier should undertake one or more mitigation measures (see options below).
- If "at risk" because information is unavailable or inconclusive for any hazards in the checklist, consider moving to Level 2 or 3 investigation.
- If "at low risk", indicate only "Move to Stage 4: Long-term Monitoring" below.

Stage 3: Risk Mitigation

Recommended options:

- ❑ Treatment to meet provincial drinking water objectives
- ❑ Treatment to meet only the provincial drinking water objectives for viruses
- ❑ Provide alternate source of water
- ❑ Well Alteration / correct significant deficiencies in well construction.[17]
- ❑ Relocate the well
- ❑ Eliminate source(s) of contamination
- ❑ Level 2 or 3 investigation
- ■ Move to Stage 4 Long-term Monitoring
- ❑ Other

Comments:

Based on the above Level 1 assessment this well is Low Risk, the next step is to continue with routine bacteriological and chemical monitoring.

-A Level 2 hydrogeological investigation has been performed and hazards b1 and B4 have been determined to be low risk.

Completed by: Sarah Gilchrist Digitally signed by Sarah Gilchrist Date: 2023.07.24 11:23:12 -07'00' DATE: July 24th 2023

[17] Deficiencies in well construction related to the Ground Water Protection Regulation must be addressed.