

## 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:** \_\_\_\_\_

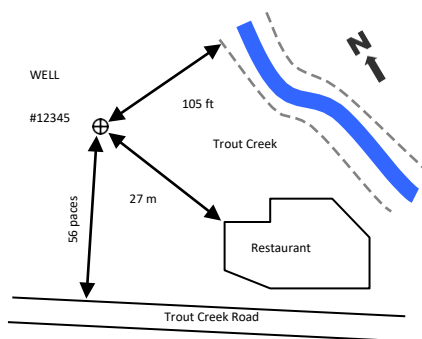
**WELL NAME:** \_\_\_\_\_

**B.C. MoE Well Identification Plate Number:** \_\_\_\_\_

**B.C. MoE Aquifer:**  / none / unknown **Local Aquifer Name:** \_\_\_\_\_

Well Log: <input type="checkbox"/> Examined <input type="checkbox"/> Attached NA <input type="checkbox"/> Site Sanitary Survey Conducted	Verbal / Measured
<b>LATitude:</b> <input type="checkbox"/> <input type="checkbox"/> . <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> ° N , <b>LONGitude:</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> . <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> ° W	<input type="checkbox"/> / <input type="checkbox"/>
Well Depth..... feet or metres below ground or <input type="checkbox"/> unknown	<input type="checkbox"/> / <input type="checkbox"/>
Water Level in Well ..... feet or metres below ground or <input type="checkbox"/> unknown	<input type="checkbox"/> / <input type="checkbox"/>
Well Casing Diameter: ..... inches or mm or <input type="checkbox"/> unknown	<input type="checkbox"/> / <input type="checkbox"/>

### 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	
<b>A. Water Quality Results</b>					
A1: Exhibits recurring presence of total coliform bacteria, fecal coliform bacteria, or <i>Escherichia coli</i> ( <i>E. coli</i> ).					
A2: Has reported intermittent turbidity or has a history of consistent turbidity greater than 1 NTU.					
<b>B. Well Location</b>					
B1: Situated inside setback distances from possible sources of contamination as per section 8 of the HHR.					
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)					
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)					
B4: Located within 300 m of a source of probable enteric viral contamination without a barrier to viral transport.					
<b>C. Well Construction</b>					
C1: Does not meet GWPR (Part 3 Div. 3) for surface sealing.					
C2: Does not meet GWPR (Part 4) and WSA (section 54) for well caps and covers					
C3: Does not meet GWPR (section 63) and DWPA (Section 16) for floodproofing.					
C4: Does not meet GWPR (Part 3 and Part 7) for wellhead protection.					
<b>D. Aquifer Type and Setting</b>					
D1: Has an intake depth <15 m below ground surface.					
D2: Is situated in a highly vulnerable, unconfined, unconsolidated or fractured bedrock aquifer.					
D3: Is completed in a karst bedrock aquifer, regardless of depth.					

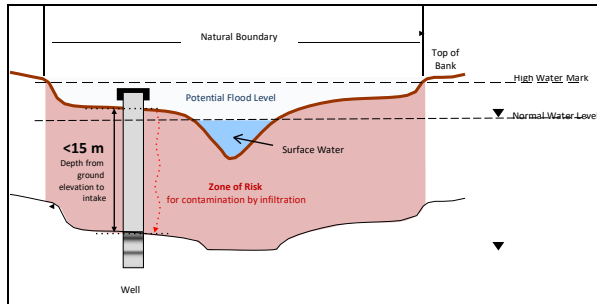


Figure 1: Hazard B2, Flood Risk

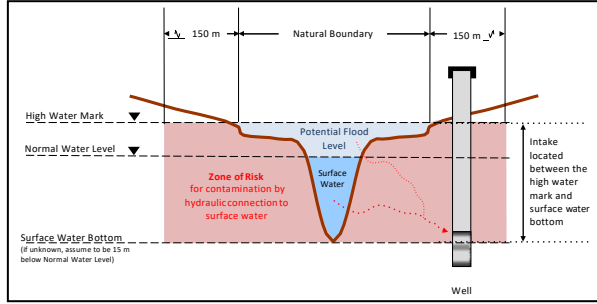


Figure 2: Hazard B3, Connection to Surface Water

**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.<sup>17</sup>
- Relocate the well
- Eliminate source(s) of contamination
- Level 2 or 3 investigation
- Move to Stage 4 Long-term Monitoring
- Other

Comments:

Completed by: \_\_\_\_\_ DATE: \_\_\_\_\_

<sup>17</sup> Deficiencies in well construction related to the Ground Water Protection Regulation must be addressed.