

**Part D - Pump Test Monitoring for Adjacent Wells**

1.6 Drawdown of **Ground Water** levels in all **Wells** within a 250 m radius of each **Well** being tested, including existing **Wells** drilled on adjacent **Parcels** and **Wells** drilled for the proposed subdivision, must be monitored during the test as follows:

- a) drawdown of **Ground Water** levels in **Wells** within a 250 m radius should be monitored at a frequency and duration no less than that specified in the following table, unless a **Qualified Professional** specifies a greater monitoring frequency and duration in order to adequately detect drawdown interference, in which case monitoring must be done at the frequency and duration specified by the **Qualified Professional**.

Frequency	Duration
Pre-test water level	
• Once	n/a
Water level during pump test	
• Every 1 hour during pumping	to 24 hours elapsed time
Maximum drawdown prior to shutting the pump off	
• Once	n/a
Water level after pump shut off	
• Every 60 minutes during recovery	Until full recovery of the <i>Well</i> or to a maximum of 24 hours elapsed time
• Every 24 hours during recovery	to full recovery of the <i>Well</i>

1.7 If any drawdown interference is detected in any **Well** within 250 m of the **Well** being tested, then the **Owner** must retain a **Qualified Professional** to complete the remainder of the water source development and testing program if a **Qualified Professional** has not already been retained.

1.8 The **Owner** or **Qualified Professional** should advise the **Regional District** in writing of any inability, despite their best efforts, to obtain access to any **Well** to monitor drawdown interference for the purposes of this Schedule, and the **Regional District** may require the **Owner** to engage a **Qualified Professional** to prescribe and fulfill, in accordance with sound **Ground Water** engineering practice, alternative measures to determine whether the proposed **Independent On-site Water System** will cause drawdown interference.

## **Part D - Interpretation of Results**

- 1.9 Determination of drawdown percentage for the **Owner**-Directed Approach should be calculated in accordance with Figure B.3. Where a **Qualified Professional** is involved in **Well** development and testing, the **Qualified Professional** should determine the appropriate methodology to determine drawdown percentage.
- 1.10 To determine impacts on the aquifer, the **Qualified Professional** should consider the following:
- a) potential surface water depletion;
  - b) potential changes in water quality;
  - c) potential reductions in water availability for nearby users;
  - d) potential that the source is ground water under the direct influence of surface water, with reference to current Provincial/Federal best practices; and
  - e) any other factor the **Qualified Professional** considers pertinent to the determination of impact on the aquifer.
- 1.11 Sustainable **Well** yield should be calculated based on a projected 100 day yield with a 30% safety factor.

## **Assessment and Demonstration of Water Availability Report for Ground Water**

- 1.12 The **Owner** should submit a report upon completion of the assessment and demonstration of water availability requirements in a form acceptable to the **Regional District**, which should contain, at a minimum, the following information for each proposed **Independent On-site Water System**:
- a) identification of water sources tested;
  - b) results of all required testing and monitoring;
  - c) construction details and as-built plans for each water source;
  - d) legal survey showing the location of the **Well**, all water system components, setbacks from property lines, sewage systems, and any other information pertinent to the **Independent On-site Water System**;

- e) copies of any licenses or permits as required by Provincial legislation;
- f) **Well** report(s) from each **Qualified Well Driller** and **Qualified Pump Installer**, which are also required to be submitted to the Comptroller of Water Rights in all cases,
- g) if a **Qualified Professional** has been involved in the water source development and testing, reports from a **Qualified Professional** containing, at a minimum, the following information:
  - i. a determination of whether or not the operation of the proposed **Well** at *MDD*, which should be at least 3.8 litres per minute, will reduce the amount of available water for any **Well** within 250 m of the tested **Well**;
  - ii. a determination of whether or not the operation of the proposed **Well** at the approved rate would result in changes to the water balance of the aquifer, which would result in long-term environmental changes or reduced yield on a regional scale;
  - iii. a determination of whether operating the **Well** at a rate higher than the approved rate would result in changes to the water balance of the aquifer, which would result in long-term environmental changes or reduced yield on a regional scale;
  - iv. calculation of sustainable **Well** yield in accordance with Section 1.11; and
  - v. a determination of whether **Well** recovery is adequate to support the intended use of the **Well**, at a rate of at least 3.8 litres per minute;
- h) a summary regarding outcomes of the testing program, indicating whether the water sources meet the requirements of this bylaw, which sources are being withdrawn from the application, and which **Wells** have been closed or deactivated; and
- i) in cases where test **Wells** will not be brought into production, **Well** closure records confirming that they have been properly closed in accordance with any applicable Provincial and Federal regulations.