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 *Well* or to a maximum of 24 hours elapsed time
• Every 24 hours during recovery	to full recovery of the *Well*

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.