

Rural Residential Subdivision and Groundwater Supply

Subdivision of Land for Household Purposes will fall within three categories:

1) A subdivision that utilizes individual water wells resulting in six or more parcels per quarter-section

If a subdivision will use individual water supply wells and the subdivision results in six or more parcels per quarter-section, the *Water Act* requires the use of an Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA) member to prepare a technical report in support of the use of water supply well(s) to provide groundwater for the subdivision. The report must support the diversion of 1250 cubic metres of groundwater per household, per year, without interfering with any household users, licensees or traditional agricultural users who exist when the subdivision is approved under the Municipal Government Act. These household users in the approved subdivision will have a statutory right to a groundwater supply of 1250 cubic metres per year. It should be noted that the six or more parcels in a quarter-section include those parcels already in existence.

For the technical report to be prepared, at least one water well must be completed in the aquifer to be used on the quarter-section to be developed. An existing water well can also be used as long as it is completed in the aquifer to be used, on the quarter-section to be developed, and reliable well construction details are available. Hydrogeological data consisting of a minimum 24-hour-pumping and 24-hour-recovery aquifer test is recommended. The rate at which the water well is pumped must be equal to or greater than the rate required for the development. A field-verified water well survey must then be completed to identify all water wells within a minimum 1.6-km radius of the development. The technical report will then be prepared and submitted.

2) Water Distribution Systems

If the subdivision will use one or more water wells to provide groundwater to a central distribution system and the total diversion will exceed 1250 cubic metres of groundwater per year, the supply well(s) go through the normal licensing procedure (see attached document). If approved by Alberta Environment (AENV), the residents will receive groundwater under a licence. This is not a statutory right, but rather a right to the use of groundwater based on the date of a complete licensing submission.

Before a licence to divert and use groundwater is considered by AENV, the source aquifer must be tested and a technical report prepared. Generally, a new water well will be used, but an existing water well can also be used as long as reliable well construction details are available. Hydrogeological data consisting of a minimum 48-hour-pumping and 48-hour-recovery aquifer test is recommended. The rate at which the water well is pumped must be equal to or greater than the rate required for the development. A field-verified water well survey must then be completed to identify all water wells within a minimum 1.6-km radius of the development. The technical report will then be prepared and submitted to AENV.

The *Water Act* requires the use of an APEGGA member to prepare a technical report supporting the use of water supply wells to provide groundwater to residents via a central distribution system.

3) A subdivision that utilizes individual water wells with five or less parcels per quarter-section

No approval to divert groundwater is required under the *Water Act*.

NOTE: *Some Counties and Municipal Districts may have subdivision requirements in addition to those under the Water Act.*

