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Aquifer Survey & Pumping Test Program, 221-Unit Townhouse Development, Lake Windermere Pointe, Invermere, British Columbia



The Pointe of View Developments and The Lake Windermere Resort Joint Venture (JV) proceeded to develop a “221-Unit Townhouse Development” at Lake Windermere Pointe (LWP) comprising three building pods, as well as miscellaneous buildings. The LWP site covers an area of just over 20,000 square metres (2 ha).

This project included significant earthworks and water supply development in the order of about 500 gpm, requiring a knowledgeable geotechnical and hydro-geological company. GES Geotech Inc. was retained in March 2005 and continued working on the project until July 2008.

GES carried out hydro-geological and aquifer survey services in cooperation with National Water Surveying (NWAS) and Thompson Drilling.

Based on the results of our Electro-Seismic (geophysical) work, GES confirmed the presence of a shallow aquifer across the LWP site with depths of 18-22 m below ground level (BGL) and estimated yields of more than 250 (lgpm), while also concluding the presence of a second (potential) deeper aquifer at depths of 45-65 m with estimated yields of up to 95 lgpm, but in localized areas only.

We Prepared work plans for chemical analysis experiments and site supervision for the well drilling operations and pump installations.

In the context of minimum yield criterion of 500 lgpm, and after carrying out further tests, GES saw little justification with a deep well drilling program at the site. GES confirmed that groundwater diversion from the tested well, at the proposed 500 lgpm pumping rate, will neither unreasonably interfere with existing users of the groundwater source, nor negatively impact the aquifer or other aquifers and surface water bodies in the area.