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President

## Crystal Mountain Resort Expansion - Water Supply Facts

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### 1.0 INTRODUCTION

Crystal Mountain Resort is located in the community of Westbank. Growth in Westbank has continued at a steady rate, and the water supply for this growth is a critical issue to the people of the community. This document is intended to provide data on how this development impacts the existing and future water supply in the community.

Similar to other developments in the area, the proposed expansion of Crystal Mountain Resort will require water for domestic and irrigation purposes. The amount of water required and the source have been determined and are discussed in detail in two reports submitted to the Regional District of Central Okanagan as part of a rezoning application. This development is committed to strict water control measures and will recycle all of the domestic water back into irrigation and/or snow making. This reduces the overall water requirements and provides a safe and sustainable method for the disposal of treated wastewater effluent.

### 2.0 WATER SUPPLY FACTS

- Water supply in the community of Westbank is primarily provided from the Powers Creek watershed by the Westbank Irrigation District (WID).
- Crystal Mountain resort resides in both the Powers Creek and Trepanier Creek watersheds. However, the confirmed underground source of water for this development is located in the Powers Creek watershed.
- The proposed water supply for Crystal Mountain is from groundwater contained in a confined aquifer. The results of the 72-hour pumping test indicated that groundwater collected from the confined aquifer in the area of the test well is not under the direct influence of surface water from Powers Creek.
- According to the Westbank Irrigation District's Capital Works Plan (Agua Consulting Inc., 2005) the average annual runoff flows from Powers Creek is in the range of 29,000,000 m<sup>3</sup>.



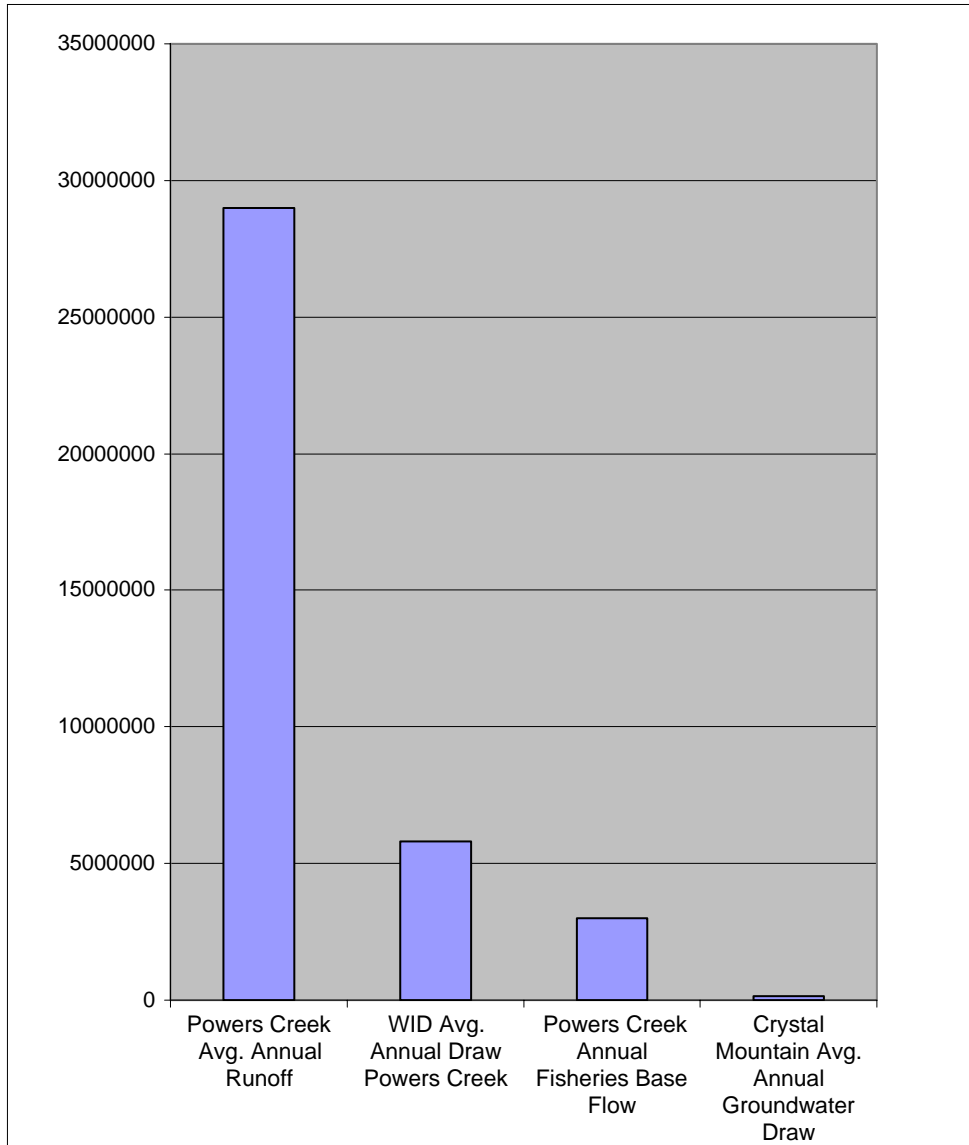
The WID annually draws an average of 5,800,000 m<sup>3</sup> of water from Powers Creek. An annual volume in the range of 3,000,000 m<sup>3</sup> is required to support fish habitat in Powers Creek.

WID holds 10,000,000 m<sup>3</sup> of licensing for Water Local Authority. It holds 13,926,000 m<sup>3</sup> of licensing for seasonal irrigation. Combined licensing for storage adds up to 24,699,000 m<sup>3</sup>. These volumes of licensing appear to be sufficient for the next 20 years of growth and change. Groundwater is not currently utilized to supplement source water capacity for the system; however, it may be available as an alternative source to reduce District reliance on Powers Creek.

- The total average annual water draw for Crystal Mountain at build out is calculated to be about 145,000 m<sup>3</sup>. The water demand for Crystal Mountain in comparison to the water resources of Powers Creek and the WID current draw is shown in Figure 1.
- The Crystal Mountain expansion is not expected to increase the overall growth rate of the community and should not affect the projected water demand. We consider the underground source as a supplement source to the water capacity of the region.
- Crystal Mountain will construct and maintain a separate water and sewer utility for the proposed development at no cost to the community of Westbank.



FIGURE 1



We trust that this data provides clear perspective on the water requirements of the development in relation to the resources available in the community.



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This report is primarily an information document. The facts and recommendations presented herewith have been developed based on the best information available at this time.

Yours very truly,

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