

7.0 WATER MANAGEMENT

7.1 Surface Water Management

The regional site drainage is described in Section 4.4. The plant site catchment area, which includes ore stockpile and process plant areas, is estimated to be approximately 0.5 hectares. Plant site runoff will be captured by collection ditches along the southern boundary of the process plant, as shown in Figure 5-1 and directed to an existing settling pond for discharge to ground.

Groundwater (surface) currently drains through the surficial materials, which have a hydraulic conductivity of 10^{-6} (BGC, 2006).

7.2 Site Water Balance

A preliminary site water balance model has yet to be prepared for the project.

7.3 Water Requirements, Supply, Treatment and Distribution

The following two sections describe the water supply systems required for fire protection, plant make-up water and domestic use.

7.4 Plant Site Domestic Water Supply

Supply of domestic potable water to the project is provided from the Atlin community water system by a commercial water supplier. Domestic water is treated with chlorine and meets potable standards based on tests performed on the well water and routine checks of the system. An *Operating Permit* for the on-site water storage and distribution system is required by Northern Health.

The average daily domestic water demand for the entire site is less than 1000 litres/day.

7.5 Plant Process Water and Fire Protection Water Supply

Plant process water will be sourced from a small containment pond, which will be constructed near the plant site within the surficial gravel materials. The process plant has been designed with a requirement for a constant clean (gland) water feed.

For fire protection, designated water pumps will be strategically located near site infrastructure (process plant, assay lab, etc.).

7.6 Overall Water Usage Requirements

Based on the current Yellowjacket development plan, the average daily demands for water can be summarized as follows:

Process plant usage	480 m ³ /day
Domestic use	1 m ³ /day
Total average usage	481 m³ /day.