

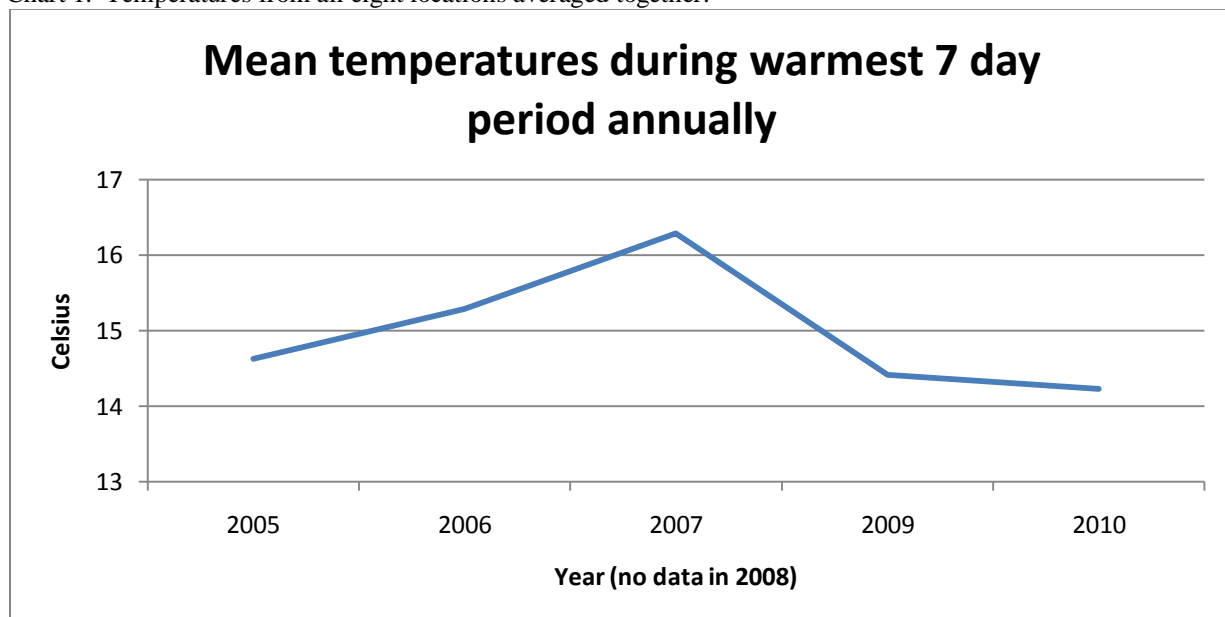
DRAFT Synopsis of 2005-2010 water temperature monitoring in the Swan Valley

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The abundant, cold water in the Swan Valley is an extremely valuable resource. Due to increased concern about climate change and potential land management impacts, the Water Quality sub-committee began monitoring water temperatures at eight locations in 2005. Data gathered from this effort would be valuable to identify sensitive areas, track bull trout habitat quality, and possibly evaluate if fishing restrictions are needed during hot summers. This data is not intended to prove or disprove climate change since it is only a short timeframe.

Three locations are on the Swan River itself and five are on tributary streams near their mouths. Data is recorded hourly from roughly May to October and then analyzed based on the warmest seven consecutive days. No data is available in 2008 due to system-wide equipment failure. The results since 2005 do not see any upward or downward trend in all eight locations averaged together. The year 2007 is the warmest on record and 2010 is the coolest on record.

Chart 1. Temperatures from all eight locations averaged together.



The results follow expectation that bull trout spawning streams, which have considerable groundwater input, would be colder than the rest of the Swan River valley. The Swan River itself is warmest at the most upstream monitoring location (Kraft Creek bridge) and is coolest at lower elevations. This is unusual for rivers and demonstrates the influence of the cold, groundwater tributary streams. No particular stream appears to be trending upward or downward. Glacier Creek, which does not have bull trout spawning, is consistently the warmest stream monitored.

Chart 2. Results from individual streams. Streams are listed in ascending elevation from Swan Lake towards headwaters. Data from the river itself is shown with dashes for clarity. No data is available for Elk Creek and Porcupine Bridge in 2010.

