

Stream Water Chemistry Report Summary

Stream Name: Old Woman's River

Water Chemistry Parameters	Observed Value	Standard
Total Suspended Solids	8.17 mg/L	< 11.2 mg/L
Alkalinity	250.59 mg/L	< 224.83 mg/L
Chloride	24.07 mg/L	
Total Phosphorus	0.039 mg/L	< 0.01 - 0.03 mg/L
Chlorophyll a Content	1.24 mg/L	
Temperature	14.96 C	< 25.15 C
pH	8.00	Between 6.5-8.5
Conductivity	0.475 spc	
Dissolved Oxygen	7.10 mg/L	> 6.0 mg/L
Total Organic Nitrogen	0.631 mg/L	< 1.1mg/L

The water chemistry at Old Woman's River indicates some disturbance may be occurring within the watershed. One of the indicators of this is the elevated phosphorus content at the site. The total phosphorus was above all provincial recommendations for a healthy freshwater system as well as above the reference site. The total organic nitrogen at this site was below the recommended value, however it was elevated when compared to the reference site value (0.557 mg/L). This suggests there is potentially human mediated sources of both of these nutrients within the Old Woman's River watershed. The dissolved oxygen and pH at this site were both within the acceptable range based on provincial guidelines, as expected.

The remaining variables show mixed signs of disturbance. The total suspended solids at this site is quite low, well below the recommended value and only marginally above the reference site. This suggests that the amount of suspended material in this stream is as expected under natural conditions. The chlorophyll *a* content, however, is elevated when compared to reference conditions. This may be due to the relatively higher phosphorus and nitrogen concentration in this stream; however, it may also be a result of the morphology of the stream promoting algal growth. Finally the alkalinity at this site is above the recommended value, like almost all other non-reference sites. This site actually has one of the highest alkalinity values which is paired well with one of the highest conductivity values. This suggests this stream has a strong connection to the ground water, opposed to surface runoff. This strong connection to the ground water promotes the high alkalinity at this site.

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