Water Quality Objective Monitoring, White River Watershed, 2009

Hydrologic and Geomorphic Characteristics of the White River Drainage Basin

The White River, with a drainage area of about 50,504 square kilometres, adds vast amounts of silt and sediment from glacier and mountain runoff to Yukon River. Many large tributary rivers and streams flow into the catchment area of the White River basin. The confluence of the White River with the Yukon River creates the point that delineates the Yukon River North from the Yukon River South

In 2009, while making routine inspections in the White River area, CS&I staff collected 9 grab samples for water quality monitoring at 5 different locations in the basin. An additional 45 samples were collected by E.M.R staff during routine mine inspections.

Site Codes and Global Position of Water Quality Sampling Locations in the White River Watershed

SITE CODE	LOCATION	LAT_Y	LONG_X
W 01	White River mouth	63.19370	-139.59580
W ARC 01	Arch Creek mouth	61.49255	-139.72307
W BUR 01	Burwash Creek Below All Mining (BAM)	61.44270	-139.21507
W DISC 01	Discovery Creek Mouth	62.07384	-137.22852
W DISC 03	Discovery Creek Above All Mining (AAM)	62.07954	-137.18932
W DOLL 02	Dolly Creek Below All Mining (BAM)	62.06233	-137.22121
W DOLL 03	Dolly Creek Above All Mining (AAM)	62.06499	-137.21320
W DON 01	Donjek River at hwy bridge	61.67894	-139.75711
W DUK 01	Duke River	61.37777	-139.13460
W GLAD 01	Gladstone Creek mouth	61.31580	-138.64999
W NAN 01	Nansen Creek mouth	61.98049	-137.19904
W NAN 02	Nansen Creek Below All Mining (BAM)	61.98052	-137.19963
W NAN 03	Nansen Creek East fork Above All Mining (AAM)	62.09598	-137.19000
W NISL 02	Nisling River d/s of Klaza River	62.09641	-138.49236
W NISL 03	Nisling River d/s of Nansen Creek at class change	61.84616	-137.47952
W NISL 04	Nisling River u/s Nansen Creek	61.98049	-137.19904
W QUIL 01	Quill Creek Below All Mining (BAM)	61.50624	-139.33156
W SAN 01	Sanpete Creek mouth	62.08206	-140.76778
W SWJ 01	Swede Johnson Creek Below All Mining (BAM)	61.59196	-139.42787
W VIC 02	Victoria Creek left fork Below All Mining (BAM)	62.02619	-137.05630
W VIC 03	Victoria Creek left fork Above All Mining (AAM)	62.09759	-137.14679

Water Quality Objective monitoring, White River Watershed – Summary

Insufficient data was available in order to draw any conclusions regarding the overall water quality in the White River watershed. Currently, there are no operating weather monitoring stations in or around the White River Watershed that could provide more detailed precipitation

data than the station at Carmacks YT and the only Water Survey of Canada station that is monitoring flow in the White River watershed is located just below the glacier field on the White, at Kilometre 1881.6, of the Alaska Highway.

There are two major sub-drainages that make up the White River watershed, the Kluane River drainage and the Nisling River drainage. Both the Kluane River and the Nisling River flow into the Donjek River which in turn flows into the White. As placer mining takes place in both sub-drainages, site specific monitoring and inspection is necessary. The analysis of water and effluent samples collected during these routine inspections was well within the water quality objectives and sediment discharge standards set for the area.

The Fish Habitat Management System - White River Watershed (Category B)
Sample Results that Exceed Water Quality Objectives for 2009

Sampling Station	W 01	W DON 01	W NISL 02	W NISL 03	W SWJ 01	W QUIL 01	Unnamed CK	W BUR 01	W GLAD 01	Other
Location Description	Mouth	Mouth	d/s Klaza River	d/s W NAN 01	Mouth	Mouth	River	Mouth	Mouth	
Sample Type	Grab							Grab	Grab	
Lat Y	63.19370	61.67894	62.09641	61.84616	61.59196	61.50624	61.49900	61.44270	61.31580	
Long X	-139.59580	-139.75711	-138.49236	-137.47952	-139.42787	-139.33156	-139.28000	-139.21507	-138.64999	
Habitat Classification	High	Moderate-L	High	Moderate-L	Moderate-H	Moderate-H	Moderate-H	Moderate-M	Lake Rule	
Water Quality Objective (mg/L)	25	200	25	200	25	25	25	100	25	
Date of Sampling										
06/30/09					36.6	8.6		18.1		
Total Seasonal Average TSS (mg/L) by site					20.6	4.6		15.5	0.6	
Number of days sampled					2	2		2	1	

Legend | **Not continuously monitored**

Water Samples that are: Above / Below the Water Quality Objective