

Stream Location and Conditions

(use a new data sheet for each stream section surveyed)

Module 1

Stream Name/Nearest Town: <i>STONEY CREEK - Buenaby</i>		Date: <i>MARCH 02, 2009</i>
Organization Name:		Watershed code <i>100-054300-56600</i>
Contact Name: <i>SCOTT DUCHARME</i>		Phone # <i>604-690-1474</i>
Crew Names: <i>THIBAUT DOIX</i>		Stream Segment #
		Stream Section # <i>1</i>
		Length Surveyed <i>805m</i>

Survey Start Point (when applicable)

Mapsheets number	Type	Scale
Start Point Location (distance from known stream landmark, directions to start) <i>~ STONEY CREEK AND BRUNETTE RIVER CONFLUENCE, ~ ACCESS TRAIL OFF CARIBOO PLACE - OFF CARIBOO RD.</i>		
Time: <i>9:30</i>	Weather	<input checked="" type="checkbox"/> clear <input checked="" type="checkbox"/> shower (1-2.5 cm in 24 hr) <input type="checkbox"/> snow <input checked="" type="checkbox"/> overcast <input type="checkbox"/> storm (>2.5 cm in 24 hr) <input type="checkbox"/> rain on snow
Water turbidity (cm visibility) <i>1 cm</i>	Temperature °C (leave thermometer 2 min.) air <i>9°</i> water <i>7.5°</i>	
Measurements taken every <i>1.0</i> m		
Bankfull Channel width <i>6.46</i> (m)	Average depth <i>1.1</i> (m)	
Wetted Channel width <i>6.0</i> (m)	Average depth <i>0.260</i> (m)	

Survey End Point (when applicable)

Mapsheets number	Type	Scale
End Point Location (distance from known stream landmark) <i>- 55m upstream SIDE OF Loughheed culverts, ABOVE ^{LAY} log Enhancement,</i>		
Time: <i>1:46</i>	Weather	<input type="checkbox"/> clear <input type="checkbox"/> shower (1-2.5 cm in 24 hr) <input type="checkbox"/> snow <input checked="" type="checkbox"/> ^{PARTLY} overcast <input type="checkbox"/> storm (>2.5 cm in 24 hr) <input type="checkbox"/> rain on snow
Water turbidity (cm visibility) <i>722 cm</i>	Temperature °C (leave thermometer 2 min.) air <i>9°</i> water <i>7.5°</i>	
Measurements taken every <i>1.0</i> m		
Bankfull Channel width <i>7.9</i> (m)	Average depth <i>1.16</i> (m)	
Wetted Channel width <i>4.06</i> (m)	Average depth <i>0.19</i> (m)	

(Start Point) First and Last Measurements taken 0.1 m from streambank edge (End Point)

Left Bank	m	0.10	0.61	2.5		2.2	1.1	1.0	Right Bank
Wetted Depth	cm	20	17	5		34	28	14	Wetted Depth
Bankfull Depth	m	1.8	1.4	1.4		1.4	1.6	1.8	Bankfull Depth

Left Bank	m	0.10	1.5	2.5		3.0	1.4	1.5	Right Bank
Wetted Depth	cm	9	27	30		10	22	20	Wetted Depth
Bankfull Depth	m	1.4	0.7	0.50		1.5	1.5	1.4	Bankfull Depth

Take measurements every 0.5m in streams less than 5m wide, every 1m in streams 5 to 15m

SECT #1

Stream Reconnaissance Field Data Sheet

Feature Information con't

Module 1

Feature #	Photo #	m upstream of last feature	Feature Description and Size (see App. 3)	Stream-bank (L or R)	Adjacent Land Use *	Actions/Comments/ Water Quality Concerns
2	1 3	12m	PEDESTRIAN BRIDGE CROSSING. • height = 4.0m • width = 8.0m • length = 6.0m • wid = 30cm	L-R	trail	• Base stable • RIFFLE Area under bridge.
3	4 5 6	54m	SLUMPING BANK ↓ 6m x 18m ↔	L	U	• under-cut starting.
4	7	56m	BANK EROSION - SLUMPING ↓ 2.3m x 7.5m ↔	R	U	Bank Enhancement Req'd. - logs or larger boulders.
5	8 9	35m	BANK EROSION SLUMPING/SIPPING ↓ 2.8m x 2.9m ↔	L	U	• Flow has potential of punching thru two small banks away from pool and meander in channel.
6	10	78	BANK EROSION ↓ 1.67m x 4.0m ↔	L R	U C	- woody debris jam on left channel side - stable at present flow.

* Adjacent Land Use Codes: Undisturbed, Agriculture, Forestry, Residential, Parks, Commercial, Industrial

General comments on this section of the stream

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7 ₁	11 12 13	10m	BANK EROSION - under-cut BANK AND EXPOSED SOIL ↓ 1.6m x 5.5m	R L	C U	- Stable at low flows. - habitat complexity could stabilize BANK for a longer period.
8 ₁	14	40m	BANK EROSION - EXPOSED clay. ↓ 1.5m x 6.7m	R	U	- impacts during hi-flows
9 ₁	15 16	9m	Enhancement ↳ Rock Weir INSTALLATION width = 5.6m length = 1.5m		U	- AT mouth to side channel - Functioning
10 ₁	15 17	1m	SIDE CHANNEL - Length = 25m BF = 4.5m - ww = 4.0m - wd avg = 18.3cm - H ₂ O = 7.5°	L	U	- Accessible during moderate to higher flows. - Rock Weir / SAND BAGS AT upstream END before ladder.
11 ₁	18	1m	BANK EROSION Stumping - undercut ↓ 3.0m x 15.0m	R	U	LWD / BOLPERS could provide some BANK protection..

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12. 10	19 20	15m	Enhancement - Rock Weir Install	Instream	U	- located below fish ladder entrance - Holding Area
13. 11	21 22 24 25	12m	Enhancement CPR - Box Fish LADDER. - steps = 1.5m x 1.8m - jump = 30cm	Instream	RAIL tracks	- Avg step water depth 35cm - monitoring of steps FOR debris Reg'd
14 12	23	8m	Culvert discharge ↓ 2.2m (↓) - 1.8m length = 24m.	L	-	- not Accessible - Presently Flowing - Fry or juvenile possibly killed from spill onto Rip / Rap
15. 13	24 25 26 27* 28	13m	Culvert discharge to FISH LADDER. DIA = 1.7m Length = 24m	R	-	- 8 small (<30cm) Rock Baffles installed, some missing. - Pic 29, upstream end of culvert.
16. 14	30 32	106m (82m)	CPR - RAILWAY Bridge crossing * "NOT in operation" ↓ 4.5m x 12.5m ↔	Instream	-	- Base stable - - Base supports leeching in water.

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17 No	31	2m	BANK EROSION exposed CLAY ↓ 1.8m x 9.3m ↔	R	U	- Stable at present FLOWS. - Ivy on a dozen trees on left BANK SIDE *
18. 15	33 34	19m	Culvert e Government RD. DIA = 2.0 m length = 34m	L Instream	U	- Flowing - no BAFFLES
19. 15	35	φm	Culvert AT Government ROAD crossing. DIA = 1.6m Length =	R	U	- Flowing NO BAFFLES
20. NO	34	32m	Culvert Discharge into LB - Culvert - H ₂ O = 8°C	L	-	- Flowing Clear - storm water From Government Roads.
21. No	36 37	3m	Artificial modification Water Quality sampling site.	R	U	- STAFF gosc - Assesment Probes. For City of Burnaby.

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22. 16	38 39	8m	Tributary - $H_2O = 7^{\circ}C$ length = > 10m BF = 1.7m ww = .80m - wd avg = 17cm.	L	u	Flowing AND Accessible. - observe 1 cold juvenile motts, half eaten.
23. 17	40 41	15m	Enhancement. - Root WAD Installation. ALSO large bolder size - .75m to 1.2m	L	u	Functioning helps keep - high flow away from left bank tributary.
24. 17	41 42	1m	Artificial modification Bolders installed at top of tributary channel. size -> .75m to 1.2m	L	u	- Placed to prevent hi flow from entering tributary channel AND eroding bank. - Functioning.
25. 18	43	12m	Enhancement. Rock Wier install. width = 5.5m length = 5m	Instream	-	- Angular rock used. - Rock size 4m to .6m
26. 19	44 45 46 47		OFF CHANNEL Enhancement. - HABITAT POND. - INFLOW blocked.	L	u	10 LWD loss in pond. - min flow thru. * Culvert blocked - observe SALMON skeleton.

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27. 20	47	22m	Culvert Discharge DIA - est ~ 40cm - No Flow	L	u	Plugged AND NOT FUNCTIONING. FLOW TO HABITAT POND BLOCKED.
28. 21	48	12m	Artificial Enhancement = Bank Stabilization with Rip/Rap. ↓ 80cm x 13m	R	u	- Rip/Rap size size = 40-60cm
29. 22	49 50	38m	BANK EROSION undercut ↓ 1.6m x 14m ↔	L	u	- Stable AT present flow.
30. 23	51	11m	Culvert Discharge DIA = 40cm - Flowing - outfall = 30cm - 10m From mainstem.	R L	trail u	- feeds small channel, then mainstem. - Not suitable FISH habitat.
31. 23	52	2m	- Drainage Area - Not Flowing -	R u	trail u	- From drainage along trail.

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32. 24	53	9m	Discharge - OLD wooden CHUTE H ₂ O = 10°C	L	Hiway	- Drain from Lousheed ditch
33. 24	54 56	1m	CULVERT - 60m length. DIA = 1.2m note: INFLOW to culvert .65m ↓ - GATES top END	R	Hiway	• NO FLOW • Hi FLOW use only. - Doughhead crossing
34. 24	54 56	1m	Culvert DIA = 1.2m - trash RACK AT upstream INFLOW.	Instream center		Flowing - no baffles. - Length of CV = 60m
35. 24	55 56	1m	Culvert. DIA = 1.8m - GATED AT INFLOW - length = 60m	L		- MAIN FLOW has, baffles for passage.
36. /	56	64m	TRASH RACK Upstream SIDE OF Lousheed CV. Height = 1.7m	Instream		- SPACE BETWEEN BARS = 23cm

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37. 25	57	6m	TRIBUTARY > 10m BF = 4.0m ww = 1.7m wd = 18cm	R	trail	H ₂ O = 8°C Flowing clear.
38. 25	58	1m	Enhancement. Rock w/ir install width = 6.4m length = 22m	Instream		Functioning Rip/Rap size = .35 - .65
39. 24	59	4m	Log Enhancement DIA = .75m to 1.2m length = 4m	L	u	Secure, but does not provide alot of habitat At this flow.
40. 26	60	0m	Artificial MODIFICATION BANK STABILIZATION using Rip/Rap. size = .75m - 1.2m	R	u	Armoring for BANK stability - min overhang Veg over creek.
41. 24	61	5m	Log Enhancement DIA = 1.2m length = 4m. in creek.	L	u	- LACK OF SMALL woody Debris.

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42	59 62	8m	log Enhancement DIA = 1.0m width = 4m in creek.	L	U	- LACK OF SMALL woody Debris built up.
43	63 66	10m	SECT 1# END PT			located upstream OF houghed Hwy crossing.

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