

APPENDIX I

Reach Cards/Site Cards/Fish Collection Forms and Photographs (Sites 63 to 927)

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #

2.0 093M.039 1030

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093M.039		ILP #: 1030		
REACH									
Reach #: 2.0		UTM(Zone/East/North): 9.669813.6136608				Sample Type: Biased			
Length (km): .79		Coupling: Decoupled		Magnitude: 2		BGC Zone: SBS			
Gradient (%): 6.1		Confinement: Frequently Confin		Order: 2		Open water: Absent			
US Elev (m): 1008		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 63		Field UTM 9.669746.6136624		Agency: C172		Crew: SG/JD		Date: 2002/09/28	
Site Length (m): 200		GIS UTM 9.669528.6136706		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.40		1.200		1.600	
Stage: Low ☒				Wetted Width (m): 1.03		0.800		1.3	
Med ☐				Bankfull Depth (m): 0.33		0.3		0.4	
High ☐									
Temp (C): 8		pH: 8.1		Conductivity: 80					
				Turbidity: Turbid ☐		Low ☐			
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 10.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 2.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Decoupled				INDICATORS		B2		B3	
Confinement: Unconfined						D1		D2	
Morphology: RP Riffle Pool						D3			
				C1		C2		C3	
				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		D		N		S	
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☐		☒	
		☐		☐		☐		☐	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest							
Left Bank: Rip.Veg:		Stage: Mature forest							
		Instream Veg: None ☐		Algae ☒		Moss ☒		Vascular ☒	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
63	EF	1	200	116 sec	600	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.039 ILP # 1030 Site 63

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
Local Name: ILP Map #: 093M.039 ILP #: 1030 NID Map #: 093M.039 NID #: 40063 Reach #: 2.0 Site #: 63
Field UTM (Z.E.N): 9.669746.6136624 Method: GPU Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 9.669528.6136706 Ref. Name:
Date: 2002/09/28 Time: 17:01 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	1.40	1.50	1.30	1.20	1.60	1.40					1.40
Wetted Width (m):	T	1.00	0.90	1.20	1.00	1.30	0.80					1.03
Pool Depth (m):	T	0.10	0.20	0.10	0.10	0.20	0.30					0.17

	Gadient %	Mtd	Avg
Method I:	3.0	2.0	C
Method II:	2.0	1.0	C

Wb Depth: .3 .3 .4 Avg: 0.33 Method: T Stage: L ☒ M ☐ H ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	N	S	T	S	T
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☒

LWD: F DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☒ M ☒ V ☒

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 8 Method: T4 Req #: Cond.: 80 Method: S3
pH: 8.1 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 10.0 D (cm): 2.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None.
Spawning Habitat	None - abundant fines and no suitable spawning substrates.
Rearing Habitat	Poor - shallow pool depths, low flows, abundant fines, ephemeral flows.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 8 F: 15A	STD	U	Upstream photo of channel.
R: 8 F: 16A	STD	D	Downstream photo of LWD.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #

ILP Map #

ILP #

Site

2.0

093M.039

1030

63

COMMENTS

Section	Comments
CHANNEL	S4*

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.039 ILP # 1030

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.039		ILP #: 1030		Reach #: 2 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/28		To:		2002/09/28		Agency: C172		Crew: SG/JD		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
63	093M.039	40063				GPU EF 1	8	80	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
63	EF	1	1	2002/09/28	17:01	2002/09/28	17:35										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
63	EF	1	1	O	116	200.0	0.9	600	60	6	SMITH	12B					
											ROOT						
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
63	EF	1	1	NFC		0											



Site #63, Upstream photo of channel.
Roll #8, Frame #15A, Date: 2002/09/28



Site #63, Downstream photo of LWD.
Roll #8, Frame #16A, Date: 2002/09/28

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
1,0	093K.092	2131

Triton Environmental Consultants Ltd.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093K.092 ILP # 2131 Site # 64

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
Local Name: ILP Map #: 093K.092 ILP #: 2131 NID Map #: 093K.092 NID #: 40064 Reach #: 1.0 Site #: 64
Field UTM (Z.E.N): .. Method: Site Lg: 300 Method: MAP Access: H
GIS UTM (Z.E.N): 10.329796.6092389 Ref. Name:
Date: 2002/09/29 Time: 09:15 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	1.60	1.90	1.50	1.80	2.10	1.70					1.77
Wetted Width (m):	T	1.30	1.20	1.40	1.10	1.30	1.20					1.25
Pool Depth (m):	T	0.20	0.30	0.30	0.20	0.20	0.30					0.25

	Gadient %	Mtd	Avg
Method I:	16.0	18.0	C
Method II:	17.0	15.0	C

Wb Depth: .5 .4 .5 Avg: 0.47 Method: T Stage: L ☐ M ☒ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	S	T	T	T	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

CROWN CLOSURE
2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

LWD: F DIST: E

LB SHP: O

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

RB SHP: O

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 40 Method: S3
pH: 7.9 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: Rafted debris Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3
D95: 30.0 D (cm): 15.00 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None.
Spawning Habitat	Poor - substrates too large for resident fish, small pockets of suitable spawning.
Rearing Habitat	Moderate - abundant cover, deep pools, adequate flows.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 8 F: 17A	STD	U	Upstream photo of cascade / pool habitat.
R: 8 F: 18A	STD	D	Downstream photo of cascade / pool habitat.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093K.092	2131	64

COMMENTS	
Section	Comments
CHANNEL	Possible barrier downstream on mainstem.

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0
ILP Map # 093K.092
ILP # 2131

WATERBODY

Gazetted Name: Local:
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
Waterbody ID: ILP Map #: 093K.092 ILP #: 2131 Reach #: 1 -
Project ID: 5271 Lake/Stream: S Lake From Date:

Fish Permit #: 145269 Date: 2002/09/29 To: 2002/09/29 Agency: C172 Crew: SG/JD Resample: ☐

SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
64	093K.092	40064	GPU	EF 1	5	40	C	

A. GEAR SETTINGS

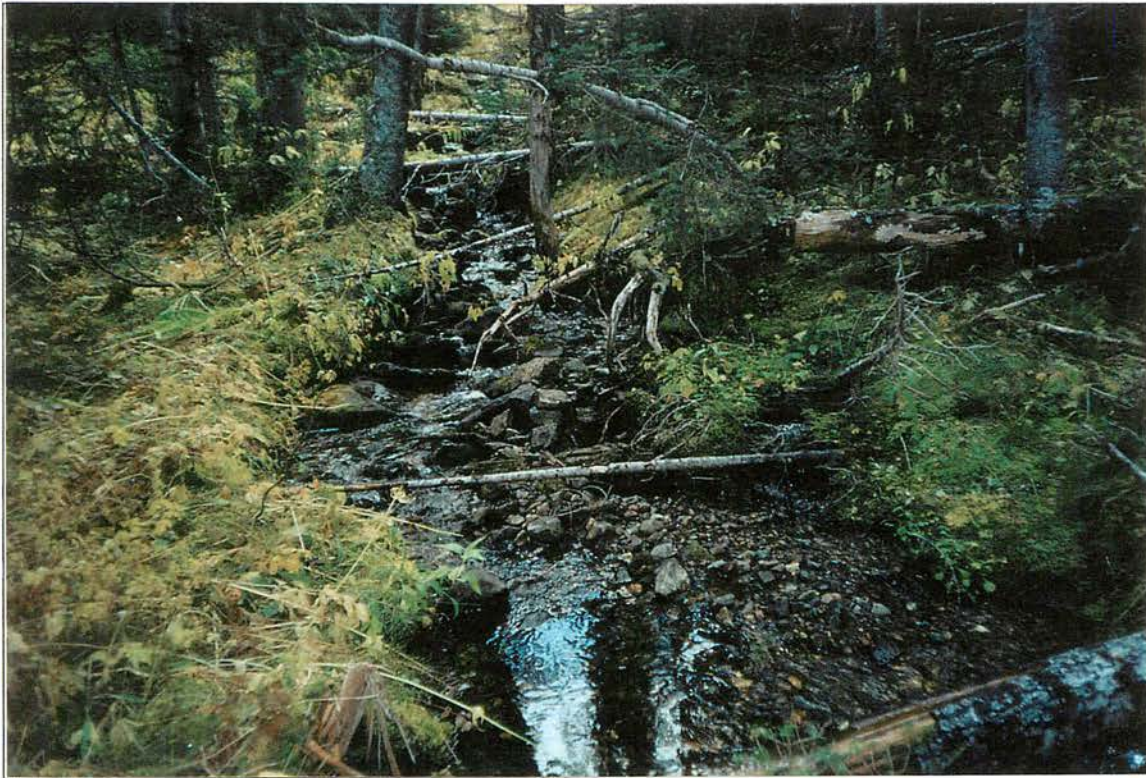
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
64	EF 1	1	2002/09/29	09:15	2002/09/29	09:45	

C. ELECTROFISHER SPECIFICATIONS

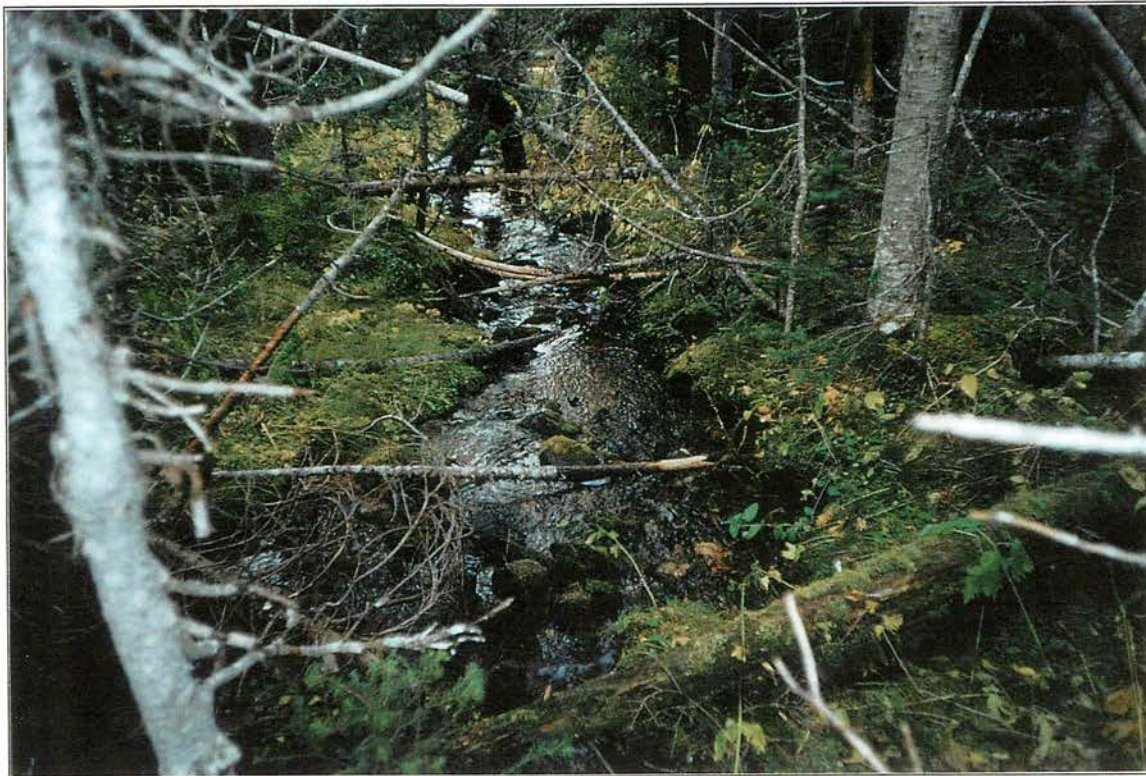
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
64	EF	1	1	O	368	300.0	1.5	1000	60	6	SMITH ROOT 12B

FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
64	EF	1	1	NFC		0			



Site #64, Upstream photo of cascade / pool habitat.
Roll #8, Frame #17A, Date: 2002/09/29



Site #64, Downstream photo of cascade / pool habitat.
Roll #8, Frame #18A, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 5.0 ILP Map # 093K.092 ILP # 2127

STREAM REFERENCING

Gazetted Name: Local Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000 ILP Map #: 093K.092 ILP #: 2127

REACH

Reach #: 5.0 UTM(Zone/East/North): 10.329607.6092412 Sample Type: Biased
Length (km): 2.06 Coupling: Coupled Magnitude: 3 BGC Zone: ESSF
Gradient (%): 10.7 Confinement: Confined Order: 2 Open water: Absent
US Elev (m): 1400 Islands: NONE Riparian Vegetation: Coniferous
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified

SITE

Site #: 65 Field UTM ... Agency: C172 Crew: JD/SG Date: 2002/09/29
Site Length (m): 400 GIS UTM 10.329441.6092505 Agency Name: Triton Environmental Consultants (Terrace)

CHANNEL

No Vis.Ch.: ☐ Intermittent: ☐ Avg Min Max #
Dewatered: ☐ Tribs.: ☐ Channel Width (m): 2.15 1.8 2.6 6
Stage: Low ☐ Wetted Width (m): 1.47 1.200 1.8 6
Med ☒ Bankfull Depth (m): 0.70 0.6 0.8 3
High ☐ Temp (C): 5 pH: 7.8 Conductivity: 40
Turbidity: Turbid ☐ Low ☐
Moderate ☐ Clear ☒

MORPHOLOGY

Bed Material: Dominant: Cobble D95 (cm): 35.00 Bars: Non ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐
Subdominant: Boulders D (cm): 15.00 Braid ☐
Channel Pattern: Sinuous Islands: None DISTURBANCE O1 B1 B2 B3 D1 D2 D3
Coupling: Coupled INDICATORS ☐ ☐ ☐ ☐ ☐ ☐ ☐
Confinement: Confined C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Morphology: CP Cascade Pool ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

COVER

Total Cover: Abundant Type: SWD LWD B U DP OV IV
Amount: T D S S S T N
LWD Dist: Clumped Location: P/S/O: ☒ ☐ ☐ ☒ ☐ ☐ ☒ ☐ ☐ ☐ FSZ: ☐
Right Bank: Shape: Overhanging Texture: Fines ☒ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐ Crown Closure
Left Bank: Shape: Overhanging Texture: Fines ☒ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐ 1-20%
Right Bank: Rip.Veg: Coniferous Stage: Mature forest
Left Bank: Rip.Veg: Stage: Mature forest Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)
093K.092	88033	C	2.0	GE	2	GE	R: F: L: #:		10.328139.6091

Comments: No Photo

FISH

Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
65	EF	1	400	516 sec	1000	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 5.0 ILP Map # 093K.092 ILP # 2127 Site 65

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093K.092 ILP #: 2127 NID Map #: 093K.092 NID #: 40065 Reach #: 5.0 Site #: 65
Field UTM (Z.E.N): .. Method: Site Lg: 400 Method: MAP Access: H
GIS UTM (Z.E.N): 10.329441.6092505 Ref. Name:
Date: 2002/09/29 Time: 09:55 Agency: C172 Crew: JD/SG Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	2.20	2.60	1.80	1.90	2.30	2.10					2.15	Method I:	12.0	10.0	C	11.00
Wetted Width (m):	T	1.60	1.40	1.30	1.20	1.80	1.50					1.47	Method II:	9.0	13.0	C	
Pool Depth (m):	T	0.30	0.40	0.50	0.30	0.30	0.40					0.37					

Wb Depth: .6 .8 .7 Avg: 0.70 Method: T Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	S	S	S	T	N
Loc: P/S/O:	☒	☒	☒	☒	☐	☒	☐

LWD: A DIST: C

LB SHP: O

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: O

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 5 Method: T4 Req #: Cond.: 40 Method: S3
pH: 7.8 Method: P2 Method: GE
Flood Signs: Rafted debris Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3
D95: 35.0 D (cm): 15.00 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: CO
Confinement: CO
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093K.092	88033	C	2.0	GE	2	GE	R: F: L: #:		10.328139.6091849	GIS
Comments: No Photo										

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Present.
Spawning Habitat	Poor - substrates too large for most resident fish.
Rearing Habitat	Moderate - abundant cover, deep pools, adequate flows.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
5.0	093K.092	2127	65

PHOTOS					
Photo				Foc Lg	Dir
					Comments
R:	8	F:	19A	STD	U
Upstream photo of LWD plunge pool.					
R:	8	F:	20A	STD	D
Downstream photo of small rapids.					
COMMENTS					
Section				Comments	
CHANNEL				Cascade downstream in Reach 5 barrier to fish.	
CHANNEL				S6	

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 5.0 ILP Map # 093K.092 ILP # 2127

WATERBODY

Gazetted Name: Local:
 Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000
 Waterbody ID: ILP Map #: 093K.092 ILP #: 2127 Reach #: 5 -
 Project ID: 5271 Lake/Stream: S Lake From Date:

Fish Permit #: 145269 Date: 2002/09/29 To: 2002/09/29 Agency: C172 Crew: JD/SG Resample: ☐

SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
65	093K.092	40065	GPU	EF 1	5	40	C	

A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
65	EF 1	1	2002/09/29	09:55	2002/09/29	10:40	

C. ELECTROFISHER SPECIFICATIONS

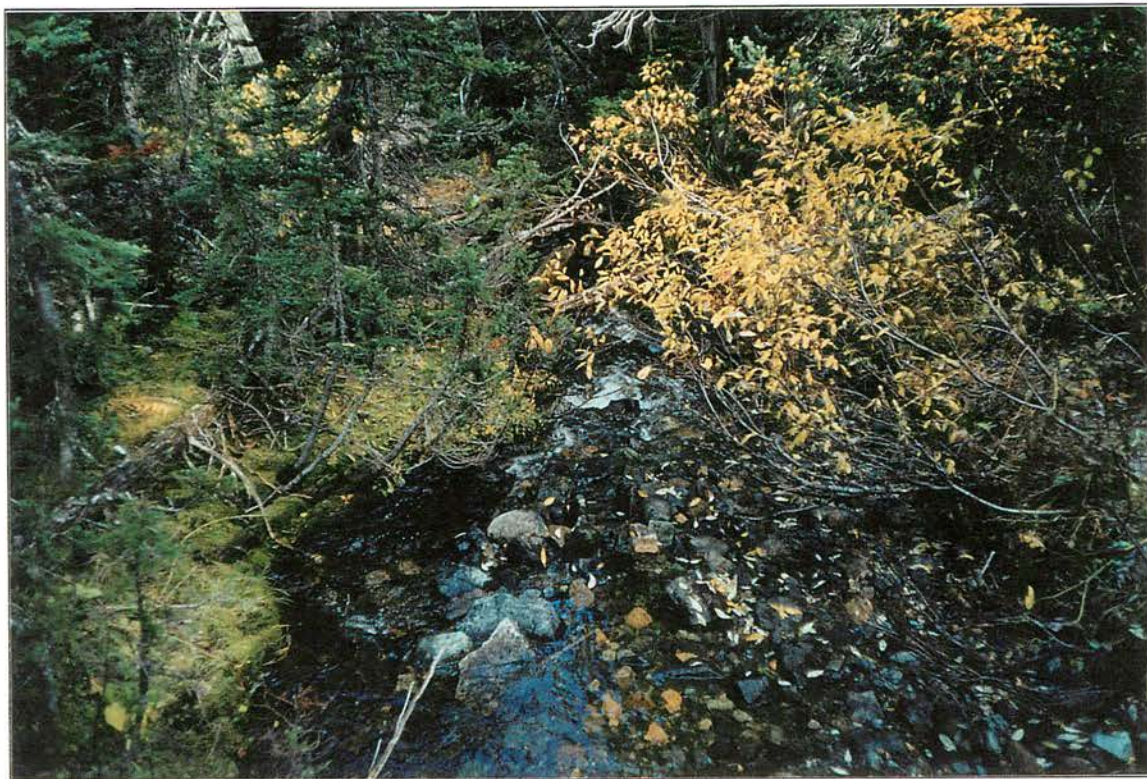
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
65	EF	1	1	O	516	400.0	1.5	1000	60	6	SMITH ROOT

FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
65	EF	1	1	NFC		0			



Site #65, Upstream photo of LWD plunge pool.
Roll #8, Frame #19A, Date: 2002/09/29



Site #65, Downstream photo of small rapids.
Roll #8, Frame #20A, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 2.0 ILP Map # 093K.092 ILP # 2052

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000					ILP Map #: 093K.092		ILP #: 2052		
REACH									
Reach #: 2.0		UTM(Zone/East/North): 10.322646.6090634				Sample Type: Biased			
Length (km): 1.69		Coupling: Coupled		Magnitude: 13		BGC Zone: SBS			
Gradient (%): 6.4		Confinement: Confined		Order: 3		Open water: Absent			
US Elev (m): 1128		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 66		Field UTM ..		Agency: C172		Crew: SG/JD		Date: 2002/09/29	
Site Length (m): 300		GIS UTM 10.322768.6090558		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		2.10		1.700	
Stage: Low ☒				Wetted Width (m):		1.50		1.200	
Med ☐				Bankfull Depth (m):		0.70		0.6	
High ☐		Temp (C): 6		pH: 7.6		Conductivity: 60		Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 25.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Boulders		D (cm): 10.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Coupled						B2		B3	
Confinement: Confined						D1		D2	
Morphology: CP Cascade Pool						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: S		S		T		D	
LWD Dist: Evenly Distributed		Location: P/S/O:		☒		☒		☒	
				☒		☒		☒	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest							
Left Bank: Rip.Veg:		Stage: Mature forest							
				Instream Veg: None ☒		Algae ☐		Moss ☐	
								Vascular ☐	
FEATURES									
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)
093K.092	88034	F	2.4	GE	1	GE	R: 8 F: 23A L:	#:	10.322933.6090
Comments:		One of several at location.							
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
66	EF	1	300	326 sec	800	NFC	0		
67	EF	1	50	56 sec	800	RB	2	150	170

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093K.092 ILP # 2052 Site 66

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093K.092 ILP #: 2052 NID Map #: 093K.092 NID #: 40066 Reach #: 2.0 Site #: 66
Field UTM (Z.E.N): ... Method: Site Lg: 300 Method: MAP Access: H
GIS UTM (Z.E.N): 10.322768.6090558 Ref. Name:
Date: 2002/09/29 Time: 11:40 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	T	2.30	2.20	2.60	2.00	1.80	1.70					2.10	Method I:	5.0	6.0	C 5.25
Wetted Width (m):	T	1.60	1.50	1.50	1.80	1.40	1.20					1.50	Method II:	5.0	5.0	C
Pool Depth (m):	T	0.30	0.40	0.50	0.50	0.20	0.30					0.37				

Wb Depth: .6 .8 .7 Avg: 0.70 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	S	T	D	T	T	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

LWD: F

DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 60 Method: S3
pH: 7.6 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3
D95: 25.0 D (cm): 10.00 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: CO
Confinement: CO
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093K.092	88034	F	2.4	GE	1	GE	R: 8 F: 23A L:	#:	10.322933.6090531	GIS

Comments: One of several at location.

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Present.
Spawning Habitat	Poor - High energy, large substrates.
Rearing Habitat	Moderate - abundant cover, adequate flows, moderately deep pools.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
2.0	093K.092	2052	66

PHOTOS						
Photo			Foc Lg	Dir	Comments	
R:	8	F: 21A	STD	U	Upstream photo of stream channel.	
R:	8	F: 22A	STD	D	Downstream photo of pool habitat.	
R:	8	F: 23A	STD	U	Photo of 2.4 m Falls.	
COMMENTS						
Section			Comments			
CHANNEL			2.4 m Falls blocks upstream fish migration RB (170 mm) captured downstream of Falls.			
CHANNEL			S3/S6			

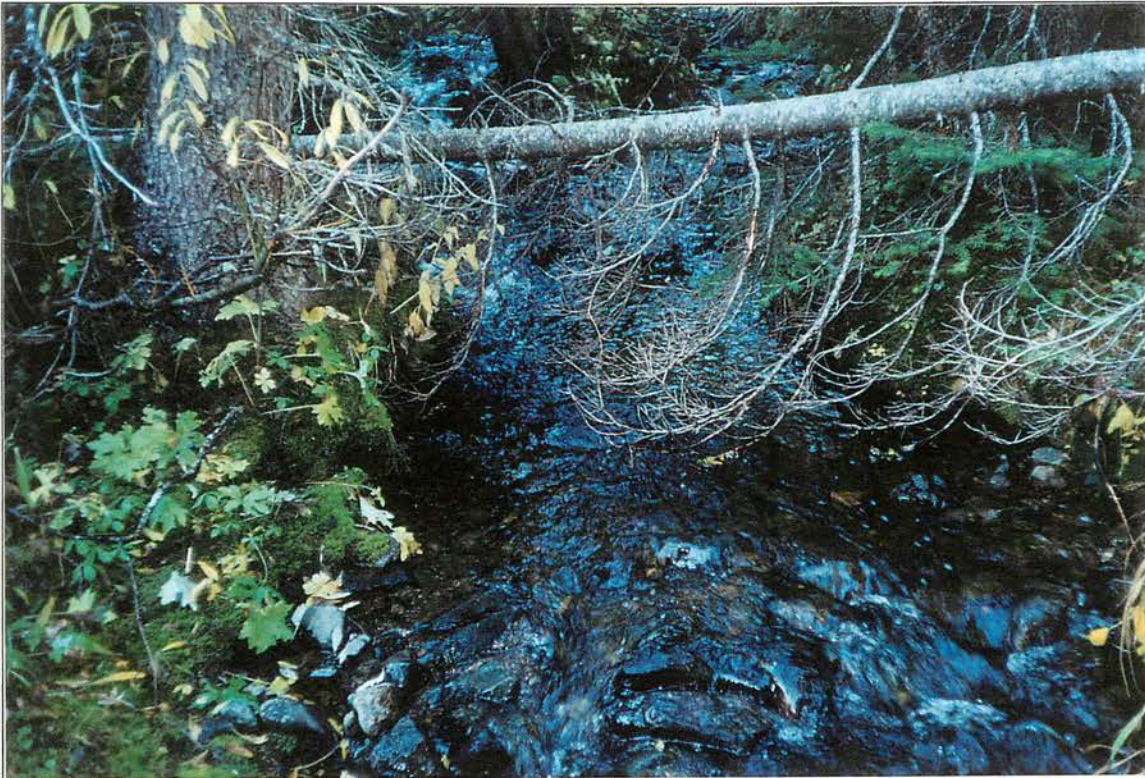
FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093K.092 ILP # 2052

WATERBODY																
Gazetted Name:										Local:						
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																
Waterbody ID:				ILP Map #: 093K.092				ILP #: 2052		Reach #: 2 -						
Project ID: 5271				Lake/Stream: S				Lake From Date:								
Fish Permit #:		145269		Date: 2002/09/29		To: 2002/09/29		Agency: C172		Crew: JD/SG		Resample: ☐				
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment						
67	093K.092	40067				GPU EF 1	6	60	C							
66	093K.092	40066				GPU EF 1	6	60	C							
A. GEAR SETTINGS																
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment									
66	EF	1	1	2002/09/29	11:40	2002/09/29	12:00									
67	EF	1	1	2002/09/29	12:00	2002/09/29	12:05									
C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model					
66	EF	1	1	O	326	300.0	1.5	800	60	6	SMITH ROOT	12B				
67	EF	1	1	O	56	50.0	1.5	800	60	6	SMITH ROOT	12B				
FISH SUMMARY																
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment							
66	EF	1	1	NFC		0										
67	EF	1	1	RB	J	2	150 170	R	downstream of Falls.							
INDIVIDUAL FISH DATA																
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment	
								Str/Smpl#	Age		Str/Smpl#					
67	EF	1	1	RB	150		U	U								
67	EF	1	1	RB	170		U	U								



Site #66, Upstream photo of stream channel.
Roll #8, Frame #21A, Date: 2002/09/29



Site #66, Downstream photo of pool habitat.
Roll #8, Frame #22A, Date: 2002/09/29



Site #66, Photo of 2.4 m Falls.
Roll #8, Frame #23A, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093K.092 ILP # 2055

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000					ILP Map #: 093K.092		ILP #: 2055		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 10.322069.6089845				Sample Type: Biased			
Length (km): 1.21		Coupling: Partially Couple		Magnitude: 3		BGC Zone: SBS			
Gradient (%): 5.5		Confinement: Frequently Confin		Order: 2		Open water: Absent			
US Elev (m): 1189		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 68		Field UTM ..		Agency: C172		Crew: JD/SG		Date: 2002/09/29	
Site Length (m): 200		GIS UTM 10.322546.6090442		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.08		0.9		1.3	
Stage: Low ☒				Wetted Width (m): 0.78		0.600		0.9	
Med ☐				Bankfull Depth (m): 0.40		0.4		0.4	
High ☐									
Temp (C): 7		pH: 7.8		Conductivity: 60					
				Avg		Min		Max	
				Gradient %: 4.75		4		6	
				Pool Depth (m): 0.35		0.200		0.5	
				Turbidity: Turbid ☐		Low ☐			
				Moderate ☐		Clear ☒			
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 20.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Cobble		D (cm): 8.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Partially Coupled						B2		B3	
Confinement: Frequently Confined						D1		D2	
Morphology: CP Cascade Pool						D3			
				C1		C2		C3	
				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		S		N		D	
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☐		☒	
		☐		☐		☐		☐	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest				Rock ☐		Manmade ☐	
Left Bank: Rip.Veg:		Stage: Mature forest				Rock ☐		Manmade ☐	
				Instream Veg: None ☐		Algae ☐		Moss ☒	
								Vascular ☐	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
68	EF	1	200	261 sec	700	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093K.092 ILP # 2055 Site 68

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093K.092 ILP #: 2055 NID Map #: 093K.092 NID #: 40068 Reach #: 1.0 Site #: 68
Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 10.322546.6090442 Ref. Name:
Date: 2002/09/29 Time: 12:21 Agency: C172 Crew: JD/SG Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	1.20	1.00	0.90	1.30	1.00	1.10					1.08
Wetted Width (m):	T	0.90	0.80	0.70	0.60	0.90	0.80					0.78
Pool Depth (m):	T	0.30	0.40	0.40	0.50	0.30	0.20					0.35

	Gadient %	Mtd	Avg
Method I:	4.0 5.0	C	4.75
Method II:	6.0 4.0	C	

Wb Depth: .4 .4 .4 Avg: 0.40 Method: T Stage: L ☒ M ☐ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	N	D	S	T	T
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☒

CROWN CLOSURE
1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

LWD: F DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 60 Method: S3
pH: 7.8 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: G Subdom: C
D95: 20.0 D (cm): 8.00 Morph: CP
Pattern: SI
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐
DISTURBANCE INDICATORS
O1 B1 B2 B3 D1 D2 D3
☐ ☐ ☐ ☐ ☐ ☐ ☐
C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Present.
Spawning Habitat	Poor - substrates offer little suitable spawning habitat.
Rearing Habitat	Moderate - abundant cover, adequate flow, moderately deep pools.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 8 F: 24A	STD	U	Upstream photo of LWD plunge pool.
R: 9 F: 1A	STD	D	Downstream photo of overhanging banks.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093K.092	2055	68

COMMENTS	
Section	Comments
CHANNEL	Falls downstream on mainstem.
CHANNEL	S6, NFC

Tochcha Lake Planning Area

000-000000-000000-000000-0000-0000-000-000-000-000-000-000

ILP Map #

2055

Triton Environmental Consultants Ltd.



Site #68, Upstream photo of LWD plunge pool.
Roll #8, Frame #24A, Date: 2002/09/29



Site #68, Downstream photo of overhanging banks.
Roll #9, Frame #1A, Date: 2002/09/29

Tochcha Lake Planning Area

3.0	093K.092	2052
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STREAM REFERENCING											
Gazetted Name:				Local Name:							
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000						ILP Map #: 093K.092		ILP #: 2052			
REACH											
Reach #: 3.0		UTM(Zone/East/North): 10.321217.6092274						Sample Type: Biased			
Length (km): 2.42		Coupling: Partially Couple			Magnitude: 8			BGC Zone: SBS			
Gradient (%): 3.0		Confinement: Occasionally Conf			Order: 3			Open water: Absent			
US Elev (m): 1200		Islands: NONE			Riparian Vegetation: Mixed C/D						
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified											
SITE											
Site #: 69		Field UTM ..		Agency: C172		Crew: JD/SG		Date: 2002/09/29			
Site Length (m): 300		GIS UTM 10.322313.6090759		Agency Name: Triton Environmental Consultants (Terrace)							
CHANNEL											
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max		#	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 2.13		1.8		2.400		6	
Stage: Low ☒				Wetted Width (m): 1.47		1.200		1.700		6	
Med ☐				Bankfull Depth (m): 0.63		0.6		0.7		3	
High ☐		Temp (C): 6		pH: 7.6		Conductivity: 60					
								Turbidity.: Turbid ☐		Low ☐	
								Moderate ☐		Clear ☒	
MORPHOLOGY											
Bed Material: Dominant: Gravels		D95 (cm): 20.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐ Span ☐	
Subdominant: Cobble		D (cm): 10.00								Braid ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1		B2	
Coupling: Partially Coupled				INDICATORS						D1	
Confinement: Frequently Confined										D2	
Morphology: RP Riffle Pool										D3	
				C1		C2		C3		C4	
										S1	
										S2	
										S3	
										S4	
										S5	
COVER											
Total Cover: Abundant		Type:		SWD		LWD		B		U	
LWD: Few		Amount:		T		S		T		S	
LWD Dist: Evenly Distributed		Location: P/S/O:		☒		☒		☒		☒	
				☒		☒		☒		☒	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☐ Manmade ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☐ Manmade ☐	
Right Bank: Rip.Veg: Mixed C/D		Stage: Shrub/herb stage								Crown Closure	
Left Bank: Rip.Veg:		Stage: Shrub/herb stage								1-20%	
										Instream Veg: None ☐ Algae ☐ Moss ☒ Vascular ☐	
FISH											
Site Number		Capture Method		Number of Events		Length fished (m)		Total Time		Voltage	
69		EF		1		300		376 sec		700	
										Species	
										Total Fish	
										Minimum Length (mm)	
										Maximum Length (mm)	

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093K.092 ILP # 2052 Site 69

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093K.092 ILP #: 2052 NID Map #: 093K.092 NID #: 40069 Reach #: 3.0 Site #: 69
Field UTM (Z.E.N): .. Method: Site Lg: 300 Method: MAP Access: H
GIS UTM (Z.E.N): 10.322313.6090759 Ref. Name:
Date: 2002/09/29 Time: 12:50 Agency: C172 Crew: JD/SG Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	T	2.30	2.40	1.90	1.80	2.30	2.10					2.13	Method I:	2.0	3.0	C 2.75
Wetted Width (m):	T	1.60	1.50	1.70	1.30	1.20	1.50					1.47	Method II:	4.0	2.0	C
Pool Depth (m):	T	0.30	0.40	0.30	0.40	0.30	0.30					0.33				

Wb Depth: .6 .7 .6 Avg: 0.63 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	T	S	T	D	T
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☒

LWD: F

DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: SHR

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 60 Method: S3
pH: 7.6 Method: P2 Method: GE
Flood Signs: None Method: GE Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 20.0 D (cm): 10.0 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Present.
Spawning Habitat	Moderate - gravels present throughout site.
Rearing Habitat	Moderate - adequate flows, deep pools, abundant cover.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 9 F: 2A	STD	U	Upstream photo of riffle habitat.
R: 9 F: 3A	STD	D	Downstream photo of channel.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
3.0	093K.092	2052	69

COMMENTS	
Section	Comments
CHANNEL	Falls downstream prevent upstream fish migration.
CHANNEL	S6

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093K.092 ILP # 2052

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093K.092		ILP #: 2052		Reach #: 3 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/29		To:		2002/09/29		Agency: C172		Crew: JD/SG		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
69	093K.092	40069				GPU EF 1	6	60	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
69	EF	1	1	2002/09/29	12:50	2002/09/29	13:20										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
69	EF	1	1	O	376	300.0	1.5	700	60	6	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
69	EF	1	1	NFC		0											



Site #69, Upstream photo of riffle habitat.
Roll #9, Frame #2A, Date: 2002/09/29



Site #69, Downstream photo of channel.
Roll #9, Frame #3A, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1785

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1785		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 10.319306.6100148				Sample Type: Biased			
Length (km): .37		Coupling: Decoupled		Magnitude: 1		BGC Zone: SBS			
Gradient (%): 3.5		Confinement: Occasionally Conf		Order: 1		Open water: Absent			
US Elev (m): 1039		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 70		Field UTM ..		Agency: C172		Crew: SG/JD		Date: 2002/09/29	
Site Length (m): 200		GIS UTM 10.319360.6099997		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		1.33		1.200	
Stage: Low ☒				Wetted Width (m):		1.02		0.800	
Med ☐				Bankfull Depth (m):		0.33		0.3	
High ☐						0.4		3	
Temp (C): 8		pH: 7.9		Conductivity: 70		Avg		Min	
						Gradient %:		2.25	
						Pool Depth (m):		0.23	
								0.200	
								0.300	
								6	
						Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 25.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Boulders		D (cm): 8.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Decoupled						B2		B3	
Confinement: Occasionally Confine						D1		D2	
Morphology: RP Riffle Pool						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		S		T		D	
LWD Dist: Evenly Distributed		Location: P/S/O:		☒		☒		☒	
				☒		☒		☒	
				☒		☒		☒	
				☒		☒		☒	
				☒		☒		☒	
				☒		☒		☒	
				☒		☒		☒	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest							
Left Bank: Rip.Veg:		Stage: Mature forest							
				Instream Veg: None ☐		Algae ☐		Moss ☐	
								Vascular ☒	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
70	EF	1	200	217 sec	800	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1785 Site 70

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000
ILP Map #: 093N.001 ILP #: 1785 NID Map #: 093N.001 NID #: 40070 Reach #: 1.0 Site #: 70
Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 10.319360.6099997 Ref. Name:
Date: 2002/09/29 Time: 13:56 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg	
Channel Width (m):	T	1.20	1.30	1.40	1.20	1.30	1.60					1.33	Method I:	2.0	3.0	C	2.25	
Wetted Width (m):	T	1.00	1.20	0.90	1.00	0.80	1.20					1.02		Method II:	2.0	2.0	C	
Pool Depth (m):	T	0.30	0.20	0.20	0.20	0.30	0.20					0.23						

Wb Depth: .3 .3 .4 Avg: 0.33 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribes.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	T	D	T	T	T
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☒

LWD: F DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☐ A ☐ M ☐ V ☒

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 8 Method: T4 Req #: Cond.: 70 Method: S3
pH: 7.9 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3
D95: 25.0 D (cm): 8.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: OC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None.
Spawning Habitat	Poor - poor spawning substrates, large overall substrates.
Rearing Habitat	Poor - shallow overall depth, subject of low flows.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 9 F: 4A	STD	U	Upstream photo of stream channel.
R: 9 F: 5A	STD	D	Downstream photo of riffle habitat.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000	Reach #	ILP Map #	ILP #	Site
	1.0	093N.001	1785	70

COMMENTS	
Section	Comments
CHANNEL	Disturbances on mainstem may limit fish access to this reach.
CHANNEL	S4*

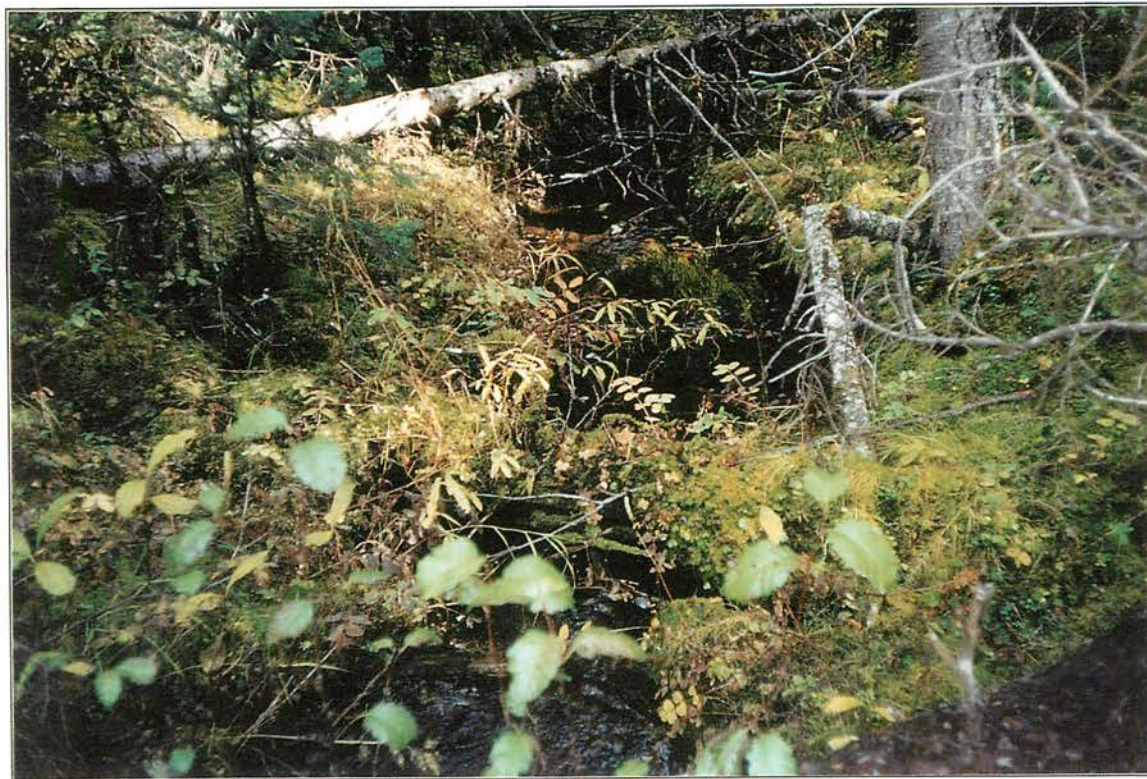
Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
1.0	093N.001	1785

Triton Environmental Consultants Ltd.



Site #70, Upstream photo of stream channel.
Roll #9, Frame #4A, Date: 2002/09/29



Site #70, Downstream photo of riffle habitat.
Roll #9, Frame #5A, Date: 2002/09/29

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
1.0	093N.001	1784

Triton Environmental Consultants Ltd.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1784 Site 71

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1784 NID Map #: 093N.001 NID #: 40071 Reach #: 1.0 Site #: 71
Field UTM (Z.E.N): .. Method: Site Lg: 300 Method: MAP Access: H
GIS UTM (Z.E.N): 10.319545.6099843 Ref. Name:
Date: 2002/09/29 Time: 14:24 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	2.30	2.10	2.40	1.90	2.30	2.20					2.20	Method I:	6.0	5.0	C	5.50
Wetted Width (m):	T	1.50	1.40	1.30	1.20	1.00	1.30					1.28	Method II:	5.0	6.0	C	
Pool Depth (m):	T	0.70	0.30	0.40	0.50	0.80	0.60					0.55					

Wb Depth: .6 .7 .6 Avg: 0.63 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	T	T	S	T	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

LWD: F

DIST: E

LB SHP: O

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 5 Method: T4 Req #: Cond.: 80 Method: S3
pH: 7.8 Method: P2 Method: GE
Flood Signs: Rafted debris Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 30.0 D (cm): 15.00 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Present.
Spawning Habitat	Poor - active stream channel and large overall substrate size for resident fish.
Rearing Habitat	Moderate - LWD plung pools present.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 9 F: 6A	STD	U	Upstream photo of riffle habitat.
R: 9 F: 7A	STD	D	Downstream photo of pool habitat.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093N.001	1784	71

COMMENTS	
Section	Comments
CHANNEL	S3*

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1784

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093N.001		ILP #: 1784		Reach #: 1 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/29		To:		2002/09/29		Agency: C172		Crew: SG/JD		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
71	093N.001	40071				GPU EF 1	5	80	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
71	EF	1	2002/09/29	14:24	2002/09/29	14:44											
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
71	EF	1	1	O	372	300.0	1.4	600	60	6	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
71	EF	1	1	NFC		0											



Site #71, Upstream photo of riffle habitat.
Roll #9, Frame #6A, Date: 2002/09/29



Site #71, Downstream photo of pool habitat.
Roll #9, Frame #7A, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #

3.0 093N.001 1757

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1757		
REACH									
Reach #: 3.0		UTM(Zone/East/North): 10.318399.6103534				Sample Type: Biased			
Length (km): .35		Coupling: Decoupled		Magnitude: 1		BGC Zone: SBS			
Gradient (%): 3.1		Confinement: Occasionally Conf		Order: 1		Open water: Present			
US Elev (m): 991		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 72		Field UTM ..		Agency: C172		Crew: SG/JD		Date: 2002/09/29	
Site Length (m): 100		GIS UTM 10.318466.6103590		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		1.50		1.3	
Stage: Low ☒				Wetted Width (m):		0.98		0.600	
Med ☐				Bankfull Depth (m):		0.33		0.3	
High ☐		Temp (C): 7		pH: 7.9		Conductivity: 50			
								Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 15.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Cobble		D (cm): 5.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Decoupled				INDICATORS		B2		B3	
Confinement: Occasionally Confine						D1		D2	
Morphology: RP Riffle Pool						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		T		N		D	
LWD Dist: Evenly Distributed		Location: P/S/O:		☒		☒		☒	
				☒		☒		☒	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Deciduous		Stage: Pole-sapling stage		None ☐		Algae ☐		Moss ☐	
Left Bank: Rip.Veg:		Stage: Pole-sapling stage		Instream Veg: None ☐		Algae ☐		Moss ☐	
								Vascular ☒	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
72	EF	1	100	106 sec	900	RB	12	65	95

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 3.0 ILP Map # 093N.001 ILP # 1757 Site # 72

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093N.001 ILP #: 1757 NID Map #: 093N.001 NID #: 40072 Reach #: 3.0 Site #: 72
Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 10.318466.6103590 Ref. Name:
Date: 2002/09/29 Time: 15:00 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	1.60	1.70	1.50	1.40	1.50	1.30					1.50
Wetted Width (m):	T	1.10	0.60	1.20	0.90	1.10	1.00					0.98
Pool Depth (m):	T	0.20	0.20	0.10	0.20	0.30	0.20					0.20

	Gadient %		Mtd	Avg
Method I:	2.0	1.0	C	1.75
Method II:	2.0	2.0	C	

Wb Depth: .3 .4 .3 Avg: 0.33 Method: T Stage: L ☒ M ☐ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	N	D	N	S	T
Loc: P/S/O:	☒	☒	☐	☒	☐	☒	☒

CROWN CLOSURE
1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☐ V ☒

LWD: F DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 50 Method: S3
pH: 7.9 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 15.0 D (cm): 5.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: OC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None.
Spawning Habitat	Poor - abundant fines and low flows.
Rearing Habitat	Poor - shallow pool depths, low flows, abundant fines.

COMMENTS

Section	Comments
CHANNEL	S3
CHANNEL	RB Captured.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
3.0	093N.001	1757	72

COMMENTS	
Section	Comments
SITE CARD	No Photos Taken

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 3.0 ILP Map # 093N.001 ILP # 1757

WATERBODY															
Gazetted Name:										Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000															
Waterbody ID:					ILP Map #: 093N.001					ILP #: 1757		Reach #: 3 -			
Project ID: 5271					Lake/Stream: S					Lake From Date:					
Fish Permit #: 145269					Date: 2002/09/29					To: 2002/09/29		Agency: C172		Crew: SG/JD	
Resample: ☐															
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment				
72	093N.001	40072				GPU	EF	1	7	50	C				
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
72	EF	1	1	2002/09/29	15:00	2002/09/29	15:20								
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
72	EF	1	1	O	106	100.0	1.2	900	60	6	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
72	EF	1	1	RB	J	12	65 95	R							
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
72	EF	1	1	RB	70		U	U							
72	EF	1	1	RB	65		U	U							
72	EF	1	1	RB	70		U	U							
72	EF	1	1	RB	65		U	U							
72	EF	1	1	RB	80		U	U							
72	EF	1	1	RB	95		U	U							
72	EF	1	1	RB	90		U	U							
72	EF	1	1	RB	80		U	U							
72	EF	1	1	RB	95		U	U							
72	EF	1	1	RB	75		U	U							

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #

3.0 093N.001 1768

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1768		
REACH									
Reach #: 3.0		UTM(Zone/East/North): 10.317808.6103088				Sample Type: Biased			
Length (km): 1.17		Coupling: Partially Couple		Magnitude: 1		BGC Zone: SBS			
Gradient (%): 3.4		Confinement: Occasionally Conf		Order: 1		Open water: Absent			
US Elev (m): 980		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 73		Field UTM ..		Agency: C172		Crew: SG/JD		Date: 2002/09/29	
Site Length (m): 200		GIS UTM 10.317268.6103650		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.12		1		1.3	
Stage: Low ☒				Wetted Width (m): 0.73		0.600		0.9	
Med ☐				Bankfull Depth (m): 0.33		0.3		0.4	
High ☐									
Temp (C): 7		pH: 7.8		Conductivity: 50		Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 15.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 5.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Partially Coupled						B2		B3	
Confinement: Frequently Confined						D1		D2	
Morphology: RP Riffle Pool						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: S		S		N		S	
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☐		☒	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest				Rock ☐		Manmade ☐	
Left Bank: Rip.Veg:		Stage: Mature forest				Instream Veg: None ☐		Algae ☐	
						Moss ☒		Vascular ☒	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
73	EF	1	200	261 sec	800	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 3.0 ILP Map # 093N.001 ILP # 1768 Site 73

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1768 NID Map #: 093N.001 NID #: 40073 Reach #: 3.0 Site #: 73
Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 10.317268.6103650 Ref. Name:
Date: 2002/09/29 Time: 15:35 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg	
Channel Width (m):	T	1.20	1.10	1.00	1.30	1.00	1.10					1.12	Method I:	3.0	4.0	C	3.50	
Wetted Width (m):	T	0.80	0.60	0.70	0.60	0.80	0.90					0.73		Method II:	3.0	4.0	C	
Pool Depth (m):	T	0.10	0.20	0.20	0.20	0.10	0.30					0.18						

Wb Depth: .4 .3 .3 Avg: 0.33 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	S	N	S	N	D	T
Loc: P/S/O:	☒	☒	☐	☒	☐	☒	☒

LWD: F

DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☒

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 50 Method: S3
pH: 7.8 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 15.0 D (cm): 5.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None.
Spawning Habitat	Poor - abundant fines and low flows.
Rearing Habitat	Poor - low flows, shallow pool depths.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 9 F: 8A	STD	U	Upstream photo of overstream vegetation.
R: 9 F: 9A	STD	D	Downstream photo of pool habitat.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
3.0	093N.001	1768	73

COMMENTS	
Section	Comments
CHANNEL	Wetlands downstream may limit upstream fish migration.
CHANNEL	S4*

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093N.001 ILP # 1768

WATERBODY													
Gazetted Name:										Local:			
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093N.001				ILP #: 1768		Reach #: 3 -			
Project ID: 5271				Lake/Stream: S				Lake From Date:					
Fish Permit #:		145269		Date: 2002/09/29		To: 2002/09/29		Agency: C172		Crew: JD/SG		Resample: ☐	
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
73	093N.001	40073				GPU EF 1	7	50	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
73	EF	1	1	2002/09/29	15:35	2002/09/29	15:50						
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
73	EF	1	1	O	261	200.0	0.7	800	60	6	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
73	EF	1	1	NFC		0							



Site #73, Upstream photo of overstream vegetation.
Roll #9, Frame #8A, Date: 2002/09/29



Site #73, Downstream photo of pool habitat.
Roll #9, Frame #9A, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #

1.0 093N.001 1769

STREAM REFERENCING																																							
Gazetted Name:						Local Name:																																	
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000						ILP Map #: 093N.001		ILP #: 1769																															
REACH																																							
Reach #: 1.0		UTM(Zone/East/North): 10.315708.6102706				Sample Type: Biased																																	
Length (km): 1.17		Coupling: Coupled		Magnitude: 2		BGC Zone: SBS																																	
Gradient (%): 6.2		Confinement: Occasionally Conf		Order: 2		Open water: Absent																																	
US Elev (m): 980		Islands: NONE		Riparian Vegetation: Coniferous																																			
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																							
SITE																																							
Site #: 74		Field UTM ..		Agency: C172		Crew: JD/SG		Date: 2002/09/29																															
Site Length (m): 200		GIS UTM 10.315703.6102912		Agency Name: Triton Environmental Consultants (Terrace)																																			
CHANNEL																																							
No Vis.Ch.: ☐		Intermittent: ☐		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Channel Width (m): 1.63</td> <td>1.3</td> <td>2.1</td> <td>6</td> </tr> <tr> <td>Wetted Width (m): 0.97</td> <td>0.600</td> <td>1.3</td> <td>6</td> </tr> <tr> <td>Bankfull Depth (m): 0.43</td> <td>0.4</td> <td>0.5</td> <td>3</td> </tr> </table>				Avg	Min	Max	#	Channel Width (m): 1.63	1.3	2.1	6	Wetted Width (m): 0.97	0.600	1.3	6	Bankfull Depth (m): 0.43	0.4	0.5	3	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Gradient %: 5.25</td> <td>3</td> <td>8</td> <td>4</td> </tr> <tr> <td>Pool Depth (m): 0.23</td> <td>0.200</td> <td>0.300</td> <td>6</td> </tr> </table>				Avg	Min	Max	#	Gradient %: 5.25	3	8	4	Pool Depth (m): 0.23	0.200	0.300	6
Avg	Min	Max	#																																				
Channel Width (m): 1.63	1.3	2.1	6																																				
Wetted Width (m): 0.97	0.600	1.3	6																																				
Bankfull Depth (m): 0.43	0.4	0.5	3																																				
Avg	Min	Max	#																																				
Gradient %: 5.25	3	8	4																																				
Pool Depth (m): 0.23	0.200	0.300	6																																				
Dewatered: ☐		Tribes: ☐																																					
Stage: Low ☒		Temp (C): 7		pH: 7.8		Conductivity: 70		Turbidity: Turbid ☐ Low ☐																															
Med ☐								Moderate ☐ Clear ☒																															
High ☐																																							
MORPHOLOGY																																							
Bed Material: Dominant: Cobble		D95 (cm): 25.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐																													
Subdominant: Boulders		D (cm): 6.00				Span ☐		Braid ☐																															
Channel Pattern: Irregular, Wandering		Islands: None		DISTURBANCE INDICATORS		O1		B1		B2																													
Coupling: Coupled						B3		D1		D2																													
Confinement: Confined						D3																																	
Morphology: CP Cascade Pool						C1		C2		C3																													
						C4		C5		S1																													
						S2		S3		S4																													
						S5																																	
COVER																																							
Total Cover: Abundant		Type: SWD		LWD		B		U		DP																													
LWD: Few		Amount: T		S		T		D		T																													
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☒		☒		☒																													
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☐																													
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☐																													
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest								Crown Closure																													
Left Bank: Rip.Veg:		Stage: Mature forest								21-40%																													
										Instream Veg: None ☐ Algae ☐ Moss ☒ Vascular ☒																													
FEATURES																																							
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto																													
093N.001	88036	CV	1.6	T	16	GE	R: 9	F: 13A	L:	#:	UTM (Z/E/N)																												
Comments: Well placed culvert.																																							
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto																													
093N.001	88035	F	1.5	T	1	T	R: 9	F: 10A	L:	#:	UTM (Z/E/N)																												
Comments: Barrier to upstream fish migration.																																							
FISH																																							
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																														
74	EF	1	200	231 sec	600	NFC	0																																

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1769 Site 74

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000

Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1769 NID Map #: 093N.001 NID #: 40074 Reach #: 1.0 Site #: 74
Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 10.315703.6102912 Ref. Name:
Date: 2002/09/29 Time: 16:02 Agency: C172 Crew: JD/SG Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	1.50	1.60	1.50	1.80	2.10	1.30					1.63	Method I:	4.0	6.0	C	5.25
Wetted Width (m):	T	1.00	0.90	1.20	0.60	1.30	0.80					0.97	Method II:	8.0	3.0	C	
Pool Depth (m):	T	0.20	0.30	0.20	0.20	0.30	0.20					0.23					

Wb Depth: .4 .4 .5 Avg: 0.43 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	T	D	T	T	T
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☒

LWD: F DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☒

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 70 Method: S3
pH: 7.8 Method: P2
Flood Signs: None Method: GE Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3
D95: 25.0 D (cm): 6.00 Morph: CP DISTURBANCE INDICATORS
Pattern: IR C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: CO
Confinement: CO
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093N.001	88036	CV	1.6	T	16	GE	R: 9 F: 13A L:	#:	10.315857.6103222	GIS
Comments: Well placed culvert.										
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093N.001	88035	F	1.5	T	1	T	R: 9 F: 10A L:	#:	10.315703.6102997	GIS
Comments: Barrier to upstream fish migration.										

HABITAT QUALITY

Name	Comments
------	----------

FDIS Site Card

Tochcha Lake Planning Area

Reach #

ILP Map #

ILP #

Site

1.0

093N.001

1769

74

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

HABITAT QUALITY					
Name			Comments		
OverWinter Habitat			None.		
Spawning Habitat			Poor - large substrates and low flows.		
Rearing Habitat			Poor - shallow overall water depth, low habitat complexity.		
PHOTOS					
Photo		Foc Lg	Dir	Comments	
R:	9	F: 10A	STD	U	Photo of 1.5 m Falls.
R:	9	F: 11A	STD	U	Upstream photo of pool habitat.
R:	9	F: 12A	STD	D	Downstream photo of channel.
R:	9	F: 13A	STD	U	Upstream photo of culvert.
COMMENTS					
Section			Comments		
CHANNEL			Falls block upstream fish migration.		
CHANNEL			S3*/S6		

FDIS Fish Card

Tochcha Lake Planning Area

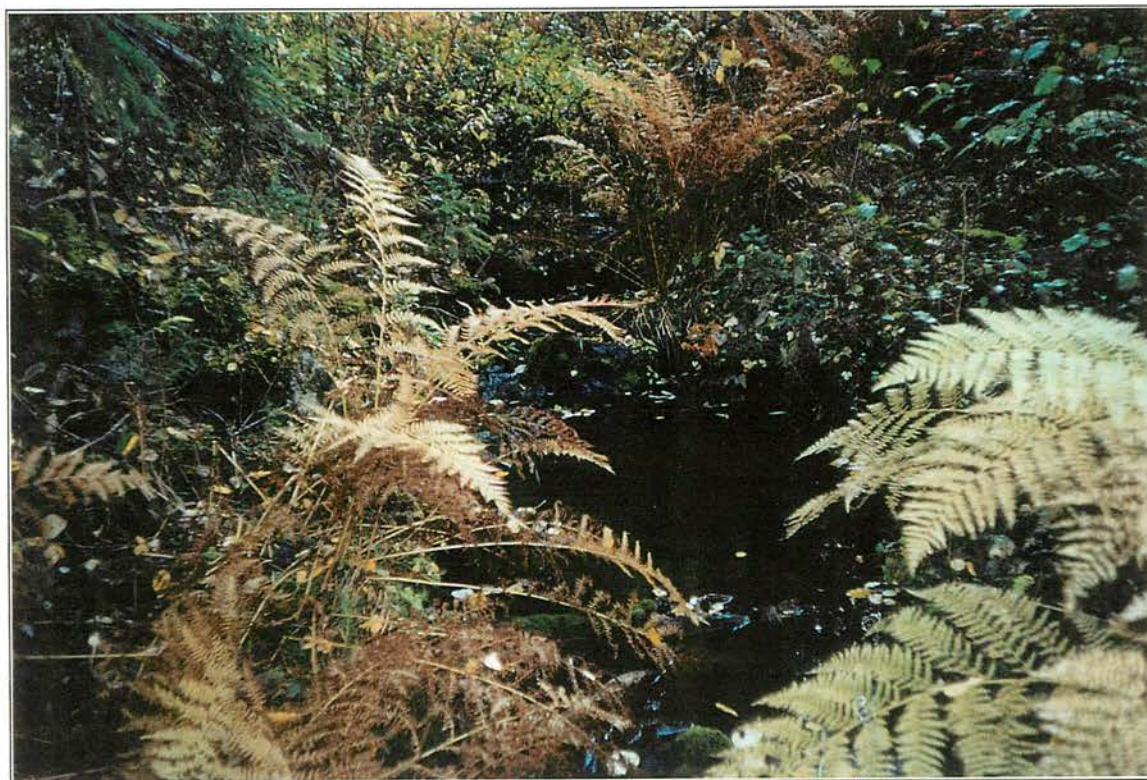
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1769

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093N.001		ILP #: 1769		Reach #: 1 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/29		To:		2002/09/29		Agency: C172		Crew: JD/SG		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
74	093N.001	40074				GPU EF 1	7	70	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
74	EF	1	1	2002/09/29	16:02	2002/09/29	16:30										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
74	EF	1	1	O	231	200.0	1.1	600	60	6	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
74	EF	1	1	NFC		0											



Site #74, Photo of 1.5 m Falls.
Roll #9, Frame #10A, Date: 2002/09/29



Site #74, Upstream photo of pool habitat.
Roll #9, Frame #11A, Date: 2002/09/29



Site #74, Downstream photo of channel.
Roll #9, Frame #12A, Date: 2002/09/29



Site #74, Upstream photo of culvert.
Roll #9, Frame #13A, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #

5.0 093N.001 1763

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1763		
REACH									
Reach #: 5.0		UTM(Zone/East/North): 10.314911.6103824				Sample Type: Biased			
Length (km): .75		Coupling: Decoupled		Magnitude: 2		BGC Zone: SBS			
Gradient (%): 6.4		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 968		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 75		Field UTM ..		Agency: C172		Crew: SG/JD		Date: 2002/09/29	
Site Length (m): 100		GIS UTM 10.315434.6103865		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☒		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		0.73		0.600	
Stage: Low ☒				Wetted Width (m):		0.40		0.300	
Med ☐				Bankfull Depth (m):		0.27		0.2	
High ☐		Temp (C): 6		pH: 7.8		Conductivity: 60		Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 5.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 1.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Decoupled						B2		B3	
Confinement: Unconfined						D1		D2	
Morphology: RP Riffle Pool						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		S		N		S	
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☐		☒	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest							
Left Bank: Rip.Veg:		Stage: Mature forest							
				Instream Veg: None ☐		Algae ☐		Moss ☒	
								Vascular ☒	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
75	EF	1	100	106 sec	700	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 5.0 ILP Map # 093N.001 ILP # 1763 Site 75

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1763 NID Map #: 093N.001 NID #: 40075 Reach #: 5.0 Site #: 75
Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 10.315434.6103865 Ref. Name:
Date: 2002/09/29 Time: 17:00 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg	
Channel Width (m):	T	0.60	0.80	0.70	0.60	0.90	0.80					0.73	Method I:	3.0	2.0	C	2.50	
Wetted Width (m):	T	0.30	0.30	0.40	0.50	0.60	0.30					0.40		Method II:	2.0	3.0	C	
Pool Depth (m):	T	0.05	0.10	0.05	0.10	0.10	0.05					0.08						

Wb Depth: .3 .2 .3 Avg: 0.27 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☒ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	N	S	N	D	T
Loc: P/S/O:	☒	☒	☐	☒	☐	☒	☒

LWD: F DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☒

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 60 Method: S3
pH: 7.8 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 5.00 D (cm): 1.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None.
Spawning Habitat	None - ephemeral, abundant fines.
Rearing Habitat	Poor - low flows, ephemeral stream, abundant fines.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 9 F: 14A	STD	U	Upstream photo of stream channel
R: 9 F: 15A	STD	D	Downstream photo of stream channel

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
5.0	093N.001	1763	75

COMMENTS	
Section	Comments
CHANNEL	Wetland may prevent upstream fish migration.
CHANNEL	S4*

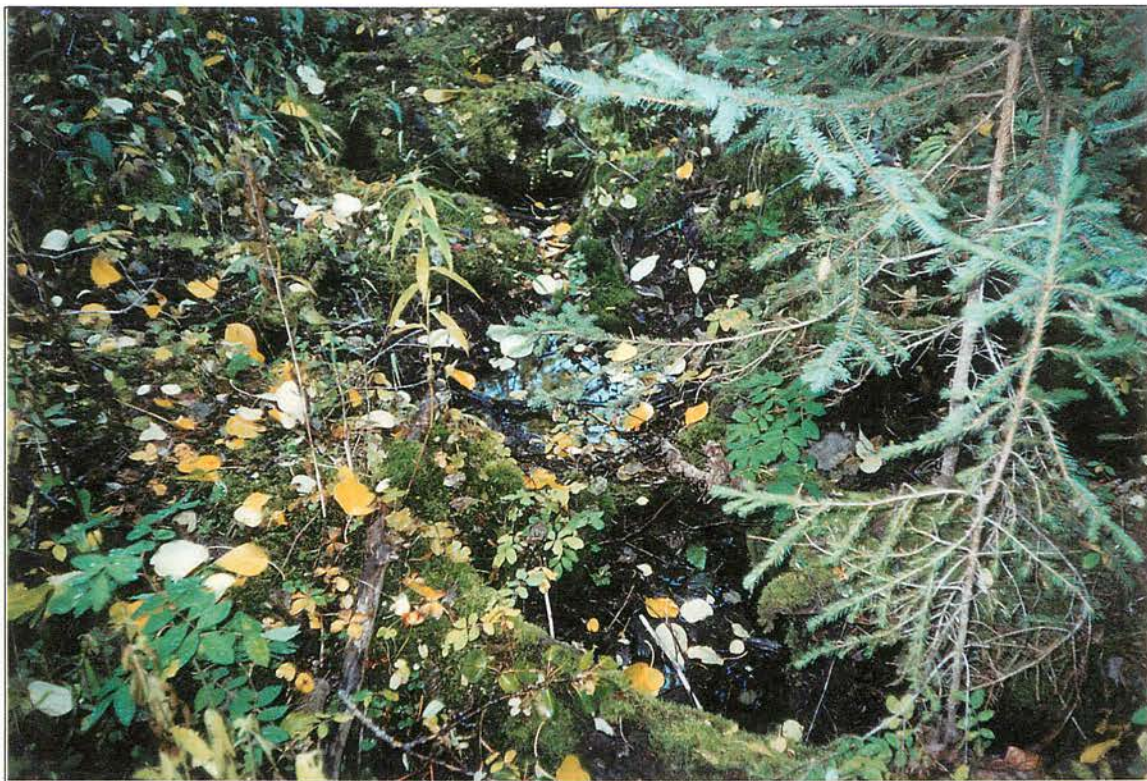
FDIS Fish Card

Tochcha Lake Planning Area

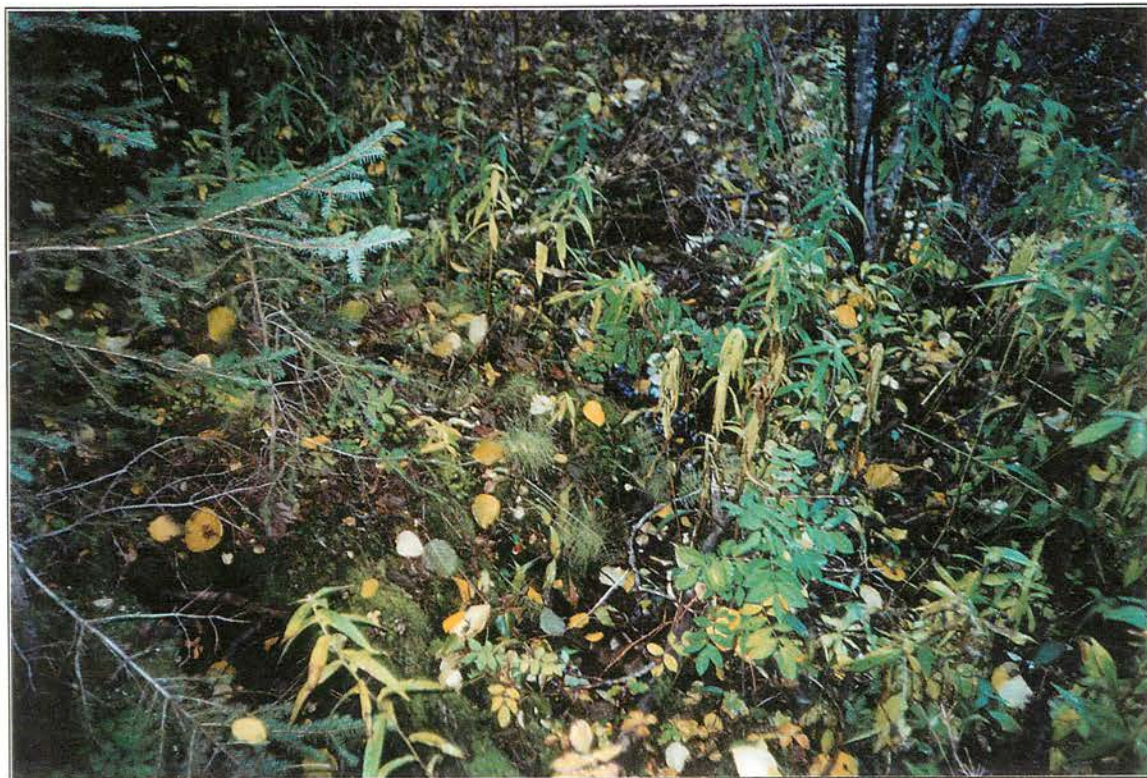
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 5.0
ILP Map # 093N.001
ILP # 1763

WATERBODY													
Gazetted Name:						Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000													
Waterbody ID:			ILP Map #: 093N.001			ILP #: 1763		Reach #: 5 -					
Project ID: 5271						Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date: 2002/09/29		To: 2002/09/29		Agency: C172		Crew: JD/SG		Resample: ☐	
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
75	093N.001	40075				GPU EF 1	6	60	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
75	EF	1	1	2002/09/29	17:00	2002/09/29	17:15						
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
75	EF	1	1	O	106	100.0	0.5	700	60	6	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
75	EF	1	1	NFC		0							



Site #75, Upstream photo of stream channel
Roll #9, Frame #14A, Date: 2002/09/29



Site #75, Downstream photo of stream channel
Roll #9, Frame #15A, Date: 2002/09/29

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
4.0	093M.029	1332

Triton Environmental Consultants Ltd.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 4.0 ILP Map # 093M.029 ILP # 1332 Site 355

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1332 NID Map #: 093M.019 NID #: 20355 Reach #: 4.0 Site #: 355
Field UTM (Z.E.N): .. Method: Site Lg: 209 Method: HC Access: V4
GIS UTM (Z.E.N): 9.670670.6119620 Ref. Name:
Date: 2002/09/26 Time: 08:30 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	MS	1.80	1.60	1.80	1.60	2.00	1.40					1.70	Method I:	2.0	3.0	C	2.38
Wetted Width (m):	MS	1.60	1.00	1.20	1.20	2.00	1.30					1.38	Method II:	1.5	3.0	C	
Pool Depth (m):	MS	0.30	0.10	0.15	0.20	0.20						0.19					

Wb Depth: .1 .2 .1 Avg: 0.13 Method: MS Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	T	T	N	D	N
Loc: P/S/O:	☒	☒	☒	☒	☐	☒	☐

LWD: A

DIST: E

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 40 Method: S3
pH: 8.0 Method: P2 Turb.: T ☐ M ☐ L ☒ C ☐ Method: GE
Flood Signs: Rafted debris 0.3 m Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 4.00 D (cm): 1.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: CO
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
Spawning Habitat	Poor - abundant gravels but limited by seasonal flow and fine sediment.
OverWinter Habitat	None - due to lack of pools and seasonal stream flow.
Rearing Habitat	Moderate - due to abundant LWD, overstream vegetation and boulder cover, limited by shallow pools.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 6 F: 16A	STD	D	Downstream photo of typical habitat within boulders.
R: 6 F: 17A	STD	U	Upstream photo of typical habitat with LWD.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
4.0	093M.029	1332	355

COMMENTS	
Section	Comments
CHANNEL	Inferred S6 (NFC - lake upstream).
CHANNEL	Log bridge crossing. Beaver dam located upstream and downstream of crossing ~1.0 m high.

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 4.0
ILP Map # 093M.029
ILP # 1332

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 480-000000-00000-00000-0000-000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.029		ILP #: 1332		Reach #: 4			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/26		To:		2002/09/26		Agency: C172		Crew: SG/JD		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
355	093M.019	20355				GPU EF 1	7	40	L								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
355	EF	1	2002/09/26	08:30	2002/09/26	09:00											
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
355	EF	1	1	O	338	209.0	1.6	800	60	6	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
355	EF	1	1	NFC		0											



Site #355, Downstream photo of typical habitat within boulders.
Roll #6, Frame #16A, Date: 2002/09/26



Site #355, Upstream photo of typical habitat with LWD.
Roll #6, Frame #17A, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.029 ILP # 1332

STREAM REFERENCING											
Gazetted Name:						Local Name:					
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000						ILP Map #: 093M.029		ILP #:		1332	
REACH											
Reach #: 2.0		UTM(Zone/East/North): 9.670730.6119077				Sample Type: Biased					
Length (km): .30		Coupling: Partially Couple		Magnitude: 1		BGC Zone: SBS					
Gradient (%): 6.7		Confinement: Occasionally Conf		Order: 1		Open water: Absent					
US Elev (m): 800		Islands: NONE		Riparian Vegetation: Coniferous							
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified											
SITE											
Site #: 356		Field UTM 9.670686.6118770		Agency: C172		Crew: SG/JD		Date: 2002/09/26			
Site Length (m): 150		GIS UTM 9.670707.6118848		Agency Name: Triton Environmental Consultants (Terrace)							
CHANNEL											
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max		#	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		1.63		1.4		1.8 6	
Stage: Low ☒				Wetted Width (m):		1.08		0.9		1.200 6	
Med ☐				Bankfull Depth (m):		0.37		0.3		0.4 3	
High ☐		Temp (C): 7		pH: 8.1		Conductivity: 60					
								Turbidity: Turbid ☐		Low ☐	
								Moderate ☐		Clear ☒	
MORPHOLOGY											
Bed Material: Dominant: Fines		D95 (cm): 7.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐	
Subdominant: Cobble		D (cm): 2.00								Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1		B2	
Coupling: Partially Coupled				INDICATORS		☐		☐		☒	
Confinement: Confined						C1		C2		C3	
Morphology: RP Riffle Pool						☐		☐		☐	
						C4		C5		S1	
						☐		☐		☐	
						C6		C7		S2	
						☐		☐		☐	
						C8		C9		S3	
						☐		☐		☐	
						C10		C11		S4	
						☐		☐		☐	
						C12		C13		S5	
						☐		☐		☐	
COVER											
Total Cover: Moderate		Type: SWD		LWD		B		U		DP	
LWD: None		Amount: T		T		S		T		N	
LWD Dist: Not Applicable		Location: P/S/O:		☒		☒		☒		☒	
				☐		☐		☐		☐	
Right Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐	
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest								Crown Closure	
Left Bank: Rip.Veg:		Stage: Mature forest								1-20%	
										Instream Veg: None ☒	
										Algae ☐	
										Moss ☐	
										Vascular ☐	
FEATURES											
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto	
093M.019	25356	F	10.0	GE	5	HC	R: 6	F: 18A	L:	#:	UTM (Z/E/N)
Comments: Top of Falls 63%		9.670675.6118									
FISH											
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)		
356	EF	1	200	236 sec	800	NFC	0				

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.029 ILP # 1332 Site 356

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1332 NID Map #: 093M.019 NID #: 20356 Reach #: 2.0 Site #: 356
Field UTM (Z.E.N): 9.670686.6118770 Method: GPU Site Lg: 150 Method: GIS Access: V4
GIS UTM (Z.E.N): 9.670707.6118848 Ref. Name:
Date: 2002/09/26 Time: 09:41 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	1.80	1.70	1.40	1.80	1.50	1.60					1.63	Method I:	3.0	3.0	C 3.25
Wetted Width (m):	MS	1.20	1.10	0.90	1.20	1.00	1.10					1.08	Method II:	4.0	3.0	C
Pool Depth (m):	MS	0.10	0.10	0.10	0.10	0.10	0.10					0.10				

Wb Depth: .4 .3 .4 Avg: 0.37 Method: MS Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	S	T	N	D	N
Loc: P/S/O:	☒	☒	☒	☒	☐	☒	☐

LWD: N

DIST: NA

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 60 Method: S3
pH: 8.1 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: F Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 7.00 D (cm): 2.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: CO
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.019	25356	F	10.0	GE	5	HC	R: 6 F: 18A L: #:		9.670675.6118768	GIS

Comments: Top of Falls 63%

HABITAT QUALITY

Name	Comments
Spawning Habitat	Poor - due to limited gravels, locations and seasonal stream flow.
OverWinter Habitat	None - no pools and seasonal stream flow.
Rearing Habitat	Poor - due to limited cover and very limited pools and deep runs.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
2.0	093M.029	1332	356

PHOTOS					
Photo			Foc Lg	Dir	Comments
R:	6	F: 18A	STD	X	Top of 10 m falls.
R:	6	F: 19A	STD	D	Downstream photo of typical habitat.
R:	6	F: 20A	STD	U	Upstream photo of typical habitat.
COMMENTS					
Section			Comments		
CHANNEL			Ephemeral, Inferred S6 (NFC, lake upstream).		

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 2.0
ILP Map # 093M.029
ILP # 1332

WATERBODY												
Gazetted Name:						Local:						
Project Code: 480-000000-00000-00000-0000-0000-000-000-000-000-0												
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000												
Waterbody ID:			ILP Map #: 093M.029				ILP #:		1332		Reach #: 2 -	
Project ID: 5271							Lake/Stream: S		Lake From Date:			
Fish Permit #:		145269		Date: 2002/09/26		To: 2002/09/26		Agency: C172		Crew: SG/JD		Resample: ☐
SITE / METHOD												
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment		
356	093M.019	20356				GPU EF 1	7	60	C			
A. GEAR SETTINGS												
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment					
356	EF 1	1	2002/09/26	09:41	2002/09/26	10:15						
C. ELECTROFISHER SPECIFICATIONS												
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model	
356	EF	1	1	O	236	200.0	1.2	800	60	6	SMITH ROOT	12B
FISH SUMMARY												
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment			
356	EF	1	1	NFC		0						



Site #356, Top of 10m falls.
Roll #6, Frame #18A, Date: 2002/09/26



Site #356, Downstream photo of typical habitat.
Roll #6, Frame #19A, Date: 2002/09/26



Site #356, Upstream photo of typical habitat.
Roll #6, Frame #20A, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1231

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1231		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.669726.6122692				Sample Type: Biased			
Length (km): 1.03		Coupling: Decoupled		Magnitude: 8		BGC Zone: SBS			
Gradient (%): 5.8		Confinement: Occasionally Conf		Order: 3		Open water: Absent			
US Elev (m): 791		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 357		Field UTM 9.669771.6122660		Agency: C172		Crew: SG/JD		Date: 2002/09/26	
Site Length (m): 200		GIS UTM 9.669639.6122630		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		3.48		3.200	
Stage: Low ☒				Wetted Width (m):		2.85		2	
Med ☐				Bankfull Depth (m):		0.43		0.3	
High ☐		Temp (C): 7		pH: 8.1		Conductivity: 70		Turbidity.: Turbid ☐	
								Low ☐	
								Moderate ☐	
								Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 12.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 4.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Decoupled				INDICATORS		☐		☐	
Confinement: Occasionally Confine				C1		C2		C3	
Morphology: RP Riffle Pool				☐		☐		☐	
				C4		C5		S1	
				☐		☐		☐	
				S2		S3		S4	
				☐		☐		☐	
				S5		☐		☐	
				☐		☐		☐	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		S		D		T	
LWD Dist: Evenly Distributed		Location: P/S/O:		☒		☒		☒	
				☒		☒		☒	
Right Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☐		Cobble ☒		Boulder ☐	
Left Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☐		Cobble ☒		Boulder ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest		Instream Veg: None ☒		Algae ☐		Moss ☐	
Left Bank: Rip.Veg:		Stage: Mature forest				Vascular ☐			
								FSZ: ☐	
								Crown Closure 1-20%	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
357	EF	1	200	145 sec	800	RB	5	72	92

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1231 Site 357

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1231 NID Map #: 093M.029 NID #: 20357 Reach #: 1.0 Site #: 357
Field UTM (Z.E.N): 9.669771.6122660 Method: GPU Site Lg: 200 Method: GE Access: H
GIS UTM (Z.E.N): 9.669639.6122630 Ref. Name:
Date: 2002/09/26 Time: 11:00 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	3.40	3.90	3.20	3.30	3.70	3.40					3.48	Method I:	4.0	5.0	C 4.25
Wetted Width (m):	MS	2.70	3.30	3.20	3.10	2.80	2.00					2.85	Method II:	4.0	4.0	C
Pool Depth (m):	MS	0.30	0.30	0.30	0.20	0.20	0.20					0.25				

Wb Depth: .5 .5 .3 Avg: 0.43 Method: MS Stage: L ☒ M ☐ H ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	D	T	N	T	N
Loc: P/S/O:	☒	☒	☒	☒	☐	☒	☐

LWD: F DIST: E

LB SHP: S

Texture: F ☐ G ☐ C ☒ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☐ G ☐ C ☒ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 7 pH: 8.1 Flood Signs: None Method: T4 Method: P2 Method: GE Req #: Cond.: 70 Turb.: T ☐ M ☐ L ☐ C ☒ Method: S3 Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: G D95: 12.0 D (cm): 4.00 Morph: RP DISTURBANCE INDICATORS O1 B1 B2 B3 D1 D2 D3 C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Pattern: SI Islands: N Coupling: DC Confinement: OC FSZ: ☐
Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
Spawning Habitat	Good - abundant gravel in pool/run margins and tailouts and perennial flows.
OverWinter Habitat	Poor - due to limited pool depths (overwintering habitat available in downstream lake).
Rearing Habitat	Good - abundant shallow pool and deep run with boulder and LWD cover.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 6 F: 21A	STD	D	Downstream photo of typical habitat.
R: 6 F: 22A	STD	U	Upstream photo of typical habitat.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #1.0

ILP Map #093M.029

ILP #1231

Site357

COMMENTS	
Section	Comments
CHANNEL	S3 (RB).

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1231

WATERBODY													
Gazetted Name:										Local:			
Project Code: 480-000000-00000-00000-0000-000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093M.029				ILP #: 1231		Reach #: 1 -			
Project ID: 5271				Lake/Stream: S				Lake From Date:					
Fish Permit #:		145269		Date: 2002/09/26		To: 2002/09/26		Agency: C172		Crew: SG/JD		Resample: ☐	
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
357	093M.029	20357				GPU EF 1	7	70	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
357	EF	1	2002/09/26	11:00	2002/09/26	11:30							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
357	EF	1	1	O	145	200.0	3.0	800	60	6	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
357	EF	1	1	RB	J	5	72 92	R					
INDIVIDUAL FISH DATA													
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age Str/Smpl#/Age	Vch#	Genetic Str/Smpl#	Roll #	Frame#	Comment
357	EF	1	1	RB	72		U	U					
357	EF	1	1	RB	90		U	U					
357	EF	1	1	RB	85		U	U					
357	EF	1	1	RB	85		U	U					
357	EF	1	1	RB	92		U	U					



Site #357, Downstream photo of typical habitat.
Roll #6, Frame #21A, Date: 2002/09/26



Site #357, Upstream photo of typical habitat.
Roll #6, Frame #22A, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #
2.0 093M.029 1231

STREAM REFERENCING											
Gazetted Name:						Local Name:					
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000						ILP Map #: 093M.029		ILP #: 1231			
REACH											
Reach #: 2.0		UTM(Zone/East/North): 9.670551.6124155				Sample Type: Biased					
Length (km): 1.93		Coupling: Partially Couple		Magnitude: 6		BGC Zone: SBS					
Gradient (%): 7.7		Confinement: Frequently Confin		Order: 3		Open water: Absent					
US Elev (m): 940		Islands: NONE		Riparian Vegetation: Mixed C/D							
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified											
SITE											
Site #: 358		Field UTM ..		Agency: C172		Crew: SG/JD		Date: 2002/09/26			
Site Length (m): 170		GIS UTM 9.670279.6123260		Agency Name: Triton Environmental Consultants (Terrace)							
CHANNEL											
No Vis.Ch.: ☐		Intermittent: ☐				Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐									
Stage: Low ☐				Channel Width (m):		3.35		2.5		3.8	
Med ☒				Wetted Width (m):		2.93		1.9		3.5	
High ☐				Bankfull Depth (m):		0.20		0.2		0.2	
Temp (C): 7		pH: 8.1		Conductivity: 70							
						Avg		Min		Max	
						Gradient %:		9.50		8	
						Pool Depth (m):		0.31		0.200	
								0.400		6	
						Turbidity: Turbid ☐		Low ☐			
						Moderate ☐		Clear ☒			
MORPHOLOGY											
Bed Material: Dominant: Cobble		D95 (cm): 21.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐	
Subdominant: Boulders		D (cm): 7.00				Span ☐		Braid ☐			
Channel Pattern: Straight		Islands: None		DISTURBANCE INDICATORS		O1		B1		B2	
Coupling: Coupled						B3		D1		D2	
Confinement: Confined						D3		S1		S2	
Morphology: CP Cascade Pool						S3		S4		S5	
COVER											
Total Cover: Moderate		Type: SWD		LWD		B		U		DP	
LWD: Abundant		Amount: T		S		D		N		N	
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☒		☐		☐	
										FSZ: ☐	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☒	
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☒	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest								Crown Closure 1-20%	
Left Bank: Rip.Veg:		Stage: Mature forest								Instream Veg: None ☒	
										Algae ☐	
										Moss ☐	
										Vascular ☐	
FEATURES											
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto	
093M.029	25358	C	16.0	GE	22	GE	R: 7	F: 1A	L:	#:	UTM (Z/E/N)
Comments: Cascade bedrock (37%), Photos 1A and 2A.		9.670274.6123									

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #

2.0 093M.029 1231

SITE									
Site #: 618		Field UTM ..		Agency: C172		Crew: JH/SH		Date: 2002/09/26	
Site Length (m): 200		GIS UTM 9.670565.6124038		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐	Intermittent: ☐			Avg	Min	Max	#		
Dewatered: ☐	Tribs.: ☐			Channel Width (m):		2.18	1.600	2.6	6
Stage: Low ☐				Wetted Width (m):		1.85	1.4	2.400	6
Med ☒				Bankfull Depth (m):		0.73	0.7	0.8	3
High ☐		Temp (C): 6		pH: 7.4		Conductivity: 80			
						Turbidity.: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 60.00		Bars: Non ☐		Side ☒		Diagonal ☐	
Subdominant: Cobble		D (cm): 20.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1 B2 B3 D1 D2 D3	
Coupling: Partially Coupled						☐		☐	
Confinement: Frequently Confined				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5		☐		☐	
Morphology: RP Riffle Pool						☐		☐	
COVER									
Total Cover: Abundant		Type: SWD LWD B U DP OV IV							
LWD: Few		Amount: T T T T S D N							
LWD Dist: Clumped		Location: P/S/O: ☒		☒		☒		☒	
				☒		☒		☒	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest		Rock ☐		Manmade ☐		Crown Closure	
Left Bank: Rip.Veg:		Stage: Mature forest		Instream Veg: None ☒		Algae ☐		Moss ☐	
								Vascular ☐	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
358	EF	1	100	79 sec	700	RB	2	135	165
380	EF	1	200	250 sec	700	NFC	0		
618	EF	1	200	460 sec	700	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.029 ILP # 1231 Site 358

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
Local Name:
ILP Map#: 093M.029 ILP #: 1231 NID Map #: 093M.029 NID #: 20358 Reach #: 2.0 Site #: 358
Field UTM (Z.E.N.): .. Method: Site Lg: 170 Method: GIS Access: FT
GIS UTM (Z.E.N.): 9.670279.6123260 Ref. Name:
Date: 2002/09/26 Time: 12:00 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	3.80	2.70	2.50	3.70	3.70	3.70					3.35	Method I:	8.0	8.0	C	9.50
Wetted Width (m):	MS	2.90	1.90	2.50	3.30	3.50	3.50					2.93	Method II:	10.0	12.0	C	
Pool Depth (m):	MS	0.20	0.25	0.30	0.40	0.40	0.30					0.31					

Wb Depth: .2 .2 .2 Avg: 0.20 Method: MS Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	D	N	N	T	N
Loc: P/S/O:	☒	☒	☒	☐	☐	☒	☐

LWD: A DIST: E

LB SHP: V

Texture: F ☐ G ☐ C ☐ B ☐ R ☒ A ☐

RIP: C

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☐ C ☐ B ☐ R ☒ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 70 Method: S3
pH: 8.1 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3
D95: 21.0 D (cm): 7.00 Morph: CP DISTURBANCE INDICATORS
Pattern: ST C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: CO
Confinement: CO
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.029	25358	C	16.0	GE	22	GE	R: 7 F: 1A L:	#:	9.670274.6123392	GIS

Comments: Cascade bedrock (37%), Photos 1A and 2A.

HABITAT QUALITY

Name	Comments
Spawning Habitat	Good - abundant gravel in pool margins.
OverWinter Habitat	Moderate - due to perennial flows but limited pool (>0.3 m deep).
Rearing Habitat	Good - due to abundant shallow pools, boulder cover and perennial flows.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
2.0	093M.029	1231	358

PHOTOS					
Photo				Foc Lg	Dir
					Comments
R:	6	F:	23A	STD	X
R:	6	F:	24A	STD	D
R:	7	F:	0A	STD	U
R:	7	F:	1A	STD	U
R:	7	F:	2A	STD	U
COMMENTS					
Section				Comments	
CHANNEL				S3/S5 Break.	

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.029 ILP # 1231

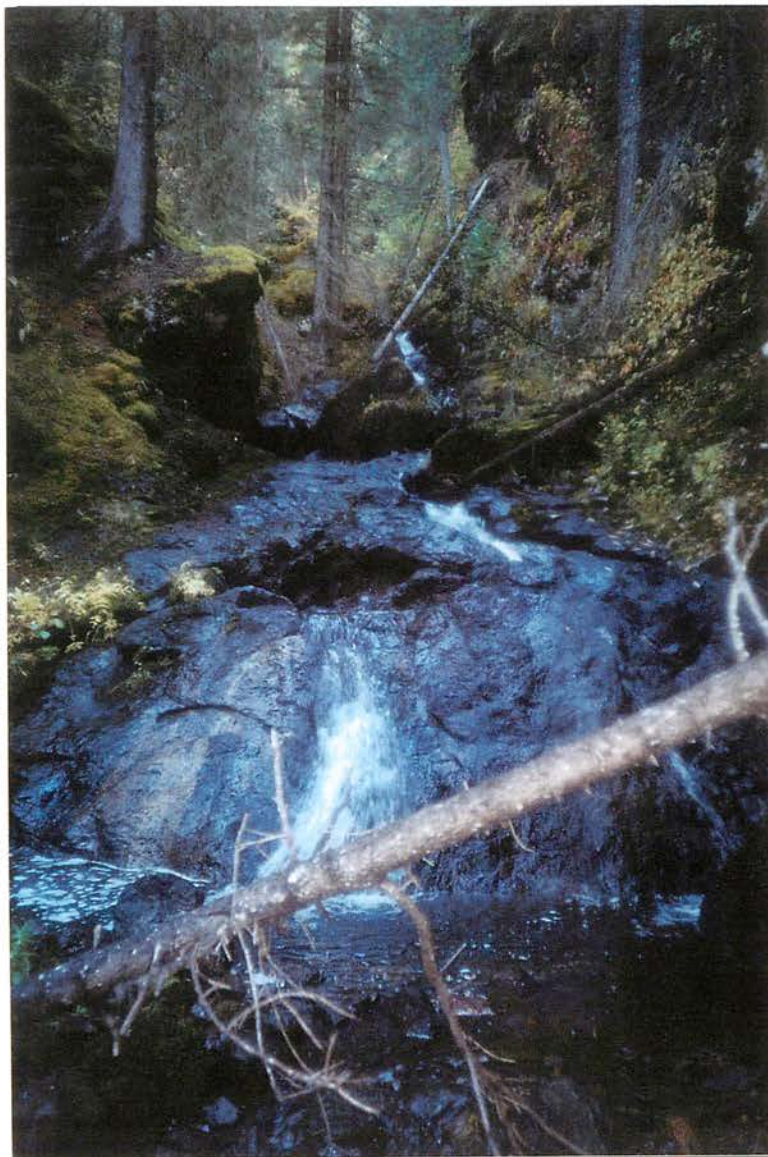
WATERBODY															
Gazetted Name:										Local:					
Project Code: 480-000000-00000-00000-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:				ILP Map #: 093M.029				ILP #: 1231		Reach #: 2 -					
Project ID: 5271				Lake/Stream: S				Lake From Date:							
Fish Permit #:		145269		Date: 2002/09/26		To: 2002/09/26		Agency: C172		Crew: SG/JD JH/		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
618	093M.029	50618				GPU EF 1	6	80	C						
380	093M.029	20380				GPU EF 1	6.5	70	C	upstream of cascade					
358	093M.029	20358				GPU EF 1	6.5	70	C	downstream of cascade					
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
358	EF	1	1	2002/09/26	12:00	2002/09/26	12:29								
380	EF	1	1	2002/09/26	12:29	2002/09/26	12:50								
618	EF	1	1	2002/09/26	10:00	2002/09/26	11:00								
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
358	EF	1	1	O	79	100.0	3.0	700	60	6	SMITH ROOT 12B				
380	EF	1	1	O	250	200.0	3.0	700	60	6	SMITH ROOT 12B				
618	EF	1	1	O	460	200.0	2.0	700	I	5	SMITH ROOT 12B				
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment					
358	EF	1	1	RB	J	2	135	165	R						
380	EF	1	1	NFC		0									
618	EF	1	1	NFC		0									
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
358	EF	1	1	RB	135		U	U							
358	EF	1	1	RB	165		U	U							



Site #358, Photo of RB.
Roll #6, Frame #23A, Date: 2002/09/26



Site #358, Downstream photo of typical habitat with LWD.
Roll #6, Frame #24A, Date: 2002/09/26



Site #358, Upstream photo of 16 m cascade.
Roll #7, Frame #1A, Date: 2002/09/26



Site #358, Upstream photo of typical habitat - stream channel.
Roll #7, Frame #0A, Date: 2002/09/26



Site #358, Upstream photo of 16 m cascade.
Roll #7, Frame #2A, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1232

STREAM REFERENCING											
Gazetted Name:						Local Name:					
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000						ILP Map #: 093M.029		ILP #:		1232	
REACH											
Reach #: 1.0		UTM(Zone/East/North): 9.670641.6122702				Sample Type: Biased					
Length (km): .94		Coupling: Coupled		Magnitude: 3		BGC Zone: SBS					
Gradient (%): 12.2		Confinement: Frequently Confin		Order: 2		Open water: Absent					
US Elev (m): 901		Islands: NONE		Riparian Vegetation: Coniferous							
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified											
SITE											
Site #: 359		Field UTM 9.670045.6122792		Agency: C172		Crew: SG/JD		Date: 2002/09/26			
Site Length (m): 130		GIS UTM 9.670062.6122794		Agency Name: Triton Environmental Consultants (Terrace)							
CHANNEL											
No Vis.Ch.: ☐		Intermittent: ☒		Avg		Min		Max		#	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.25		0.800		1.700		6	
Stage: Low ☐				Wetted Width (m): 0.67		0.400		1		6	
Med ☐				Bankfull Depth (m): 0.30		0.3		0.3		3	
High ☐		Temp (C): 7		pH: 8.1		Conductivity: 70					
								Turbidity: Turbid ☐		Low ☒	
								Moderate ☐		Clear ☐	
MORPHOLOGY											
Bed Material: Dominant: Cobble		D95 (cm): 11.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐	
Subdominant: Gravels		D (cm): 4.00								Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1		B2	
Coupling: Coupled				INDICATORS		☐		☐		☐	
Confinement: Confined						C1		C2		C3	
Morphology: CP Cascade Pool						☐		☐		☐	
						C4		C5		S1	
						☐		☐		☐	
						S2		S3		S4	
						☐		☐		☐	
						S5					
						☐					
COVER											
Total Cover: Abundant		Type: SWD		LWD		B		U		DP	
LWD: Abundant		Amount: T		D		S		T		N	
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☒		☒		☐	
										FSZ: ☐	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐	
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest								Crown Closure	
Left Bank: Rip.Veg:		Stage: Mature forest								21-40%	
								Instream Veg: None ☒		Algae ☐	
										Moss ☐	
										Vascular ☐	
FEATURES											
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto	
093M.029	25359	F	2.5	GE	0	GE	R: 7	F: 5A	L:	#:	UTM (Z/E/N)
Comments: Bedrock Falls.											
FISH											
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)		
359	EF	1	220	312 sec	800	NFC	0				

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1232 Site 359

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093M.029 ILP #: 1232 NID Map #: 093M.029 NID #: 20359 Reach #: 1.0 Site #: 359
Field UTM (Z.E.N): 9.670045.6122792 Method: GPU Site Lg: 130 Method: GIS Access: FT
GIS UTM (Z.E.N): 9.670062.6122794 Ref. Name:
Date: 2002/09/26 Time: 13:01 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	1.50	0.80	1.20	1.40	1.70	0.90					1.25	Method I:	11.0	8.0	9.25
Wetted Width (m):	MS	0.40	0.70	1.00	0.40	1.00	0.50					0.67	Method II:	10.0	8.0	C
Pool Depth (m):	MS	0.30	0.40	0.35	0.30	0.40						0.35				

Wb Depth: .3 .3 .3 Avg: 0.30 Method: MS Stage: L ☐ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☒ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	S	T	N	T	N
Loc: P/S/O:	☒	☒	☒	☒	☐	☒	☐

LWD: A DIST: E

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 7 Method: T4 Cond.: 70 Method: S3
pH: 8.1 Method: P2 Turb.: T ☐ M ☐ L ☒ C ☐ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 11.0 D (cm): 4.00 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: CO
Confinement: CO
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.029	25359	F	2.5	GE	0	GE	R: 7 F: 5A L:	#:	9.669972.6122773	GIS

Comments: Bedrock Falls.

HABITAT QUALITY

Name	Comments
Spawning Habitat	None - abundant gravel but seasonal flows.
OverWinter Habitat	None - seasonal stream with limited pools.
Rearing Habitat	Moderate - abundant pool habitat up to 0.4 m deep with good LWD cover.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093M.029	1232	359

PHOTOS

Photo				Foc Lg	Dir	Comments
R:	7	F:	3A	STD	D	Downstream photo of typical habitat.
R:	7	F:	4A	STD	U	Upstream photo of typical habitat.
R:	7	F:	5A	STD	U	2.5 m bedrock falls.

COMMENTS

Section	Comments
CHANNEL	Stream is dry below falls. Falls located 60 m downstream of site UTM.
CHANNEL	Seasonal, S4/S6

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0
ILP Map # 093M.029
ILP # 1232

WATERBODY													
Gazetted Name:						Local:							
Project Code: 480-000000-00000-00000-0000-000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093M.029				ILP #: 1232		Reach #: 1 -			
Project ID: 5271				Lake/Stream: S				Lake From Date:					
Fish Permit #: 145269			Date: 2002/09/26			To: 2002/09/26			Agency: C172		Crew: SG/JD		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
359	093M.029	20359				GPU EF 1	7	70	L				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
359	EF 1	1	2002/09/26	13:01	2002/09/26	13:20							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
359	EF 1	1	O	312	220.0	0.6	800	60	6	SMITH ROOT	12B		
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
359	EF 1	1	NFC			0							



Site #359, Downstream photo of typical habitat.
Roll #7, Frame #3A, Date: 2002/09/26



Site #359, Upstream photo of typical habitat.
Roll #7, Frame #4A, Date: 2002/09/26



Site #359, Bedrock falls / 2.5 M .
Roll #7, Frame #5A, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # ILP Map # ILP #

1.0 093M.029 1206

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1206		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.667607.6127370				Sample Type: Biased			
Length (km): .74		Coupling: Decoupled		Magnitude: 8		BGC Zone: SBS			
Gradient (%): 4.2		Confinement: Occasionally Conf		Order: 3		Open water: Absent			
US Elev (m): 820		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 360		Field UTM 9.667124.6126940		Agency: C172		Crew: SG/JD		Date: 2002/09/26	
Site Length (m): 180		GIS UTM 9.667167.6126969		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐ Intermittent: ☐									
Dewatered: ☐ Tribs.: ☐									
Stage: Low ☒		Avg		Min		Max		#	
Med ☐		Channel Width (m): 1.37		0.7		1.700		6	
High ☐		Wetted Width (m): 1.15		0		1.700		6	
Temp (C): 8		Bankfull Depth (m): 0.20		0.2		0.2		3	
pH: 8.2									
Conductivity: 100									
		Avg		Min		Max		#	
		Gradient %: 1.13		1		1.5		4	
		Pool Depth (m): 0.20		0.100		0.35		5	
		Turbidity: Turbid ☐		Low ☐					
		Moderate ☐		Clear ☒					
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 3.00		Bars: Non ☒		Side ☐		Diagonal ☐ Mid-channel ☐ Span ☐	
Subdominant: Cobble		D (cm): 1.00						Braid ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS					
Coupling: Decoupled				O1 B1 B2 B3 D1 D2 D3					
Confinement: Unconfined				☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐					
Morphology: RP Riffle Pool				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5					
				☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐					
COVER									
Total Cover: Abundant		Type: SWD LWD B U DP OV IV							
LWD: Few		Amount: N S T T N D N							
LWD Dist: Evenly Distributed		Location: P/S/O: ☐ ☒ ☐ ☒ ☐ ☒ ☐ ☒ ☐ ☐		FSZ: ☐					
Right Bank: Shape: Sloping (g)		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐		Crown Closure					
Left Bank: Shape: Sloping (g)		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐		21-40%					
Right Bank: Rip.Veg: Deciduous		Stage: Mature forest							
Left Bank: Rip.Veg:		Stage: Mature forest		Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐					
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
360	EF	1	180	212 sec	800	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-0000

Reach # 1.0 ILP Map # 093M.029 ILP # 1206 Site 360

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-0000-0000-0000-0000-0000-0000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-0000
Local Name:
ILP Map#: 093M.029 ILP #: 1206 NID Map #: 093M.029 NID #: 20360 Reach #: 1.0 Site #: 360
Field UTM (Z.E.N): 9.667124.6126940 Method: GPU Site Lg: 180 Method: GIS Access: H
GIS UTM (Z.E.N): 9.667167.6126969 Ref. Name:
Date: 2002/09/26 Time: 14:00 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.20	1.30	0.70	1.60	1.70	1.70					1.37	Method I:	1.0	1.0	C	1.13
Wetted Width (m):	MS	0.60	1.30	0.00	1.60	1.70	1.70					1.15	Method II:	1.5	1.0	C	
Pool Depth (m):	MS	0.20	0.10		0.20	0.35	0.15					0.20					

Wb Depth: .2 .2 .2 Avg: 0.20 Method: MS Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	S	T	T	N	D	N
Loc: P/S/O:	☐	☒	☒	☒	☐	☒	☐

LWD: F DIST: E

LB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: MF

WATER

EMS: Temp: 8 Method: T4 Req #: Cond.: 100 Method: S3
pH: 8.2 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 3.00 D (cm): 1.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
Spawning Habitat	Poor - due to seasonal flows.
OverWinter Habitat	None - due to lack of pools and seasonal flows.
Rearing Habitat	Poor - due to lack of pool habitat and seasonal flows.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 7 F: 6A	STD	U	Upstream photo of typical habitat with section of dry channel.
R: 7 F: 7A	STD	D	Downstream photo of typical habitat with pool.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093M.029	1206	360

COMMENTS	
Section	Comments
CHANNEL	Ephemeral, Inferred S4 (RB caught in lake outlet).

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1206

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 480-000000-00000-00000-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.029		ILP #: 1206		Reach #: 1 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/26		To:		2002/09/26		Agency: C172		Crew: SG/JD		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd				MTD/NO	Temp	Cond	Turbid	Comment						
360	093M.029	20360				GPU	EF 1	8	100	C							
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
360	EF 1	1	2002/09/26	14:00	2002/09/26	14:20											
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
360	EF	1	1	O	212	180.0	1.6	800	60	6	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
360	EF	1	1	NFC		0											



Site #360, Upstream photo of typical habitat with section of dry channel.
Roll #7, Frame #6A, Date: 2002/09/26



Site #360, Downstream photo of typical habitat with pool.
Roll #7, Frame #7A, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1204

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1204		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.667101.6126571				Sample Type: Biased			
Length (km): .84		Coupling: Partially Couple		Magnitude: 15		BGC Zone: SBS			
Gradient (%): 7.0		Confinement: Occasionally Conf		Order: 4		Open water: Absent			
US Elev (m): 790		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 361		Field UTM 9.667130.6126510		Agency: C172		Crew: SG/JD		Date: 2002/09/26	
Site Length (m): 220		GIS UTM 9.667158.6126437		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 2.87		2.5		3.1	
Stage: Low ☒				Wetted Width (m): 2.50		2.1		2.900	
Med ☐				Bankfull Depth (m): 0.13		0.1		0.2	
High ☐									
Temp (C): 11		pH: 8.3		Conductivity: 30					
				Turbidity: Turbid ☐		Low ☐			
				Moderate ☐		Clear ☒			
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 12.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Cobble		D (cm): 10.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Partially Coupled				INDICATORS		B2		B3	
Confinement: Frequently Confined						D1		D2	
Morphology: RP Riffle Pool						D3			
				C1		C2		C3	
				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: None		Amount: N		T		D		N	
LWD Dist: Not Applicable		Location: P/S/O:		☒		☒		☒	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☒		Boulder ☐	
Left Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☐		Cobble ☒		Boulder ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest		Instream Veg: None ☐		Algae ☐		Moss ☒	
Left Bank: Rip.Veg:		Stage: Mature forest		Vascular ☐					
FEATURES									
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)
093M.029	25361	BD	1.5	MS			R: 7 F: 10A L:	#:	9.667098.6126
Comments: At Lake outlet - passable.									
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
361	EF	1	200	250 sec	600	SU	3	15	20
361	EF	1	200	250 sec	600	RB	3	45	115

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1204 Site # 361

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093M.029 ILP #: 1204 NID Map #: 093M.029 NID #: 20361 Reach #: 1.0 Site #: 361
Field UTM (Z.E.N): 9.667130.6126510 Method: GPU Site Lg: 220 Method: GIS Access: H
GIS UTM (Z.E.N): 9.667158.6126437 Ref. Name:
Date: 2002/09/26 Time: 14:38 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	MS	2.70	3.10	3.10	2.90	2.50	2.90					2.87	Method I:	4.0	1.0	C	2.25
Wetted Width (m):	MS	2.70	2.20	2.10	2.70	2.40	2.90					2.50	Method II:	2.0	2.0	C	
Pool Depth (m):	MS	0.20	0.20	0.25	0.15	0.20	0.20					0.20					

Wb Depth: .1 .2 .1 Avg: 0.13 Method: MS Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	T	D	N	N	S	N
Loc: P/S/O:	☐	☒	☒	☐	☐	☒	☐

LWD: N

DIST: NA

LB SHP: S

Texture: F ☐ G ☐ C ☒ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: V

Texture: F ☐ G ☐ C ☒ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 11 Method: T4 Req #: Cond.: 30 Method: S3
pH: 8.3 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 12.0 D (cm): 10.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.029	25361	BD	1.5	MS			R: 7 F: 10A L:	#:	9.667098.6126575	GIS

Comments: At Lake outlet - passable.

HABITAT QUALITY

Name	Comments
Spawning Habitat	None - no gravel.
OverWinter Habitat	None - seasonal flows.
Rearing Habitat	Moderate - abundant boulder overstream vegetation in shallow pool and runs.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093M.029	1204	361

PHOTOS						
Photo				Foc Lg	Dir	Comments
R:	7	F:	10A	STD	U	Upstream photo of beaver dam at lake outlet.
R:	7	F:	8A	STD	D	Downstream photo of typical habitat with flat rocks.
R:	7	F:	9A	STD	U	Upstream photo of typical habitat with flat rocks.
COMMENTS						
Section				Comments		
CHANNEL				S3 (RB and SU).		

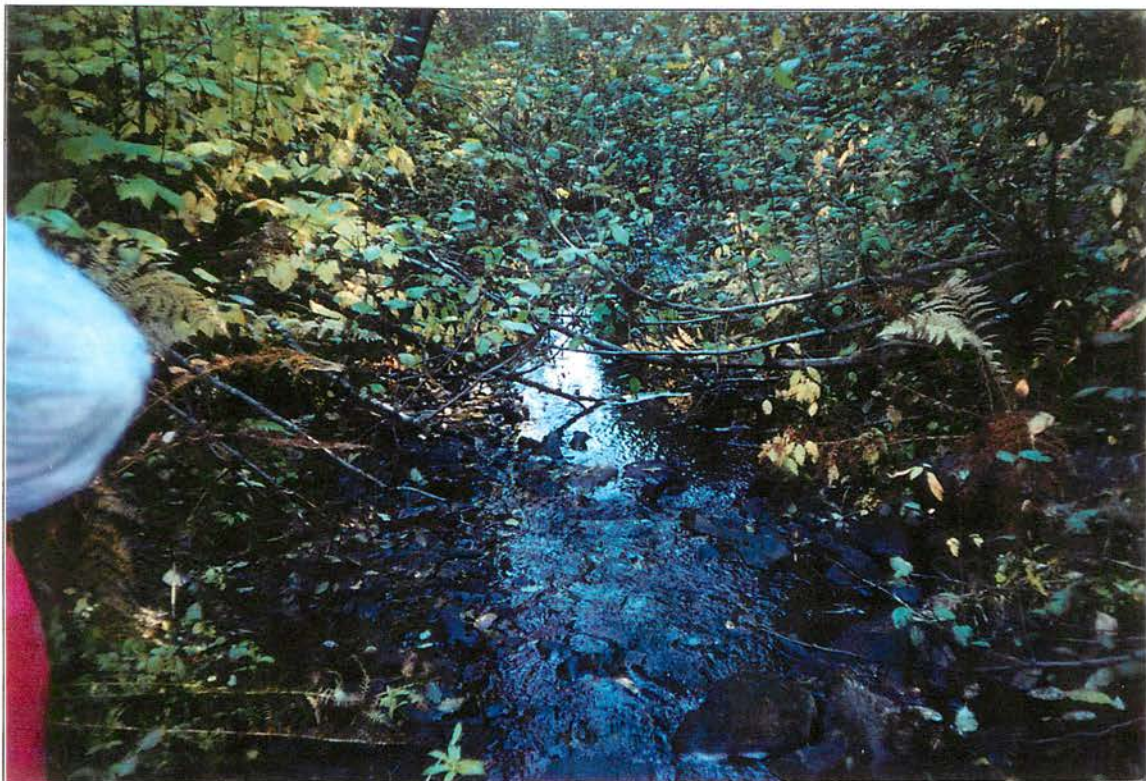
FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1204

WATERBODY															
Gazetted Name:										Local:					
Project Code: 480-000000-00000-00000-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:				ILP Map #: 093M.029				ILP #: 1204		Reach #: 1 -					
Project ID: 5271				Lake/Stream: S				Lake From Date:							
Fish Permit #:		145269		Date: 2002/09/26		To: 2002/09/26		Agency: C172		Crew: SG/JD		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
361	093M.029	20361				GPU EF 1	11	30	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
361	EF	1	2002/09/26	14:38	2002/09/26	15:10									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
361	EF	1	1	O	250	200.0	2.2	600	60	6	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment					
361	EF	1	1	SU	F	3	15	20	R						
361	EF	1	1	RB	J	3	45	115	R						
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
361	EF	1	1	RB	45		U	U							
361	EF	1	1	RB	115		U	U							
361	EF	1	1	RB	50		U	U							
361	EF	1	1	SU	15		U	U							
361	EF	1	1	SU	20		U	U							
361	EF	1	1	SU	15		U	U							



Site #361, Downstream photo of typical habitat with flat rocks.
Roll #7, Frame #8A, Date: 2002/09/26



Site #361, Upstream photo of typical habitat with flat rocks.
Roll #7, Frame #9A, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #

4.0 093M.020 1398

STREAM REFERENCING																																												
Gazetted Name:						Local Name:																																						
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000						ILP Map #: 093M.020			ILP #: 1398																																			
REACH																																												
Reach #: 4.0		UTM(Zone/East/North): 9.680181.6118189				Sample Type: Biased																																						
Length (km): 1.26		Coupling: Decoupled		Magnitude: 5		BGC Zone: SBS																																						
Gradient (%): 5.1		Confinement: Occasionally Conf		Order: 2		Open water: Absent																																						
US Elev (m): 967		Islands: NONE		Riparian Vegetation: Deciduous																																								
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																												
SITE																																												
Site #: 363		Field UTM 9.680444.6117911		Agency: C172		Crew: SG/JD		Date: 2002/10/07																																				
Site Length (m): 250		GIS UTM 9.680398.6117954		Agency Name: Triton Environmental Consultants (Terrace)																																								
CHANNEL																																												
No Vis.Ch.: ☐		Intermittent: ☐		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Channel Width (m):</td> <td>3.38</td> <td>2.8</td> <td>4.2</td> <td>6</td> </tr> <tr> <td>Wetted Width (m):</td> <td>2.23</td> <td>1.8</td> <td>2.5</td> <td>6</td> </tr> <tr> <td>Bankfull Depth (m):</td> <td>0.17</td> <td>0.1</td> <td>0.2</td> <td>3</td> </tr> </table>				Avg	Min	Max	#	Channel Width (m):	3.38	2.8	4.2	6	Wetted Width (m):	2.23	1.8	2.5	6	Bankfull Depth (m):	0.17	0.1	0.2	3	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Gradient %:</td> <td>4.25</td> <td>3</td> <td>5</td> <td>4</td> </tr> <tr> <td>Pool Depth (m):</td> <td>0.27</td> <td>0.200</td> <td>0.300</td> <td>5</td> </tr> </table>				Avg	Min	Max	#	Gradient %:	4.25	3	5	4	Pool Depth (m):	0.27	0.200	0.300	5
Avg	Min	Max	#																																									
Channel Width (m):	3.38	2.8	4.2	6																																								
Wetted Width (m):	2.23	1.8	2.5	6																																								
Bankfull Depth (m):	0.17	0.1	0.2	3																																								
Avg	Min	Max	#																																									
Gradient %:	4.25	3	5	4																																								
Pool Depth (m):	0.27	0.200	0.300	5																																								
Dewatered: ☐		Tribes: ☐																																										
Stage: Low ☐		Med ☒		High ☐		Temp (C): 5		pH: 8.1		Conductivity: 70																																		
								Turbidity: Turbid ☐		Low ☐																																		
										Moderate ☐																																		
										Clear ☒																																		
MORPHOLOGY																																												
Bed Material: Dominant: Gravels		D95 (cm): 12.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐																																		
Subdominant: Cobble		D (cm): 3.00								Span ☐																																		
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1		B2																																		
Coupling: Decoupled						B3		D1		D2																																		
Confinement: Unconfined						D3																																						
Morphology: RP Riffle Pool						C1		C2		C3																																		
						C4		C5		S1																																		
						S2		S3		S4																																		
						S5																																						
COVER																																												
Total Cover: Abundant		Type: SWD		LWD		B		U		DP																																		
LWD: Few		Amount: T		S		N		T		N																																		
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☐		☒		☐																																		
										FSZ: ☐																																		
Right Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐																																		
Left Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐																																		
Right Bank: Rip.Veg: Deciduous		Stage: Young forest								Crown Closure																																		
Left Bank: Rip.Veg:		Stage: Young forest								21-40%																																		
										Instream Veg: None ☒																																		
										Algae ☐																																		
										Moss ☐																																		
										Vascular ☐																																		
FEATURES																																												
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo		AirPhoto		UTM (Z/E/N)																																	
093M.020	25363	CV	1.6	MS	20	HC	R: 80	F: 03	L:	#:	9.680442.6117																																	
Comments: Perched 25 cm at 5% gradient.																																												
FISH																																												
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																																			
363	EF	1	130	210 sec	800	RB	2	70	140																																			

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 4.0 ILP Map # 093M.020 ILP # 1398 Site 363

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.020 ILP #: 1398 NID Map #: 093M.020 NID #: 20363 Reach #: 4.0 Site #: 363
Field UTM (Z.E.N): 9.680444.6117911 Method: GPU Site Lg: 250 Method: HC Access: V4
GIS UTM (Z.E.N): 9.680398.6117954 Ref. Name:
Date: 2002/10/07 Time: 08:30 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	3.40	3.50	3.30	2.80	3.10	4.20					3.38	Method I:	3.0	5.0	C	4.25
Wetted Width (m):	MS	2.30	2.10	1.80	2.40	2.50	2.30					2.23	Method II:	4.0	5.0	C	
Pool Depth (m):	MS	0.20	0.30	0.25	0.30	0.30						0.27					

Wb Depth: .2 .1 .2 Avg: 0.17 Method: MS Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	N	T	N	D	N
Loc: P/S/O:	☒	☒	☐	☒	☐	☒	☐

LWD: F DIST: E

LB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: YF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: YF

WATER

EMS: Temp: 5 Method: T4 Req #: Cond.: 70 Method: S3
pH: 8.1 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: Rafted debris 0.3 m Method: GE

MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 12.0 D (cm): 3.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.020	25363	CV	1.6	MS	20	HC	R: 80 F: 03 L:	#:	9.680442.6117882	GIS

Comments: Perched 25 cm at 5% gradient.

HABITAT QUALITY

Name	Comments
Spawning Habitat	Good - abundant gravel and spawning locations in pools associated with LWD.
OverWinter Habitat	Poor - limited pool depths.
Rearing Habitat	Good - abundant overstream vegetation and LWD cover in shallow pools and deep runs.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
4.0	093M.020	1398	363

PHOTOS					
Photo			Foc Lg	Dir	Comments
R:	80	F: 01	STD	D	Downstream photo of typical habitat.
R:	80	F: 02	STD	U	Upstream photo of typical habitat.
R:	80	F: 03	STD	U	Upstream photo of 1.6 m culvert, perched 25 cm.
COMMENTS					
Section			Comments		
CHANNEL			S3* (NFC).		
CHANNEL			Perennial.		

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 4.0 ILP Map # 093M.020 ILP # 1398

WATERBODY															
Gazetted Name:										Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000															
Waterbody ID:					ILP Map #: 093M.020					ILP #: 1398		Reach #: 4 -			
Project ID: 5271					Lake/Stream: S					Lake From Date:					
Fish Permit #: 145269			Date: 2002/10/07			To: 2002/10/07			Agency: C172		Crew: SG/DT		Resample: ☐		
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
363	093M.020	20363	9	680444	6117911	GPU	EF 1	5	70	C					
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
363	EF	1	2002/10/07	08:30	2002/10/07	09:05									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
363	EF	1	1	O	210	130.0	2.0	800	60	6	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
363	EF	1	1	RB	J	2	70 140	R	RB caught upstream and downstream of culvert.						
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl# / Age			Str/Smpl#				
363	EF	1	1	RB	140		U	U							
363	EF	1	1	RB	70		U	U							



Site #363, Downstream photo of typical habitat.
Roll #80, Frame #01, Date: 2002/10/07



Site #363, Upstream photo of typical habitat.
Roll #80, Frame #02, Date: 2002/10/07



Site #363, Upstream photo of 1.6 m cv, perched 25 cm.
Roll #80, Frame #03, Date: 2002/10/07

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093M.030 ILP # 1305

WATERBODY													
Gazetted Name:										Local:			
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093M.030				ILP #: 1305		Reach #: 3 -			
Project ID: 5271				Lake/Stream: L				Lake From Date:					
Fish Permit #:		145269		Date: 2002/10/07		To: 2002/10/08		Agency: C172		Crew: SG/DT		Resample: ☐	
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd				MTD/NO	Temp	Cond	Turbid	Comment		
364	093M.030	20364	9	679149	6124323	GPU	MT 7						
364	093M.030	20364	9	679149	6124323	GPU	MT 6						
364	093M.030	20364	9	679149	6124323	GPU	MT 5						
364	093M.030	20364	9	679149	6124323	GPU	MT 4						
364	093M.030	20364	9	679149	6124323	GPU	MT 3						
364	093M.030	20364	9	679149	6124323	GPU	MT 2						
364	093M.030	20364	9	679149	6124323	GPU	MT 1						
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
364	MT 1	1	2002/10/07	09:30	2002/10/08	12:30							
364	MT 2	1	2002/10/07	09:30	2002/10/08	12:30							
364	MT 3	1	2002/10/07	09:30	2002/10/08	12:30							
364	MT 4	1	2002/10/07	09:30	2002/10/08	12:30							
364	MT 5	1	2002/10/07	09:30	2002/10/08	12:30							
364	MT 6	1	2002/10/07	09:30	2002/10/08	12:30							
364	MT 7	1	2002/10/07	09:30	2002/10/08	12:30							
B. NET/TRAP SPECIFICATIONS													
Site #	MTD/NO.		H/P	Net Type	Length	Depth	Mesh	Set	Habitat				
364	MT	1	1			0.4		BT	L				
364	MT	2	1			0.5		BT	L				
364	MT	3	1			1.0		BT	L				
364	MT	4	1			1.2		BT	L				
364	MT	5	1			1.0		BT	L				
364	MT	6	1			1.3		BT	L				
364	MT	7	1			0.8		BT	L				
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
364	MT	1	1	NFC		0							
364	MT	2	1	NFC		0							
364	MT	3	1	NFC		0							
364	MT	4	1	NFC		0							
364	MT	5	1	NFC		0							
364	MT	6	1	NFC		0							
364	MT	7	1	NFC		0							
COMMENTS													
Section			Comments										
WATERBODY			Photo Roll 80 Frame 17										



Site #364, Photo of lake sampled.
Roll #80, Frame #17, Date: 2002/10/07

FDIS Reach Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.030 ILP # 1308

PROJECT			
Project Name: Babine and Tochcha		Project Code: 5271	
Stream Name (gaz.): SAKENICHE RIVER			
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000			
WATERSHED			
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000			
ILP Map #: 093M.030	ILP #: 1308	Reach #: 2.0	NID Map #: 093M.030
Air Photos		Names	
LINE: BCB910236		UTM(Zone/East/North/Method) 9.678462.6124964	
#: 0	Gaz.: Local:	GIS Sample Type: B Wetland: ☐	
SURVEY INFO			
Date: 2002/08/26		Agency: C172	
		Crew: SG/JD	
ATTRIBUTES			
Length (km): .94	Gradient: 2.13	Setting: VW	DISTURBANCE INDICATORS
DS Elev.: 880	Order: 1	Open water: A	O1 ☐ B1 ☐ B2 ☐ B3 ☐ D1 ☐ D2 ☐ D3 ☐
US Elev: 900	Magnitude: 1	Confinement: OC	C1 ☐ C2 ☐ C3 ☐ C4 ☐ C5 ☐ S1 ☐ S2 ☐ S3 ☐ S4 ☐ S5 ☐
BGC Zone: SBS		Coupling: PC	
Valley Flat: N	C/D: ☐	Islands: N	
Active Floodplain Visible: ☐	Est. Width:	Bars: ☒ N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR	
Channel Pattern: ST		Mass Movement: L	Exposed/Eroded: NS
		Riparian Veg.: C	Landuse: NS

MAPS		
Map Type	Map #	Year
TRIM	093M.030	1983

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.030 ILP # 1308

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.030		ILP #: 1308		Reach #: 2 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/10/08		To:		2002/10/08		Agency: C172		Crew: SG/DT		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
365	093M.030	20365				GPU EF 1	6	40	C	T02-ST1-NFC							
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
365	EF 1	1	2002/10/08	12:00	2002/10/08	12:30											
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
365	EF 1	1	O	135	200.0	0.5	1000	60	6	SMITH ROOT	12B						
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
365	EF 1	1	NFC			0											

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
6.0	093M.020	1441

Triton Environmental Consultants Ltd.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 6.0 ILP Map # 093M.020 ILP # 1441 Site 366

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000
ILP Map #: 093M.020 ILP #: 1441 NID Map #: 093M.020 NID #: 20366 Reach #: 6.0 Site #: 366
Field UTM (Z.E.N): 9.683810.6110890 Method: GPU Site Lg: 100 Method: GE Access: V2
GIS UTM (Z.E.N): 9.683823.6110897 Ref. Name:
Date: 2002/10/07 Time: 10:45 Agency: C172 Crew: SG/DT Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.50	0.50	0.40	0.40	0.70	0.50					0.50	Method I:	38.0	35.0	C	30.25
Wetted Width (m):	MS											0.00	Method II:	22.0	26.0	C	
Pool Depth (m):	MS											0.00					

Wb Depth: .1 .1 .1 Avg: 0.10 Method: MS Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☒ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	D	N
Loc: P/S/O:	☐	☐	☐	☐	☐	☒	☐

LWD: N DIST: NA

LB SHP: S

Texture: F ☐ G ☐ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☐ G ☐ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: pH: Flood Signs: None
Method: T4 Method: P2 Method: GE
Req #: Cond.: Method: S3
Turb.: T ☐ M ☐ L ☐ C ☐ Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: F
D95: 12.0 D (cm): 7.00 Morph: SP
Pattern: ST Islands: N Coupling: DC Confinement: FC FSZ: ☐
DISTURBANCE INDICATORS
O1 B1 B2 B3 D1 D2 D3
☐ ☐ ☐ ☐ ☐ ☐ ☐
C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name Comments
Other No habitat.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 80 F: 06 STD D			Downstream photo of dry channel.
R: 80 F: 07 STD U			Upstream photo of dry channel.

COMMENTS

Section Comments

FDIS Site Card

Tochcha Lake Planning Area

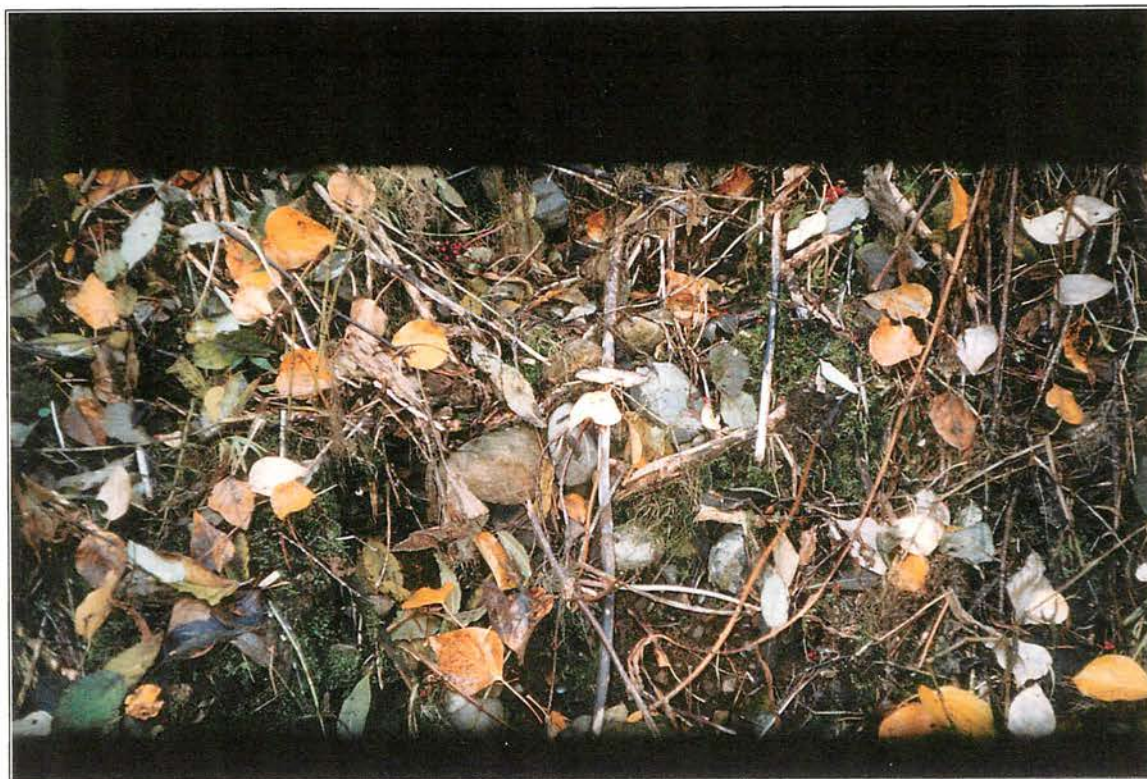
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
6.0	093M.020	1441	366

COMMENTS	
Section	Comments
CHANNEL	Very poorly defined channel (No Visible Channel downstream of road). 100 m of scour observed upstream.
CHANNEL	S6.



Site #366, Downstream photo of dry channel.
Roll #80, Frame #06, Date: 2002/10/07



Site #366, Upstream photo of dry channel.
Roll #80, Frame #07, Date: 2002/10/07

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 5.0 ILP Map # 093M.020 ILP # 1432

STREAM REFERENCING												
Gazetted Name:						Local Name:						
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000						ILP Map #: 093M.020			ILP #: 1432			
REACH												
Reach #: 5.0		UTM(Zone/East/North): 9.682860.6110931				Sample Type: Biased						
Length (km): 2.12		Coupling: Decoupled		Magnitude: 3		BGC Zone: ESSF						
Gradient (%): 8.0		Confinement: Occasionally Conf		Order: 2		Open water: Absent						
US Elev (m): 1040		Islands: NONE		Riparian Vegetation: Deciduous								
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified												
SITE												
Site #: 367		Field UTM 9.682843.6111281		Agency: C172		Crew: SG/DT		Date: 2002/10/07				
Site Length (m): 180		GIS UTM 9.682839.6111273		Agency Name: Triton Environmental Consultants (Terrace)								
CHANNEL												
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max		#		
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.96		1.600		2.3		7		
Stage: Low ☒				Wetted Width (m): 1.57		1.4		1.9		7		
Med ☐				Bankfull Depth (m): 0.20		0.2		0.2		3		
High ☐		Temp (C): 5		pH: 7.9		Conductivity: 100						
						Turbidity: Turbid ☐		Low ☐				
						Moderate ☐		Clear ☒				
MORPHOLOGY												
Bed Material: Dominant: Gravels		D95 (cm): 17.00		Bars: Non ☐		Side ☒		Diagonal ☐		Mid-channel ☐ Span ☐		
Subdominant: Cobble		D (cm): 2.00								Braid ☐		
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1		B2 B3 D1 D2 D3		
Coupling: Decoupled				INDICATORS		☐		☒		☐		
Confinement: Occasionally Confine				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5		☐		☒		☐		
Morphology: RP Riffle Pool						☐		☒		☐		
COVER												
Total Cover: Abundant		Type: SWD		LWD		B		U		DP OV IV		
LWD: Few		Amount: T		D		S		T		N T N		
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☒		☒		☐		
Right Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐ Manmade ☐ Crown Closure		
Left Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐ Manmade ☐ 1-20%		
Right Bank: Rip.Veg: Deciduous		Stage: Shrub/herb stage										
Left Bank: Rip.Veg:		Stage: Mature forest								Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐		
FEATURES												
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto		UTM (Z/E/N)
093M.020	25367	CV	.8	MS	23	GE	R: 80	F: 10	L:	#:		9.682836.6111
Comments: x 2 perched 1.0 m barrier.												
FISH												
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)			
367	EF	1	120	171 sec	600	RB	1	150	150			

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 5.0 ILP Map # 093M.020 ILP # 1432 Site 367

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093M.020 ILP #: 1432 NID Map #: 093M.020 NID #: 20367 Reach #: 5.0 Site #: 367
Field UTM (Z.E.N): 9.682843.6111281 Method: GPU Site Lg: 180 Method: HC Access: V2
GIS UTM (Z.E.N): 9.682839.6111273 Ref. Name:
Date: 2002/10/07 Time: 12:00 Agency: C172 Crew: SG/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	2.20	2.30	1.90	1.60	1.60	1.90	2.20				1.96	Method I:	5.0	7.0	C	6.00
Wetted Width (m):	MS	1.40	1.70	1.90	1.40	1.40	1.60	1.60				1.57	Method II:	7.0	5.0	C	
Pool Depth (m):	MS	0.25	0.20	0.20	0.15	0.30	0.20					0.22					

Wb Depth: .2 .2 .2 Avg: 0.20 Method: MS Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	S	T	N	T	N
Loc: P/S/O:	☒	☒	☒	☒	☐	☒	☐

LWD: F DIST: E

LB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: SHR

WATER

EMS: Temp: 5 Method: T4 Req #: Cond.: 100 Method: S3
pH: 7.9 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 17.0 D (cm): 2.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: OC
FSZ: ☐ Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.020	25367	CV	.8	MS	23	GE	R: 80 F: 10 L:	#:	9.682836.6111181	GIS

Comments: x 2 perched 1.0 m barrier.

HABITAT QUALITY

Name	Comments
Spawning Habitat	Good - abundant gravel in tailouts of shallow pools.
OverWinter Habitat	Poor - no pools >0.3 m observed.
Rearing Habitat	Good - limited cover in shallow pools (stream has been logged) associated with remnant LWD.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # ILP Map # ILP # Site
5.0 093M.020 1432 367

PHOTOS					
Photo			Foc Lg	Dir	Comments
R:	80	F: 08	STD	D	Downstream photo of typical habitat.
R:	80	F: 09	STD	U	Upstream photo of typical habitat.
R:	80	F: 10	STD	U	Upstream photo of two perched culverts.
COMMENTS					
Section			Comments		
CHANNEL			S3 (RB).		

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 5.0 ILP Map # 093M.020 ILP # 1432

WATERBODY													
Gazetted Name:										Local:			
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093M.020				ILP #: 1432		Reach #: 5 -			
Project ID: 5271				Lake/Stream: S				Lake From Date:					
Fish Permit #:		145269		Date: 2002/10/07		To: 2002/10/07		Agency: C172		Crew: SG/DT		Resample: ☐	
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
367	093M.020	20367	9	682843	6111281	GPU	EF	1	5	100	C		
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
367	EF	1	1	2002/10/07	11:50	2002/10/07	12:12						
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
367	EF	1	1	O	171	120.0	1.9	600	60	6	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
367	EF	1	1	RB	J	1	150 150	R	downstream of culvert.				
INDIVIDUAL FISH DATA													
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age	Vch#	Genetic	Roll #	Frame#	Comment
								Str/Smpl#/Age		Str/Smpl#			
367	EF	1	1	RB	150		U	U					



Site #367, Downstream photo of typical habitat.
Roll #80, Frame #08, Date: 2002/10/07



Site #367, Upstream photo of typical habitat.
Roll #80, Frame #09, Date: 2002/10/07



Site #367, Upstream photo of two perched culverts.
Roll #80, Frame #10, Date: 2002/10/07

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 5.0 ILP Map # 093M.019 ILP # 1332

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 480-000000-00000-00000-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.019		ILP #: 1332		Reach #: 5 -			
Project ID: 5271										Lake/Stream: L		Lake From Date:					
Fish Permit #:		145269		Date:		2002/10/07		To:		2002/10/07		Agency: C172		Crew: SG/DT		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd				MTD/NO		Temp	Cond	Turbid	Comment					
368	093M.019	20368	9	670691	6119714	GPU	MT	5									
368	093M.019	20368	9	670691	6119714	GPU	MT	4									
368	093M.019	20368	9	670691	6119714	GPU	MT	3									
368	093M.019	20368	9	670691	6119714	GPU	MT	2									
368	093M.019	20368	9	670691	6119714	GPU	MT	1									
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
368	MT 1	1	2002/10/07	13:00	2002/10/08	10:00											
368	MT 2	1	2002/10/07	13:00	2002/10/08	10:00											
368	MT 3	1	2002/10/07	13:00	2002/10/08	10:00											
368	MT 4	1	2002/10/07	13:00	2002/10/08	10:00											
368	MT 5	1	2002/10/07	13:00	2002/10/08	10:00											
B. NET/TRAP SPECIFICATIONS																	
Site #	MTD/NO.		H/P	Net Type	Length	Depth	Mesh	Set	Habitat								
368	MT 1		1			0.5		BT	L								
368	MT 2		1			0.8		BT	L								
368	MT 3		1			1.0		BT	L								
368	MT 4		1			1.5		BT	L								
368	MT 5		1			0.9		BT	L								
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
368	MT 1	1	NFC			0											
368	MT 2	1	NFC			0											
368	MT 3	1	NFC			0											
368	MT 4	1	NFC			0											
368	MT 5	1	NFC			0											

FDIS Reach Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.009 ILP # 1520

PROJECT									
Project Name: Babine and Tochcha					Project Code: 5271				
Stream Name (gaz.): BABINE RIVER									
Project Watershed Code: 480-000000-00000-00000-0000-0000-000-000-000-000-000									
WATERSHED									
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000									
ILP Map #: 093M.009	ILP #: 1520	Reach #: 1.0	NID Map #: 093M.009		NID #: 11150				
Air Photos		Names			UTM(Zone/East/North/Method)				
LINE: BCB910236	Gaz.:				9.676876.6109351 GIS				
#: 0	Local:				Sample Type: B		Wetland: ☐		
SURVEY INFO									
Date: 2002/08/26			Agency: C172			Crew: SG/JD			
ATTRIBUTES									
Length (km): 1.17	Gradient: 3.42	Setting: VF	DISTURBANCE INDICATORS						
DS Elev.: 711	Order: 3	Open water: A	O1	B1	B2	B3	D1	D2	D3
US Elev: 751	Magnitude: 16	Confinement: OC	C1	C2	C3	C4	C5	S1	S2
BGC Zone: SBS	Coupling: DC								
Valley Flat: B	C/D: C	Islands: N							
Active Floodplain Visible: ☐	Est. Width:	Bars: ☒ N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR							
Channel Pattern: SI		Mass Movement: L	Exposed/Eroded: NS						
		Riparian Veg.: NS	Landuse: NS						

MAPS		
Map Type	Map #	Year
TRIM	093M.009	1983

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
1.0	093M.009	1520

Triton Environmental Consultants Ltd.

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
5.0	093L100	1863

Triton Environmental Consultants Ltd.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 2.0 ILP Map # 093L.100 ILP # 1863 Site 371

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map#: 093L.100 ILP #: 1863 NID Map #: 093L.100 NID #: 20371 Reach #: 2.0 Site #: 371
Field UTM (Z.E.N): .. Method: Site Lg: 400 Method: MAP Access: V2
GIS UTM (Z.E.N): 9.680879.6098394 Ref. Name:
Date: 2002/10/08 Time: 16:00 Agency: C172 Crew: SG/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	MS	1.40	2.20	1.80	2.60	1.20	1.80					1.83	Method I:	5.0	7.0	C	6.00
Wetted Width (m):	MS	1.00	2.00	1.40	2.10	0.90	1.60					1.50	Method II:	7.0	5.0	C	
Pool Depth (m):	MS	0.10	0.10	0.20	0.10	0.30						0.16					

Wb Depth: .3 .3 .3 Avg: 0.30 Method: MS Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	S	T	N	T	N
Loc: P/S/O:	☒	☒	☒	☒	☐	☒	☐

LWD: A DIST: E

LB SHP: V

Texture: F ☐ G ☐ C ☐ B ☐ R ☒ A ☐

RIP: M

STG: PS

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☐ C ☐ B ☐ R ☒ A ☐

RIP: M

STG: PS

WATER

EMS: Temp: 6 pH: 8.3 Flood Signs: None Method: T4 Method: P2 Method: GE Req #: Cond.: 100 Method: S3 Method: GE Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: F Subdom: G D95: 2.00 D (cm): 1.00 Morph: RP Pattern: ST Islands: N Coupling: CO Confinement: EN FSZ: ☐ DISTURBANCE INDICATORS O1 B1 B2 B3 D1 D2 D3 C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093L.100	25371	F	15.0	GE	1	GE	R: 80 F: 13 L:	#:	9.681001.6097856	GIS

Comments:

HABITAT QUALITY

Name	Comments
Spawning Habitat	Poor - fine dominated substrate.
OverWinter Habitat	None - no pools (available in upstream lake).
Rearing Habitat	Poor - abundant cover limited by shallow pool depth.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach #

ILP Map #

ILP #

Site

2.0

093L.100

1863

371

PHOTOS

Photo				Foc Lg	Dir	Comments
R:	80	F:	11	STD	U	Upstream photo of typical habitat with logged riparian.
R:	80	F:	12	STD	D	Downstream photo of typical habitat with logged riparian.
R:	80	F:	13	STD	D	Downstream view of 15 m falls.

COMMENTS

Section		Comments
CHANNEL		S6* (NFC barrier downstream).

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093L.100 ILP # 1863

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 480-000000-00000-00000-0000-000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093L.100		ILP #: 1863		Reach #: 2 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/10/07		To:		2002/10/07		Agency: C172		Crew: SG/DT		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
371	093L.100	20371				GPU	EF	1	6	100	C	upstream barrier.					
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
371	EF	1	1	2002/10/07	16:00	2002/10/07	16:40										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
371	EF	1	1	O	312	260.0	1.5	800	60	6	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
371	EF	1	1	NFC		0											



Site #371, Upstream photo of typical habitat with logged riparian.
Roll #80, Frame #11, Date: 2002/10/08



Site #371, Downstream photo of typical habitat with logged riparian.
Roll #80, Frame #12, Date: 2002/10/08



Site #371, Downstream view of 15 m falls.
Roll #80, Frame #13, Date: 2002/10/08

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093L.100 ILP # 1877

STREAM REFERENCING																																												
Gazetted Name:						Local Name:																																						
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000						ILP Map #: 093L.100		ILP #:		1877																																		
REACH																																												
Reach #: 2.0		UTM(Zone/East/North): 9.684971.6095696				Sample Type: Biased																																						
Length (km): 2.18		Coupling: Decoupled		Magnitude: 3		BGC Zone: SBS																																						
Gradient (%): 4.2		Confinement: Frequently Confin		Order: 2		Open water: Absent																																						
US Elev (m): 820		Islands: NONE		Riparian Vegetation: Deciduous																																								
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																												
SITE																																												
Site #: 372		Field UTM 9.684571.6095398		Agency: C172		Crew: SG/DT		Date: 2002/10/08																																				
Site Length (m): 250		GIS UTM 9.684556.6095320		Agency Name: Triton Environmental Consultants (Terrace)																																								
CHANNEL																																												
No Vis.Ch.: ☐		Intermittent: ☐		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Channel Width (m):</td> <td>3.44</td> <td>2.900</td> <td>4.2</td> <td>7</td> </tr> <tr> <td>Wetted Width (m):</td> <td>1.89</td> <td>0.800</td> <td>3.3</td> <td>7</td> </tr> <tr> <td>Bankfull Depth (m):</td> <td>0.37</td> <td>0.3</td> <td>0.4</td> <td>3</td> </tr> </table>				Avg	Min	Max	#	Channel Width (m):	3.44	2.900	4.2	7	Wetted Width (m):	1.89	0.800	3.3	7	Bankfull Depth (m):	0.37	0.3	0.4	3	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Gradient %:</td> <td>5.50</td> <td>3</td> <td>7</td> <td>4</td> </tr> <tr> <td>Pool Depth (m):</td> <td>0.28</td> <td>0.200</td> <td>0.35</td> <td>5</td> </tr> </table>				Avg	Min	Max	#	Gradient %:	5.50	3	7	4	Pool Depth (m):	0.28	0.200	0.35	5
Avg	Min	Max	#																																									
Channel Width (m):	3.44	2.900	4.2	7																																								
Wetted Width (m):	1.89	0.800	3.3	7																																								
Bankfull Depth (m):	0.37	0.3	0.4	3																																								
Avg	Min	Max	#																																									
Gradient %:	5.50	3	7	4																																								
Pool Depth (m):	0.28	0.200	0.35	5																																								
Dewatered: ☐		Tribes: ☐																																										
Stage: Low ☒		Temp (C): 6		pH: 8.1		Conductivity: 90		Turbidity: Turbid ☐ Low ☐																																				
Med ☐								Moderate ☐ Clear ☒																																				
High ☐																																												
MORPHOLOGY																																												
Bed Material: Dominant: Cobble		D95 (cm): 16.00		Bars: Non ☐		Side ☒		Diagonal ☐		Mid-channel ☐																																		
Subdominant: Gravels		D (cm): 7.00								Span ☐																																		
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1		B2																																		
Coupling: Decoupled						B3		D1		D2																																		
Confinement: Occasionally Confine						D3																																						
Morphology: RP Riffle Pool						C1		C2		C3																																		
						C4		C5		S1																																		
						S2		S3		S4																																		
						S5																																						
COVER																																												
Total Cover: Abundant		Type: SWD		LWD		B		U		DP																																		
LWD: Abundant		Amount: T		D		T		T		S																																		
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☒		☒		☒																																		
		☒		☒		☒		☒		☐																																		
Right Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐																																		
Left Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐																																		
Right Bank: Rip.Veg: Deciduous		Stage: Pole-sapling stage								Crown Closure																																		
Left Bank: Rip.Veg:		Stage: Pole-sapling stage								41-70%																																		
										Instream Veg: None ☒																																		
										Algae ☐																																		
										Moss ☐																																		
										Vascular ☐																																		
FEATURES																																												
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo		AirPhoto		UTM (Z/E/N)																																	
093L.100	25372	CV	1.4	GE	25	HC	R: 80	F: 14	L:	#:	9.684592.6095																																	
Comments: x2 perched 0.5 m at 6% slope. Full barrier at low and moderate flows.																																												
FISH																																												
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																																			
372	EF	2	230	279 sec	700	RB	3	36	110																																			

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-0000-0000

Reach # 2.0 ILP Map # 093L.100 ILP # 1877 Site 372

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-0000-0000-0000-0000-0000-0000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-0000
ILP Map#: 093L.100 ILP #: 1877 NID Map #: 093L.100 NID #: 20372 Reach #: 2.0 Site #: 372
Field UTM (Z.E.N): 9.684571.6095398 Method: GPU Site Lg: 250 Method: GIS Access: V2
GIS UTM (Z.E.N): 9.684556.6095320 Ref. Name:
Date: 2002/10/08 Time: 07:35 Agency: C172 Crew: SG/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	3.10	4.20	2.90	3.50	3.20	3.60	3.60				3.44	Method I:	7.0	3.0	C	5.50
Wetted Width (m):	MS	0.80	2.20	2.00	3.30	1.50	1.70	1.70				1.89	Method II:	5.0	7.0	C	
Pool Depth (m):	MS	0.30	0.30	0.25	0.35	0.20						0.28					

Wb Depth: .4 .4 .3 Avg: 0.37 Method: MS Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	T	T	T	S	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

LWD: A

DIST: E

LB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

CROWN CLOSURE

3 41-70%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS: Temp: 6 pH: 8.1 Flood Signs: Rafted debris 0.4 m Method: T4 Method: P2 Method: GE Req #: Cond.: 90 Turb.: T ☐ M ☐ L ☐ C ☒ Method: S3 Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: G D95: 16.0 D (cm): 7.00 Morph: RP O1 B1 B2 B3 D1 D2 D3
DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Pattern: SI Islands: N Coupling: DC Confinement: OC FSZ: ☐ Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093L.100	25372	CV	1.4	GE	25	HC	R: 80 F: 14 L:	#:	9.684592.6095381	GIS

Comments: x2 perched 0.5 m at 6% slope. Full barrier at low and moderate flows.

HABITAT QUALITY

Name	Comments
Spawning Habitat	Good - abundant grael in margin and tailouts and perennial flows.
OverWinter Habitat	Poor - limited pool depths (max 0.35 m).
Rearing Habitat	Good - abundant cover in deeper pool and runs associated with LWD.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
2.0	093L.100	1877	372

PHOTOS						
Photo			Foc Lg	Dir	Comments	
R:	80	F: 14	STD	U	Upstream view of 1.4 m twin culverts, perched 0.5 m.	
R:	80	F: 15	STD	D	Downstream photo of typical habitat.	
R:	80	F: 16	STD	U	Upstream photo of typical habitat.	
COMMENTS						
Section			Comments			
CHANNEL			2 culverts, left culvert has collapsed.			

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093L.100 ILP # 1877

WATERBODY																
Gazetted Name:										Local:						
Project Code: 480-000000-00000-00000-0000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000																
Waterbody ID:				ILP Map #: 093L.100				ILP #: 1877		Reach #: 2 -						
Project ID: 5271				Lake/Stream: S				Lake From Date:								
Fish Permit #:		145269		Date: 2002/10/08		To: 2002/10/08		Agency: C172		Crew: SG/DT		Resample: ☐				
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment						
372	093L.100	20372				GPU EF 2	5	90	C	upstream of culvert.						
372	093L.100	20372				GPU EF 1	5	90	C	downstream of culvert.						
A. GEAR SETTINGS																
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment									
372	EF 1	1	2002/10/08	07:35	2002/10/08	07:55										
372	EF 2	1	2002/10/08	07:55	2002/10/08	08:15										
C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model					
372	EF	1	1	O	127	100.0	3.0	700	60	6	SMITH ROOT	12B				
372	EF	2	1	O	152	130.0	3.0	700	60	6	SMITH ROOT	12B				
FISH SUMMARY																
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment							
372	EF	1	1	RB	J	1	110 110	R								
372	EF	1	1	RB	F	1	36 36	R								
372	EF	2	1	RB	J	1	90 90	R								
INDIVIDUAL FISH DATA																
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment	
								Str/Smpl#	Age		Str/Smpl#					
372	EF	1	1	RB	36		U	U								
372	EF	1	1	RB	110		U	U								
372	EF	2	1	RB	90		U	U								



Site #372, Upstream view of 1.4 m twim cv's, perched 0.5 m.
Roll #80, Frame #14, Date: 2002/10/08



Site #372, Downstream photo of typical habitat.
Roll #80, Frame #15, Date: 2002/10/08



Site #372, Upstream photo of typical habitat.
Roll #80, Frame #16, Date: 2002/10/08

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 5.0 ILP Map # 093M.010 ILP # 1594

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.010		ILP #: 1594		
REACH									
Reach #: 5.0		UTM(Zone/East/North): 9.685517.6106993				Sample Type: Biased			
Length (km): 2.13		Coupling: Decoupled		Magnitude: 5		BGC Zone: SBS			
Gradient (%): 5.2		Confinement: Frequently Confin		Order: 2		Open water: Absent			
US Elev (m): 990		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 373		Field UTM 9.686779.6107443		Agency: C172		Crew: SG/DT		Date: 2002/10/08	
Site Length (m): 140		GIS UTM 9.686743.6107419		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.87		1.4		2.200	
Stage: Low ☒				Wetted Width (m): 1.58		1.100		2.200	
Med ☐				Bankfull Depth (m): 0.37		0.3		0.4	
High ☐		Temp (C): 6		pH: 7.8		Conductivity: 80			
								Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 7.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 3.00						Mid-channel ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Decoupled						B2		B3	
Confinement: Occasionally Confine						D1		D2	
Morphology: RP Riffle Pool						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Abundant		Amount: T		D		N		T	
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☐		☒	
Right Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Left Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Mixed C/D		Stage: Young forest		Instream Veg: None ☒		Algae ☐		Moss ☐	
Left Bank: Rip.Veg:		Stage: Young forest				Vascular ☐			
FEATURES									
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo		AirPhoto
093M.010	25373	CV	1.0	GE	15	HC	R: 80	F: 18	L: #:
Comments: Partial barrier at low flows, 3% slope.		UTM (Z/E/N) 9.686748.6107							
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
373	EF	1	100	59 sec	700	RB	2	130	145

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 5.0 ILP Map # 093M.010 ILP # 1594 Site 373

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.010 ILP #: 1594 NID Map #: 093M.010 NID #: 20373 Reach #: 5.0 Site #: 373
Field UTM (Z.E.N): 9.686779.6107443 Method: GPU Site Lg: 140 Method: GE Access: V4
GIS UTM (Z.E.N): 9.686743.6107419 Ref. Name:
Date: 2002/10/08 Time: 15:00 Agency: C172 Crew: SG/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.70	2.00	2.20	1.80	1.40	2.10					1.87	Method I:	8.0	4.0	C	5.25
Wetted Width (m):	MS	1.70	1.80	2.20	1.40	1.30	1.10					1.58	Method II:	5.0	4.0	C	
Pool Depth (m):	MS	0.30	0.40	0.25	0.20	0.20						0.27					

Wb Depth: .4 .3 .4 Avg: 0.37 Method: MS Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	N	T	N	S	N
Loc: P/S/O:	☒	☒	☐	☒	☐	☒	☐

LWD: A

DIST: E

LB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: YF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: YF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 80 Method: S3
pH: 7.8 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 7.00 D (cm): 3.00 Morph: RP DISTURBANCE INDICATORS ☐ ☐ ☐ ☐ ☐ ☒ ☐
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Coupling: DC Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐
Confinement: OC
FSZ: ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.010	25373	CV	1.0	GE	15	HC	R: 80 F: 18 L:	#:	9.686748.6107424	GIS

Comments: Partial barrier at low flows, 3% slope.

HABITAT QUALITY

Name	Comments
Spawning Habitat	Good - abundant gravels.
Overwinter Habitat	Poor - limited pool depths.
Rearing Habitat	Good - abundant LWD cover in pools up to 0.4 m deep associated with LWD.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
5.0	093M.010	1594	373

PHOTOS					
Photo			Foc Lg	Dir	Comments
R:	80	F: 18	STD	U	Upstream photo of culvert, partial barrier at low flows.
R:	80	F: 19	STD	D	Downstream photo of typical habitat.
R:	80	F: 20	STD	U	Upstream photo of typical habitat.
COMMENTS					
Section			Comments		
CHANNEL			Logged with 10 m Riparian Zone.		

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 5.0 ILP Map # 093M.010 ILP # 1594

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.010		ILP #: 1594		Reach #: 5 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/10/08		To:		2002/10/08		Agency: C172		Crew: SG/DT		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
373	093M.010	20373				GPU EF 1	6	80	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
373	EF	1	1	2002/10/08	15:00	2002/10/08	15:30										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
373	EF	1	1	O	59	100.0	1.7	700	60	6	SMITH	12B					
										ROOT							
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
373	EF	1	1	RB	J	2	130 145	R									
INDIVIDUAL FISH DATA																	
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age	Vch#	Genetic	Roll #	Frame#	Comment				
								Str/Smpl#	Age	Str/Smpl#							
373	EF	1	1	RB	130		U	U									
373	EF	1	1	RB	145		U	U									



Site #373, Upstream photo of culvert, partial barrier at low flows.
Roll #80, Frame #18, Date: 2002/10/08



Site #373, Downstream photo of typical habitat.
Roll #80, Frame #19, Date: 2002/10/08



Site #373, Upstream photo of typical habitat.
Roll #80, Frame #20, Date: 2002/10/08

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 3.0 ILP Map # 093M.010 ILP # 1690

STREAM REFERENCING																																												
Gazetted Name:						Local Name:																																						
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000						ILP Map #: 093M.010		ILP #: 1690																																				
REACH																																												
Reach #: 3.0		UTM(Zone/East/North): 9.690673.6103527				Sample Type: Biased																																						
Length (km): 2.96		Coupling: Decoupled		Magnitude: 2		BGC Zone: SBS																																						
Gradient (%): 2.7		Confinement: Occasionally Conf		Order: 2		Open water: Absent																																						
US Elev (m): 880		Islands: NONE		Riparian Vegetation: Deciduous																																								
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																												
SITE																																												
Site #: 374		Field UTM 9.691057.6105610		Agency: C172		Crew: SG/DT		Date: 2002/10/08																																				
Site Length (m): 150		GIS UTM 9.690865.6104466		Agency Name: Triton Environmental Consultants (Terrace)																																								
CHANNEL																																												
No Vis.Ch.: ☐		Intermittent: ☐		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Channel Width (m):</td> <td>0.60</td> <td>0.400</td> <td>0.800</td> <td>6</td> </tr> <tr> <td>Wetted Width (m):</td> <td>0.60</td> <td>0.400</td> <td>0.800</td> <td>6</td> </tr> <tr> <td>Bankfull Depth (m):</td> <td>0.10</td> <td>0.1</td> <td>0.1</td> <td>3</td> </tr> </table>				Avg	Min	Max	#	Channel Width (m):	0.60	0.400	0.800	6	Wetted Width (m):	0.60	0.400	0.800	6	Bankfull Depth (m):	0.10	0.1	0.1	3	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Gradient %:</td> <td>2.00</td> <td>2</td> <td>2</td> <td>4</td> </tr> <tr> <td>Pool Depth (m):</td> <td>0.28</td> <td>0.25</td> <td>0.300</td> <td>4</td> </tr> </table>				Avg	Min	Max	#	Gradient %:	2.00	2	2	4	Pool Depth (m):	0.28	0.25	0.300	4
Avg	Min	Max	#																																									
Channel Width (m):	0.60	0.400	0.800	6																																								
Wetted Width (m):	0.60	0.400	0.800	6																																								
Bankfull Depth (m):	0.10	0.1	0.1	3																																								
Avg	Min	Max	#																																									
Gradient %:	2.00	2	2	4																																								
Pool Depth (m):	0.28	0.25	0.300	4																																								
Dewatered: ☐		Trib.: ☐																																										
Stage: Low ☐																																												
Med ☒																																												
High ☐																																												
Temp (C): 6		pH: 8.4		Conductivity: 60		Turbidity: Turbid ☐		Low ☐																																				
						Moderate ☐		Clear ☒																																				
MORPHOLOGY																																												
Bed Material: Dominant: Fines		D95 (cm): 0.05		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐ Span ☐																																		
Subdominant: Gravels		D (cm): 0.01								Braid ☐																																		
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1 B1 B2 B3 D1 D2 D3																																						
Coupling: Decoupled																																												
Confinement: Unconfined				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5																																								
Morphology: RP Riffle Pool																																												
COVER																																												
Total Cover: Abundant		Type: SWD LWD B U DP OV IV																																										
LWD: None		Amount: T N N S N D N																																										
LWD Dist: Not Applicable		Location: P/S/O: ☒		☐		☐		☒		FSZ: ☐																																		
Right Bank: Shape: Sloping (g)		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐								Crown Closure																																		
Left Bank: Shape: Sloping (g)		Texture: Fines ☒ Gravel ☐ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐								21-40%																																		
Right Bank: Rip.Veg: Deciduous		Stage: Pole-sapling stage																																										
Left Bank: Rip.Veg:		Stage: Pole-sapling stage		Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐																																								
FEATURES																																												
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo		AirPhoto		UTM (Z/E/N)																																	
093M.010	25374	CV	.6	MS	15	HC	R: 80	F: 23	L:	#:	9.690875.6104																																	
Comments: Passable under all flows.																																												
FISH																																												
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																																			
374	EF	1	100	112 sec	800	NFC	0																																					

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 3.0 ILP Map # 093M.010 ILP # 1690 Site 374

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093M.010 ILP #: 1690 NID Map #: 093M.010 NID #: 20374 Reach #: 3.0 Site #: 374
Field UTM (Z.E.N): 9.691057.6105610 Method: GPU Site Lg: 150 Method: GIS Access: V2
GIS UTM (Z.E.N): 9.690865.6104466 Ref. Name:
Date: 2002/10/08 Time: 14:20 Agency: C172 Crew: SG/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	0.50	0.80	0.40	0.50	0.80	0.60					0.60	Method I:	2.0	2.0	2.00
Wetted Width (m):	MS	0.50	0.80	0.40	0.50	0.80	0.60					0.60	Method II:	2.0	2.0	C
Pool Depth (m):	MS	0.25		0.25		0.30	0.30					0.28				

Wb Depth: .1 .1 .1 Avg: 0.10 Method: MS Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	N	N	S	N	D	N
Loc: P/S/O:	☒	☐	☐	☒	☐	☒	☐

LWD: N DIST: NA

LB SHP: S

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 60 Method: S3
pH: 8.4 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 0.05 D (cm): 0.01 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.010	25374	CV	.6	MS	15	HC	R: 80 F: 23 L:	#:	9.690875.6104381	GIS

Comments: Passable under all flows.

HABITAT QUALITY

Name	Comments
Spawning Habitat	None - due to fine material dominated substrate and seasonal flows.
OverWinter Habitat	None - due to lack of pool and ephemeral flows.
Rearing Habitat	Poor - due to shallow stream channel and seasonal flows.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
3.0	093M.010	1690	374

PHOTOS						
Photo				Foc Lg	Dir	Comments
R:	80	F:	21	STD	D	Downstream photo of typical habitat.
R:	80	F:	22	STD	U	Upstream photo of typical habitat.
R:	80	F:	23	STD	U	Upstream photo of 0.6 m culvert, passable under all flows.
COMMENTS						
Section				Comments		
CHANNEL				S4* (NFC)		

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
3.0	093M.010	1690

Triton Environmental Consultants Ltd.



Site #374, Downstream photo of typical habitat.
Roll #80, Frame #21, Date: 2002/10/08



Site #374, Upstream photo of typical habitat.
Roll #80, Frame #22, Date: 2002/10/08



Site #374, Upstream photo of 0.6 m culvert, passable under all flows.
Roll #80, Frame #23, Date: 2002/10/08

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #
6.0 093N.001 1803

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1803		
REACH									
Reach #: 6.0		UTM(Zone/East/North): 9.690388.6102103				Sample Type: Biased			
Length (km): .34		Coupling: Decoupled		Magnitude: 6		BGC Zone: SBS			
Gradient (%): 0.0		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 880		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 375		Field UTM 9.690476.6102047		Agency: C172		Crew: SG/DT		Date: 2002/10/08	
Site Length (m): 150		GIS UTM 9.690558.6102021		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐ Intermittent: ☐				Avg		Min		Max	
Dewatered: ☐ Tribes.: ☐									
Stage: Low ☐		Channel Width (m): 2.20		1.4		3.200		7	
Med ☐		Wetted Width (m): 2.60		1.8		3.6		7	
High ☒		Bankfull Depth (m): 0.27		0.2		0.3		3	
Temp (C): 7		pH: 8.3		Conductivity: 50					
				Turbidity: Turbid ☐		Low ☐			
				Moderate ☐		Clear ☒			
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 0.01		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Not Applicable		D (cm): 0.01				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Decoupled				INDICATORS		B2		B3	
Confinement: Unconfined						D1		D2	
Morphology: LC Large Channel						D3			
				C1		C2		C3	
				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		N		S		N	
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☐		☒	
		☐		☐		☐		☐	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Deciduous		Stage: Shrub/herb stage		None ☐		Algae ☐		Moss ☐	
Left Bank: Rip.Veg:		Stage: Shrub/herb stage		Instream Veg: None ☐		Algae ☐		Moss ☐	
				Vascular ☒					
FEATURES									
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo		AirPhoto
093M.010	25375	CV	.6	GE	12	HC	R: 79	F: 01	UTM (Z/E/N)
Comments: Plugged by beavers.									
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
375	EF	1	200	238 sec	600	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-0000

Reach # 6.0 ILP Map # 093N.001 ILP # 1803 Site 375

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-0000-0000-0000-0000

Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-0000
ILP Map#: 093N.001 ILP #: 1803 NID Map #: 093M.010 NID #: 20375 Reach #: 6.0 Site #: 375
Field UTM (Z.E.N): 9.690476.6102047 Method: GPU Site Lg: 150 Method: HC Access: V2
GIS UTM (Z.E.N): 9.690558.6102021 Ref. Name:
Date: 2002/10/08 Time: 14:30 Agency: C172 Crew: SG/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	2.20	1.40	2.70	3.20	1.70	1.90	2.30				2.20	Method I:	1.0	0.5	C	0.50
Wetted Width (m):	MS	2.60	1.80	3.10	3.60	2.10	2.30	2.70				2.60	Method II:	0.5	0.0	C	
Pool Depth (m):	MS	0.30	0.30	0.25	0.20	0.20	0.25					0.25					

Wb Depth: .3 .3 .2 Avg: 0.27 Method: MS Stage: L ☐ M ☐ H ☒ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	N	S	N	D	T
Loc: P/S/O:	☒	☒	☐	☒	☐	☒	☒

LWD: F DIST: E

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☐ V ☒

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: SHR

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 50 Method: S3
pH: 8.3 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: Flooded Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: NA O1 B1 B2 B3 D1 D2 D3
D95: 0.01 D (cm): 0.01 Morph: LC DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.010	25375	CV	.6	GE	12	HC	R: 79 F: 01 L:	#:	9.690489.6102048	GIS

Comments: Plugged by beavers.

HABITAT QUALITY

Name	Comments
Spawning Habitat	None - no gravel.
OverWinter Habitat	Poor - lack of deep pool habitat.
Rearing Habitat	Good - abundant overstream vegetation, LWD, instream vegetation cover in deep runs and shallow pools.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
6.0	093N.001	1803	375

PHOTOS					
Photo				Foc Lg	Dir
R:	79	F:	01	STD	U
Upstream photo of 0.6 m culvert plugged by beavers.					
R:	80	F:	24	STD	D
Downstream photo of typical habitat.					
R:	80	F:	25	STD	U
Upstream photo of typical habitat.					
COMMENTS					
Section				Comments	
CHANNEL				S3* (lake upstream and NFC).	

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
6.0	093N.001	1803

Triton Environmental Consultants Ltd.



Site #375, Downstream photo of typical habitat.
Roll #80, Frame #24, Date: 2002/10/08



Site #375, Upstream photo of typical habitat.
Roll #80, Frame #25, Date: 2002/10/08



Site #375, Upstream photo of 0.6 m culvert plugged by beavers.
Roll #79, Frame #01, Date: 2002/10/08

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #
9.0 093N.001 1803

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1803		
REACH									
Reach #: 9.0		UTM(Zone/East/North): 9.688964.6100745				Sample Type: Biased			
Length (km): 1.38		Coupling: Decoupled		Magnitude: 2		BGC Zone: SBS			
Gradient (%): 2.9		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 920		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 376		Field UTM 9.689180.6160752		Agency: C172		Crew: SG/DT		Date: 2002/10/08	
Site Length (m): 150		GIS UTM 9.689113.6100771		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 2.46		1.9		3.200	
Stage: Low ☐				Wetted Width (m): 0.00		0		0	
Med ☐				Bankfull Depth (m): 0.47		0.4		0.5	
High ☒									
Temp (C): 7		pH: 8.3		Conductivity: 80					
				Avg		Min		Max	
				Gradient %: 0.25		0		0.5	
				Pool Depth (m): 0.65		0.400		0.800	
				Turbidity: Turbid ☐		Low ☐			
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 0.01		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Not Applicable		D (cm): 0.01				Mid-channel ☐		Span ☐	
Channel Pattern: Irregular, Wandering		Islands: None		DISTURBANCE		O1		B1	
Coupling: Decoupled				INDICATORS		B2		B3	
Confinement: Unconfined						D1		D2	
Morphology: LC Large Channel						D3			
				C1		C2		C3	
				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: None		Amount: T		T		N		T	
LWD Dist: Not Applicable		Location: P/S/O: ☒		☒		☐		☒	
				☒		☒		☒	
Right Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Overhang		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Deciduous		Stage: Pole-sapling stage		Rock ☐		Manmade ☐		Crown Closure	
Left Bank: Rip.Veg:		Stage: Pole-sapling stage		Instream Veg: None ☒		Algae ☐		Moss ☐	
								Vascular ☐	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
376	EF	1	160	312 sec	700	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 9.0 ILP Map # 093N.001 ILP # 1803 Site 376

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000

Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1803 NID Map #: 093M.010 NID #: 20376 Reach #: 9.0 Site #: 376
Field UTM (Z.E.N): 9.689180.6160752 Method: GPU Site Lg: 150 Method: GIS Access: FT
GIS UTM (Z.E.N): 9.689113.6100771 Ref. Name:
Date: 2002/10/08 Time: 15:30 Agency: C172 Crew: SG/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	MS	2.20	3.20	2.80	2.60	2.00	1.90	2.50				2.46
Wetted Width (m):	MS											0.00
Pool Depth (m):	MS	0.40	0.80	0.60	0.60	0.70	0.80					0.65

	Gadient %	Mtd	Avg
Method I:	0.0 0.5	C	0.25
Method II:	0.0 0.5	C	

Wb Depth: .5 .4 .5 Avg: 0.47 Method: MS Stage: L ☐ M ☐ H ☒

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	N	T	S	D	N
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☐

CROWN CLOSURE
2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

LWD: N DIST: NA

LB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

RB SHP: O

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS:
Temp: 7
pH: 8.3
Flood Signs: Flooded

Method: T4
Method: P2
Method: GE

Req #: Cond.: 80 Method: S3
Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: NA
D95: 0.01 D (cm): 0.01 Morph: LC
Pattern: IR
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐

O1 B1 B2 B3 D1 D2 D3
DISTURBANCE INDICATORS
C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
Spawning Habitat	None - no gravel.
OverWinter Habitat	Good - abundant deep pool and perennial flows.
Rearing Habitat	Good - abundant deep pool with overstream vegetation and undercut bank cover.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 79 F: 02	STD	D	Downstream photo of typical flooded habitat.
R: 79 F: 03	STD	U	Upstream photo of typical flooded habitat.
R: 79 F: 04	STD	U	Upstream photo of typical flooded habitat.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
9.0	093N.001	1803	376

COMMENTS	
Section	Comments
CHANNEL	S3* (NFC).

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 9.0 ILP Map # 093N.001 ILP # 1803

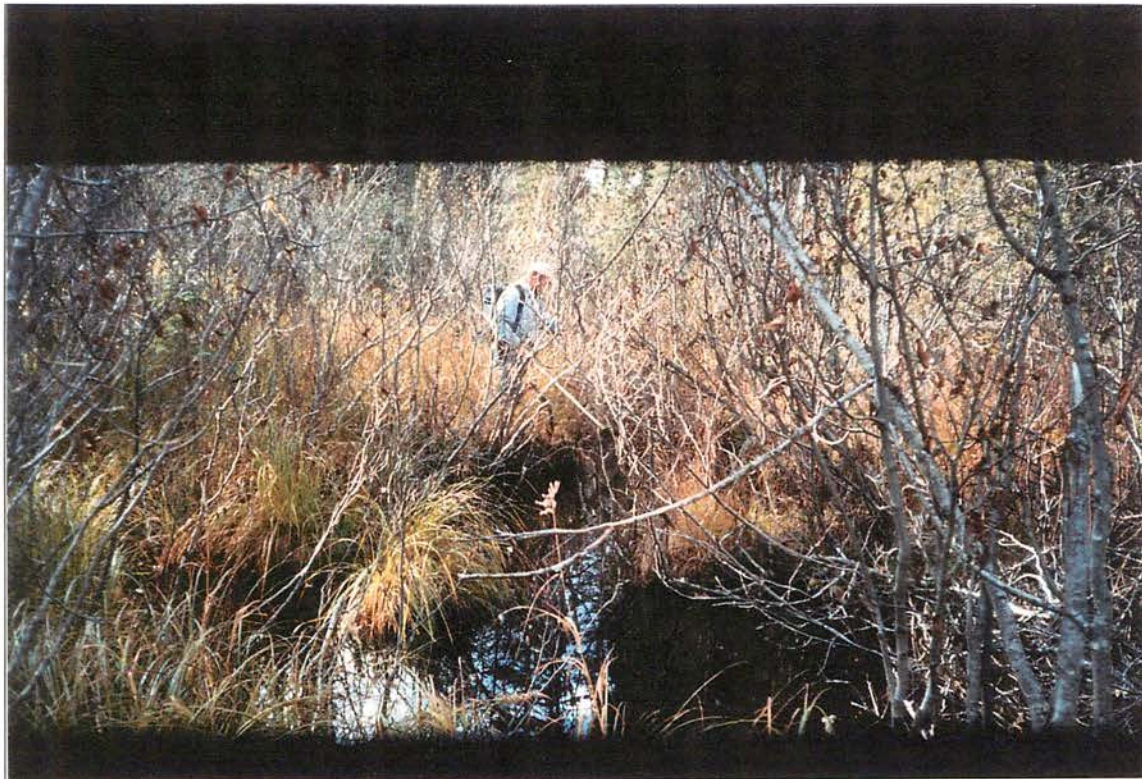
WATERBODY													
Gazetted Name:						Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:						ILP Map #: 093N.001		ILP #: 1803		Reach #: 9 -			
Project ID: 5271						Lake/Stream: S			Lake From Date:				
Fish Permit #: 145269			Date: 2002/10/08			To: 2002/10/08			Agency: C172		Crew: SG/DT		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
376	093M.010	20376				GPU EF 1	7	80	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
376	EF 1	1	2002/10/08	15:30	2002/10/08	16:00							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
376	EF	1	1	O	312	160.0	2.5	700	60	6	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
376	EF	1	1	NFC		0							



Site #376, Downstream photo of typical flooded habitat.
Roll #79, Frame #02, Date: 2002/10/08



Site #376, Upstream photo of typical flooded habitat.
Roll #79, Frame #03, Date: 2002/10/08



Site #376, Upstream photo of typical flooded habitat.
Roll #79, Frame #04, Date: 2002/10/08

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
3.0	093N.001	1808

Triton Environmental Consultants Ltd.

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #
2.0 093M.029 1231

STREAM REFERENCING												
Gazetted Name:						Local Name:						
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000						ILP Map #: 093M.029			ILP #: 1231			
REACH												
Reach #: 2.0		UTM(Zone/East/North): 9.670551.6124155				Sample Type: Biased						
Length (km): 1.93		Coupling: Partially Couple		Magnitude: 6		BGC Zone: SBS						
Gradient (%): 7.7		Confinement: Frequently Confin		Order: 3		Open water: Absent						
US Elev (m): 940		Islands: NONE		Riparian Vegetation: Mixed C/D								
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified												
SITE												
Site #: 358		Field UTM ..		Agency: C172		Crew: SG/JD		Date: 2002/09/26				
Site Length (m): 170		GIS UTM 9.670279.6123260		Agency Name: Triton Environmental Consultants (Terrace)								
CHANNEL												
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max		#		
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 3.35		2.5		3.8		6		
Stage: Low ☐				Wetted Width (m): 2.93		1.9		3.5		6		
Med ☒				Bankfull Depth (m): 0.20		0.2		0.2		3		
High ☐		Temp (C): 7		pH: 8.1		Conductivity: 70						
										Turbidity: Turbid ☐ Low ☐		
										Moderate ☐ Clear ☒		
MORPHOLOGY												
Bed Material: Dominant: Cobble		D95 (cm): 21.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐ Span ☐		
Subdominant: Boulders		D (cm): 7.00								Braid ☐		
Channel Pattern: Straight		Islands: None		DISTURBANCE		O1		B1		B2 B3 D1 D2 D3		
Coupling: Coupled				INDICATORS		☐		☐		☐		
Confinement: Confined				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5		☐		☐		☐		
Morphology: CP Cascade Pool						☐		☐		☐		
COVER												
Total Cover: Moderate		Type: SWD LWD B U DP OV IV										
LWD: Abundant		Amount: T S D N N T N										
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☒		☐		☐		
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☒ Manmade ☐		
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☒ Manmade ☐		
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest								Crown Closure 1-20%		
Left Bank: Rip.Veg:		Stage: Mature forest		Instream Veg: None ☒		Algae ☐		Moss ☐		Vascular ☐		
FEATURES												
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto		UTM (Z/E/N)
093M.029	25358	C	16.0	GE	22	GE	R: 7	F: 1A	L:	#:		9.670274.6123
Comments: Cascade bedrock (37%), Photos 1A and 2A.												

Tochcha Lake Planning Area

1231

[illegible]

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093N.001 ILP # 1808 Site 576

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
Local Name:
ILP Map #: 093N.001 ILP #: 1808 NID Map #: 093N.001 NID #: 50576 Reach #: 3.0 Site #: 576
Field UTM (Z.E.N): 10.310652.6101000 Method: GPU Site Lg: 150 Method: MAP Access: V2
GIS UTM (Z.E.N): 10.310645.6101050 Ref. Name:
Date: 2002/09/13 Time: 10:30 Agency: C172 Crew: JH/SG Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg	
Channel Width (m):	T	0.90	1.10	1.00	1.10	1.10	0.90					1.02	Method I:	4.0	5.0	C	5.33	
Wetted Width (m):	T	0.30	0.40	0.50	0.40	0.60	0.30					0.42		Method II:	7.0		C	
Pool Depth (m):	T	0.10	0.10	0.10	0.10							0.10						

Wb Depth: .5 .5 .4 Avg: 0.47 Method: T Stage: L ☒ M ☐ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	N	N	N	D	N
Loc: P/S/O:	☒	☒	☐	☐	☐	☒	☐

CROWN CLOSURE
1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☒

LWD: F DIST: C

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 110 Method: S3
pH: 7.2 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 30.0 D (cm): 10.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: OC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093N.001	55532	CV	.8	GE	10	GE	R: 58 F: 11 L:	#:	10.310651.6101042	GIS
Comments: Low priority, slight perch ~5 cm.										

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None observed.
Rearing Habitat	Low - small shallow pools, good cover.
Spawning Habitat	Low - associated with small pools and small gravel patches.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
3.0	093N.001	1808	576

PHOTOS					
Photo			Foc Lg	Dir	Comments
R:	58	F: 11	STD	U	Culvert outlet (not pH and conductivity meters with thermometer).
R:	58	F: 12	STD	U	Upstream photo
R:	58	F: 13	STD	D	Downstream photo (note meter stick).
COMMENTS					
Section		Comments			
CHANNEL		No barriers observed in Recci. Downstream wetlan / pong should contain fish. Potential MT site.			
CHANNEL		NFC			

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 3.0 ILP Map # 093N.001 ILP # 1808

WATERBODY													
Gazetted Name:						Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:						ILP Map #: 093N.001		ILP #: 1808		Reach #: 3 -			
Project ID: 5271						Lake/Stream: S			Lake From Date:				
Fish Permit #: 145269			Date: 2002/09/13			To: 2002/09/13			Agency: C172		Crew: JH/SG		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment		
576	093N.001	50576				GPU	EF 1	6	110	C			
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
576	EF	1	2002/09/13	10:20	2002/09/13	11:30							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
576	EF	1	1	O	360	150.0	1.0	600	I	5	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
576	EF	1	1	NFC		0							



Site #576, Culvert outlet (not pH and conductivity meters with thermometer).
Roll #58, Frame #11, Date: 2002/09/13



Site #576, Upstream photo
Roll #58, Frame #12, Date: 2002/09/13



Site #576, Downstream photo (note meter stick).
Roll #58, Frame #13, Date: 2002/09/13

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #
1.0 093N.001 1808

STREAM REFERENCING																																																	
Gazetted Name:					Local Name:																																												
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1808																																										
REACH																																																	
Reach #: 1.0		UTM(Zone/East/North): 10.310171.6101600				Sample Type: Biased																																											
Length (km): .63		Coupling: Decoupled		Magnitude: 5		BGC Zone: SBS																																											
Gradient (%): 4.3		Confinement: Occasionally Conf		Order: 3		Open water: Present																																											
US Elev (m): 860		Islands: NONE		Riparian Vegetation: Not Specified																																													
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																																	
SITE																																																	
Site #: 577		Field UTM 9.309860.6101648		Agency: C172		Crew: JH/SG		Date: 2002/09/13																																									
Site Length (m): 180		GIS UTM 10.309936.6101734		Agency Name: Triton Environmental Consultants (Terrace)																																													
CHANNEL																																																	
No Vis.Ch.: ☒ Intermittent: ☐		Dewatered: ☐ Tribes.: ☐		<table border="1" style="display: inline-table; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> </thead> <tbody> <tr> <td>Channel Width (m):</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Wetted Width (m):</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Bankfull Depth (m):</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>			Avg	Min	Max	#	Channel Width (m):	0.00	0	0	0	Wetted Width (m):	0.00	0	0	0	Bankfull Depth (m):	0.00	0	0	0	<table border="1" style="display: inline-table; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> </thead> <tbody> <tr> <td>Gradient %:</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Pool Depth (m):</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>					Avg	Min	Max	#	Gradient %:	0.00	0	0	0	Pool Depth (m):	0.00	0	0	0					
	Avg	Min	Max	#																																													
Channel Width (m):	0.00	0	0	0																																													
Wetted Width (m):	0.00	0	0	0																																													
Bankfull Depth (m):	0.00	0	0	0																																													
	Avg	Min	Max	#																																													
Gradient %:	0.00	0	0	0																																													
Pool Depth (m):	0.00	0	0	0																																													
Stage: Low ☐ Med ☐ High ☐		Temp (C):		pH:		Conductivity:		Turbidity.: Turbid ☐ Low ☐ Moderate ☐ Clear ☐																																									
MORPHOLOGY																																																	
Bed Material: Dominant:		D95 (cm):		Bars: Non ☐ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐																																													
Subdominant:		D (cm):		Braid ☐																																													
Channel Pattern:		Islands:		<table border="1" style="display: inline-table; border-collapse: collapse;"> <thead> <tr> <th colspan="10">DISTURBANCE INDICATORS</th> </tr> <tr> <th>O1</th> <th>B1</th> <th>B2</th> <th>B3</th> <th>D1</th> <th>D2</th> <th>D3</th> <th>C1</th> <th>C2</th> <th>C3</th> </tr> </thead> <tbody> <tr> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>						DISTURBANCE INDICATORS										O1	B1	B2	B3	D1	D2	D3	C1	C2	C3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
DISTURBANCE INDICATORS																																																	
O1	B1	B2	B3	D1	D2	D3	C1	C2	C3																																								
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																																								
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																																								
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Type:	SWD	LWD	B	U	DP	OV	IV																																										
Amount:																																																	
Location: P/S/O:	☐	☐	☐	☐	☐	☐	☐																																										
LWD:		FSZ: ☐																																															
LWD Dist:																																																	
Right Bank: Shape:		Texture: Fines ☐ Gravel ☐ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐ Crown Closure																																															
Left Bank: Shape:		Texture: Fines ☐ Gravel ☐ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐																																															
Right Bank: Rip.Veg:		Stage:																																															
Left Bank: Rip.Veg:		Stage:																																															
Instream Veg: None ☐ Algae ☐ Moss ☐ Vascular ☐																																																	

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1808 Site 577

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1808 NID Map #: 093N.001 NID #: 50577 Reach #: 1.0 Site #: 577
Field UTM (Z.E.N): 9.309860.6101648 Method: GPU Site Lg: 180 Method: MAP Access: V2
GIS UTM (Z.E.N): 10.309936.6101734 Ref. Name:
Date: 2002/09/13 Time: 12:00 Agency: C172 Crew: JH/SG Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):												0.00	Method I:			0.00
Wetted Width (m):												0.00	Method II:			
Pool Depth (m):												0.00				

Wb Depth: Avg: 0.00 Method: MS Stage: L ☐ M ☐ H ☐ No Vis.Ch.: ☒ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER

Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	☐	☐	☐	☐	☐	☐	☐

CROWN CLOSURE

INSTREAM VEG: N ☐ A ☐ M ☐ V ☐

LWD:

DIST:

LB SHP:

RB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RIP:

RIP:

STG:

STG:

WATER

EMS: Temp: Method: Req #: Cond.: Method:
pH: Method: Turb.: T ☐ M ☐ L ☐ C ☐ Method: GE
Flood Signs: Method:

MORPHOLOGY

Bed Material: Dominant: Subdom: O1 B1 B2 B3 D1 D2 D3
D95: D (cm): Morph: DISTURBANCE INDICATORS
Pattern: C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: ☐
Coupling: ☐
Confinement: ☐
FSZ: ☐ Bars: N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Flooded wetland.
Rearing Habitat	Flooded wetland.
Spawning Habitat	Flooded wetland.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 58 F: 14	STD	U	Wetland.
R: 58 F: 15	STD	U	Wetland / ponded area.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093N.001	1808	577

COMMENTS	
Section	Comments
CHANNEL	Flooded wetland / pond.



Site #577, Wetland.
Roll #58, Frame #14, Date: 2002/09/13



Site #577, Wetland / ponded area.
Roll #58, Frame #15, Date: 2002/09/13

Tochcha Lake Planning Area

1.0	093N.001	1792
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FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1792 Site 578

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1792 NID Map #: 093N.001 NID #: 50578 Reach #: 1.0 Site #: 578
Field UTM (Z.E.N): 10.311999.6106037 Method: GPU Site Lg: 120 Method: MAP Access: V2
GIS UTM (Z.E.N): 10.312020.6106051 Ref. Name:
Date: 2002/09/13 Time: 13:00 Agency: C172 Crew: JH/SG Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	0.80	0.50	0.90	1.20	1.10	1.10					0.93
Wetted Width (m):	T	0.20	0.10	0.30	0.20	0.10						0.18
Pool Depth (m):	T	0.10	0.10	0.10	0.10							0.10

	Gadient %		Mtd	Avg
Method I:	23.0	28.0	C	15.50
Method II:	5.0	6.0	C	

Wb Depth: .4 .6 .3 Avg: 0.43 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	S	N	N	D	N
Loc: P/S/O:	☐	☐	☒	☐	☐	☒	☐

LWD: N

DIST: NA

LB SHP: V

Texture: F ☐ G ☐ C ☒ B ☐ R ☒ A ☐

RIP: M

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☐ C ☒ B ☐ R ☒ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 7 pH: 7.0 Flood Signs: None Method: T4 Method: P2 Method: GE Req #: Cond.: 90 Method: S3 Method: GE Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: B Subdom: C D95: 150.0 D (cm): 10.00 Morph: CP
Pattern: SI Islands: N Coupling: PC Confinement: FC FSZ: ☐
DISTURBANCE INDICATORS
O1 B1 B2 B3 D1 D2 D3
☐ ☐ ☐ ☐ ☐ ☐ ☐
C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093N.001	55534	CV	2.0	GE	20	GE	R: 58 F: 19 L:	#:	10.311999.6106489	GIS
Comments: CV outlet - good structure @ outlet, minor erosion problems @ inlet.										
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093N.001	55533	CV	1.2	GE	10	GE	R: 58 F: 16 L:	#:	10.312005.6105998	GIS
Comments: CV outlet										

HABITAT QUALITY

Name	Comments
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FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093N.001	1792	578

HABITAT QUALITY					
Name			Comments		
OverWinter Habitat			Potential in upstream lake, none observed in site.		
Rearing Habitat			Low - small pools.		
Spawning Habitat			Low - patchy gravels.		
PHOTOS					
Photo		Foc Lg	Dir	Comments	
R:	58 F: 16	STD	U	Culvert outlet (note meters, tape and thermometer).	
R:	58 F: 17	STD	D	Typical cascade over rock found in high gradient section.	
R:	58 F: 18	STD	U	Typical cascade over rock found in high gradient section.	
R:	58 F: 19	STD	U	Downstream culvert on lower road, good crossing structure downstream of road crossing.	
COMMENTS					
Section		Comments			
CHANNEL		Gradient less steep at lower crossing.			
CHANNEL		Sample upstream lake.			
CHANNEL		Cascade over rock and bedrock downstream of road crossing.			
CHANNEL		23% / 50 m and 28% / 30 m downstream of road crossing.			

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1792

WATERBODY															
Gazetted Name:										Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000															
Waterbody ID:				ILP Map #: 093N.001				ILP #: 1792		Reach #: 1 -					
Project ID: 5271				Lake/Stream: S				Lake From Date:							
Fish Permit #:		145269		Date: 2002/09/13		To: 2002/09/13		Agency: C172		Crew: JH/SG		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
579	093N.001	50579				GPU EF 1	7	90	C						
578	093N.001	50578				GPU EF 1	7	90	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
578	EF 1	1	2002/09/13	13:00	2002/09/13	13:30									
579	EF 1	1	2002/09/13	13:45	2002/09/13	14:15									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
578	EF	1	1	O	205	120.0	1.0	600	I	5	SMITH ROOT	12B			
579	EF	1	1	O	144	100.0	1.0	600	I	5	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
578	EF	1	1	NFC		0									
579	EF	1	1	RB	J	2+	1	75 75	R						
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
579	EF	1	1	RB	75		U	U							



Site #578, Culvert outlet (note meters, tape and thermometer).
Roll #58, Frame #16, Date: 2002/09/13



Site #578, Typical cascade over rock found in high gradient section.
Roll #58, Frame #17, Date: 2002/09/13



Site #578, Typical cascade over rock found in high gradient section.
Roll #58, Frame #18, Date: 2002/09/13



Site #578, Downstream culvert on lower road, good crossing structure downstream of road crossing.
Roll #58, Frame #19, Date: 2002/09/13

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1792

STREAM REFERENCING											
Gazetted Name:						Local Name:					
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000						ILP Map #: 093N.001			ILP #: 1792		
REACH											
Reach #: 1.0		UTM (Zone/East/North): 10.311760.6105945				Sample Type: Biased					
Length (km): 1.16		Coupling: Partially Couple		Magnitude: 5		BGC Zone: SBS					
Gradient (%): 5.3		Confinement: Occasionally Conf		Order: 2		Open water: Absent					
US Elev (m): 840		Islands: NONE		Riparian Vegetation: Mixed C/D							
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified											
SITE											
Site #: 578		Field UTM 10.311999.6106037		Agency: C172		Crew: JH/SG		Date: 2002/09/13			
Site Length (m): 120		GIS UTM 10.312020.6106051		Agency Name: Triton Environmental Consultants (Terrace)							
CHANNEL											
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max		#	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		0.93		0.5		1.200	
Stage: Low ☒				Wetted Width (m):		0.18		0.100		0.300	
Med ☐				Bankfull Depth (m):		0.43		0.3		0.6	
High ☐		Temp (C): 7		pH: 7.0		Conductivity: 90					
								Avg		Min	
								Max		#	
								Gradient %:		15.50	
								Pool Depth (m):		0.10	
								Turbidity: Turbid ☐		Low ☐	
								Moderate ☐		Clear ☒	
MORPHOLOGY											
Bed Material: Dominant: Boulders		D95 (cm): 150.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐	
Subdominant: Cobble		D (cm): 10.00								Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1		B2	
Coupling: Partially Coupled				INDICATORS		C1		C2		C3	
Confinement: Frequently Confined						C4		C5		S1	
Morphology: CP Cascade Pool						S2		S3		S4	
						S5					
COVER											
Total Cover: Abundant		Type: SWD		LWD		B		U		DP	
LWD: None		Amount: N		N		S		N		N	
LWD Dist: Not Applicable		Location: P/S/O:		☐		☐		☒		☐	
				☐		☐		☐		☐	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☒		Boulder ☐		Rock ☒	
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☒		Boulder ☐		Rock ☒	
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest								Crown Closure	
Left Bank: Rip.Veg:		Stage: Mature forest								21-40%	
								Instream Veg: None ☒		Algae ☐	
										Moss ☐	
										Vascular ☐	
FEATURES											
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto	
093N.001	55534	CV	2.0	GE	20	GE	R: 58	F: 19	L:	#:	UTM (Z/E/N)
Comments: CV outlet - good structure @ outlet, minor erosion problems @ inlet.											
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto	
093N.001	55533	CV	1.2	GE	10	GE	R: 58	F: 16	L:	#:	UTM (Z/E/N)
Comments: CV outlet											
FISH											
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)		
578	EF	1	120	205 sec	600	NFC	0				
579	EF	1	100	144 sec	600	RB	1	75	75		

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1792

WATERBODY															
Gazetted Name:										Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:				ILP Map #: 093N.001				ILP #: 1792		Reach #: 1 -					
Project ID: 5271								Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date: 2002/09/13		To: 2002/09/13		Agency: C172		Crew: JH/SG		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
579	093N.001	50579				GPU EF 1	7	90	C						
578	093N.001	50578				GPU EF 1	7	90	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
578	EF 1	1	2002/09/13	13:00	2002/09/13	13:30									
579	EF 1	1	2002/09/13	13:45	2002/09/13	14:15									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
578	EF	1	1	O	205	120.0	1.0	600	I	5	SMITH ROOT	12B			
579	EF	1	1	O	144	100.0	1.0	600	I	5	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
578	EF	1	1	NFC		0									
579	EF	1	1	RB	J	2+	1	75	75	R					
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
579	EF	1	1	RB	75		U	U							

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1763

STREAM REFERENCING																																					
Gazetted Name:					Local Name:																																
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1763																														
REACH																																					
Reach #: 1.0		UTM(Zone/East/North): 10.315522.6104802				Sample Type: Biased																															
Length (km): .74		Coupling: Partially Couple		Magnitude: 6		BGC Zone: SBS																															
Gradient (%): 3.0		Confinement: Occasionally Conf		Order: 3		Open water: Absent																															
US Elev (m): 900		Islands: NONE		Riparian Vegetation: Mixed C/D																																	
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																					
SITE																																					
Site #: 580		Field UTM 9.315685.6104911		Agency: C172		Crew: JH/SG		Date: 2002/09/12																													
Site Length (m): 150		GIS UTM 10.315650.6104865		Agency Name: Triton Environmental Consultants (Terrace)																																	
CHANNEL																																					
No Vis.Ch.: ☐ Intermittent: ☐		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Channel Width (m): 1.37</td> <td>1.200</td> <td>1.600</td> <td>6</td> </tr> <tr> <td>Wetted Width (m): 0.73</td> <td>0.5</td> <td>0.9</td> <td>6</td> </tr> <tr> <td>Bankfull Depth (m): 0.57</td> <td>0.5</td> <td>0.6</td> <td>3</td> </tr> </table>				Avg	Min	Max	#	Channel Width (m): 1.37	1.200	1.600	6	Wetted Width (m): 0.73	0.5	0.9	6	Bankfull Depth (m): 0.57	0.5	0.6	3	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Gradient %: 3.75</td> <td>2</td> <td>6</td> <td>4</td> </tr> <tr> <td>Pool Depth (m): 0.36</td> <td>0.300</td> <td>0.5</td> <td>5</td> </tr> </table>				Avg	Min	Max	#	Gradient %: 3.75	2	6	4	Pool Depth (m): 0.36	0.300	0.5	5
Avg	Min	Max	#																																		
Channel Width (m): 1.37	1.200	1.600	6																																		
Wetted Width (m): 0.73	0.5	0.9	6																																		
Bankfull Depth (m): 0.57	0.5	0.6	3																																		
Avg	Min	Max	#																																		
Gradient %: 3.75	2	6	4																																		
Pool Depth (m): 0.36	0.300	0.5	5																																		
Dewatered: ☐ Tribs.: ☐						Turbidity: Turbid ☐ Low ☐																															
Stage: Low ☒		Temp (C): 7				pH: 7.0		Conductivity: 120																													
Med ☐								Moderate ☐ Clear ☒																													
High ☐																																					
MORPHOLOGY																																					
Bed Material: Dominant: Cobble		D95 (cm): 60.00		Bars: Non ☒		Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐																															
Subdominant: Gravels		D (cm): 20.00				Braid ☐																															
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS																																	
Coupling: Partially Coupled				<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td>O1</td><td>B1</td><td>B2</td><td>B3</td><td>D1</td><td>D2</td><td>D3</td> </tr> <tr> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> </table>						O1	B1	B2	B3	D1	D2	D3	☐	☐	☐	☐	☐	☐	☐														
O1	B1	B2	B3	D1	D2	D3																															
☐	☐	☐	☐	☐	☐	☐																															
Confinement: Occasionally Confine				<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td>C1</td><td>C2</td><td>C3</td><td>C4</td><td>C5</td><td>S1</td><td>S2</td><td>S3</td><td>S4</td><td>S5</td> </tr> <tr> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> </table>						C1	C2	C3	C4	C5	S1	S2	S3	S4	S5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐								
C1	C2	C3	C4	C5	S1	S2	S3	S4	S5																												
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																												
Morphology: RP Riffle Pool																																					
COVER																																					
Total Cover: Abundant		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Type:</th> <th>SWD</th> <th>LWD</th> <th>B</th> <th>U</th> <th>DP</th> <th>OV</th> <th>IV</th> </tr> <tr> <th>Amount:</th> <td>T</td> <td>S</td> <td>T</td> <td>N</td> <td>N</td> <td>D</td> <td>N</td> </tr> </table>								Type:	SWD	LWD	B	U	DP	OV	IV	Amount:	T	S	T	N	N	D	N												
Type:	SWD	LWD	B	U	DP	OV	IV																														
Amount:	T	S	T	N	N	D	N																														
LWD: None		Location: P/S/O: ☒ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ FSZ: ☐																																			
LWD Dist: Not Applicable																																					
Right Bank: Shape: V - shape		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐ Rock ☐ Manmade ☐																													
Left Bank: Shape: V - shape		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐ Rock ☐ Manmade ☐																													
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest		Crown Closure 21-40%																																	
Left Bank: Rip.Veg:		Stage: Mature forest		Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐																																	
FEATURES																																					
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)																												
093N.001	55535	CV	2.0	GE	20	GE	R: 58 F: 20 L:	#:	10.315656.6104																												
Comments: CV good at both ends.																																					
FISH																																					
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																												
580	EF	1	100	220 sec	500	RB	5	70	90																												

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1763 Site 580

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093N.001 ILP #: 1763 NID Map #: 093N.001 NID #: 50580 Reach #: 1.0 Site #: 580
Field UTM (Z.E.N): 9.315685.6104911 Method: GPU Site Lg: 150 Method: MAP Access: V2
GIS UTM (Z.E.N): 10.315650.6104865 Ref. Name:
Date: 2002/09/12 Time: 14:40 Agency: C172 Crew: JH/SG Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	1.40	1.20	1.60	1.20	1.30	1.50					1.37
Wetted Width (m):	T	0.50	0.80	0.80	0.60	0.80	0.90					0.73
Pool Depth (m):	T	0.40	0.30	0.30	0.50	0.30						0.36

	Gadient %		Mtd	Avg
Method I:	6.0	4.0	C	3.75
Method II:	2.0	3.0	C	

Wb Depth: .6 .5 .6 Avg: 0.57 Method: T Stage: L ☒ M ☐ H ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	T	N	N	D	N
Loc: P/S/O:	☒	☒	☒	☐	☐	☒	☐

LWD: N DIST: NA

LB SHP: V

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 7 pH: 7.0 Flood Signs: None
Method: T4 Method: P2 Method: GE
Req #: Cond.: 120 Turb.: T ☐ M ☐ L ☐ C ☒
Method: S3 Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: G D95: 60.0 D (cm): 20.00 Morph: RP
Pattern: SI Islands: N Coupling: PC Confinement: OC FSZ: ☐
DISTURBANCE INDICATORS
O1 B1 B2 B3 D1 D2 D3
C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093N.001	55535	CV	2.0	GE	20	GE	R: 58 F: 20 L:	#:	10.315656.6104876	GIS

Comments: CV good at both ends.

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None observed in site.
Rearing Habitat	Low - small pools.
Spawning Habitat	Low - patches of gravel, cover.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093N.001	1763	580

PHOTOS					
Photo			Foc Lg	Dir	Comments
R:	58	F: 20	STD	U	Culvert outlet.
R:	58	F: 21	STD	U	Upstream photo of habitat.
R:	58	F: 22	STD	D	Downstream photo of habitat.

COMMENTS	
Section	Comments
CHANNEL	RB captured.

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.001 ILP # 1763

WATERBODY															
Gazetted Name:										Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000															
Waterbody ID:				ILP Map #: 093N.001				ILP #: 1763		Reach #: 1 -					
Project ID: 5271				Lake/Stream: S				Lake From Date:							
Fish Permit #:		145269		Date:		2002/09/12		To:		2002/09/12		Agency: C172			
								Crew: JH/SG		Resample:		☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
580	093N.001	50580				GPU EF 1	7	120	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
580	EF 1	1	2002/09/12	14:40	2002/09/12	15:30									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
580	EF 1	1	O	220	100.0	1.5	500	I	5	SMITH ROOT	12B				
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
580	EF 1	1	RB	J		5	70 90	R							
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
580	EF 1	1	RB	70		U	U								
580	EF 1	1	RB	80		U	U								
580	EF 1	1	RB	80		U	U								
580	EF 1	1	RB	70		U	U								
580	EF 1	1	RB	90		U	U								



Site #580, Culvert outlet.
Roll #58, Frame #20, Date: 2002/09/13



Site #580, Upstream photo of habitat.
Roll #58, Frame #21, Date: 2002/09/13



Site #580, Downstream photo of habitat.
Roll #58, Frame #22, Date: 2002/09/13

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093M.029 ILP # 1231

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1231		
REACH									
Reach #: 3.0		UTM(Zone/East/North): 9.670917.6124385				Sample Type: Biased			
Length (km): .52		Coupling: Partially Couple		Magnitude: 4		BGC Zone: SBS			
Gradient (%): 3.9		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 960		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 617		Field UTM 9.670607.6124266		Agency: C172		Crew: JH/SH		Date: 2002/09/26	
Site Length (m): 220		GIS UTM 9.670607.6124218		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes: ☐		Channel Width (m): 1.79		1.3		2	
Stage: Low ☐				Wetted Width (m): 1.73		1.5		2	
Med ☒				Bankfull Depth (m): 0.53		0.4		0.6	
High ☐		Temp (C): 6		pH: 7.4		Conductivity: 80		Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 40.00		Bars: Non ☐		Side ☒		Diagonal ☐	
Subdominant: Cobble		D (cm): 20.00						Mid-channel ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Partially Coupled				INDICATORS		B2		B3	
Confinement: Occasionally Confine				C1		C2		C3	
Morphology: RP Riffle Pool				C4		C5		S1	
				C6		S2		S3	
				S4		S5			
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		S		N		T	
LWD Dist: Clumped		Location: P/S/O: ☒		☒		☐		☒	
		☐		☐		☐		☐	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest		Stage: Mature forest		Instream Veg: None ☐		Algae ☐	
Left Bank: Rip.Veg:						Moss ☒		Vascular ☒	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
617	EF	1	220	510 sec	700	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093M.029 ILP # 1231 Site # 617

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093M.029 ILP #: 1231 NID Map #: 093M.029 NID #: 50617 Reach #: 3.0 Site #: 617
Field UTM (Z.E.N): 9.670607.6124266 Method: GPU Site Lg: 220 Method: MAP Access: H
GIS UTM (Z.E.N): 9.670607.6124218 Ref. Name:
Date: 2002/09/26 Time: 09:50 Agency: C172 Crew: JH/SH Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	1.30	2.00	2.00	1.80	1.90	1.60	1.90				1.79	Method I:	3.0	3.0	C	3.00
Wetted Width (m):	T	1.50	2.00	1.60	1.60	1.90	1.70	1.80				1.73	Method II:			C	
Pool Depth (m):	T	0.30	0.50	0.30	0.40	0.60	0.50	0.50				0.44					

Wb Depth: .4 .6 .6 Avg: 0.53 Method: T Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	N	T	D	S	N
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☐

LWD: F DIST: C

LB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☒

RB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 6 pH: 7.4 Flood Signs: None Method: T4 Method: P2 Method: GE Req #: Cond.: 80 Method: S3 Method: GE Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: G Subdom: C D95: 40.0 D (cm): 20.00 Morph: RP
Pattern: SI Islands: N Coupling: PC Confinement: OC FSZ: ☐
DISTURBANCE INDICATORS
O1 B1 B2 B3 D1 D2 D3
☐ ☐ ☐ ☐ ☐ ☐ ☐
C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Moderate - associated with plunge pools >50 cm in depth.
Rearing Habitat	Moderate - associated with pools, flows and LWD.
Spawning Habitat	Moderate - associated with cover, pools, flows, and gravels suitable for various sizes.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 01	STD	U	Upstream photo of habitat within site.
R: 63 F: 02	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
3.0	093M.029	1231	617

COMMENTS	
Section	Comments
CHANNEL	NFC

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
3.0	093M.029	1231

Triton Environmental Consultants Ltd.



Site #617, Upstream photo of habitat within site.
Roll #63, Frame #01, Date: 2002/09/26



Site #617, Downstream photo of habitat within site.
Roll #63, Frame #02, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #

2.0 093M.029 1231

SITE																							
Site #: 618		Field UTM ..		Agency: C172		Crew: JH/SH		Date: 2002/09/26															
Site Length (m): 200		GIS UTM 9.670565.6124038		Agency Name: Triton Environmental Consultants (Terrace)																			
CHANNEL																							
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max		#		Avg		Min		Max		#					
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		2.18		1.600		2.6		6		Gradient %:		5.50		5		6		2	
Stage: Low ☐				Wetted Width (m):		1.85		1.4		2.400		6		Pool Depth (m):		0.33		0.300		0.400		6	
Med ☒				Bankfull Depth (m):		0.73		0.7		0.8		3											
High ☐				Temp (C): 6		pH: 7.4		Conductivity: 80						Turbidity.: Turbid ☐		Low ☐							
														Moderate ☐		Clear ☒							
MORPHOLOGY																							
Bed Material: Dominant: Gravels		D95 (cm): 60.00		Bars: Non ☐		Side ☒		Diagonal ☐		Mid-channel ☐		Span ☐											
Subdominant: Cobble		D (cm): 20.00																					
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1		B2		B3		D1		D2		D3					
Coupling: Partially Coupled				INDICATORS		☐		☐		☐		☐		☐		☐		☐					
Confinement: Frequently Confined				C1		C2		C3		C4		C5		S1		S2		S3		S4		S5	
Morphology: RP Riffle Pool				☐		☐		☐		☐		☐		☐		☐		☐		☐		☐	
COVER																							
Total Cover: Abundant		Type: SWD		LWD		B		U		DP		OV		IV									
LWD: Few		Amount: T		T		T		T		S		D		N									
LWD Dist: Clumped		Location: P/S/O:		☒		☒		☒		☒		☒		☒		☐		☐				FSZ: ☐	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐		Manmade ☐										Crown Closure	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐		Manmade ☐										21-40%	
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest																					
Left Bank: Rip.Veg:		Stage: Mature forest																				Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐	
FISH																							
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)														
358	EF	1	100	79 sec	700	RB	2	135	165														
380	EF	1	200	250 sec	700	NFC	0																
618	EF	1	200	460 sec	700	NFC	0																

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.029 ILP # 1231 Site # 618

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1231 NID Map #: 093M.029 NID #: 50618 Reach #: 2.0 Site #: 618
Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 9.670565.6124038 Ref. Name:
Date: 2002/09/26 Time: 10:20 Agency: C172 Crew: JH/SH Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	2.20	2.00	1.60	2.30	2.60	2.40					2.18
Wetted Width (m):	T	1.80	1.80	1.70	1.40	2.40	2.00					1.85
Pool Depth (m):	T	0.30	0.40	0.30	0.30	0.30	0.40					0.33

	Gadient %	Mtd	Avg
Method I:	5.0 6.0	C	5.50
Method II:		C	

Wb Depth: .8 .7 .7 Avg: 0.73 Method: T Stage: L ☐ M ☒ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	T	T	S	D	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

CROWN CLOSURE
2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

LWD: F DIST: C

LB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

RB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 80 Method: S3
pH: 7.4 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: G Subdom: C
D95: 60.0 D (cm): 20.00 Morph: RP
Pattern: SI
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐

O1 B1 B2 B3 D1 D2 D3
C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
DISTURBANCE INDICATORS
Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Potential in some pools.
Rearing Habitat	Low - shallow pools / good cover (overvegetation and LWD).
Spawning Habitat	Low - small patches of gravel / moderate cover for adults.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 03	STD	U	Upstream photo of habitat within site.
R: 63 F: 04	STD	D	Downstream photo of habitat within site.
R: 63 F: 05	STD	X	Functioning antler in stream.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
2.0	093M.029	1231	618

COMMENTS	
Section	Comments
CHANNEL	NFC

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.029 ILP # 1231

WATERBODY																
Gazetted Name:										Local:						
Project Code: 480-000000-00000-00000-0000-000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																
Waterbody ID:				ILP Map #: 093M.029				ILP #: 1231		Reach #: 2 -						
Project ID: 5271				Lake/Stream: S				Lake From Date:								
Fish Permit #:		145269		Date: 2002/09/26		To: 2002/09/26		Agency: C172		Crew: SG/JD JH/		Resample: ☐				
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment						
618	093M.029	50618				GPU EF 1	6	80	C							
380	093M.029	20380				GPU EF 1	6.5	70	C	upstream of cascade						
358	093M.029	20358				GPU EF 1	6.5	70	C	downstream of cascade						
A. GEAR SETTINGS																
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment									
358	EF 1	1	2002/09/26	12:00	2002/09/26	12:29										
380	EF 1	1	2002/09/26	12:29	2002/09/26	12:50										
618	EF 1	1	2002/09/26	10:00	2002/09/26	11:00										
C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model					
358	EF	1	1	O	79	100.0	3.0	700	60	6	SMITH ROOT	12B				
380	EF	1	1	O	250	200.0	3.0	700	60	6	SMITH ROOT	12B				
618	EF	1	1	O	460	200.0	2.0	700	I	5	SMITH ROOT	12B				
FISH SUMMARY																
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment							
358	EF	1	1	RB	J	2	135 165	R								
380	EF	1	1	NFC		0										
618	EF	1	1	NFC		0										
INDIVIDUAL FISH DATA																
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment	
								Str/Smpl#	Age		Str/Smpl#					
358	EF	1	1	RB	135		U	U								
358	EF	1	1	RB	165		U	U								



Site #618, Upstream photo of habitat within site.
Roll #63, Frame #03, Date: 2002/09/26



Site #618, Downstream photo of habitat within site.
Roll #63, Frame #04, Date: 2002/09/26



Site #618, Functioning antler in stream.
Roll #63, Frame #05, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1235

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1235		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.670260.6124914				Sample Type: Biased			
Length (km): .84		Coupling: Partially Couple		Magnitude: 4		BGC Zone: SBS			
Gradient (%): 6.0		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 980		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 619		Field UTM ..		Agency: C172		Crew: JH/SH		Date: 2002/09/26	
Site Length (m): 180		GIS UTM 9.670512.6124292		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 0.77		0.5		1	
Stage: Low ☒				Wetted Width (m): 0.47		0.300		0.600	
Med ☐				Bankfull Depth (m): 0.37		0.3		0.4	
High ☐		Temp (C): 6		pH: 7.4		Conductivity: 80		Turbidity.: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 10.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Fines		D (cm): 5.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Partially Coupled				INDICATORS		B2		B3	
Confinement: Occasionally Confine				C1		C2		C3	
Morphology: RP Riffle Pool				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Moderate		Type: SWD		LWD		B		U	
LWD: None		Amount: S		T		N		N	
LWD Dist: Not Applicable		Location: P/S/O:		☒		☒		☒	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Deciduous		Stage: Pole-sapling stage		Rock ☐		Manmade ☐		Crown Closure	
Left Bank: Rip.Veg:		Stage: Mature forest		Instream Veg: None ☒		Algae ☐		Moss ☐	
								Vascular ☐	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
619	EF	1	130	200 sec	700	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1235 Site 619

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map #: 093M.029 ILP #: 1235 NID Map #: 093M.029 NID #: 50619 Reach #: 1.0 Site #: 619
Field UTM (Z.E.N): .. Method: Site Lg: 180 Method: MAP Access: H
GIS UTM (Z.E.N): 9.670512.6124292 Ref. Name:
Date: 2002/09/26 Time: 11:15 Agency: C172 Crew: JH/SH Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	0.50	0.80	1.00	0.90	0.80	0.60					0.77	Method I:	4.0	4.0	C	4.00
Wetted Width (m):	T	0.50	0.60	0.50	0.50	0.40	0.30					0.47	Method II:			C	
Pool Depth (m):	T	0.10	0.10	0.10	0.10							0.10					

Wb Depth: .4 .4 .3 Avg: 0.37 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	T	N	N	N	D	N
Loc: P/S/O:	☒	☒	☐	☐	☐	☒	☐

LWD: N DIST: NA

LB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 80 Method: S3
pH: 7.4 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: G Subdom: F O1 B1 B2 B3 D1 D2 D3
D95: 10.0 D (cm): 5.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: OC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None observed in site - potential in upstream wetland.
Rearing Habitat	Associated with small shallow pools.
Spawning Habitat	None observed.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 06	STD	U	Upstream photo of habitat within site.
R: 63 F: 07	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093M.029	1235	619

COMMENTS	
Section	Comments
CHANNEL	NFC

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1235

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 480-000000-00000-00000-0000-000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.029		ILP #: 1235		Reach #: 1 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/26		To:		2002/09/26		Agency: C172		Crew: JH/SH		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
619	093M.029	50619				GPU EF 1	6	80	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
619	EF	1	1	2002/09/26	11:00	2002/09/26	11:30										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
619	EF	1	1	O	200	130.0	1.0	700	I	5	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
619	EF	1	1	NFC		0											



Site #619, Upstream photo of habitat within site.
Roll #63, Frame #06, Date: 2002/09/26



Site #619, Downstream photo of habitat within site.
Roll #63, Frame #07, Date: 2002/09/26

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
1.0	093M.029	1224

STREAM REFERENCING																																											
Gazetted Name:					Local Name:																																						
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1224																																				
REACH																																											
Reach #: 1.0		UTM(Zone/East/North): 9.669340.6126407				Sample Type: Biased																																					
Length (km): 2.95		Coupling: Partially Couple		Magnitude: 5		BGC Zone: SBS																																					
Gradient (%): 7.1		Confinement: Occasionally Conf		Order: 2		Open water: Absent																																					
US Elev (m): 940		Islands: NONE		Riparian Vegetation: Mixed C/D																																							
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																											
SITE																																											
Site #: 620		Field UTM 9.668500.2123800		Agency: C172		Crew: SG/JD		Date: 2002/09/26																																			
Site Length (m): 150		GIS UTM 9.668305.6123890		Agency Name: Triton Environmental Consultants (Terrace)																																							
CHANNEL																																											
No Vis.Ch.: ☐		Intermittent: ☐		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Channel Width (m): 1.77</td> <td>1.4</td> <td>2.200</td> <td>6</td> </tr> <tr> <td>Wetted Width (m): 0.75</td> <td>0.5</td> <td>1.100</td> <td>6</td> </tr> <tr> <td>Bankfull Depth (m): 0.57</td> <td>0.5</td> <td>0.6</td> <td>3</td> </tr> </table>		Avg	Min	Max	#	Channel Width (m): 1.77	1.4	2.200	6	Wetted Width (m): 0.75	0.5	1.100	6	Bankfull Depth (m): 0.57	0.5	0.6	3	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Gradient %: 2.00</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Pool Depth (m): 0.43</td> <td>0.300</td> <td>0.7</td> <td>6</td> </tr> </table>		Avg	Min	Max	#	Gradient %: 2.00	2	2	2	Pool Depth (m): 0.43	0.300	0.7	6								
Avg	Min	Max	#																																								
Channel Width (m): 1.77	1.4	2.200	6																																								
Wetted Width (m): 0.75	0.5	1.100	6																																								
Bankfull Depth (m): 0.57	0.5	0.6	3																																								
Avg	Min	Max	#																																								
Gradient %: 2.00	2	2	2																																								
Pool Depth (m): 0.43	0.300	0.7	6																																								
Dewatered: ☐		Trib.: ☐																																									
Stage: Low ☐								Turbidity.: Turbid ☐ Low ☐																																			
Med ☒								Moderate ☐ Clear ☒																																			
High ☐		Temp (C): 7		pH: 7.4		Conductivity: 160																																					
MORPHOLOGY																																											
Bed Material: Dominant: Gravels		D95 (cm): 10.00		Bars: Non ☐		Side ☒		Diagonal ☐ Mid-channel ☐ Span ☐																																			
Subdominant: Fines		D (cm): 10.00						Braid ☐																																			
Channel Pattern: Irregular, Wandering		Islands: None		DISTURBANCE INDICATORS		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>O1</td><td>B1</td><td>B2</td><td>B3</td><td>D1</td><td>D2</td><td>D3</td> </tr> <tr> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> <tr> <td>C1</td><td>C2</td><td>C3</td><td>C4</td><td>C5</td><td>S1</td><td>S2</td><td>S3</td><td>S4</td><td>S5</td> </tr> <tr> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> </table>				O1	B1	B2	B3	D1	D2	D3	☐	☐	☐	☐	☐	☐	☐	C1	C2	C3	C4	C5	S1	S2	S3	S4	S5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
O1	B1	B2	B3	D1	D2	D3																																					
☐	☐	☐	☐	☐	☐	☐																																					
C1	C2	C3	C4	C5	S1	S2	S3	S4	S5																																		
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																																		
Coupling: Partially Coupled																																											
Confinement: Occasionally Confine																																											
Morphology: RP Riffle Pool																																											
COVER																																											
Total Cover: Abundant		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Type:</th> <th>SWD</th> <th>LWD</th> <th>B</th> <th>U</th> <th>DP</th> <th>OV</th> <th>IV</th> </tr> <tr> <th>Amount:</th> <td>T</td> <td>T</td> <td>N</td> <td>S</td> <td>T</td> <td>D</td> <td>N</td> </tr> <tr> <th>Location: P/S/O:</th> <td>☒</td><td>☐</td><td>☒</td><td>☐</td><td>☒</td><td>☐</td><td>☒</td><td>☐</td><td>☐</td> </tr> </table>								Type:	SWD	LWD	B	U	DP	OV	IV	Amount:	T	T	N	S	T	D	N	Location: P/S/O:	☒	☐	☒	☐	☒	☐	☒	☐	☐								
Type:	SWD	LWD	B	U	DP	OV	IV																																				
Amount:	T	T	N	S	T	D	N																																				
Location: P/S/O:	☒	☐	☒	☐	☒	☐	☒	☐	☐																																		
LWD: None		FSZ: ☐																																									
LWD Dist: Not Applicable																																											
Right Bank: Shape: Undercut		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐						Crown Closure																																			
Left Bank: Shape: Undercut		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐						21-40%																																			
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest																																									
Left Bank: Rip.Veg:		Stage: Pole-sapling stage		Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐																																							
FISH																																											
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																																		
620	EF	1	150	240 sec	500	CO	10	60	70																																		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1224 Site # 620

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map #: 093M.029 ILP #: 1224 NID Map #: 093M.029 NID #: 50620 Reach #: 1.0 Site #: 620
Field UTM (Z.E.N): 9.668500.2123800 Method: GPU Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 9.668305.6123890 Ref. Name:
Date: 2002/09/26 Time: 12:00 Agency: C172 Crew: SG/JD Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	2.20	1.80	1.40	1.40	1.80	2.00					1.77	Method I:	2.0	2.0	C	2.00
Wetted Width (m):	T	0.50	0.50	0.60	1.00	1.10	0.80					0.75	Method II:			C	
Pool Depth (m):	T	0.70	0.40	0.30	0.30	0.40	0.50					0.43					

Wb Depth: .6 .6 .5 Avg: 0.57 Method: MS Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	N	S	T	D	N
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☐

LWD: N

DIST: NA

LB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 7 pH: 7.4 Flood Signs: Rafted debris
Method: T4 Method: P2 Method: GE
Req #: Cond.: 160 Method: S3
Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE

MORPHOLOGY

Bed Material: Dominant: G Subdom: F D95: 10.0 D (cm): 10.0 Morph: RP
Pattern: IR Islands: N Coupling: PC Confinement: OC FSZ: ☐
DISTURBANCE INDICATORS
O1 B1 B2 B3 D1 D2 D3
C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Potential in some of the pools present.
Rearing Habitat	Moderate - juvenile rearing - associated with small pools and cover.
Spawning Habitat	Moderate - associated with gravels, limited by cover / flows.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 08	STD	X	Adipose clipped coho.
R: 63 F: 09	STD	U	Upstream photo of habitat within stream.
R: 63 F: 10	STD	D	Downstream photo of habitat within stream.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093M.029	1224	620

COMMENTS	
Section	Comments
CHANNEL	Coho ~60 - 70 mm unlimited. Two of the coho had been adipose clipped.

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1224

WATERBODY												
Gazetted Name:						Local:						
Project Code: 480-000000-00000-00000-0000-0000-0000-0000-0000-0000-0												
WS Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-000												
Waterbody ID:				ILP Map #: 093M.029				ILP #: 1224		Reach #: 1 -		
Project ID: 5271				Lake/Stream: S				Lake From Date:				
Fish Permit #: 145269			Date: 2002/09/26			To: 2002/09/26			Agency: C172		Crew: JH/SH	Resample: ☐

SITE / METHOD											
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment	
620	093M.029	50620				GPU EF 1	7	160	C		

A. GEAR SETTINGS							
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
620	EF 1	1	2002/09/26	11:50	2002/09/26	12:30	

C. ELECTROFISHER SPECIFICATIONS											
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
620	EF	1	1	O	240	150.0	1.5	500	I	5	SMITH ROOT 12B

FISH SUMMARY										
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment
620	EF	1	1	CO	J	2+	10	60 70	R	

INDIVIDUAL FISH DATA																	
Site#	MTD/NO		H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
									Str/Smpl#/Age				Str/Smpl#				
620	EF	1	1	CO	70		U	U									
620	EF	1	1	CO	70		U	U									
620	EF	1	1	CO	60		U	U									
620	EF	1	1	CO	60		U	U									
620	EF	1	1	CO	60		U	U									
620	EF	1	1	CO	70		U	U									
620	EF	1	1	CO	60		U	U									
620	EF	1	1	CO	70		U	U									
620	EF	1	1	CO	60		U	U									
620	EF	1	1	CO	60		U	U									



Site #620, Adipose clipped coho.
Roll #63, Frame #08, Date: 2002/09/26



Site #620, Upstream photo of habitat within stream.
Roll #63, Frame #09, Date: 2002/09/26



Site #620, Downstream photo of habitat within stream.
Roll #63, Frame #10, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #

3.0 093M.029 1204

STREAM REFERENCING

Gazetted Name:

Local Name:

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

ILP Map #: 093M.029

ILP #: 1204

REACH

Reach #: 3.0

UTM(Zone/East/North): 9.666223.6128470

Sample Type: Biased

Length (km): .73

Coupling: Decoupled

Magnitude: 6

BGC Zone: SBS

Gradient (%): 0.0

Confinement: Occasionally Conf

Order: 3

Open water: Absent

US Elev (m): 800

Islands: NONE

Riparian Vegetation: Deciduous

Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified

SITE

Site #: 621

Field UTM ..

Agency: C172

Crew: JH/SH

Date: 2002/09/26

Site Length (m): 120

GIS UTM 9.666272.6128283

Agency Name: Triton Environmental Consultants (Terrace)

CHANNEL

No Vis.Ch.: ☒

Intermittent: ☐

Dewatered: ☐

Tribs.: ☐

Stage: Low ☐

Med ☐

High ☐

Temp (C):

pH:

Conductivity:

	Avg	Min	Max	#
Channel Width (m):	0.00	0	0	0
Wetted Width (m):	0.00	0	0	0
Bankfull Depth (m):	0.00	0	0	0

	Avg	Min	Max	#
Gradient %:	0.00	0	0	0
Pool Depth (m):	0.00	0	0	0

Turbidity.: Turbid ☐ Low ☐

Moderate ☐ Clear ☐

MORPHOLOGY

Bed Material: Dominant:

D95 (cm):

Bars: Non ☐

Side ☐

Diagonal ☐

Mid-channel ☐

Span ☐

Subdominant:

D (cm):

Braid ☐

Channel Pattern:

Islands:

DISTURBANCE

O1 B1 B2 B3 D1 D2 D3

Coupling:

Confinement:

Morphology:

C1 C2 C3 C4 C5 S1 S2 S3 S4 S5

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

COVER

Total Cover:

LWD:

LWD Dist:

Right Bank: Shape:

Left Bank: Shape:

Right Bank: Rip.Veg:

Left Bank: Rip.Veg:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Location: P/S/O:	☐	☐	☐	☐	☐	☐	☐

FSZ: ☐

Texture: Fines ☐ Gravel ☐ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐

Texture: Fines ☐ Gravel ☐ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐

Stage:

Stage:

Instream Veg: None ☐ Algae ☐ Moss ☐ Vascular ☐

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093M.029 ILP # 1204 Site 621

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1204 NID Map #: 093M.029 NID #: 50621 Reach #: 3.0 Site #: 621
Field UTM (Z.E.N): .. Method: Site Lg: 120 Method: MAP Access: H
GIS UTM (Z.E.N): 9.666272.6128283 Ref. Name:
Date: 2002/09/26 Time: 13:00 Agency: C172 Crew: JH/SH Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %	Mtd	Avg
Channel Width (m):												0.00	Method I:		0.00
Wetted Width (m):												0.00	Method II:		
Pool Depth (m):												0.00			

Wb Depth: Avg: 0.00 Method: MS Stage: L ☐ M ☐ H ☐ No Vis.Ch.: ☒ Intermittent: ☐
Dw: ☐ Tribes: ☐

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	☐	☐	☐	☐	☐	☐	☐

CROWN CLOSURE

INSTREAM VEG: N ☐ A ☐ M ☐ V ☐

LWD: DIST:

LB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RIP:

RIP:

STG:

STG:

WATER

EMS: Req #: Cond.: Method: Method: Method: GE
Temp: Method: Method: Method: GE
pH: Method: Method: Method: GE
Flood Signs: Method: Method: Method: GE
Turb.: T ☐ M ☐ L ☐ C ☐

MORPHOLOGY

Bed Material: Dominant: Subdom: O1 B1 B2 B3 D1 D2 D3
D95: D (cm): Morph: DISTURBANCE INDICATORS
Pattern: C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: ☐
Coupling: ☐
Confinement: Bars: N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐
FSZ: ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Flooded / ponded area.
Rearing Habitat	Flooded / ponded area.
Spawning Habitat	Flooded / ponded area.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 11 STD X			Flooded area.
R: 63 F: 12 STD X			Flooded area.

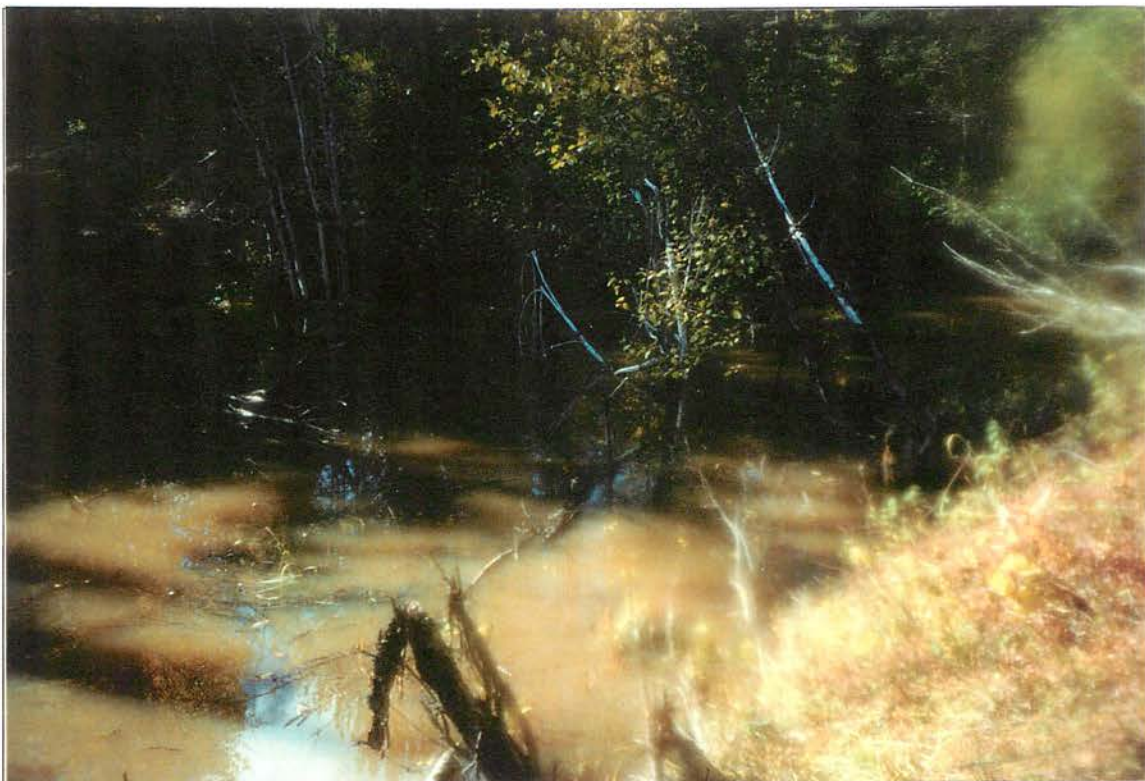
FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
3.0	093M.029	1204	621

COMMENTS	
Section	Comments
SITE CARD	Area has been flooded by extensive beaver use. Potential overwintering in upstream wetland.



Site #621, Flooded area.
Roll #63, Frame #11, Date: 2002/09/26



Site #621, Flooded area.
Roll #63, Frame #12, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1214

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1214		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.667001.6128454				Sample Type: Biased			
Length (km): 1.08		Coupling: Partially Couple		Magnitude: 4		BGC Zone: SBS			
Gradient (%): 4.0		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 840		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 622		Field UTM 9.666580.6128280		Agency: C172		Crew: JH/SH		Date: 2002/09/26	
Site Length (m): 120		GIS UTM 9.666638.6128398		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes: ☐		Channel Width (m): 1.20		1		1.5	
Stage: Low ☒				Wetted Width (m): 0.27		0.100		0.5	
Med ☐				Bankfull Depth (m): 0.20		0.2		0.2	
High ☐		Temp (C): 7		pH: 7.6		Conductivity: 100			
								Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 10.00		Bars: Non ☐		Side ☒		Diagonal ☐	
Subdominant: Cobble		D (cm): 10.00						Mid-channel ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Partially Coupled				INDICATORS		B2		B3	
Confinement: Occasionally Confine						D1		D2	
Morphology: RP Riffle Pool						D3			
				C1		C2		C3	
				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Moderate		Type: SWD		LWD		B		U	
LWD: None		Amount: S		T		N		N	
LWD Dist: Not Applicable		Location: P/S/O: ☒		☒		☐		☐	
								FSZ: ☐	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Deciduous		Stage: Pole-sapling stage						Crown Closure 1-20%	
Left Bank: Rip.Veg:		Stage: Pole-sapling stage						Instream Veg: None ☒	
								Algae ☐	
								Moss ☐	
								Vascular ☐	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
622	EF	1	120	150 sec	500	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1214 Site # 622

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): BABINE RIVER
Project Watershed Code: 480-000000-00000-00000-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1214 NID Map #: 093M.029 NID #: 50622 Reach #: 1.0 Site #: 622
Field UTM (Z.E.N): 9.666580.6128280 Method: GPU Site Lg: 120 Method: MAP Access: H
GIS UTM (Z.E.N): 9.666638.6128398 Ref. Name:
Date: 2002/09/26 Time: 14:00 Agency: C172 Crew: JH/SH Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	1.20	1.00	1.00	1.10	1.50	1.40					1.20	Method I:	1.0	2.0	C	2.00
Wetted Width (m):	T	0.30	0.40	0.20	0.10	0.50	0.10					0.27	Method II:	3.0		C	
Pool Depth (m):	T	0.10	0.10	0.10	0.10							0.10					

Wb Depth: .2 .2 .2 Avg: 0.20 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribes: ☐

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	T	N	N	N	D	N
Loc: P/S/O:	☒	☒	☐	☐	☐	☒	☐

LWD: N

DIST: NA

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 100 Method: S3
pH: 7.6 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 10.0 D (cm): 10.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: OC
FSZ: ☐ Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None observed.
Rearing Habitat	Low - small pools.
Spawning Habitat	Low - small patches of gravels only mostly cobble / boulder.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 13	STD	U	Upstream photo of habitat within site.
R: 63 F: 14	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093M.029	1214	622

COMMENTS	
Section	Comments
CHANNEL	Fish observed rising in downstream lake.
CHANNEL	NFC

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1214

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 480-000000-00000-00000-0000-000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.029		ILP #: 1214		Reach #: 1 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/26		To:		2002/09/26		Agency: C172		Crew: JH/SH		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
622	093M.029	50672				GPU EF 1	7	100	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
622	EF	1	1	2002/09/26	13:50	2002/09/26	14:30										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
622	EF	1	1	O	150	120.0	1.0	500	I	5	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
622	EF	1	1	NFC		0											



Site #622, Upstream photo of habitat within site.
Roll #63, Frame #13, Date: 2002/09/26



Site #622, Downstream photo of habitat within site.
Roll #63, Frame #14, Date: 2002/09/26

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 4.0 ILP Map # 093M.029 ILP # 1119

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1119		
REACH									
Reach #: 4.0		UTM(Zone/East/North): 9.677330.6121422				Sample Type: Biased			
Length (km): 1.06		Coupling: Partially Couple		Magnitude: 2		BGC Zone: SBS			
Gradient (%): 3.8		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 1000		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 623		Field UTM 9.677229.6121840		Agency: C172		Crew: JH/SH		Date: 2002/09/26	
Site Length (m): 150		GIS UTM 9.677211.6121762		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes: ☐		Channel Width (m): 0.75		0		0	
Stage: Low ☐				Wetted Width (m): 0.85		0		0	
Med ☒				Bankfull Depth (m): 0.00		0		0	
High ☐		Temp (C): 7		pH: 7.6		Conductivity: 80			
						Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 12.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 2.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Partially Coupled				INDICATORS		B2		B3	
Confinement: Frequently Confined						D1		D2	
Morphology: RP Riffle Pool						D3			
				C1		C2		C3	
				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: None		Amount: T		S		N		T	
LWD Dist: Not Applicable		Location: P/S/O: ☒		☒		☐		☒	
								FSZ: ☐	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest		Stage: Mature forest		Instream Veg: None ☐		Algae ☐	
Left Bank: Rip.Veg:						Moss ☒		Vascular ☐	
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
623	EF	1	150	370 sec	600	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 4.0 ILP Map # 093M.029 ILP # 1119 Site 623

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093M.029 ILP #: 1119 NID Map #: 093M.029 NID #: 50623 Reach #: 4.0 Site #: 623
Field UTM (Z.E.N): 9.677229.6121840 Method: GPU Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 9.677211.6121762 Ref. Name:
Date: 2002/09/26 Time: 16:00 Agency: C172 Crew: JH/SH Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	0.90	0.80	0.80	0.70	0.60	0.70					0.75
Wetted Width (m):	T	0.90	0.90	0.80	0.80	0.90	0.80					0.85
Pool Depth (m):	T	0.10	0.20	0.10	0.10	0.20	0.10					0.00

	Gadient %		Mtd	Avg
Method I:	6.0	8.0	C	7.00
Method II:			C	

Wb Depth: .4 .4 .5 Avg: 0.00 Method: T Stage: L ☐ M ☒ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	N	T	N	D	N
Loc: P/S/O:	☒	☒	☐	☒	☐	☒	☐

CROWN CLOSURE
1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

LWD: N

DIST: NA

LB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: M

RIP: M

STG: MF

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 80 Method: S3
pH: 7.6 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 12.0 D (cm): 2.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None observed in site / potntial in upstream lake.
Rearing Habitat	Low - associated with small shallow pools.
Spawning Habitat	Low - potentially associated with small gravel patches.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 15	STD	U	Upstream photo of habitat within site.
R: 63 F: 16	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
4.0	093M.029	1119	623

COMMENTS	
Section	Comments
CHANNEL	Stream has been harvested to banks ~100 m downstream of site UTM.
CHANNEL	NFC

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 4.0 ILP Map # 093M.029 ILP # 1119

WATERBODY														
Gazetted Name:						Local:								
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0														
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000														
Waterbody ID:				ILP Map #: 093M.029				ILP #: 1119		Reach #: 4 -				
Project ID: 5271				Lake/Stream: S				Lake From Date:						
Fish Permit #: 145269			Date: 2002/09/26			To: 2002/09/26			Agency: C172		Crew: JH/SH		Resample: ☐	
SITE / METHOD														
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment				
623	093M.029	50623				GPU	EF 1	7	80	C				
A. GEAR SETTINGS														
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment							
623	EF	1	2002/09/26	16:00	2002/09/26	16:50								
C. ELECTROFISHER SPECIFICATIONS														
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model			
623	EF	1	1	O	370	150.0	1.0	600	I	5	SMITH ROOT	12B		
FISH SUMMARY														
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment					
623	EF	1	1	NFC		0								



Site #623, Upstream photo of habitat within site.
Roll #63, Frame #15, Date: 2002/09/26



Site #623, Downstream photo of habitat within site.
Roll #63, Frame #16, Date: 2002/09/26

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.029 ILP # 1135 Site # 625

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000

Project Code: 5271

WATERSHED

Gazetted Name: Local Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1135 NID Map #: 093M.029 NID #: 50625 Reach #: 2.0 Site #: 625
Field UTM (Z.E.N): 9.674293.6124910 Method: GPU Site Lg: 180 Method: MAP Access: H
GIS UTM (Z.E.N): 9.674100.6124805 Ref. Name: Date: 2002/09/28 Time: 09:15 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	1.20	1.20	0.90	1.10	1.20	1.50					1.18	Method I:	17.0	18.0	C	19.00
Wetted Width (m):	T	0.60	0.70	0.50	0.50	0.90	1.10					0.72	Method II:	21.0	20.0	C	
Pool Depth (m):	T	0.20	0.30	0.30	0.20	0.20	0.30					0.25					

Wb Depth: .2 .2 .2 Avg: 0.20 Method: T Stage: L ☐ M ☒ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	T	N	N	N	D	N
Loc: P/S/O:	☒	☒	☐	☐	☐	☒	☐

CROWN CLOSURE
1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

LWD: F DIST: C

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS: Req #: Temp: 7 Cond.: 210 Method: S3
pH: 7.4 Method: P2 Method: GE
Flood Signs: Rafted debris Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 50.0 D (cm): 20.00 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: OC
FSZ: ☐ Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Poor - limited by gradient and coarse substrates.
Rearing Habitat	Poor - limited by gradient and coarse substrates.
Spawning Habitat	Poor - limited by gradient and coarse substrates.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 20	STD	U	Upstream photo of habitat within site.
R: 63 F: 21	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000	Reach #	ILP Map #	ILP #	Site
	2.0	093M.029	1135	625

COMMENTS	
Section	Comments
CHANNEL	Small pitches of 20% within cutblock. Stream has been harvested to banks. 20% break at cutblock edge. NFC upstream S6 within cutblock upstream of UTM. UTM at 20% break and cutblock edge = 674325 / 6124921, Non fish bearing upstream.

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 2.0 ILP Map # 093M.029 ILP # 1135

WATERBODY													
Gazetted Name:										Local:			
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:										ILP Map #: 093M.029			
Project ID: 5271										ILP #: 1135 Reach #: 2 -			
Lake/Stream: S										Lake From Date:			
Fish Permit #: 145269 Date: 2002/09/28 To: 2002/09/28 Agency: C172 Crew: JH/DT Resample: ☐													
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
625	093M.029	50625				GPU EF 1	7	210	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
625	EF	1	2002/09/28	09:00	2002/09/28	09:40							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
625	EF	1	1	O	310	180.0	1.0	500	I	5	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
625	EF	1	1	NFC		0							



Site #625, Upstream photo of habitat within site.
Roll #63, Frame #20, Date: 2002/09/28



Site #625, Downstream photo of habitat within site.
Roll #63, Frame #21, Date: 2002/09/28

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #
5.0 093M.029 1150

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1150		
REACH									
Reach #: 5.0		UTM(Zone/East/North): 9.670700.6127666				Sample Type: Biased			
Length (km): 1.72		Coupling: Decoupled		Magnitude: 2		BGC Zone: SBS			
Gradient (%): 6.9		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 1019		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 626		Field UTM 9.672073.6127244		Agency: C172		Crew: JH/DT		Date: 2002/09/28	
Site Length (m): 150		GIS UTM 9.672059.6127235		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☒		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.40		0		0	
Stage: Low ☒				Wetted Width (m): 0.00		0		0	
Med ☐				Bankfull Depth (m): 0.00		0		0	
High ☐		Temp (C):		pH:		Conductivity:			
								Turbidity.: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☐	
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 30.00		Bars: Non ☒		Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐			
Subdominant: Cobble		D (cm): 5.00				Braid ☐			
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Decoupled				INDICATORS		B2		B3	
Confinement: Unconfined				C1		C2		C3	
Morphology: RP Riffle Pool				C4		C5		S1	
				C6		S2		S3	
				S4		S5			
COVER									
Total Cover: Trace		Type: SWD		LWD		B		U	
LWD: None		Amount: N		N		N		N	
LWD Dist: Not Applicable		Location: P/S/O:		P/S/O:		P/S/O:		P/S/O:	
								FSZ: ☐	
Right Bank: Shape: V - shape		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐		Crown Closure					
Left Bank: Shape: V - shape		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐		1-20%					
Right Bank: Rip.Veg: Deciduous		Stage: Pole-sapling stage							
Left Bank: Rip.Veg:		Stage: Pole-sapling stage		Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐					

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 5.0 ILP Map # 093M.029 ILP # 1150 Site # 626

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000

Project Code: 5271

WATERSHED

Gazetted Name: Local Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1150 NID Map #: 093M.029 NID #: 50626 Reach #: 5.0 Site #: 626
Field UTM (Z.E.N): 9.672073.6127244 Method: GPU Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 9.672059.6127235 Ref. Name: Date: 2002/09/28 Time: 10:00 Agency: C172 Crew: JH/DT Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	1.00	1.10	2.00	1.50	1.60	1.20					1.40
Wetted Width (m):	MS											0.00
Pool Depth (m):	MS											0.00

	Gadient %	Mtd	Avg
Method I:	1.0	1.0	C
Method II:			C

Wb Depth: .2 .3 .2 Avg: 0.00 Method: T Stage: L ☒ M ☐ H ☐

No Vis.Ch.: ☐ Intermittent: ☒ Dw: ☐ Tribs.: ☐

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	D	N
Loc: P/S/O:	☐	☐	☐	☐	☐	☒	☐

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

LWD: N DIST: NA

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS:
Temp:
pH:
Flood Signs: None

Method: T4
Method: P2
Method: GE

Req #:
Cond.: Method: S3
Turb.: T ☐ M ☐ L ☐ C ☐ Method: GE

MORPHOLOGY

Bed Material: Dominant: G Subdom: C
D95: 30.0 D (cm): 5.00 Morph: RP
Pattern: SI
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐

O1 B1 B2 B3 D1 D2 D3
☐ ☐ ☐ ☐ ☐ ☐ ☐
DISTURBANCE INDICATORS
C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None observed.
Rearing Habitat	Low - during flow periods only.
Spawning Habitat	Gravels only, during flow periods only.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 22	STD	U	Habitat within stream at time of sampling.
R: 63 F: 23	STD	D	Habitat within stream at time of sampling.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
5.0	093M.029	1150	626

COMMENTS	
Section	Comments
CHANNEL	Stream has been dry all summer - full of gravels. Inferred fish bearing, no barriers.



Site #626, Habitat within stream at time of sampling.
Roll #63, Frame #22, Date: 2002/09/28



Site #626, Habitat within stream at time of sampling.
Roll #63, Frame #23, Date: 2002/09/28

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 6.0 ILP Map # 093M.029 ILP # 1155

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1155		
REACH									
Reach #: 6.0		UTM(Zone/East/North): 9.674674.6131513				Sample Type: Biased			
Length (km): 2.83		Coupling: Partially Couple		Magnitude: 17		BGC Zone: SBS			
Gradient (%): 2.1		Confinement: Entrenched		Order: 3		Open water: Absent			
US Elev (m): 1000		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 627		Field UTM 9.674700.6128870		Agency: C172		Crew: JH/DT		Date: 2002/09/28	
Site Length (m): 100		GIS UTM 9.674713.6128830		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 2.68		2.200		3.400	
Stage: Low ☐				Wetted Width (m): 1.73		1.5		2	
Med ☒				Bankfull Depth (m): 0.53		0.5		0.6	
High ☐									
Temp (C): 7		pH: 7.4		Conductivity: 80					
				Avg		Min		Max	
				Gradient %: 2.50		2		3	
				Pool Depth (m): 0.37		0.300		0.5	
				Turbidity: Turbid ☐		Low ☐			
				Moderate ☐		Clear ☒			
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 50.00		Bars: Non ☐		Side ☒		Diagonal ☐	
Subdominant: Cobble		D (cm): 20.00						Mid-channel ☐	
Channel Pattern: Sinuous		Islands: None						Span ☐	
Coupling: Partially Coupled								Braid ☐	
Confinement: Occasionally Confine									
Morphology: RP Riffle Pool									
				DISTURBANCE INDICATORS		O1		B1	
						B2		B3	
						D1		D2	
						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: None		Amount: T		D		N		T	
LWD Dist: Not Applicable		Location: P/S/O: ☒		☒		☐		☒	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Mixed C/D								Rock ☐	
Left Bank: Rip.Veg:								Manmade ☐	
								Crown Closure 1-20%	
								Stage: Mature forest	
								Instream Veg: None ☐	
								Algae ☐	
								Moss ☒	
								Vascular ☐	
FEATURES									
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)
093M.029	90991	BD	1.0	GE	30	GE	R: 64 F: 2A L:	#:	9.674712.6128
Comments: Series of BD at confluence with tributary.									

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 6.0 ILP Map # 093M.029 ILP # 1155 Site # 627

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1155 NID Map #: 093M.029 NID #: 50627 Reach #: 6.0 Site #: 627
Field UTM (Z.E.N): 9.674700.6128870 Method: GPU Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.674713.6128830 Ref. Name:
Date: 2002/09/28 Time: 11:20 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	2.70	2.20	2.50	3.40	3.10	2.20					2.68	Method I:	3.0	2.0	C	2.50
Wetted Width (m):	T	1.50	1.60	2.00	1.90	1.70	1.70					1.73	Method II:			C	
Pool Depth (m):	T	0.40	0.30	0.30	0.30	0.40	0.50					0.37					

Wb Depth: .5 .6 .5 Avg: 0.53 Method: T Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	N	T	T	S	N
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☐

LWD: N DIST: NA

LB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 80 Method: S3
pH: 7.4 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 50.0 D (cm): 20.00 Morph: RP
Pattern: SI DISTURBANCE INDICATORS
Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Coupling: PC
Confinement: OC
FSZ: ☐ Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093M.029	90991	BD	1.0	GE	30	GE	R: 64 F: 2A L:	#:	9.674712.6128855	GIS

Comments: Series of BD at confluence with tributary.

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Potential in some of the pools observed.
Rearing Habitat	Moderate - associated with pools/ cover.
Spawning Habitat	Moderate - abundant gravels - moderate cover for adults.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
6.0	093M.029	1155	627

PHOTOS					
Photo			Foc Lg	Dir	Comments
R:	64	F: 0A	STD	U	Riffle / pool habitat within site.
R:	64	F: 1A	STD	D	Riffle / pool habitat within site.
R:	64	F: 2A	STD	U	Series of beaver dams.
COMMENTS					
Section			Comments		
CHANNEL			Beaver dams at confluence with tributary.		

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 6.0 ILP Map # 093M.029 ILP # 1155

WATERBODY															
Gazetted Name:										Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:				ILP Map #: 093M.029				ILP #: 1155		Reach #: 6 -					
Project ID: 5271				Lake/Stream: S				Lake From Date:							
Fish Permit #:		145269		Date: 2002/09/28		To: 2002/09/28		Agency: C172		Crew: JH/DT		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
627	093M.029	50627				GPU EF 1	7	80	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
627	EF	1	2002/09/28	11:20	2002/09/28	12:00									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
627	EF	1	1	O	280	100.0	3.0	600	I	5	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
627	EF	1	1	RB	A	3+	2	110	110	R					
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#			Str/Smpl#				
627	EF	1	1	RB	110		U	U							
627	EF	1	1	RB	110		U	U							



Site #627, Riffle / pool habitat within site.
Roll #64, Frame #0A, Date: 2002/09/28



Site #627, Riffle / pool habitat within site.
Roll #64, Frame #1A, Date: 2002/09/28



Site #627, Series of beaver dams.
Roll #64, Frame #2A, Date: 2002/09/28

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1158

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1158		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.674933.6129100				Sample Type: Biased			
Length (km): .32		Coupling: Partially Couple		Magnitude: 3		BGC Zone: SBS			
Gradient (%): 14.7		Confinement: Frequently Confin		Order: 2		Open water: Absent			
US Elev (m): 980		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 628		Field UTM ..		Agency: C172		Crew: JH/DT		Date: 2002/09/28	
Site Length (m): 100		GIS UTM 9.674777.6128943		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.58		1.200		1.8	
Stage: Low ☒				Wetted Width (m): 0.83		0.600		1	
Med ☐				Bankfull Depth (m): 0.43		0.3		0.5	
High ☐		Temp (C): 7		pH: 7.6		Conductivity: 80			
								Turbidity.: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 50.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 7.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Partially Coupled						B2		B3	
Confinement: Occasionally Confin						D1		D2	
Morphology: CP Cascade Pool						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: S		S		N		T	
LWD Dist: Clumped		Location: P/S/O:		☒		☒		☒	
				☒		☒		☒	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest		Instream Veg: None ☒		Algae ☐		Moss ☐	
Left Bank: Rip.Veg:		Stage: Mature forest				Vascular ☐			
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
628	EF	1	100	280 sec	500	NFC	0		

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #	Site
1.0	093M.029	1158	628

PROJECT

Project Code: 5271

WATERSHED	
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Gazetted Name:			Local Name:		
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					
ILP Map#: 093M.029	ILP #: 1158	NID Map #: 093M.029	NID #: 50628	Reach #: 1.0	Site #: 628
Field UTM (Z.E.N): ..	Method:		Site Lg: 100	Method: MAP	Access: H
GIS UTM (Z.E.N): 9.674777.6128943			Ref. Name:		
Date: 2002/09/28	Time: 12:00	Agency: C172	Crew: JH/DT	Fish Crd?: ☒	Incomplete: ☐

CHANNEL	
---------	--

No Vis.Ch.: ☐ Intermittent: ☐
Dw.: ☐ Tribs.: ☐

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

STG: MF

	WATER	
--	-------	--

Req #:
 Cond.: 80 Method: S3
 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE

	MORPHOLOGY
--	------------

	O1	B1	B2	B3	D1	D2	D3					
DISTURBANCE INDICATORS	☐	☐	☐	☐	☐	☐	☐					
	C1	C2	C3	C4	C5	S1	S2	S3	S4	S5		
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY	
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
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77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

Name	Comments
Overwinter Habitat	none observed.
Rearing Habitat	Low - associated with small pool / cover.
Spawning Habitat	Low - limited by coarse substrates and small shallow pools.

PHOTOS

Photo				Foc Lg	Dir	Comments
R:	64	F:	3A	STD	U	Upstream photo of small pool with root wad.
R:	64	F:	4A	STD	D	Riffle / pool section.



Site #628, Upstream photo of small pool with root wad.
Roll #64, Frame #3A, Date: 2002/09/28



Site #628, Riffle / pool section.
Roll #64, Frame #4A, Date: 2002/09/28

FDIS Reach Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 5.0 ILP Map # 093M.029 ILP # 1155

PROJECT									
Project Name: Babine and Tochcha					Project Code: 5271				
Stream Name (gaz.): SAKENICHE RIVER									
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000									
WATERSHED									
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000									
ILP Map #: 093M.029	ILP #: 1155	Reach #: 5.0	NID Map #: 093M.029		NID #: 10531				
Air Photos		Names		UTM(Zone/East/North/Method)					
LINE: BCB910236		Gaz.:		9.674716.6128782 GIS					
#: 0		Local:		Sample Type: B		Wetland: ☐			
SURVEY INFO									
Date: 2002/08/26			Agency: C172			Crew: SG/JD			
ATTRIBUTES									
Length (km): 5.53	Gradient: 0.36	Setting: VF	DISTURBANCE INDICATORS						
DS Elev.: 920	Order: 3	Open water: A	O1	B1	B2	B3	D1	D2	D3
US Elev: 940	Magnitude: 18	Confinement: OC	☐	☐	☐	☐	☐	☐	☐
	BGC Zone: SBS	Coupling: PC	C1	C2	C3	C4	C5	S1	S2
			☐	☐	☐	☐	☐	☐	☐
Valley Flat: R	C/D: C	Islands: N							
Active Floodplain Visible: ☐	Est. Width:	Bars: ☒ N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR							
Channel Pattern: SI		Mass Movement: L	Exposed/Eroded: NS						
		Riparian Veg.: NS	Landuse: NS						

MAPS		
Map Type	Map #	Year
TRIM	093M.029	1983

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
5.0	093M.029	1155

WATERBODY															
Gazetted Name:										Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000															
Waterbody ID:					ILP Map #: 093M.029					ILP #:		1155		Reach #:	5 -
Project ID: 5271					Lake/Stream: S					Lake From Date:					
Fish Permit #:		145269		Date: 2002/09/28		To: 2002/09/28		Agency: C172		Crew: JH/DT		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
629	093M.029	50629				GPU EF 1	7	80	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
629	EF 1	1	2002/09/28	12:20	2002/09/28	12:50									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO		H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model			
629	EF	1	1	O	230	100.0	1.0	500	I	5	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO		H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment					
629	EF	1	1	RB	A	3+	2	120 130	R						
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#/Age			Str/Smpl#				
629	EF	1	1	RB	120	U	U								
629	EF	1	1	RB	130	U	U								



Site #629, Rainbow trout captured at site.
Roll #64, Frame #5A, Date: 2002/09/28

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #

6.0 093M.029 1155

SITE																																														
Site #: 630		Field UTM 9.674740.6130970		Agency: C172		Crew: JH/DT		Date: 2002/09/28																																						
Site Length (m): 100		GIS UTM 9.674777.6130965		Agency Name: Triton Environmental Consultants (Terrace)																																										
CHANNEL																																														
No Vis.Ch.: ☒		Intermittent: ☐																																												
Dewatered: ☐		Tribes: ☐																																												
Stage: Low ☐				<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th></th> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Channel Width (m):</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Wetted Width (m):</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Bankfull Depth (m):</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> </table>					Avg	Min	Max	#	Channel Width (m):	0.00	0	0	0	Wetted Width (m):	0.00	0	0	0	Bankfull Depth (m):	0.00	0	0	0	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th></th> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Gradient %:</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Pool Depth (m):</td> <td>0.00</td> <td>0</td> <td>0</td> <td>0</td> </tr> </table>					Avg	Min	Max	#	Gradient %:	0.00	0	0	0	Pool Depth (m):	0.00	0	0	0
	Avg	Min	Max	#																																										
Channel Width (m):	0.00	0	0	0																																										
Wetted Width (m):	0.00	0	0	0																																										
Bankfull Depth (m):	0.00	0	0	0																																										
	Avg	Min	Max	#																																										
Gradient %:	0.00	0	0	0																																										
Pool Depth (m):	0.00	0	0	0																																										
Med ☐								Turbidity: Turbid ☐ Low ☐																																						
High ☐								Moderate ☐ Clear ☐																																						
Temp (C):		pH:		Conductivity:																																										
MORPHOLOGY																																														
Bed Material: Dominant:		D95 (cm):		Bars: Non ☐		Side ☐		Diagonal ☐		Mid-channel ☐																																				
Subdominant:		D (cm):								Span ☐																																				
Channel Pattern:		Islands:		DISTURBANCE INDICATORS		O1 ☐		B1 ☐		B2 ☐																																				
Coupling:						B3 ☐		D1 ☐		D2 ☐																																				
Confinement:						D3 ☐																																								
Morphology:						C1 ☐		C2 ☐		C3 ☐																																				
						C4 ☐		C5 ☐		S1 ☐																																				
						S2 ☐		S3 ☐		S4 ☐																																				
						S5 ☐																																								
COVER																																														
Total Cover:		Type:		SWD		LWD		B		U																																				
LWD:		Amount:																																												
LWD Dist:		Location: P/S/O:		☐		☐		☐		☐																																				
Right Bank: Shape:		Texture: Fines ☐		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☐																																				
Left Bank: Shape:		Texture: Fines ☐		Gravel ☐		Cobble ☐		Boulder ☐		Rock ☐																																				
Right Bank: Rip.Veg:		Stage:								Manmade ☐																																				
Left Bank: Rip.Veg:		Stage:								Crown Closure ☐																																				
										Instream Veg: None ☐																																				
										Algae ☐																																				
										Moss ☐																																				
										Vascular ☐																																				
FISH																																														
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																																					
627	EF	1	100	280 sec	600	RB	2	110	110																																					

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 6.0 ILP Map # 093M.029 ILP # 1155 Site 630

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Local Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1155 NID Map #: 093M.029 NID #: 50630 Reach #: 6.0 Site #: 630
Field UTM (Z.E.N): 9.674740.6130970 Method: GPU Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.674777.6130965 Ref. Name: Date: 2002/09/28 Time: 13:00 Agency: C172 Crew: JH/DT Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS											0.00	Method I:		C	0.00
Wetted Width (m):	MS											0.00	Method II:		C	
Pool Depth (m):	MS											0.00				

Wb Depth: Avg: 0.00 Method: MS Stage: L ☐ M ☐ H ☐ No Vis.Ch.: ☒ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	☐	☐	☐	☐	☐	☐	☐

CROWN CLOSURE

INSTREAM VEG: N ☐ A ☐ M ☐ V ☐

LWD: DIST:

LB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RIP:

RIP:

STG:

STG:

WATER

EMS: Req #: Temp: Method: T4 Cond.: Method: S3 pH: Method: P2 Turb.: T ☐ M ☐ L ☐ C ☐ Method: GE Flood Signs: Method: GE

MORPHOLOGY

Bed Material: Dominant: Subdom: O1 B1 B2 B3 D1 D2 D3
D95: D (cm): Morph: DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Pattern: Islands: Coupling: Confinement: FSZ: ☐ Bars: N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None.
Rearing Habitat	None.
Spawning Habitat	None.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 64 F: 6A	STD	D	Willow swale with seasonally flooded channel.
R: 64 F: 7A	STD	D	Sedge platform within channel.

FDIS Site Card

Tochcha Lake Planning Area

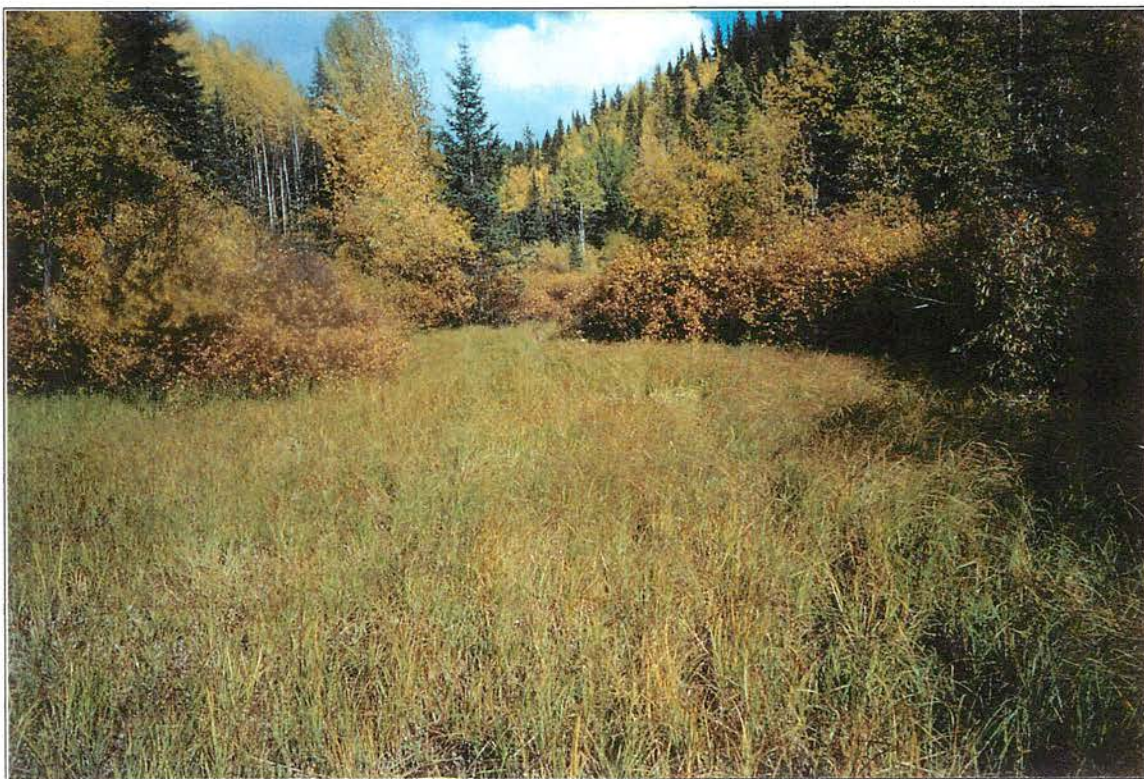
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
6.0	093M.029	1155	630

COMMENTS	
Section	Comments
SITE CARD	Access through sedge platform unlikely - seasonally flooded.
SITE CARD	Seasonally flooded, willow swale / wetland. Beaver activity at outlet created sedge platform. No barriers observed to site location.
SITE CARD	Wetland - NVC



Site #630, Willow swale with seasonally flooded channel.
Roll #64, Frame #6A, Date: 2002/09/28



Site #630, Sedge platform within channel.
Roll #64, Frame #7A, Date: 2002/09/28

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 8.0 ILP Map # 093M.029 ILP # 1155

STREAM REFERENCING																																												
Gazetted Name:						Local Name:																																						
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000						ILP Map #: 093M.029		ILP #: 1155																																				
REACH																																												
Reach #: 8.0		UTM(Zone/East/North): 9.676158.6132004				Sample Type: Biased																																						
Length (km): .87		Coupling: Coupled		Magnitude: 5		BGC Zone: SBS																																						
Gradient (%): 13.8		Confinement: Confined		Order: 2		Open water: Absent																																						
US Elev (m): 1200		Islands: NONE		Riparian Vegetation: Mixed C/D																																								
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																												
SITE																																												
Site #: 631		Field UTM 9.675920.6131925		Agency: C172		Crew: JH/DT		Date: 2002/09/28																																				
Site Length (m): 200		GIS UTM 9.675825.6131969		Agency Name: Triton Environmental Consultants (Terrace)																																								
CHANNEL																																												
No Vis.Ch.: ☐		Intermittent: ☐		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Channel Width (m):</td> <td>2.32</td> <td>2</td> <td>2.5</td> <td>6</td> </tr> <tr> <td>Wetted Width (m):</td> <td>1.72</td> <td>1.600</td> <td>1.9</td> <td>6</td> </tr> <tr> <td>Bankfull Depth (m):</td> <td>0.53</td> <td>0.5</td> <td>0.6</td> <td>3</td> </tr> </table>				Avg	Min	Max	#	Channel Width (m):	2.32	2	2.5	6	Wetted Width (m):	1.72	1.600	1.9	6	Bankfull Depth (m):	0.53	0.5	0.6	3	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> <tr> <td>Gradient %:</td> <td>18.00</td> <td>17</td> <td>19</td> <td>3</td> </tr> <tr> <td>Pool Depth (m):</td> <td>0.45</td> <td>0.400</td> <td>0.5</td> <td>6</td> </tr> </table>				Avg	Min	Max	#	Gradient %:	18.00	17	19	3	Pool Depth (m):	0.45	0.400	0.5	6
Avg	Min	Max	#																																									
Channel Width (m):	2.32	2	2.5	6																																								
Wetted Width (m):	1.72	1.600	1.9	6																																								
Bankfull Depth (m):	0.53	0.5	0.6	3																																								
Avg	Min	Max	#																																									
Gradient %:	18.00	17	19	3																																								
Pool Depth (m):	0.45	0.400	0.5	6																																								
Dewatered: ☐		Tribes.: ☐																																										
Stage: Low ☒		Temp (C): 7		pH: 7.6		Conductivity: 80		Turbidity.: Turbid ☐ Low ☐																																				
Med ☐								Moderate ☐ Clear ☒																																				
High ☐																																												
MORPHOLOGY																																												
Bed Material: Dominant: Cobble		D95 (cm): 70.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐																																		
Subdominant: Gravels		D (cm): 20.00				Span ☐		Braid ☐																																				
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS																																								
Coupling: Coupled				<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td>O1</td><td>B1</td><td>B2</td><td>B3</td><td>D1</td><td>D2</td><td>D3</td> </tr> <tr> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> </table>								O1	B1	B2	B3	D1	D2	D3	☐	☐	☐	☐	☐	☐	☐																			
O1	B1	B2	B3	D1	D2	D3																																						
☐	☐	☐	☐	☐	☐	☐																																						
Confinement: Confined				<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td>C1</td><td>C2</td><td>C3</td><td>C4</td><td>C5</td><td>S1</td><td>S2</td><td>S3</td><td>S4</td><td>S5</td> </tr> <tr> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> </table>								C1	C2	C3	C4	C5	S1	S2	S3	S4	S5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐													
C1	C2	C3	C4	C5	S1	S2	S3	S4	S5																																			
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																																			
Morphology: CP Cascade Pool																																												
COVER																																												
Total Cover: Abundant		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Type:</th> <th>SWD</th> <th>LWD</th> <th>B</th> <th>U</th> <th>DP</th> <th>OV</th> <th>IV</th> </tr> <tr> <th>Amount:</th> <td>S</td> <td>S</td> <td>T</td> <td>T</td> <td>D</td> <td>N</td> <td>N</td> </tr> </table>										Type:	SWD	LWD	B	U	DP	OV	IV	Amount:	S	S	T	T	D	N	N																	
Type:	SWD	LWD	B	U	DP	OV	IV																																					
Amount:	S	S	T	T	D	N	N																																					
LWD: Few		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <th>Location: P/S/O:</th> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </table>										Location: P/S/O:	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐																						
Location: P/S/O:	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐																																		
LWD Dist: Clumped		FSZ: ☐																																										
Right Bank: Shape: Undercut		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐																																		
Left Bank: Shape: Undercut		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐																																		
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest								Crown Closure 21-40%																																		
Left Bank: Rip.Veg:		Stage: Mature forest								Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐																																		
FISH																																												
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																																			
631	EF	1	180	430 sec	500	NFC	0																																					

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 8.0 ILP Map # 093M.029 ILP # 1155 Site 631

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
Local Name:
ILP Map#: 093M.029 ILP #: 1155 NID Map #: 093M.039 NID #: 50631 Reach #: 8.0 Site #: 631
Field UTM (Z.E.N): 9.675920.6131925 Method: GPU Site Lg: 200 Method: GE Access: H
GIS UTM (Z.E.N): 9.675825.6131969 Ref. Name:
Date: 2002/09/28 Time: 13:30 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	2.40	2.50	2.00	2.20	2.40	2.40					2.32	Method I:	18.0	17.0	C	18.00
Wetted Width (m):	T	1.90	1.60	1.80	1.70	1.60	1.70					1.72	Method II:	19.0		C	
Pool Depth (m):	T	0.40	0.40	0.50	0.40	0.50	0.50					0.45					

Wb Depth: .5 .5 .6 Avg: 0.53 Method: T Stage: L ☒ M ☐ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	S	T	T	D	N	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☐	☐

LWD: F DIST: C

LB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 80 Method: S3
pH: 7.6 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: Rafted debris Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 70.0 D (cm): 20.0 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: CO
Confinement: CO
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Potential in some pools.
Rearing Habitat	Moderate - associated with pools, cover, LWD, D95.
Spawning Habitat	Low - associated with gravels, pools, cover.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 64 F: 10A	STD	U	0.9 / 2 m cascade - bedrock.
R: 64 F: 8A	STD	U	Upstream towards 1.5 / 1.5 m cascade.
R: 64 F: 9A	STD	D	Downstream through high gradient section.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
8.0	093M.029	1155	631

COMMENTS	
Section	Comments
CHANNEL	1.5 / 1.5 m cascade. Cascade is sketchy with some resting within. 0.9 / 2 m cascade bedrock.
CHANNEL	Pine flat between this reach and 1155 with no visible connection.
CHANNEL	Unable to determine exact drainage pattern downstream . Stream looks to flow into 1173 (Reach 5).

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 8.0 ILP Map # 093M.029 ILP # 1155

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.029		ILP #: 1155		Reach #: 8 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/28		To:		2002/09/28		Agency: C172		Crew: JH/DT		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment						
631	093M.039	50631				GPU	EF	1	7	80	C						
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
631	EF	1	1	2002/09/28	13:30	2002/09/28	14:10										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
631	EF	1	1	O	430	180.0	2.5	500	I	5	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
631	EF	1	1	NFC		0											



Site #631, Upstream towards 1.5 / 1.5 m cascade.
Roll #64, Frame #8A, Date: 2002/09/28



Site #631, Downstream through high gradient section.
Roll #64, Frame #9A, Date: 2002/09/28



Site #631, 0.9 / 2 m cascade - bedrock.
Roll #64, Frame #10A, Date: 2002/09/28

FDIS Reach Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 4.0 ILP Map # 093M.039 ILP # 1022

PROJECT									
Project Name: Babine and Tochcha					Project Code: 5271				
Stream Name (gaz.): SAKENICHE RIVER									
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000									
WATERSHED									
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000									
ILP Map #: 093M.039	ILP #: 1022	Reach #: 4.0	NID Map #: 093M.039		NID #: 10075				
Air Photos		Names			UTM(Zone/East/North/Method)				
LINE: BCB910236	Gaz.:				9.671581.6134925 GIS				
#: 0	Local:				Sample Type: B Wetland: ☐				
SURVEY INFO									
Date: 2002/08/26			Agency: C172			Crew: SG/JD			
ATTRIBUTES									
Length (km): 1.96	Gradient: 4.08	Setting: VW	DISTURBANCE INDICATORS						
DS Elev.: 900	Order: 4	Open water: A	O1	B1	B2	B3	D1	D2	D3
US Elev: 980	Magnitude: 21	Confinement: OC	C1	C2	C3	C4	C5	S1	S2
	BGC Zone: SBS	Coupling: PC						S3	S4
Valley Flat: N	C/D:	Islands: N						S5	
Active Floodplain Visible: ☐	Est. Width:	Bars: ☒ N ☐ SIDE ☐ DIAG	☐ MID		☐ SPAN		☐ BR		
Channel Pattern: SI		Mass Movement: L	Exposed/Eroded: NS		Landuse: NS				
		Riparian Veg.: NS							

MAPS		
Map Type	Map #	Year
TRIM	093M.039	1983

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach # 4.0
ILP Map # 093M.039
ILP # 1022

WATERBODY											
Gazetted Name:						Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0											
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000											
Waterbody ID:				ILP Map #: 093M.039				ILP #: 1022		Reach #: 4 -	
Project ID: 5271				Lake/Stream: S				Lake From Date:			
Fish Permit #:		145269		Date: 2002/09/28		To: 2002/09/28		Agency: C172		Crew: JH/DT	
											Resample: ☐

SITE / METHOD												
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment	
632	093M.039	50632	9	617385	6134500	GPU	EF	1	8	90	C	

A. GEAR SETTINGS							
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
632	EF 1	1	2002/09/28	14:30	2002/09/28	15:10	

C. ELECTROFISHER SPECIFICATIONS											
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
632	EF 1	1	O	450	100.0	4.0	500	I	5	SMITH ROOT	12B

FISH SUMMARY									
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
632	EF 1	1	RB	F	0+	5	40 40	R	
632	EF 1	1	RB	J	2+	5	70 80	R	

INDIVIDUAL FISH DATA																	
Site#	MTD/NO		H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
									Str/Smpl#/Age				Str/Smpl#				
632	EF	1	1	RB	70		U	U									
632	EF	1	1	RB	70		U	U									
632	EF	1	1	RB	70		U	U									
632	EF	1	1	RB	70		U	U									
632	EF	1	1	RB	80		U	U									
632	EF	1	1	RB	40		U	U									
632	EF	1	1	RB	40		U	U									
632	EF	1	1	RB	40		U	U									
632	EF	1	1	RB	40		U	U									
632	EF	1	1	RB	40		U	U									

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #

1.0 093M.039 1056

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.039		ILP #: 1056		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.670792.6132697				Sample Type: Biased			
Length (km): .45		Coupling: Decoupled		Magnitude: 17		BGC Zone: SBS			
Gradient (%): 1.3		Confinement: Unconfined		Order: 3		Open water: Absent			
US Elev (m): 884		Islands: NONE		Riparian Vegetation: Not Specified					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 633		Field UTM ..		Agency: C172		Crew: JH/DT		Date: 2002/09/28	
Site Length (m): 100		GIS UTM 9.670708.6132573		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☒		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 0.00		0		0	
Stage: Low ☐				Wetted Width (m): 0.00		0		0	
Med ☐				Bankfull Depth (m): 0.00		0		0	
High ☐									
Temp (C):		pH:		Conductivity:		Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☐	
MORPHOLOGY									
Bed Material: Dominant:		D95 (cm):		Bars: Non ☐		Side ☐		Diagonal ☐	
Subdominant:		D (cm):				Mid-channel ☐		Span ☐	
Channel Pattern:		Islands:		DISTURBANCE INDICATORS		O1		B1	
Coupling:						B2		B3	
Confinement:						D1		D2	
Morphology:						D3			
				C1		C2		C3	
				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover:		Type:		SWD		LWD		B	
LWD:		Amount:							
LWD Dist:		Location: P/S/O:		☐		☐		☐	
Right Bank: Shape:		Texture: Fines ☐		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape:		Texture: Fines ☐		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg:		Stage:							
Left Bank: Rip.Veg:		Stage:							
		Instream Veg: None ☐		Algae ☐		Moss ☐		Vascular ☐	

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.039 ILP # 1056 Site # 633

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.039 ILP #: 1056 NID Map #: 093M.039 NID #: 50633 Reach #: 1.0 Site #: 633
Field UTM (Z.E.N): ... Method: Site Lg: 100 Method: GE Access: H
GIS UTM (Z.E.N): 9.670708.6132573 Ref. Name:
Date: 2002/09/28 Time: 15:20 Agency: C172 Crew: JH/DT Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):												0.00	Method I:			0.00
Wetted Width (m):												0.00	Method II:			
Pool Depth (m):												0.00				

Wb Depth: Avg: 0.00 Method: MS Stage: L ☐ M ☐ H ☐ No Vis.Ch.: ☒ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	☐	☐	☐	☐	☐	☐	☐

CROWN CLOSURE

INSTREAM VEG: N ☐ A ☐ M ☐ V ☐

LWD: DIST:

LB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RIP:

RIP:

STG:

STG:

WATER

EMS: Req #: Method: Cond.: Method:
Temp: Method: Turb.: T ☐ M ☐ L ☐ C ☐ Method: GE
pH: Method:
Flood Signs: Method:

MORPHOLOGY

Bed Material: Dominant: Subdom: O1 B1 B2 B3 D1 D2 D3
D95: D (cm): Morph: DISTURBANCE INDICATORS
Pattern: C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: ☐
Coupling: ☐
Confinement: Bars: N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐
FSZ: ☐

COMMENTS

Section	Comments
SITE CARD	Seasonally flooded depressions. NCD characteristics. No channel connection at confluence observed from air.
SITE CARD	Wetland - NVC
SITE CARD	No photos taken.

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 13.0 ILP Map # 093M.039 ILP # 1022

WATERBODY															
Gazetted Name:										Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000															
Waterbody ID:										ILP Map #: 093M.039		ILP #: 1022		Reach #: 13 -	
Project ID: 5271										Lake/Stream: W		Lake From Date:			
Fish Permit #:		145269		Date: 2002/09/28		To: 2002/09/28		Agency: C172		Crew: JH/DT		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
634	093M.039	50634				GPU EF 1	7	60	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
634	EF 1	1	2002/09/28	15:45	2002/09/28	16:30									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
634	EF 1	1	O	330	100.0	5.0	800	I	5	SMITH ROOT	12B				
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
634	EF 1	1	NFC			0									

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.039 ILP # 1079

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.039		ILP #: 1079		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.671671.6135322				Sample Type: Biased			
Length (km): .07		Coupling: Decoupled		Magnitude: 6		BGC Zone: SBS			
Gradient (%): 5.7		Confinement: Occasionally Conf		Order: 3		Open water: Absent			
US Elev (m): 983		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 635		Field UTM 9.671740.6135245		Agency: C172		Crew: JH/DT		Date: 2002/09/28	
Site Length (m): 100		GIS UTM 9.671656.6135285		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		1.19		0.800	
Stage: Low ☐				Wetted Width (m):		1.07		0.5	
Med ☒				Bankfull Depth (m):		0.33		0.3	
High ☐									
Temp (C): 7		pH: 7.6		Conductivity: 80		Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 1.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Not Applicable		D (cm): 1.00				Mid-channel ☐		Span ☐	
Channel Pattern: Irregular, Wandering		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Decoupled						B2		B3	
Confinement: Unconfined						D1		D2	
Morphology: RP Riffle Pool						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: None		Amount: N		N		N		T	
LWD Dist: Not Applicable		Location: P/S/O:		☐		☐		☒	
				☐		☐		☐	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Deciduous		Stage: Pole-sapling stage		Instream Veg: None ☐		Algae ☐		Moss ☐	
Left Bank: Rip.Veg:		Stage: Pole-sapling stage		Vascular ☒					
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
635	EF	1	100	220 sec	500	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.039 ILP # 1079 Site 635

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Local Name:
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.039 ILP #: 1079 NID Map #: 093M.039 NID #: 50635 Reach #: 1.0 Site #: 635
Field UTM (Z.E.N): 9.671740.6135245 Method: GPU Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.671656.6135285 Ref. Name:
Date: 2002/09/28 Time: 17:00 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	0.80	0.90	2.00	1.50	1.10	1.20	0.80				1.19	Method I:	1.0	1.0	C	1.00
Wetted Width (m):	T	0.50	0.90	2.00	1.10	1.20	0.90	0.90				1.07	Method II:			C	
Pool Depth (m):	T	0.10	0.30	0.40	0.30	0.20	0.20					0.25					

Wb Depth: .3 .3 .4 Avg: 0.33 Method: T Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	T	N	D	S
Loc: P/S/O:	☐	☐	☐	☒	☐	☒	☒

LWD: N

DIST: NA

LB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☐ V ☒

RB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS: Req #: Method: S3
Temp: 7 Cond.: 80 Method: GE
pH: 7.6 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: NA O1 B1 B2 B3 D1 D2 D3
D95: 1.00 D (cm): 1.00 Morph: RP DISTURBANCE INDICATORS
Pattern: IR C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None observed in site - present immediately downstream.
Rearing Habitat	Low - associated with shallow pools and runs.
Spawning Habitat	None - 100% fines.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 64 F: 11A	STD	U	Stream within heavy willow area.
R: 64 F: 12A	STD	D	Stream within heavy willow area.
R: 64 F: 13A	STD	U	Stream habitat at top end of site.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093M.039	1079	635

C O M M E N T S	
Section	Comments
CHANNEL	Stream has sections of piping. Potential fish access from upstream fish bearing water during flood periods. Fish stream in areas.
CHANNEL	NFC

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0
ILP Map # 093M.039
ILP # 1079

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093M.039		ILP #: 1079		Reach #: 1 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/28		To:		2002/09/28		Agency: C172		Crew: JH/DT		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment						
635	093M.039	50635				GPU	EF	1	7	80	C						
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
635	EF	1	1	2002/09/28	17:00	2002/09/28	17:40										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
635	EF	1	1	O	220	100.0	1.0	500	O	5	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
635	EF	1	1	NFC		0											



Site #635, Stream within heavy willow area.
Roll #64, Frame #11A, Date: 2002/09/28



Site #635, Stream within heavy willow area.
Roll #64, Frame #12A, Date: 2002/09/28



Site #635, Stream habitat at top end of site.
Roll #64, Frame #13A, Date: 2002/09/28

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #

5.0 093M.039 1022

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093M.039		ILP #: 1022		
REACH									
Reach #: 5.0		UTM(Zone/East/North): 9.671660.6135248				Sample Type: Biased			
Length (km): .38		Coupling: Decoupled		Magnitude: 19		BGC Zone: SBS			
Gradient (%): 0.0		Confinement: Unconfined		Order: 4		Open water: Absent			
US Elev (m): 980		Islands: NONE		Riparian Vegetation: Not Specified					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 636		Field UTM 9.671738.6135147		Agency: C172		Crew: JH/DT		Date: 2002/09/28	
Site Length (m): 100		GIS UTM 9.671671.6135226		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☒ Intermittent: ☐				Avg		Min		Max	
Dewatered: ☐ Tribs.: ☐				Channel Width (m):		0.00		0	
Stage: Low ☐				Wetted Width (m):		0.00		0	
Med ☐				Bankfull Depth (m):		0.00		0	
High ☐		Temp (C):		pH:		Conductivity:		Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☐	
MORPHOLOGY									
Bed Material: Dominant:		D95 (cm):		Bars: Non ☐ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐					
Subdominant:		D (cm):				Braid ☐			
Channel Pattern:		Islands:		DISTURBANCE INDICATORS					
Coupling:				O1 B1 B2 B3 D1 D2 D3					
Confinement:				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5					
Morphology:									
COVER									
Total Cover:		Type:		SWD		LWD		B U DP OV IV	
LWD:		Amount:							
LWD Dist:		Location: P/S/O:						FSZ: ☐	
Right Bank: Shape:		Texture: Fines ☐ Gravel ☐ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐		Crown Closure					
Left Bank: Shape:		Texture: Fines ☐ Gravel ☐ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐							
Right Bank: Rip.Veg:		Stage:							
Left Bank: Rip.Veg:		Stage:		Instream Veg: None ☐ Algae ☐ Moss ☐ Vascular ☐					

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-000

Reach # 5.0 ILP Map # 093M.039 ILP # 1022 Site # 636

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Code: 5271
Project Watershed Code: 182-819600-63300-40900-0000-0000-0000-0000-0000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-0000-0000-0000-0000-000
Local Name: ILP Map #: 093M.039 ILP #: 1022 NID Map #: 093M.039 NID #: 50636 Reach #: 5.0 Site #: 636
Field UTM (Z.E.N): 9.671738.6135147 Method: GPU Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.671671.6135226 Ref. Name:
Date: 2002/09/28 Time: 17:50 Agency: C172 Crew: JH/DT Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %	Mtd	Avg
Channel Width (m):													0.00	Method I:		0.00
Wetted Width (m):													0.00	Method II:		
Pool Depth (m):													0.00			
Wb Depth:													Avg: 0.00	Method: MS	Stage: L ☐ M ☐ H ☐	No Vis.Ch.: ☒ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER

Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	☐	☐	☐	☐	☐	☐	☐

CROWN CLOSURE

INSTREAM VEG: N ☐ A ☐ M ☐ V ☐

LWD:

DIST:

LB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RIP:

STG:

RB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RIP:

STG:

WATER

EMS: Req #: Method: Cond.: Method: Turb.: T ☐ M ☐ L ☐ C ☐ Method: GE
Temp: Method: pH: Method: Flood Signs: Method:

MORPHOLOGY

Bed Material: Dominant: Subdom: O1 B1 B2 B3 D1 D2 D3
D95: D (cm): Morph: DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Pattern: Islands: Coupling: Confinement: FSZ: ☐
Bars: N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 64 F: 14A	STD	U	Habitat within wetland reach.

COMMENTS

Section	Comments
CHANNEL	Flooded by beaver dams.
SITE CARD	Wetland - NVC



Site #636, Habitat within wetland reach.
Roll #64, Frame #14A, Date: 2002/09/28

Tochcha Lake Planning Area

5.0 093K.092 2075

[illegible]

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 5.0 ILP Map # 093K.092 ILP # 2075 Site 637

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093K.092 ILP #: 2075 NID Map #: 093K.092 NID #: 50637 Reach #: 5.0 Site #: 637
Field UTM (Z.E.N): 10.329561.6094440 Method: GPU Site Lg: 300 Method: MAP Access: H
GIS UTM (Z.E.N): 10.329515.6094389 Ref. Name:
Date: 2002/09/29 Time: 09:30 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	2.70	2.50	2.40	2.60	3.90	3.10	3.60	3.70	3.70	3.70	3.06	Method I:	3.0	2.0	C	5.25
Wetted Width (m):	T	2.50	2.70	2.60	2.50	2.40	2.00	2.80	2.90			2.55	Method II:	6.0	10.0	C	
Pool Depth (m):	T	0.40	0.50	0.40	0.30	0.30	0.50	0.60	0.70			0.46					

Wb Depth: .4 .4 .3 Avg: 0.37 Method: T Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	T	S	T	T	D	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

LWD: N

DIST: NA

LB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 5 Method: T4 Req #: Cond.: 60 Method: S3
pH: 7.0 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3
D95: 90.0 D (cm): 20.00 Morph: RP DISTURBANCE INDICATORS
Pattern: IR C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: OC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Potential in deep pools.
Rearing Habitat	Associated with pools / cover.
Spawning Habitat	Low - associated with gravels / pool, limited by coarse substrates.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 64 F: 15A	STD	U	Site photo.
R: 64 F: 16A	STD	D	Site photo.
R: 64 F: 17A	STD	U	Stream characteristics ~150 m downstream of site UTM.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
5.0	093K.092	2075	637

PHOTOS						
Photo			Foc Lg	Dir	Comments	
R:	64	F:	18A	STD	X	Cascade over boulders within site.
COMMENTS						
Section			Comments			
CHANNEL			No helicopter landing downstream of this point. Due to our product being marginalized through a tendering process I can no longer afford to search for the barrier.			
CHANNEL			Cascades over rock and small gradient pitches 15% / 40 m may limit / block fish access to site location.			
CHANNEL			Stream goes from low gradient ~3% to higher gradient 12%.			

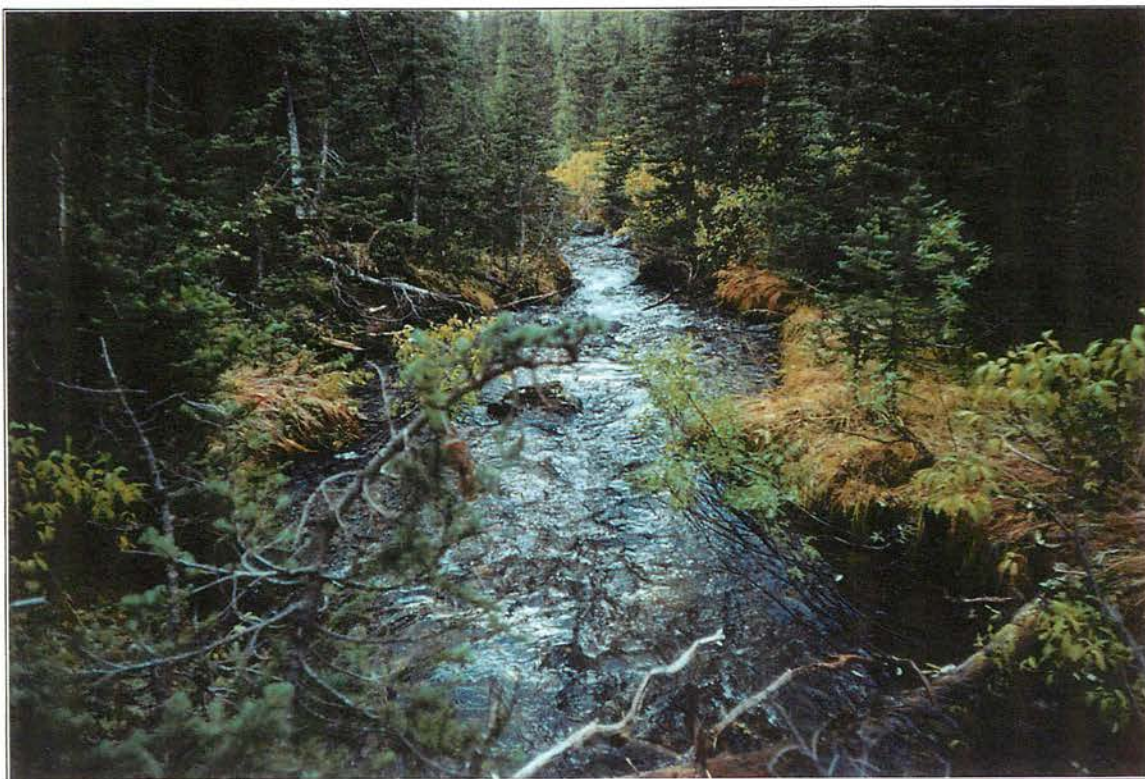
Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
5.0	093K.092	2075

Triton Environmental Consultants Ltd.



Site #637, Site photo.
Roll #64, Frame #15A, Date: 2002/09/29



Site #637, Site photo.
Roll #64, Frame #16A, Date: 2002/09/29



Site #637, Stream characteristics ~150 m downstream of site UTM.
Roll #64, Frame #17A, Date: 2002/09/29



Site #637, Cascade over boulders within site.
Roll #64, Frame #18A, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093K.092 ILP # 2076

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093K.092		ILP #: 2076		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 10.325072.6094576				Sample Type: Biased			
Length (km): 1.25		Coupling: Partially Couple		Magnitude: 4		BGC Zone: SBS			
Gradient (%): 2.6		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 1057		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 638		Field UTM 10.325270.6093675		Agency: C172		Crew: JH/DT		Date: 2002/09/29	
Site Length (m): 200		GIS UTM 10.325219.6093514		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		1.70		1.200	
Stage: Low ☐				Wetted Width (m):		1.57		1.200	
Med ☒				Bankfull Depth (m):		0.27		0.2	
High ☐		Temp (C): 6		pH: 7.6		Conductivity: 200		Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 50.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 10.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Partially Coupled						B2		B3	
Confinement: Frequently Confined						D1		D2	
Morphology: RP Riffle Pool						D3			
						C1		C2	
						C3		C4	
						C5		S1	
						S2		S3	
						S4		S5	
COVER									
Total Cover: Moderate		Type: SWD		LWD		B		U	
LWD: None		Amount: S		S		N		T	
LWD Dist: Not Applicable		Location: P/S/O:		☒		☒		☒	
				☒		☒		☒	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest		Instream Veg: None ☐		Algae ☐		Moss ☒	
Left Bank: Rip.Veg:		Stage: Mature forest				Vascular ☒			
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
638	EF	1	200	420 sec	500	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093K.092 ILP # 2076 Site # 638

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Local Name:
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093K.092 ILP #: 2076 NID Map #: 093K.092 NID #: 50638 Reach #: 1.0 Site #: 638
Field UTM (Z.E.N): 10.325270.6093675 Method: GPU Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 10.325219.6093514 Ref. Name:
Date: 2002/09/29 Time: 11:30 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	1.40	2.20	2.00	1.20	1.60	1.70	1.80				1.70
Wetted Width (m):	T	1.40	2.00	2.00	1.20	1.50	1.50	1.40				1.57
Pool Depth (m):	T	0.30	0.40	0.40	0.30	0.40	0.40	0.20				0.34

	Gadient %		Mtd	Avg
Method I:	4.0	3.0	C	3.50
Method II:			C	

Wb Depth: .3 .3 .2 Avg: 0.27 Method: T Stage: L ☐ M ☒ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	S	N	T	T	D	N
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☐

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☒

LWD: N DIST: NA

LB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: M

RIP: M

STG: MF

STG: MF

WATER

EMS: Req #: Cond.: 200 Method: S3
Temp: 6 Method: T4 Method: GE
pH: 7.6 Method: P2
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 50.0 D (cm): 10.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Low - potential upstream and downstream.
Rearing Habitat	Associated with small shallow pools.
Spawning Habitat	Low - limited by fines.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 64 F: 19A	STD	U	Upstream photo of pool with functioning LWD.
R: 64 F: 20A	STD	D	Downstream photo of riffle / pool habitat.

FDIS Site Card

Tochcha Lake Planning Area

	Reach #	ILP Map #	ILP #	Site
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000	1.0	093K.092	2076	638

COMMENTS	
Section	Comments
CHANNEL	No barriers observed downstream to T98 fish bearing water.
CHANNEL	NFC

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093K.092 ILP # 2076

WATERBODY													
Gazetted Name:										Local:			
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093K.092				ILP #: 2076		Reach #: 1 -			
Project ID: 5271				Lake/Stream: S				Lake From Date:					
Fish Permit #:		145269		Date: 2002/09/29		To: 2002/09/29		Agency: C172		Crew: JH/DT		Resample: ☐	
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
638	093K.092	50638				GPU EF 1	6	200	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
638	EF 1	1	2002/09/29	11:30	2002/09/29	12:00							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
638	EF	1	1	O	420	200.0	1.5	500	I	5	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
638	EF	1	1	NFC		0							



Site #638, Upstream photo of pool with functioning LWD.
Roll #64, Frame #19A, Date: 2002/09/29



Site #638, Downstream photo of riffle / pool habitat.
Roll #64, Frame #20A, Date: 2002/09/29

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093K.092 ILP # 2075

WATERBODY

Gazetted Name: Local:
 Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0
 WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
 Waterbody ID: ILP Map #: 093K.092 ILP #: 2075 Reach #: 3 -
 Project ID: 5271 Lake/Stream: S Lake From Date:

Fish Permit #: 145269 Date: 2002/09/29 To: 2002/09/29 Agency: C172 Crew: JH/DT Resample: ☐

SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
639	093K.092	50639	GPU	EF 1	6	80	C	

A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
639	EF 1	1	2002/09/29	12:00	2002/09/29	12:20	

C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
639	EF 1	1	O	300	100.0	5.0	700	1	5	SMITH ROOT	12B

FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
639	EF 1	1	NFC			0			

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
2.0	093K.092	2075

WATERBODY													
Gazetted Name:			Local:										
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000													
Waterbody ID:			ILP Map #: 093K.092			ILP #:		2075		Reach #: 2 -			
Project ID: 5271			Lake/Stream: S			Lake From Date:							
Fish Permit #:		145269		Date: 2002/09/29		To: 2002/09/29		Agency: C172		Crew: JH/DT		Resample: ☐	

SITE / METHOD											
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment
640	093K.092	50640				GPU	EF 1	6	110	C	

A. GEAR SETTINGS								
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment	
640	EF	1	1	2002/09/29	12:20	2002/09/29	12:45	

[illegible]

FISH SUMMARY											
Site#	MTD/NO		H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment
640	EF	1	1	NFC			0				

Tochcha Lake Planning Area

13.0	093N.001	1742
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STREAM REFERENCING																																												
Gazetted Name:					Local Name:																																							
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1742																																					
REACH																																												
Reach #: 13.0		UTM(Zone/East/North): 10.321312.6094216				Sample Type: Biased																																						
Length (km): 1.29		Coupling: Decoupled		Magnitude: 10		BGC Zone: SBS																																						
Gradient (%): 3.1		Confinement: Frequently Confin			Order: 3		Open water: Absent																																					
US Elev (m): 1060		Islands: NONE		Riparian Vegetation: Mixed C/D																																								
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																												
SITE																																												
Site #: 641		Field UTM ..		Agency: C172		Crew: JH/DT		Date: 2002/09/29																																				
Site Length (m): 150		GIS UTM 10.321527.6094373		Agency Name: Triton Environmental Consultants (Terrace)																																								
CHANNEL																																												
No Vis.Ch.: ☐		Intermittent: ☐		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> </thead> <tbody> <tr> <td>Channel Width (m):</td> <td>2.29</td> <td>1.8</td> <td>2.700</td> <td>7</td> </tr> <tr> <td>Wetted Width (m):</td> <td>1.87</td> <td>1.200</td> <td>2.5</td> <td>7</td> </tr> <tr> <td>Bankfull Depth (m):</td> <td>0.17</td> <td>0.1</td> <td>0.2</td> <td>3</td> </tr> </tbody> </table>			Avg	Min	Max	#	Channel Width (m):	2.29	1.8	2.700	7	Wetted Width (m):	1.87	1.200	2.5	7	Bankfull Depth (m):	0.17	0.1	0.2	3	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Avg</th> <th>Min</th> <th>Max</th> <th>#</th> </tr> </thead> <tbody> <tr> <td>Gradient %:</td> <td>3.00</td> <td>2</td> <td>4</td> <td>2</td> </tr> <tr> <td>Pool Depth (m):</td> <td>0.51</td> <td>0.300</td> <td>0.800</td> <td>7</td> </tr> </tbody> </table>			Avg	Min	Max	#	Gradient %:	3.00	2	4	2	Pool Depth (m):	0.51	0.300	0.800	7	Turbidity.: Turbid ☐ Low ☐ Moderate ☐ Clear ☒	
	Avg	Min	Max			#																																						
Channel Width (m):	2.29	1.8	2.700	7																																								
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Gradient %:	3.00	2	4	2																																								
Pool Depth (m):	0.51	0.300	0.800	7																																								
Dewatered: ☐		Tribes.: ☐																																										
Stage: Low ☐																																												
Med ☒																																												
High ☐		Temp (C): 6		pH: 6.5		Conductivity: 50																																						
MORPHOLOGY																																												
Bed Material: Dominant: Gravels		D95 (cm): 20.00		Bars: Non ☒		Side ☐		Diagonal ☐																																				
Subdominant: Cobble		D (cm): 5.00				Mid-channel ☐		Span ☐																																				
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS: O1 B1 B2 B3 D1 D2 D3 ☐ ☐ ☐ ☐ ☐ ☐ ☐																																								
Coupling: Decoupled				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐																																								
Confinement: Occasionally Confine																																												
Morphology: RP Riffle Pool																																												
COVER																																												
Total Cover: Abundant		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Type:</th> <th>SWD</th> <th>LWD</th> <th>B</th> <th>U</th> <th>DP</th> <th>OV</th> <th>IV</th> </tr> </thead> <tbody> <tr> <td>Amount:</td> <td>T</td> <td>T</td> <td>N</td> <td>T</td> <td>S</td> <td>D</td> <td>N</td> </tr> <tr> <td>Location: P/S/O:</td> <td>☒</td> <td>☒</td> <td>☐</td> <td>☒</td> <td>☒</td> <td>☒</td> <td>☐</td> </tr> </tbody> </table>								Type:	SWD	LWD	B	U	DP	OV	IV	Amount:	T	T	N	T	S	D	N	Location: P/S/O:	☒	☒	☐	☒	☒	☒	☐											
Type:	SWD	LWD	B	U	DP	OV	IV																																					
Amount:	T	T	N	T	S	D	N																																					
Location: P/S/O:	☒	☒	☐	☒	☒	☒	☐																																					
LWD: None		FSZ: ☐																																										
LWD Dist: Not Applicable																																												
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐																																				
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☒		Cobble ☐		Boulder ☐																																				
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest																																										
Left Bank: Rip.Veg:		Stage: Pole-sapling stage		Instream Veg: None ☒		Algae ☐		Moss ☐																																				
				Vascular ☐																																								
FISH																																												
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																																			
641	EF	1	150	470 sec	600	NFC	0																																					

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 13.0 ILP Map # 093N.001 ILP # 1742 Site # 641

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1742 NID Map #: 093K.092 NID #: 50641 Reach #: 13.0 Site #: 641
Field UTM (Z.E.N): .. Method: Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 10.321527.6094373 Ref. Name:
Date: 2002/09/29 Time: 13:30 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	1.80	2.40	2.60	2.00	1.90	2.70	2.60				2.29	Method I:	2.0	4.0	C	3.00
Wetted Width (m):	T	1.60	1.80	1.20	1.90	2.10	2.50	2.00				1.87	Method II:			C	
Pool Depth (m):	T	0.50	0.60	0.40	0.80	0.60	0.40	0.30				0.51					

Wb Depth: .2 .2 .1 Avg: 0.17 Method: T Stage: L ☐ M ☒ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	N	T	S	D	N
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☐

LWD: N DIST: NA

LB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 50 Method: S3
pH: 6.5 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 20.0 D (cm): 5.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: OC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Present in pools > 50 cm.
Rearing Habitat	Moderate - associated with deep pools / cover / undercut banks / LWD.
Spawning Habitat	Moderate - associated with gravels / pools / cover.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 64 F: 21A	STD	U	Upstream photo of heavy overvegetation area.
R: 64 F: 22A	STD	D	Downstream photo of heavy overvegetation area.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
13.0	093N.001	1742	641

COMMENTS	
Section	Comments
CHANNEL	NFC

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
13.0	093N.001	1742

Triton Environmental Consultants Ltd.



Site #641, Upstream photo of heavy overvegetation area.
Roll #64, Frame #21A, Date: 2002/09/29



Site #641, Downstream photo of heavy overvegetation area.
Roll #64, Frame #22A, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # 8.0 ILP Map # 093N.001 ILP # 1750

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1750		
REACH									
Reach #: 8.0		UTM(Zone/East/North): 10.322885.6100937				Sample Type: Biased			
Length (km): 3.30		Coupling: Partially Couple		Magnitude: 4		BGC Zone: SBS			
Gradient (%): 9.4		Confinement: Confined		Order: 2		Open water: Absent			
US Elev (m): 1410		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 642		Field UTM 10.322432.6101383		Agency: C172		Crew: JH/DT		Date: 2002/09/29	
Site Length (m): 200		GIS UTM 10.322383.6101375		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐ Intermittent: ☐									
Dewatered: ☐ Tribs.: ☐									
Stage: Low ☒		Avg		Min		Max		#	
Med ☐		Channel Width (m): 1.40		0.9		2		7	
High ☐		Wetted Width (m): 1.40		1.100		2		7	
Temp (C): 6		Bankfull Depth (m): 0.23		0.2		0.3		3	
pH: 7.0									
Conductivity: 50									
		Avg		Min		Max		#	
		Gradient %: 10.00		9		11		4	
		Pool Depth (m): 0.34		0.300		0.400		7	
		Turbidity: Turbid ☐		Low ☐					
		Moderate ☐		Clear ☒					
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 50.00		Bars: Non ☐		Side ☒		Diagonal ☐ Mid-channel ☐ Span ☐	
Subdominant: Gravels		D (cm): 20.00						Braid ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1 B2 B3 D1 D2 D3	
Coupling: Partially Coupled									
Confinement: Frequently Confined									
Morphology: CP Cascade Pool									
		C1 C2 C3 C4 C5 S1 S2 S3 S4 S5							
COVER									
Total Cover: Moderate		Type: SWD LWD B U DP OV IV							
LWD: None		Amount: S T N T T D N							
LWD Dist: Not Applicable		Location: P/S/O: ☒ ☐ ☐		☒ ☐ ☐		☒ ☐ ☐		☒ ☐ ☐	
Right Bank: Shape: Undercut		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐						Crown Closure 1-20%	
Left Bank: Shape: Undercut		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐							
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest							
Left Bank: Rip.Veg:		Stage: Mature forest		Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐					
FEATURES									
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)
093N.002	99931	F	1.5	GE		HC	R: F: L: #:		10.321547.6102
Comments: Barrier									
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
642	EF	1	150	460 sec	600	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 8.0 ILP Map # 093N.001 ILP # 1750 Site # 642

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1750 NID Map #: 093N.002 NID #: 50642 Reach #: 8.0 Site #: 642
Field UTM (Z.E.N): 10.322432.6101383 Method: GPU Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 10.322383.6101375 Ref. Name:
Date: 2002/09/29 Time: 14:15 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	T	2.00	1.50	0.90	1.30	1.20	1.40	1.50				1.40
Wetted Width (m):	T	2.00	1.50	1.10	1.40	1.30	1.40	1.10				1.40
Pool Depth (m):	T	0.30	0.40	0.30	0.30	0.40	0.40	0.30				0.34

	Gradient %	Mtd	Avg
Method I:	11.0 10.0	C	10.00
Method II:	10.0 9.0	C	

Wb Depth: .2 .2 .3 Avg: 0.23 Method: T Stage: L ☒ M ☐ H ☐

No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribes: ☐

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	T	N	T	T	D	N
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☐

CROWN CLOSURE
1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

LWD: N DIST: NA

LB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

RB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 50 Method: S3
pH: 7.0 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 50.0 D (cm): 20.00 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: FC
FSZ: ☐ Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093N.002	99931	F	1.5	GE		HC	R: F: L:	#:	10.321547.6102116	GIS
Comments: Barrier										

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Potential in pools present.
Rearing Habitat	Associated with small pools, cover, LWD - limited resting in areas.
Spawning Habitat	Low - limited by coarse substrates / gradient.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
8.0	093N.001	1750	642

PHOTOS					
Photo		Foc Lg	Dir	Comments	
R:	64	F: 23A	STD	U	Upstream photo of site with meters.
R:	64	F: 24A	STD	D	Downstream photo within site.
COMMENTS					
Section		Comments			
CHANNEL		1.5 m Falls UTM downstream = 1520 / 2150			
CHANNEL		NFC			

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

Reach # 8.0 ILP Map # 093N.001 ILP # 1750

WATERBODY													
Gazetted Name:						Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:						ILP Map #: 093N.001		ILP #: 1750		Reach #: 8 -			
Project ID: 5271						Lake/Stream: S			Lake From Date:				
Fish Permit #: 145269			Date: 2002/09/29			To: 2002/09/29			Agency: C172		Crew: JH/DT		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
642	093N.002	50642				GPU EF 1	6	50	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
642	EF 1	1	2002/09/29	14:15	2002/09/29	15:00							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
642	EF 1	1	O	460	150.0	1.0	600	I	5	SMITH ROOT	12B		
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
642	EF 1	1	NFC			0							



Site #642, Upstream photo of site with meters.
Roll #64, Frame #23A, Date: 2002/09/29



Site #642, Downstream photo within site.
Roll #64, Frame #24A, Date: 2002/09/29

Tochcha Lake Planning Area

Reach #	ILP Map #	ILP #
3.0	093K.092	2114

Triton Environmental Consultants Ltd.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 3.0 ILP Map # 093K.092 ILP # 2114 Site # 643

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093K.092 ILP #: 2114 NID Map #: 093N.002 NID #: 50643 Reach #: 3.0 Site #: 643
Field UTM (Z.E.N): 10.323674.6098765 Method: GPU Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 10.323674.6098719 Ref. Name:
Date: 2002/09/29 Time: 15:30 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg			Gadient %	Mtd	Avg
Channel Width (m):	T	1.90	1.00	1.60	1.30	1.80	1.30	1.80				1.53	Method I:	6.0	8.0	C	7.00
Wetted Width (m):	T	1.50	1.10	1.50	1.20	1.30	1.10	1.60				1.33	Method II:			C	
Pool Depth (m):	T	0.30	0.20	0.20	0.30	0.30	0.20	0.20				0.24					

Wb Depth: .2 .3 .3 Avg: 0.27 Method: T Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	N	T	T	S	N
Loc: P/S/O:	☒	☒	☐	☒	☒	☒	☐

LWD: F DIST: C

LB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 90 Method: S3
pH: 6.8 Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 30.0 D (cm): 5.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: OC
FSZ: ☐ Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Questionable.
Rearing Habitat	Moderate - rearing for ~100 mm salmonids, good cover / complexity.
Spawning Habitat	Moderate - abundant gravels / moderate resting, rearing for smaller adult salmonids.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 65 F: 01	STD	U	Upstream photo within site.
R: 65 F: 02	STD	D	Downstream photo within site.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
3.0	093K.092	2114	643

COMMENTS	
Section	Comments
CHANNEL	NFC

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 3.0 ILP Map # 093K.092 ILP # 2114

WATERBODY															
Gazetted Name:										Local:					
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:										ILP Map #: 093K.092		ILP #: 2114		Reach #: 3 -	
Project ID: 5271										Lake/Stream: S		Lake From Date:			
Fish Permit #:		145269		Date: 2002/09/29		To: 2002/09/29		Agency: C172		Crew: JH/DT		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
643	093N.002	50643				GPU EF 1	6	90	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
643	EF	1	2002/09/29	15:30	2002/09/29	16:05									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
643	EF	1	1	O	240	150.0	1.5	600	I	5	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
643	EF	1	1	NFC		0									



Site #643, Upstream photo within site.
Roll #65, Frame #01, Date: 2002/09/29



Site #643, Downstream photo within site.
Roll #65, Frame #02, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.002 ILP # 1844

STREAM REFERENCING																																	
Gazetted Name:					Local Name:																												
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093N.002		ILP #: 1844																										
REACH																																	
Reach #: 1.0		UTM(Zone/East/North): 10.326426.6098493				Sample Type: Biased																											
Length (km): 1.00		Coupling: Partially Couple		Magnitude: 3		BGC Zone: SBS																											
Gradient (%): 5.3		Confinement: Occasionally Conf		Order: 2		Open water: Absent																											
US Elev (m): 1206		Islands: NONE		Riparian Vegetation: Not Specified																													
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																	
SITE																																	
Site #: 644		Field UTM 10.326653.6099182		Agency: C172		Crew: JH/DT		Date: 2002/09/29																									
Site Length (m): 300		GIS UTM 10.326506.6099235		Agency Name: Triton Environmental Consultants (Terrace)																													
CHANNEL																																	
No Vis.Ch.: ☒ Intermittent: ☐				Avg		Min		Max																									
Dewatered: ☐ Tribes.: ☐																																	
Stage: Low ☐		Channel Width (m): 0.00		0		0		0																									
Med ☐		Wetted Width (m): 0.00		0		0		0																									
High ☐		Bankfull Depth (m): 0.00		0		0		0																									
Temp (C):		pH:		Conductivity:		Turbidity: Turbid ☐ Low ☐		Moderate ☐ Clear ☐																									
MORPHOLOGY																																	
Bed Material: Dominant:		D95 (cm):		Bars: Non ☐ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐																													
Subdominant:		D (cm):		Braid ☐																													
Channel Pattern:		Islands:		DISTURBANCE INDICATORS																													
Coupling:				O1 B1 B2 B3 D1 D2 D3																													
Confinement:				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5																													
Morphology:																																	
COVER																																	
Total Cover:		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Type:</th> <th>SWD</th> <th>LWD</th> <th>B</th> <th>U</th> <th>DP</th> <th>OV</th> <th>IV</th> </tr> <tr> <td>Amount:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Location: P/S/O:</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </table>								Type:	SWD	LWD	B	U	DP	OV	IV	Amount:								Location: P/S/O:	☐	☐	☐	☐	☐	☐	☐
Type:	SWD	LWD	B	U	DP	OV	IV																										
Amount:																																	
Location: P/S/O:	☐	☐	☐	☐	☐	☐	☐																										
LWD:		FSZ: ☐																															
LWD Dist:																																	
Right Bank: Shape:		Texture: Fines ☐ Gravel ☐ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐ Crown Closure																															
Left Bank: Shape:		Texture: Fines ☐ Gravel ☐ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐																															
Right Bank: Rip.Veg:		Stage:																															
Left Bank: Rip.Veg:		Stage:																															
Instream Veg: None ☐ Algae ☐ Moss ☐ Vascular ☐																																	

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093N.002 ILP # 1844 Site # 644

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000

Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.002 ILP #: 1844 NID Map #: 093N.002 NID #: 50644 Reach #: 1.0 Site #: 644
Field UTM (Z.E.N): 10.326653.6099182 Method: GPU Site Lg: 300 Method: AE Access: H
GIS UTM (Z.E.N): 10.326506.6099235 Ref. Name:
Date: 2002/09/29 Time: 16:30 Agency: C172 Crew: JH/DT Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):												0.00
Wetted Width (m):												0.00
Pool Depth (m):												0.00

	Gadient %	Mtd	Avg
Method I:			0.00
Method II:			

Wb Depth: Avg: 0.00 Method: MS Stage: L ☐ M ☐ H ☐

No Vis.Ch.: ☒ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	☐	☐	☐	☐	☐	☐	☐

CROWN CLOSURE

INSTREAM VEG: N ☐ A ☐ M ☐ V ☐

LWD: DIST:

LB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RB SHP:

Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐

RIP:

RIP:

STG:

STG:

WATER

EMS: Req #: Temp: Method: Cond.: Method: pH: Method: Method: Flood Signs: Method: Turb.: T ☐ M ☐ L ☐ C ☐ Method: GE

MORPHOLOGY

Bed Material: Dominant: Subdom: O1 B1 B2 B3 D1 D2 D3
D95: D (cm): Morph: DISTURBANCE INDICATORS
Pattern: C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: Coupling: Bars: N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐
Confinement: FSZ: ☐

PHOTOS

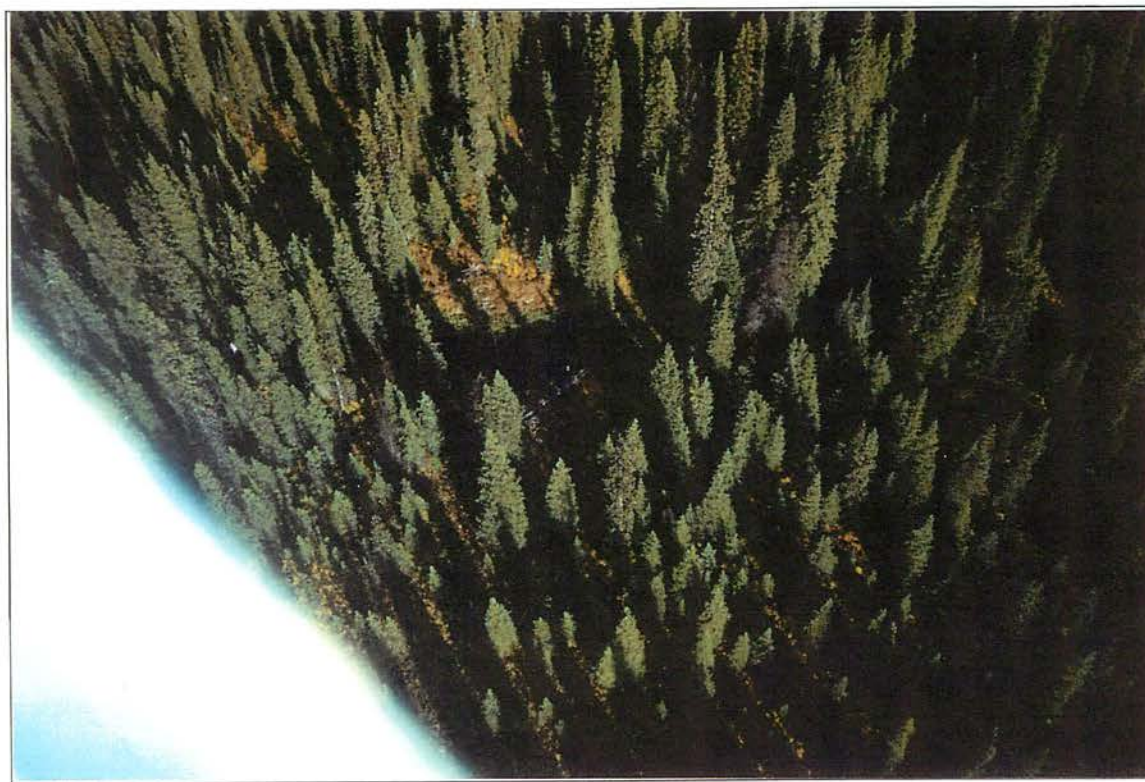
Photo	Foc Lg	Dir	Comments
R: 65 F: 03	STD	U	NCD characteristics, photo from helicopter.
R: 65 F: 04	STD	D	NCD characteristics, photo from helicopter.

COMMENTS

Section	Comments
SITE CARD	NCD at bottom of reach. No channel observed, flooded depressions, ponded areas.



Site #644, NCD characteristics, photo from helicopter.
Roll #65, Frame #03, Date: 2002/09/29



Site #644, NCD characteristics, photo from helicopter.
Roll #65, Frame #04, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000

Reach # ILP Map # ILP #

4.0 093N.001 1752

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093N.001		ILP #: 1752		
REACH									
Reach #: 4.0		UTM(Zone/East/North): 10.323262.6105781				Sample Type: Biased			
Length (km): 1.87		Coupling: Partially Couple		Magnitude: 3		BGC Zone: SBS			
Gradient (%): 7.1		Confinement: Frequently Confin		Order: 2		Open water: Absent			
US Elev (m): 1133		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 645		Field UTM 10.322691.6106590		Agency: C172		Crew: JH/DT		Date: 2002/09/29	
Site Length (m): 150		GIS UTM 10.322732.6106572		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐ Intermittent: ☐									
Dewatered: ☐ Tribes.: ☐									
Stage: Low ☐		Avg		Min		Max		#	
Med ☒		Channel Width (m): 2.17		1.8		2.5		7	
High ☐		Wetted Width (m): 1.91		1.700		2.200		7	
Temp (C): 6		Bankfull Depth (m): 0.30		0.3		0.3		3	
pH: 6.5									
Conductivity: 80									
		Avg		Min		Max		#	
		Gradient %: 7.67		7		9		3	
		Pool Depth (m): 0.23		0.200		0.300		7	
		Turbidity: Turbid ☐		Low ☐					
		Moderate ☐		Clear ☒					
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 70.00		Bars: Non ☐		Side ☒		Diagonal ☐ Mid-channel ☐ Span ☐	
Subdominant: Cobble		D (cm): 20.00						Braid ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1 B2 B3 D1 D2 D3	
Coupling: Partially Coupled				INDICATORS					
Confinement: Occasionally Confine				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5					
Morphology: RP Riffle Pool									
COVER									
Total Cover: Abundant		Type: SWD LWD B U DP OV IV							
LWD: Few		Amount: S D T T T T T N							
LWD Dist: Clumped		Location: P/S/O: ☒ ☒ ☒ ☒ ☒ ☒ ☐ ☐						FSZ: ☐	
Right Bank: Shape: Undercut		Texture: Fines ☒ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐						Crown Closure	
Left Bank: Shape: Undercut		Texture: Fines ☒ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐						21-40%	
Right Bank: Rip.Veg: Mixed C/D		Stage: Mature forest							
Left Bank: Rip.Veg:		Stage: Mature forest		Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐					
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
645	EF	1	150	240 sec	600	NFC	0		

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 4.0 ILP Map # 093N.001 ILP # 1752 Site # 645

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000
Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093N.001 ILP #: 1752 NID Map #: 093N.002 NID #: 50645 Reach #: 4.0 Site #: 645
Field UTM (Z.E.N): 10.322691.6106590 Method: GPU Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 10.322732.6106572 Ref. Name:
Date: 2002/09/29 Time: 16:50 Agency: C172 Crew: JH/DT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	2.20	2.50	2.50	1.90	2.00	2.30	1.80				2.17	Method I:	7.0	7.0	C	7.67
Wetted Width (m):	T	1.90	1.70	1.90	1.90	2.20	2.00	1.80				1.91	Method II:	9.0		C	
Pool Depth (m):	T	0.20	0.30	0.20	0.30	0.20	0.20	0.20				0.23					

Wb Depth: .3 .3 .3 Avg: 0.30 Method: T Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐ Dw: ☐ Tribes.: ☐

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	D	T	T	T	T	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

LWD: F DIST: C

LB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 80 Method: S3
pH: 6.5 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 70.0 D (cm): 20.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: PC
Confinement: OC
FSZ: ☐ Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None observed in site.
Rearing Habitat	Associated with small shallow pools / cover / LWD and undercut banks.
Spawning Habitat	Low - associated with small gravel patches, limited by coarse substrates / small pools.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 65 F: 05	STD	U	Upstream photo of pool within site.
R: 65 F: 06	STD	D	Downstream photo of site.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
4.0	093N.001	1752	645

COMMENTS	
Section	Comments
CHANNEL	Small LWD steps may limit access. Stream should contain fish. Barrier may have been missed in Recci??
CHANNEL	Access looks possible from downstream lake (Recci).
CHANNEL	NFC

FDIS Fish Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 4.0 ILP Map # 093N.001 ILP # 1752

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 182-819600-63300-40900-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-0																	
Waterbody ID:										ILP Map #: 093N.001		ILP #: 1752		Reach #: 4 -			
Project ID: 5271										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/29		To:		2002/09/29		Agency: C172		Crew: JH/DT		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment						
645	093N.002	50645				GPU	EF 1	6	80	C							
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
645	EF	1	1	2002/09/29	16:50	2002/09/29	17:30										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
645	EF	1	1	O	240	150.0	2.0	600	I	5	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
645	EF	1	1	NFC		0											



Site #645, Upstream photo of pool within site.
Roll #65, Frame #05, Date: 2002/09/29



Site #645, Downstream photo of site.
Roll #65, Frame #06, Date: 2002/09/29

FDIS Reach/Site Summary

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # ILP Map # ILP #

1.0 093M.029 1149

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093M.029		ILP #: 1149		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.670665.6127382				Sample Type: Biased			
Length (km): 1.84		Coupling: Decoupled		Magnitude: 1		BGC Zone: SBS			
Gradient (%): 8.1		Confinement: Occasionally Conf		Order: 1		Open water: Absent			
US Elev (m): 1035		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 927		Field UTM 9.672030.6127100		Agency: C172		Crew: JH/DT		Date: 2002/09/28	
Site Length (m): 100		GIS UTM 9.672105.6127139		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☒		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 0.67		0.5		0.9	
Stage: Low ☒				Wetted Width (m): 0.00		0		0	
Med ☐				Bankfull Depth (m): 0.33		0.3		0.4	
High ☐									
Temp (C):		pH:		Conductivity:		Avg		Min	
						Gradient %: 1.50		1	
						Pool Depth (m): 0.00		0	
						Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☐	
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 5.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Fines		D (cm): 1.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Decoupled				INDICATORS		B2		B3	
Confinement: Unconfined				C1		C2		C3	
Morphology: RP Riffle Pool				C4		C5		S1	
				C6		S2		S3	
				C7		S4		S5	
				C8		S6		S7	
				C9		S8		S9	
				C10		S10		S11	
COVER									
Total Cover: Trace		Type: SWD		LWD		B		U	
LWD: None		Amount: N		N		N		N	
LWD Dist: Not Applicable		Location: P/S/O:		P		S		O	
				P		S		O	
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Deciduous		Stage: Pole-sapling stage		None ☒		Algae ☐		Moss ☐	
Left Bank: Rip.Veg:		Stage: Pole-sapling stage		None ☒		Algae ☐		Moss ☐	
				Instream Veg: None ☒		Algae ☐		Moss ☐	
				Vascular ☐					

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093M.029 ILP # 1149 Site 927

PROJECT

Project Name: Babine and Tochcha
Stream Name (gaz.): SAKENICHE RIVER
Project Watershed Code: 182-819600-63300-40900-0000-0000-000-000-000-000-000

Project Code: 5271

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093M.029 ILP #: 1149 NID Map #: 093M.029 NID #: 50927 Reach #: 1.0 Site #: 927
Field UTM (Z.E.N): 9.672030.6127100 Method: GPU Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.672105.6127139 Ref. Name:
Date: 2002/09/28 Time: 10:45 Agency: C172 Crew: JH/DT Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	0.50	0.60	0.50	0.80	0.70	0.90					0.67	Method I:	1.0	2.0	C	1.50
Wetted Width (m):	MS											0.00	Method II:			C	
Pool Depth (m):	MS											0.00					

Wb Depth: .3 .3 .4 Avg: 0.33 Method: T Stage: L ☒ M ☐ H ☐

No Vis.Ch.: ☐ Intermittent: ☒
Dw: ☐ Tribs.: ☐

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	D	N
Loc: P/S/O:	☐	☐	☐	☐	☐	☒	☐

LWD: N DIST: NA

LB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

EMS: Temp: Method: T4 Req #: Cond.: Method: S3
pH: Method: P2 Method: GE
Flood Signs: None Method: GE
Turb.: T ☐ M ☐ L ☐ C ☐

MORPHOLOGY

Bed Material: Dominant: G Subdom: F O1 B1 B2 B3 D1 D2 D3
D95: 5.00 D (cm): 1.00 Morph: RP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: DC
Confinement: UN
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	None observed - seasonal stream / highly ephemeral.
Rearing Habitat	None observed - seasonal stream / highly ephemeral.
Spawning Habitat	None observed - seasonal stream / highly ephemeral.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 63 F: 24	STD	U	Upstream photo of dry stream channel.
R: 63 F: 24A	STD	D	Downstream photo of dry stream channel.

FDIS Site Card

Tochcha Lake Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	093M.029	1149	927

COMMENTS	
Section	Comments
CHANNEL	Inferred fish bearing. No barriers observed.



Site #927, Upstream photo of dry stream channel.
Roll #63, Frame #24, Date: 2002/09/28



Site #927, Downstream photo of dry stream channel.
Roll #63, Frame #24A, Date: 2002/09/28

APPENDIX II

Phase Completion Reports

PROJECT PHASE COMPLETION REPORT

PHASE 4

- **MWLAP Project Number:** CNF_C172_010_2003
- **Contract Name:** Fish and Fish Habitat Inventory in selected tributaries within the Tochcha and Morice Planning Areas
- **FIA Project Number:** FIA 2002-8
- **FIA Region** Skeena-Bulkley Region
- **MWLAP Region** Skeena 06/07
- **FDIS Project Code:** 5270 and 5271
- **Forest District** Morice Forest District
- **Project Type:** 1:20 000 Reconnaissance
- **Report Date:** October 15, 2002
- **Proponent:** Canadian Forest Products Ltd. (Houston Operations)
- **Company/Agency:** Triton Environmental Consultants Ltd.
- **Contact Person:** Jason Harris
- **Contact Phone:** (250) 635-1494
- **Contact E-Mail:** jharris@triton-env.com
- **FIA Coordinator:** Todd Mahon
- **Proponent QA Monitor:** Chris Schell

List of Deliverables Submitted

<u>Deliverable Product</u>	<u>Received</u>	<u>Approved</u>
Site Cards	Delivered as attachment to Final Report	
Fish Collection Forms/Individual Fish Data Forms	Delivered as attachment to Final Report	
Additional Sampling Table	Delivered as attachment to Final Report	
Phase Completion Report		
Phase 2 Quality Assurance	Delivered as attachment to Final Report	

Activity Log

<u>Date</u>	<u>Activity</u>
September 2, 2002 – October 10, 2001	Gear up, travel, fieldwork and gear down for stream inventory in the Morice Forest District.

Summary of Work Completed

Total number of stream reaches sampled: 384*

*Includes 3 lakes sampled - overnight gillnet sets

*Includes 15 lakes / wetlands sampled - overnight minnow trap sets

Summary of Phase Costs

Professional Fees	\$45,014.29
Disbursements	\$45,641.00

Progress and Problems Summary

Phase 4 was completed as scheduled. Sampling during late summer periods allowed crews to assess habitat during low flow conditions and gave a good representation of stream habitats throughout the year.

Identification of obstructions/barriers was critical to describing and assessing fisheries distribution within the sampled watersheds. Field crews tried to identify obstructions/barriers while on site, by either using a helicopter recce of the stream or by strategically moving sample sites while still in the field.

Field crews were in constant contact with Todd Mahon (FIA contract monitor) and John Brockley (Canfor) when the originally proposed plan needed modifications. Modifications of the original plan were used to provide additional fisheries information for the working area.

Next Phase Project Plans and Constraints

The project will now proceed with data compilation and reporting.

Contract Monitor Acceptance

Report Submitted By: Jason Harris	Date: October 15, 2002
Phase Completion Approved:	Date:
Comments:	

PROJECT PHASE COMPLETION REPORT

PHASE 5/6

- **MWLAP Project Number:** CNF_C172_010_2003
- **Contract Name:** Fish and Fish Habitat Inventory in selected tributaries within the Tochcha and Morice Planning Areas
- **FIA Project Number:** FIA 2002-8
- **FIA Region** Skeena-Bulkley Region
- **MWLAP Region** Skeena 06
- **FDIS Project Code:** 5270 and 5271
- **Forest District** Morice Forest District
- **Project Type:** 1:20 000 Reconnaissance
- **Report Date:** January 15, 2003
- **Proponent:** Canadian Forest Products Ltd. (Houston Operations)
- **Company/Agency:** Triton Environmental Consultants Ltd.
- **Contact Person:** Jason Harris
- **Contact Phone:** (250) 635-1494
- **Contact E-Mail:** jharris@triton-env.com
- **FIA Coordinator:** Todd Mahon
- **Proponent QA Monitor:** Chris Schell

List of Deliverables Submitted

<u>Deliverable Product</u>	<u>Received</u>	<u>Approved (QA)</u>
FDIS Site Cards (in watershed reports)		
FDIS Fish Collection Forms (in watershed reports)		
FDIS Database (as attachment)		
Planning Document (as attachment)		
Field Notes (as attachment)		
Fish Ageing Structures (as attachment)		
Photodocumentation (as attachment)		
Digital Data (as attachment)		
FISS update data (as attachment)		
Final Reports (hardcopy and digital)		
Project Overview Map		
Interpretive Maps		
Project Maps		

Activity Log

<u>Date</u>	<u>Activity</u>	<u>Time Spent</u>
October - November 2002	site card entry	200 hrs
November - December 2002	fish collection form entry	200 hrs
November - December 2002	photo development/scanning/printing	115 hrs
November - December 2002	watershed reporting	500 hrs
January - February 2003	mapping project/interpretive/overview	787.6 hrs

Summary of Work Completed

Total number of stream reaches processed: 384*

*Includes 3 lakes sampled – overnight gillnet sets

*Includes 15 lakes / wetlands sampled – overnight minnow trap sets

Summary of Phase I-III Costs

Professional Fees	\$20,911.79
Disbursements	\$680.00

Summary of Phase IV Costs

Professional Fees	\$45,014.29
Disbursements	\$45,641.00

Summary of Phase V Costs

Professional Fees	\$23,282.00
Disbursements	\$1,850.00

Summary of Phase VI Costs

Professional Fees	\$55,266.21
Disbursements	\$1,853.00

Progress and Problems Summary

The reporting and mapping procedures followed those outlined in the *Reconnaissance (1:20,000) Inventory Standards* and includes additional data not otherwise required. The digitally produced maps include all information as per RIC standards and the contract. These maps include: watershed codes; ILP's; stream names; waterbody identifiers; stream networks; reach breaks; fish sampling/site card locations; fisheries sensitive zones; fish species; and features.

All data entered into FDIS was audited using MWAP's QA/QC tool prior to inclusion into the watershed reports.

Next Phase Project Plans and Constraints

Nid to UTM conversions will be completed post QA/QC.

Triton will complete digital mapping QA internally after QA/QC has been completed.

Contract Monitor Acceptance

Report Submitted By: Jason Harris	Date: January 15, 2003
Phase Completion Approved:	Date:
Comments:	

APPENDIX III

Quality Assurance Forms and Correspondence

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
Bed_Moveable_Particle	093M.039	1079	1.0	635	093M.039	50635	Bed Moveable Particle (D) should be less than 0.2.	Field estimate.
Bed_Moveable_Particle	093M.039	1079	1.0	635	093M.039	50635	D95 should be less than 0.2.	Field estimate.
Bed_Moveable_Particle	093M.039	1079	1.0	635	093M.039	50635	D95 is less than D.	Field estimate.
Bed_Moveable_Particle	093M.039	1091	1.0	61	093M.039	40061	Bed Moveable Particle (D) should be less than 0.2.	Field estimate.
Bed_Moveable_Particle	093M.039	1091	1.0	61	093M.039	40061	D95 should be less than 0.2.	Field estimate.
Bed_Moveable_Particle	093M.039	1091	1.0	61	093M.039	40061	D95 is less than D.	Field estimate.
Bed_Moveable_Particle	093M.029	1214	1.0	622	093M.029	50622	D95 is less than D.	Field estimate.
Bed_Moveable_Particle	093M.029	1224	1.0	620	093M.029	50620	D95 is less than D.	Field estimate.
Bed_Moveable_Particle	093M.030	1290	1.0	33	093M.030	40033	D95 is less than D.	Field estimate.
Bed_Moveable_Particle	093N.001	1803	6.0	375	093M.010	20375	D95 is less than D.	Field estimate.
Bed_Moveable_Particle	093N.001	1803	9.0	376	093M.010	20376	D95 is less than D.	Field estimate.
CONFINEMENT	093M.039	1022	8.0	62	093M.039	40062	if Confinement CO then Reach Confinement should = EN or CO or FC. Warning Only, do not change if Reach confinement matches map.	Field measurement differs from map estimate.
CONFINEMENT	093M.039	1030	2.0	63	093M.036	40063	if Confinement UN then Reach Confinement should = OC or UN. Warning Only, do not change if Reach confinement matches map.	Field measurement differs from map estimate.
CONFINEMENT	093M.029	1155	6.0	627	093M.029	50627	if Confinement OC then Reach Confinement should = FC or OC or UN. Warning Only, do not change if Reach confinement matches map.	Field measurement differs from map estimate.
CONFINEMENT	093M.029	1332	2.0	356	093M.019	20356	if Confinement CO then Reach Confinement should = EN or CO or FC. Warning Only, do not change if Reach confinement matches map.	Field measurement differs from map estimate.

Tochcha Lake Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
CONFINEMENT	093M.029	1332	4.0	355	093M.019	20355	if Confinement CO then Reach Confinement should = EN or CO or FC. Warning Only, do not change if Reach confinement matches map.	Field measurement differs from map estimate.
CONFINEMENT	093N.001	1769	1.0	74	093N.001	40074	if Confinement CO then Reach Confinement should = EN or CO or FC. Warning Only, do not change if Reach confinement matches map.	Field measurement differs from map estimate.
CONFINEMENT	093L.100	1863	2.0	371	093L.100	20371	if Confinement EN then Reach Confinement must = EN or CO.	Field measurement differs from map estimate.
CONFINEMENT	093K.092	2075	5.0	637	093K.092	50637	if Confinement OC then Reach Confinement should = FC or OC or UN. Warning Only, do not change if Reach confinement matches map.	Field measurement differs from map estimate.
CONFINEMENT	093K.081	2253	2.0	20	093K.081	40020	if Confinement EN then Reach Confinement must = EN or CO.	Field measurement differs from map estimate.
FEATURE	093N.001	1750	8.0	642	093N.002	50642	Roll and Frame missing.	No photos taken.
FEATURE	093K.092	2127	5.0	65	093K.092	40065	Roll and Frame missing.	No photos taken.
FEATURE	093K.081	2251	2.0	8	093K.081	40008	Roll and Frame missing.	No photos taken.
FEATURE	093K.081	2251	2.0	8	093K.081	40008	Roll and Frame missing.	No photos taken.
FISH FORM	093M.039	1015	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.039	1018	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.039	1022	4.0				WARNING: A stream should have a minimum of two methods.	No comment.

Tochcha Lake Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093M.039	1022	8.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.039	1030	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.039	1079	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.039	1091	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1119	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1119	4.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1123	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1135	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1141	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1155	5.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1155	6.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1155	8.0				WARNING: A stream should have a minimum of two methods.	No comment.

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093M.029	1158	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1173	6.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1181	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1182	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1204	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1206	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1214	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1224	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1231	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1231	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1232	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1235	1.0				WARNING: A stream should have a minimum of two methods.	No comment.

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093M.030	1290	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.030	1296	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.030	1308	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1332	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.029	1332	4.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.020	1394	4.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.020	1394	6.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.020	1398	4.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.020	1404	5.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.020	1429	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.020	1432	5.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.020	1450	11.0				WARNING: A stream should have a minimum of two methods.	No comment.

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093M.009	1520	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.010	1594	5.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093M.010	1690	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1742	13.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1750	8.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1752	4.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1757	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1763	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1763	5.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1768	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1769	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1784	1.0				WARNING: A stream should have a minimum of two methods.	No comment.

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093N.001	1785	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1803	6.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1803	9.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093N.001	1808	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.100	1863	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1942	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1944	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1944	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1945	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1948	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1948	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1966	1.0				WARNING: A stream should have a minimum of two methods.	No comment.

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093K.091	1966	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1989	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1990	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1993	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	1995	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	2009	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	2009	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.091	2009	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.092	2052	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.092	2055	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.092	2075	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.092	2075	3.0				WARNING: A stream should have a minimum of two methods.	No comment.

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093K.092	2075	5.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.092	2076	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.092	2114	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.092	2127	5.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.092	2131	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.081	2251	1.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.081	2251	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.081	2253	2.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.082	2308	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.071	2359	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.071	2359	5.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.071	2366	2.0				WARNING: A stream should have a minimum of two methods.	No comment.

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093K.071	2370	5.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.071	2370	6.0				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093K.071	2373	3.0				WARNING: A stream should have a minimum of two methods.	No comment.
Gradient	093M.039	1018	1.0	59	093M.039	40059	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093M.039	1030	2.0	63	093M.036	40063	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093M.039	1079	1.0	635	093M.039	50635	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093M.039	1091	1.0	61	093M.039	40061	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093M.029	1119	4.0	623	093M.029	50623	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093M.029	1149	1.0	927	093M.029	50927	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093M.029	1150	5.0	626	093M.029	50626	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093M.029	1204	1.0	361	093M.029	20361	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093M.029	1224	1.0	620	093M.029	50620	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
Gradient	093M.020	1404	5.0	39	093M.020	40039	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093M.020	1441	6.0	366	093M.020	20366	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093N.001	1763	5.0	75	093N.001	40075	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093N.001	1792	1.0	578	093N.001	50578	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093N.001	1803	9.0	376	093M.010	20376	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093K.091	1942	2.0	11	093K.091	40011	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093K.091	1975	1.0	26	093K.091	40026	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093K.091	1993	1.0	30	093K.091	40030	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093K.091	1995	2.0	29	093K.091	40029	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093K.091	2009	2.0	19	093K.081	40019	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093K.081	2251	2.0	8	093K.081	40008	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093K.081	2253	2.0	20	093K.081	40020	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
REACHCARD	093M.039	1022	4.0		093M.039	10075	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093M.029	1155	5.0		093M.029	10531	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093M.030	1308	2.0		093M.030	10620	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093M.009	1520	1.0		093M.009	11150	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093K.091	1944	1.0		093K.091	12070	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093K.091	2009	1.0		093K.081	12843	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093K.092	2075	2.0		093K.092	12376	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093K.092	2075	3.0		093K.092	12377	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093K.081	2251	1.0		093K.081	12816	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093K.081	2251	3.0		093K.081	12818	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093K.071	2370	6.0		093K.071	13082	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
SITE LENGTH	093M.039	1079	1.0	635	093M.039	50635	Site's length > Reach's length.	Field measurement is different than map estimate

Tochcha Lake Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
SITE/METHOD	093K.071	2358	2.0				Stream Conductivity missing for Site # 7; Method & #: VO/1	Stream conductivity not measured in field.
SITE/METHOD	093K.071	2358	2.0				Stream Temp required for Site # 7; Method & #: VO/1	Stream temperature not measured in field.

March 21, 2003

Todd Mahon, Wildfor Consultants
FIAA Co-ordinator, Canadian Forest Products Ltd.
PO Box 158,
Houston, BC, VOJ 1Z0

Re: Stage 3 QA on phases 5-6 fish and fish habitat inventory in the Tochcha and Morice North Planning Areas.

Todd:

The stage 3 quality assurance (QA) review of the final deliverables for the 1:20k stream inventory sampling program performed by Triton Environmental Consulting Ltd. for Canadian Forest Products Ltd. has been completed. Resources Inventory Committee standard QA forms were completed during the audit and are included with this letter.

The list of deliverables check found everything present. The card/FDIS/map check found an acceptably small number of errors and no systematic problems. The report was fine. On the maps I noted a few discrepancies in the stream classification coding which need to be addressed, but these were minor and the maps were otherwise excellent. Mapping comments are contained on the last page of this report. The FISS update deliverables was complete and to standards. I found some errors in the photodocumentation package.

While there are some minor issues to address, the deliverables for this project are complete and to RIC standards. This project has passed QA review. If you have any questions regarding the information presented in this memo or in the QA forms please contact me by e-mail (schell@bulkley.net) or by telephone (250-847-9059).

Sincerely,

Chris Schell

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
 FRBC project number: 716432 MELP project number: SCI-C172-010-2001
 Submitted by: Triton Environmental Consultants Ltd
 QA review by: Chris Schell Review date: March, 2003

FORM 3A DATA COMPILATION AND REPORTING DELIVERABLES FOR QA – PAGE 1 OF 1

	Deliverable	Hardcopy	Digital	Comments
Watershed reporting	Watershed report	Y	Y	
	Appendices			
	I. FDIS summary and photographs	Y	Y	
	II. Hardcopy maps	Y	N	No digital mapping files see attached email and digital deliverables CD
	Attachments			
	I. Pre-field planning document	-	Y	
	II. Field notes and forms	Y	-	
	III. Fish aging structures	Y	-	
	IV. Fish samples and vouchers	-	-	None
	V. Photodocumentation	Y	Y	
	VI. Digital data	Y		Mapping files and digital mapping QA files missing see attached email and digital deliverables CD
	VII. FISS update data	Y	-	
	VIII. Aerial photography	-	-	
Individual lake reporting (for each lake)	Lake report			No lake reporting.
	Appendices			
	I. Lake survey form			
	II. Water chemistry data			
	III. Fish collection forms			
	IV. Tributary summary			
	V. Photographs			
	VI. Bathymetric map			
	Attachments			
	I. Photodocumentation			
	II. Digital data			
	III. FISS update data			
	IV. Phase completion reports			
	V. Field notes and forms			
	VI. Aerial photography			
	VII. Fish ageing structures			
	VIII. Fish samples and vouchers			

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
 FRBC project number: 716432 MELP project number: SCI-C172-010-2001
 Submitted by: Triton Environmental Consultants Ltd
 QA review by: Chris Schell Review date: March, 2003

FORM 3B DIGITAL DATA CHECKING – PAGE 1 OF 1

For each FDIS file provided:

FDIS filename:

	Acceptable		Comments
	Y	N	
Conversions done:			
• ILP to WSC	Y		Not completed, but not expected.
• NID-UTM	Y		
• Update bathymetry	NA	NA	
FDIS QA report attached			
• Acceptable error report	Y		See comments below

For each FDIS file and digital map file set:

ARCVIEW fish QA tool

	Filename	Acceptable		Comments
		Y	N	
Digital map files				
• Metadata table	M620301.dbf M620302.dbf	Y		
• Map attributes table	A620301.dbf A620302.dbf	Y		
FDIS data check				
• Sequential reach numbering:		Y		
• Point locations on TRIM streams:		Y		
Copy of ARCVIEW fish QA tool error report attached				
• Acceptable error report		Y		

Morice FDIS QA: site 530 and 259, cond and temp should have been measured in the field if EF was the primary sampling method. Site 172, EF length should have been equal to x10 channel length.

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
FRBC project number: 716432 **MELP project number:** SCI-C172-010-2001
Submitted by: Triton Environmental Consultants Ltd
QA review by: Chris Schell **Review date:** March, 2003

FORM 3C

CONSISTENCY CHECK: STREAM CARDS, FDIS, PROJECT, INTERPRETIVE MAPS – PAGE 1 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	5	16	20	31	39	54	62	73	355	361
NID map #	93k.071	93k.091	93k.081	93k.091	93m.020	93m.029	93m.039	93n.001	93m.019	93m.029
NID #	40005	40016	40020	40031	40039	40054	40062	40073	20355	20361

Record errors below with an 'x.' An error occurs if there is any inconsistency among: 1) field site cards, 2) FDIS, 3) project maps and 4) interpretive maps, as specified for each attribute.

Card section	Attribute	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Header	Stream name	1, 2, 3, 4											
	Watershed code or ILP map # and ILP #	1, 2, 3, 4											
	NID map # and NID #	1, 2											
	Reach #	1, 2, 3, 4											
	Site #	1, 2, 3, 4											
	Site length	1, 2											
	Access	1, 2											
	Survey date	1, 2, 3, 4											
	Agency conducting survey	1, 2, 3, 4											
	Time of survey	1, 2											
	Crew conducting survey	1, 2											
	Fish form completed	1, 2											
Channel	Channel width	1, 2, 3, 4											
	Wetted width	1, 2											
	Residual pool depth	1, 2											
	Gradient	1, 2, 3, 4											
	Bankfull depth	1, 2											
	Stage	1, 2											
	No Vis. Ch., DW, and Dry/Int.	1, 2, 3, 4											
	Tribs	1, 2, 3, 4											
Cover	Total cover	1, 2											
	Cover elements	1, 2											
	Functional LWD (amount, distribution)	1, 2											
	Crown closure	1, 2											
	Instream vegetation	1, 2											
	Bank shape, texture, riparian vegetation	1, 2											

Card section	Attribute	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Water	EMS #	1, 2, 3, 4											
	Temperature, pH	1, 2											
	Water chemistry requisition #	1, 2											
	Conductivity, turbidity	1, 2											
Channel - morphology	Flood signs	1, 2											
	Bed material	1, 2, 3											
	D95, D	1, 2											
	Morphology	1, 2, 3											
	Disturbance indicators	1, 2, 3											
	Pattern	1, 2, 3											
	Islands, bars, coupling	1, 2											
	Confinement	1, 2, 3											
Features	NID map # and NID #	1, 2											
	Type, height/length	1, 2, 3, 4											
	Photo, comments	1, 2, 3, 4											
	UTM	1, 2				X	X						
Habitat quality	General comments	1, 2											
	Fisheries sensitive zones	1, 2											
Photo-documentation	Roll #	1, 2											
	Frame #	1, 2											
	Focal length	1, 2											
	Direction	1, 2											
	Comments	1, 2											
Wildlife	Group	1, 2											
	Observations	1, 2											
Comments	General comments	1, 2									X		
Total errors:						1	1				1		3

Comments:

4 & 5) UTM for features are missing in FDIS Added to FDIS.

9) Card says S6, FDIS says S3, the map is solid blue. Fixed FDIS.

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
 FRBC project number: 716432 MELP project number: SCI-C172-010-2001
 Submitted by: Triton Environmental Consultants Ltd
 QA review by: Chris Schell Review date: March, 2003

FORM 3C

CONSISTENCY CHECK: STREAM CARDS, FDIS, PROJECT, INTERPRETIVE MAPS – PAGE 3 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	376	580	627	642	42	52	259	267	276	285
NID map #	93m.010	93n.001	93m.029	93n.002	93l.046	93l.013	93l.046	93l.046	93l.036	93l.046
NID #	20376	50580	50627	50642	20042	20052	20259	20267	20297	20285

Record errors below with an 'x.' An error occurs if there is any inconsistency among: 1) field site cards, 2) FDIS, 3) project maps and 4) interpretive maps, as specified for each attribute.

Card section	Attribute	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Header	Stream name	1, 2, 3, 4											
	Watershed code or ILP map # and ILP #	1, 2, 3, 4				X							
	NID map # and NID #	1, 2											
	Reach #	1, 2, 3, 4											
	Site #	1, 2, 3, 4											
	Site length	1, 2											
	Access	1, 2											
	Survey date	1, 2, 3, 4											
	Agency conducting survey	1, 2, 3, 4											
	Time of survey	1, 2											
	Crew conducting survey	1, 2											
	Fish form completed	1, 2											
Channel	Channel width	1, 2, 3, 4								X			
	Wetted width	1, 2								X			
	Residual pool depth	1, 2					X						
	Gradient	1, 2, 3, 4											
	Bankfull depth	1, 2											
	Stage	1, 2											
	No Vis. Ch., DW, and Dry/Int.	1, 2, 3, 4											
	Tribs	1, 2, 3, 4											
Cover	Total cover	1, 2											
	Cover elements	1, 2											
	Functional LWD (amount, distribution)	1, 2											
	Crown closure	1, 2											
	Instream vegetation	1, 2											
	Bank shape, texture, riparian vegetation	1, 2											

Card section	Attribute	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Water	EMS #	1, 2, 3, 4											
	Temperature, pH	1, 2											
	Water chemistry requisition #	1, 2											
	Conductivity, turbidity	1, 2											
Channel - morphology	Flood signs	1, 2											
	Bed material	1, 2, 3											
	D95, D	1, 2											
	Morphology	1, 2, 3											
	Disturbance indicators	1, 2, 3											
	Pattern	1, 2, 3											
	Islands, bars, coupling	1, 2											
	Confinement	1, 2, 3											
Features	NID map # and NID #	1, 2											
	Type, height/length	1, 2, 3, 4											
	Photo, comments	1, 2, 3, 4											
	UTM	1, 2											
Habitat quality	General comments	1, 2											
	Fisheries sensitive zones	1, 2											
Photo-documentation	Roll #	1, 2											
	Frame #	1, 2											
	Focal length	1, 2											
	Direction	1, 2											
	Comments	1, 2											
Wildlife	Group	1, 2											
	Observations	1, 2											
Comments	General comments	1, 2											
Total errors:						1	1			2			4

Comments:

4) ILP 1750 in FDIS, some of the labels on the maps say this is 1750, and some say 1752 (headwater label). Stream should be ILP 1750 at headwaters, fixed map.

5) Wb method, GE on card, MS in FDIS Fixed FDIS.

8) channel method on card is HC, channel method in FDIS is MS Fixed FDIS.

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
FRBC project number: 716432 **MELP project number:** SCI-C172-010-2001
Submitted by: Triton Environmental Consultants Ltd
QA review by: Chris Schell **Review date:** March, 2003

FORM 3C

CONSISTENCY CHECK: STREAM CARDS, FDIS, PROJECT, INTERPRETIVE MAPS – PAGE 5 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	297	304	312	324	337	342	349	461	517	531
NID map #	931.036	931.014	931.024	931.035	931.055	931.045	931.035	931.046	931.029	931.025
NID #	20297	21304	20312	20324	20337	20342	20349	95461	50517	50531

Record errors below with an 'x.' An error occurs if there is any inconsistency among: 1) field site cards, 2) FDIS, 3) project maps and 4) interpretive maps, as specified for each attribute.

Card section	Attribute	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Header	Stream name	1, 2, 3, 4											
	Watershed code or ILP map # and ILP #	1, 2, 3, 4											
	NID map # and NID #	1, 2											
	Reach #	1, 2, 3, 4											
	Site #	1, 2, 3, 4											
	Site length	1, 2											
	Access	1, 2											
	Survey date	1, 2, 3, 4											
	Agency conducting survey	1, 2, 3, 4											
	Time of survey	1, 2											
	Crew conducting survey	1, 2											
	Fish form completed	1, 2											
Channel	Channel width	1, 2, 3, 4											
	Wetted width	1, 2											
	Residual pool depth	1, 2											
	Gradient	1, 2, 3, 4											
	Bankfull depth	1, 2											
	Stage	1, 2											
	No Vis. Ch., DW, and Dry/Int.	1, 2, 3, 4											
	Tribes	1, 2, 3, 4											
Cover	Total cover	1, 2											
	Cover elements	1, 2											
	Functional LWD (amount, distribution)	1, 2											
	Crown closure	1, 2											
	Instream vegetation	1, 2											
	Bank shape, texture, riparian vegetation	1, 2											

Card section	Attribute	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Water	EMS #	1, 2, 3, 4											
	Temperature, pH	1, 2											
	Water chemistry requisition #	1, 2											
	Conductivity, turbidity	1, 2											
Channel - morphology	Flood signs	1, 2											
	Bed material	1, 2, 3											
	D95, D	1, 2											
	Morphology	1, 2, 3											
	Disturbance indicators	1, 2, 3											
	Pattern	1, 2, 3											
	Islands, bars, coupling	1, 2											
	Confinement	1, 2, 3											
Features	NID map # and NID #	1, 2											
	Type, height/length	1, 2, 3, 4											
	Photo, comments	1, 2, 3, 4											
	UTM	1, 2											
Habitat quality	General comments	1, 2											
	Fisheries sensitive zones	1, 2											
Photo-documentation	Roll #	1, 2											
	Frame #	1, 2											
	Focal length	1, 2											
	Direction	1, 2											
	Comments	1, 2											
Wildlife	Group	1, 2											
	Observations	1, 2											
Comments	General comments	1, 2											
Total errors:													

Summary of stream site information check:

Number of marks (# cards * 52): 1560

Maximum number of errors acceptable (5%): 52

Number of errors found: 7

Is the number of errors acceptable: Yes

Comments:

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
FRBC project number: 716432 **MELP project number:** SCI-C172-010-2001
Submitted by: Triton Environmental Consultants Ltd
QA review by: Chris Schell **Review date:** March, 2003

FORM 3E

CONSISTENCY CHECK: FISH COLLECTION FORM, FDIS, PROJECT MAP, INTERPRETIVE MAP – PAGE 1 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	5	16	20	31	39	54	62	73	355	361
NID map #	93k.071	93k.091	93k.081	93k.091	93m.020	93m.029	93m.039	93n.001	93m.019	93m.029
NID #	40005	40016	40020	40031	40039	40054	40062	40073	20355	20361

Record errors below with an 'x'. An error occurs if there is inconsistency among 1) fish collection forms, 2) FDIS, 3) project maps, and 4) interpretive maps, and/or 5) lake outline maps, as specified for each attribute.

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Header	Name	1, 2, 3, 4, 5											
	Stream/Lake/Wetland	1, 2, 3											
	Watershed code or ILP	1, 2, 3, 4, 5											
	Waterbody ID	1, 2, 5											
	ILP map #	1, 2											
	Reach #	1, 2, 3, 4, 5											
	MELP fish permit #	1, 2											
	Date start, end	1, 2											
	Agency, crew	1, 2											
	Resample	1, 2											
Site/Method	Site #	1, 2, 3, 4, 5											
	NID map #, NID #	1, 2											
	Site UTM	1, 2											
	Method, method no.	1, 2											
	Temp, turbidity	1, 2											
	Conductivity	1, 2, 3, 4											
Fish summary	Method, method no.	1, 2											
	Haul/Pass (H/P)	1, 2											
	Species	1, 2, 3, 4											
	Stage, total #	1, 2											
	Min. length	1, 2											
	Fish activity	1, 2											

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Gear specifications	Method, method no.	1, 2											
	Haul	1, 2											
	Date, time in/out	1, 2											
	Net type, lgth, dpth	1, 2											
	Mesh size	1, 2											
	Set, habitat	1, 2											
Electrofisher specifications	Method, method no.	1, 2											
	Pass	1, 2											
	Time in, time out	1, 2											
	EF sec.	1, 2											
	Length, width	1, 2											
	Enclosure	1, 2											
	Voltage, freq., pulse	1, 2											
	Make, model	1, 2											
Total:												X	1

Comments:10) FDIS fish card printout missing from binder. Added to binder.

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
 FRBC project number: 716432 MELP project number: SCI-C172-010-2001
 Submitted by: Triton Environmental Consultants Ltd
 QA review by: Chris Schell Review date: March, 2003

FORM 3E

CONSISTENCY CHECK: FISH COLLECTION FORM, FDIS, PROJECT MAP, INTERPRETIVE MAP, - PAGE 3 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	376	580	627	642	42	52	259	267	276	285
NID map #	93m.010	93n.001	93m.029	93n.002	93l.046	93l.013	93l.046	93l.046	93l.036	93l.046
NID #	20376	50580	50627	50642	20042	20052	20259	20267	20297	20285

Record errors below with an 'x'. An error occurs if there is inconsistency among 1) fish collection forms, 2) FDIS, 3) project maps, and 4) interpretive maps, and/or 5) lake outline maps, as specified for each attribute.

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Header	Name	1, 2, 3, 4, 5											
	Stream/Lake/Wetland	1, 2, 3											
	Watershed code or ILP	1, 2, 3, 4, 5											
	Waterbody ID	1, 2, 5											
	ILP map #	1, 2											
	Reach #	1, 2, 3, 4, 5											
	MELP fish permit #	1, 2											
	Date start, end	1, 2											
	Agency, crew	1, 2											
	Resample	1, 2											
Site/Method	Site #	1, 2, 3, 4, 5											
	NID map #, NID #	1, 2											
	Site UTM	1, 2											
	Method, method no.	1, 2											
	Temp, turbidity	1, 2											
	Conductivity	1, 2, 3, 4											
Fish summary	Method, method no.	1, 2											
	Haul/Pass (H/P)	1, 2											
	Species	1, 2, 3, 4											
	Stage, total #	1, 2											
	Min. length	1, 2											
	Fish activity	1, 2											

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Gear specifications	Method, method no.	1, 2											
	Haul	1, 2											
	Date, time in/out	1, 2											
	Net type, lgth, dpth	1, 2											
	Mesh size	1, 2											
	Set, habitat	1, 2											
Electrofisher specifications	Method, method no.	1, 2											
	Pass	1, 2											
	Time in, time out	1, 2											
	EF sec.	1, 2											
	Length, width	1, 2											
	Enclosure	1, 2											
	Voltage, freq., pulse	1, 2											
	Make, model	1, 2											
Total:													

Comments:

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
 FRBC project number: 716432 MELP project number: SCI-C172-010-2001
 Submitted by: Triton Environmental Consultants Ltd
 QA review by: Chris Schell Review date: March, 2003

FORM 3E

CONSISTENCY CHECK: FISH COLLECTION FORM, FDIS, PROJECT MAP, INTERPRETIVE MAP,-- PAGE 5 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	297	304	312	324	337	342	349	461	517	531
NID map #	931.036	931.014	931.024	931.035	931.055	931.045	931.035	931.046	931.029	931.025
NID #	20297	21304	20312	20324	20337	20342	20349	95461	50517	50531

Record errors below with an 'x'. An error occurs if there is inconsistency among 1) fish collection forms, 2) FDIS, 3) project maps, and 4) interpretive maps, and/or 5) lake outline maps, as specified for each attribute.

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Header	Name	1, 2, 3, 4, 5											
	Stream/Lake/Wetland	1, 2, 3											
	Watershed code or ILP	1, 2, 3, 4, 5											
	Waterbody ID	1, 2, 5											
	ILP map #	1, 2											
	Reach #	1, 2, 3, 4, 5											
	MELP fish permit #	1, 2											
	Date start, end	1, 2											
	Agency, crew	1, 2											
	Resample	1, 2											
Site/Method	Site #	1, 2, 3, 4, 5											
	NID map #, NID #	1, 2											
	Site UTM	1, 2											
	Method, method no.	1, 2											
	Temp, turbidity	1, 2											
	Conductivity	1, 2, 3, 4											
Fish summary	Method, method no.	1, 2											
	Haul/Pass (H/P)	1, 2											
	Species	1, 2, 3, 4											
	Stage, total #	1, 2											
	Min. length	1, 2											
	Fish activity	1, 2											

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Gear specifications	Method, method no.	1, 2											
	Haul	1, 2											
	Date, time in/out	1, 2											
	Net type, lgth, dpth	1, 2											
	Mesh size	1, 2											
	Set, habitat	1, 2											
Electrofisher specifications	Method, method no.	1, 2											
	Pass	1, 2											
	Time in, time out	1, 2											
	EF sec.	1, 2											
	Length, width	1, 2											
	Enclosure	1, 2											
	Voltage, freq., pulse	1, 2											
	Make, model	1, 2											
Total:													

Number of marks (# cards * 36): 720Number of errors found: 1Maximum number of errors acceptable (5%): 36

Is the number of errors acceptable: Yes

Comments:

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
 FRBC project number: 716432 MELP project number: SCI-C172-010-2001
 Submitted by: Triton Environmental Consultants Ltd
 QA review by: Chris Schell Review date: March, 2003

FORM 3F

CONSISTENCY CHECK: INDIVIDUAL FISH DATA CARD, FDIS – PAGE 1 OF 1

	1	2	3	4	5	6	7	8	9	10
Site #	31	580	627	259	297	304	531	556	593	615
NID map #	93k.091	93n.001	93m.029	93l.046	93l.036	93l.014	93l.025	93l.036	93l.035	93l.035
NID #	40031	50580	50627	20259	20297	21304	50531	50556	50593	50615

Record errors below with an 'x'. An error occurs if there is inconsistency among 1) individual fish data cards and 2) FDIS, as specified for each attribute.

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Individual fish data	Site #	1, 2											
	Method, method no.	1, 2											
	Haul/Pass	1, 2											
	Species	1, 2											
	Length	1, 2											
	Weight	1, 2											
	Sex	1, 2											
	Maturity	1, 2											
	Age structure	1, 2											
	Age sample #	1, 2											
	Age	1, 2										X	
	Voucher	1, 2											
	Genetic structure	1, 2											
	Genetic sample #	1, 2											
	Photos	1, 2											

Number of marks (# cards * 15): 150

Number of errors found: 1

Maximum number of errors acceptable (5%): 7

Is the number of errors acceptable: Y

Comments:

10) There is no ageing data in the individual fish data section but in the fish summary section of this card you claim these fish are age 3+. Fixed card.

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: 1:20 k Reconnaissance F&FHI - Canfor 2002 program
 FRBC project number: 716432 MELP project number: SCI-C172-010-2001
 Submitted by: Triton Environmental Consultants Ltd
 QA review by: Chris Schell Review date: March, 2003

FORM 3K

WATERSHED REPORT – PAGE 1 OF 4

Report section	Attribute	Accept. (Y/N)	Notes
Title page	Proper title	Y	
	Watershed code below title	Y	
	Prepared for...	Y	
	Prepared by...	Y	
	Signature of R.P.Bio	N	Not yet TAW t sign
Reference information	Project reference information	Y	
	Watershed information	Y	
	Sampling design summary	Y	
	Contractor information	Y	
Disclaimer	Standard wording disclaimer	Y	
Acknowledgements		Y	
Table of contents	Page numbering correct	Y	
	Report outline follows standard	Y	
Lists	List of Tables	Y	
	List of Figures	N	1
	List of Attachments	Y	
	List of Appendices	Y	

Report section	Attribute	Accept. (Y/N)	Notes
Introduction			
Project scope, objectives	1:20 000, 1:5000, lakes, etc.	Y	
Location	Description	Y	
Overview map	8.5 × 11" or 11 × 17"	Y	
	Outline of study area	Y	
	Inset map showing relation to BC	Y	
	Sample site locations	Y	
	1:20 000 map grid	Y	
	Major communities	Y	
	TRIM/FC aquatic features	na	
Access	Description	Y	
Resource Information	First Nations	Y	
	Land use, logging, recreation, etc.	Y	
	Impacts and uses by wildlife	Y	
	Existing water quality data	Y	
	Previous fish presence	Y	
Methods	Reference to RECCE standards	Y	
	Reference to project plan	Y	
	Deviations from RIC standards	Y	
	Deviations from project plan	Y	
	List of sampling equipment used	Y	

Notes:

1) Tochcha report has 2 page vi and two list of figures Addressed.

Report section	Attribute	Accept. (Y/N)	Notes
Results and Discussion			
Logistics	Problems encountered	Y	
	Weather	Y	
	Access	Y	
	Water levels	Y	
	How was it addressed	Y	
	How did it impact the results	Y	

Stream Report Format

Report section	Attribute	Accept. (Y/N)	Notes
Summary of sub-basin biophysical information	Table defining each sub-drainage	Y	
	Sub-drainages not sampled but included in the planning document	Y	
	Previous sampling reference	Y	
Habitat and fish distribution	Characteristics of fish habitats	Y	
	Pattern of fish distribution	Y	
	Location of significant fish pop.s	Y	
	Lakes treated as a reach of the stream	Y	
	Upstream limits of fish presence	Y	
	Obstructions influencing fish	Y	
	Table of all barriers present	Y	

Notes:

1) Morice report. Why do you not think the fish you have captured are RB and not ST?

Stream Report Format – cont.

Report section	Attribute	Accept. (Y/N)	Notes
Fish age, size and life history	Summary of life stages, life history, etc.	Y	1
	Length-frequency histograms	Y	
	Histograms have the same x-axis	Y	
	Table: Summary of length-at-age.	Y	
	Data presented by species	Y	
	Data presented by sub-drainage	NA	
	Age classes appear correct	Y	
Significant features and fisheries observations	Fish and fish habitat		
	Critical habitats	Y	
	Special populations	Y	
	Wild stocks	Y	
	Rare stocks or species	Y	
	High value sport fishing	Y	
	NO management recommend.	Y	
	Habitat protection concerns		
	Fisheries sensitive zones	Y	
	Fish above 20% gradients	Y	
	Restoration opportunities	Y	
	Problem culverts	Y	
	Unstable slopes	Y	
Fish bearing status	Brief narrative section	Y	
	Table: Summary of fish bearing reaches...	Y	

Stream Report Format – cont.

Report section	Attribute	Accept. (Y/N)	Notes
Fish bearing status (cont.)	Table: Summary of non-fish bearing reaches	Y	
	Table: Follow-up sampling required	Y	
References	All sources in report listed	Y	
	According to CBE style manual	Y	

Stream Report Appendices

Report section	Attribute	Accept. (Y/N)	Notes
Appendix I. FDIS summary and Photographs	In ascending order by WSC	-	
	Grouped by site	Y	
	FDIS reach card printouts	Y	
	FDIS site card printouts	Y	
	Fish data collection form	Y	
	Photos (min. 1, max. 4)	Y	
	All photos entered in FDIS	Y	
	Explanatory photo captions	Y	
	Photos in colour (final only)	Y	
Appendix II. Hardcopy maps – General	“E” size plots	Y	
	Folded in pocket in report	N	
	UTM projection	Y	
	1:20 000 map grid	Y	
	1:20 000 scale	Y	
	Complete title box	Y	
	Complete legend box	Y	
	Source information box	Y	

Stream Report Appendices – cont.

Report section	Attribute	Accept. (Y/N)	Notes
Appendix II. Hardcopy maps – General (cont.)	Inset map box	Y	
	Fish species box	Y	
	100 m contour lines	Y	
	WSCs or ILPs for all sampled streams	Y	
	WSCs or ILPs for all 3 rd order or higher streams	Y	
	WSCs or ILPs for every other 1 st and 2 nd order stream	Y	
	WBIDs for all lakes	Y	
	Sample site locations	Y	
Project map	All site data symbols attached to sites	Y	
	Lake summary symbols	Y	
	Reach data symbols on all reaches <30% gradient and all reaches containing sites	Y	
	Features, obstructions, etc.	Y	
	Reach breaks and numbers	Y	
Interpretive map	Reach summary symbols for all reaches in the project area	NA	
	Features, obstructions	Y	
	Fish distribution limits	Y	2
	Stream class	Y	

Notes:

Stream Report Attachments

Report section	Attribute	Accept. (Y/N)	Notes
Attachment I. Planning document	Budget breakdown by phase	Y	
	Project sampling design	Y	
	Process of site selection	Y	
	Reach table	Y	
	Lake table	Y	
	Random sample table	Y	
	References, contacts list	Y	
Attachment II. Field notes	Field book or facsimile	Y	
	Site cards	Y	
	Fish collection forms	Y	
	Individual fish data forms	Y	
	Field working maps	na	
Attachment III. Fish ageing structures	Actual ageing structures	Y	
	Labelled photocopies	Y	
	Annuli identified with red	Y	
	Age data are correct	Y	
Attachment IV. Voucher, DNA samples	Table: Vouchers collected	NA	
	Table: DNA collected	NA	
Attachment V. Photodocumentation	Table: Photo summary report	Y	
	Colour thumbnail reference	Y	
	Photo CD	Y	
	CD Image #s match digital	X	1
	Negatives in plastic sleeves	Y	
	Negatives labelled	Y	

Report section	Attribute	Accept. (Y/N)	Notes
Attachment V. Photodocumentation (cont.)	Negative #s match digital	Y	
	Prints in plastic sleeves	Y	
	Prints labelled	Y	
Attachment VI. Digital data	Budget breakdown by phase	na	
	Project sampling design	Y	
	References, contacts list	Y	
	Table of vouchers collected	Y	in FDIS
	Table of DNA collected	Y	in FDIS
	Photo summary report	Y	in FDIS
	Report tables, figures	Y	
	Report text	Y	
	FDISDAT.MDB	Y	
	Mapping files (plot files)	N	see attached email and digital deliverables CD
	Mapping files (metadata and map features files)	N	see attached email and digital deliverables CD
Attachment VII. FISS update data	FISS data forms and maps	Y	
	Copies of reference material	Y	
	Data on forms match FDIS	Y	
Attachment VIII. Aerial photography	Purchased aerial photos	na	
	Aerial video tape	na	

Notes:

1) Roll 6, the images on the CD do not match the FDIS photodoc printout.
Double checked photos to CD and photodoc printout, everything correct.

Tochcha Maps:

93m.030 R9&10 of Hautete Creek – dashed red should be solid red Fixed.

93k.092 R3 of 2075 - changes from solid red to dashed red halfway through the reach. Why? Stream was visibly accessible to fish from observations conducted during a helicopter overflight.

93l.090 R4 of 2174 – move solid blue down to falls Fixed map.

93m.020 typo on Hautete Lake Edited Map.

Morice Maps:

93l.035 R2 of 3259 – changes from solid red to dashed red in middle of reach. Why? No barriers were observed to the solid red/dashed red break, upstream of this point is potential fish access.

93l.035 R2 of 3275 – same question No barriers were observed to the solid red/dashed red break, upstream of this point is potential fish access.

93l.013 R2 of 3742 – same question Exact fish distribution to the meter is unknown due to helicopter overflight and general UTM location.

93l.013 R2 of 3749 – same question Stream has increasing gradient and goes to inferred non fish bearing status (dashed blue).

Site 342. The site symbol of this map is on a different map sheet than the site itself. Fixed

Lakes (site 902, 903 and 907) should have lake summary symbols, not stream summary symbols. Complete lake surveys were not conducted, the lakes that were sampled were used for determining fish presence/absence.

From: Shawna Hartman
To: Schell, Chris
Date: 3/21/03 9:57AM
Subject: Re: Tochcha Final

Chris,

Attached is the Morice Final.

Shawna

>>> "Chris Schell" <schell@bulkley.net> 03/21/03 08:58AM >>>
Great Shawna, thanks.
Still awaiting the Morice files though.

Chris.

Chris Schell
PO Box 4695
Smithers, BC, V0J 2N0
tel & fax: (250) 846-9059

----- Original Message -----

From: "Shawna Hartman" <shartman@triton-env.com>

To: <schell@bulkley.net>

Cc: "Jason Harris" <JHarris@triton-env.com>; "Kim Strong"
<KStrong@triton-env.com>

Sent: Wednesday, March 19, 2003 9:43 AM

Subject: Tochcha Final

> Hi Chris,

>

> Attached is the final Tochcha file. Please contact me if there is any
> problem or questions.

>

> Thanks,

>

> Shawna Hartman, Biologist

> shartman@triton-env.com

>

> Triton Environmental Consultants Ltd.

> Mail: PO Box 88, Terrace, BC V8G 4A2

> Courier: #300 - 4546 Park Avenue, Terrace, BC V8G 1V4

> Tel: (250) 635-1494; Fax: (250) 635-1495

>

CC: Harris, Jason; Strong, Kim

APPENDIX IV

Phase I-III Project Plan (with attachments)

Phases I - III Pre-Field Project Planning Report Reconnaissance (1:20,000 Scale) Fish and Fish Habitat Inventory in selected tributaries within the Tochcha and Morice Planning Areas



Sakeniche River WSC 182-819600-63300-40900
Babine River WSC 480-000000
Morice River WSC 460-600600
Bulkley River WSC 460-000000

Prepared for:



September 2002

Prepared by:



PHASES I - III
PRE-FIELD PROJECT PLANNING REPORT
Reconnaissance (1:20,000) Fish and Fish Habitat
Inventory in selected tributaries within the Tochcha
and Morice Planning Areas

Sackeniche River WSC 182-819600-63300-40900

Babine River WSC 480-000000

Morice River WSC 460-600600

Bulkley River WSC 460-000000

Prepared for:



Canadian Forest Products Ltd.
P.O. Box 158
Houston, BC V0J 1Z0

September 2002

Prepared by:



P.O. Box 88
Terrace, BC V8G 4A2
Tel: (250) 635 1494 Fax: (250) 635-1495

PHASES I - III PRE-FIELD PROJECT PLANNING REPORT

Reconnaissance (1:20,000) Fish and Fish Habitat Inventory in selected tributaries within the Tochcha and Morice Planning Areas

Project Name: Reconnaissance (1:20,000) Fish and Fish
Habitat Inventory in selected tributaries within
the Tochcha and Morice Planning Areas

Project Type: 1:20,000 Reconnaissance

Report Date: September 2, 2002

Proponent: Canadian Forest Products Ltd.

Company/Agency: Triton Environmental Consultants Ltd.

Contact Person: Jason Harris

Contact Phone: (250) 635-1494

Contact E-Mail: jharris@triton-env.com

Coordinator: Todd Mahon, Wildfor Consultants Ltd.

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Appendix II	Bibliography
Appendix III	List of Key Contacts and Information Sources
Appendix IV	Tochcha Planning Area Sample Selection
Appendix V	Morice Planning Area Sampling Summary Report (with sample selection and FDIS QA)

DIGITAL PRODUCTS

Bibliography
List of Contacts
Project Planning Report
Phase Completion Report

Bibliography 2002.doc
Contacts 2002.doc
Project Plan 2002.doc
Phase Completion 123 2002.doc

Tochcha Digital Data

Tochcha Stream ILP Data Sheet
Tochcha Lake ILP Data Sheet
Tochcha Wetland ILP Data Sheet
Tochcha FDIS

tochcha stream ilp.dbf
tochcha lake ilp.dbf
tochcha wetland ilp.dbf
FDISDAT.mdb

Morice Digital Data

Morice Stream ILP Data Sheet
Morice Lake ILP Data Sheet
Morice Wetland ILP Data Sheet
Morice FDIS

morice stream ilp.dbf
morice lake ilp.dbf
morice wetland ilp.dbf
FDISDAT.mdb

1.0 INTRODUCTION

Triton Environmental Consultants Ltd. was retained by Canadian Forest Products Ltd. (Canfor), Houston, BC in partnership with the Forest Investment Account (FIA) and Ministry of Sustainable Resource Management (MSRM) to conduct a reconnaissance level fish and fish inventory in selected tributaries within the Tochcha Lake and Morice River watersheds. This report summarizes work completed in Phases I-III and outlines the project plan for Phases IV-VI.

1.1 Summary of Work Completed

A summary of work completed for each phase is outlined in the attached Phase Completion Report (Appendix I). This summary includes:

- contractor information;
- list of deliverables submitted;
- activity log;
- summary of work completed;
- progress and problems summary; and
- next phase project plans and constraints.

2.0 STUDY AREA AND ACCESS

The Tochcha planning area is located approximately 30 km west of the community of Topley Landing. The Tochcha planning area includes all tributaries located along the east shore of Babine Lake between WSC 480-598800 and WSC 480-807300 as well as all tributaries flowing into the Sakeniche River WSC 182-819600-63300-40900 and Hautete Creek WSC 180-819600-63300-40900-8500.

The Morice planning area is located approximately 5 km northeast of Houston, BC. The Morice planning area includes all tributaries located along the left bank of the Morice River between WSC 460-600600-35600 and WSC 460-600600-02700 and all tributaries located to the east along the Bulkley River left bank between WSC 460-622700 and WSC 460-545700, as well as tributaries located along the west shore of Morice Lake from WSC 480-460-600600-66900 to Gosnell Creek (WSC 460-600600-50800-00500).

2.1 List of Trim Maps

The 1:20,000 TRIM sheets covering this project area include:

Tochcha Planning Area

93M.038	93M.039	93M.040	93M.028	93M.029	93M.030
93M.019	93M.020	93M.010	93N.001	93M.009	93N.011
93N.002	93L.100	093L.090	93K.091	93K.092	93K.081
93K.082	93K.071	93K.072			

Morice Planning Area

93L.055	93L.056	93L.045	93L.046	93L.047	93L.034
93L.035	93L.036	93L.037	93L.024	93L.025	93L.026
93L.015	93L.016	93L.003	93L.013	93L.014	

2.2 Working Areas and Major Sub-Basins within the Project Area

The sub-basins to be sampled in the project area include:

Tochcha Planning Area

Gloyazeikut Creek	(WSC 182-819600-63300-40900-8040)
Hautete Creek	(WSC 182-819600-63300-40900-9760)
Nizik Creek	(WSC 182-819600-63300-40900-8500)
Sakeniche River	(WSC 182-819600-63300-40900)

Morice Planning Area

Houston Tommy Creek	(WSC 460-600600-17000)
Emerson Creek	(WSC 460-568500)
Dockrill Creek	(WSC 460-562100)
Knapper Creek	(WSC 460-600600-11800)

2.3 Access

Road access is fairly extensive throughout the Tochcha planning area and the lower reaches of the Morice planning area. The upper reaches of many of the sub-basins will be accessed by helicopter where road networks are not present.

3.0 BACKGROUND REVIEW

An extensive background review was completed for the project area. Data sources reviewed include:

- consultants reports;
- Canfor planning and stream class information;
- previous inventory data;
- FISS data base and maps; and
- DFO/MSRM Fish Habitat Inventory and Information Program (FHIP or SISS) catalogue for Sub-district 4D Smithers (Volume 2) Bulkley.

A complete list of references and contacts used during the background review is provided in Appendix II and Appendix III. The background review indicated that the following species are present within the project area:

- coho salmon (*Oncorhynchus kisutch*);
- pink salmon (*O. gorbuscha*);
- chinook salmon (*O. tshawytscha*);
- kokanee/sockeye salmon (*O. nerka*);
- steelhead/rainbow trout (*O. mykiss*);
- cutthroat trout (*O. clarki*);
- Dolly Varden char/Bull Trout (*Salvelinus malma*);
- lake trout (*S. namaycush*);
- brook trout (*S. fontinalis*);
- bridgelip sucker (*Catostomus columbianus*);
- largescale sucker (*C. macrocheilus*);
- longnose sucker (*C. catostomus*);
- white sucker (*C. commersoni*);
- northern pikeminnow (*Ptychocheilus oregonensis*);
- peamouth chub (*Mylocheilus caurinus*);
- redbelt shiner (*Richardsonius balteatus*);
- longnose dace (*Rhinichthys cataractae*);
- northern redbelly dace (*Chrosomus eos*);
- mountain whitefish (*Prosopium williamsoni*);
- pygmy whitefish (*P. coulteri*);
- lake whitefish (*Coregonus clupeaformis*);
- burbot (*Lota lota*);
- prickly sculpin (*Cottus asper*);
- lamprey (*Lampetra sp.*); and
- Arctic lamprey (*L. japonica*).

4.0 DEVIATION FROM RIC STANDARDS

4.1 Planning Phases

Sample site selection was based on satisfying the types of stream reaches identified in the Sample Size Summary Table (as generated by the FDIS random generated planning tool).

Prior sampling, fish presence and historical features have been added to the planning maps and the FDIS database. These sites were used to modify the sampling plan and avoid redundancy in sampling efforts. Random sites downstream of confirmed fish and upstream of End of Fish Use (EFU) will be removed or relocated (as discretionary sites) to support further fish distribution information.

Discretionary site selection focused on obtaining comprehensive fish distribution data from the major sub-basins within the study area. Discretionary sites were selected to achieve connectivity within sub-basins and identify upstream limits for fish distribution. Major inlets of primary and secondary lakes, as well as reaches that may contain barriers were potential candidates for discretionary sites. Forest development planning and the operational needs of the licensee were also considered when selecting sites.

Randomly selected reaches are shown on the interim maps with a green highlighter and green label dots. Randomly selected reaches that have been moved are shown with a green highlighter that has been crossed out (no label dot). Discretionary sites are shown with a green dashed line and red label dot. Label dots were used to allow for easier identification of sites.

FISS data will be compiled, edited and submitted at the completion of phase 6. FISS updates will include existing information found during the data search and new site information captured during the field inventory.

Detailed reach planning was not conducted during the planning phases, as it is anticipated (based on previous experience) that several reaches will be moved during pre-field meetings with the licensee, ministry representatives and during the sampling program. Detailed reach planning forms will be completed during phase 5 and will be submitted as a deliverable for phase 6.

5.0 PROJECT PLAN

5.1 Phase 4: Field Data Collection (Streams)

Following is an outline of our approach to the fieldwork, clarification of specific sampling methodologies, and an estimate of the effort required. The following sections describe the methodologies and approaches to complete field sampling, data collection and reporting.

5.1.1 Pre-Field Preparation

Pre-field preparations will entail both office activities and logistics planning in co-ordination with members of the project team, the Implementation Contractor and Canfor. Fish collection permits will be obtained from MSRM and the Department of Fisheries and Oceans (DFO) prior to commencement of field activities.

Pre-field preparations will include a crew talk and pre-field training. During the crew talk, safety issues and procedures will be reviewed. All staff will be required to complete pre-field training to review standards and procedures. Crew members who are not involved in the planning phases will be informed about project specific logistics and requirements. The crew talk and pre-field training will provide a means to ensure that all inventory cards are completed in a standardized manner by all crews and that crews are aware of QA/QC requirements.

5.1.2 Equipment

Triton possesses all necessary field equipment to complete the project.

Each crew will be equipped with a Smith-Root Model 12A backpack electrofisher and other standard field gear (Abney level, hip chain, tape measure, VHF radio, first aid kit, etc.).

5.1.3 Field Assessment

Two person field crews will conduct fieldwork. Crew mobilization will take place using a variety of methods depending on the access available in each watershed. In watersheds where road access is available, crews will drive to the sample sites. In watersheds where road access is unavailable crews will be transported by helicopter to the sample sites.

Field crews will be supplied with forest cover maps, TRIM planning maps and aerial photographs to assist in locating and accessing reaches of interest. Reaches will be largely accessed using compass bearings, hip chains and GPS units.

5.1.4 Fish Species Sampling

Fish sampling efforts will focus on reaches of <20% gradient (>20% at the Project Manager's discretion (i.e. suspected bull trout, regionally significant species presence)) and will follow the procedures outlined in the *Reconnaissance Fish and Fish Habitat Inventory: Standards and Procedures* (April, 2001) and the *Forest Practice Code's Fish Stream Identification Guidebook*. A minimum 100 m of stream length or a length equal to 10 bankfull widths (whichever is greater) will be sampled in each reach identified for sampling. In addition, intermittent fish sampling may be conducted during travel between sample sites (in an upstream direction), upstream and downstream of barriers and within habitat features (pools, debris jams etc.) that may be utilized by fish.

The presence, relative abundance and diversity of fish species will generally be evaluated through electroshocking at least 100 linear meters of stream length. In areas where return visits are practical, minnow traps baited with salmon roe will be set and allowed to remain for a 24-hour period. This sampling method will be used to supplement electroshocking data, or in areas that are not suited to electroshocking (deep pools, wetlands, and active spawning areas). Other sampling methods, such as snorkeling, beach seining, and angling may be used where necessary.

All fish sampling data will be recorded on Fish Collection Forms. The following data and samples will be recorded and collected for fish caught at each sampling site:

- species (keyed out using RIC's Field Key to Freshwater Fishes of BC). Special attention will be given to documenting species at risk in Region 6;
- length to the nearest mm (fork length or total length depending on species) determined for 30 random samples of each fish species captured including the longest and shortest fish;
- life stage;
- a representative sample of any abnormal or unidentified fish will be preserved and submitted to the Implementation Contractor; and
- aging structures will be collected from a representative sub sample of fish species captured throughout the inventory area.

5.1.5 Habitat (Site) Description

The following data will be collected at each site:

- site length;
- stream gradient;
- 6 individual channel and wetted width measurements;
- estimates of bed material size, by size class;

- measurements of stream cover / riparian vegetation and large organic debris;
- channel confinement;
- water temperature;
- conductivity;
- major features (fish passage barriers, log jams, LWD, beaver dams, clay slides, etc.)
- obvious fish habitat limitations or restoration opportunities; and
- preliminary identification of obvious Fisheries Sensitive Zones as per Fish-stream Identification Guidebook specifications.

5.1.6 Water Quality

Triton will sample water quality parameters in the field at each sample site. Parameters will be measured in the field in order to reduce laboratory costs and shipping. Specifically, Triton proposes to measure air and water temperature using standard field thermometers, pH and conductivity using hand held meters, and turbidity using visual estimates.

5.1.7 Wildlife Observations

Wildlife observations will be noted and specific details recorded. Amphibians, aquatic invertebrates and macrophytes will be described and identified to Order or Family (where practical). Photographs will be taken for further documentation and confirmation. Wildlife observations will be recorded on the Site Card with emphasis placed on species considered rare, endangered or threatened as defined by the Conservation Data Centre.

5.1.8 Photographic Documentation

Photographs will be taken of each sample site (including upstream and downstream perspectives), of each feature identified and of representative or unidentifiable fish species. Photographs will be documented on Site Cards and Fish Collection Forms.

5.1.9 Inventory Area Specific Sampling

Through completion of Phases I-III we have identified specific reaches to sample in each working area. Sample sizes are outlined in Table 1.

Table 1 Sample Site Summary by Planning Area

Inventory Area	Tochcha Planning Area	Morice Planning Area
Number of reach sample sites proposed	100	260

In order to achieve Reconnaissance (1:20,000) Fish and Fish Habitat Inventory objectives discretionary sites were selected using the following criteria:

- where it is necessary to determine fish presence within a sub-basin;
- to address Local Area Agreements and fisheries distribution within the project area;
- inlets and outlets of lakes where it is necessary to determine fish presence within a sub-basin;
- lower order reaches that are likely to delineate the upper limits of fish distribution;
- within or adjacent to proposed cutblocks;
- above and below potential barriers; and
- around the 20% gradient break.

5.1.10 Non Fish Bearing Reaches

The fish bearing status of streams may be directly supported by sampling data or indirectly inferred based on fish captures in associated reaches, or habitat quality and the occurrence or lack of barriers to fish passage. Should a barrier be located, sampling will focus on covering perennial and non-perennial habitat types above that barrier. Sampling in perennial habitats will follow the Guidelines for Local Area Agreement Preparation-Skeena Region (version 2). This will include sampling perennial habitats above barriers with adequate intensities, stream order u/s of barrier x 2 = number of required sites. This intensity should allow field crews to cover all spawning, rearing and overwintering habitat types within that particular stream. Minnow traps and small gill nets will be set overnight in possible overwintering wetlands and where practical, primary or secondary lakes sampling methods will be conducted. If no perennial habitats are present within a stream and a barrier is located (no connectivity, cascades, falls etc.) sampling intensity of stream order u/s of barrier = number of required sites.

Identification of barriers in the field is critical to describing and assessing fisheries distribution within a particular watershed or stream. Field crews will try to identify these barriers while on site, by either using a helicopter recce of the stream or by strategically moving sample sites while still in the field. At the end of each field day crews will meet to discuss data and color code interpretive maps. This color coding of maps will allow field crews to identify unanswered questions regarding distribution and make proper changes while still in the field.

For all reaches with a non-fish bearing classification a written explanation supporting the classification will be submitted (Non-Fish Bearing Classification Report) in the final report. The explanation will focus on sampling methods utilized during the field program, and water quality parameters, including conductivity and turbidity.

5.1.11 Lakes Sampling

Lakes have not been specifically selected for sampling. Potential lake sampling will be discussed with Todd Mahon and John Brockley at the conclusion of the stream-sampling program. Lake sampling will then focus on attaining information that will be of value to both MSRM (watershed wide fish distribution) and the licensee (headwater lakes which support fish).

Should lake sampling be required the following plan will be used.

5.2 Lakes Plan

5.2.1 Phase 4: Field Data Collection

Following is an outline of our approach to the fieldwork, clarification of specific sampling methodologies, and an estimate of the effort required. The following sections describe the methodologies and approaches to complete field sampling, data collection and reporting for primary and secondary lake inventories.

5.2.2 Field Assessment

A 2-person field crew will conduct the lakes fieldwork. Crew mobilization will take place using a variety of methods, which will maximize the efficiency of the field program depending on specific access available at each lake. For lakes with road access, the field crew will utilize a 4X4-crew cab pickup truck. For sites in which road access is unavailable the field crew will be mobilized by helicopter.

The field crew will be equipped with a Smith-Root Model 12A backpack electrofisher, gill nets, minnow traps and other standard field gear (zodiac and motor, clinometer, hip chain, tape measure, Van Dorn bottle, VHF radio, first aid kit, etc.). Utilizing a combination of these methodologies will ensure that field efficiency is maximized and the project target is attained.

5.2.3 Fish Species Sampling: Primary Lakes

Multi-panel floating and sinking gill nets will be the principal fish sampling method utilized in primary lakes, along with minnow traps and angling. Gill nets (floating and sinking) to be used will follow specifications for standard nets used in reconnaissance level lake inventories in B.C. Gill nets will be set with the smallest mesh size at the shallow end of the net set and secured to a point on shore. Gill nets and minnow traps will be allowed to fish overnight for a minimum period of 8 hours. Gill nets will be set in the evening and monitored for approximately 30 - 45 minutes for an indication of catch

success. Professional judgment will be applied to reduce the netting effort if early indications of net catch suggest excessive fish mortality will result from a standard two net or overnight set. The depth sounder will be operated while setting gill nets to provide a record of bottom substrates and the presence of submerged logs or snags.

Baited (boraxed salmon roe) minnow traps will be set around the perimeter of the lake within shallow shoal areas. Water depths at trap sites will be between 0.3 m and 1.5 m and the trap entrances will be placed parallel to shore or submerged cover. Styrofoam floats will be attached to the traps with a 1.5 m length of string. Minnow traps will be allowed to fish overnight for a minimum of 8 hours.

Inlet and outlet streams will be sampled using an electroshocker to determine fish species presence and relative abundance.

5.2.4 Fish Species Sampling: Secondary Lakes

Secondary lakes are intended to be quick (1 day) surveys of fish species presence or absence. Gill nets will be set initially upon arrival to a lake and allowed to fish while the field crew completes their limnological sampling and other tasks. Minnow traps will also be set for the day during secondary lake surveys. Fish sampling in streams will not be conducted for secondary lakes unless downstream or upstream reaches are sampled during the concurrent stream inventory.

5.2.5 Fish Species Sampling: General

All fish sampling data will be recorded on waterproof Fish Collection Forms. The following data and samples will be recorded and collected for fish caught at each sampling site:

- species (keyed out using RIC's Field Key to Freshwater Fishes of BC). Special attention will be given to documenting species at risk;
- life stage;
- wet weight (in grams);
- a representative sample of any abnormal or unidentified fish or a species of fish out of its normal range will be preserved and submitted to the Implementation Contractor.

Non-lethal aging structures will be removed from a subsample of fish captured in lakes (generally 30 of each species) to determine the age of cohorts present in the lake. Aquatic insects, invertebrates and amphibians will be identified, enumerated and released. Unidentified invertebrates will be retained and preserved in buffered 10% formalin.

A reach description will be completed for one reach of the major inlet and outlet streams to each primary lake consistent with the Site Description form and entered into MSRM's FDIS database as part of Phase 5. Each sampling site length will be 100 m, or >10 bankfull widths whichever is greater. The following data will be collected at each site:

- site length
- stream gradient
- 6 individual channel and wetted width measurements
- estimates of bed material size, by size class
- measurements of stream cover / riparian vegetation and large organic debris
- channel confinement
- water temperature
- conductivity (ambient)
- major features (fish passage barriers, log jams, LWD, beaver dams, clay slides, etc.)
- obvious fish habitat limitations or restoration opportunities
- preliminary identification of obvious Fisheries Sensitive Zones as per Fish-stream Identification Guidebook specifications.

For secondary lakes a visual survey of each inlet and outlet will be conducted to determine the presence of potential habitats that are important to fish.

For all inlet and outlet reaches with non-fish bearing classification a written explanation supporting the classification will be submitted. The written explanation will be included in the final report. The discussion will focus on sampling methods utilized during the field program, water quality parameters including conductivity and turbidity and recommendations for follow-up sampling.

5.2.6 Lake Habitat Descriptions

Bathymetric soundings will be conducted using a Lowrance X-16 electronic depth sounder. The transducer will be mounted on the transom of a 3 m Achilles inflatable boat powered by a short-leg 9.9 hp Johnson outboard. This combination of boat and motor will allow transects to be conducted in water as shallow as .30 m in depth, resulting in accurate estimates of distance at transect start and end points. Depths within shoal areas and weed beds will be measured with a measuring pole.

An E-line transect will be performed along the main (long) axis of the lake to determine the maximum depth in the main basin of the lake. Upon completion of the E-line transect, a shoreline perimeter cruise will be conducted to record lakeshore features, surrounding terrain, vegetation and aquatic plant descriptions.

Full bathymetric surveys will only be required on primary lakes. Transects will be conducted in a straight line, perpendicular to the shoreline and towards an easily

identifiable feature on the opposite shoreline (i.e. point, snag etc.). A constant speed will be maintained for the duration of each transect (~1 m/sec). Speed will be estimated using a floating object tossed in the water ahead and to one side of the boat and timed as it passes beside the boat from bow to stern. Echograms will be marked with a single solid line to represent the start of each transect and double solid lines to indicate end points. Measurement of lake surface area and drainage area will be determined using a Placom KP-90N digital planimeter.

5.2.7 Water Quality

Triton field crews will sample water quality parameters in the field at each limnology station. EMS numbers will be acquired from MSRM prior to the commencement of fieldwork in primary lakes. Parameters will be measured in the field in order to reduce laboratory costs and shipping. On primary lakes, water samples will be sent to a certified laboratory for analysis. Parameters analyzed will follow the Lake and Stream Inventory manual.

Specifically, Triton proposes to measure field air and water temperature using standard field thermometers, pH and conductivity using hand held meters, and turbidity using visual estimates.

Lake limnological sampling will also include a dissolved oxygen/temperature profile, to be completed with a YSI DO probe. A secchi depth measurement will be taken at the deepest point within the lake. Conductivity and pH will be measured from just below the surface and above the lake bottom. Water samples within the lake will be collected with a Van Dorn bottle.

5.2.8 Wildlife Observations

Wildlife observations will be noted and specific details recorded. Amphibians will be identified in the field. Abundant invertebrates will be described and field identified to Order or Family (where practical), as will aquatic macrophytes. Photographs will be taken for further documentation and confirmation. Wildlife observations will be recorded on the lake survey form with emphasis placed on species considered rare, endangered or threatened as defined by the Conservation Data Center.

5.2.9 Photographic Documentation

Triton will make extensive use of photography throughout the project. For lakes, a series of panoramic pictures will be taken from the geographic center of the lake. Pictures will also be taken which highlight geographic features, surrounding country and aquatic vegetation. Other photographs taken on lakes will include evidence of recreational use, wildlife features and fish species (if captured). Photographs will be documented on lake

survey form and Triton's photodocumentation form. The photos will be presented in the report in a manner that meets RIC standards.

6.0 PHASE 5 - DATA COMPILATION

The office portion of Phase 5 will entail entering hardcopy field notes and field forms into requisite electronic database forms including lake forms, site cards, fish collection forms and photodocumentation Form 1. Photographs taken during the field will be developed, captioned and coupled with lake forms and site cards where applicable. Additional photographs will be indexed in referenced binders with the photodocumentation cards and negatives. Bathymetric and lake outline mapping will be completed during Phase 5.

7.0 PHASE 6 - REPORTING AND MAPPING

The final report will follow the outline provided in the Reconnaissance (1:20,000) Inventory Standards and will include data analyses, fisheries values, stream and riparian classifications and management recommendations. This report will contain fish bearing and non fish bearing classification reports and a table supporting each will include sampling methods (and effort), habitat conditions, barriers to fish passage and water quality parameters.

For all reaches with a non fish bearing classification a written explanation supporting the classification will be submitted (Non Fish Bearing Classification Report). The written explanation will be included in the site descriptions provided in the final report. The discussion will focus on sampling methods utilized during the field program, water quality parameters including conductivity, turbidity and recommendations.

All final map work will be produced using GIS software program. Maps produced digitally will include all information as per the requirements outlined in the Reconnaissance (1:20,000) Inventory Standards. The hybridized project/interpretative maps will include: watershed codes (ILP's); stream names; waterbody identifiers; reach breaks; fish sampling sites; fish species; features; stream classification; annotated fish distribution and historical data. Overview maps will accompany the final reports and will show sampling site locations.

7.1 Existing Data

Existing data (i.e. Houston Tommy Inventory 1998/99) will be incorporated into the report where applicable and for ease of reference. The results from previous sampling will be used to establish fish presence and distribution throughout the watershed and to facilitate and/or confirm stream Riparian Management Area classifications.

Historical inventory data will be annotated on the inventory maps and will be linked via a unique site number to the original report.

8.0 PROJECT TIMELINES

Phase III deliverables including ILP map and data sheet by:	September 2, 2002
Phase IV activities completed by:	October 18, 2002
Phase IV deliverables by:	October 25, 2002
Draft Phase V and VI deliverables completed and delivered by:	January 15, 2003
Final deliverables for all phases by:	March 31, 2003

9.0 PROPOSED STAFF

Project Director	Tom Watson
Project Manager	Jason Harris
GIS Coordinator	David Warburton
GIS Technician	Suhkbir Johal
Crew Supervisor	Jason Dorey
Crew Member	Shawna Hartman
Crew Member	Shawn Geisbrecht
Crew Member	David Taft

10.0 EQUIPMENT LIST

Fish Collection/Crew

1 electrofisher
1 large battery
1 small battery
1 charger
2 anode poles
2 cathodes
3 pairs of linesman gloves
Fish Collection Permit
1 small net
measuring board
recovery bucket
10 minnow traps
bait
4 bottle of alcohol
voucher jars
Fish Collection Methods and Procedures
1 bottle of clove oil
scale envelopes
DNA vials
razorblade knife
ziplock bags
fishing license

Misc

RIC inventory standards
contract
fish identification key
project contact list
winch
jack-all
tire iron
spare tire
shovel
axe
Swede saw
rope
tarps
planning maps
timesheets
expense claim forms
daytimers
1 flashlight

Field Gear/Crew

2 compass	first aid kit	hip chain	bug dope
2 clino	2 wool blankets	string	2 scale rules
2 field books	waders	flagging tape	metric thermometer
site cards	wading boots	1 axe	pH meter
fish forms	aquaseal	file	conductivity meter
individual fish data	color film	caulks	two way radio
duksbak	waterproof camera	caulk wrench	radio frequencies

11.0 CONTINGENCY PLAN

It is critical that sampling be approached strategically, rather than (or in addition to) strictly site based. Crews will work from the approved plan, but if modifications to the plan lead to an increased knowledge of fish distribution (within the watershed) changes to the plan will be made. In cases where sampling could not be conducted, or where conditions for sampling were unfavorable, the field crews will make a number of assumptions in selecting new sites.

The following criteria will be considered when adding or moving sites:

- the establishment of fish presence within a catchment or basin (the intent here is not to chase End of Fish Use in every tributary);
- the identification of upstream limits of fish distribution;
- the investigation of barriers to fish passage; and
- the investigation of potential overwintering habitat. The identification and confirmation of barriers to fish passage have significant implications, where entire portions of sub-basins could be confirmed as non-fish bearing, pending the sampling of any potential overwintering habitats upstream of the barrier.

Strategic selection and professional judgement to relocate sites within the watershed will allow maximum sampling efficiency and it will also allow crews to assess barriers and fisheries values throughout the watershed.

APPENDIX I

Project Phase Completion Report: Phases I – III

PROJECT PHASE COMPLETION REPORT: PHASES I - III

Project Name: Reconnaissance (1:20,000) Fish and Fish Habitat Inventory in selected tributaries within the Tochcha and Morice Planning Areas
Project Type: 1:20,000 Reconnaissance
Report Date: September 2, 2002
Proponent: Canadian Forest Products Ltd. (Canfor)
Company/Agency: Triton Environmental Consultants Ltd.
Contact Person: Jason Harris
Contact Phone: (250) 635-1494
Contact E-Mail: jharris@triton-env.com
Coordinator: Todd Mahon, Wildfor Consultants Ltd.

Table 1. List of Deliverables Submitted (Phase I)

Deliverable Product	Received	Approved (QA)
Bibliography (hardcopy and digital)		
List of Contacts (hardcopy and digital)		
Interim Maps with; • watershed boundaries • waterbodies with ILP's or watershed codes • reach breaks with NIDS • lakes with NIDS • proposed sample sites		
Reach tables (digital FDIS)		
Project Plan (hardcopy and digital)		
Lake tables (digital FDIS)		
Phase completion report (hardcopy and digital)		

Table 2. Activity Log (Phases I - III)

Date	Activity
Aug 10 - Aug 15	Assign ILP's, delineate watershed boundaries
Aug 10 - Aug 25	Completing Reach Tables and Quality Control
Aug 10 - Aug 25	Completing Interim Maps and Quality Control
Aug 15 - Aug 25	Lakes planning and lakes information tables
Aug 15 - Aug 25	Completing Basin Classification, Reach Breaks, Lakes Classification and Quality Control
Aug 25 - Sept 1	Create contact list, bibliography, etc.
Aug 25 - Sept 1	Project Plan development
Aug 28 - Sept 2	Interim Maps/Sample Site Locations

Summary of Work Completed

A background data review was conducted to establish existing information within the Tochcha and Morice watersheds. These reports were obtained from the Ministry of Sustainable Resources Management (MSRM) office in Smithers, Canadian Forest Products (Canfor) in Houston, various consultants and the BC Conservation Data Centre. A bibliography listing these reports was completed.

In the process of data collection and compilation consultants, government agencies and Canfor personnel were contacted. A list of contacts made during this process was completed.

FISS maps were reviewed and compared with the data collected during the background review. Information that was not included on the FISS maps, as well as new information gathered in Phase 4, will be transcribed to a corresponding 1:50,000 scale National Topographic Scale (NTS) map during Phase 5.

The project area boundaries were delineated on TRIM maps and all streams, wetlands and lakes were assigned, waterbody identifiers or ILP's. ILP's were assigned using Arcview and FDIS.

Thirty-eight working TRIM map sheets are being used for the project.

Detailed map and photo analysis was conducted in order to identify and classify sub-basins within the study area; to determine reach breaks; and to determine individual reach characteristics for all watercourses, lakes and wetlands. The delineation of sub-basins was based on stream order and hierarchy within the watershed.

All connected wetlands were identified and added to the interim maps. Wetlands with defined or partly defined channels, which convey flow, were included in the stream portion of the sampling plan. While wetlands without defined channels, or those with extensive ponding were included in the lake portion of the sampling plan.

All watercourses within the study area were divided into reaches and physical features affecting fish habitat suitability (including gradient, confinement, channel pattern and riparian vegetation) were identified.

All lakes within the study area were assigned to lake groups.

The focus of Phase 3 was to develop the detailed sampling plan and produce the planning report. The number of sample sites proposed and a brief rationale for sample site selection is provided in the project plan.

Planning for the field-sampling portion of this project followed a balanced approach between RIC requirements and Canfor's operational needs. Initial sample site selection was undertaken using the FDIS random generator. Further discretionary sites were added

to the initial randomly generated sampling sites. Discretionary sites were selected using the following criteria:

- FDIS Reach Sampling Summary table for each watershed;
- existing fish species distribution data;
- strategies to determine fish distribution within each watershed; and
- Canfor operational needs.

Revisions to the stream sampling plan (increased number of site, alternate site locations) will be revised at the beginning of Phase 4, which is scheduled to commence in the summer of 2002.

Table 3. Project Area Statistics

Inventory Area	Tochcha Planning Area	Morice Planning Area
Project Area (Ha)	141,732 Ha	85,029 Ha
Number of TRIM maps	21	17
Largest watershed (stream) order	5	5
Number of 3rd order basins	66	67
Km of streams	2033.4 km	1544.5 km
Number of stream reaches in project area	2762	2208
Number of lakes in project area	134	33

Table 4. Sample Site Summary

Inventory Area	Tochcha Planning Area	Morice Planning Area
Number of reach sample sites proposed	100	260

Progress and Problems Summary

Detailed reach planning was not conducted during the planning phases, as it is anticipated (based on previous experience) that several reaches will be moved during pre-field meetings with Canfor personnel, ministry representatives and during the sampling program. We anticipate several changes to the sampling plan, and these changes will significantly alter the original sample site selection. Detailed reach planning forms will be completed during phase 5 and will be submitted as a deliverable for this phase.

No lakes were specifically selected for sampling; therefore no detailed lakes forms were completed. Lakes to be sampled will be selected after the conclusion of the stream sampling program. Lakes sampling will then focus on attaining information that will be of value to both MSRM (watershed wide fish distribution) and Canfor (headwater lakes which support fish in ephemeral systems).

Next Phase Project Plans and Constraints

FISS updates will be provided with the Phase VI deliverables as opposed to Phase III. At that time new information gathered from the field can be incorporated into FISS.

Phase IV (field) is scheduled to commence in September of 2002.

Summary of Phases I - III Costs

Costs as per contract

Contract Monitor Acceptance

Report Submitted By: Jason Harris	Date: September 2, 2002
Phase Completion Approved:	Date:
Comments:	

APPENDIX II

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APPENDIX III

List of Key Contacts and Information Sources

List of Key Contacts and Information Sources for Canadian Forest Products Stream Inventory Project

Name	Company/Agency	Title	Contact Number	Date	Comments
John Brockley	Canadian Forest Products Ltd.	Project Administrator	(250) 847-5277	Ongoing	Guidance throughout project
Todd Mahon	Wildfor Consultants Ltd.	Project Co-ordinator	(250) 846-5449	Ongoing	Guidance throughout project
Paul Giroux	MWLAP (Smithers)	Regional Biologist	(250) 847-7303	Ongoing	Guidance throughout project
John Thibeau	MOF (Houston)	Forestry Technician	(250)-845-6243	Ongoing	Identification of barrier to fish migration in the Tochcha Lake planning area.
Dana Atagi	MWLAP (Smithers)	Fisheries Biologist	(250) 847-7303	Ongoing	Requested info. regarding project area
Matthew Jessop	MWLAP (Smithers)	Fisheries Technician	(250) 847-7303	Ongoing	Requested info. regarding project area
Scott Northrup	DFO (Nanaimo)	Habitat Biologist	(250) 756-7275	Ongoing	Contacted for info. regarding completed inventories within the study area
Jim Trask	Triton Environmental Consultants Ltd. (Prince George)	Consultant	(250) 562-9155	Ongoing	- Requested info. pertaining to work completed in the study area - Guidance throughout project
Chris Schell	Consultant	Fisheries Biologist	(250) 846-9059	Ongoing	- RIC Inventory expert - Guidance throughout project
David Bustard	Consultant	Fisheries Biologist	(250) 847-2963	Ongoing	Familiar with fisheries resources throughout the study area
David Warburton	Triton Environmental Consultants Ltd. (Prince George)	GIS Co-ordinator	(250) 562-9155	Ongoing	Requested existing inventory maps and databases
David Taft	Triton Environmental Consultants Ltd. (Terrace)	Local Legend	(250) 635-1494	Ongoing	Familiar with fisheries and wildlife resources throughout the study area
Tony Cheong	MWLAP (Victoria)	Fisheries Biologist	(250) 387-9585	Ongoing	Familiar with RIC standards and requirements
Lynn Meirs	MWLAP (Victoria)	Data Administrator	(250) 387-9564	Ongoing	FDIS database request and ongoing support

List of Key Contacts and Information Sources for Canadian Forest Products Stream Inventory Project

Name	Company/Agency	Title	Contact Number	Date	Comments
Sean Cheesman	MWLPA (Victoria)	GIS Technician	(250) 387-2579	Ongoing	• WSC submission and RIC requirements
Tom Pendray	DFO (Smithers)	District Habitat Officer	(250) 847-4723	Ongoing	• Familiar with study area
Carl Vandermark	Canfor (Houston)	Planning Superintendent	(250) 847-5200	Ongoing	• Guidance throughout project
Colin Johnston	Canfor (Houston)	Forestry Supervisor	(250) 847-5200	Ongoing	• Familiar with study area
Cam Bentley	Canfor (Houston)	Forestry Supervisor	(250) 847-5200	Ongoing	• Familiar with study area
Keith Jaarsma	Canfor (Houston)	Forestry Supervisor	(250) 847-5200	Ongoing	• Familiar with study area
Aurnir Nelson	Canfor (Houston)	Forestry Supervisor	(250) 847-5200	Ongoing	• Familiar with study area
Barry Watson	Canfor (Houston)	GIS Administrator	(250) 847-5200	Ongoing	• Familiar with study area
Trevor Bellevance	Canfor (Houston)	Assistant Forestry Supervisor	(250) 847-5200	Ongoing	• Familiar with study area
Rebecca Werner	Canfor (Houston)	Assistant Forestry Supervisor	(250) 847-5200	Ongoing	• Familiar with study area
Miro Kosalko	Canfor (Houston)	Assistant Forestry Supervisor	(250) 847-5200	Ongoing	• Familiar with study area
Jim McCormack	Canfor (Houston)	Planning Forester	(250) 847-5200	Ongoing	• Familiar with study area
Harry Anaka	Canfor (Houston)	Forestry Supervisor	(250) 847-5200	Ongoing	• Familiar with study area
Jesse Anaka	Anaka Environmental Consulting	Local Legend	(780)-919-4878	Ongoing	• Familiar with study area
Brenda Donas	DFO (Smithers)	Community Advisor	(250) 847-5298	Ongoing	• Familiar with study area

APPENDIX IV

Tochcha Planning Area Sample Selection

Tochcha Sample Selection

MAPSHEET	NID	ILP	REACH
93M.010	11436	1803	9
93N.001	11797	1809	3
93N.001	11723	1763	5
93N.001	11712	1769	1
93N.001	11767	1792	1
93M.020	11030	1470	11
93M.020	10947	1432	2
93M.020	11075	1429	2
93M.020	11026	1470	7
93M.020	10861	1398	4
93M.020	10892	1404	5
93M.020	10884	1408	2
93M.030	10638	1394	6
93M.030	10642	1394	4
93M.030	10577	1290	1
93M.029	10509	1296	3
93M.029	10471	1181	3
93M.029	10531	1155	5
93M.029	10487	1182	3
93M.029	10531	1155	5
93M.029	10437	1141	3
93M.029	10455	1150	5
93M.029	10526	1158	2
93M.029	10414	1119	4
93M.029	10413	1119	3
93M.029	10399	1123	2
93M.029	10424	1135	2
93M.039	10023	1155	7
93M.039	10037	1173	4
93M.039	10138	1056	5
93M.039	10137	1056	4
93M.039	10046	1015	1
93M.039	10077	1022	6
93M.039	10110	1079	2
93M.039	10081	1022	10
93M.039	10042	1018	2
93M.039	10188	1030	2
93M.039	10197	1037	1
93M.039	10211	1044	3
93M.019	10690	1332	4
93M.029	10330	1232	1
93M.029	10315	1231	2
93M.029	10319	1231	6
93M.029	10306	1224	1
93M.029	10283	1206	1
93M.029	10270	1204	3
93M.029	10326	1235	1
93M.019	10764	1361	4

Tochcha Sample Selection

MAPSHEET	NID	ILP	REACH
93N.001	11789	1808	3
93N.001	11685	1784	1
93K.091	12139	1990	1
93K.091	12135	1989	3
93K.091	12163	1979	2
93K.091	12165	1979	4
93K.091	12133	1989	1
93K.091	12180	1975	1
93K.091	12193	1966	1
93K.092	12264	1742	14
93K.092	12288	2055	2
93K.092	12421	2127	4
93K.092	12378	2075	4
93K.082	12953	2308	3
93K.092	12410	2076	4
93N.002	11872	2114	3
93N.002	11890	1844	1
93K.092	12326	2308	4
93K.081	12844	2009	2
93K.091	12108	2009	6
93K.081	12794	2253	3
93K.091	12081	1948	1
93K.091	12083	1948	3
93K.091	12061	1942	2
93K.091	12071	1944	2
93K.071	13050	2358	2
93K.071	13081	2370	5
93K.071	13089	2373	3
93K.071	13054	2359	3
93K.071	13067	2366	2
93K.081	12818	2251	3
93K.081	12820	2251	5
93M.029	10473	1181	5
93M.030	10618	1305	3
93M.020	10852	1390	2
93M.010	11262	1594	5
93N.001	11855	1752	8
93N.001	11717	1768	3
93N.001	11820	1757	2
93L.100	11919	1877	3
93M.010	11573	1863	2
93K.071	13028	2380	6
93M.019	10687	1332	1
93M.019	10794	1521	1
93M.009	11150	1520	1

APPENDIX V

**Morice Planning Area Sampling Summary Report
(with sample selection and FDIS QA)**



		SIZE												
		SMALL			MEDIUM			LARGE						
GRADIEN	FORM	Total	Sample	Actual	Total	Sampl	Actual	Total	Sample	Actual				
1 ≤4	ST/SI	171	13	26	120	13	34	17	2	6				
	IM/ME	0	0	0	6	2	4	11	2	4				
	AN/BR	0	0	0	0	0	0	2	2	2				
2 >4 and ≤8	ST/SI	238	14	29	108	12	40	14	2	7				
	IM/ME	1	1	1	6	2	6	2	2	2				
	AN/BR	0	0	0	1	1	1	0	0	0				
3 >8 and ≤20	ST/SI	438	16	27	164	13	40	0	0	0				
	IM/ME	1	1	1	2	2	2	1	1	1				
	AN/BR	0	0	0	0	0	0	0	0	0				
4 >20 and ≤30	ST/SI	196	14	10	61	6	11	1	1	1				
	IM/ME	0	0	0	2	2	2	0	0	0				
	AN/BR	0	0	0	0	0	0	0	0	0				
5 >30	ST/SI	571	0	2	73	0	1	0	0	0				
	IM/ME	0	0	0	1	0	0	0	0	0				
	AN/BR	0	0	0	0	0	0	0	0	0				
Reach Total:		2208	Sample Total:		124	Sample %:		5.6	Actual Total:		260	Actual %:		11.8

Group 1

Group 2

Group 3

Group 4

Morice Sample Selection

MAPSHEET	NID	ILP	REACH
093L.046	10930	3571	6.0
093L.035	11065	3275	1.0
093L.046	10908	3028	2.0
093L.046	10909	3028	3.0
093L.046	10911	3028	5.0
093L.046	10912	3028	6.0
093L.046	10898	2877	2.0
093L.046	10927	2857	1.0
093L.046	10894	2874	1.0
093L.034	10971	3042	1.0
093L.034	10975	3268	2.0
093L.047	10998	3025	1.0
093L.035	11031	3247	3.0
093L.035	11035	3248	2.0
093L.046	10820	2910	1.0
093L.046	10923	2861	1.0
093L.046	10863	3471	5.0
093L.055	10003	2445	7.0
093L.046	10828	2868	4.0
093L.046	10829	2868	5.0
093L.046	10830	2868	6.0
093L.046	10831	2868	7.0
093L.046	10899	2879	1.0
093L.046	10862	3471	4.0
093L.035	11066	3275	2.0
093L.046	10864	3471	6.0
093L.046	10866	2908	1.0
093L.046	10876	2885	2.0
093L.046	10886	2873	1.0
093L.046	10887	2873	2.0
093L.046	10888	2873	3.0
093L.046	10848	2890	2.0
093L.035	11360	3599	2.0
093L.035	11048	3259	1.0
093L.035	11285	3601	5.0
093L.035	11290	3164	1.0
093L.035	11294	3164	5.0
093L.035	11301	3169	1.0
093L.035	11257	3604	6.0
093L.035	11325	3182	3.0
093L.035	11254	3604	3.0
093L.035	11362	3599	4.0
093L.035	11377	3138	3.0
093L.035	11401	3158	2.0
093L.035	11416	3477	2.0
093L.035	11418	3477	4.0
093L.035	11438	3162	1.0
093L.035	11319	3179	2.0

Morice Sample Selection

MAPSHEET	NID	ILP	REACH
093L.035	11190	3361	2.0
093L.035	11116	3314	1.0
093L.035	11121	3315	1.0
093L.035	11122	3315	2.0
093L.035	11147	3332	2.0
093L.035	11167	3345	1.0
093L.035	11283	3601	3.0
093L.035	11187	3357	1.0
093L.046	10817	2913	1.0
093L.035	11205	3628	1.0
093L.035	11207	3628	3.0
093L.035	11208	3628	4.0
093L.035	11215	3375	3.0
093L.035	11235	3225	1.0
093L.035	11243	3219	2.0
093L.035	11184	3355	1.0
093L.045	10235	2506	1.0
093L.045	10304	2941	7.0
093L.056	10133	3007	4.0
093L.045	10165	2981	3.0
093L.045	10166	2981	4.0
093L.045	10169	2981	7.0
093L.056	10130	2453	1.0
093L.045	10174	2981	12.0
093L.056	10117	2450	6.0
093L.045	10270	2593	1.0
093L.045	10271	2593	2.0
093L.045	10272	2593	3.0
093L.045	10273	2593	4.0
093L.045	10301	2941	4.0
093L.046	10825	2868	1.0
093L.045	10170	2981	8.0
093L.056	10087	2445	5.0
093L.055	10004	2445	8.0
093L.055	10005	2445	9.0
093L.055	10009	2445	13.0
093L.055	10010	2445	14.0
093L.055	10038	2435	1.0
093L.056	10131	2453	2.0
093L.056	10077	2477	1.0
093L.045	10336	2868	8.0
093L.056	10100	2463	1.0
093L.056	10105	2461	1.0
093L.056	10109	2445	2.0
093L.056	10112	2450	1.0
093L.056	10113	2450	2.0
093L.056	10114	2450	3.0
093L.055	10052	2549	3.0

Morice Sample Selection

MAPSHEET	NID	ILP	REACH
093L.046	10768	2912	3.0
093L.045	10302	2941	5.0
093L.046	10742	2942	3.0
093L.046	10755	2944	2.0
093L.046	10757	2937	1.0
093L.046	10758	2937	2.0
093L.046	10730	2956	2.0
093L.046	10766	2912	1.0
093L.046	10717	2999	3.0
093L.046	10770	2912	5.0
093L.046	10779	2934	1.0
093L.046	10789	2929	2.0
093L.046	10791	2925	1.0
093L.046	10806	2915	3.0
093L.046	10813	2917	2.0
093L.046	10762	2939	2.0
093L.045	10547	3678	8.0
093L.045	10337	2868	9.0
093L.045	10338	2868	10.0
093L.045	10423	2641	1.0
093L.045	10424	2641	2.0
093L.045	10465	3406	8.0
093L.046	10740	2942	1.0
093L.045	10531	2774	2.0
093L.035	11471	3121	1.0
093L.046	10630	2941	1.0
093L.046	10632	2941	3.0
093L.046	10636	2989	2.0
093L.046	10662	2974	3.0
093L.046	10689	2448	2.0
093L.046	10691	2445	3.0
093L.045	10530	2774	1.0
093L.026	12180	3682	1.0
093L.026	12205	3715	4.0
093L.026	12161	3688	4.0
093L.026	12166	3681	1.0
093L.026	12170	3675	2.0
093L.026	12172	3675	4.0
093L.026	12149	3698	1.0
093L.026	12177	3701	2.0
093L.026	12143	3693	2.0
093L.026	12185	3685	1.0
093L.026	12187	3684	1.0
093L.026	12192	3633	2.0
093L.026	12193	3633	3.0
093L.026	12196	3633	6.0
093L.035	11443	3089	4.0
093L.026	12175	3679	2.0

Morice Sample Selection

MAPSHEET	NID	ILP	REACH
093L.025	12013	3725	7.0
093L.025	11971	3607	1.0
093L.025	11974	3607	4.0
093L.025	11980	3609	3.0
093L.025	11986	3608	1.0
093L.025	12003	3597	2.0
093L.026	12151	3698	3.0
093L.025	12010	3725	4.0
093L.026	12206	3715	5.0
093L.025	12018	3590	1.0
093L.025	12040	3723	1.0
093L.025	12045	3801	4.0
093L.025	12051	3635	1.0
093L.025	12106	3637	5.0
093L.025	12113	3638	1.0
093L.025	12007	3725	1.0
093L.013	12341	3749	1.0
093L.026	12199	3724	2.0
093L.013	12311	3737	2.0
093L.013	12315	3740	2.0
093L.013	12323	3742	2.0
093L.013	12325	3742	4.0
093L.013	12289	3787	3.0
093L.013	12334	3746	2.0
093L.013	12285	3789	2.0
093L.013	12342	3749	2.0
093L.013	12352	3753	2.0
093L.014	12403	3787	1.0
093L.014	12408	3783	2.0
093L.014	12412	3781	3.0
093L.014	12416	3776	2.0
093L.013	12330	3743	3.0
093L.026	12248	3707	1.0
093L.026	12207	3715	6.0
093L.026	12210	3715	9.0
093L.026	12217	3721	2.0
093L.026	12222	3716	3.0
093L.026	12235	3710	3.0
093L.013	12292	3791	1.0
093L.026	12245	3706	3.0
093L.025	11950	3618	5.0
093L.026	12251	3705	1.0
093L.013	12270	3776	3.0
093L.013	12275	3783	3.0
093L.013	12276	3783	4.0
093L.013	12277	3783	5.0
093L.013	12282	3731	2.0
093L.026	12243	3706	1.0

Morice Sample Selection

MAPSHEET	NID	ILP	REACH
093L.036	11619	3406	2.0
093L.025	11956	3620	1.0
093L.036	11590	3540	3.0
093L.036	11596	3544	1.0
093L.036	11597	3545	1.0
093L.036	11603	3525	2.0
093L.036	11574	3532	1.0
093L.036	11608	3520	1.0
093L.036	11572	3530	1.0
093L.036	11620	3406	3.0
093L.036	11621	3406	4.0
093L.036	11622	3406	5.0
093L.036	11623	3406	6.0
093L.036	11631	3412	1.0
093L.036	11634	3412	4.0
093L.036	11606	3524	2.0
093L.036	11553	3526	3.0
093L.014	12417	3777	1.0
093L.035	11472	3112	1.0
093L.035	11511	3065	1.0
093L.035	11516	3067	1.0
093L.035	11520	3406	9.0
093L.036	11578	3532	5.0
093L.036	11551	3526	1.0
093L.036	11661	3426	1.0
093L.036	11557	3528	2.0
093L.036	11558	3528	3.0
093L.036	11559	3528	4.0
093L.036	11562	3528	7.0
093L.036	11565	3529	1.0
093L.036	11567	3529	3.0
093L.035	11528	3073	1.0
093L.024	11918	3629	7.0
093L.036	11877	3562	1.0
093L.036	11884	3547	1.0
093L.036	11890	3138	4.0
093L.037	11901	3570	2.0
093L.037	11902	3571	1.0
093L.036	11647	3418	1.0
093L.024	11916	3629	5.0
093L.036	11832	2881	2.0
093L.025	11935	3617	3.0
093L.025	11938	3626	1.0
093L.025	11940	3636	3.0
093L.025	11944	3625	2.0
093L.025	11947	3618	2.0
093L.035	11457	3100	2.0
093L.037	11903	3571	2.0

Morice Sample Selection

MAPSHEET	NID	ILP	REACH
093L.036	11746	3500	1.0
093L.025	11951	3618	6.0
093L.036	11677	3435	2.0
093L.036	11679	3436	2.0
093L.036	11684	3439	1.0
093L.036	11685	3439	2.0
093L.036	11705	3450	4.0
093L.036	11874	3695	7.0
093L.036	11741	3471	2.0
093L.036	11845	3549	2.0
093L.036	11798	3405	1.0
093L.036	11802	3401	2.0
093L.036	11804	3401	4.0
093L.036	11807	3402	1.0
093L.036	11823	2877	4.0
093L.036	11650	3420	1.0
093L.036	11733	3466	1.0

Planning QA Report

NID/UTM Import Complete:

ILP/WSC Import Complete:

Elevation tolerance (m) (+/-): 5

	Minimum	Maximum
Project Elevation (m):	0	4020
Reach Length Maximum (km):	0.1	5

From File : C:\Canfor FDIS 2002\Fdisdat.mdb

Project WS Code / WS Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000

REACH CARD

Field Name	Watershed Code	ILP Map#	ILP#	Reach ID	Site ID	NID Map#	NID#	Comment
CONF_CODE	000-000000-00000-00000-0000-000-000-000-000-000-000	093L.045	2545	1.0		093L.045	10214	Wetland cannot have a confinement of CO

END OF REPORT