
**Reconnaissance (1:20,000)
Fish and Fish Habitat Inventory
of Selected Tributaries
to the Morice River and the
Bulkley River Watersheds**

**WSC 460 to WSC 460-600600
(Morice North Planning Area)**

Volume 5 of 5

Prepared for:

Canadian Forest Products Ltd.
PO Box 158; 1397 Morice River Road
Houston, BC
V0J 1Z0

Prepared by:

TRITON 
ENVIRONMENTAL CONSULTANTS LTD.

#300 – 4546 Park Avenue
Terrace, BC Canada V8G 1V4
Phone: (250) 635-1494
Fax: (250) 635-1495
www.triton-env.com



APPENDIX I

Reach Cards/Site Cards/Fish Collection Forms and Photographs (Sites 566 to 2732)

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

1.0 093L.026 3707

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093L.026		ILP #: 3707		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.636591.6011710				Sample Type: Biased			
Length (km): .27		Coupling: Decoupled		Magnitude: 1		BGC Zone: SBS			
Gradient (%): 4.1		Confinement: Occasionally Conf		Order: 1		Open water: Absent			
US Elev (m): 755		Islands: NONE		Riparian Vegetation: Not Specified					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 566		Field UTM ..		Agency: C172		Crew: JH/SG		Date: 2002/09/10	
Site Length (m): 180		GIS UTM 9.636647.6011465		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☒ Intermittent: ☐									
Dewatered: ☐ Tribs.: ☐									
Stage: Low ☐		Avg		Min		Max		#	
Med ☐		Channel Width (m): 0.00		0		0		0	
High ☐		Wetted Width (m): 0.00		0		0		0	
Temp (C):		Bankfull Depth (m): 0.00		0		0		0	
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		O1 B1 B2 B3 D1 D2 D3			
Coupling:				INDICATORS		☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
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:		☐ ☐ ☐		☐ ☐ ☐		☐ ☐ ☐	
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

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.026 ILP # 3707 Site # 566

PROJECT																																																																														
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)										Project Code: 5270																																																																				
Stream Name (gaz.): BULKLEY RIVER																																																																														
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000																																																																														
WATERSHED																																																																														
Gazetted Name:										Local Name:																																																																				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																																																																														
ILP Map #: 093L.026			ILP #: 3707		NID Map #: 093L.026			NID #: 50566		Reach #: 1.0		Site #: 566																																																																		
Field UTM (Z.E.N): ..					Method:		Site Lg: 180			Method: MAP		Access: V2																																																																		
GIS UTM (Z.E.N): 9.636647.6011465							Ref. Name:																																																																							
Date: 2002/09/10			Time: 17:00		Agency: C172			Crew: JH/SG		Fish Crd?: ☐		Incomplete: ☐																																																																		
CHANNEL																																																																														
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Mtd</th> <th>width</th> <th>width</th> <th>width</th> <th>width</th> <th>width</th> <th>width</th> <th>width</th> <th>width</th> <th>width</th> <th>width</th> <th>Avg</th> </tr> </thead> <tbody> <tr> <td>Channel Width (m):</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td> </tr> <tr> <td>Wetted Width (m):</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td> </tr> <tr> <td>Pool Depth (m):</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td> </tr> </tbody> </table>													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	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Gadient %</th> <th>Mtd</th> <th>Avg</th> </tr> </thead> <tbody> <tr> <td>Method I:</td> <td></td><td></td><td>0.00</td> </tr> <tr> <td>Method II:</td> <td></td><td></td><td></td> </tr> </tbody> </table>				Gadient %	Mtd	Avg	Method I:			0.00	Method II:			
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Wb Depth:			Avg: 0.00		Method: MS			Stage: L ☐ M ☐ H ☐			No Vis.Ch.: ☒		Intermittent: ☐																																																																	
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Loc: P/S/O:	☐	☐	☐	☐	☐	☐	☐																																																																							
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Texture: F ☐ G ☐ C ☐ B ☐ R ☐ A ☐																																																																														
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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: None.																																																																														
Rearing Habitat: None.																																																																														
Spawning Habitat: None.																																																																														
PHOTOS																																																																														
Photo: Foc Lg: Dir: Comments:																																																																														
R: 57 F: 24 STD U Upslope photo within old cutblock.																																																																														
COMMENTS																																																																														
Section: Comments:																																																																														

FDIS Site Card

Morice North Planning Area

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

Reach #

ILP Map #

ILP #

Site

1.0

093L.026

3707

566

Section

Comments

CHANNEL	Non fish bearing stream.
CHANNEL	Stream channel meanders within block, loses energy and then disappears, within and under vegetation and disturbance.
CHANNEL	Inblock stream. Stream has been so disturbed by previous logging practices that it is impossible to follow or distinguish within harvested area downstream of road.



Site #566, Upslope photo within old cutblock.
Roll #57, Frame #24, Date: 2002/09/10

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #
3.0 093L.026 3706

STREAM REFERENCING																																														
Gazetted Name:						Local Name:																																								
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000						ILP Map #: 093L.026		ILP #: 3706																																						
REACH																																														
Reach #: 3.0		UTM(Zone/East/North): 9.635994.6011450				Sample Type: Biased																																								
Length (km): .69		Coupling: Decoupled		Magnitude: 1		BGC Zone: SBS																																								
Gradient (%): 8.0		Confinement: Frequently Confin		Order: 1		Open water: Absent																																								
US Elev (m): 806		Islands: NONE		Riparian Vegetation: Not Specified																																										
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																														
SITE																																														
Site #: 567		Field UTM ..		Agency: C172		Crew: JH/SG		Date: 2002/09/10																																						
Site Length (m): 100		GIS UTM 9.636541.6011476		Agency Name: Triton Environmental Consultants (Terrace)																																										
CHANNEL																																														
No Vis.Ch.: ☒ Intermittent: ☐		Dewatered: ☐ Tribs.: ☐		<table border="1"><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"><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																																										
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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:		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"><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></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></tbody></table>								Type:	SWD	LWD	B	U	DP	OV	IV	Amount:								Location: P/S/O:	☐	☐	☐	☐	☐	☐	☐	FSZ: ☐												
Type:	SWD	LWD	B	U	DP	OV	IV																																							
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Location: P/S/O:	☐	☐	☐	☐	☐	☐	☐																																							
LWD:																																														
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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

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.026 ILP # 3706 Site 567

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map #: 093L.026 ILP #: 3706 NID Map #: 093L.026 NID #: 50567 Reach #: 3.0 Site #: 567
Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: MAP Access: V2
GIS UTM (Z.E.N): 9.636541.6011476 Ref. Name:
Date: 2002/09/10 Time: 17:30 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):	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 ☐ 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: Temp: Method: T4 Req #: 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
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	None.
Rearing Habitat	None.
Spawning Habitat	None.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 57 F: 24A	STD	U	Upslope photo within harvested block.

COMMENTS

Section Comments

FDIS Site Card

Morice North Planning Area

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

Reach #

ILP Map #

ILP #

Site

3.0

093L.026

3706

567

Section

Comments

CHANNEL

Non fish bearing stream.

CHANNEL

Inblock stream. Stream has been so disturbed that it is impossible to follow or distinguish within harvested area.



Site #567, Upslope photo within harvested block.
Roll #57, Frame #24A, Date: 2002/09/10

FDIS Reach Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.025 ILP # 3602

PROJECT									
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)					Project Code: 5270				
Stream Name (gaz.): BULKLEY RIVER									
Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000									
WATERSHED									
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000									
ILP Map #: 093L.025	ILP #: 3602	Reach #: 3.0	NID Map #: 093L.025		NID #: 11996				
Air Photos		Names			UTM(Zone/East/North/Method)				
LINE: BCC98341	Gaz.:				9.624724.6018072 GIS				
#: 0	Local:				Sample Type: B Wetland: ☒				
SURVEY INFO									
Date: 2002/08/27			Agency: C172			Crew: SG/SH			
ATTRIBUTES									
Length (km): .44	Gradient: 0.68	Setting: VF	DISTURBANCE INDICATORS						
DS Elev.: 961	Order: 1	Open water: P	O1	B1	B2	B3	D1	D2	D3
US Elev: 964	Magnitude: 1	Confinement: OC	C1	C2	C3	C4	C5	S1	S2
	BGC Zone: SBS	Coupling: PC							
Valley Flat: B	C/D: D	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.: C	Landuse: NS						

MAPS		
Map Type	Map #	Year
TRIM	093L.025	

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 3.0 ILP Map # 093L.025 ILP # 3602

WATERBODY														
Gazetted Name:						Local:								
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0														
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000														
Waterbody ID:						ILP Map #: 093L.025		ILP #: 3602		Reach #: 3 -				
Project ID: 5270						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				
568	093L.025	50568	9	626482	6018284	GPU EF 1	7	110	C					
A. GEAR SETTINGS														
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment							
568	EF	1	1	2002/09/12	09:30	2002/09/12	10:00							
C. ELECTROFISHER SPECIFICATIONS														
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model			
568	EF	1	1	O	395	180.0	2.0	600	1	5	SMITH ROOT 12B			
FISH SUMMARY														
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment					
568	EF	1	1	NFC		0								

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

2.0 093L.025 3602

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000					ILP Map #: 093L.025		ILP #: 3602		
REACH									
Reach #: 2.0		UTM(Zone/East/North): 9.625089.6018193				Sample Type: Biased			
Length (km): 1.53		Coupling: Partially Couple		Magnitude: 8		BGC Zone: SBS			
Gradient (%): 3.3		Confinement: Frequently Confin		Order: 3		Open water: Absent			
US Elev (m): 961		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 569		Field UTM ..		Agency: C172		Crew: JH/SG		Date: 2002/09/12	
Site Length (m): 940		GIS UTM 9.626199.6018385		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐ Intermittent: ☐				Avg		Min		Max	
Dewatered: ☐ Tribs.: ☐				Channel Width (m):		3.60		2.3	
Stage: Low ☐				Wetted Width (m):		2.25		1.200	
Med ☒				Bankfull Depth (m):		0.90		0.8	
High ☐						1		3	
Temp (C): 7		pH: 6.9		Conductivity: 110					
						Avg		Min	
						Gradient %:		5.00	
						Pool Depth (m):		0.38	
								0.300	
								0.5	
								6	
								3	
								6	
								Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 70.00		Bars: Non ☐ Side ☒ Diagonal ☐ Mid-channel ☐ Span ☐					
Subdominant: Boulders		D (cm): 30.00				Braid ☐			
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: CP Cascade Pool									
COVER									
Total Cover: Abundant		Type: SWD LWD B U DP OV IV							
LWD: Few		Amount: T S 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: 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)
093L.025	55531	F	5.0	GE			R: 58 F: 06 L:	#:	9.625357.6018
Comments: Falls / barrier									
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
569	EF	1	300	861 sec	600	RB	5	90	110
569	EF	1	300	861 sec	600	DV	2	120	130
570	EF	1	300	418 sec	600	RB	5	100	120
571	EF	1	300	365 sec	600	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3602 Site # 569

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Local Name:
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093L.025 ILP #: 3602 NID Map #: 093L.025 NID #: 50569 Reach #: 2.0 Site #: 569
Field UTM (Z.E.N): .. Method: Site Lg: 940 Method: MAP Access: V2
GIS UTM (Z.E.N): 9.626199.6018385 Ref. Name:
Date: 2002/09/12 Time: 11:50 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	2.80	4.10	3.90	4.70	3.80	2.30					3.60	Method I:	4.0	5.0	C	5.00
Wetted Width (m):	T	1.20	3.10	3.00	2.90	2.10	1.20					2.25		Method II:	6.0		C
Pool Depth (m):	T	0.50	0.30	0.40	0.40	0.30	0.40					0.38					

Wb Depth: 1.0 .9 .8 Avg: 0.90 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	T	S	D	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

LWD: F DIST: C

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: D

STG: PS

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 110 Method: S3
pH: 6.9 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: 70.0 D (cm): 30.00 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
093L.025	55531	F	5.0	GE			R: 58 F: 06 L:	#:	9.625357.6018338	GIS
Comments: Falls / barrier										

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Potential in deeper pools.
Rearing Habitat	Moderate - associated with pools, cover, LWD.
Spawning Habitat	Moderate - associated with gravels, pools, cover.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
2.0	093L.025	3602	569

PHOTOS					
Photo		Foc Lg	Dir	Comments	
R:	58	F: 01	STD	U	Upstream photo of habitat within site.
R:	58	F: 02	STD	D	Downstream photo of habitat within site.
R:	58	F: 03	STD	D	Second cascade within site (upstream one).
R:	58	F: 04	STD	X	DV captured upstream of cascades (110 mm).
R:	58	F: 05	STD	U	1.4 m rock falls - no plunge pool at base (bedrock falls).
R:	58	F: 06	STD	U	5 m Falls.
COMMENTS					
Section		Comments			
CHANNEL		5 m falls, NFC upstream - non fish bearing upstream.			
CHANNEL		1 / 1 m cascade (DV upstream).			
CHANNEL		1 / 2 m cascade over bedrock. DV captured upstream.			

FDIS Fish Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3602

WATERBODY

Gazetted Name: Local:
 Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0
 WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-0
 Waterbody ID: ILP Map #: 093L.025 ILP #: 3602 Reach #: 2 -
 Project ID: 5270 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
571	093L.025	50571		GPU EF 1	7	110	C	upstream of falls.
570	093L.025	50570		GPU EF 1	7	110	C	downstream of falls.
569	093L.025	50569		GPU EF 1	7	110	C	upstream of cascades, downstream of falls.

A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
569	EF 1	1	2002/09/12	11:30	2002/09/12	12:25	
570	EF 1	1	2002/09/12	12:25	2002/09/12	12:50	
571	EF 1	1	2002/09/12	10:20	2002/09/12	11:00	

C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
569	EF 1	1	O	861	300.0	3.8	600	I	5	SMITH ROOT	12B
570	EF 1	1	O	418	300.0	3.8	600	I	5	SMITH ROOT	12B
571	EF 1	1	O	365	300.0	3.8	600	I	5	SMITH ROOT	12B

FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
569	EF 1	1	DV	A	3+	2	120 130	R	
569	EF 1	1	RB	J	2+	5	90 110	R	
570	EF 1	1	RB	J	2+	5	100 120	R	
571	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#		Str/Smpl#			
569	EF 1	1	RB	90		U	U						
569	EF 1	1	RB	100		U	U						
569	EF 1	1	RB	90		U	U						
569	EF 1	1	RB	90		U	U						
569	EF 1	1	RB	110		U	U						
569	EF 1	1	DV	120		U	U						
569	EF 1	1	DV	130		U	U						
570	EF 1	1	RB	100		U	U						
570	EF 1	1	RB	100		U	U						
570	EF 1	1	RB	120		U	U						
570	EF 1	1	RB	110		U	U						
570	EF 1	1	RB	100		U	U						



Site #569, Upstream photo of habitat within site.
Roll #58, Frame #01, Date: 2002/09/12



Site #569, Downstream photo of habitat within site.
Roll #58, Frame #02, Date: 2002/09/12



Site #569, Second cascade within site (upstream one).
Roll #58, Frame #03, Date: 2002/09/12



Site #569, DV captured upstream of cascades (110 mm).
Roll #58, Frame #04, Date: 2002/09/12



Site #569, 1.4 m rock falls - no plunge pool at base (bedrock falls).
Roll #58, Frame #05, Date: 2002/09/12



Site #569, 5 m Falls.
Roll #58, Frame #06, Date: 2002/09/12

FDIS Reach Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3605

PROJECT									
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)					Project Code: 5270				
Stream Name (gaz.): BULKLEY RIVER									
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000									
WATERSHED									
Reach Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000									
ILP Map #: 093L.025	ILP #: 3605	Reach #: 2.0	NID Map #: 093L.035		NID #: 11236				
Air Photos		Names		UTM(Zone/East/North/Method)					
LINE: BCC98341		Gaz.:		9.623765.6018814					
#: 0		Local:		Sample Type: B Wetland: ☐					
SURVEY INFO									
Date: 2002/08/27			Agency: C172			Crew: SG/SH			
ATTRIBUTES									
Length (km): 1.35	Gradient: 5.7	Setting: VF	DISTURBANCE INDICATORS						
DS Elev.: 977	Order: 3	Open water: A	☐	☐	☐	☐	☐	☐	☐
US Elev: 1054	Magnitude: 7	Confinement: OC	C1	C2	C3	C4	C5	S1	S2
	BGC Zone: ESSF	Coupling: DC	☐	☐	☐	☐	☐	☐	☐
Valley Flat: B	C/D: D	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	093L.035	

FDIS Fish Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3605

WATERBODY													
Gazetted Name:						Local:							
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:						ILP Map #: 093L.025		ILP #: 3605		Reach #: 2 -			
Project ID: 5270						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			
572	093L.035	50572	9	626293	6018782	GPU EF 1	7	110	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
572	EF	1	1	2002/09/12	13:10	2002/09/12	13:30						
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
572	EF	1	1	O	459	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				
572	EF	1	1	NFC		0							

Morice North Planning Area

1.0 093L.035 3164

Gazetted Name:		Local Name:	
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000		ILP Map #: 093L.035	
ILP #: 3164			

REACH			
Reach #: 1.0	UTM(Zone/East/North): 9.627266.6019650		Sample Type: Random
Length (km): .52	Coupling: Partially Couple	Magnitude: 5	BGC Zone: ESSF
Gradient (%): 11.4	Confinement: Frequently Confin	Order: 2	Open water: Absent
US Elev (m): 925	Islands: NONE	Riparian Vegetation: Mixed C/D	
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified			

SITE			
Site #: 573	Field UTM 9.627281.6019340	Agency: C172	Crew: JH/SG
Site Length (m): 220	GIS UTM 9.627270.6019491	Date: 2002/09/12	
Agency Name: Triton Environmental Consultants (Terrace)			

CHANNEL									
No Vis.Ch.: ☐	Intermittent: ☐					Avg	Min	Max	#
Dewatered: ☐	Tribs.: ☐								
Stage: Low ☐		Channel Width (m): 4.39				3.1	5.800	8	
Med ☒		Wetted Width (m): 2.07				1.100	4	8	
High ☐		Bankfull Depth (m): 0.47				0.3	0.6	3	
Temp (C): 6		pH: 6.9		Conductivity: 100					
						Turbidity: Turbid ☐ Low ☐			
						Moderate ☐ Clear ☒			

MORPHOLOGY									
Bed Material: Dominant: Cobble	D95 (cm): 90.00	Bars: Non ☐	Side ☒	Diagonal ☐	Mid-channel ☐	Span ☐			
Subdominant: Gravels	D (cm): 40.00								
Channel Pattern: Irregular, Wandering	Islands: None	DISTURBANCE INDICATORS							
Coupling: Partially Coupled		O1	B1	B2	B3	D1	D2	D3	
Confinement: Frequently Confined		☐	☐	☐	☐	☐	☐	☐	☐
Morphology: CP Cascade Pool		C1	C2	C3	C4	C5	S1	S2	S3
		☐	☐	☐	☐	☐	☐	☐	☐

COVER									
Total Cover: Abundant	Type: SWD	LWD	B	U	DP	OV	IV		
LWD: Few	Amount: T	D	T	N	S	T	N		
LWD Dist: Clumped	Location: 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 ☐	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)
573	EF	1	200	615 sec	600	DV	5	100	110

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3164 Site 573

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000
Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093L.035 ILP #: 3164 NID Map #: 093L.035 NID #: 50573 Reach #: 1.0 Site #: 573
Field UTM (Z.E.N): 9.627281.6019340 Method: GPU Site Lg: 220 Method: MAP Access: V2
GIS UTM (Z.E.N): 9.627270.6019491 Ref. Name:
Date: 2002/09/12 Time: 13:50 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	4.30	3.80	3.70	4.60	4.90	3.10	4.90	5.80	5.80	5.80	4.39	Method I:	13.0	10.0	C 11.50
Wetted Width (m):	T	1.10	1.30	1.40	1.50	2.20	2.10	3.00	4.00			2.07	Method II:	12.0	11.0	C
Pool Depth (m):	T	0.40	0.30	0.30	0.30	0.40	0.40	0.60	0.70			0.43				

Wb Depth: .5 .3 .6 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	T	N	S	T	N
Loc: P/S/O:	☒	☒	☒	☐	☒	☒	☐

LWD: F DIST: C

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: 6 pH: 6.9 Flood Signs: Rafted debris
Method: T4 Method: P2 Method: GE
Req #: Cond.: 100 Turb.: T ☐ M ☐ L ☐ C ☒ Method: S3 Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: G D95: 90.0 D (cm): 40.00 Morph: CP
Pattern: IR 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	Potential in plunge pools.
Rearing Habitat	Moderate - plunge pools.
Spawning Habitat	Low - gravels, pools, access.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 58 F: 07	STD	U	Upstream photo of functioning LWD.
R: 58 F: 08	STD	D	Downstream photo of debris jam.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.035	3164	573

COMMENTS

Section	Comments
CHANNEL	DV captured >110 mm.

FDIS Fish Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3164

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093L.035		ILP #: 3164		Reach #: 1 -			
Project ID: 5270										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							
573	093L.035	50573				GPU EF 1	6	100	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
573	EF 1	1	2002/09/12	13:50	2002/09/12	14:30											
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
573	EF 1	1	O	615	200.0	3.0	600	I	5	SMITH ROOT	12B						
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment							
573	EF 1	1	DV	J	3+	5	100	110	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#						
573	EF 1	1	DV	106		U	U										
573	EF 1	1	DV	100		U	U										
573	EF 1	1	DV	100		U	U										
573	EF 1	1	DV	100		U	U										
573	EF 1	1	DV	110		U	U										



Site #573, Upstream photo of functioning LWD.
Roll #58, Frame #07, Date: 2002/09/12



Site #573, Downstream photo of debris jam.
Roll #58, Frame #08, Date: 2002/09/12

FDIS Reach Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.035 ILP # 3164

PROJECT									
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.) Stream Name (gaz.): BULKLEY RIVER Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000 Project Code: 5270									
WATERSHED									
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000 ILP Map #: 093L.035 ILP #: 3164 Reach #: 2.0 NID Map #: 093L.035 NID #: 11291 Air Photos LINE: BCC98341 #: 0 Names Gaz.: Local: UTM(Zone/East/North/Method) 9.626461.6020227 GIS Sample Type: B Wetland: ☐									
SURVEY INFO									
Date: 2002/08/27 Agency: C172 Crew: SG/SH									
ATTRIBUTES									
Length (km): 1.08 DS Elev.: 925 US Elev: 1049 Gradient: 11.48 Order: 2 Magnitude: 5 BGC Zone: ESSF Setting: VW Open water: A Confinement: CO Coupling: PC DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 O1 B1 B2 B3 D1 D2 D3 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Valley Flat: N Active Floodplain Visible: ☐ C/D: Est. Width: Islands: N Bars: ☒ N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR Channel Pattern: SI Mass Movement: L Riparian Veg.: NS Exposed/Eroded: NS Landuse: NS									

MAPS		
Map Type	Map #	Year
TRIM	093L.035	

FDIS Fish Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.035 ILP # 3164

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:										ILP Map #: 093L.035		ILP #: 3164		Reach #: 2 -	
Project ID: 5270										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				
574	093L.035	50574	9	627288	9019641	GPU	EF	1	6	130	C				
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
574	EF	1	1	2002/09/12	14:30	2002/09/12	14:50								
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
574	EF	1	1	O	315	100.0	4.0	600	I	5	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
574	EF	1	1	DV	J	2+	5	100	120	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#				
574	EF	1	1	DV	100		U	U							
574	EF	1	1	DV	120		U	U							
574	EF	1	1	DV	110		U	U							
574	EF	1	1	DV	100		U	U							
574	EF	1	1	DV	100		U	U							

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.025 ILP # 3601

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.025		ILP #: 3601		
REACH									
Reach #: 3.0		UTM(Zone/East/North): 9.626925.6022549				Sample Type: Biased			
Length (km): 3.73		Coupling: Coupled		Magnitude: 38		BGC Zone: ESSF			
Gradient (%): 7.3		Confinement: Confined		Order: 4		Open water: Absent			
US Elev (m): 1162		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 575		Field UTM 9.627364.6019841		Agency: C172		Crew: JH/SG		Date: 2002/09/12	
Site Length (m): 290		GIS UTM 9.627358.6019829		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes: ☐		Channel Width (m): 9.75		7		14	
Stage: Low ☒				Wetted Width (m): 2.83		2		5	
Med ☐				Bankfull Depth (m): 0.97		0.9		1	
High ☐		Temp (C): 7		pH: 6.9		Conductivity: 110			
						Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 140.00		Bars: Non ☐		Side ☒		Diagonal ☐	
Subdominant: Boulders		D (cm): 50.00						Mid-channel ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Coupled				INDICATORS		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: T		S		T		N	
LWD Dist: Clumped		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: 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)
575	EF	1	200	470 sec	700	RB	5	100	110
575	EF	1	200	470 sec	700	DV	5	100	120

FDIS Site Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.025 ILP # 3601 Site 575

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map#: 093L.025 ILP #: 3601 NID Map #: 093L.035 NID #: 50575 Reach #: 3.0 Site #: 575
Field UTM (Z.E.N): 9.627364.6019841 Method: GPU Site Lg: 290 Method: MAP Access: V2
GIS UTM (Z.E.N): 9.627358.6019829 Ref. Name:
Date: 2002/09/12 Time: 15:10 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):	GE	8.00	10.00	7.00	9.00	10.00	8.00	14.00	12.00	12.00	12.00	9.75	Method I:	5.0	6.0	C	6.33
Wetted Width (m):	GE	2.00	2.00	5.00	3.00	2.00	3.00					2.83	Method II:	8.0		C	
Pool Depth (m):	T	0.40	0.50	0.50	0.30	0.30	0.40					0.40					

Wb Depth: 1.0 .9 1.0 Avg: 0.97 Method: T Stage: L ☒ M ☐ H ☐ Dw: ☐ Tribs.: ☐

COVER Total: A

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

LWD: F DIST: C

LB SHP: V

Texture: F ☐ G ☐ C ☒ B ☒ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☐ C ☒ B ☒ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 110 Method: S3
pH: 6.9 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: 140.0 D (cm): 50.00 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 ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Associated with deep pools.
Rearing Habitat	Moderate - associated with cover, D95, LWD and access.
Spawning Habitat	Moderate - associated with gravels, cover and flows.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 58 F: 09	STD	U	Upstream photo of cascade pool habitat within confined section.
R: 58 F: 10	STD	D	Downstream photo of debris jam.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
3.0	093L.025	3601	575

COMMENTS	
Section	Comments
CHANNEL	DV, RB present >110 mm

Morice North Planning Area

WATERBODY										
Gazetted Name:				Local:						
Project Code: 460-000000-00000-00000-0000-000-000-000-000-0										
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000										
Waterbody ID:			ILP Map #: 093L.025			ILP #: 3601		Reach #: 3 -		
Project ID: 5270			Lake/Stream: S			Lake From Date:				
Fish Permit #: 145269		Date: 2002/09/12		To: 2002/09/12		Agency: C172		Crew: JH/SG		Resample: ☐

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
575	093L.025	50575	GPU	EF 1	7	110	C	

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
575	EF 1	1	2002/09/12	15:10	2002/09/12	15:50	

Site#	MTD/NO		H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
575	EF	1	1	O	470	200.0	10.0	700	1	5	SMITH ROOT	12B

Site#	MTD/NO		H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment
575	EF	1	1	RB	J	3+	5	100	110	R	
575	EF	1	1	DV	J	3+	5	100	120	R	

[illegible]



Site #575, Upstream photo of cascade pool habitat within confined section.
Roll #58, Frame #09, Date: 2002/09/12



Site #575, Downstream photo of debris jam.
Roll #58, Frame #10, Date: 2002/09/12

Morice North Planning Area

Reach #	ILP Map #	ILP #
2.0	093L.025	3617

Triton Environmental Consultants Ltd.

FDIS Site Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3617 Site # 581

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093L.025 ILP #: 3617 NID Map #: 093L.025 NID #: 50581 Reach #: 2.0 Site #: 581
Field UTM (Z.E.N): 9.620649.6017863 Method: GPU Site Lg: 210 Method: MAP Access: H
GIS UTM (Z.E.N): 9.620637.6017867 Ref. Name:
Date: 2002/09/14 Time: 09:15 Agency: C172 Crew: JH/JA Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	5.10	4.60	3.90	5.60	4.90	5.80					4.98	Method I:	4.0	4.0	C	4.00
Wetted Width (m):	T	2.50	2.00	3.20	2.20	1.90	2.50					2.38	Method II:			C	
Pool Depth (m):	T	0.60	0.50	0.90	1.10	0.80	0.90					0.80					

Wb Depth: .5 .6 .6 Avg: 0.57 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	N	S	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: 8 Method: T4 Req #: Cond.: 40 Method: S3
pH: 6.9 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: 90.0 D (cm): 40.00 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	Moderate - associated with deep pools.
Rearing Habitat	Moderate - associated with cover, deep pools and D95.
Spawning Habitat	Moderate - associated with cover, pools, gravel - limited by coarse substrates.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 59 F: 01	STD	U	Upstream photo of habitat within stream.
R: 59 F: 02	STD	D	Downstream photo of habitat within stream.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
2.0	093L.025	3617	581

COMMENTS	
Section	Comments
CHANNEL	Low fish densities.
CHANNEL	RB 80-90 mm ~5 / 100 m.
CHANNEL	RB 100-120 mm ~5 / 100 m.

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 2.0 ILP Map # 093L.025 ILP # 3617

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:										ILP Map #: 093L.025		ILP #: 3617		Reach #: 2 -	
Project ID: 5270										Lake/Stream: S		Lake From Date:			
Fish Permit #: 145269		Date: 2002/09/14		To: 2002/09/14		Agency: C172		Crew: JH/JA		Resample: ☐					
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
581	093L.025	50581				GPU EF 1	8	40	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
581	EF	1	2002/09/14	09:00	2002/09/14	09:30									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
581	EF	1	1	O	510	200.0	4.0	700	1	5	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
581	EF	1	1	RB	J	2+	10	80	120	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#				
581	EF	1	1	RB	100		U	U							
581	EF	1	1	RB	100		U	U							
581	EF	1	1	RB	80		U	U							
581	EF	1	1	RB	90		U	U							
581	EF	1	1	RB	100		U	U							
581	EF	1	1	RB	110		U	U							
581	EF	1	1	RB	120		U	U							
581	EF	1	1	RB	120		U	U							
581	EF	1	1	RB	110		U	U							
581	EF	1	1	RB	100		U	U							



Site #581, Upstream photo of habitat within stream.
Roll #59, Frame #01, Date: 2002/09/14



Site #581, Downstream photo of habitat within stream.
Roll #59, Frame #02, Date: 2002/09/14

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

1.0 093L.025 3626

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.025		ILP #: 3626		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.619215.6017016				Sample Type: Biased			
Length (km): 1.90		Coupling: Partially Couple		Magnitude: 2		BGC Zone: ESSF			
Gradient (%): 4.8		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 1087		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 582		Field UTM ..		Agency: C172		Crew: JH/JA		Date: 2002/09/14	
Site Length (m): 100		GIS UTM 9.620357.6017708		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.80		1.4		2.200	
Stage: Low ☐				Wetted Width (m): 0.67		0.400		0.800	
Med ☒				Bankfull Depth (m): 0.23		0.2		0.3	
High ☐		Temp (C): 7		pH: 7.2		Conductivity: 30			
						Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 70.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Boulders		D (cm): 20.00				Mid-channel ☐		Span ☐	
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: Abundant		Type: SWD		LWD		B		U	
LWD: None		Amount: T		S		N		N	
LWD Dist: Not Applicable		Location: P/S/O: ☒		☒		☐		☐	
		☐		☐		☐		☐	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Left Bank: Shape: V - shape		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)
582	EF	1	100	760 sec	800	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.025 ILP # 3626 Site 582

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Local Name:
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.025 ILP #: 3626 NID Map #: 093L.025 NID #: 50582 Reach #: 1.0 Site #: 582
Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.620357.6017708 Ref. Name:
Date: 2002/09/14 Time: 09:40 Agency: C172 Crew: JH/JA 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	1.60	2.00	2.20	1.80	1.40					1.80	Method I:	12.0	3.0	C	6.00
Wetted Width (m):	T	0.60	0.80	0.40	0.60	0.80	0.80					0.67	Method II:	2.0	7.0	C	
Pool Depth (m):	T	0.10	0.10	0.20	0.10	0.20	0.10					0.13					

Wb Depth: .2 .3 .2 Avg: 0.23 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:	☒	☒	☐	☐	☐	☒	☐

LWD: N DIST: NA

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 30 Method: S3
pH: 7.2 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: 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	Low - small shallow pools.
Spawning Habitat	Low - cover and small gravel patches.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 59 F: 03 STD U			Upstream photo of habitat within site.
R: 59 F: 04 STD D			Downstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.025	3626	582

COMMENTS	
Section	Comments
CHANNEL	Fish bearing reach, solid reach. No barriers observed.
CHANNEL	12% pitch at confluence.

FDIS Fish Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.025 ILP # 3626

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093L.025		ILP #: 3626		Reach #: 1 -			
Project ID: 5270										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/14		To:		2002/09/14		Agency: C172		Crew: JH/JA		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
582	093L.025	50582				GPU EF 1	7	30	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
582	EF	1	2002/09/14	09:40	2002/09/14	10:10											
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
582	EF	1	1	O	760	100.0	2.0	800	I	5	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
582	EF	1	1	NFC		0											



Site #582, Upstream photo of habitat within site.
Roll #59, Frame #03, Date: 2002/09/14



Site #582, Downstream photo of habitat within site.
Roll #59, Frame #04, Date: 2002/09/14

FDIS Reach Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.025 ILP # 3628

PROJECT																													
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)					Project Code: 5270																								
Stream Name (gaz.): BULKLEY RIVER																													
Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000																													
WATERSHED																													
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																													
ILP Map #: 093L.025		ILP #: 3628		Reach #: 1.0		NID Map #: 093L.035		NID #: 11205																					
Air Photos			Names			UTM(Zone/East/North/Method)																							
LINE: BCC98341__			Gaz.:			9.618548.6019205																							
#: 0			Local:			Sample Type: B Wetland: ☐																							
SURVEY INFO																													
Date: 2002/08/27			Agency: C172			Crew: SG/SH																							
ATTRIBUTES																													
Length (km): 2.54		Gradient: 10.16		Setting: VW		DISTURBANCE INDICATORS																							
DS Elev.: 1021		Order: 3		Open water: A		<table border="0" style="width:100%;"> <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																							
☐	☐	☐	☐	☐	☐	☐																							
US Elev: 1279		Magnitude: 12		Confinement: CO		<table border="0" style="width:100%;"> <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																				
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																				
		BGC Zone: ESSF		Coupling: PC																									
Valley Flat: N		C/D:		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.: C		Landuse: NS																							

MAPS		
Map Type	Map #	Year
TRIM	093L.025	

FDIS Fish Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.025 ILP # 3628

WATERBODY																
Gazetted Name:										Local:						
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																
Waterbody ID:										ILP Map #: 093L.025		ILP #: 3628		Reach #: 1 -		
Project ID: 5270										Lake/Stream: S		Lake From Date:				
Fish Permit #:		145269		Date:		2002/09/14		To: 2002/09/14		Agency: C172		Crew: JH/JA		Resample: ☐		
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/East/North/Mhd			MTD/NO	Temp	Cond	Turbid	Comment						
583	093L.025	50583	9	620433	6017881	GPU EF 1	8	30	C							
A. GEAR SETTINGS																
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment									
583	EF	1	1	2002/09/14	10:15	2002/09/14	10:35									
C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model					
583	EF	1	1	O	271	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						
583	EF	1	1	RB	J	2+	5	100	120	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#					
583	EF	1	1	RB	110		U	U								
583	EF	1	1	RB	110		U	U								
583	EF	1	1	RB	100		U	U								
583	EF	1	1	RB	120		U	U								
583	EF	1	1	RB	100		U	U								

FDIS Site Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.025 ILP # 3617 Site # 584

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Local Name:
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.025 ILP #: 3617 NID Map #: 093L.025 NID #: 50584 Reach #: 3.0 Site #: 584
Field UTM (Z.E.N): 9.620345.6017865 Method: GPU Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.620357.6017851 Ref. Name:
Date: 2002/09/14 Time: 11:00 Agency: C172 Crew: JH/JA Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	3.20	2.80	2.60	3.80	4.20	4.00					3.43	Method I:	2.0	2.0	C	2.00
Wetted Width (m):	T	1.80	1.20	2.00	1.80	2.80	2.20					1.97	Method II:			C	
Pool Depth (m):	T	0.30	0.40	0.30	0.50							0.38					

Wb Depth: .3 .3 .3 Avg: 0.30 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	N	T	D	N
Loc: P/S/O:	☒	☒	☒	☐	☒	☒	☐

CROWN CLOSURE

2 21-40%

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: 7 Method: T4 Req #: Cond.: 30 Method: S3
pH: 6.9 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: 60.0 D (cm): 30.00 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	Potential in pools.
Rearing Habitat	Moderate - associated with LWD, pools and cover.
Spawning Habitat	Moderate - associated with gravels, pools and cover.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 59 F: 05 STD U			Upstream photo of habitat within site.
R: 59 F: 06 STD D			Downstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
3.0	093L.025	3617	584

COMMENTS	
Section	Comments
CHANNEL	RB captured ~ 80-90 mm.

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 3.0 ILP Map # 093L.025 ILP # 3617

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:										ILP Map #: 093L.025		ILP #: 3617		Reach #: 3 -	
Project ID: 5270										Lake/Stream: S		Lake From Date:			
Fish Permit #:		145269		Date:		2002/09/14		To: 2002/09/14		Agency: C172		Crew: JH/JA		Resample: ☐	
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment				
584	093L.025	50584				GPU	EF 1	7	30	C					
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
584	EF 1	1	2002/09/14	10:45	2002/09/14	11:05									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
584	EF 1	1	O	210	100.0	3.0	800	1	5	SMITH ROOT	12B				
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment					
584	EF 1	1	RB	J	3+	5	80	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#				
584	EF 1	1	RB	80		U	U								
584	EF 1	1	RB	90		U	U								
584	EF 1	1	RB	90		U	U								
584	EF 1	1	RB	80		U	U								
584	EF 1	1	RB	80		U	U								



Site #584, Upstream photo of habitat within site.
Roll #59, Frame #05, Date: 2002/09/14



Site #584, Downstream photo of habitat within site.
Roll #59, Frame #06, Date: 2002/09/14

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3628

STREAM REFERENCING											
Gazetted Name:						Local Name:					
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000						ILP Map #: 093L.025			ILP #: 3628		
REACH											
Reach #: 2.0		UTM(Zone/East/North): 9.618394.6019417				Sample Type: Biased					
Length (km): .27		Coupling: Decoupled		Magnitude: 13		BGC Zone: ESSF					
Gradient (%): 0.0		Confinement: Occasionally Conf		Order: 3		Open water: Absent					
US Elev (m): 1279		Islands: NONE		Riparian Vegetation: Shrubs							
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified											
SITE											
Site #: 585		Field UTM 9.618406.6019370		Agency: C172		Crew: JH/JA		Date: 2002/09/14			
Site Length (m): 300		GIS UTM 9.618497.6019234		Agency Name: Triton Environmental Consultants (Terrace)							
CHANNEL											
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max		#	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.97		1.600		2.400		6	
Stage: Low ☐				Wetted Width (m): 1.13		0.800		2		6	
Med ☒				Bankfull Depth (m): 0.53		0.4		0.6		3	
High ☐		Temp (C): 8		pH: 7.6		Conductivity: 30					
								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): 10.00								Braid ☐	
Channel Pattern: Irregular, Wandering		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: None		Amount: N		N		T		S		N D N	
LWD Dist: Not Applicable		Location: P/S/O:		☐		☐		☒		☐	
Right Bank: Shape: Undercut		Texture: Fines ☐		Gravel ☒		Cobble ☒		Boulder ☐		Rock ☐ Manmade ☐	
Left Bank: Shape: Undercut		Texture: Fines ☐		Gravel ☒		Cobble ☒		Boulder ☐		Rock ☐ Manmade ☐	
Right Bank: Rip.Veg: Shrubs		Stage: Shrub/herb stage								Crown Closure 1-20%	
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	
093L.035	55526	C	50.0	GE	50	GE	R: 59	F: 09	L:	#:	UTM (Z/E/N) 9.618571.6019
Comments: Cascade with 5 m Falls within											
FISH											
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)		
585	EF	1	300	525 sec	800	NFC	0				

FDIS Site Card

Morice North Planning Area

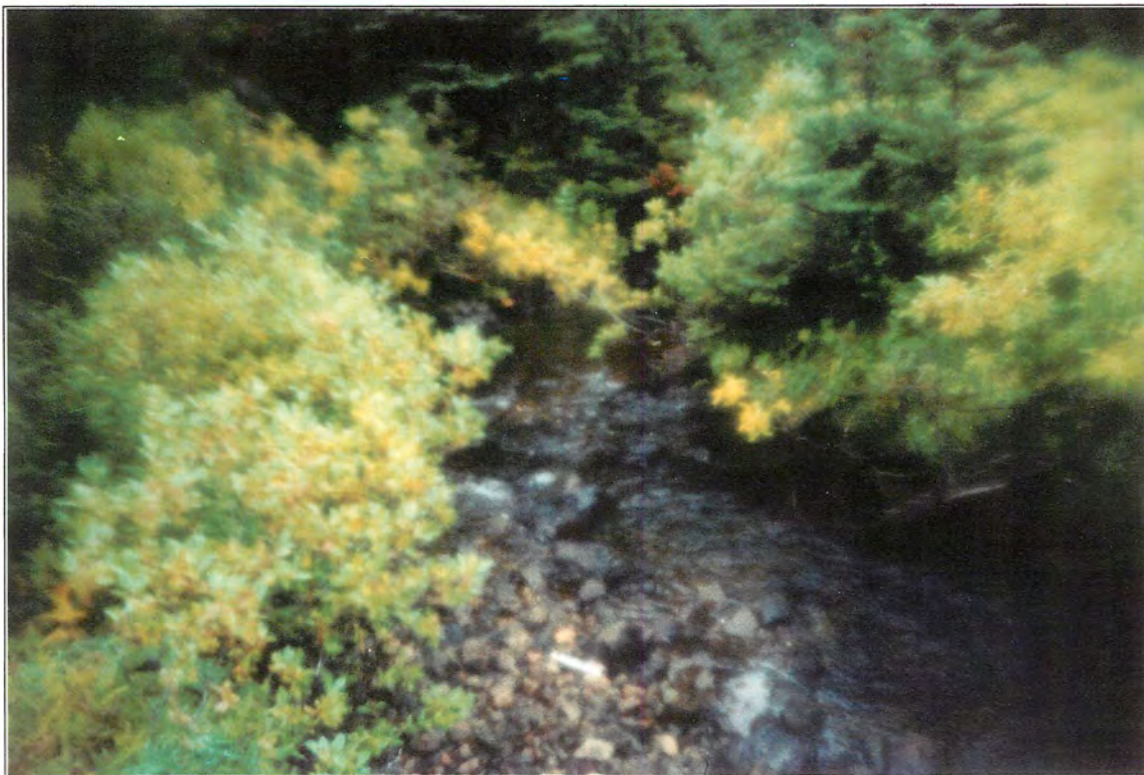
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
2.0	093L.025	3628	585

PHOTOS						
Photo			Foc Lg	Dir	Comments	
R:	59	F:	07	STD	U	Upstream photo of typical habitat.
R:	59	F:	08	STD	D	Downstream photo of typical habitat.
R:	59	F:	09	STD	U	Cascade with 5 m falls within.
COMMENTS						
Section			Comments			
CHANNEL			NFC upstream of barrier.			
CHANNEL			NFC upstream of Falls / Cascade.			



Site #585, Upstream photo of typical habitat.
Roll #59, Frame #07, Date: 2002/09/14



Site #585, Downstream photo of typical habitat.
Roll #59, Frame #08, Date: 2002/09/14



Site #585, Cascade with 5 m falls within.
Roll #59, Frame #09, Date: 2002/09/14

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3375

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3375		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.618564.6019639				Sample Type: Biased			
Length (km): .31		Coupling: Decoupled		Magnitude: 5		BGC Zone: ESSF			
Gradient (%): 6.8		Confinement: Occasionally Conf		Order: 3		Open water: Present			
US Elev (m): 1297		Islands: NONE		Riparian Vegetation: Shrubs					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 586		Field UTM ..		Agency: C172		Crew: JH/JA		Date: 2002/09/14	
Site Length (m): 110		GIS UTM 9.618380.6019498		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 0.93		0.800		1	
Stage: Low ☐				Wetted Width (m): 0.87		0.600		1	
Med ☒				Bankfull Depth (m): 0.27		0.2		0.3	
High ☐		Temp (C): 7		pH: 7.4		Conductivity: 30		Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 40.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Boulders		D (cm): 10.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Decoupled				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: None		Amount: N		N		N		S	
LWD Dist: Not Applicable		Location: P/S/O:		☐		☐		☒	
				☐		☐		☐	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Shrubs		Stage: Shrub/herb stage		Instream Veg: None ☒		Algae ☐		Moss ☐	
Left Bank: Rip.Veg:		Stage: Shrub/herb 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)
586	EF	1	100	250 sec	800	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3375 Site # 586

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3375 NID Map #: 093L.035 NID #: 50586 Reach #: 1.0 Site #: 586
Field UTM (Z.E.N): .. Method: Site Lg: 110 Method: MAP Access: H
GIS UTM (Z.E.N): 9.618380.6019498 Ref. Name:
Date: 2002/09/14 Time: 12:00 Agency: C172 Crew: JH/JA 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	1.00	1.00	0.80	1.00	1.00					0.93	Method I:	1.0	1.0	C	1.00
Wetted Width (m):	T	0.80	1.00	1.00	0.80	0.60	1.00					0.87	Method II:			C	
Pool Depth (m):	T	0.10	0.10	0.10	0.10							0.10					

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:	N	N	N	S	N	D	N
Loc: P/S/O:	☐	☐	☐	☒	☐	☒	☐

LWD: N DIST: NA

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: 7 Method: T3 Req #: Cond.: 30 Method: S3
pH: 7.4 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: 40.0 D (cm): 10.00 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 observed.
Rearing Habitat	Low - shallow pools.
Spawning Habitat	Low - coarse substrates, shallow.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 59 F: 10	STD	U	Upstream habitat within site.
R: 59 F: 11	STD	D	Downstream habitat within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.035	3375	586

COMMENTS	
Section	Comments
CHANNEL	NFC

FDIS Fish Card

Morice North Planning Area

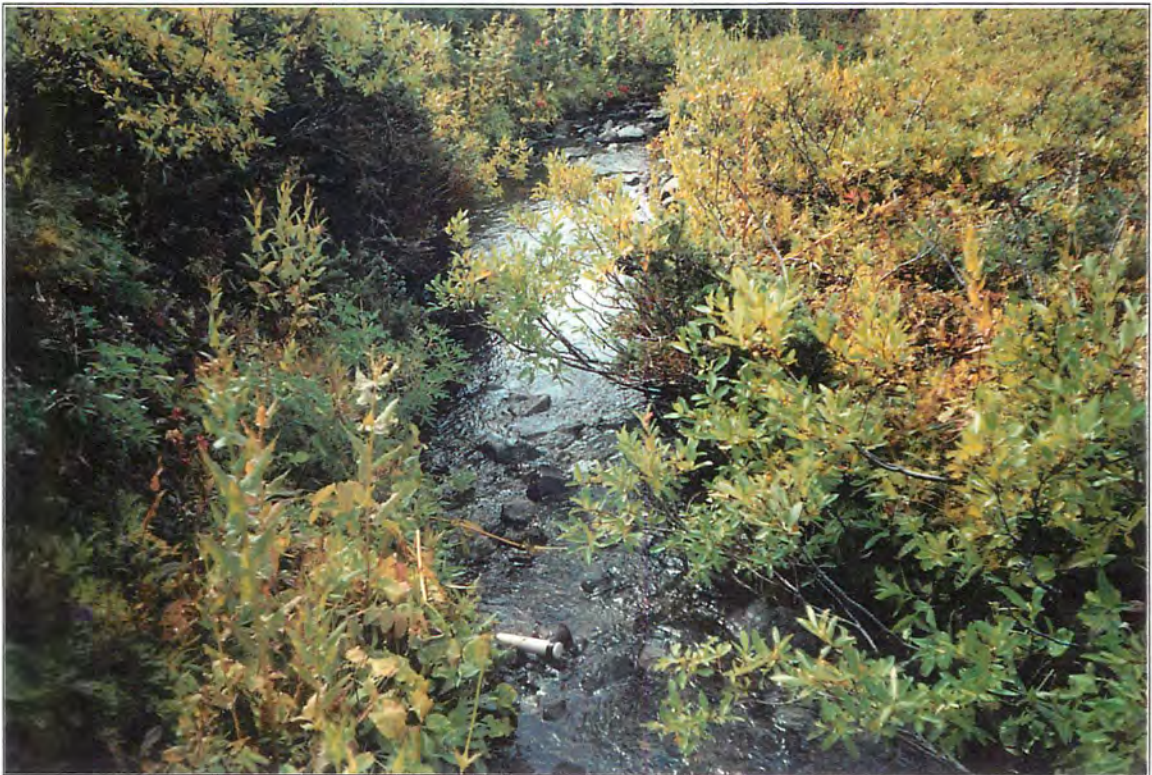
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0
ILP Map # 093L.035
ILP # 3375

WATERBODY																	
Gazetted Name:							Local:										
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:				ILP Map #: 093L.035				ILP #: 3375		Reach #: 1 -							
Project ID: 5270				Lake/Stream: S				Lake From Date:									
Fish Permit #:		145269		Date:		2002/09/14		To:		2002/09/14		Agency: C172		Crew: JH/JA		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
586	093L.035	50586				GPU EF 1	7	30	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
586	EF	1	1	2002/09/14	12:00	2002/09/14	12:15										
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
586	EF	1	1	O	250	100.0	1.0	800	I	5	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
586	EF	1	1	NFC		0											



Site #586, Upstream habitat within site.
Roll #59, Frame #10, Date: 2002/09/14



Site #586, Downstream habitat within site.
Roll #59, Frame #11, Date: 2002/09/14

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #
3.0 093L.025 3628

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093L.025		ILP #: 3628		
REACH									
Reach #: 3.0		UTM(Zone/East/North): 9.618037.6019602				Sample Type: Biased			
Length (km): .49		Coupling: Decoupled		Magnitude: 7		BGC Zone: ESSF			
Gradient (%): 1.4		Confinement: Occasionally Conf		Order: 2		Open water: Present			
US Elev (m): 1286		Islands: NONE		Riparian Vegetation: Shrubs					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 587		Field UTM ..		Agency: C172		Crew: JH/JA		Date: 2002/09/14	
Site Length (m): 150		GIS UTM 9.618328.6019455		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		2.70		2.200	
Stage: Low ☒				Wetted Width (m):		1.27		0.600	
Med ☐				Bankfull Depth (m):		0.57		0.5	
High ☐						0.6		3	
Temp (C): 7		pH: 7.4		Conductivity: 30		Avg		Min	
						Gradient %:		1.00	
						Pool Depth (m):		0.33	
								0.200	
								0.7	
								6	
						Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 15.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Cobble		D (cm): 10.00				Mid-channel ☐		Span ☐	
Channel Pattern: Irregular, Wandering		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: None		Amount: N		N		N		S	
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: Shrubs		Stage: Shrub/herb stage		None ☒		Algae ☐		Moss ☐	
Left Bank: Rip.Veg:		Stage: Shrub/herb stage		None ☒		Algae ☐		Moss ☐	
				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)
587	EF	1	150	180 sec	300	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.025 ILP # 3628 Site 587

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map#: 093L.025 ILP #: 3628 NID Map #: 093L.035 NID #: 50587 Reach #: 3.0 Site #: 587
Field UTM (Z.E.N): .. Method: Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 9.618328.6019455 Ref. Name:
Date: 2002/09/14 Time: 12:20 Agency: C172 Crew: JH/JA 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	2.80	2.40	3.00	2.80	3.00					2.70	Method I:	1.0	1.0	C	1.00
Wetted Width (m):	T	0.60	1.00	1.60	1.20	1.40	1.80					1.27	Method II:			C	
Pool Depth (m):	T	0.20	0.20	0.20	0.70	0.30	0.40					0.33					

Wb Depth: .6 .5 .6 Avg: 0.57 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	S	N	D	N
Loc: P/S/O:	☐	☐	☐	☒	☐	☒	☐

LWD: N DIST: NA

LB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 30 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: C O1 B1 B2 B3 D1 D2 D3
D95: 15.0 D (cm): 10.00 Morph: RP DISTURBANCE INDICATORS
Pattern: IR 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	Low - associated with pools.
Rearing Habitat	Low / Moderate - associated with cover, pools.
Spawning Habitat	Low - associated with gravels - small gravels pockets.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 59 F: 12	STD	U	Upstream photo of habitat within site.
R: 59 F: 13	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
3.0	093L.025	3628	587

COMMENTS	
Section	Comments
CHANNEL	NFC

Morice North Planning Area

Reach #	ILP Map #	ILP #
3.0	093L.025	3628

WATERBODY														
Gazetted Name:						Local:								
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0														
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000														
Waterbody ID:				ILP Map #: 093L.025				ILP #:		3628		Reach #: 3 -		
Project ID: 5270				Lake/Stream: S				Lake From Date:						
Fish Permit #: 145269			Date: 2002/09/14			To: 2002/09/14			Agency: C172		Crew: JH/JA		Resample: ☐	
SITE / METHOD														
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment				
587	093L.035	50587				GPU EF 1	7	30	C					
A. GEAR SETTINGS														
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment							
587	EF	1	2002/09/14	12:15	2002/09/14	12:30								
C. ELECTROFISHER SPECIFICATIONS														
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model			
587	EF	1	O	180	150.0	1.0	300	I	5	SMITH ROOT	12B			
FISH SUMMARY														
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment					
587	EF	1	NFC			0								



Site #587, Upstream photo of habitat within site.
Roll #59, Frame #12, Date: 2002/09/14



Site #587, Downstream photo of habitat within site.
Roll #59, Frame #13, Date: 2002/09/14

FDIS Reach Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3618

PROJECT																													
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)					Project Code: 5270																								
Stream Name (gaz.): BULKLEY RIVER																													
Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000																													
WATERSHED																													
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																													
ILP Map #: 093L.025		ILP #: 3618		Reach #: 2.0		NID Map #: 093L.025		NID #: 11947																					
Air Photos			Names			UTM(Zone/East/North/Method)																							
LINE: BCC98341			Gaz.:			9.621262.6016235																							
#: 0			Local:			Sample Type: B		Wetland: ☒																					
SURVEY INFO																													
Date: 2002/08/27				Agency: C172			Crew: SG/SH																						
ATTRIBUTES																													
Length (km): .81		Gradient: 0.12		Setting: VF		DISTURBANCE INDICATORS																							
DS Elev.: 975		Order: 2		Open water: P		<table style="width:100%; border: none;"> <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																							
☐	☐	☐	☐	☐	☐	☐																							
US Elev: 976		Magnitude: 6		Confinement: OC		<table style="width:100%; border: none;"> <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																				
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																				
		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.: G		Landuse: NS																							

MAPS		
Map Type	Map #	Year
TRIM	093L.025	

FDIS Fish Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3618

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000															
Waterbody ID:										ILP Map #: 093L.025		ILP #: 3618		Reach #: 2 -	
Project ID: 5270										Lake/Stream: S		Lake From Date:			
Fish Permit #:		145269		Date:		2002/09/14		To: 2002/09/14		Agency: C172		Crew: JH/JA		Resample: ☐	
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mhd			MTD/NO		Temp	Cond	Turbid	Comment				
588	093L.025	50588				GPU	EF	1	7	60	C				
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
588	EF	1	2002/09/14	12:30	2002/09/14	12:45									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
588	EF	1	1	O	165	100.0	2.0	800	I	5	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
588	EF	1	1	NFC		0									
COMMENTS															
Section			Comments												
WATERBODY			Difficult shocking - should be minnow trapped upstream.												
WATERBODY			Bottom 100m of Reach 2												

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.025 ILP # 3618

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.025		ILP #: 3618		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.621581.6016873				Sample Type: Biased			
Length (km): 1.27		Coupling: Decoupled		Magnitude: 6		BGC Zone: SBS			
Gradient (%): 1.8		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 975		Islands: NONE		Riparian Vegetation: Shrubs					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 589		Field UTM 9.621726.6017311		Agency: C172		Crew: JH/JA		Date: 2002/09/14	
Site Length (m): 150		GIS UTM 9.621690.6017248		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.97		1.600		2.400	
Stage: Low ☐				Wetted Width (m): 1.90		1.600		2.200	
Med ☒				Bankfull Depth (m): 0.77		0.7		0.8	
High ☐									
Temp (C): 7		pH: 7.6		Conductivity: 60		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: 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: None		Amount: N		N		N		T	
LWD Dist: Not Applicable		Location: P/S/O:		☐		☐		☒	
				☐		☐		☒	
Right Bank: Shape: V - shape		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Left Bank: Shape: V - shape		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Shrubs		Stage: Shrub/herb stage		Rock ☐		Manmade ☐		Crown Closure	
Left Bank: Rip.Veg:		Stage: Shrub/herb 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)
589	EF	1	150	300 sec	800	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.025 ILP # 3618 Site # 589

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map#: 093L.025 ILP #: 3618 NID Map #: 093L.025 NID #: 50589 Reach #: 1.0 Site #: 589
Field UTM (Z.E.N): 9.621726.6017311 Method: GPU Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 9.621690.6017248 Ref. Name:
Date: 2002/09/14 Time: 12:45 Agency: C172 Crew: JH/JA 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	2.20	1.80	1.60	1.90	2.40					1.97	Method I:	1.0	1.0	C	1.00
Wetted Width (m):	T	1.80	2.10	1.80	1.60	1.90	2.20					1.90	Method II:			C	
Pool Depth (m):	T	0.50	0.60	0.40	0.40	0.60	1.00					0.58					

Wb Depth: .8 .7 .8 Avg: 0.77 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	S	D	T
Loc: P/S/O:	☐	☐	☐	☒	☒	☒	☒

LWD: N DIST: NA

LB SHP: V

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☐ V ☒

RB SHP: V

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: 7 pH: 7.6 Flood Signs: None Method: T4 Method: P2 Method: GE Req #: Cond.: 60 Turb.: T ☐ M ☐ L ☐ C ☒ Method: S3 Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: NA D95: 1.00 D (cm): 1.00 Morph: RP Pattern: SI Islands: N Coupling: DC Confinement: OC 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	Low.
Rearing Habitat	Low.
Spawning Habitat	Low.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 59 F: 14 STD U			Upstream photo of habitat within site.
R: 59 F: 15 STD D			Downstream photo of stream and RMA.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.025	3618	589

COMMENTS	
Section	Comments
CHANNEL	Confined section at bottom of Reach.
CHANNEL	Should be minnow trapped to confirm fish presence / absence. Minnow trap upstream lakes.
CHANNEL	NFC - no barriers observed in Recci. Stream / wetland habitat upstream.

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 093L.025 ILP # 3618

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:										ILP Map #: 093L.025		ILP #: 3618		Reach #: 1 -	
Project ID: 5270										Lake/Stream: S		Lake From Date:			
Fish Permit #:		145269		Date: 2002/09/14		To: 2002/09/14		Agency: C172		Crew: JH/JA		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
589	093L.025	50589				GPU EF 1	7	60	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
589	EF 1	1	2002/09/14	12:45	2002/09/14	13:15									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
589	EF 1	1	O	300	150.0	2.0	800	I	5	SMITH ROOT	12B				
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
589	EF 1	1	NFC			0									



Site #589, Upstream photo of habitat within site.
Roll #59, Frame #14, Date: 2002/09/14



Site #589, Downstream photo of stream and RMA.
Roll #59, Frame #15, Date: 2002/09/14

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

1.0 093L.025 3619

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093L.025		ILP #: 3619		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.621487.6017413				Sample Type: Biased			
Length (km): .29		Coupling: Decoupled		Magnitude: 1		BGC Zone: SBS			
Gradient (%): 6.9		Confinement: Occasionally Conf		Order: 1		Open water: Absent			
US Elev (m): 986		Islands: NONE		Riparian Vegetation: Shrubs					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 590		Field UTM ..		Agency: C172		Crew: JH/JA		Date: 2002/09/14	
Site Length (m): 110		GIS UTM 9.621664.6017433		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☒ Intermittent: ☐									
Dewatered: ☐ Tribs.: ☐									
Stage: Low ☐		Avg		Min		Max		#	
Med ☐		Channel Width (m): 0.00		0		0		0	
High ☐		Wetted Width (m): 0.00		0		0		0	
Temp (C):		Bankfull Depth (m): 0.00		0		0		0	
pH:									
Conductivity:									
		Avg		Min		Max		#	
		Gradient %: 11.67		8		16		3	
		Pool Depth (m): 0.00		0		0		0	
		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		O1		B1	
Coupling:				INDICATORS		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

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.025 ILP # 3619 Site # 590

PROJECT																																						
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)										Project Code: 5270																												
Stream Name (gaz.): BULKLEY RIVER																																						
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000																																						
WATERSHED																																						
Gazetted Name:										Local Name:																												
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000																																						
ILP Map#: 093L.025			ILP #: 3619		NID Map #: 093L.025			NID #: 50590		Reach #: 1.0		Site #: 590																										
Field UTM (Z.E.N): ..					Method:		Site Lg: 110			Method: MAP		Access: H																										
GIS UTM (Z.E.N): 9.621664.6017433							Ref. Name:																															
Date: 2002/09/14			Time: 13:20		Agency: C172			Crew: JH/JA		Fish Crd?: ☐		Incomplete: ☐																										
CHANNEL																																						
										<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Gradient %</th> <th colspan="2">Mtd</th> <th colspan="2">Avg</th> </tr> </thead> <tbody> <tr> <td>Method I:</td> <td>11.0</td> <td>8.0</td> <td>C</td> <td colspan="2"></td> <td colspan="2">11.67</td> </tr> <tr> <td>Method II:</td> <td>16.0</td> <td></td> <td>C</td> <td colspan="2"></td> <td colspan="2"></td> </tr> </tbody> </table>							Gradient %		Mtd		Avg		Method I:	11.0	8.0	C			11.67		Method II:	16.0		C				
		Gradient %		Mtd		Avg																																
Method I:	11.0	8.0	C			11.67																																
Method II:	16.0		C																																			
Channel Width (m):		Mtd	width	width	width	width	width	width	width	width	width	width	Avg																									
Wetted Width (m):													0.00																									
Pool Depth (m):													0.00																									
Wb Depth:					Avg: 0.00		Method: MS		Stage: L ☐ M ☐ H ☐		No Vis.Ch.: ☒		Intermittent: ☐																									
												Dw: ☐		Tribes.: ☐																								
COVER																																						
Type:		SWD	LWD	B	U	DP	OV	IV	CROWN CLOSURE																													
Amount:																																						
Loc: P/S/O:		☐	☐	☐	☐	☐	☐	☐	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:					Req #:					Method:																												
Temp:					Method:					Cond.:																												
pH:					Method:					Turb.: T ☐ M ☐ L ☐ C ☐																												
Flood Signs:					Method:					Method: GE																												
MORPHOLOGY																																						
Bed Material:		Dominant:		Subdom:		O1		B1		B2		B3		D1		D2		D3																				
D95:		D (cm):		Morph:																																		
Pattern:						DISTURBANCE		C1		C2		C3		C4		C5		S1																				
Islands:						INDICATORS																																
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:	59	F:	16	STD		U		Organic barrier with scour pool below.																														
R:	59	F:	17	STD		D		NCD characteristics - no scour.																														

FDIS Site Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000	Reach #	ILP Map #	ILP #	Site
	1.0	093L.025	3619	590

COMMENTS	
Section	Comments
CHANNEL	NCD / S6.



Site #590, Organic barrier with scour pool below.
Roll #59, Frame #16, Date: 2002/09/14



Site #590, NCD characteristics - no scour.
Roll #59, Frame #17, Date: 2002/09/14

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3259

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3259		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.620032.6022550				Sample Type: Biased			
Length (km): .34		Coupling: Partially Couple		Magnitude: 29		BGC Zone: ESSF			
Gradient (%): 13.8		Confinement: Occasionally Conf		Order: 3		Open water: Absent			
US Elev (m): 1096		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 591		Field UTM 9.620256.6022610		Agency: C172		Crew: JH/JA		Date: 2002/09/14	
Site Length (m): 200		GIS UTM 9.620275.6022599		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes: ☐		Channel Width (m): 8.37		7.6		9	
Stage: Low ☐				Wetted Width (m): 4.97		4.400		5.800	
Med ☒				Bankfull Depth (m): 0.83		0.6		1	
High ☐		Temp (C): 7		pH: 6.8		Conductivity: 40			
								Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 110.00		Bars: Non ☐		Side ☒		Diagonal ☐	
Subdominant: Cobble		D (cm): 60.00						Mid-channel ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Partially Coupled				INDICATORS		B2		B3	
Confinement: Occasionally Confine						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		T		D		N	
LWD Dist: Clumped		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: Mixed C/D		Stage: Mature forest						Crown Closure 1-20%	
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)
591	EF	1	200	390 sec	I	RB	4	100	120

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3259 Site 591

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3259 NID Map #: 093L.035 NID #: 50591 Reach #: 1.0 Site #: 591
Field UTM (Z.E.N): 9.620256.6022610 Method: GPU Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 9.620275.6022599 Ref. Name:
Date: 2002/09/14 Time: 14:00 Agency: C172 Crew: JH/JA Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	7.60	9.00	8.60	8.00	8.80	8.20					8.37	Method I:	10.0	13.0	C	9.00
Wetted Width (m):	T	4.80	5.00	4.40	4.60	5.20	5.80					4.97	Method II:	6.0	7.0	C	
Pool Depth (m):	T	0.60	0.90	0.80	0.80	0.60	0.50					0.70					

Wb Depth: 1.0 .9 .6 Avg: 0.83 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	D	N	S	N	N
Loc: P/S/O:	☒	☒	☒	☐	☒	☐	☐

LWD: F DIST: C

LB SHP: V

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 40 Method: S3
pH: 6.8 Method: P2 Method: GE
Flood Signs: Rafted debris Method: GE
Turb.: T ☐ M ☐ L ☐ C ☒

MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 110.0 D (cm): 60.00 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	Associated with deep pools.
Rearing Habitat	Moderate - associated with plunge pool habitat.
Spawning Habitat	Low - associated with pools, cover, flows, limited by coarse substrates, access and flashy nature.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 59 F: 18	STD	U	LWD / debris jam with plunge pool at base.
R: 59 F: 19	STD	D	Downstream photo of fish capture pool - RB.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.035	3259	591

COMMENTS	
Section	Comments
CHANNEL	No barriers observed in Recci flight. Fish access possible into next reaach based on observations. Solid red in Reach 2 as well.
CHANNEL	Low density ~2 fish / 50 m.
CHANNEL	Flashy high energy system. Gradient may increase upstream of site.
CHANNEL	RB captured 100-120 mm.

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 093L.035 ILP # 3259

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093L.035		ILP #: 3259		Reach #: 1 -			
Project ID: 5270										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/14		To:		2002/09/14		Agency: C172		Crew: JH/JA		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
591	093L.035	50591				GPU EF 1	7	40	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
591	EF	1	2002/09/14	14:00	2002/09/14	14:30											
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
591	EF	1	1	O	390	200.0	8.0	I	5	SMITH ROOT	12B						
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
591	EF	1	1	RB	J	3+	4	100	120	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#							
591	EF	1	1	RB	100		U	U									
591	EF	1	1	RB	120		U	U									
591	EF	1	1	RB	100		U	U									
591	EF	1	1	RB	100		U	U									



Site #591, LWD / debris jam with plunge pool at base.
Roll #59, Frame #18, Date: 2002/09/14



Site #591, Downstream photo of fish capture pool - RB.
Roll #59, Frame #19, Date: 2002/09/14

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

1.0 093L.035 3275

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3275		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.620654.6023005				Sample Type: Biased			
Length (km): .38		Coupling: Partially Couple		Magnitude: 31		BGC Zone: ESSF			
Gradient (%): 11.6		Confinement: Frequently Confin		Order: 3		Open water: Absent			
US Elev (m): 1095		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 592		Field UTM 9.670436.6022845		Agency: C172		Crew: JH/JA		Date: 2002/09/14	
Site Length (m): 120		GIS UTM 9.620492.6022922		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 5.23		4		6.400	
Stage: Low ☐				Wetted Width (m): 2.49		1.8		4	
Med ☒				Bankfull Depth (m): 0.97		0.9		1.1	
High ☐									
Temp (C): 8		pH: 6.9		Conductivity: 110					
				Turbidity: Turbid ☐		Low ☐			
				Moderate ☐		Clear ☒			
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 80.00		Bars: Non ☐		Side ☒		Diagonal ☐	
Subdominant: Cobble		D (cm): 30.00						Mid-channel ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Partially Coupled				INDICATORS		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		D		T	
LWD Dist: Clumped		Location: P/S/O: ☒		☒		☒		☒	
		☒		☒		☒		☒	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Left Bank: Shape: V - shape		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)
592	EF	1	100	540 sec	600	RB	4	100	120

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3275 Site 592

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Local Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3275 NID Map #: 093L.035 NID #: 50592 Reach #: 1.0 Site #: 592
Field UTM (Z.E.N): 9.670436.6022845 Method: GPU Site Lg: 120 Method: MAP Access: H
GIS UTM (Z.E.N): 9.620492.6022922 Ref. Name: Date: 2002/09/14 Time: 14:45 Agency: C172 Crew: JH/JA Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	5.00	5.80	6.20	5.00	4.80	4.60	6.40	4.00	4.00	4.00	5.23	Method I:	6.0	5.0	C	5.67
Wetted Width (m):	T	2.40	2.00	2.20	1.80	1.80	4.00	3.20				2.49	Method II:	6.0		C	
Pool Depth (m):	T	0.30	0.30	0.60	0.30	0.40	0.50					0.40					

Wb Depth: .9 1.1 .9 Avg: 0.97 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	D	T	T	T	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

LWD: F DIST: C

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Req #: Temp: 8 Method: T4 Cond.: 110 Method: S3
pH: 6.9 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: Rafted debris Method: GE

MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 80.0 D (cm): 30.00 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	Potential in pool.
Rearing Habitat	Low - associated with plunge pools.
Spawning Habitat	Low - associated with gravels, limited by coarse substrates and flashy nature.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 59 F: 20	STD	U	Upstream photo of confined section.
R: 59 F: 21	STD	D	Downstream photo of functioning LWD and D95.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.035	3275	592

COMMENTS	
Section	Comments
CHANNEL	No barrier observed in Recci - potential fish access to upstream reach based on over-flight observations.
CHANNEL	RB captured ~120 mm, ~2 / 50 m.

Morice North Planning Area

Reach #	ILP Map #	ILP #
1.0	093L.035	3275

Triton Environmental Consultants Ltd.



Site #592, Upstream photo of confined section.
Roll #59, Frame #20, Date: 2002/09/14



Site #592, Downstream photo of functioning LWD and D95.
Roll #59, Frame #21, Date: 2002/09/14

FDIS Reach Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.026 ILP # 3678

PROJECT																			
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)					Project Code: 5270														
Stream Name (gaz.): BULKLEY RIVER																			
Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000																			
WATERSHED																			
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																			
ILP Map #: 093L.026		ILP #: 3678		Reach #: 3.0		NID Map #: 093L.035		NID #: 11000											
Air Photos		Names		UTM(Zone/East/North/Method)															
LINE: BCC98341_		Gaz.:		9.620339.6022788 GIS															
#: 0		Local:		Sample Type: B		Wetland: ☐													
SURVEY INFO																			
Date: 2002/08/27			Agency: C172			Crew: SG/SH													
ATTRIBUTES																			
Length (km): 6.68		Gradient: 1.74		Setting: VF		DISTURBANCE INDICATORS													
DS Elev.: 940		Order: 3		Open water: A		<table style="width:100%; border: none;"> <tr> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> </table>				☐	☐	☐	☐	☐	☐	☐	☐	☐	
☐	☐	☐	☐	☐	☐	☐	☐	☐											
US Elev: 1056		Magnitude: 192		Confinement: OC		<table style="width:100%; border: none;"> <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> </table>				C1	C2	C3	C4	C5	S1	S2	S3	S4	S5
C1	C2	C3	C4	C5	S1	S2	S3	S4	S5										
		BGC Zone: SBS		Coupling: PC		<table style="width:100%; border: none;"> <tr> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> </table>				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐										
Valley Flat: B		C/D: D		Islands: N															
Active Floodplain Visible: ☐		Est. Width:		Bars: ☒ N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR															
Channel Pattern: IM				Mass Movement: M		Exposed/Eroded: NS													
				Riparian Veg.: C		Landuse: NS													

MAPS		
Map Type	Map #	Year
TRIM	093L.035	
TRIM	093M.026	

FDIS Fish Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.026 ILP # 3678

WATERBODY																	
Gazetted Name:										Local: Houston Tommy Creek							
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093L.026		ILP #: 3678		Reach #: 3 -			
Project ID: 5270										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/14		To:		2002/09/14		Agency: C172		Crew: JH/JA		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
593	093L.035	50593				GPU EF 1	7	70	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
593	EF	1	2002/09/14	15:10	2002/09/14	15:50											
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
593	EF	1	1	O	830	100.0	2.0	600	I	5	SMITH ROOT	12B					
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment								
593	EF	1	1	RB	A	3+	10	110	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#						
593	EF	1	1	RB	110		U	U									
593	EF	1	1	RB	130		U	U									
593	EF	1	1	RB	120		U	U									
593	EF	1	1	RB	120		U	U									
593	EF	1	1	RB	110		U	U									
593	EF	1	1	RB	110		U	U									
593	EF	1	1	RB	120		U	U									
593	EF	1	1	RB	120		U	U									
593	EF	1	1	RB	130		U	U									
593	EF	1	1	RB	120		U	U									
COMMENTS																	
Section		Comments															
WATERBODY		Only RB captured. Between upstream 3275 and downstream 3268 walk.															

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.035 ILP # 3315

STREAM REFERENCING																																												
Gazetted Name:					Local Name:																																							
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3315																																					
REACH																																												
Reach #: 3.0		UTM(Zone/East/North): 9.618821.6025783				Sample Type: Biased																																						
Length (km): .18		Coupling: Decoupled		Magnitude: 2		BGC Zone: ESSF																																						
Gradient (%): 11.7		Confinement: Occasionally Conf		Order: 2		Open water: Present																																						
US Elev (m): 1178		Islands: NONE		Riparian Vegetation: Mixed C/D																																								
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																												
SITE																																												
Site #: 595		Field UTM ..		Agency: C172		Crew: JH/JA		Date: 2002/09/14																																				
Site Length (m): 140		GIS UTM 9.618772.6025712		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>1.02</td> <td>0.800</td> <td>1.4</td> <td>6</td> </tr> <tr> <td>Wetted Width (m):</td> <td>1.02</td> <td>0.800</td> <td>1.4</td> <td>6</td> </tr> <tr> <td>Bankfull Depth (m):</td> <td>0.23</td> <td>0.2</td> <td>0.3</td> <td>3</td> </tr> </tbody> </table>					Avg	Min	Max	#	Channel Width (m):	1.02	0.800	1.4	6	Wetted Width (m):	1.02	0.800	1.4	6	Bankfull Depth (m):	0.23	0.2	0.3	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>1.00</td> <td>1</td> <td>1</td> <td>2</td> </tr> <tr> <td>Pool Depth (m):</td> <td>0.15</td> <td>0.100</td> <td>0.200</td> <td>6</td> </tr> </tbody> </table>					Avg	Min	Max	#	Gradient %:	1.00	1	1	2	Pool Depth (m):	0.15	0.100	0.200	6
	Avg	Min	Max	#																																								
Channel Width (m):	1.02	0.800	1.4	6																																								
Wetted Width (m):	1.02	0.800	1.4	6																																								
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	Avg	Min	Max	#																																								
Gradient %:	1.00	1	1	2																																								
Pool Depth (m):	0.15	0.100	0.200	6																																								
Dewatered: ☐ Tribes.: ☐						Turbidity.: Turbid ☐ Low ☐																																						
Stage: Low ☐						Moderate ☐ Clear ☒																																						
Med ☒																																												
High ☐																																												
Temp (C): 11		pH: 7.4		Conductivity: 40																																								
MORPHOLOGY																																												
Bed Material: Dominant: Fines		D95 (cm): 10.00		Bars: Non ☒		Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐		Braid ☐																																				
Subdominant: Gravels		D (cm): 2.00																																										
Channel Pattern: Irregular, Wandering		Islands: None		DISTURBANCE INDICATORS																																								
Coupling: Decoupled				<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> </table>						O1	B1	B2	B3	D1	D2	D3	☐	☐	☐	☐	☐	☐	☐																					
O1	B1	B2	B3	D1	D2	D3																																						
☐	☐	☐	☐	☐	☐	☐																																						
Confinement: Unconfined				<table border="1" style="width:100%; 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="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>N</td> <td>N</td> <td>N</td> <td>S</td> <td>N</td> <td>D</td> <td>N</td> </tr> </tbody> </table>								Type:	SWD	LWD	B	U	DP	OV	IV	Amount:	N	N	N	S	N	D	N																			
Type:	SWD	LWD	B	U	DP	OV	IV																																					
Amount:	N	N	N	S	N	D	N																																					
LWD: None		Location: P/S/O: ☐ ☐ ☐ ☐ ☐ ☐ ☒ ☐ ☐ ☐ ☐ ☐ ☒ ☐ ☐ ☐ ☐ ☐																																										
LWD Dist: Not Applicable		FSZ: ☐																																										
Right Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐																																				
Left Bank: Shape: Undercut		Texture: Fines ☒		Gravel ☐		Cobble ☐		Boulder ☐																																				
Right Bank: Rip.Veg: Shrubs		Stage: Shrub/herb stage		None ☐		Algae ☐		Moss ☒																																				
Left Bank: Rip.Veg:		Stage: Shrub/herb stage		None ☐		Algae ☐		Moss ☒																																				
				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)																																			
595	EF	1	140	300 sec	800	NFC	0																																					

FDIS Site Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.035 ILP # 3315 Site 595

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Local Name:
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093L.035 ILP #: 3315 NID Map #: 093L.035 NID #: 50595 Reach #: 3.0 Site #: 595
Field UTM (Z.E.N): .. Method: Site Lg: 140 Method: MAP Access: H
GIS UTM (Z.E.N): 9.618772.6025712 Ref. Name:
Date: 2002/09/14 Time: 16:30 Agency: C172 Crew: JH/JA 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	0.80	1.20	1.40	1.00					1.02	Method I:	1.0	1.0	C	1.00
Wetted Width (m):	T	0.80	0.90	0.80	1.20	1.40	1.00					1.02	Method II:			C	
Pool Depth (m):	T	0.10	0.20	0.10	0.20	0.20	0.10					0.15					

Wb Depth: .2 .2 .3 Avg: 0.23 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	S	N	D	N
Loc: P/S/O:	☐	☐	☐	☒	☐	☒	☐

LWD: N DIST: NA

LB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☒

RB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: 11 Method: T4 Req #: Cond.: 40 Method: S3
pH: 7.4 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: 10.0 D (cm): 2.00 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	Potential in upstream lakes.
Rearing Habitat	Low - associated with cover, shallow pools.
Spawning Habitat	Low - limited by fines and shallow pools.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 59 F: 22 STD U			Upstream photo of small channel at bottom of reach 3.
R: 59 F: 23 STD D			Downstream photo of small channel at bottom of reach 3.
R: 59 F: 24 STD U			Upstream photo of wetland area.

FDIS Site Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000	Reach #	ILP Map #	ILP #	Site
	3.0	093L.035	3315	595

COMMENTS	
Section	Comments
CHANNEL	Lakes immediately upstream could potentially be fish bearing. No barriers observed in Recci.

Morice North Planning Area

Reach #	ILP Map #	ILP #
3.0	093L035	3315

Triton Environmental Consultants Ltd.



Site #595, Upstream photo of small channel at bottom of reach 3.
Roll #59, Frame #22, Date: 2002/09/14



Site #595, Downstream photo of small channel at bottom of reach 3.
Roll #59, Frame #23, Date: 2002/09/14



Site #595, Upstream photo of wetland area.
Roll #59, Frame #24, Date: 2002/09/14

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.026 ILP # 3725

STREAM REFERENCING											
Gazetted Name:						Local Name:					
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000						ILP Map #: 093L.026		ILP #: 3725			
REACH											
Reach #: 1.0		UTM(Zone/East/North): 9.629539.6015399				Sample Type: Biased					
Length (km): 1.63		Coupling: Decoupled		Magnitude: 11		BGC Zone: SBS					
Gradient (%): 4.7		Confinement: Occasionally Conf		Order: 3		Open water: Absent					
US Elev (m): 831		Islands: NONE		Riparian Vegetation: Shrubs							
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified											
SITE											
Site #: 596		Field UTM 9.630877.6015583		Agency: C172		Crew: JH/TT		Date: 2002/09/17			
Site Length (m): 120		GIS UTM 9.630630.6015429		Agency Name: Triton Environmental Consultants (Terrace)							
CHANNEL											
No Vis.Ch.: ☐		Intermittent: ☒		Avg		Min		Max		#	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		1.65		1.5		1.8	
Stage: Low ☐				Wetted Width (m):		0.00		0		0	
Med ☐				Bankfull Depth (m):		0.20		0.2		0.2	
High ☐		Temp (C):		pH:		Conductivity:					
										Turbidity.: Turbid ☐ Low ☐	
										Moderate ☐ Clear ☐	
MORPHOLOGY											
Bed Material: Dominant: Cobble		D95 (cm): 10.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐	
Subdominant: Gravels		D (cm): 10.00								Span ☐	
Channel Pattern: Irregular, Wandering		Islands: None		DISTURBANCE		O1		B1		B2	
Coupling: Decoupled				INDICATORS		☐		☐		☐	
Confinement: Unconfined				C1		C2		C3		C4	
Morphology: RP Riffle Pool				C5		S1		S2		S3	
										S4	
										S5	
COVER											
Total Cover: Abundant		Type: SWD		LWD		B		U		DP	
LWD: None		Amount: N		N		N		N		N	
LWD Dist: Not Applicable		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: Shrubs		Stage: Shrub/herb stage								Crown Closure	
Left Bank: Rip.Veg:		Stage: Shrub/herb stage								1-20%	
										Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐	

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.026 ILP # 3725 Site 596

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000
ILP Map#: 093L.026 ILP #: 3725 NID Map #: 093L.026 NID #: 50596 Reach #: 1.0 Site #: 596
Field UTM (Z.E.N): 9.630877.6015583 Method: GPU Site Lg: 120 Method: MAP Access: H
GIS UTM (Z.E.N): 9.630630.6015429 Ref. Name:
Date: 2002/09/17 Time: 09:30 Agency: C172 Crew: JH/TT Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	T	1.60	1.70	1.60	1.50	1.80	1.70					1.65	Method I:	1.0	1.0	1.00
Wetted Width (m):	T											0.00	Method II:		C	
Pool Depth (m):	T											0.00				

Wb Depth: .2 .2 .2 Avg: 0.20 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	N	N	D	N
Loc: P/S/O:	☐	☐	☐	☐	☐	☒	☐

LWD: N DIST: NA

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: Method: T4 Req #: Cond.: Method: S3
pH: 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: 10.0 D (cm): 10.00 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.
Rearing Habitat	Low - none observed, shallow, limited complexity.
Spawning Habitat	Low - none observed at this time - potential spring spawning - low probability.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 60 F: 01	STD	U	Upstream photo of habitat within site.
R: 60 F: 02	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000	Reach #	ILP Map #	ILP #	Site
	1.0	093L.026	3725	596

COMMENTS	
Section	Comments
CHANNEL	Small bedrock knob observed in upstream reach, no barrier / drop present.
CHANNEL	Riffle section for >300 m may limit access.
CHANNEL	Fish could potentially access this reach when flows are present.
CHANNEL	Stream becomes braided upstream of Houston Tommy Creek. No barriers observed in Recci.



Site #596, Upstream photo of habitat within site.
Roll #60, Frame #01, Date: 2002/09/17



Site #596, Downstream photo of habitat within site.
Roll #60, Frame #02, Date: 2002/09/17

Morice North Planning Area

1.0	093L.026	3693
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Triton Environmental Consultants Ltd.

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.026 ILP # 3693 Site 597

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map#: 093L.026 ILP #: 3693 NID Map #: 093L.026 NID #: 50597 Reach #: 1.0 Site #: 597
Field UTM (Z.E.N): 9.631947.6016686 Method: GPU Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.631905.6016683 Ref. Name:
Date: 2002/09/17 Time: 10:00 Agency: C172 Crew: JH/TT 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	1.60	1.50	1.90	1.40	1.60					1.63	Method I:	8.0	6.0	C	7.00
Wetted Width (m):	MS											0.00	Method II:			C	
Pool Depth (m):	MS											0.00					

Wb Depth: .5 .7 .3 Avg: 0.50 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:	☒	☒	☐	☐	☐	☒	☐

LWD: F DIST: C

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: Method: T4 Req #: Cond.: Method: S3
pH: 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: 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 in site.
Rearing Habitat	Low - potential during increased flows.
Spawning Habitat	Low - associated with gravels only.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 60 F: 03	STD	U	Upstream photo of habitat within site.
R: 60 F: 04	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.026	3693	597

COMMENTS	
Section	Comments
CHANNEL	Solid red / fish bearing.
CHANNEL	Stream flows directly into downstream mainstem, no barriers, access possible.



Site #597, Upstream photo of habitat within site.
Roll #60, Frame #03, Date: 2002/09/17



Site #597, Downstream photo of habitat within site.
Roll #60, Frame #04, Date: 2002/09/17

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.035 ILP # 3138

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3138		
REACH									
Reach #: 2.0		UTM(Zone/East/North): 9.629356.6022368				Sample Type: Biased			
Length (km): .23		Coupling: Decoupled		Magnitude: 5		BGC Zone: ESSF			
Gradient (%): 4.8		Confinement: Occasionally Conf		Order: 3		Open water: Absent			
US Elev (m): 1164		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 598		Field UTM 9.629257.6022349		Agency: C172		Crew: JH/TT		Date: 2002/09/17	
Site Length (m): 150		GIS UTM 9.629278.6022369		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.20		1		1.4	
Stage: Low ☐				Wetted Width (m): 1.25		0.9		1.9	
Med ☒				Bankfull Depth (m): 0.57		0.5		0.6	
High ☐		Temp (C): 7		pH: 7.4		Conductivity: 60			
								Turbidity.: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 50.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Fines		D (cm): 10.00				Mid-channel ☐		Span ☐	
Channel Pattern: Irregular, Wandering		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: None		Amount: T		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)
598	EF	1	150	205 sec	800	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.035 ILP # 3138 Site 598

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3138 NID Map #: 093L.035 NID #: 50598 Reach #: 2.0 Site #: 598
Field UTM (Z.E.N): 9.629257.6022349 Method: GPU Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 9.629278.6022369 Ref. Name:
Date: 2002/09/17 Time: 11:10 Agency: C172 Crew: JH/TT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	1.40	1.10	1.00	1.10	1.20	1.40					1.20	Method I:	7.0	5.0	C	6.00
Wetted Width (m):	T	1.40	1.10	1.90	0.90	0.90	1.30					1.25	Method II:			C	
Pool Depth (m):	T	0.20	0.10	0.10	0.20	0.30	0.20					0.18					

Wb Depth: .6 .5 .6 Avg: 0.57 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:	☒	☒	☐	☒	☐	☒	☐

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.: 60 Method: S3
pH: 7.4 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: None Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: F O1 B1 B2 B3 D1 D2 D3
D95: 50.0 D (cm): 10.00 Morph: RP DISTURBANCE INDICATORS
Pattern: IR 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 observed in site.
Rearing Habitat	Low - small shallow pools, good cover.
Spawning Habitat	Low - shallow pools, small gravel patches.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 60 F: 05	STD	U	Upstream photo of habitat within site.
R: 60 F: 06	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
2.0	093L.035	3138	598

COMMENTS	
Section	Comments
CHANNEL	NFC

Morice North Planning Area

000-000000-00000-00000-0000-0000-000-000-000-000-000-000

2.0

093L.035

3138

Triton Environmental Consultants Ltd.



Site #598, Upstream photo of habitat within site.
Roll #60, Frame #05, Date: 2002/09/17



Site #598, Downstream photo of habitat within site.
Roll #60, Frame #06, Date: 2002/09/17

FDIS Site Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.035 ILP # 3146 Site 599

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3146 NID Map #: 093L.035 NID #: 50599 Reach #: 2.0 Site #: 599
Field UTM (Z.E.N): 9.629500.6024032 Method: GPU Site Lg: 250 Method: MAP Access: H
GIS UTM (Z.E.N): 9.629469.6023909 Ref. Name:
Date: 2002/09/17 Time: 12:30 Agency: C172 Crew: JH/TT 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	2.80	1.30	1.00	2.20	1.20					1.67	Method I:	1.0	1.0	C	1.00
Wetted Width (m):	T	1.50	2.80	1.30	1.00	2.20	1.20					1.67	Method II:			C	
Pool Depth (m):	T	0.50	0.30	0.50	0.40	0.30	0.30					0.38					

Wb Depth: .3 .3 .3 Avg: 0.30 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	N	N	D	N
Loc: P/S/O:	☐	☐	☐	☐	☐	☒	☐

LWD: N DIST: NA

LB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☐ V ☒

RB SHP: U

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS:
Temp: 7
pH: 7.6
Flood Signs: None

Method: T4
Method: P2
Method: GE

Req #: Cond.: 40 Method: S3
Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE

MORPHOLOGY

Bed Material: Dominant: F Subdom: NA
D95: 5.00 D (cm): 2.00 Morph: RP
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
OverWinter Habitat	Potentially in some of the larger ponded areas.
Rearing Habitat	Low - associated with pools.
Spawning Habitat	None observed.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 60 F: 07 STD	U		Upstream photo of wetted area within wetland.
R: 60 F: 08 STD	D		Downstream photo of wetted area within wetland.

FDIS Site Card

Morice North Planning Area

	Reach #	ILP Map #	ILP #	Site
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000	2.0	093L.035	3146	599

COMMENTS	
Section	Comments
CHANNEL	Heavy cover made electroshocking difficult due to willow.
CHANNEL	Potential overwintering in upstream lake / pond.
CHANNEL	Channelized wetland.
CHANNEL	NFC

Morice North Planning Area

Reach #	ILP Map #	ILP #
2.0	093L.035	3146

WATERBODY																
Gazetted Name:					Local:											
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000																
Waterbody ID:					ILP Map #: 093L.035					ILP #:		3146		Reach #: 2 -		
Project ID: 5270					Lake/Stream: S					Lake From Date:						
Fish Permit #: 145269					Date: 2002/09/17			To: 2002/09/17			Agency: C172		Crew: JH/TT		Resample: ☐	
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment					
599	093L.036	50599				GPU	EF	1	7	40	C					
A. GEAR SETTINGS																
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment									
599	EF	1	1	2002/09/17	12:30	2002/09/17	13:10									
C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model					
599	EF	1	1	O	210	100.0	2.0	800	1	5	SMITH ROOT	12B				
FISH SUMMARY																
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment							
599	EF	1	1	NFC		0										

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

2.0 093L.025 3599

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000					ILP Map #: 093L.025		ILP #: 3599		
REACH									
Reach #: 2.0		UTM(Zone/East/North): 9.628237.6024100				Sample Type: Random			
Length (km): 2.78		Coupling: Partially Couple		Magnitude: 10		BGC Zone: AT			
Gradient (%): 7.3		Confinement: Frequently Confin		Order: 4		Open water: Absent			
US Elev (m): 1227		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 600		Field UTM ..		Agency: C172		Crew: JH/TT		Date: 2002/09/17	
Site Length (m): 210		GIS UTM 9.628426.6023110		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐ Intermittent: ☐									
Dewatered: ☐ Tribs.: ☐									
Stage: Low ☐		Avg		Min		Max		#	
Med ☒		Channel Width (m): 4.48		3.8		5.300		6	
High ☐		Wetted Width (m): 3.60		2.400		4.2		6	
Temp (C): 6		Bankfull Depth (m): 0.33		0.3		0.4		3	
pH: 7.4									
Conductivity: 60									
		Avg		Min		Max		#	
		Gradient %: 8.00		7		9		2	
		Pool Depth (m): 0.48		0.300		0.9		6	
		Turbidity: Turbid ☐		Low ☐					
		Moderate ☐		Clear ☒					
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 75.00		Bars: Non ☐		Side ☒		Diagonal ☐ Mid-channel ☐ Span ☐	
Subdominant: Gravels		D (cm): 30.00						Braid ☐	
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: CP Cascade Pool						☐		☐	
COVER									
Total Cover: Abundant		Type: SWD LWD B U DP OV IV							
LWD: Few		Amount: T D T N S T N							
LWD Dist: Clumped		Location: P/S/O: ☒		☒		☒		☐	
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: 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)
600	EF	1	210	520 sec	800	DV	8	90	120

FDIS Site Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3599 Site # 600

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
 Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
 Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

WATERSHED

Gazetted Name: Local Name:
 Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
 ILP Map#: 093L.025 ILP #: 3599 NID Map #: 093L.035 NID #: 50600 Reach #: 2.0 Site #: 600
 Field UTM (Z.E.N): .. Method: Site Lg: 210 Method: MAP Access: H
 GIS UTM (Z.E.N): 9.628426.6023110 Ref. Name:
 Date: 2002/09/17 Time: 13:50 Agency: C172 Crew: JH/TT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	T	5.10	3.80	4.20	5.30	4.60	3.90					4.48	Method I:	7.0	9.0	8.00
Wetted Width (m):	T	2.40	3.80	4.20	4.10	4.00	3.10					3.60	Method II:			C
Pool Depth (m):	T	0.50	0.90	0.40	0.50	0.30	0.30					0.48				

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:	T	D	T	N	S	T	N
Loc: P/S/O:	☒	☒	☒	☐	☒	☒	☐

LWD: F DIST: C

LB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Req #: Cond.: 60 Method: S3
 Temp: 6 Method: T4 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
 pH: 7.4 Method: P2
 Flood Signs: Rafted Debris Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3
 D95: 75.0 D (cm): 30.00 Morph: CP DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
 Pattern: SI Bars: N ☐ SIDE ☒ DIAG ☐ MID ☐ SPAN ☐ BR ☐
 Islands: N
 Coupling: PC
 Confinement: FC
 FSZ: ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Associated with Deep pools.
Rearing Habitat	Moderate - associated with cover, LWD, D95 and deep pools.
Spawning Habitat	Moderate - associated with gravels, flows, cover, resting and access.

PHOTOS

Photo				Foc Lg	Dir	Comments
R:	60	F:	09	STD	U	Upstream photo of habitat within site.
R:	60	F:	10	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

	Reach #	ILP Map #	ILP #	Site
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000	2.0	093L.025	3599	600

COMMENTS	
Section	Comments
CHANNEL	DV captured 90-120 mm.

FDIS Fish Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3599

WATERBODY																	
Gazetted Name:										Local:							
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0																	
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000																	
Waterbody ID:										ILP Map #: 093L.025		ILP #: 3599		Reach #: 2 -			
Project ID: 5270										Lake/Stream: S		Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/17		To:		2002/09/17		Agency: C172		Crew: JH/TT		Resample: ☐	
SITE / METHOD																	
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment							
600	093L.035	50600				GPU EF 1	6	60	C								
A. GEAR SETTINGS																	
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment										
600	EF 1	1	2002/09/17	13:50	2002/09/17	14:30											
C. ELECTROFISHER SPECIFICATIONS																	
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model						
600	EF	1	1	O	520	210.0	4.0	800	I	5	SMITH ROOT 12B						
FISH SUMMARY																	
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment							
600	EF	1	1	DV	J	3+	8	90 120	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#						
600	EF	1	1	DV	100		U	U									
600	EF	1	1	DV	90		U	U									
600	EF	1	1	DV	120		U	U									
600	EF	1	1	DV	100		U	U									
600	EF	1	1	DV	90		U	U									
600	EF	1	1	DV	120		U	U									
600	EF	1	1	DV	90		U	U									
600	EF	1	1	DV	90		U	U									



Site #600, Upstream photo of habitat within site.
Roll #60, Frame #09, Date: 2002/09/17



Site #600, Downstream photo of habitat within site.
Roll #60, Frame #10, Date: 2002/09/17

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3146

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3146		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.629438.6023254				Sample Type: Biased			
Length (km): .91		Coupling: Coupled		Magnitude: 3		BGC Zone: ESSF			
Gradient (%): 23.3		Confinement: Frequently Confin		Order: 2		Open water: Absent			
US Elev (m): 1308		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 601		Field UTM ..		Agency: C172		Crew: JH/TT		Date: 2002/09/17	
Site Length (m): 200		GIS UTM 9.628786.6022851		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Trib.: ☐		Channel Width (m):		2.90		2.400	
Stage: Low ☒				Wetted Width (m):		1.08		0.800	
Med ☐				Bankfull Depth (m):		0.67		0.4	
High ☐		Temp (C): 6		pH: 7.3		Conductivity: 50		Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 90.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Cobble		D (cm): 40.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Coupled				INDICATORS		B2		B3	
Confinement: Frequently Confined				C1		C2		C3	
Morphology: CP Cascade Pool				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		D		T		N	
LWD Dist: Clumped		Location: P/S/O: ☒		☒		☒		☒	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☒		Boulder ☒	
Left Bank: Shape: V - shape		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)
601	EF	1	200	350 sec	700	DV	2	100	100

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3146 Site 601

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3146 NID Map #: 093L.035 NID #: 50601 Reach #: 1.0 Site #: 601
Field UTM (Z.E.N): ... Method: Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 9.628786.6022851 Ref. Name:
Date: 2002/09/17 Time: 15:00 Agency: C172 Crew: JH/TT 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	3.10	2.80	2.70	3.30	3.10					2.90	Method I:	16.0	17.0	C	17.50
Wetted Width (m):	T	0.90	0.80	0.90	1.30	1.40	1.20					1.08	Method II:	17.0	20.0	C	
Pool Depth (m):	T	0.40	0.30	0.40	0.40	0.30	0.30					0.35					

Wb Depth: .6 1.0 .4 Avg: 0.67 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	N	S	T	N
Loc: P/S/O:	☒	☒	☒	☐	☒	☒	☐

LWD: F DIST: C

LB SHP: V

Texture: F ☐ G ☐ C ☒ B ☒ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: V

Texture: F ☐ G ☐ C ☒ B ☒ R ☐ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 50 Method: S3
pH: 7.3 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: Rafted debris Method: GE

MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 90.0 D (cm): 40.00 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: CO
Confinement: FC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Potential in deeper pools.
Rearing Habitat	Low - associated with plunge pools, D95 and LWD.
Spawning Habitat	Low - limited by gradient and coarse substrates.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 60 F: 11 STD U			Upstream photo of cascade / pool habitat.
R: 60 F: 12 STD D			Downstream photo of typical habitat within stream.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.035	3146	601

COMMENTS	
Section	Comments
SITE CARD	Additional gradient measurements are: 19, 20, 18.
CHANNEL	Debris jams likely limit upstream access.
CHANNEL	Site upstream of GPS point 628700 / 602280.
CHANNEL	Fish were captured in low gradient section at bottom of reach.
CHANNEL	Some 20% gradient shots but cascade / pool habitat and wide channel widths.
CHANNEL	Potential access ~200 m upstream.
CHANNEL	DV captured 20 m upstream of confluence.

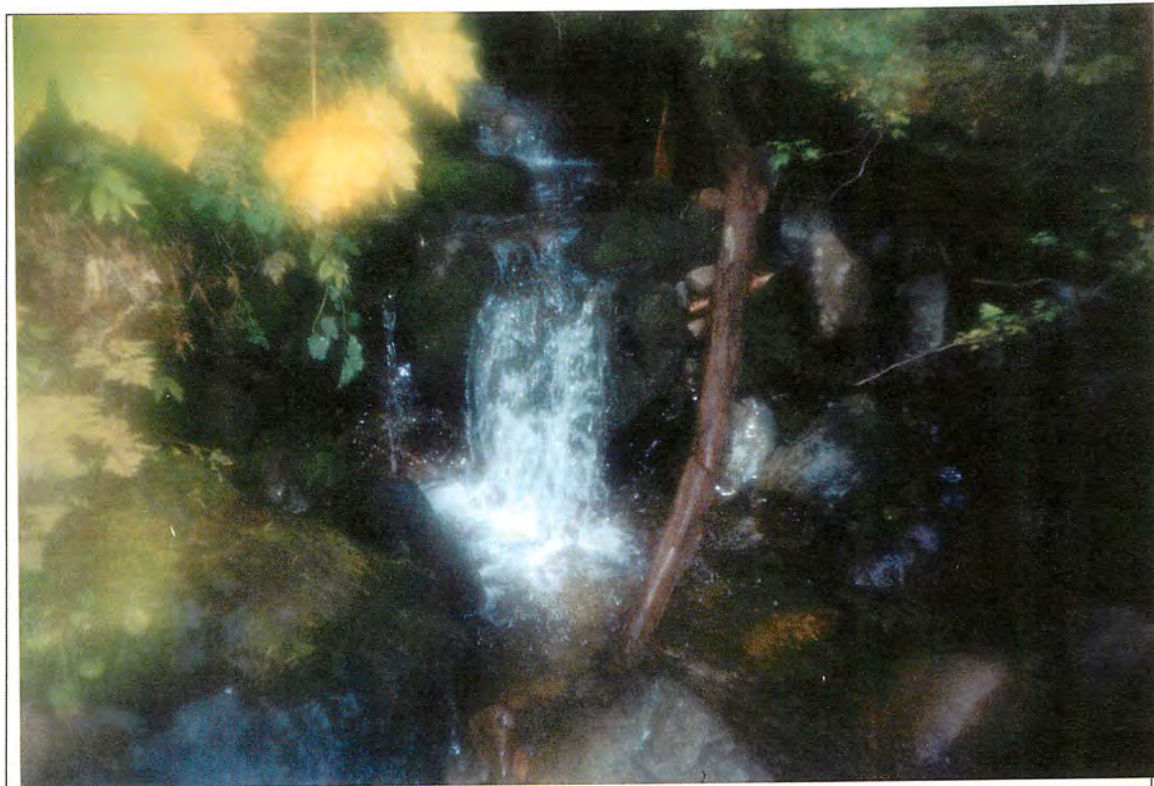
FDIS Fish Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3146

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000															
Waterbody ID:				ILP Map #: 093L.035				ILP #: 3146		Reach #: 1 -					
Project ID: 5270				Lake/Stream: S				Lake From Date:							
Fish Permit #:		145269		Date:		2002/09/17		To:		2002/09/17		Agency: C172			
										Crew: JH/TT		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
601	093L.035	50601				GPU EF 1	6	50	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
601	EF 1	1	2002/09/17	15:00	2002/09/17	16:00									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
601	EF	1	1	O	350	200.0	3.0	700	I	5	SMITH	12B			
												ROOT			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
601	EF	1	1	DV	J	3+	2	100	100	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#					
601	EF	1	1	DV	100		U	U							
601	EF	1	1	DV	100		U	U							



Site #601, Upstream photo of cascade / pool habitat.
Roll #60, Frame #11, Date: 2002/09/17



Site #601, Downstream photo of typical habitat within stream.
Roll #60, Frame #12, Date: 2002/09/17

FDIS Reach Card

Morice North Planning Area

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

Reach # 7.0 ILP Map # 093L.056 ILP # 2445

PROJECT									
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)					Project Code: 5270				
Stream Name (gaz.): BULKLEY RIVER									
Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000									
WATERSHED									
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000									
ILP Map #: 093L.056		ILP #: 2445		Reach #: 7.0		NID Map #: 093L.055		NID #: 10003	
Air Photos			Names			UTM(Zone/East/North/Method)			
LINE: BCC98341_			Gaz.:			9.629051.6044471			
#: 0			Local:			Sample Type: B		Wetland: ☐	
SURVEY INFO									
Date: 2002/08/27				Agency: C172			Crew: SG/SH		
ATTRIBUTES									
Length (km): 2.59		Gradient: 2.7		Setting: VW		DISTURBANCE INDICATORS			
DS Elev.: 1039		Order: 3		Open water: A		☐ O1 ☐ B1 ☐ B2 ☐ B3 ☐ D1 ☐ D2 ☐ D3			
US Elev: 1109		Magnitude: 16		Confinement: FC		☐ 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: IM				Mass Movement: M		Exposed/Eroded: NS			
				Riparian Veg.: NS		Landuse: NS			

MAPS		
Map Type	Map #	Year
TRIM	093L.056	

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 7.0 ILP Map # 093L.056 ILP # 2445

WATERBODY													
Gazetted Name:						Local:							
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000													
Waterbody ID:						ILP Map #: 093L.056		ILP #: 2445		Reach #: 7 -			
Project ID: 5270						Lake/Stream: S			Lake From Date:				
Fish Permit #: 145269			Date: 2002/09/19			To: 2002/09/19			Agency: C172		Crew: JH/SG		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
602	093L.056	50602	9	629851	6043593	GPU EF 1	6	50	L				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
602	EF	1	1	2002/09/19	09:00	2002/09/19	09:40						
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
602	EF	1	1	O	761	200.0	5.0	800	I	5	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
602	EF	1	1	NFC		0							

Morice North Planning Area

Reach #	ILP Map #	ILP #
14.0	093L.056	2445

Triton Environmental Consultants Ltd.

FDIS Site Card

Morice North Planning Area

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

Reach # 14.0 ILP Map # 093L.056 ILP # 2445 Site # 603

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map#: 093L.056 ILP #: 2445 NID Map #: 093L.055 NID #: 50603 Reach #: 14.0 Site #: 603
Field UTM (Z.E.N): 9.628032.6042433 Method: GPU Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 9.628193.6042442 Ref. Name:
Date: 2002/09/19 Time: 10:00 Agency: C172 Crew: JH/TT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	1.60	1.50	1.30	1.30	1.50	1.20					1.40	Method I:	10.0	9.0	C	9.75
Wetted Width (m):	T	1.60	1.50	1.30	1.30	1.50	1.20					1.40	Method II:	9.0	11.0	C	
Pool Depth (m):	T	0.30	0.40	0.30	0.30	0.50	0.40					0.37					

Wb Depth: .5 .6 .6 Avg: 0.57 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	N	D	T	N
Loc: P/S/O:	☒	☒	☒	☐	☒	☒	☐

LWD: F DIST: C

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: 6 Method: T4 Req #: Cond.: 20 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: G O1 B1 B2 B3 D1 D2 D3
D95: 60.0 D (cm): 30.00 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	Potential in deep pools.
Rearing Habitat	Associated with pools, LWD, D95 and cover.
Spawning Habitat	Associated with gravels, cover and pools.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 60 F: 13 STD U			Upstream photo and functioning LWD.
R: 60 F: 14 STD D			Downstream photo of cascade / pool habitat with functioning LWD.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
14.0	093L.056	2445	603

COMMENTS	
Section	Comments
CHANNEL	NFC

Morice North Planning Area

Reach #	ILP Map #	ILP #
14.0	093L.056	2445

Triton Environmental Consultants Ltd.



Site #603, Upstream photo and functioning LWD.
Roll #60, Frame #13, Date: 2002/09/19



Site #603, Downstream photo of cascade / pool habitat with functioning LWD.
Roll #60, Frame #14, Date: 2002/09/19

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 13.0 ILP Map # 093L.056 ILP # 2445

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093L.056		ILP #: 2445		
REACH									
Reach #: 13.0		UTM(Zone/East/North): 9.627908.6042778				Sample Type: Random			
Length (km): .27		Coupling: Partially Couple		Magnitude: 2		BGC Zone: ESSF			
Gradient (%): 7.4		Confinement: Occasionally Conf		Order: 2		Open water: Absent			
US Elev (m): 1238		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 604		Field UTM ..		Agency: C172		Crew: JH/TT		Date: 2002/09/19	
Site Length (m): 100		GIS UTM 9.627902.6042802		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 2.20		2		2.5	
Stage: Low ☐				Wetted Width (m): 2.10		2		2.400	
Med ☐				Bankfull Depth (m): 0.27		0.2		0.3	
High ☒		Temp (C): 6		pH: 7.6		Conductivity: 20			
								Turbidity.: Turbid ☐ Low ☒	
								Moderate ☐ Clear ☐	
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 100.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 50.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Partially Coupled				INDICATORS		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		D		T		N	
LWD Dist: Clumped		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: Mixed C/D		Stage: Mature forest						Crown Closure	
Left Bank: Rip.Veg:		Stage: Mature forest						21-40%	
				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)
604	EF	1	100	340 sec	800	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 13.0 ILP Map # 093L.056 ILP # 2445 Site 604

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.056 ILP #: 2445 NID Map #: 093L.055 NID #: 50604 Reach #: 13.0 Site #: 604
Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.627902.6042802 Ref. Name:
Date: 2002/09/19 Time: 11:00 Agency: C172 Crew: JH/TT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	2.10	2.40	2.00	2.50	2.00	2.20					2.20	Method I:	10.0	10.0	C	10.00
Wetted Width (m):	T	2.00	2.00	2.00	2.40	2.00	2.20					2.10	Method II:			C	
Pool Depth (m):	T	0.30	0.30	0.50	0.30	0.40	0.50					0.38					

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	T	N	S	T	N
Loc: P/S/O:	☒	☒	☒	☐	☒	☒	☐

LWD: F DIST: C

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: 6 Method: T4 Req #: Cond.: 20 Method: S3
pH: 7.6 Method: P2 Turb.: T ☐ M ☐ L ☒ C ☐ Method: GE
Flood Signs: Rafted debris Method: GE

MORPHOLOGY

Bed Material: Dominant: B Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 100.0 D (cm): 50.00 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	Potential in pools.
Rearing Habitat	Associated with pools, functioning LWD, D95.
Spawning Habitat	Associated with small gravel patches, pools, LWD cover.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 60 F: 15 STD D			Downstream photo of cascade / pool habitat within site.
R: 60 F: 16 STD U			Upstream photo of cascade / pool habitat within site.

FDIS Site Card

Morice North Planning Area

	Reach #	ILP Map #	ILP #	Site
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000	13.0	093L.056	2445	604

COMMENTS	
Section	Comments
CHANNEL	NFC.

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 13.0 ILP Map # 093L.056 ILP # 2445

WATERBODY													
Gazetted Name:						Local:							
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000													
Waterbody ID:						ILP Map #: 093L.056			ILP #: 2445		Reach #: 13 -		
Project ID: 5270						Lake/Stream: S			Lake From Date:				
Fish Permit #: 145269			Date: 2002/09/19			To: 2002/09/19			Agency: C172		Crew: JH/TT		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
604	093L.055	50604				GPU EF 1	6	20	L				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
604	EF 1	1	2002/09/19	11:00	2002/09/19	13:00							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
604	EF 1	1	O	340	100.0	2.0	800	I	5	SMITH ROOT	12B		
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
604	EF 1	1	NFC			0							



Site #604, Downstream photo of cascade / pool habitat within site.
Roll #60, Frame #15, Date: 2002/09/19



Site #604, Upstream photo of cascade / pool habitat within site.
Roll #60, Frame #16, Date: 2002/09/19

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 7.0 ILP Map # 093L.026 ILP # 3678

STREAM REFERENCING																																							
Gazetted Name:						Local Name:																																	
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000						ILP Map #: 093L.026		ILP #: 3678																															
REACH																																							
Reach #: 7.0		UTM(Zone/East/North): 9.619257.6031746				Sample Type: Biased																																	
Length (km): 3.77		Coupling: Decoupled		Magnitude: 67		BGC Zone: ESSF																																	
Gradient (%): 2.6		Confinement: Frequently Confin		Order: 4		Open water: Absent																																	
US Elev (m): 1293		Islands: NONE		Riparian Vegetation: Coniferous																																			
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																							
SITE																																							
Site #: 339		Field UTM 9.620152.6030400		Agency: C172		Crew: SG/SH		Date: 2002/09/19																															
Site Length (m): 350		GIS UTM 9.620151.6030466		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): 7.52</td> <td>6.800</td> <td>8.600</td> <td>6</td> </tr> <tr> <td>Wetted Width (m): 7.52</td> <td>6.800</td> <td>8.600</td> <td>6</td> </tr> <tr> <td>Bankfull Depth (m): 0.20</td> <td>0.2</td> <td>0.2</td> <td>3</td> </tr> </table>				Avg	Min	Max	#	Channel Width (m): 7.52	6.800	8.600	6	Wetted Width (m): 7.52	6.800	8.600	6	Bankfull Depth (m): 0.20	0.2	0.2	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 %: 1.75</td> <td>1.5</td> <td>2</td> <td>4</td> </tr> <tr> <td>Pool Depth (m): 0.33</td> <td>0.200</td> <td>0.550</td> <td>6</td> </tr> </table>				Avg	Min	Max	#	Gradient %: 1.75	1.5	2	4	Pool Depth (m): 0.33	0.200	0.550	6
Avg	Min	Max	#																																				
Channel Width (m): 7.52	6.800	8.600	6																																				
Wetted Width (m): 7.52	6.800	8.600	6																																				
Bankfull Depth (m): 0.20	0.2	0.2	3																																				
Avg	Min	Max	#																																				
Gradient %: 1.75	1.5	2	4																																				
Pool Depth (m): 0.33	0.200	0.550	6																																				
Dewatered: ☐		Tribes: ☐																																					
Stage: Low ☐																																							
Med ☐																																							
High ☒		Temp (C): 5		pH: 7.7		Conductivity: 30		Turbidity: Turbid ☐ Low ☒																															
								Moderate ☐ Clear ☐																															
MORPHOLOGY																																							
Bed Material: Dominant: Cobble		D95 (cm): 65.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐																													
Subdominant: Boulders		D (cm): 12.00				Span ☐		Braid ☐																															
Channel Pattern: Regular Meanders		Islands: None		DISTURBANCE INDICATORS		O1		B1		B2																													
Coupling: Decoupled						B3		D1		D2																													
Confinement: Frequently Confined						D3																																	
Morphology: RP Riffle Pool						C1		C2		C3																													
						C4		C5		S1																													
						S2		S3		S4																													
						S5																																	
COVER																																							
Total Cover: Moderate		Type: SWD		LWD		B		U		DP																													
LWD: Few		Amount: N		N		D		T		N																													
LWD Dist: Clumped		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: Coniferous		Stage: Mature forest								Manmade ☐																													
Left Bank: Rip.Veg:		Stage: Mature forest								Crown Closure 1-20%																													
										Instream Veg: None ☒ Algae ☐ Moss ☐ Vascular ☐																													
FEATURES																																							
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo		AirPhoto		UTM (Z/E/N)																												
093L.035	70339	F	5.0	GE		HC	R: 60	F: 17	L:	#:	9.620227.6029																												
Comments: Falls barrier in Reach 7 of Houston Tommy Creek																																							
FISH																																							
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)																														
339	EF	1	350	469 sec	800	NFC	0																																
605	EF	1	100	650 sec	600	NFC	0																																

FDIS Fish Card

Morice North Planning Area

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

Reach # 7.0 ILP Map # 093L.026 ILP # 3678

WATERBODY													
Gazetted Name:						Local: Houston Tommy Creek							
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093L.026				ILP #: 3678		Reach #: 7 -			
Project ID: 5270				Lake/Stream: S				Lake From Date:					
Fish Permit #: 145269			Date: 2002/09/19			To: 2002/09/19			Agency: C172		Crew: SG/SH JH/		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd		MTD/NO	Temp	Cond	Turbid	Comment				
605	093L.045	50605	9	620150	6029710	GPU EF 1	5	50	C				
339	093L.045	20339				GPU EF 1	4.5	30	L				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
339	EF 1	1	2002/09/19	13:30	2002/09/19	13:45							
605	EF 1	1	2002/09/19	13:30	2002/09/19	14:15							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
339	EF	1	1	O	469	350.0	7.0	800	60	6	SMITH ROOT	12B	
605	EF	1	1	O	650	100.0	5.0	600	I	I5	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
339	EF	1	1	NFC		0							
605	EF	1	1	NFC		0							
COMMENTS													
Section			Comments										
WATERBODY			Site 605 comment: Roll 60 # 17 is photo of downstream falls ~5 m falls ~300 m downstream of UTM. Falls are featured on Site 339 card.										

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

1.0 093L.035 3357

SITE																							
Site #: 606		Field UTM 9.621042.6029009			Agency: C172		Crew: JH/TT		Date: 2002/09/19														
Site Length (m): 200		GIS UTM 9.621074.6029134			Agency Name: Triton Environmental Consultants (Terrace)																		
CHANNEL																							
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max		#		Avg		Min		Max		#					
Dewatered: ☐		Tribes: ☐		Channel Width (m):		6.82		5.300		8.100		6		Gradient %:		7.00		6		8		2	
Stage: Low ☐				Wetted Width (m):		4.60		3		5.6		6		Pool Depth (m):		0.53		0.400		0.7		6	
Med ☒				Bankfull Depth (m):		0.43		0.4		0.5		3		Turbidity: Turbid ☐		Low ☐							
High ☐		Temp (C): 5		pH: 7.2				Conductivity: 40						Moderate ☐		Clear ☒							
MORPHOLOGY																							
Bed Material: Dominant: Boulders		D95 (cm): 100.00		Bars: Non ☐		Side ☒		Diagonal ☐		Mid-channel ☐		Span ☐											
Subdominant: Cobble		D (cm): 40.00																					
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: CP Cascade Pool				☐		☐		☐		☐		☐		☐		☐		☐		☐		☐	
COVER																							
Total Cover: Abundant		Type: SWD		LWD		B		U		DP		OV		IV									
LWD: Few		Amount: T		S		T		T		D		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 ☐		1-20%									
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)					
093L.035		59606		F		5.0		GE				HC		R: 60 F: 19 L:		#:		9.620904.6029					
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)					
343		EF		1		300		498 sec		900		NFC		0									
606		EF		1		200		660 sec		800		NFC		0									

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3357 Site 606

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3357 NID Map #: 093L.035 NID #: 50606 Reach #: 1.0 Site #: 606
Field UTM (Z.E.N): 9.621042.6029009 Method: GPU Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 9.621074.6029134 Ref. Name:
Date: 2002/09/19 Time: 14:40 Agency: C172 Crew: JH/TT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	5.40	5.30	6.80	8.10	7.80	7.50					6.82	Method I:	8.0	6.0	C	7.00
Wetted Width (m):	T	4.80	4.20	5.60	5.00	5.00	3.00					4.60	Method II:			C	
Pool Depth (m):	T	0.40	0.50	0.50	0.60	0.70	0.50					0.53					

Wb Depth: .5 .4 .4 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	T	D	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

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.: 40 Method: S3
pH: 7.2 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: 100.0 D (cm): 40.00 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
093L.035	59606	F	5.0	GE		HC	R: 60 F: 19 L:	#:	9.620904.6029066	GIS
Comments: Barrier										

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Associated with plunge pools.
Rearing Habitat	Associated with functioning LWD, D95, plunge pools and good cover.
Spawning Habitat	Associated with cover, pools and gravels - could be limited by gradient and coarse substrates.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.035	3357	606

PHOTOS					
Photo			Foc Lg	Dir	Comments
R:	60	F: 19	STD	U	Upstream photo of falls on trib ~400 m downstream of site UTM.
R:	60	F: 20	STD	U	Upstream photo of typical habitat within site.
R:	60	F: 21	STD	D	Downstream photo of typical habitat within site.
COMMENTS					
Section			Comments		
CHANNEL			Downstream falls ~5 m approximately 400 m downstream of site UTM.		
CHANNEL			NFC		

FDIS Fish Card

Morice North Planning Area

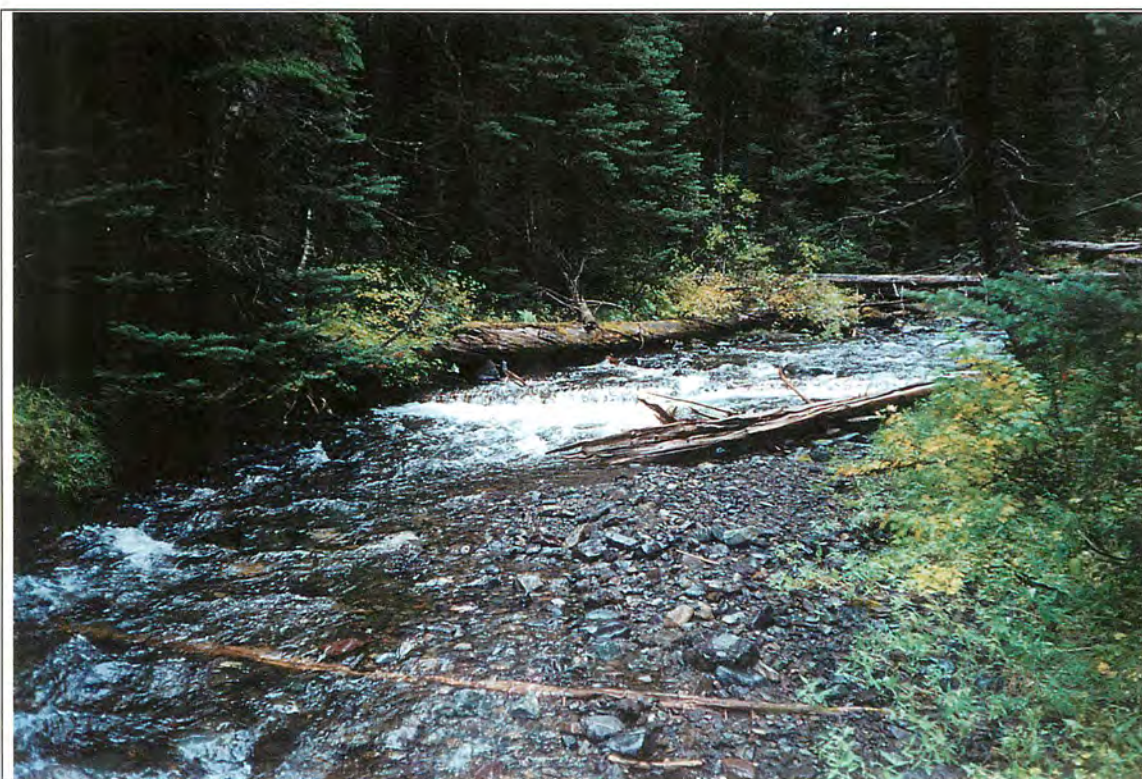
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000

Reach # 1.0 ILP Map # 093L.035 ILP # 3357

WATERBODY													
Gazetted Name:										Local:			
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093L.035				ILP #: 3357		Reach #: 1 -			
Project ID: 5270				Lake/Stream: S				Lake From Date:					
Fish Permit #:		145269		Date: 2002/09/19		To: 2002/09/19		Agency: C172		Crew: SG/SH		Resample: ☐	
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment		
606	093L.035	50606				GPU	EF	1	5	40	C		
343	093L.035	20343				GPU	EF	1	5	40	L		
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
343	EF	1	1	2002/09/19	16:05	2002/09/19	16:45						
606	EF	1	1	2002/09/19	14:40	2002/09/19	16:00						
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
343	EF	1	1	O	498	300.0	4.5	900	60	6	SMITH ROOT	12B	
606	EF	1	1	O	660	200.0	6.0	800	I	5	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
343	EF	1	1	NFC		0							
606	EF	1	1	NFC		0							



Site #606, Upstream photo of falls on trib ~400 m downstream of site UTM.
Roll #60, Frame #19, Date: 2002/09/19



Site #606, Upstream photo of typical habitat within site.
Roll #60, Frame #20, Date: 2002/09/19



Site #606, Downstream photo of typical habitat within site.
Roll #60, Frame #21, Date: 2002/09/19

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3350

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3350		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.621548.6027376				Sample Type: Biased			
Length (km): .90		Coupling: Partially Couple		Magnitude: 1		BGC Zone: ESSF			
Gradient (%): 31.8		Confinement: Confined		Order: 1		Open water: Absent			
US Elev (m): 1655		Islands: NONE		Riparian Vegetation: Shrubs					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 607		Field UTM 9.621085.6027511		Agency: C172		Crew: JH/TT		Date: 2002/09/20	
Site Length (m): 150		GIS UTM 9.621068.6027489		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes: ☐		Channel Width (m): 1.62		1.4		1.9	
Stage: Low ☐				Wetted Width (m): 1.62		1.4		1.9	
Med ☒				Bankfull Depth (m): 0.20		0.2		0.2	
High ☐		Temp (C): 4		pH: 6.9		Conductivity: 60			
								Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 90.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 40.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Partially Coupled				INDICATORS		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: Moderate		Type: SWD		LWD		B		U	
LWD: None		Amount: T		T		S		N	
LWD Dist: Not Applicable		Location: P/S/O: ☒		☒		☒		☒	
		☒		☒		☒		☒	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☒		Boulder ☐	
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☒		Boulder ☐	
Right Bank: Rip.Veg: Shrubs		Stage: Shrub/herb stage		Stage: Shrub/herb stage		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)
607	EF	1	150	275 sec	700	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3350 Site 607

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3350 NID Map #: 093L.035 NID #: 50607 Reach #: 1.0 Site #: 607
Field UTM (Z.E.N): 9.621085.6027511 Method: GPU Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 9.621068.6027489 Ref. Name:
Date: 2002/09/20 Time: 07:50 Agency: C172 Crew: JH/TT 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	1.60	1.90	1.50	1.50	1.40					1.62	Method I:	24.0	24.0	C	27.00
Wetted Width (m):	T	1.80	1.60	1.90	1.50	1.50	1.40					1.62	Method II:	28.0	32.0	C	
Pool Depth (m):	T	0.30	0.30	0.40	0.30	0.30	0.40					0.33					

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:	T	T	S	N	D	T	N
Loc: P/S/O:	☒	☒	☒	☐	☒	☒	☐

LWD: N DIST: NA

LB SHP: V

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: 4 Method: T4 Req #: Cond.: 60 Method: S3
pH: 6.9 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: Rafted debris Method: GE

MORPHOLOGY

Bed Material: Dominant: B Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 90.0 D (cm): 40.00 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 observed in site.
Rearing Habitat	Low - associated with small plunge pools only.
Spawning Habitat	Low - patches of gravels only limited by gradient and coarse substrates.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 60 F: 22	STD	U	Upstream photo at edge of slide trail.
R: 60 F: 23	STD	D	Downstream photo at edge of slide trail.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.035	3350	607

COMMENTS	
Section	Comments
CHANNEL	Cascades, falls and gradients >30% in mid portion of reach 2 block all upstream access.
CHANNEL	NFC

Morice North Planning Area

Reach #	ILP Map #	ILP #
1.0	093L.035	3350

Triton Environmental Consultants Ltd.



Site #607, Upstream photo at edge of slide trail.
Roll #60, Frame #22, Date: 2002/09/20



Site #607, Downstream photo at edge of slide trail.
Roll #60, Frame #23, Date: 2002/09/20

Morice North Planning Area

Reach #	ILP Map #	ILP #	Site
3.0	093L.035	3349	608

Triton Environmental Consultants Ltd.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
3.0	093L.035	3349	608

COMMENTS	
Section	Comments
CHANNEL	Downstream barrier on mainstem.
CHANNEL	NFC

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 3.0 ILP Map # 093L.035 ILP # 3349

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000															
Waterbody ID:										ILP Map #: 093L.035		ILP #: 3349		Reach #: 3 -	
Project ID: 5270										Lake/Stream: S		Lake From Date:			
Fish Permit #:		145269		Date: 2002/09/20		To: 2002/09/20		Agency: C172		Crew: JH/TT		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
608	093L.035	50608				GPU EF 1	4	50	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
608	EF 1	1	2002/09/20	08:35	2002/09/20	09:05									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
608	EF 1	1	O	160	120.0	1.2	600	I	5	SMITH ROOT	12B				
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
608	EF 1	1	NFC			0									



Site #608, Upstream photo of high gradient throughout.
Roll #60, Frame #24, Date: 2002/09/20



Site #608, Downstream photo of high gradient throughout.
Roll #60, Frame #25, Date: 2002/09/20

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.035 ILP # 3332

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3332		
REACH									
Reach #: 3.0		UTM(Zone/East/North): 9.621987.6026593				Sample Type: Biased			
Length (km): 1.96		Coupling: Coupled		Magnitude: 6		BGC Zone: ESSF			
Gradient (%): 13.0		Confinement: Confined		Order: 2		Open water: Absent			
US Elev (m): 1591		Islands: NONE		Riparian Vegetation: Shrubs					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 609		Field UTM 9.621744.6026024		Agency: C172		Crew: JH/TT		Date: 2002/09/20	
Site Length (m): 300		GIS UTM 9.621739.6026000		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 3.53		2.3		5.800	
Stage: Low ☐				Wetted Width (m): 2.78		2		3	
Med ☒				Bankfull Depth (m): 0.47		0.4		0.6	
High ☐		Temp (C): 4		pH: 6.9		Conductivity: 80			
						Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 125.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Cobble		D (cm): 50.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Coupled				INDICATORS		B2		B3	
Confinement: Confined						D1		D2	
Morphology: CP		Cascade Pool				D3			
				C1		C2		C3	
				C4		C5		S1	
				S2		S3		S4	
				S5					
COVER									
Total Cover: Moderate		Type: SWD		LWD		B		U	
LWD: None		Amount: N		T		S		N	
LWD Dist: Not Applicable		Location: P/S/O:		☒		☒		☒	
				☒		☒		☒	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☒		Boulder ☐	
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☒		Boulder ☐	
Right Bank: Rip.Veg: Shrubs		Stage: Shrub/herb stage		None ☐		Algae ☐		Moss ☒	
Left Bank: Rip.Veg:		Stage: Shrub/herb stage		None ☐		Algae ☐		Moss ☒	
				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)
609	EF	1	300	530 sec	800	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.035 ILP # 3332 Site 609

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3332 NID Map #: 093L.035 NID #: 50609 Reach #: 3.0 Site #: 609
Field UTM (Z.E.N): 9.621744.6026024 Method: GPU Site Lg: 300 Method: MAP Access: H
GIS UTM (Z.E.N): 9.621739.6026000 Ref. Name:
Date: 2002/09/20 Time: 09:15 Agency: C172 Crew: JH/TT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	2.80	3.20	3.50	2.30	2.90	3.60	5.80	4.10	4.10	4.10	3.53	Method I:	14.0	13.0	C	13.50
Wetted Width (m):	T	2.80	3.00	3.00	2.00	2.90	3.00					2.78	Method II:			C	
Pool Depth (m):	T	0.50	0.60	0.60	0.50	0.40	0.40					0.50					

Wb Depth: .4 .4 .6 Avg: 0.47 Method: T Stage: L ☐ M ☒ H ☐

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

COVER Total: M

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

LWD: N DIST: NA

LB SHP: V

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

0 0%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS:
Temp: 4
pH: 6.9
Flood Signs: None

Method: T4
Method: P2
Method: GE

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

MORPHOLOGY

Bed Material: Dominant: B Subdom: C
D95: 125.0 D (cm): 50.00 Morph: CP
Pattern: SI
Islands: N
Coupling: CO
Confinement: CO
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 pools observed.
Rearing Habitat	Associated with plunge pools.
Spawning Habitat	Low - associated with small gravel patches limited by coarse substrates.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 62 F: 01A	STD	D	Downstream photo of habitat within site.
R: 62 F: 0A	STD	U	Upstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
3.0	093L.035	3332	609

COMMENTS	
Section	Comments
CHANNEL	Barriers in downstream reaches block upstream access. Barriers observed in Recci include: falls 4 m, cascades (numerous) and gradient barriers.
CHANNEL	NFC

Morice North Planning Area

Reach #	ILP Map #	ILP #
3.0	093L.035	3332

Triton Environmental Consultants Ltd.



Site #609, Upstream photo of habitat within site.
Roll #62, Frame #0A, Date: 2002/09/20



Site #609, Downstream photo of habitat within site.
Roll #62, Frame #01A, Date: 2002/09/20

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

3.0 093L.035 3275

STREAM REFERENCING																																	
Gazetted Name:					Local Name:																												
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3275																										
REACH																																	
Reach #: 3.0		UTM(Zone/East/North): 9.622691.6025366				Sample Type: Biased																											
Length (km): 1.24		Coupling: Partially Couple		Magnitude: 17		BGC Zone: ESSF																											
Gradient (%): 11.1		Confinement: Confined		Order: 3		Open water: Absent																											
US Elev (m): 1449		Islands: NONE		Riparian Vegetation: Shrubs																													
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																	
SITE																																	
Site #: 610		Field UTM 9.622500.6022600		Agency: C172		Crew: JH/TT		Date: 2002/09/20																									
Site Length (m): 200		GIS UTM 9.622497.6024420		Agency Name: Triton Environmental Consultants (Terrace)																													
CHANNEL																																	
No Vis.Ch.: ☐ Intermittent: ☐		Avg Min Max #				Avg Min Max #																											
Dewatered: ☐ Tribs.: ☐		Channel Width (m): 0.98 0.9 1.200 6				Gradient %: 6.00 4 8 4																											
Stage: Low ☐		Wetted Width (m): 1.07 0.9 1.200 6				Pool Depth (m): 0.20 0.100 0.300 6																											
Med ☒		Bankfull Depth (m): 0.50 0.5 0.5 3				Turbidity: Turbid ☐ Low ☐																											
High ☐		Temp (C): 5		pH: 7.4		Conductivity: 40		Moderate ☐ Clear ☒																									
MORPHOLOGY																																	
Bed Material: Dominant: Cobble		D95 (cm): 50.00		Bars: Non ☒		Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐		Braid ☐																									
Subdominant: Gravels		D (cm): 10.00																															
Channel Pattern: Irregular, Wandering		Islands: None		DISTURBANCE INDICATORS																													
Coupling: Partially Coupled				O1 B1 B2 B3 D1 D2 D3																													
Confinement: Occasionally Confine				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5																													
Morphology: RP Riffle Pool																																	
COVER																																	
Total Cover: Abundant		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Type:</td> <td>SWD</td> <td>LWD</td> <td>B</td> <td>U</td> <td>DP</td> <td>OV</td> <td>IV</td> </tr> <tr> <td>Amount:</td> <td>T</td> <td>T</td> <td>T</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> </table>								Type:	SWD	LWD	B	U	DP	OV	IV	Amount:	T	T	T	T	S	D	N	Location: P/S/O:	☒	☒	☒	☒	☒	☒	☐
Type:	SWD	LWD	B	U	DP	OV	IV																										
Amount:	T	T	T	T	S	D	N																										
Location: P/S/O:	☒	☒	☒	☒	☒	☒	☐																										
LWD: Few		FSZ: ☐																															
LWD Dist: Evenly Distributed																																	
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: Shrubs		Stage: Shrub/herb stage																															
Left Bank: Rip.Veg:		Stage: Shrub/herb 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)																								
610	EF	1	200	180 sec	800	NFC	0																										

FDIS Site Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.035 ILP # 3275 Site 610

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093L.035 ILP #: 3275 NID Map #: 093L.035 NID #: 50610 Reach #: 3.0 Site #: 610
Field UTM (Z.E.N): 9.622500.6022600 Method: GPU Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 9.622497.6024420 Ref. Name:
Date: 2002/09/20 Time: 10:15 Agency: C172 Crew: JH/TT 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	1.20	1.00	0.90	0.90	1.00					0.98	Method I:	4.0	7.0	C	6.00
Wetted Width (m):	T	0.90	1.20	1.20	1.10	1.00	1.00					1.07	Method II:	5.0	8.0	C	
Pool Depth (m):	T	0.10	0.10	0.20	0.30	0.30	0.20					0.20					

Wb Depth: .5 .5 .5 Avg: 0.50 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:	☒	☒	☒	☒	☒	☒	☐

LWD: F DIST: E

LB SHP: V

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☒ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: 5 Method: T4 Req #: Cond.: 40 Method: S3
pH: 7.4 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): 10.00 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 plunge pools.
Rearing Habitat	Low - associated with small pools.
Spawning Habitat	Low - associated with small patches of gravel.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 62 F: 02A	STD	U	Upstream photo of habitat found within site.
R: 62 F: 03A	STD	D	Downstream photo of habitat found within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
3.0	093L.035	3275	610

COMMENTS	
Section	Comments
SITE CARD	Additional gradients taken: 10, 12.
CHANNEL	Sheet flow also observed downstream in sections.
CHANNEL	NFC
CHANNEL	Gradient and cascade / pool habitat downstream may block upstream access. Gradients downstream look to be >20% from helicopter.

FDIS Fish Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.035 ILP # 3275

WATERBODY													
Gazetted Name:										Local:			
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093L.035				ILP #: 3275		Reach #: 3			
Project ID: 5270				Lake/Stream: S				Lake From Date:					
Fish Permit #:		145269		Date:		2002/09/20		To:		2002/09/20		Agency: C172	
										Crew: JH/TT		Resample: ☐	
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment		
610	093L.035	50610				GPU	EF 1	5	40	C			
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
610	EF	1	1	2002/09/20	10:15	2002/09/20	10:35						
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
610	EF	1	1	O	180	200.0	1.0	800	I	5	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
610	EF	1	1	NFC		0							



Site #610, Upstream photo of habitat found within site.
Roll #62, Frame #02A, Date: 2002/09/20



Site #610, Downstream photo of habitat found within site.
Roll #62, Frame #03A, Date: 2002/09/20

Morice North Planning Area

1.0	093L.035	3252
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FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3252 Site # 611

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map #: 093L.035 ILP #: 3252 NID Map #: 093L.035 NID #: 50611 Reach #: 1.0 Site #: 611
Field UTM (Z.E.N): 9.622333.6022666 Method: GPU Site Lg: 100 Method: MAP Access: H
GIS UTM (Z.E.N): 9.622381.6022636 Ref. Name:
Date: 2002/09/20 Time: 10:45 Agency: C172 Crew: JH/TT 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	0.60	1.20	1.50	0.90	1.10					1.02	Method I:	21.0	23.0	C	22.00
Wetted Width (m):	T	0.80	0.50	1.30	1.20	0.80	1.00					0.93	Method II:			C	
Pool Depth (m):	T	0.10	0.30	0.30	0.10	0.10	0.10					0.17					

Wb Depth: .6 .5 .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	T	T	T	S	D	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

LWD: N DIST: NA

LB SHP: U

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: U

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS:
Temp: 5
pH: 7.9
Flood Signs: None

Method: T4
Method: P2
Method: GE

Req #: Cond.: 50 Method: S3
Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE

MORPHOLOGY

Bed Material: Dominant: B Subdom: C
D95: 90.0 D (cm): 30.00 Morph: CP
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	Limited by gradient, access, coarse substrates.
Rearing Habitat	Limited by gradient, access, coarse substrates.
Spawning Habitat	Limited by gradient, access, coarse substrates.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 62 F: 04A	STD	U	Upstream photo within high gradient section.
R: 62 F: 05A	STD	D	Downstream photo within high gradient section.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.035	3252	611

COMMENTS	
Section	Comments
CHANNEL	NFC
CHANNEL	>20% at confluence to downstream trib, 20% / 40 m.

Morice North Planning Area

Reach #	ILP Map #	ILP #
1.0	093L.035	3252

Triton Environmental Consultants Ltd.



Site #611, Upstream photo within high gradient section.
Roll #62, Frame #04A, Date: 2002/09/20



Site #611, Downstream photo within high gradient section.
Roll #62, Frame #05A, Date: 2002/09/20

FDIS Reach Card

Morice North Planning Area

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

Reach # 4.0 ILP Map # 093L.035 ILP # 3247

PROJECT									
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)					Project Code: 5270				
Stream Name (gaz.): BULKLEY RIVER									
Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000									
WATERSHED									
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000									
ILP Map #: 093L.035	ILP #: 3247	Reach #: 4.0	NID Map #: 093L.035		NID #: 11032				
Air Photos		Names			UTM(Zone/East/North/Method)				
LINE: BCC98341__		Gaz.:			9.622571.6022948 GIS				
#: 0		Local:			Sample Type: B Wetland: ☐				
SURVEY INFO									
Date: 2002/08/27			Agency: C172			Crew: SG/SH			
ATTRIBUTES									
Length (km): .52	Gradient: 6.73	Setting: MP	DISTURBANCE INDICATORS						
DS Elev.: 1439	Order: 2	Open water: P	O1	B1	B2	B3	D1	D2	D3
US Elev: 1474	Magnitude: 3	Confinement: OC	C1	C2	C3	C4	C5	S1	S2
	BGC Zone: ESSF	Coupling: PC						S3	S4
Valley Flat: N	C/D:	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	093L.035	

Morice North Planning Area

Reach #	ILP Map #	ILP #
4.0	093L.035	3247

Triton Environmental Consultants Ltd.

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.035 ILP # 3182

STREAM REFERENCING																																	
Gazetted Name:					Local Name:																												
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3182																										
REACH																																	
Reach #: 2.0		UTM(Zone/East/North): 9.624816.6024602				Sample Type: Biased																											
Length (km): .92		Coupling: Partially Couple		Magnitude: 4		BGC Zone: AT																											
Gradient (%): 14.2		Confinement: Frequently Confin		Order: 2		Open water: Absent																											
US Elev (m): 1588		Islands: NONE		Riparian Vegetation: Shrubs																													
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																																	
SITE																																	
Site #: 613		Field UTM 9.624834.6024591		Agency: C172		Crew: JH/TT		Date: 2002/09/20																									
Site Length (m): 220		GIS UTM 9.624857.6024541		Agency Name: Triton Environmental Consultants (Terrace)																													
CHANNEL																																	
No Vis.Ch.: ☐ Intermittent: ☐		Avg Min Max #				Avg Min Max #																											
Dewatered: ☐ Tribs.: ☐		Channel Width (m): 2.48 2 2.900 6				Gradient %: 3.50 3 4 2																											
Stage: Low ☐		Wetted Width (m): 2.37 2 2.8 6				Pool Depth (m): 0.53 0.300 0.7 6																											
Med ☒		Bankfull Depth (m): 0.33 0.3 0.4 3				Turbidity: Turbid ☐ Low ☐																											
High ☐		Temp (C): 5		pH: 7.4		Conductivity: 50		Moderate ☐ Clear ☒																									
MORPHOLOGY																																	
Bed Material: Dominant: Cobble		D95 (cm): 90.00		Bars: Non ☒		Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐		Braid ☐																									
Subdominant: Boulders		D (cm): 30.00																															
Channel Pattern: Irregular, Wandering		Islands: None		DISTURBANCE INDICATORS																													
Coupling: Partially Coupled				O1 B1 B2 B3 D1 D2 D3																													
Confinement: Occasionally Confin				C1 C2 C3 C4 C5 S1 S2 S3 S4 S5																													
Morphology: CP Cascade Pool																																	
COVER																																	
Total Cover: Moderate		<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>N</td> <td>N</td> <td>S</td> <td>T</td> <td>D</td> <td>T</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:	N	N	S	T	D	T	N	Location: P/S/O:	☐	☐	☒	☒	☒	☒	☐
Type:	SWD	LWD	B	U	DP	OV	IV																										
Amount:	N	N	S	T	D	T	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				0%																									
Left Bank: Shape: Undercut		Texture: Fines ☐ Gravel ☒ Cobble ☒ Boulder ☐ Rock ☐ Manmade ☐																															
Right Bank: Rip.Veg: Shrubs		Stage: Shrub/herb stage																															
Left Bank: Rip.Veg:		Stage: Shrub/herb 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)																								
613	EF	1	220	270 sec	800	NFC	0																										

FDIS Site Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.035 ILP # 3182 Site # 613

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3182 NID Map #: 093L.035 NID #: 50613 Reach #: 2.0 Site #: 613
Field UTM (Z.E.N): 9.624834.6024591 Method: GPU Site Lg: 220 Method: MAP Access: H
GIS UTM (Z.E.N): 9.624857.6024541 Ref. Name:
Date: 2002/09/20 Time: 12:00 Agency: C172 Crew: JH/TT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	2.00	2.20	2.30	2.80	2.70	2.90					2.48	Method I:	3.0	4.0	C	3.50
Wetted Width (m):	T	2.20	2.00	2.00	2.80	2.50	2.70					2.37	Method II:			C	
Pool Depth (m):	T	0.50	0.70	0.30	0.50	0.60	0.60					0.53					

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

COVER Total: M

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

LWD: N DIST: NA

LB SHP: U

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

0 0%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: U

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: 5 Method: T4 Req #: Cond.: 50 Method: S3
pH: 7.4 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: 90.0 D (cm): 30.00 Morph: CP 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 present.
Rearing Habitat	Associated with pools, cover and flows.
Spawning Habitat	Associated with small pockets of gravels.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 62 F: 06A	STD	U	Upstream photo of habitat within site.
R: 62 F: 07A	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
2.0	093L.035	3182	613

COMMENTS	
Section	Comments
CHANNEL	NFC
CHANNEL	Numerous falls, cascades and gradient barriers observed downstream - Reach 1 at confluence has numerous falls >5 m in height.

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 2.0 ILP Map # 093L.035 ILP # 3182

WATERBODY													
Gazetted Name:						Local:							
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093L.035				ILP #: 3182		Reach #: 2 -			
Project ID: 5270				Lake/Stream: S				Lake From Date:					
Fish Permit #: 145269			Date: 2002/09/20			To: 2002/09/20			Agency: C172		Crew: JH/TT		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
613	093L.035	50613				GPU EF 1	5	50	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
613	EF 1	1	2002/09/20	12:00	2002/09/20	12:20							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
613	EF 1	1	O	270	220.0	2.5	800	I	5	SMITH ROOT	12B		
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
613	EF 1	1	NFC			0							



Site #613, Upstream photo of habitat within site.
Roll #62, Frame #06A, Date: 2002/09/20



Site #613, Downstream photo of habitat within site.
Roll #62, Frame #07A, Date: 2002/09/20

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3184

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3184		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.624858.6023666				Sample Type: Biased			
Length (km): .42		Coupling: Partially Couple		Magnitude: 4		BGC Zone: AT			
Gradient (%): 21.4		Confinement: Confined		Order: 3		Open water: Absent			
US Elev (m): 1521		Islands: NONE		Riparian Vegetation: Shrubs					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 614		Field UTM 9.624863.6023670		Agency: C172		Crew: JH/TT		Date: 2002/09/20	
Site Length (m): 200		GIS UTM 9.624889.6023700		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐ Intermittent: ☐									
Dewatered: ☐ Tribs.: ☐									
Stage: Low ☐		Avg		Min		Max		#	
Med ☒		Channel Width (m): 1.60		1.200		1.9		6	
High ☐		Wetted Width (m): 1.35		1		1.600		6	
Temp (C): 5		Bankfull Depth (m): 0.40		0.4		0.4		3	
pH: 7.4									
Conductivity: 50									
		Avg		Min		Max		#	
		Gradient %: 7.50		6		9		2	
		Pool Depth (m): 0.32		0.200		0.400		6	
		Turbidity: Turbid ☐		Low ☐					
		Moderate ☐		Clear ☒					
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 60.00		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: CP Cascade Pool						☐		☐	
COVER									
Total Cover: Moderate		Type: SWD LWD B U DP OV IV							
LWD: None		Amount: N N D S N T N							
LWD Dist: Not Applicable		Location: P/S/O: ☐		☒		☒		☐	
Right Bank: Shape: Undercut		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐						Crown Closure	
Left Bank: Shape: Undercut		Texture: Fines ☐ Gravel ☒ Cobble ☐ Boulder ☐ Rock ☐ Manmade ☐						0%	
Right Bank: Rip.Veg: Shrubs		Stage: Shrub/herb stage							
Left Bank: Rip.Veg:		Stage: Shrub/herb 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)
614	EF	1	200	210 sec	800	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3184 Site 614

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093L.035 ILP #: 3184 NID Map #: 093L.035 NID #: 50614 Reach #: 1.0 Site #: 614
Field UTM (Z.E.N): 9.624863.6023670 Method: GPU Site Lg: 200 Method: MAP Access: H
GIS UTM (Z.E.N): 9.624889.6023700 Ref. Name:
Date: 2002/09/20 Time: 12:30 Agency: C172 Crew: JH/TT 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	1.70	1.80	1.90	1.80	1.20					1.60	Method I:	9.0	6.0	C 7.50
Wetted Width (m):	T	1.00	1.50	1.40	1.60	1.60	1.00					1.35	Method II:			C
Pool Depth (m):	T	0.30	0.30	0.40	0.30	0.20	0.40					0.32				

Wb Depth: .4 .4 .4 Avg: 0.40 Method: T Stage: L ☐ M ☒ H ☐ No Vis.Ch.: ☐ Intermittent: ☐
Dw: ☐ Tribs.: ☐

COVER Total: M

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

LWD: N DIST: NA

LB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

CROWN CLOSURE

0 0%

INSTREAM VEG: N ☐ A ☐ M ☒ V ☐

RB SHP: U

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: S

STG: SHR

WATER

EMS: Temp: 5 Method: T4 Req #: Cond.: 50 Method: S3
pH: 7.4 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: 60.0 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	None observed in site.
Rearing Habitat	Associated with small pools and cover.
Spawning Habitat	Limited by coarse angular substrates.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 62 F: 08A	STD	D	Downstream photo towards helicopter.
R: 62 F: 09A	STD	U	Upstream with clino at edge of frame.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.035	3184	614

COMMENTS	
Section	Comments
CHANNEL	Numerous barriers observed downstream.
CHANNEL	NFC

FDIS Fish Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.035 ILP # 3184

WATERBODY													
Gazetted Name:						Local:							
Project Code: 460-000000-00000-00000-0000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093L.035				ILP #: 3184		Reach #: 1 -			
Project ID: 5270				Lake/Stream: S				Lake From Date:					
Fish Permit #: 145269			Date: 2002/09/20			To: 2002/09/20			Agency: C172		Crew: JH/TT		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
614	093L.035	50614				GPU EF 1	5	50	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
614	EF	1	2002/09/20	12:30	2002/09/20	12:50							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
614	EF	1	1	O	210	200.0	1.5	800	I	5	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
614	EF	1	1	NFC		0							



Site #614, Downstream photo towards helicopter.
Roll #62, Frame #08A, Date: 2002/09/20



Site #614, Upstream with clino at edge of frame.
Roll #62, Frame #09A, Date: 2002/09/20

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 5.0 ILP Map # 093L.025 ILP # 3601

SITE															
Site #: 615		Field UTM 9.625727.6024666		Agency: C172		Crew: JH/TT		Date: 2002/09/20							
Site Length (m): 200		GIS UTM 9.625704.6024769		Agency Name: Triton Environmental Consultants (Terrace)											
CHANNEL															
No Vis.Ch.: ☐		Intermittent: ☐				Avg		Min		Max		#			
Dewatered: ☐		Tribes.: ☐				Channel Width (m):		4.27		3.400		5.6		6	
Stage: Low ☐						Wetted Width (m):		2.98		2.700		3.400		6	
Med ☒						Bankfull Depth (m):		0.23		0.2		0.3		3	
High ☐															
Temp (C): 6		pH: 7.2		Conductivity: 30											
												Avg		Min	
														Max	
														#	
														Gradient %:	
														18.75	
														16	
														22	
														4	
														Pool Depth (m):	
														0.45	
														0.300	
														0.600	
														6	
														Turbidity.: Turbid ☐	
														Low ☐	
														Moderate ☐	
														Clear ☒	
MORPHOLOGY															
Bed Material: Dominant: Boulders		D95 (cm): 100.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐		Span ☐			
Subdominant: Cobble		D (cm): 40.00												Braid ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1		B2		B3		D1	
Coupling: Partially Coupled				INDICATORS		☐		☐		☐		☐		☐	
Confinement: Frequently Confined				C1		C2		C3		C4		C5		S1	
Morphology: CP Cascade Pool				☐		☐		☐		☐		☐		☐	
				C1		C2		C3		C4		C5		S1	
				☐		☐		☐		☐		☐		☐	
				C1		C2		C3		C4		C5		S1	
				☐		☐		☐		☐		☐		☐	
COVER															
Total Cover: Abundant		Type: SWD		LWD		B		U		DP		OV		IV	
LWD: None		Amount: T		T		S		T		D		N		N	
LWD Dist: Not Applicable		Location: 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 ☐		0%	
Right Bank: Rip.Veg: Shrubs		Stage: Shrub/herb stage													
Left Bank: Rip.Veg:		Stage: Shrub/herb 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)						
352	EF	1	250	348 sec	600	NFC	0								
615	EF	1	200	480 sec	600	DV	6	100	120						

Morice North Planning Area

Reach #	ILP Map #	ILP #	Site
5.0	093L025	3601	615

Triton Environmental Consultants Ltd.

FDIS Site Card

Morice North Planning Area

	Reach #	ILP Map #	ILP #	Site
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000	5.0	093L.025	3601	615

COMMENTS	
Section	Comments
CHANNEL	Fish can switchback their way up through high gradient section.
CHANNEL	Extremely flashy system with unstable banks and channel.
CHANNEL	DV captured ~100 - 120 mm.

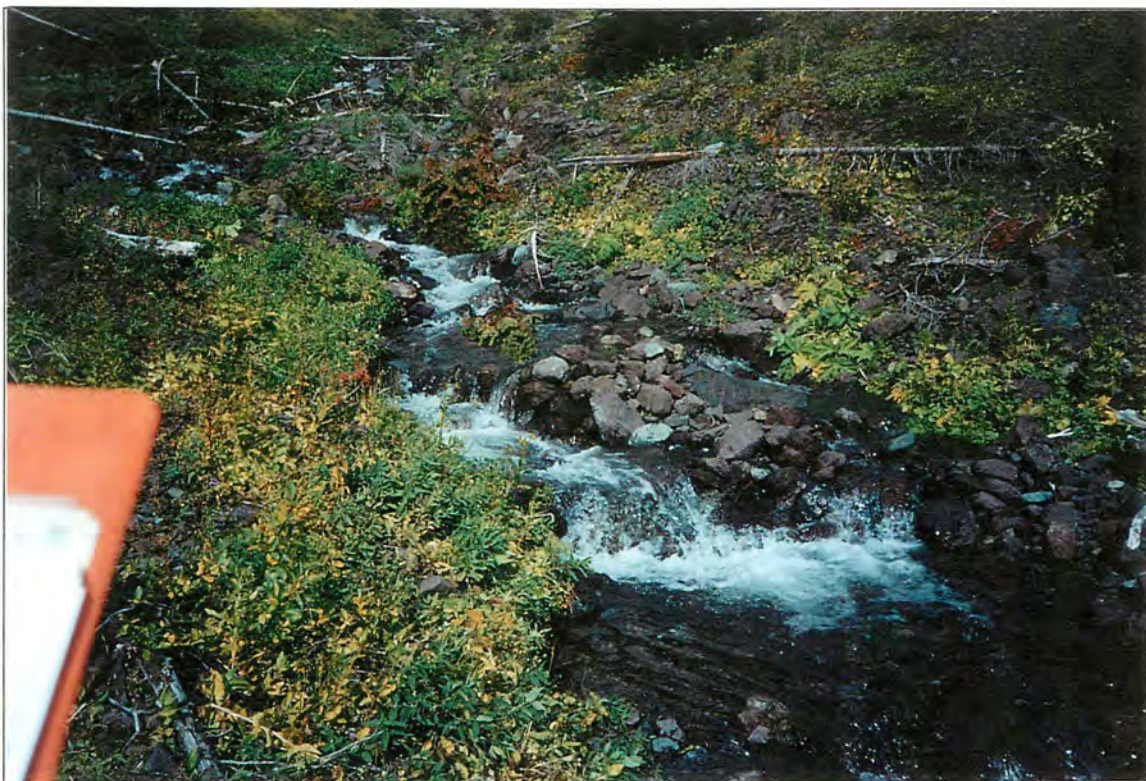
FDIS Fish Card

Morice North Planning Area

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

Reach # 5.0 ILP Map # 093L.025 ILP # 3601

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000															
Waterbody ID:				ILP Map #: 093L.025				ILP #: 3601		Reach #: 5 -					
Project ID: 5270								Lake/Stream: S		Lake From Date:					
Fish Permit #: 145269		Date: 2002/09/20		To: 2002/09/20		Agency: C172		Crew: JH/TT		Resample: ☐					
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
615	093L.035	50615				GPU EF 1	6	30	C						
352	093L.035	20352				GPU EF 1	4.5	70	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
352	EF 1	1	2002/09/20	13:08	2002/09/20	14:00									
615	EF 1	1	2002/09/20	13:00	2002/09/20	13:45									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
352	EF	1	1	O	348	250.0	3.2	600	60	6	SMITH ROOT	12B			
615	EF	1	1	O	480	200.0	4.0	600	I	5	SMITH ROOT	12B			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
352	EF	1	1	NFC		0									
615	EF	1	1	DV	J	6	100 120	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#				
615	EF	1	1	DV	100		U	U							
615	EF	1	1	DV	110		U	U							
615	EF	1	1	DV	100		U	U							
615	EF	1	1	DV	100		U	U							
615	EF	1	1	DV	120		U	U							
615	EF	1	1	DV	110		U	U							



Site #615, Upstream photo of habitat within site.
Roll #62, Frame #10A, Date: 2002/09/20



Site #615, Downstream photo of habitat within site.
Roll #62, Frame #11A, Date: 2002/09/20

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

2.0 093L.035 3178

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.035		ILP #: 3178		
REACH									
Reach #: 2.0		UTM(Zone/East/North): 9.625721.6022730				Sample Type: Biased			
Length (km): .97		Coupling: Partially Couple		Magnitude: 4		BGC Zone: ESSF			
Gradient (%): 19.8		Confinement: Confined		Order: 3		Open water: Absent			
US Elev (m): 1412		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 616		Field UTM 9.625975.6022775		Agency: C172		Crew: JH/TT		Date: 2002/09/20	
Site Length (m): 150		GIS UTM 9.625939.6022718		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 1.51		1.3		1.8	
Stage: Low ☐				Wetted Width (m): 1.47		1.3		1.8	
Med ☐				Bankfull Depth (m): 0.17		0.1		0.2	
High ☒		Temp (C): 6		pH: 7.2		Conductivity: 110			
								Turbidity.: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 80.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 30.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Coupled				INDICATORS		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: S		D		T		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						Crown Closure	
Left Bank: Rip.Veg:		Stage: Mature forest						1-20%	
				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)
616	EF	1	150	530 sec	600	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.035 ILP # 3178 Site 616

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.035 ILP #: 3178 NID Map #: 093L.035 NID #: 50616 Reach #: 2.0 Site #: 616
Field UTM (Z.E.N): 9.625975.6022775 Method: GPU Site Lg: 150 Method: MAP Access: H
GIS UTM (Z.E.N): 9.625939.6022718 Ref. Name:
Date: 2002/09/20 Time: 14:10 Agency: C172 Crew: JH/TT Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %		Mtd	Avg
Channel Width (m):	T	1.40	1.60	1.50	1.50	1.60	1.80	1.30	1.40	1.40	1.40	1.51	Method I:	16.0	13.0	C	14.33
Wetted Width (m):	T	1.40	1.60	1.30	1.50	1.30	1.80	1.50	1.40			1.47	Method II:	14.0		C	
Pool Depth (m):	T	0.30	0.30	0.40	0.40	0.30	0.50	0.40				0.37					

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:	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

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: 6 Method: T4 Req #: Cond.: 110 Method: S3
pH: 7.2 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: 80.0 D (cm): 30.00 Morph: CP DISTURBANCE INDICATORS
Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
Islands: N
Coupling: CO
Confinement: FC
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Limited potential - pools observed in site appear to be too shallow.
Rearing Habitat	Low - associated with small pools, D95, LWD and cover.
Spawning Habitat	Low - associated with gravel patches and cover - limited by gradient / access.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 62 F: 12A	STD	U	Upstream photo of habitat within site.
R: 62 F: 14A	STD	D	Downstream photo of habitat within site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
2.0	093L.035	3178	616

COMMENTS	
Section	Comments
CHANNEL	S6
CHANNEL	NFC
CHANNEL	Gradients in excess of 20% observed downstream during reach 1 and 2 Recci.

Morice North Planning Area

Reach #	ILP Map #	ILP #
2.0	093L.035	3178

Triton Environmental Consultants Ltd.



Site #616, Upstream photo of habitat within site.
Roll #62, Frame #12A, Date: 2002/09/20



Site #616, Downstream photo of habitat within site.
Roll #62, Frame #14A, Date: 2002/09/20

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #
2.0 093L.026 3697

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.026		ILP #: 3697		
REACH									
Reach #: 2.0		UTM(Zone/East/North): 9.631607.6018224				Sample Type: Biased			
Length (km): 2.64		Coupling: Partially Couple		Magnitude: 9		BGC Zone: SBS			
Gradient (%): 4.6		Confinement: Frequently Confin		Order: 3		Open water: Absent			
US Elev (m): 874		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 624		Field UTM 9.631721.6017430		Agency: C172		Crew: JH/DT		Date: 2002/09/27	
Site Length (m): 100		GIS UTM 9.631660.6017457		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		#		Avg		Min	
Stage: Low ☒		Channel Width (m): 4.30		3.200		5.6		6	
Med ☐		Wetted Width (m): 1.27		0.800		1.9		6	
High ☐		Bankfull Depth (m): 0.27		0.2		0.3		3	
Temp (C): 7		pH: 7.4		Conductivity: 80					
						Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 70.00		Bars: Non ☐		Side ☒		Diagonal ☐	
Subdominant: Boulders		D (cm): 30.00				Mid-channel ☐		Span ☐	
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: Abundant		Type: SWD		LWD		B		U	
LWD: Few		Amount: T		S		T		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		None ☐		Algae ☐		Moss ☒	
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
093L.026	60012	CV	1.6	T	20	GE	R: 63	F: 17	L: #:
Comments: Bad CV 1 m perch - high priority.		UTM (Z/E/N) 9.631601.6017							
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
624	EF	1	100	580 sec	600	DV	10	100	110

FDIS Site Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.026 ILP # 3697 Site # 624

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map #: 093L.026 ILP #: 3697 NID Map #: 093L.026 NID #: 50624 Reach #: 2.0 Site #: 624
Field UTM (Z.E.N): 9.631721.6017430 Method: GPU Site Lg: 100 Method: GE Access: V2
GIS UTM (Z.E.N): 9.631660.6017457 Ref. Name:
Date: 2002/09/27 Time: 14:00 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	3.40	3.20	5.00	4.70	3.90	5.60					4.30				
Wetted Width (m):	T	0.80	1.30	1.50	1.00	1.90	1.10					1.27				
Pool Depth (m):	T	0.30	0.70	0.40	0.20	0.30	0.50					0.40				

Wb Depth: .3 .3 .2 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	T	T	S	D	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐

LWD: F DIST: C

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: M

STG: MF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 80 Method: S3
pH: 7.4 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: 70.0 D (cm): 30.00 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
093L.026	60012	CV	1.6	T	20	GE	R: 63 F: 17 L:	#:	9.631601.6017491	GIS

Comments: Bad CV 1 m perch - high priority.

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Potential in a few pools.
Rearing Habitat	Moderate - associated with small shallow pools and abundant cover.
Spawning Habitat	Low / Moderate - associated with small gravel patches limited by coarse substrates / lack of pools.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
2.0	093L.026	3697	624

PHOTOS						
Photo			Foc Lg	Dir	Comments	
R:	63	F:	17	STD	U	Culvert at road crossing perched 1 m (high priority).
R:	63	F:	18	STD	U	Upstream photo of habitat within site.
R:	63	F:	19	STD	D	Downstream photo of habitat within site.
COMMENTS						
Section				Comments		
CHANNEL				DV captured 100-110 mm.		

Morice North Planning Area

Reach #	ILP Map #	ILP #
2.0	093L.026	3697

Triton Environmental Consultants Ltd.



Site #624, Culvert at road crossing perched 1 m (high priority).
Roll #63, Frame #17, Date: 2002/09/27



Site #624, Upstream photo of habitat within site.
Roll #63, Frame #18, Date: 2002/09/27



Site #624, Downstream photo of habitat within site.
Roll #63, Frame #19, Date: 2002/09/27

Morice North Planning Area

Reach #	ILP Map #	ILP #
3.0	093L.036	3439

Triton Environmental Consultants Ltd.

FDIS Reach Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.025 ILP # 3623

PROJECT									
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)					Project Code: 5270				
Stream Name (gaz.): BULKLEY RIVER									
Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000									
WATERSHED									
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000									
ILP Map #: 093L.025	ILP #: 3623	Reach #: 1.0	NID Map #: 093L.025		NID #: 11953				
Air Photos		Names		UTM(Zone/East/North/Method)					
LINE: BCC98341		Gaz.:		9.618631.6016157 GIS					
#. 0		Local:		Sample Type: B		Wetland: ☒			
SURVEY INFO									
Date: 2002/08/27			Agency: C172			Crew: SG/SH			
ATTRIBUTES									
Length (km): 1.13	Gradient: 0.44	Setting: VF	DISTURBANCE INDICATORS						
DS Elev.: 1115	Order: 1	Open water: A	O1	B1	B2	B3	D1	D2	D3
US Elev: 1120	Magnitude: 1	Confinement: OC	C1	C2	C3	C4	C5	S1	S2
	BGC Zone: ESSF	Coupling: DC						S3	S4
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.: G	Landuse: NS						

MAPS		
Map Type	Map #	Year
TRIM	093L.025	

FDIS Fish Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.025 ILP # 3623

WATERBODY													
Gazetted Name:										Local:			
Project Code: 460-000000-00000-00000-0000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093L.025				ILP #: 3623		Reach #: 1			
Project ID: 5270				Lake/Stream: S				Lake From Date:					
Fish Permit #: 145269				Date: 2002/10/01		To: 2002/10/02		Agency: C172		Crew: SH/DT		Resample: ☐	
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment		
901	093L.025	20901	9	618440	6015827	GPU	MT	3					
901	093L.025	20901	9	618440	6015827	GPU	MT	2					
901	093L.025	20901	9	618440	6015827	GPU	MT	1					
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
901	MT 1	1	2002/10/01	12:45	2002/10/02	10:50							
901	MT 2	1	2002/10/01	12:45	2002/10/02	10:50							
901	MT 3	1	2002/10/01	12:45	2002/10/02	10:50							
B. NET/TRAP SPECIFICATIONS													
Site #	MTD/NO.		H/P	Net Type		Length	Depth	Mesh	Set	Habitat			
901	MT 1		1				0.4		BT	L			
901	MT 2		1				0.3		BT	L			
901	MT 3		1				0.3		BT	L			
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
901	MT 1	1	NFC			0			inverts (water beetles).				
901	MT 2	1	NFC			0							
901	MT 3	1	NFC			0							

FDIS Fish Card

Morice North Planning Area

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

Reach # 2.0 ILP Map # 093L.025 ILP # 3667

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000															
Waterbody ID:					ILP Map #: 093L.025					ILP #: 3667		Reach #: 2 -			
Project ID: 5270					Lake/Stream: L					Lake From Date:					
Fish Permit #: 145269			Date: 2002/10/01			To: 2002/10/02			Agency: C172			Crew: SH/DT		Resample: ☐	
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
902	093L.025	20902	9	621174	6016463	GPU MT 5									
902	093L.025	20902	9	621174	6016463	GPU MT 4									
902	093L.025	20902	9	621174	6016463	GPU MT 3									
902	093L.025	20902	9	621174	6016463	GPU MT 2									
902	093L.025	20902	9	621174	6016463	GPU MT 1									
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
902	MT 1	1	2002/10/01	12:30	2002/10/02	10:45									
902	MT 2	1	2002/10/01	12:30	2002/10/02	10:45									
902	MT 3	1	2002/10/01	12:30	2002/10/02	10:45									
902	MT 4	1	2002/10/01	12:30	2002/10/02	10:45									
902	MT 5	1	2002/10/01	12:30	2002/10/02	10:45									
B. NET/TRAP SPECIFICATIONS															
Site #	MTD/NO.		H/P	Net Type	Length	Depth	Mesh	Set	Habitat						
902	MT 1		1			0.8		BT	L						
902	MT 2		1			0.7		BT	L						
902	MT 3		1			0.8		BT	L						
902	MT 4		1			0.8		BT	L						
902	MT 5		1			0.7		BT	L						
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment					
902	MT 1	1	LKC	J		37	71	92	R						
902	MT 2	1	LKC	J		3	73	80	R						
902	MT 3	1	LKC	J		1	73	73	R						
902	MT 4	1	LKC	J		50	72	108	R						
902	MT 5	1	LKC	J		10	57	83	R	1 northwestern salamander nute					
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
902	MT	1	1	LKC	78		U	U							
902	MT	1	1	LKC	78		U	U							
902	MT	1	1	LKC	89		U	U							
902	MT	1	1	LKC	72		U	U							
902	MT	1	1	LKC	71		U	U							
902	MT	1	1	LKC	74		U	U							
902	MT	1	1	LKC	80		U	U							
902	MT	1	1	LKC	76		U	U							
902	MT	1	1	LKC	89		U	U							
902	MT	1	1	LKC	86		U	U							
902	MT	1	1	LKC	74		U	U							
902	MT	1	1	LKC	76		U	U							
902	MT	1	1	LKC	92		U	U							
902	MT	1	1	LKC	86		U	U							
902	MT	2	1	LKC	80		U	U							plus 23 not measured
902	MT	2	1	LKC	75		U	U							
902	MT	2	1	LKC	73		U	U							
902	MT	3	1	LKC	73		U	U							

FDIS Fish Card

Morice North Planning Area

Watershed Code:

000-000000-00000-00000-0000-000-000-000-000-000-000

Reach #

ILP Map #

ILP #

2.0

093L.025

3667

INDIVIDUAL FISH DATA																	
Site#	MTD/NO		H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
									Str/Smpl#/Age				Str/Smpl#				
902	MT	4	1	LKC	86		U	U									
902	MT	4	1	LKC	82		U	U									
902	MT	4	1	LKC	82		U	U									
902	MT	4	1	LKC	93		U	U									
902	MT	4	1	LKC	80		U	U									
902	MT	4	1	LKC	73		U	U									
902	MT	4	1	LKC	92		U	U									
902	MT	4	1	LKC	95		U	U									
902	MT	4	1	LKC	88		U	U									
902	MT	4	1	LKC	72		U	U									
902	MT	4	1	LKC	70		U	U									
902	MT	4	1	LKC	83		U	U									
902	MT	4	1	LKC	87		U	U									
902	MT	4	1	LKC	108		U	U									
902	MT	4	1	LKC	88		U	U									plus 35 not measured
902	MT	5	1	LKC	76		U	U									
902	MT	5	1	LKC	78		U	U									
902	MT	5	1	LKC	75		U	U									
902	MT	5	1	LKC	72		U	U									
902	MT	5	1	LKC	69		U	U									
902	MT	5	1	LKC	76		U	U									
902	MT	5	1	LKC	58		U	U									
902	MT	5	1	LKC	83		U	U									
902	MT	5	1	LKC	57		U	U									
902	MT	5	1	LKC	73		U	U									

FDIS Fish Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.025 ILP # 3607

WATERBODY												
Gazetted Name:						Local:						
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0												
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000												
Waterbody ID:				ILP Map #: 093L.025				ILP #: 3607		Reach #: 3 -		
Project ID: 5270				Lake/Stream: L				Lake From Date:				
Fish Permit #: 145269			Date: 2002/10/01			To: 2002/10/02			Agency: C172		Crew: SH/DT	Resample: ☐
SITE / METHOD												
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment		
903	093L.025	20903	9	625504	6016082	GPU MT 3						
903	093L.025	20903	9	625504	6016082	GPU MT 2						
903	093L.025	20903	9	625504	6016082	GPU MT 1						
903	093L.025	20903	9	625504	6016082	GPU GN 1						
A. GEAR SETTINGS												
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment					
903	GN 1	1	2002/10/01	11:48	2002/10/02	09:30						
903	MT 1	1	2002/10/01	12:00	2002/10/02	09:45						
903	MT 2	1	2002/10/01	12:00	2002/10/02	09:45						
903	MT 3	1	2002/10/01	12:00	2002/10/02	09:45						
B. NET/TRAP SPECIFICATIONS												
Site #	MTD/NO.		H/P	Net Type	Length	Depth	Mesh	Set	Habitat			
903	GN 1		1	FL	92.0	3.0	ST	BT	L			
903	MT 1		1			0.5		BT	L			
903	MT 2		1			0.6		BT	L			
903	MT 3		1			0.5		BT	L			
FISH SUMMARY												
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment			
903	GN 1	1	NFC			0						
903	MT 1	1	NFC			0						
903	MT 2	1	NFC			0						
903	MT 3	1	NFC			0						
COMMENTS												
Section			Comments									
WATERBODY			NFC in gill net. Inverts caught in minnow traps (NFC). DT observed abundant freshwater shrimp.									

Morice North Planning Area

North Planning Area		Reach #	ILP Map #	ILP #
Watershed Code:	000-000000-00000-00000-0000-000-000-000-000-000-000	4.0	093L.025	3605

WATERBODY																
Gazetted Name:										Local:						
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																
Waterbody ID:					ILP Map #: 093L.025					ILP #:		3605		Reach #:	4 -	
Project ID: 5270					Lake/Stream: L					Lake From Date:						
Fish Permit #:			145269			Date: 2002/10/01			To: 2002/10/02			Agency: C172		Crew: SH/DT		Resample: ☐
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment					
904	093L.035	20904	9	622718	6018840	GPU	MT	5								
904	093L.035	20904	9	622718	6018840	GPU	MT	4								
904	093L.035	20904	9	622718	6018840	GPU	MT	3								
904	093L.035	20904	9	622718	6018840	GPU	MT	2								
904	093L.035	20904	9	622718	6018840	GPU	MT	1								
A. GEAR SETTINGS																
Site#	MTD/NO		H/P	Date In	Time In	Date Out	Time Out	Comment								
904	MT	1	1	2002/10/01	13:30	2002/10/02	12:00									
904	MT	2	1	2002/10/01	13:30	2002/10/02	12:00									
904	MT	3	1	2002/10/01	13:30	2002/10/02	12:00									
904	MT	4	1	2002/10/01	13:30	2002/10/02	12:00									
904	MT	5	1	2002/10/01	13:30	2002/10/02	12:00									
B. NET/TRAP SPECIFICATIONS																
Site #	MTD/NO.		H/P	Net Type		Length	Depth	Mesh	Set	Habitat						
904	MT	1	1				0.6		BT	L						
904	MT	2	1				0.5		BT	L						
904	MT	3	1				0.6		BT	L						
904	MT	4	1				0.4		BT	L						
904	MT	5	1				0.5		BT	L						
FISH SUMMARY																
Site#	MTD/NO		H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment					
904	MT	1	1	NFC			0									
904	MT	2	1	NFC			0									
904	MT	3	1	NFC			0									
904	MT	4	1	NFC			0									
904	MT	5	1	NFC			0									

FDIS Fish Card

Morice North Planning Area

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000 Reach # 3.0 ILP Map # 093L.046 ILP # 2877

WATERBODY												
Gazetted Name:						Local:						
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0												
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000												
Waterbody ID:				ILP Map #: 093L.046				ILP #: 2877		Reach #: 3 -		
Project ID: 5270				Lake/Stream: L				Lake From Date:				
Fish Permit #: 145269			Date: 2002/09/30			To: 2002/10/02			Agency: C172		Crew: SG/JD SH/	Resample: ☐
SITE / METHOD												
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment		
905	093L.046	20905				GPU GN 1						
906	093L.046	20906	9	638129	6030751	GPU MT 5						
906	093L.046	20906	9	638129	6030751	GPU MT 4						
906	093L.046	20906	9	638150	6030585	GPU MT 3						
906	093L.046	20906	9	638150	6030585	GPU MT 2						
906	093L.046	20906	9	638150	6030585	GPU MT 1						
A. GEAR SETTINGS												
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment					
905	GN 1	1	2002/10/01	16:30	2002/10/02	13:00						
906	MT 1	1	2002/09/30	09:30	2002/10/01	09:05						
906	MT 2	1	2002/09/30	09:30	2002/10/01	09:05						
906	MT 3	1	2002/09/30	09:30	2002/10/01	09:05						
906	MT 4	1	2002/09/30	09:30	2002/10/01	09:05						
906	MT 5	1	2002/09/30	09:30	2002/10/01	09:05						
B. NET/TRAP SPECIFICATIONS												
Site #	MTD/NO.		H/P	Net Type	Length	Depth	Mesh	Set	Habitat			
905	GN 1		1	FL	92.0	2.0	ST	BT	L			
906	MT 1		1			0.8		BT	L			
906	MT 2		1			0.8		BT	L			
906	MT 3		1			0.8		BT	L			
906	MT 4		1			1.2		BT	L			
906	MT 5		1			1.2		BT	L			
FISH SUMMARY												
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment			
905	GN 1	1	NFC			0			Juvenile Grebe was tangled in gill net, it was cut out of the gill net and released unharmed.			
906	MT 1	1	NFC			0						
906	MT 2	1	NFC			0						
906	MT 3	1	NFC			0						
906	MT 4	1	NFC			0						
906	MT 5	1	NFC			0						



Site #918, Upstream photo of cobble / gravel substrates.
Roll #52, Frame #01, Date: 2002/09/05



Site #918, Downstream photo of small cascade over cobble.
Roll #52, Frame #02, Date: 2002/09/05



Site #918, Falls over organic / cobbles 1.5 m.
Roll #52, Frame #03, Date: 2002/09/05



Site #918, Culvert at road slight bank failure.
Roll #52, Frame #04, Date: 2002/09/05

FDIS Reach Card

Morice North Planning Area

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

Reach # 4.0 ILP Map # 093L.046 ILP # 2868

PROJECT																																													
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.) Stream Name (gaz.): BULKLEY RIVER Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000 Project Code: 5270																																													
WATERSHED																																													
Reach Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000 ILP Map #: 093L.046 Air Photos LINE: BCC98341_ #: 0 ILP #: 2868 Gaz.: Local: Reach #: 4.0 Names UTM(Zone/East/North/Method) 9.638953.6033191 Sample Type: B NID Map #: 093L.046 NID #: 10828 GIS Wetland: ☐																																													
SURVEY INFO																																													
Date: 2002/08/27 Agency: C172 Crew: SG/SH																																													
ATTRIBUTES																																													
Length (km): 1.50 DS Elev.: 644 US Elev: 736 Valley Flat: N Active Floodplain Visible: ☐ Channel Pattern: IR Gradient: 6.13 Order: 4 Magnitude: 129 BGC Zone: SBS C/D: Est. Width: Setting: VW Open water: A Confinement: CO Coupling: CO Islands: N Bars: ☒ N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR Mass Movement: M Riparian Veg.: N DISTURBANCE INDICATORS <table style="width: 100%; text-align: center;"> <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> </tr> <tr> <td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td> </tr> <tr> <td>S3</td><td>S4</td><td>S5</td><td colspan="4"></td> </tr> <tr> <td>☐</td><td>☐</td><td>☐</td><td colspan="4"></td> </tr> </table> Exposed/Eroded: NS Landuse: NS				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																																											
☐	☐	☐																																											

MAPS		
Map Type	Map #	Year
TRIM	093L.046	

Morice North Planning Area

Watershed Code:

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

Reach #

ILP Map #

ILP #

4.0

093L 046

2868

WATERBODY

Local: Emerson Creek

Project Code: 460-000000-00000-00000-0000-0000-0000-000-000-000-000-0

WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000

ILP Map #: 093L.046

ILP #: 2868 Reach #: 4 -

Project ID: 5270

Lake/Stream: S

Lake From Date:

Fish Permit #: 145269 Date: 2002/09/07 To: 2002/09/07 Agency: C172 Crew: JH/JD Resample: ☐

SITE / METHOD	
1	1
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99	99
100	100

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment
945	093L.046	50945				GPU	EF 1	6	80	C	

DATE	LOCATION	COAST	TIME	WIND	WAVE	SEA	SWELL	WAVE PERIOD	WAVE DIRECTION	WAVE HEIGHT	WAVE LENGTH	WAVE PERIOD	WAVE DIRECTION	WAVE HEIGHT	WAVE LENGTH
A. GEAR SETTINGS															

Site#	MTD/NO		H/P	Date In	Time In	Date Out	Time Out	Comment
945	EF	1	1	2002/09/07	16:40	2002/09/07	17:20	

C. ELECTROFISHER SPECIFICATIONS									
---------------------------------	--	--	--	--	--	--	--	--	--

Site#	MTD/NO		H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
945	EF	1	1	O	562	150.0	10.0	600	J	7	SMITH ROOT	12B

FISH SUMMARY		ROST
--------------	--	------

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

FDIS Fish Card

Morice North Planning Area

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

Reach # 7.0 ILP Map # 093L.026 ILP # 3715

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000															
Waterbody ID:										ILP Map #: 093L.026		ILP #: 3715		Reach #: 7 -	
Project ID: 5270										Lake/Stream: L		Lake From Date:			
Fish Permit #: 145269				Date: 2002/09/30		To: 2002/09/30		Agency: C172		Crew: SG/JD		Resample: ☐			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment				
958	093L.026	20958	9	633123	6010250	GPU	MT	5							
958	093L.026	20958	9	633123	6010250	GPU	MT	4							
958	093L.026	20958	9	633123	6010250	GPU	MT	3							
958	093L.026	20958	9	633146	6010258	GPU	MT	2							
958	093L.026	20958	9	633146	6010258	GPU	MT	1							
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
958	MT 1	1	2002/09/30	12:15	2002/10/01	10:00									
958	MT 2	1	2002/09/30	12:15	2002/10/01	10:00									
958	MT 3	1	2002/09/30	12:15	2002/10/01	10:00									
958	MT 4	1	2002/09/30	12:15	2002/10/01	10:00									
958	MT 5	1	2002/09/30	12:15	2002/10/01	10:00									
B. NET/TRAP SPECIFICATIONS															
Site #	MTD/NO.		H/P	Net Type	Length	Depth	Mesh	Set	Habitat						
958	MT	1	1			1.5		BT	L						
958	MT	2	1			0.8		BT	L						
958	MT	3	1			1.2		BT	L						
958	MT	4	1			0.6		BT	L						
958	MT	5	1			1.0		BT	L						
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
958	MT 1	1	NFC			0									
958	MT 2	1	NFC			0									
958	MT 3	1	NFC			0									
958	MT 4	1	NFC			0									
958	MT 5	1	NFC			0									

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 4.0 ILP Map # 093L.056 ILP # 2445

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.056		ILP #: 2445		
REACH									
Reach #: 4.0		UTM(Zone/East/North): 9.633259.6040864				Sample Type: Biased			
Length (km): 3.41		Coupling: Coupled		Magnitude: 31		BGC Zone: SBS			
Gradient (%): 4.3		Confinement: Frequently Confin		Order: 3		Open water: Absent			
US Elev (m): 870		Islands: NONE		Riparian Vegetation: Mixed C/D					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 980		Field UTM 9.634350.6039934		Agency: C172		Crew: JH/DT		Date: 2002/09/30	
Site Length (m): 250		GIS UTM 9.634224.6039937		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐ Intermittent: ☐				Avg		Min		Max	
Dewatered: ☐ Tribs.: ☐				Avg		Min		Max	
Stage: Low ☐		Channel Width (m): 8.24		6.900		9.5		7	
Med ☒		Wetted Width (m): 3.20		2.3		4		7	
High ☐		Bankfull Depth (m): 0.53		0.5		0.6		3	
Temp (C): 5		pH: 7.0		Conductivity: 50					
				Turbidity: Turbid ☐		Low ☐			
				Moderate ☐		Clear ☒			
MORPHOLOGY									
Bed Material: Dominant: Boulders		D95 (cm): 100.00		Bars: Non ☐		Side ☒		Diagonal ☐	
Subdominant: Cobble		D (cm): 30.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1	
Coupling: Coupled				INDICATORS		B2		B3	
Confinement: 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: T		D		S		N	
LWD Dist: Clumped		Location: P/S/O: ☒		☒		☒		☒	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☒		Boulder ☐	
Left Bank: Shape: V - shape		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 ☐					
FEATURES									
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo		AirPhoto
093L.046	98000	F	5.0	GE		HC	R: 65	F: 09	L: #:
Comments: Falls (Barrier), Photo roll 89, # 18 and 19.									
FISH									
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
980	EF	1	250	840 sec	800	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 4.0 ILP Map # 093L.056 ILP # 2445 Site 980

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map#: 093L.056 ILP #: 2445 NID Map #: 093L.046 NID #: 50980 Reach #: 4.0 Site #: 980
Field UTM (Z.E.N): 9.634350.6039934 Method: GPU Site Lg: 250 Method: MAP Access: H
GIS UTM (Z.E.N): 9.634224.6039937 Ref. Name:
Date: 2002/09/30 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):	T	7.80	6.90	8.20	9.00	6.90	9.40	9.50				8.24	Method I:	4.0	3.0	C	3.50
Wetted Width (m):	T	2.30	3.70	2.80	2.90	4.00	3.10	3.60				3.20	Method II:			C	
Pool Depth (m):	T	0.40	0.60	0.40	0.40	0.30	0.50	0.50				0.44					

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:	T	D	S	N	T	N	N
Loc: P/S/O:	☒	☒	☒	☐	☒	☐	☐

LWD: F DIST: C

LB SHP: V

Texture: F ☐ G ☒ C ☒ B ☐ R ☐ A ☐

RIP: M

STG: MF

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☒ A ☐ M ☐ V ☐

RB SHP: V

Texture: F ☐ G ☒ C ☒ B ☐ R ☒ A ☐

RIP: M

STG: MF

WATER

EMS: Temp: 5 Method: T4 Req #: Cond.: 50 Method: S3
pH: 7.0 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: Rafted debris Method: GE

MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3
D95: 100.0 D (cm): 30.00 Morph: RP 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
093L.046	98000	F	5.0	GE		HC	R: 65 F: 09 L:	#:	9.634315.6039927	GIS

Comments: Falls (Barrier). Photo roll 89, # 18 and 19.

HABITAT QUALITY

Name	Comments
OverWinter Habitat	Moderate - associated with pools and flows.
Rearing Habitat	Moderate - associated with pools, riffles, runs, cover, LWD and D95.
Spawning Habitat	Moderate - associated with gravels, pools, flows.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
4.0	093L.056	2445	980

PHOTOS					
Photo				Foc Lg	Dir
R:	65	F:	07	STD	U
R:	65	F:	08	STD	D
R:	65	F:	09	STD	D
R:	65	F:	10	STD	D
R:	89	F:	18	STD	U
R:	89	F:	19	STD	U
COMMENTS					
Section				Comments	
CHANNEL				NFC upstream of falls, 250 m site 840 seconds I, 5, 800.	

FDIS Fish Card

Morice North Planning Area

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

Reach # 4.0 ILP Map # 093L.056 ILP # 2445

WATERBODY													
Gazetted Name:						Local:							
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0													
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000													
Waterbody ID:				ILP Map #: 093L.056				ILP #: 2445		Reach #: 4 -			
Project ID: 5270				Lake/Stream: S				Lake From Date:					
Fish Permit #: 145269			Date: 2002/09/30			To: 2002/09/30			Agency: C172		Crew: JH/DT		Resample: ☐
SITE / METHOD													
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment			
980	093L.046	50980				GPU EF 1	5	50	C				
A. GEAR SETTINGS													
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment						
980	EF	1	2002/09/30	13:00	2002/09/30	14:40							
C. ELECTROFISHER SPECIFICATIONS													
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model		
980	EF	1	1	O	840	250.0	9.0	800	I	5	SMITH ROOT	12B	
FISH SUMMARY													
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment				
980	EF	1	1	NFC		0							



Site #980, Upstream photo within site.
Roll #65, Frame #07, Date: 2002/09/30



Site #980, Downstream photo within site (DT).
Roll #65, Frame #08, Date: 2002/09/30



Site #980, 5 m Falls.
Roll #65, Frame #09, Date: 2002/09/30



Site #980, DT downstream of Falls.
Roll #65, Frame #10, Date: 2002/09/30



Site #980, View of 5 m Falls from helicopter.
Roll #89, Frame #18, Date: 2002/09/30



Site #980, View of 5 m Falls from helicopter.
Roll #89, Frame #19, Date: 2002/09/30

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

1.0 093L.046 2942

SITE															
Site #: 981		Field UTM 9.638706.6037718		Agency: C172		Crew: JH/DT		Date: 2002/09/30							
Site Length (m): 100		GIS UTM 9.638710.6037798		Agency Name: Triton Environmental Consultants (Terrace)											
CHANNEL															
No Vis.Ch.: ☐		Intermittent: ☐				Avg		Min		Max		#			
Dewatered: ☐		Tribes.: ☐				Channel Width (m):		2.99		2		5.1		8	
Stage: Low ☒						Wetted Width (m):		0.95		0.5		2		6	
Med ☐						Bankfull Depth (m):		0.50		0.5		0.5		3	
High ☐		Temp (C): 6		pH: 7.2		Conductivity: 80									
												Avg		Min	
												Gradient %:		7.33	
												Pool Depth (m):		0.30	
												Turbidity.: Turbid ☐		Low ☐	
												Moderate ☐		Clear ☒	
MORPHOLOGY															
Bed Material: Dominant: Cobble		D95 (cm): 90.00		Bars: Non ☐		Side ☒		Diagonal ☐		Mid-channel ☐		Span ☐			
Subdominant: Boulders		D (cm): 40.00												Braid ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1		B2		B3		D1	
Coupling: Coupled				INDICATORS		☐		☐		☐		☐		☐	
Confinement: Confined						C1		C2		C3		C4		C5	
Morphology: RP Riffle Pool						☐		☐		☐		☐		☐	
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FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.046 ILP # 2942 Site 981

PROJECT																															
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)																															
Stream Name (gaz.): BULKLEY RIVER										Project Code: 5270																					
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000																															
WATERSHED																															
Gazetted Name:										Local Name:																					
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																															
ILP Map#: 093L.046		ILP #: 2942		NID Map #: 093L.046		NID #: 50981		Reach #: 1.0		Site #: 981																					
Field UTM (Z.E.N): 9.638706.6037718				Method: GPU		Site Lg: 100				Method: MAP		Access: V2																			
GIS UTM (Z.E.N): 9.638710.6037798						Ref. Name:																									
Date: 2002/09/30		Time: 16:00		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	2.50	2.30	2.00	2.50	3.90	5.10	2.60	3.00	3.00	3.00	2.99																			
Wetted Width (m):	T	0.50	0.60	1.00	0.70	0.90	2.00					0.95																			
Pool Depth (m):	T	0.30	0.30	0.40	0.20	0.40	0.20					0.30																			
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Gradient %</th> <th>Mtd</th> <th>Avg</th> </tr> </thead> <tbody> <tr> <td>Method I:</td> <td>5.0</td> <td>8.0</td> <td>C</td> <td>7.33</td> <td></td> </tr> <tr> <td>Method II:</td> <td>9.0</td> <td></td> <td>C</td> <td></td> <td></td> </tr> </tbody> </table>																Gradient %		Mtd	Avg	Method I:	5.0	8.0	C	7.33		Method II:	9.0		C		
		Gradient %		Mtd	Avg																										
Method I:	5.0	8.0	C	7.33																											
Method II:	9.0		C																												
Wb Depth: .5		.5		.5		Avg: 0.50		Method: T		Stage: L ☒ M ☐ H ☐		No Vis.Ch.: ☐ Intermittent: ☐																			
												Dw: ☐ Tribs.: ☐																			
COVER																															
Total: A																															
Type:	SWD	LWD	B	U	DP	OV	IV	CROWN CLOSURE																							
Amount:	S	D	T	T	T	T	N	1 1-20%																							
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☐	INSTREAM VEG: N ☒ A ☐ M ☐ V ☐																							
LWD: F		DIST: C																													
LB SHP: U		RB SHP: U																													
Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐		Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐																													
RIP: M		RIP: M																													
STG: MF		STG: MF																													
WATER																															
EMS:		Temp: 6		pH: 7.2		Flood Signs: Rafted debris		Method: T4		Method: P2		Method: GE																			
								Req #: Cond.: 80		Method: S3		Method: GE																			
								Turb.: T ☐ M ☐ L ☐ C ☒																							
MORPHOLOGY																															
Bed Material:		Dominant: C		Subdom: B		Morph: RP		O1 B1 B2 B3 D1 D2 D3																							
D95: 90.0		D (cm): 40.00						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																		
093L.046	98002	F	5.0	GE		HC	R: 65	F: 14	L:	#:	9.638643.6037789		GIS																		
Comments: Falls																															
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo		AirPhoto		UTM (Z/E/N)		Method																		
093L.046	98001	F	2.0	GE		HC	R: 65	F: 13	L:	#:	9.638710.6037798		GIS																		
Comments: Falls																															
HABITAT QUALITY																															
Name		Comments																													

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.046	2942	981

HABITAT QUALITY						
Name				Comments		
OverWinter Habitat				None.		
Rearing Habitat				None.		
Spawning Habitat				None.		
PHOTOS						
Photo		Foc Lg	Dir	Comments		
R:	65	F:	11	STD	U	Upstream photo within site.
R:	65	F:	12	STD	D	Downstream photo within site.
R:	65	F:	13	STD	U	2 m Falls.
R:	65	F:	14	STD	U	5 m Falls.
COMMENTS						
Section				Comments		
CHANNEL				NFC		
CHANNEL				Barrier 100 m upstream of confluence with Dockrill. 2 m Falls then 30 m upstream is another 5 m Falls.		

Morice North Planning Area

Reach #	ILP Map #	ILP #
1.0	093L.046	2942

Triton Environmental Consultants Ltd.



Site #981, Upstream photo within site.
Roll #65, Frame #11, Date: 2002/09/30



Site #981, Downstream photo within site.
Roll #65, Frame #12, Date: 2002/09/30



Site #981, 2 m Falls.
Roll #65, Frame #13, Date: 2002/09/30



Site #981, 5 m Falls.
Roll #65, Frame #14, Date: 2002/09/30

FDIS Reach Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.046 ILP # 2941

PROJECT																													
Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)					Project Code: 5270																								
Stream Name (gaz.): BULKLEY RIVER																													
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000																													
WATERSHED																													
Reach Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																													
ILP Map #: 093L.046		ILP #: 2941		Reach #: 3.0		NID Map #: 093L.046		NID #: 10632																					
Air Photos		Names		UTM(Zone/East/North/Method)																									
LINE: BCC98341		Gaz.:		9.631290.6037181 GIS																									
#: 0		Local:		Sample Type: B Wetland: ☐																									
SURVEY INFO																													
Date: 2002/08/27				Agency: C172			Crew: SG/SH																						
ATTRIBUTES																													
Length (km): 11.17		Gradient: 2.52		Setting: VW		DISTURBANCE																							
DS Elev.: 619		Order: 4		Open water: A		INDICATORS																							
US Elev: 901		Magnitude: 182		Confinement: FC		<table border="0" style="width: 100%;"> <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																							
☐	☐	☐	☐	☐	☐	☐																							
BGC Zone: SBS		Coupling: PC				<table border="0" style="width: 100%;"> <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																				
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐																				
Valley Flat: N		C/D:		Islands: N																									
Active Floodplain Visible: ☐		Est. Width:		Bars: ☒ N ☐ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR																									
Channel Pattern: IM				Mass Movement: M		Exposed/Eroded: NS																							
				Riparian Veg.: NS		Landuse: NS																							

MAPS		
Map Type	Map #	Year
TRIM	093L.046	

FDIS Fish Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.046 ILP # 2941

WATERBODY														
Gazetted Name:										Local:				
Project Code: 460-000000-00000-00000-0000-000-000-000-000-0														
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000														
Waterbody ID:				ILP Map #: 093L.046				ILP #: 2941		Reach #: 3 -				
Project ID: 5270				Lake/Stream: S				Lake From Date:						
Fish Permit #:		145269		Date: 2002/09/30		To: 2002/09/30		Agency: C172		Crew: JH/DT		Resample: ☐		
SITE / METHOD														
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment				
982	093L.046	98002	9	638781	6037916	GPU	EF	1	6	50	C			
A. GEAR SETTINGS														
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment							
982	EF	1	1	2002/09/30	17:00	2002/09/30	17:30							
C. ELECTROFISHER SPECIFICATIONS														
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model			
982	EF	1	1	O	420	100.0	20.0	800	I	5	SMITH	12B		
										ROOT				
FISH SUMMARY														
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment					
982	EF	1	1	RB	F	0+	3	30	30	R				
982	EF	1	1	RB	J	2+	1	70	70	R				
982	EF	1	1	DV	F	1+	2	45	45	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#			
982	EF	1	1	DV	45		U	U				65	15	
982	EF	1	1	DV	45		U	U						
982	EF	1	1	RB	70		U	U						
982	EF	1	1	RB	30		U	U						
982	EF	1	1	RB	30		U	U						
982	EF	1	1	RB	30		U	U						



Site #982, Dolly Varden fry, 45 mm
Roll #65, Frame #15, Date: 2002/09/30

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 4.0 ILP Map # 093L.046 ILP # 2981

STREAM REFERENCING																							
Gazetted Name:						Local Name:																	
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000						ILP Map #: 093L.046			ILP #: 2981														
REACH																							
Reach #: 4.0		UTM(Zone/East/North): 9.626902.6040314				Sample Type: Biased																	
Length (km): 1.78		Coupling: Partially Couple		Magnitude: 57		BGC Zone: ESSF																	
Gradient (%): 4.2		Confinement: Occasionally Conf		Order: 3		Open water: Absent																	
US Elev (m): 1097		Islands: NONE		Riparian Vegetation: Coniferous																			
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified																							
SITE																							
Site #: 986		Field UTM 9.627433.6040047		Agency: C172		Crew: SG/SH		Date: 2002/09/07															
Site Length (m): 300		GIS UTM 9.627419.6040077		Agency Name: Triton Environmental Consultants (Terrace)																			
CHANNEL																							
No Vis.Ch.: ☐ Intermittent: ☐						Avg		Min		Max		#											
Dewatered: ☐ Tribs.: ☐						Channel Width (m):		9.13		8.4		10.2		6									
Stage: Low ☐						Wetted Width (m):		8.55		7.800		9.600		6									
Med ☒						Bankfull Depth (m):		0.47		0.4		0.5		3									
High ☐						Temp (C): 6		pH: 7.1		Conductivity: 40													
												Turbidity: Turbid ☐ Low ☐											
												Moderate ☐ Clear ☒											
MORPHOLOGY																							
Bed Material: Dominant: Cobble		D95 (cm): 35.00		Bars: Non ☐ Side ☐ Diagonal ☐ Mid-channel ☒ Span ☐																			
Subdominant: Gravels		D (cm): 12.00				Braid ☐																	
Channel Pattern: Regular Meanders		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		D		S		T		T		T		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 ☐														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)										
093L.045	27286	X	3.0	GE	25	GE	R:	95	F:	14	L:		#:		9.627313.6040								
Comments: Log Jam from multiple slides.																							
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto			UTM (Z/E/N)										
093L.045	26286	F	10.0	GE	2	GE	R:	95	F:	12	L:		#:		9.626652.6040								
Comments: Lower Falls.																							
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto			UTM (Z/E/N)										
093L.045	25286	F	25.0	GE	5	GE	R:	95	F:	11	L:		#:		9.626394.6040								
Comments: Falls at outlet Melissen Lake.																							
FISH																							
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)														
986	EF	1	300	856 sec	1000	DV	11	33	115														

FDIS Site Card

Morice North Planning Area

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

Reach # 4.0 ILP Map # 093L.046 ILP # 2981 Site 986

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

Project Code: 5270

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093L.046 ILP #: 2981 NID Map #: 093L.045 NID #: 20986 Reach #: 4.0 Site #: 986
Field UTM (Z.E.N): 9.627433.6040047 Method: GPU Site Lg: 300 Method: HC Access: H
GIS UTM (Z.E.N): 9.627419.6040077 Ref. Name:
Date: 2002/09/07 Time: 09:00 Agency: C172 Crew: SG/SH Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	8.60	9.40	10.20	8.40	9.60	8.60					9.13	Method I:	1.0	1.5	C	2.38
Wetted Width (m):	MS	8.20	9.10	9.60	8.00	8.60	7.80					8.55	Method II:	4.0	3.0	C	
Pool Depth (m):	MS	0.60	0.50	0.40	0.80							0.58					

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	D	S	T	T	T	N
Loc: P/S/O:	☒	☒	☒	☒	☒	☒	☒

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☒ M ☒ V ☐

LWD: F DIST: E

LB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: C

STG: MF

RB SHP: S

Texture: F ☐ G ☐ C ☒ B ☐ R ☐ A ☐

RIP: C

STG: MF

WATER

EMS: Temp: 6 Method: T4 Req #: Cond.: 40 Method: S3
pH: 7.1 Method: P2 Turb.: T ☐ M ☐ L ☐ C ☒ Method: GE
Flood Signs: Abandon side channel Method: GE

MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3
D95: 35.0 D (cm): 12.00 Morph: RP DISTURBANCE INDICATORS
Pattern: ME 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
093L.045	27286	X	3.0	GE	25	GE	R: 95 F: 14 L:	#:	9.627313.6040108	GIS
Comments: Log Jam from multiple slides.										
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
093L.045	26286	F	10.0	GE	2	GE	R: 95 F: 12 L:	#:	9.626652.6040276	GIS
Comments: Lower Falls.										

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
4.0	093L.046	2981	986

FEATURES													
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto		UTM (Z/E/N)	Method
093L.045	25286	F	25.0	GE	5	GE	R:	95	F:	11	L:		GIS
Comments:		Falls at outlet Melissen Lake.											
HABITAT QUALITY													
Name		Comments											
Spawning Habitat		Good - abundant gravels in lower areas of tributaries and off channel areas.											
OverWinter Habitat		Good - due to abundant cover, deep pools in mainstem and off channel areas and perennial flows.											
Rearing Habitat		Good - due to abundant cover and off channel areas.											
PHOTOS													
Photo				Foc Lg	Dir	Comments							
R:	95	F:	11	STD	U	Upstream photo of falls at outlet of Melissen Lake.							
R:	95	F:	12	STD	U	Upstream photo of Lower Falls.							
R:	95	F:	13	STD	U	Upstream photo of snow slide tailout.							
R:	95	F:	14	STD	U	Upstream photo of log jam from multiple slides.							
R:	95	F:	15	STD	D	Downstream photo of typical habitat through riffle area.							
R:	95	F:	16	STD	U	Upstream photo of typical habitat with abundant LWD.							
COMMENTS													
Section		Comments											
CHANNEL		S2 - DV captured.											

FDIS Fish Card

Morice North Planning Area

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

Reach # 4.0 ILP Map # 093L.046 ILP # 2981

WATERBODY															
Gazetted Name:										Local:					
Project Code: 460-000000-00000-00000-0000-000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000															
Waterbody ID:				ILP Map #: 093L.046				ILP #: 2981		Reach #: 4 -					
Project ID: 5270				Lake/Stream: S				Lake From Date:							
Fish Permit #: 145269		Date: 2002/09/07		To: 2002/09/07		Agency: C172		Crew: SG/SH		Resample: ☐					
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
986	093L.045	20986				GPU EF 1	4	60	C						
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
986	EF 1	1	2002/09/07	09:00	2002/09/07	10:30									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
986	EF 1	1	O	856	300.0	8.0	1000	60	6	SMITH ROOT	12B				
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment					
986	EF 1	1	DV	J		5	85	115	R						
986	EF 1	1	DV	F		6	33	45	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#				
986	EF 1	1	DV	35		U	IM								
986	EF 1	1	DV	37		U	IM								
986	EF 1	1	DV	42		U	IM								
986	EF 1	1	DV	45		U	IM								
986	EF 1	1	DV	35		U	IM								
986	EF 1	1	DV	33		U	IM								
986	EF 1	1	DV	110		U	IM								
986	EF 1	1	DV	115		U	IM								
986	EF 1	1	DV	95		U	IM								
986	EF 1	1	DV	85		U	IM								
986	EF 1	1	DV	87		U	IM								
COMMENTS															
Section			Comments												
WATERBODY			Fish sampling was conducted downstream of falls barrier in mainstem, tributaries and off channel areas. Low conductivity resulted in poor results with electrofishing.												



Site #986, Upstream photo of falls at outlet of Melissen Lake.
Roll #95, Frame #11, Date: 2002/09/07



Site #986, Upstream photo of Lower Falls.
Roll #95, Frame #12, Date: 2002/09/07



Site #986, Upstream photo of snow slide tailout.
Roll #95, Frame #13, Date: 2002/09/07



Site #986, Upstream photo of log jam from multiple slides.
Roll #95, Frame #14, Date: 2002/09/07



Site #986, Downstream photo of typical habitat through riffle area.
Roll #95, Frame #15, Date: 2002/09/07



Site #986, Upstream photo of typical habitat with abundant LWD.
Roll #95, Frame #16, Date: 2002/09/07

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.036 ILP # 3543

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000					ILP Map #: 093L.036		ILP #: 3543		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.636306.6023417				Sample Type: Biased			
Length (km): 1.43		Coupling: Decoupled		Magnitude: 5		BGC Zone: SBS			
Gradient (%): 4.9		Confinement: Occasionally Conf		Order: 3		Open water: Absent			
US Elev (m): 892		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 987		Field UTM ..		Agency: C172		Crew: SG/SH		Date: 2002/09/09	
Site Length (m): 100		GIS UTM 9.636367.6022112		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☒							
Dewatered: ☐		Tribes.: ☐							
Stage: Low ☒									
Med ☐									
High ☐									
Temp (C):		pH:		Conductivity:		Turbidity: Turbid ☐		Low ☐	
						Moderate ☐		Clear ☐	
MORPHOLOGY									
Bed Material: Dominant: Fines		D95 (cm): 0.05		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Not Applicable		D (cm): 0.05						Mid-channel ☐	
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: None		Amount: N		N		N		N	
LWD Dist: Not Specified		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: Deciduous		Stage: Pole-sapling stage						Crown Closure	
Left Bank: Rip.Veg:		Stage: Pole-sapling stage						1-20%	
								Instream Veg: None ☐	
								Algae ☐	
								Moss ☐	
								Vascular ☒	

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.036 ILP # 3543 Site 987

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000
ILP Map #: 093L.036 ILP #: 3543 NID Map #: 093L.036 NID #: 20987 Reach #: 1.0 Site #: 987
Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: HC Access: H
GIS UTM (Z.E.N): 9.636367.6022112 Ref. Name:
Date: 2002/09/09 Time: 13:44 Agency: C172 Crew: SG/SH Fish Crd?: ☐ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg
Channel Width (m):	MS	0.60	0.80	0.60	0.60	0.60	0.70					0.65
Wetted Width (m):	MS											0.00
Pool Depth (m):	MS											0.00

	Gadient %		Mtd	Avg
Method I:	0.5	0.5	C	0.67
Method II:	1.0		C	

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:	N	N	N	N	N	D	S
Loc: P/S/O:	☐	☐	☐	☐	☐	☐	☐

LWD: N DIST: NS

LB SHP: S

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☐ V ☒

RB SHP: S

Texture: F ☒ G ☐ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

WATER

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

MORPHOLOGY

Bed Material: Dominant: F Subdom: NA O1 B1 B2 B3 D1 D2 D3
D95: 0.05 D (cm): 0.05 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	None - no gravels.
OverWinter Habitat	None - no pool and seasonal.
Rearing Habitat	Poor - no pool habitat and seasonal stream flow.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 93 F: 14	STD	D	Downstream photo of site.
R: 93 F: 15	STD	U	Upstream photo of site.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.036	3543	987

COMMENTS	
Section	Comments
CHANNEL	S4 - no barriers observed.



Site #987, Downstream photo of site.
Roll #93, Frame #14, Date: 2002/09/09



Site #987, Upstream photo of site.
Roll #93, Frame #15, Date: 2002/09/09

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

3.0 093L.047 3028

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.047		ILP #: 3028		
REACH									
Reach #: 3.0		UTM(Zone/East/North): 9.642257.6032329				Sample Type: Random			
Length (km): .47		Coupling: Decoupled		Magnitude: 10		BGC Zone: SBS			
Gradient (%): 0.0		Confinement: Occasionally Conf		Order: 3		Open water: Absent			
US Elev (m): 608		Islands: NONE		Riparian Vegetation: Deciduous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 988		Field UTM ..		Agency: C172		Crew: SG/SH		Date: 2002/09/09	
Site Length (m): 125		GIS UTM 9.642255.6032647		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☒		Tribes.: ☐		Channel Width (m):		2.02		1.9	
Stage: Low ☒				Wetted Width (m):		0.20		0	
Med ☐				Bankfull Depth (m):		0.23		0.2	
High ☐				pH: 7.4		Conductivity: 100			
				Turbidity: Turbid ☐		Low ☐			
						Moderate ☐		Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Cobble		D95 (cm): 17.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Gravels		D (cm): 5.00				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: Moderate		Type: SWD		LWD		B		U	
		Amount: T		S		T		T	
LWD: Few		Location: P/S/O: ☒		☒		☒		☒	
LWD Dist: Evenly Distributed									
Right Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Left Bank: Shape: Sloping (g)		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐	
Right Bank: Rip.Veg: Deciduous		Stage: Young forest		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)
988	EF	1	100	181 sec	600	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 3.0 ILP Map # 093L.047 ILP # 3028 Site # 988

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-0000-000-000-000-000-000

WATERSHED

Gazetted Name: Local Name:
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000
ILP Map #: 093L.047 ILP #: 3028 NID Map #: 093L.046 NID #: 20988 Reach #: 3.0 Site #: 988
Field UTM (Z.E.N): .. Method: Site Lg: 125 Method: HC Access: V4
GIS UTM (Z.E.N): 9.642255.6032647 Ref. Name:
Date: 2002/09/09 Time: 16:15 Agency: C172 Crew: SG/SH 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	2.00	1.90	2.10	1.90	2.00					2.02	Method I:	2.0	4.0	C	2.50
Wetted Width (m):	MS	0.40	0.00	0.30	0.20	0.30	0.00					0.20	Method II:	2.0	2.0	C	
Pool Depth (m):	MS	0.10	0.10	0.10	0.10							0.10					

Wb Depth: .3 .2 .2 Avg: 0.23 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	T	T	N	D	T
Loc: P/S/O:	☒	☒	☒	☒	☐	☒	☒

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N ☐ A ☐ M ☐ V ☒

LWD: F DIST: E

LB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: PS

RB SHP: S

Texture: F ☐ G ☒ C ☐ B ☐ R ☐ A ☐

RIP: D

STG: YF

WATER

EMS: Temp: 7 Method: T4 Req #: Cond.: 100 Method: S3
pH: 7.4 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: 17.0 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: UN
FSZ: ☐ Bars: N ☒ SIDE ☐ DIAG ☐ MID ☐ SPAN ☐ BR ☐

HABITAT QUALITY

Name	Comments
Spawning Habitat	Poor - good gravel in margins but limited by seasonal stream flow.
OverWinter Habitat	None - no pools and seasonal stream.
Rearing Habitat	Poor - excellent cover but limited by lack of pools.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 93 F: 16	STD	D	Downstream photo of typical habitat - dry.
R: 93 F: 17	STD	U	Upstream photo of typical habitat.
R: 93 F: 18	STD	U	Private culvert (damaged) 450 mm at 12% slope.

FDIS Site Card

Morice North Planning Area

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

Reach #3.0

ILP Map #093L.047

ILP #3028

Site988

COMMENTS	
Section	Comments
CHANNEL	Culvert is plugged and stream flow is ponded above culvert. This ponding has potentially resulted in the dewaterd channel here and downstream at the Walcot road crossing.
CHANNEL	S3* (accessible).

Morice North Planning Area

Reach #	ILP Map #	ILP #
3.0	093L.047	3028

Triton Environmental Consultants Ltd.



Site #988, Downstream photo of typical habitat - dry.
Roll #93, Frame #16, Date: 2002/09/09



Site #988, Upstream photo of typical habitat.
Roll #93, Frame #17, Date: 2002/09/09



Site #988, Private culvert (damaged) 450 mm at 12% slope.
Roll #93, Frame #18, Date: 2002/09/09

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

1.0 093L.046 2927

STREAM REFERENCING									
Gazetted Name:					Local Name:				
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000					ILP Map #: 093L.046		ILP #: 2927		
REACH									
Reach #: 1.0		UTM(Zone/East/North): 9.635502.6035530				Sample Type: Biased			
Length (km): .36		Coupling: Coupled		Magnitude: 6		BGC Zone: SBS			
Gradient (%): 7.8		Confinement: Occasionally Conf		Order: 3		Open water: Absent			
US Elev (m): 902		Islands: NONE		Riparian Vegetation: Coniferous					
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified									
SITE									
Site #: 996		Field UTM 9.635502.6035770		Agency: C172		Crew: SG/SH		Date: 2002/09/07	
Site Length (m): 350		GIS UTM 9.635534.6035661		Agency Name: Triton Environmental Consultants (Terrace)					
CHANNEL									
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max	
Dewatered: ☐		Tribes.: ☐		Channel Width (m): 2.92		2.6		3.3	
Stage: Low ☒				Wetted Width (m): 1.78		1.4		2.200	
Med ☐				Bankfull Depth (m): 0.23		0.2		0.3	
High ☐		Temp (C): 7		pH: 6.9		Conductivity: 80		Turbidity: Turbid ☐ Low ☐	
								Moderate ☐ Clear ☒	
MORPHOLOGY									
Bed Material: Dominant: Gravels		D95 (cm): 10.00		Bars: Non ☒		Side ☐		Diagonal ☐	
Subdominant: Fines		D (cm): 6.00				Mid-channel ☐		Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE INDICATORS		O1		B1	
Coupling: Coupled						B2		B3	
Confinement: 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: Abundant		Amount: T		S		N		T	
LWD Dist: Evenly Distributed		Location: P/S/O: ☒		☒		☒		☒	
		☒		☒		☒		☒	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☒		Boulder ☐	
Left Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☐		Cobble ☒		Boulder ☐	
Right Bank: Rip.Veg: Coniferous		Stage: Mature forest						Rock ☐	
Left Bank: Rip.Veg:		Stage: Mature forest						Manmade ☐	
								Crown Closure 1-20%	
								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)
996	EF	1	35	543 sec	700	NFC	0		

FDIS Site Card

Morice North Planning Area

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

Reach # 1.0 ILP Map # 093L.046 ILP # 2927 Site 996

PROJECT

Project Name: RFFHI within the Morice Forest District (tribs to Morice R.)
Stream Name (gaz.): BULKLEY RIVER Project Code: 5270
Project Watershed Code: 460-000000-00000-00000-0000-000-000-000-000-000-000

WATERSHED

Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000
ILP Map #: 093L.046 ILP #: 2927 NID Map #: 093L.046 NID #: 20996 Reach #: 1.0 Site #: 996
Field UTM (Z.E.N): 9.635502.6035770 Method: GPU Site Lg: 350 Method: HC Access: H
GIS UTM (Z.E.N): 9.635534.6035661 Ref. Name:
Date: 2002/09/07 Time: 17:00 Agency: C172 Crew: SG/SH Fish Crd?: ☒ Incomplete: ☐

CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	2.80	2.70	2.60	2.90	3.20	3.30					2.92	Method I:	3.0	3.0	C	3.25
Wetted Width (m):	MS	1.50	1.60	1.40	1.90	2.10	2.20					1.78	Method II:	3.0	4.0	C	
Pool Depth (m):	MS	0.30	0.30	0.20	0.20	0.40	0.30					0.28					

Wb Depth: .2 .2 .3 Avg: 0.23 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	T	D	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.: 80 Method: S3
pH: 6.9 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): 6.00 Morph: RP 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
Spawning Habitat	Good - abundant gravel and spawning locations in runs and pools.
OverWinter Habitat	Good - due to perennial flow and deeper pool habitat.
Rearing Habitat	Good - due to abundant cover in deeper pools.

PHOTOS

Photo	Foc Lg	Dir	Comments
R: 94 F: 14	STD	D	Downstream photo of typical habitat within site.
R: 94 F: 15	STD	U	Upstream photo of typical habitat within site with log.

FDIS Site Card

Morice North Planning Area

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

Reach #	ILP Map #	ILP #	Site
1.0	093L.046	2927	996

COMMENTS	
Section	Comments
CHANNEL	S6, Barrier downstream.

Morice North Planning Area

Reach #	ILP Map #	ILP #
1.0	093L.046	2927

Triton Environmental Consultants Ltd.



Site #996, Downstream photo of typical habitat within site.
Roll #94, Frame #14, Date: 2002/09/07



Site #996, Upstream photo of typical habitat within site with log.
Roll #94, Frame #15, Date: 2002/09/07

FDIS Reach/Site Summary

Morice North Planning Area

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

Reach # ILP Map # ILP #

3.0 093L.056 2450

STREAM REFERENCING											
Gazetted Name:						Local Name:					
Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000						ILP Map #: 093L.056			ILP #: 2450		
REACH											
Reach #: 3.0		UTM(Zone/East/North): 9.635450.6043068				Sample Type: Biased					
Length (km): 1.10		Coupling: Partially Couple		Magnitude: 8		BGC Zone: SBS					
Gradient (%): 4.4		Confinement: Occasionally Conf		Order: 2		Open water: Absent					
US Elev (m): 799		Islands: NONE		Riparian Vegetation: Mixed C/D							
Bars: None ☒ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified											
SITE											
Site #: 273		Field UTM 9.635954.6042864		Agency: C172		Crew: SG/SH		Date: 2002/09/05			
Site Length (m): 120		GIS UTM 9.636035.6042839		Agency Name: Triton Environmental Consultants (Terrace)							
CHANNEL											
No Vis.Ch.: ☐		Intermittent: ☐		Avg		Min		Max		#	
Dewatered: ☐		Tribes.: ☐		Channel Width (m):		2.00		1.4		2.6	
Stage: Low ☒				Wetted Width (m):		1.16		0.600		1.55	
Med ☐				Bankfull Depth (m):		0.20		0.2		0.2	
High ☐		Temp (C): 4		pH: 6.8		Conductivity: 110					
								Turbidity: Turbid ☐		Low ☐	
								Moderate ☐		Clear ☒	
MORPHOLOGY											
Bed Material: Dominant: Gravels		D95 (cm): 25.00		Bars: Non ☒		Side ☐		Diagonal ☐		Mid-channel ☐	
Subdominant: Cobble		D (cm): 12.00								Span ☐	
Channel Pattern: Sinuous		Islands: None		DISTURBANCE		O1		B1		B2	
Coupling: Partially Coupled				INDICATORS		☐		☐		☐	
Confinement: Frequently Confined						C1		C2		C3	
Morphology: RP Riffle Pool						☐		☐		☐	
						C4		C5		S1	
						☐		☐		☐	
						S2		S3		S4	
						☐		☐		☐	
						S5					
						☐					
COVER											
Total Cover: Abundant		Type: SWD		LWD		B		U		DP	
LWD: Abundant		Amount: S		S		T		S		T	
LWD Dist: Evenly Distributed		Location: P/S/O:		☒		☒		☒		☒	
				☒		☒		☒		☒	
Right Bank: Shape: V - shape		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐	
Left Bank: Shape: Sloping (g		Texture: Fines ☐		Gravel ☒		Cobble ☐		Boulder ☐		Rock ☐	
Right Bank: Rip.Veg: Mixed C/D		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)
093L.056	25273	C	1.5	MS	2	HC	R: 96	F: 01A	L:	#:	9.636278.6042
Comments: Cascade over bedrock.											
NID Map	NID	Type	Hgt	Method	Lg	Method	Photo			AirPhoto	UTM (Z/E/N)
093L.056	26273	CV	.9	MS	20	HC	R: 97	F: 15	L:	#:	9.635959.6042
Comments: Perched 0.25 m (partial barrier), 0.45 m deep pool at 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)		
273	EF	1	120	340 sec	700	NFC	0				
2732	EF	1	80	270 sec	700	NFC	0				

Morice North Planning Area

Reach #	ILP Map #	ILP #
3.0	093L.056	2450

Triton Environmental Consultants Ltd.

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

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
Bed_Moveable_Particle	093L.015	3801	4	529	093L.025	50529	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.024	3580	1	311	093L.024	20311	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.025	3617	4	312	093L.024	20312	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.025	3618	1	589	093L.025	50589	Bed Moveable Particle (D) should be less than 0.2.	Field estimate
Bed_Moveable_Particle	093L.025	3618	1	589	093L.025	50589	D95 should be less than 0.2.	Field estimate
Bed_Moveable_Particle	093L.025	3618	1	589	093L.025	50589	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.025	3618	4	316	093L.025	20316	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.025	3620	1	317	093L.025	20317	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.025	3623	1	313	093L.025	20313	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.026	3681	1	518	093L.026	50518	Bed Moveable Particle (D) should be less than 0.2.	Field estimate
Bed_Moveable_Particle	093L.026	3681	1	518	093L.026	50518	D95 should be less than 0.2.	Field estimate
Bed_Moveable_Particle	093L.026	3681	1	518	093L.026	50518	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.026	3693	1	597	093L.026	50597	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.026	3723	1	323	093L.026	20323	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.026	3725	1	596	093L.026	50596	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.035	3146	2	599	093L.035	50599	Bed Moveable Particle (D) should be less than 0.2.	Field estimate
Bed_Moveable_Particle	093L.035	3146	2	599	093L.035	50599	D95 should be less than 0.2.	Field estimate
Bed_Moveable_Particle	093L.036	3406	4	546	093L.036	50546	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.036	3439	1	547	093L.036	50547	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.036	3529	3	516	093L.036	50516	Bed Moveable Particle (D) should be less than 0.2.	Field estimate
Bed_Moveable_Particle	093L.036	3529	3	516	093L.036	50516	D95 should be less than 0.2.	Field estimate
Bed_Moveable_Particle	093L.036	3529	3	516	093L.036	50516	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.036	3543	1	987	093L.036	20987	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.046	2868	6	545	093L.046	50545	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.046	2937	2	260	093L.046	20260	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.046	2939	2	561	093L.046	50561	Bed Moveable Particle (D) should be less than 0.2.	Field estimate

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
Bed_Moveable_Particle	093L.046	2939	2	561	093L.046	50561	D95 should be less than 0.2.	Field estimate
Bed_Moveable_Particle	093L.046	2939	2	561	093L.046	50561	D95 is less than D.	Field estimate
Bed_Moveable_Particle	093L.046	2981	7	539	093L.045	50539	D95 is less than D.	Field estimate
CONFINEMENT	093L.014	3783	2	306	093L.014	20306	if Confinement EN then Reach Confinement must = EN or CO.	Field measurement differs from map estimate.
CONFINEMENT	093L.014	3783	3	49	093L.014	20049	if Confinement EN then Reach Confinement must = EN or CO.	Field measurement differs from map estimate.
CONFINEMENT	093L.014	3784	1	305	093L.014	20305	if Confinement EN then Reach Confinement must = EN or CO.	Field measurement differs from map estimate.
CONFINEMENT	093L.026	3681	1	518	093L.026	50518	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	093L.034	3042	2	319	093L.034	20319	if Confinement EN then Reach Confinement must = EN or CO.	Field measurement differs from map estimate.
CONFINEMENT	093L.035	3162	1	332	093L.035	20332	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	093L.035	3184	1	614	093L.035	50614	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.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
CONFINEMENT	093L.035	3275	3	610	093L.035	50610	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	093L.046	2868	5	281	093L.046	20281	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	093L.046	2885	2	268	093L.046	20268	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.046	2910	3	261	093L.046	20261	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.046	2927	1	996	093L.046	20996	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.

3363/WP T-1390

Morice North Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FEATURE	093L.036	3477	5	329	093L.035	20329	Roll and Frame missing.	No photos taken.
FEATURE	093L.046	2912	5	266	093L.046	20266	Roll and Frame missing.	No photos taken.
FISH EF SPECS	093L.014	3781	3				EF Length 2 must be >= 100 for Site # 304; Method & #: EF/1; H/P: 1	Electroshocked in a small pool at culvert inlet.
FISH EF SPECS	093L.046	2873	1				EF Length 50 must be >= 100 for Site # 279; Method & #: EF/1; H/P: 1	First 50 m had water, the rest of the stream was DRY.
FISH EF SPECS	093L.046	2873	2				EF Length 20 must be >= 100 for Site # 272; Method & #: EF/1; H/P: 1	Electroshocking was conducted in two isolated pools below culvert outlet. Dewatered.
FISH EF SPECS	093L.046	2877	4				EF Length 10 must be >= 100 for Site # 283; Method & #: EF/1; H/P: 1	Electroshocked a small isolated pool above CV. DRY/INTERMITTENT stream.
FISH EF SPECS	093L.046	2913	1				EF Length 10 must be >= 100 for Site # 262; Method & #: EF/1; H/P: 1	Electroshocked in a small isolated pond at CV inlet, stream is NCD upstream and downstream of pond.
FISH EF SPECS	093L.046	2925	1				EF Length 50 must be >= 100 for Site # 293; Method & #: EF/1; H/P: 1	Electroshocked in a small isolated pool from the confluence for 50 m upstream. DRY/INTERMITTENT stream.
FISH EF SPECS	093L.046	2941	1				EF Length 100 must be >= 172 for Site # 253; Method & #: EF/1; H/P: 1	Site length was 150 m, electroshocking length was 100 m.
FISH EF SPECS	093L.047	3028	2				EF Length 30 must be >= 100 for Site # 259; Method & #: EF/1; H/P: 1	All fish were captured in the culvert outlet pool. This stream was Dewatered.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.013	3731	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3742	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3742	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3742	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3743	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3746	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3749	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3749	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3749	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3753	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.013	3753	2				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.014	3776	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.014	3777	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.014	3781	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.014	3783	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.014	3783	5				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.014	3784	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.014	3787	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.024	3580	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3599	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3599	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3601	3				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.025	3601	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3602	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3605	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3607	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3617	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3617	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3617	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3618	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3618	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3618	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3618	5				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.025	3620	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3623	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3626	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3628	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3628	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3628	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3633	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3633	6				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3637	5				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.025	3638	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3633	2				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.026	3675	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3678	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3682	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3684	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3688	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3695	7				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3697	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3698	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3701	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3711	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3715	4				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.026	3716	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.026	3723	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.034	3042	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3073	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3112	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3122	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3138	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3146	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3146	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3155	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3164	1				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.035	3164	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3164	6				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3174	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3178	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3182	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3184	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3247	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3247	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3252	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3259	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3259	4				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.035	3275	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3275	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3315	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3315	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3315	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3332	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3332	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3332	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3349	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3349	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3350	1				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.035	3357	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3361	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.035	3375	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3406	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3406	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3406	5				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3406	6				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3406	10				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3412	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3412	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3439	1				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.036	3439	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3439	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3471	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3477	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3477	5				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3477	6				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3520	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3526	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3528	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3529	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3532	1				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.036	3532	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3549	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.036	3559	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.045	2593	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.045	2593	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.045	2593	6				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.045	2610	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.045	2690	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.045	2774	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2868	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2868	4				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.046	2868	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2868	6				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2868	6				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2868	7				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2868	8				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2868	8				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2868	9				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2868	10				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2873	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2873	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2877	1				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.046	2877	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2877	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2885	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2908	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2912	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2912	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2912	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2912	5				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2913	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2915	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2925	1				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.046	2927	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2934	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2937	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2941	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2941	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2941	6				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2942	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2942	1				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2981	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2981	7				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2981	8				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.046	2981	10				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2981	12				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.046	2999	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.047	3028	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.047	3028	3				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.056	2445	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.056	2445	4				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.056	2445	7				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.056	2445	8				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.056	2445	9				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.056	2445	11				WARNING: A stream should have a minimum of two methods.	No comment.

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
FISH FORM	093L.056	2445	13				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.056	2445	14				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.056	2450	2				WARNING: A stream should have a minimum of two methods.	No comment.
FISH FORM	093L.056	2450	6				WARNING: A stream should have a minimum of two methods.	No comment.
Gradient	093L.013	3736	3	309	093L.013	20309	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.013	3737	2	46	093L.013	20046	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.013	3740	2	45	093L.013	20045	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.013	3742	2	44	093L.013	20044	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.013	3743	1	455	093L.013	95455	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.013	3749	1	42	093L.013	20042	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.013	3749	1	452	093L.013	95452	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
Gradient	093L.013	3749	2	41	093L.013	20041	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.014	3784	1	305	093L.014	20305	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.014	3787	3	48	093L.013	20048	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.024	3580	1	311	093L.024	20311	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.025	3618	4	316	093L.025	20316	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.025	3633	6	533	093L.026	50533	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.026	3678	8	338	093L.045	20338	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.026	3681	1	518	093L.026	50518	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.026	3688	1	517	093L.026	50517	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.026	3710	3	521	093L.026	50521	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.026	3711	1	520	093L.026	50520	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
Gradient	093L.026	3723	1	323	093L.026	20323	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.026	3725	1	596	093L.026	50596	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3112	1	330	093L.035	20330	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3122	1	328	093L.035	20238	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3146	1	601	093L.035	50601	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3155	2	334	093L.035	20334	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3162	1	332	093L.035	20332	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3164	6	354	093L.035	20354	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3182	1	351	093L.035	20351	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3182	2	613	093L.035	50613	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3184	1	614	093L.035	50614	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
Gradient	093L.035	3247	1	349	093L.035	20349	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3252	1	611	093L.035	50611	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3259	4	320	093L.034	20320	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3275	1	592	093L.035	50592	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3275	3	610	093L.035	50610	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3315	3	595	093L.035	50595	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3332	1	348	093L.035	20348	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3332	2	347	093L.035	20347	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3361	2	341	093L.035	20341	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.035	3375	1	586	093L.035	50586	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.036	3471	3	456	093L.036	95456	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
Gradient	093L.036	3471	5	461	093L.046	95461	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.036	3525	3	507	093L.036	50507	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.036	3543	1	987	093L.036	20987	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.036	3549	2	512	093L.036	50512	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.037	3571	1	500	093L.037	50500	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.045	2593	4	541	093L.045	50541	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.045	2593	6	289	093L.045	20289	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.045	2774	1	340	093L.045	20340	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.046	2868	4	282	093L.046	20282	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.046	2868	5	280	093L.046	20280	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.046	2874	1	269	093L.046	20269	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
Gradient	093L.046	2885	2	268	093L.046	20268	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.046	2908	2	459	093L.046	95459	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.046	2910	3	261	093L.046	20261	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.046	2927	1	996	093L.046	20996	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.047	3028	3	988	093L.046	20988	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.047	3028	6	286	093L.046	20286	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
Gradient	093L.056	2445	9	336	093L.055	20336	Average Gradient is higher than the reach gradient plus the tolerance.	Field measurement is different than map estimate
Gradient	093L.056	2450	6	276	093L.056	20276	Average Gradient is lower than the reach gradient minus the tolerance.	Field measurement is different than map estimate
PATTERN	093L.035	3275	2		093L.035	11066	Gradient cannot exceed 8% when the Reach Pattern is IM/ME	Field measurement is different than map estimate
PATTERN	093L.035	3357	1		093L.035	11187	Gradient cannot exceed 8% when the Reach Pattern is IM/ME	Field measurement is different than map estimate
PATTERN	093L.035	3361	2		093L.035	11190	Gradient cannot exceed 8% when the Reach Pattern is IM/ME	Field measurement is different than map estimate

Morice North Planning Area FDIS QA

Field Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
PATTERN	093L.045	2542	2		093L.045	10212	Gradient cannot exceed 8% when the Reach Pattern is IM/ME	Field measurement is different than map estimate
PATTERN	093L.045	2593	4		093L.045	10273	Gradient cannot exceed 8% when the Reach Pattern is IM/ME	Field measurement is different than map estimate
PATTERN	093L.045	2641	2		093L.045	10424	Gradient cannot exceed 8% when the Reach Pattern is IM/ME	Field measurement is different than map estimate
PATTERN	093L.055	2435	1		093L.055	10038	Gradient cannot exceed 8% when the Reach Pattern is IM/ME	Field measurement is different than map estimate
REACHCARD	093L.013	3753	2		093L.013	12352	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.025	3602	3		093L.025	11996	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.025	3605	2		093L.035	11236	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.025	3618	2		093L.025	11947	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.025	3628	1		093L.025	11205	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.025	3637	5		093L.025	12106	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.026	3678	3		093L.035	11000	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.

Morice North Planning Area FDIS QA

Field_Name	ILP Map	ILP	Reach	Site	NID Map	NID	Comment	Triton Comment
REACHCARD	093L.026	3678	6		093L.035	11003	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.026	3684	1		093L.026	12187	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.026	3698	3		093L.026	12151	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.035	3164	2		093L.035	11291	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.035	3247	4		093L.035	11032	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.036	3406	5		093L.036	11622	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.036	3528	2		093L.036	11557	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.036	3529	1		093L.036	11565	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.036	3532	3		093L.036	11576	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.046	2868	7		093L.046	10831	Site card must be filled out.	Fish only sampling site. No site card filled out in the field.
REACHCARD	093L.046	2868	9		093L.045	10337	Site card must be filled out.	Fish only sampling site. No site card filled out in the 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 <u>see attached email and digital deliverables CD</u>
	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 <u>see attached email and digital deliverables CD</u>
	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											
	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				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											
	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:													

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											
Electrofischer 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	931.046	931.013	931.046	931.046	931.036	931.046
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 deliverable s CD
	Mapping files (metadata and map features files)	N	see attached email and digital deliverable s 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.

TABLE OF CONTENTS

	Page
1.0 INTRODUCTION	1
1.1 Summary of Work Completed	1
2.0 STUDY AREA AND ACCESS	1
2.1 List of Trim Maps	2
2.2 Working Areas and Major Sub-Basins within the Project Area	2
2.3 Access	2
3.0 BACKGROUND REVIEW	3
4.0 DEVIATION FROM RIC STANDARDS	4
4.1 Planning Phases	4
5.0 PROJECT PLAN	5
5.1 Phase 4: Field Data Collection (Streams)	5
5.1.1 Pre-Field Preparation	5
5.1.2 Equipment	5
5.1.3 Field Assessment	5
5.1.4 Fish Species Sampling	6
5.1.5 Habitat (Site) Description	6
5.1.6 Water Quality	7
5.1.7 Wildlife Observations	7
5.1.8 Photographic Documentation	7
5.1.9 Inventory Area Specific Sampling	7
5.1.10 Non Fish Bearing Reaches	8
5.1.11 Lakes Sampling	9
5.2 Lakes Plan	9
5.2.1 Phase 4: Field Data Collection	9
5.2.2 Field Assessment	9
5.2.3 Fish Species Sampling: Primary Lakes	9
5.2.4 Fish Species Sampling: Secondary Lakes	10
5.2.5 Fish Species Sampling: General	10
5.2.6 Lake Habitat Descriptions	11
5.2.7 Water Quality	12
5.2.8 Wildlife Observations	12
5.2.9 Photographic Documentation	12

6.0	PHASE 5 - DATA COMPILATION	13
7.0	PHASE 6 - REPORTING AND MAPPING	13
7.1	Existing Data	13
8.0	PROJECT TIMELINES	14
9.0	PROPOSED STAFF	14
10.0	EQUIPMENT LIST	15
11.0	CONTINGENCY PLAN	16

LIST OF TABLES

Table 1	Sample Site Summary by Planning Area	7
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LIST OF FIGURES

Figure 1	Tochcha Lake Planning Area Overview Map	v
Figure 2	Morice North Planning Area Overview Map	vi

APPENDICES

Appendix I	Project Phase Completion Report: Phases I - III
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

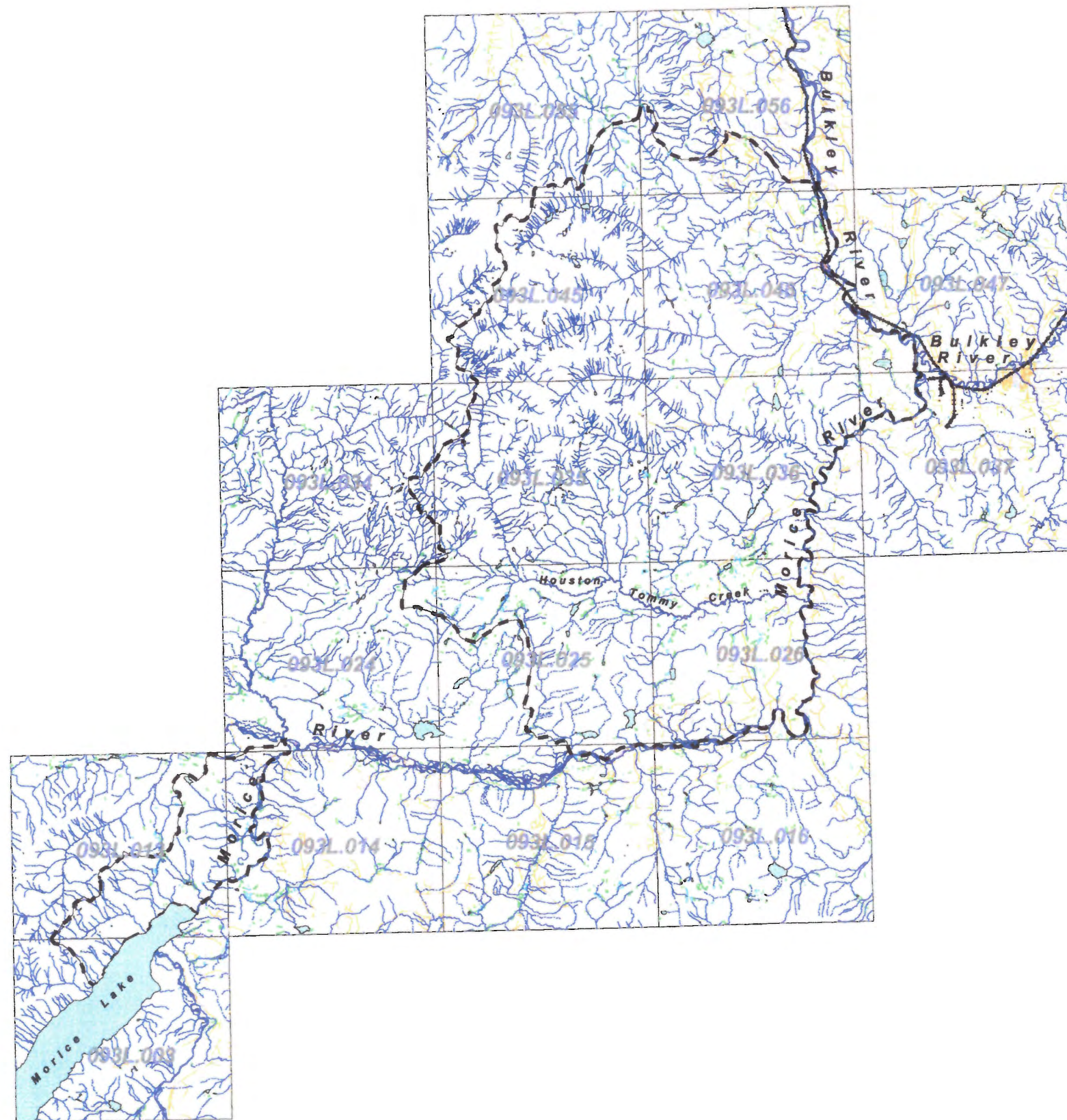
Tochcha Stream ILP Data Sheet
Tochcha Lake ILP Data Sheet
Tochcha Wetland ILP Data Sheet
Tochcha FDIS

tochcha stream ilp.dbf
tochcha lake ilp.dbf
tochcha wetland ilp.dbf
FDISDAT.mdb

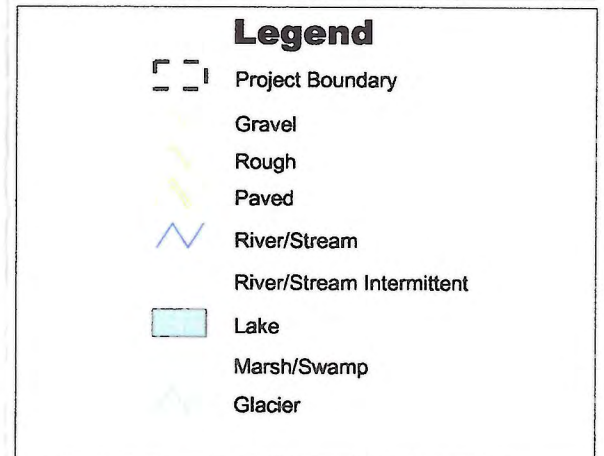
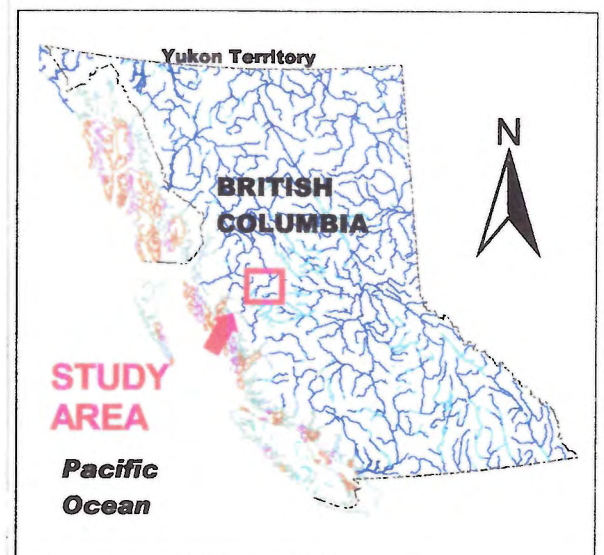
Morice Digital Data

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



Reconnaissance (1:20,000)
Fish and Fish Habitat Inventory
Morice North Planning Area
Overview Map
Figure 2



1: 300,000

5 0 5 Kilometers

Source: 1:20,000 TRIM Projection: UTM

Date: August 28, 2002
Created by: SJ

TRITON
ENVIRONMENTAL CONSULTANTS LTD.

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 (FHIIP 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*);
- redbside 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 coordination 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

Bibliography

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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)**



GRADIEN	FORM	SIZE								
		SMALL			MEDIUM			LARGE		
		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	8	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	000-000000-00000-00000-0000-0000-000-000-000-000	093L.045	2545	1.0		093L.045	10214	Wetland cannot have a confinement of CO

END OF REPORT