

Reconnaissance (1:20,000)

Fish and Fish Habitat Inventory of Unnamed Tributaries to the Southwest Shore of Babine Lake, South of Topley Landing (South Fulton Planning Area)

> WSC 480-705800 to 480-776600 Volume 2 of 2



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APPENDIX I

Reach Cards/Site Cards/Fish Collection Forms and Photographs

(Sites 366 to 953)

South Fulton Study Area

Reach # ILP Map #

093L.080

3.0

ILP# 10127

STREAM REFERENCING **Gazetted Name:** Local Name: JLP Map #: 093L.080 10127 REACH UTM(Zone/East/North): 9.684766.6074145 Reach #: 3.0 Sample Type: Biased Magnitude: 3 **BGC Zone:** SBS Length (km): 1.65 Coupling: Decoupled Order: 2 Open water: Absent Gradient (%): 2.1 Confinement: Occasionally Conf US Elev (m): 757 Islands: NONE Riparian Vegetation: Shrubs Mid-channel Span Braid Landuse: Not Specified Bars: None 🗹 Side 🗌 Diagonal 📗 SITE AND THE PARTY OF THE PARTY Mark 10 and 10 a Site #: 366 JA/SH Site Length (m): 100 GIS UTM 9.684788.6074838 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL No Vis.Ch.: Intermittent: 🗹 Avg Min Max # Avg Max # Channel Width (m): 1.100 1.30 1.5 6 4.25 6 Dewatered: Tribs.: Gradient %: 3 4 Wetted Width (m): 0.00 ō Ô Pool Depth (m): 0.00 ō 0 Stage: Low 🗸 Bankfull Depth (m): 0.60 0.5 0.7 3 Med Turbidity.: Turbid Low High Temp (C): Conductivity: Moderate: Clear NORPHOLOGY Bed Material: Dominant: Cobble D95 (cm): 19.00 Bars: Non 🗹 Side Diagonal Mid-channel Span i D (cm): 3.00 Subdominant: Gravels Braid 🔙 Channel Pattern: Irregular, Wandering Islands: None DISTURBANCE **B**3 **INDICATORS** Coupling: Decoupled Confinement: Unconfined C1 C2 C3 C4 C5 S1 S2 S3 **S4 S5** Morphology: RP Riffle Pool COVER SWD LWD nΡ Total Cover: Moderate Type: R П D Amount S N s N s LWD: None Location: P/S/O: • LWD Dist: FSZ: Texture: Fines Gravel Cobble Boulder Rock Manmade Texture: Fines Gravel Cobble Boulder Rock Manmade Right Bank: Manmade Shape: V - shape Crown Closure Left Bank: Shape: V - shape 1-20% Rip.Veg: Shrubs Stage: Mature forest Instream Veg: None Algae Moss Vascular

Stage: Mature forest

Left Bank:

Rip.Veg:

South Fulton Study Area

Reach # ILP Map #

ILP# 10127 Site 366

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							WAT	ERS	HED	4	200					27	***
Gazetted Nam	e:		_			_				Loc	cal Name	e: None					
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ILP Map	#: 0 93 L.0	080	I	LP #: 10	127	NID Ma	ap #: 090	3L.080	N	ID#: 30	0066	Rea	ch #:	;	3.0	Site #:	366
Field UTM (Z.E.N	D:			,	vlethod:					Site Lg	g: 100		Me	thod: HC		Access: V2	
GIS UTM (Z.E.N		88.6074	838						Re	ef. Name	: :						
D	ate: 200	1/10/04	7	Гіте: 14	:30		Agency:	C172	c	crew: .	ja/SH		ı	Fish Crd?	. 🗀	Incompi	ete:
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EMS	 S:			_						R	eq #:						
Tem	o:					Metho	od: T4			C	ond.:					Method: 3	33
pH							od: P2			Т	urb.: T	<u> </u>	L	. 🗀 с		Method:	GE
Flood Signs	s: None					Metho	od: GE					·		L-J	لبط		
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Name		T		rug ja .		<u> </u>		4.5		ommen	ts	Me de part	•		122		
Rearing Habita	ıt	Low -	Dry/Int														
Spawning Habit		Moder	ate - ass	ociated	with clea	n patch	es of gra	vel, limi	ted by D	ry/Int							
OverWinter Hab	itat	Low -	Dry/Int c	hannel													
					17.	PHOTOS						s:Ph-					
Photo		c Lg			Dir							Comme	nts				7
R: 91 F: 13		TD			Ú	_			pical hal								
R: 91 F: 14	S	TD	1		D	Idow	nstream	photo o	f typical I	nabitat v	vithin site	2					

South Fulton Study Area

Reach # ILI

ILP Map #

ILP#

Site 366

3.0

093L.080

enga naga naga di 16 mili tahung pe	COMMENTS
Section	Comments
CHANNEL	S4 by default



Site #366, upstream photo of typical habitat within site. Roll #91, Frame #13, Date: 2001/10/04



Site #366, downstream photo of typical habitat within site. Roll #91, Frame #14, Date: 2001/10/04

South Fulton Study Area

Reach # ILP Map # ILP#

1.0 093L.080 10118 STREAM REFERENCING - 12 **Gazetted Name:** Local Name: ILP Map #: 093L.080 ILP#: 10118 REACH UTM(Zone/East/North): 9.686459.6073261 Reach #: 1.0 Sample Type: Magnitude: 2 Length (km): .78 Coupling: Decoupled BGC Zone: SBS Open water: Absent Gradient (%): 2.0 Confinement: Unconfined Order: 2 Islands: NONE US Elev (m): 738 Riparian Vegetation: Shrubs Diagonal Mid-channel Braid Bars: None 🗹 Side Span Landuse: Not Specified Field UTM .. Agency: C172 Crew: JA/SH Date: 2001/10/04 Site #: 367 Site Length (m): 100 GIS UTM 9.686913.6073197 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL No Vis.Ch.: Min Max # Max Avg Ava Intermittent: Channel Width (m): 0.66 0.51 0.810 Gradient % 3.00 4 Tribs.: 6 Dewatered: Wetted Width (m): 0.47 0.310 0.71 5 Pool Depth (m): 0.07 0.02 0.12 4 Stage: I ow 🗸 Bankfull Depth (m): 0.33 0.3 0.4 Med Turbidity.: Turbid Low Clear 🗸 High Temp (C): 10 pH: 5.2 Conductivity: 235 Moderate MORPHOLOGY Side Diagonal Mid-channel Bars: Non 🗹 Bed Material: Dominant: Fines D95 (cm): 3.00 Braid Subdominant: Not Applicable D (cm): 1.00 DISTURBANCE Channel Pattern: Irregular Meanders Islands: None **B**3 **INDICATORS** Coupling: Decoupled Confinement: Unconfined СЗ C4 C5 S1 S2 S3 **S4** S5 Morphology: RP Riffle Pool COVER В Total Cover: Moderate Type: SWD LWD U DP ΟV I۷ Amount S S N Ŧ Ν D S LWD: Few Location: P/S/O: ~ LWD Dist: Evenly Distributed FSZ: Right Bank: Shape: V - shape 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: Shrubs Stage: Mature forest Instream Veg: None Algae Moss V Vascular V Left Bank: Rip.Veg: Stage: Mature forest

			ig-	* F1	8H. 🖭			- 21 PA1	
Site Number	Capture	Number of	Length fished	Total	Voltage	Species	Total	Minimum	Maximum
1	Method	Events	(m)	Time			Fish	Length (mm)	Length (mm)
367	l ce	4	100	63 sec	200	NFC			

South Fulton Study Area

Gazetted Name:

Field UTM (Z.E.N): ..

!LP Map#: 093L.080

GIS UTM (Z.E.N): 9.686913.6073197

Date: 2001/10/04

ILP Map # Reach #

IIP#

Site

Method: S3

Method: GE

ILP #: 10118

Time: 13:30

Method:

Stream Name (gaz.): BABINE RIVER

367 1.0 093L.080 10118 PROJECT Project Name: Smithers Landing Fish Inventory - 2000 Project Code: 3496 WATERSHED Local Name: None NID Map #: 093L.080 NID#: 30067 Reach #: 1.0 Site #: 367 Method: HC Site Lg: 100 Access: V2 Ref. Name: Fish Crd?: Crew: JA/SH Incomplete: Agency: C172

	Mtd	width v	vidth width	width	width	width	width	width	width	width	Avg		Gadi	ent %	Mtd	Av	
Channel Width (m):	MS (0.81	61 0.51	0.73	0.63	0.68					0.66	Method I:	2.0	3.0	C	3.0	
Wetted Width (m):	MS	0.71 (0.61 0.31	0.41	0.31						0.47	Method II:	3.0	4.0	С		
Pool Depth (m):	MS	0.02 (0.08 0.12	0.05							0.07					•	
											,	No Vis.Ch	,		_	_	
Wb Depth:	.3	.4	.3 Av	g: 0.33	N	lethod:	MS	St	age: L	✓ M	□ H [Dw.	<i>r</i> :	1	ribs		
COVER			Total: M														
Type:	SWD	LWD	В	U	DP		ov	IV	CR	OWN CL	OSURE						
Amount:	S	s	S N T N D S 1 1-20%														
Loc: P/S/O:	✓	Y		V													
LWD:	F		DIST: E						-								
LB SHP:	U								ı	RB SHP	: V						
Texture: F G C B R A Texture: F G C B R A																	
RIP:	s									R∤P	: S						
STG:	ME									STG	: MF						

CHANNEL

		- M	ORPHOLOGY.			***							
Bed Material: Don	ninant: F	Subdom: NA		01	B 1	B2	ВЗ	D1	D2	D3			
D95: 3.00 E	(cm): 1.00	Morph: RP	DISTURBANCE]		
Pattern: IM			INDICATORS	C1	C2	СЗ	C4	C5	S1	S2	S3	S4	S 5
islands: N													
Coupling: DC													
Confinement: UN			_		0.5								
FSZ:			Bars:	N	SID	E!	DIAC	3 🗌	MID	_ ;	SPAN		BR

Method: T4

Method: P2

Method: GE

Req#:

Cond.: 235

Turb.: T \square M \square L \square C \checkmark

Comments Name Rearing Habitat Moderate - associated with overhanging vegetation and instream vegetation limited by lack of flow OverWinter Habitat Low - associated with no deep pools / intermittent flow Spawning Habitat Low - associated with no clean patches of gravel observed

			· y · ·		posated trial the oldari pat	
					7.0	PHOTOS THE STATE OF THE STATE O
	Ph	oto		Foc Lg	Dir	Comments
R:	91] F:	11	STD	U	upstream photo of overhanging vegetation observed within sample site
R:	91	F:	12	STD	D	downstream photo of typical channel observed within sample site

EMS:

Flood Signs: None

Temp: 10

FSZ:

pH: 5.2

South Fulton Study Area

Reach #

ILP Map #

ILP#

Site 367

1.0

093L.080

and the second s	COMMENTS
Section	Comments
WATER	No Fish Caught
CHANNEL	S4 by default



Site #367, upstream photo of overhanging vegetation observed within sample site. Roll #91, Frame #11, Date: 2001/10/04



Site #367, downstream photo of typical channel observed within sample site. Roll #91, Frame #12, Date: 2001/10/04

FDIS Fish Card

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

480-718600-18048-00000-0000-0000-000-000-000-000-000-000

1.0

093L.080

Gaz	ettec	Name	:									Loca	al: No	ne			
P	rojec	t Code	480-0	000000-	00000	-00000-00	000-0000-	000-00	0-000-0	00-000)-0						
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W	atert	ody ID:	:						ILP Ma	ıp#:0	93L.08	0		ILP#:	10118 I	Reach #:	1 -
	Pro	ject ID:	3496									Lake/Str	eam:	S	Lake Fro	om Date:	
Fi	sh P	ermit #:	145	085K		Date:	2001/10/0)4	To:	2001/	10/04	Age	ency: C	172	Crew: JA/SH	Resa	mple:
			,					. 8	ITE:	M	ETH	OD .				/#** /	
Site#	Nil) Map	NID	#	UTM:	Zone/Eas	st/North/M	thd	MTD/N	10 1	Temp	Cond	Turbi	đ	Co	mment	
367	093	L.080	300	67				GPU	EF	1	10	235	С				
								A. 1	GEAF	t S	ETT	NGS	30.00	14,400		7	
Site#	МТ	D/NO	H/P	Date	e In	Time In	Date	Out	Time C	Out				Co	mment		
367	EF	1	1	2001/	10/04	13:30	2001/	10/04	14:05	5							
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367	E	-	1	1		0	63		100.0		0.8	20	00	I	5	SMITH	12B
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Site#	l	MTD/N	10	H/P	Sp	ecies	Stage	Age	e T	otal #	Lgti	n (Min/Ma	ax)	FishAct		Comment	

South Fulton Study Area

Reach # ILP Map #

ILP#

1.0 093L.080

	\$11.	EAM	REF	ERE	NCI	N G			1994		
Gazetted Name:					Local	Name:					
Watershed Code: 480-719689-0	0000-0000-0000-0000-0	00-000-0	000-000-0	000-000		ILF	Map #: 093	BL.080	IL	P #:	10125
			REA	CH							
Reach #: 1.0	UTM(Zone/East/N	lorth): 9	.687246.	6072332	2			Sample	Type:	Biase	ed
Length (km): 1.07	Coupling: Partially (Couple	Mag	gnitude:	: 1			BGC	Zone:	SBS	
Gradient (%): 6.9	Confinement: Occasion	ally Cont		Order				Open wa	nter: Abs	ent	
US Elev (m): 787	Islands: NONE		Rip	arian V	egetati	on: Shr	ubs				
Bars: None V Side Diag	onal Mid-channel	Span		raid 🔙	Lan	duse: N	ot Specified	7600 V 1 0000 7 11 00			
			SIT	E							0.0
	ield UTM			•	ncy: C		Crew:	JA/SH		2001/10	0/04
Site Length (m): 300	GIS UTM 9.687529.6073	176		Age	ncy Na	me: Trite	on Environm	ental Consu	ıltants (T	ептасе)	
		C	HAN	NEL			1975		A.	4.0	
No Vis.Ch.: V Intermittent:		Avg	Min	Max	#			Avg	Min	Max	#
Dewatered: Tribs.:			0	0	0] [Gradien		1	7_	4
Stage: Low	Wetted Width (m):		0	0	0	↓ L	Pool Depth	(m): 0.00	0	0	0
Med	Bankfull Depth (m):	0.00	0	0	0		1	Γurbidity.:	Turbid		Low
High Temp (C	C): pH:		C	Conducti	vity:			N	loderate		Clear
Tank		MOR	RPHO	LOG	Y				or fig.	*	N. W.
Bed Material: Dominant:	D95 (cm):		1	Bars: Non 🗌 Side 🔛 Diagonal 🔲 Mid-ch							pan 🔲
Subdominant:	D (cm):									В	raid
Channel Pattern:	Islands:			RBANCE	E _ 01	B1	B2 B3	3 D1	D2 D	3	
Coupling:			INDIC	ATORS							
Confinement:			C1	C2	C3 (C4 C	5 S1	S2 S3	S4	S5	
Morphology:											
			COVE	ER			114			+ . • #9	
Total Cover:	Type:	SWD	LWD)	В	U	DP	ov	IV		
LWD:	Amount:										
LWD Dist:	Location: P/S/O:									FS	z: 🔲
Right Bank: Shape:	Texture: Fines Gr	avel	Cobble	Boul	der	Rock	Manmade	e[]	Cro	wn Clo	sure
Left Bank: Shape:		avel	Cobble	Boul	===	Rock	Manmade		J.,	1-2	
Right Bank: Rip.Veg:	Stag	je:	_	_		1-					•
Left Bank: Rip.Veg:	Stag	je:			Ins	tream V	eg: None	Algae	Moss [Vas	cular 🗌
								_			

South Fulton Study Area

Reach #

Comments

upstream photo of vegetated depression within site

downstream photo of typical vegetation observed within sample site

ILP Map #

ILP#

Site

1.0 093L.080 10125 368 PROJECT d it wash Project Name: Smithers Landing Fish Inventory - 2000 Project Code: 3496 Stream Name (gaz.): BABINE RIVER WATERSHED Local Name: None Gazetted Name: NID #: 30068 1.0 Site #: 368 ILP#: 10125 NID Map #: 093L.080 Reach #: ILP Map#: 093L.080 Site Lg: 300 Method: HC Access: V2 Field UTM (Z.E.N): .. Method: GIS UTM (Z.E.N): 9.687529.6073176 Ref. Name: Fish Crd?: Date: 2001/10/04 Time: 13:00 Agency: C172 Crew: JA/SH incomplete: CHANNEL Gadient % Mtd width width width width Avg Mtd width width width width width width Avg 0.00 Method I: 7.0 3.75 Channel Width (m): MS 0.00 Method II: 1.0 3.0 C Wetted Width (m): MS Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Stage: L M H Dw: Tribs.: Wb Depth: Avg: 0.00 Method: MS COVER Total: CROWN CLOSURE SWD LWD DP OV ΙV 8 Ū Type: 1-20% Amount Loc: P/S/O: INSTREAM VEG: N A M V DIST: LWD: RB SHP: LB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER Req#: EMS: Temp: Method: T4 Cond.: Method: S3 Method: P2 pH: Turb.: T _ M _ L _ C _ Method: GE Flood Signs: Method: GE MORPHOLOGY O1 **B**1 B2 **B3** D₁ D2 D3 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S2 S3 S5 Islands: Coupling: Confinement: SIDE DIAGE Bars N MID **BR** FSZ: CHABITAT QUALITY Name Comments OverWinter Habitat None - associated to No Visible Channel Rearing Habitat None - associated to No Visible Channel Spawning Habitat None - associated to No Visible Channel PHOTOS Harris Derrang

10

Photo

91

91

Foc Lg

STD

STD

Dir

U

n

South Fulton Study Area

Section CHANNEL

Reach #

ILP Map #

ILP#

Site

9	689-00000-00000-0000-0000-000-000-000-000	1.0	093L.080	10125	368
	COMMENTS:			1.11	F.D.J. Jan.
	C	Comments			
	alder swirls were observed				



Site #368, upstream photo of vegetated depression within site. Roll #91, Frame #09, Date: 2001/10/04



Site #368, downstream photo of typical vegetation observed within sample site. Roll #91, Frame #10, Date: 2001/10/04

South Fulton Study Area

Reach # ILP Map #

ILP#

1.0 093L.080

	STRE	AH	KEF	EKE	N C J N	•		***	1	. 1 ft	. #	
Gazetted Name:					Local P	lame:						
Watershed Code: 480-722721-000	00-00000-0000-0000-000-0	000-00	0-000-0	000-000		ILP	Map #: 093L.08	0		P #:	10124	
19 A			REA	3 H 🔻				r	3.335	2.5		
Reach #: 1.0	UTM(Zone/East/Nort	th): 9.	687630.0	6072416	5			Sample	Type:	Bias	ed	
Length (km): .47	Coupling: Decoupled		Mag	initude:	1			BGC	Zone:	SBS		
Gradient (%): 17.2	onfinement: Frequently C	onfin		Order:	1		0	pen wa	ter: Abse	ent		
US Elev (m): 794	Islands: NONE		Rip	arian V	egetatio	n: Shru	ibs					
Bars: None V Side Diagona	al Mid-channel	Span	Br	aid 🗔	Land	use: No	ot Specified					
	· · · · · · · · · · · · · · · · · · ·		SIT			***				1.7	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Site #: 369 Field	UTM			Ager	ncy: C1	72	Crew: JA/	SH	Date:	2001/1	0/04	
Site Length (m): 200 GI	S UTM 9.688027.6072456			Age	ncy Nar	ne: Trito	n Environmenta	Consu	ttants (Te	rrace)		
		С	HAN	NEL		:			17.8			
No Vis.Ch.: 🗸 Intermittent:		Avg	Min	Max	#			Avg	Min	Max	#	
Dewatered: Tribs.:	Channel Width (m): (0.00	0	0	0		Gradient %:	18.25	10	27	4	
Stage: Low		0.00	0	0	0		Pool Depth (m):	0.00	0	0	0	
Med	Bankfull Depth (m): (0.00	0	0	0		Turbi	dity.:	Turbid]	Low	
High Temp (C):	pH:	С	onductiv	vity:			Moderate Clear					
and the state of t		0 R	PHO	LOG	Y		to the	-1 -1-1	### T	CHICAGO.		
Bed Material: Dominant:	D95 (cm):		E	Bars: No	П	Side	Diagonal	Mid-	channel	□ s	pan 🗌	
Subdominant:	D (cm):									В	raid 🔲	
Channel Pattern:	Islands:		DISTUR	RBANCE	01	B1	B2B3	D1	D2 D	3		
Coupling:			INDIC	ATORS								
Confinement:			C1	C2 (C3 C	4 C	5 \$1 \$2	S 3	S4	S5		
Morphology:		[JLI						
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Left Bank: Shape:	Texture: Fines Grave	4	Cobble	= Boul	der	Rock	Manmade			1-2		
Right Bank: Rip.Veg:	Stage:		_	-								
Left Bank: Rip.Veg:	Stage:				Insti	eam Ve	eg: None 🔲 A	lgae	Moss	Vas	cular 🗌	

South Fulton Study Area

Reach # ILP# Site ILP Map # 1.0 093L.080 10124 369

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South Fulton Study Area

Reach # ILP Map #

093L.080

1.0

ILP# 10124 Site 369

	COMMENTS
Section	Comments
CHANNEL	depression cuts through an old logging block
CHANNEL	immature pine, alder and twisted stalk was observed within depression



Site #369, upstream photo of vegetated depression. Roll #91, Frame #07, Date: 2001/10/04



Site #369, downstream photo of vegetated depression. Roll #91, Frame #08, Date: 2001/10/04

South Fulton Study Area

Reach # ILP Map #

1.0

ILP#

093L.080

STREAM REFERENCING **Gazetted Name:** Local Name: ILP Map #: 093L.080 ILP#: 10110 REACH and the street of the state of Reach #: 1.0 UTM(Zone/East/North): 9.687836.6071912 Biased Sample Type: Length (km): .40 BGC Zone: SBS Coupling: Decoupled Magnitude: 1 Gradient (%): 18.0 Confinement: Confined Order: 1 Open water: Absent US Elev (m): 785 Islands: NONE Riparian Vegetation: Shrubs Bars: None ♥ Side Diagonal Mid-channel Span Braid Landuse: Not Specified SITE Field UTM .. Site #: 370 Agency: C172 Crew: JA/SH Date: 2001/10/04 Site Length (m): 100 GIS UTM 9.688069.6071927 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL Intermittent: Min No Vis.Ch.: 🗸 Avg Max # Avg Min Max # Tribs.: ; Channel Width (m): 0.00 0 0 0 Gradient %: 20.00 13 31 4 Dewatered: Wetted Width (m) 0.00 0 0 0 Pool Depth (m): 0.00 0 0 Stage: Low Bankfull Depth (m): 0.00 0 0 0 Med Turbid Turbidity.: Low Conductivity: Moderate High Temp (C): pH: Clear MORPHOLOGY A STATE OF THE STA Bed Material: Dominant: D95 (cm): Bars: Non Side ___ Diagonal ___ Mid-channel ___ Span Subdominant: D (cm): Braid L Channel Pattern: Islands: DISTURBANCE **B**3 D1 D2 D3 **INDICATORS** Coupling: Confinement: C2 СЗ C1 C4 C5 S1 **S**5 S2 **S3 S4** Morphology: COVER 44 SWD LWD Óν Total Cover: Type В U DP ΙV Amount LWD: Location: P/S/O LWD Dist: FSZ: Right Bank: Shape: Texture: Fines Gravel Cobble Boulder Rock Manmade Crown Closure Left Bank: Shape: Texture: Fines Gravel Cobble Boulder Rock Manmade 1-20% Right Bank: Rip.Veg: Stage: Left Bank: Rip.Veg: Instream Veg: None [] Algae [] Moss [] Vascular [Stage:

South Fulton Study Area

Reach # ILP Map #

093L.080

ILP#

Site

 $\textbf{Watershed Code: } 480\text{-}725288\text{-}00000\text{-}00000\text{-}0000\text{-}0000\text{-}000\text{-$

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South Fulton Study Area

Reach # ILP Map #

093L.080

1.0

ILP# 10110 Site 370

	COMMENTS
Section	Comments
CHANNEL	Heavily vegetated depression with devil's club, twisted stalk found in abundance
CHANNEL	No Visible Channel



Site #370, upstream photo of typical vegetated depression found within site. Roll #91. Frame #05, Date: 2001/10/04



Site #370, downstream photo of typical vegetated depression found within site. Roll #91, Frame #06, Date: 2001/10/04

South Fulton Study Area

Reach # ILP Map #

ILP#

2.0 093L.080

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US Elev (m):	981	I	slands: NON		R	iparian Ve	getation:	Shrubs				
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		J. S.	<i>V</i>		SIT			_	* **		-One	
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South Fulton Study Area

Reach # ILP Map #

093L.080

ILP#

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W	etted Width (m): MS	3.00	1.30	7.00	3.70	4.30	4.00)				3.88] [Method II	2.0	1.0	С	
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		re: F 🗸	G	C	В	R	•						-	G	□ c =	В	R] A _	
		P: S										RIP							
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	Tem	'						od: T4			С	ond.: 100	כ				Met	thod: S	3
	•	1: 7.8						od: P2			7	urb.: T	□ м		L C	✓	Met	thod: G	E
	Flood Signs	s: None					Metho	od: GE											
								IOR	PHOL	DGY							13.5		
	Bed Materia	ıl: C	Dominan	nt: C		Subdon	n: G				01	B1	B2	B 3	D1 [)2 [)3		
	D95	5: 21.0	D (cm): 2.00		Morph	n: RP		DISTUR	BANCE	V								
	Pattern	n: SI							INDICA	TORS	C 1	C2	СЗ	C4	C5 S	S1 S	32 S	3 S4	S5
	Islands	s: N																	
	Coupling																		
	Confinemen								Е	ars:	N	SID	E	DIA	3	MID	SPA	N.	BR
	F32	2:									لــــا				- L_J	. [_]		•	
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NID Ma	p NID	Туре	Hgt	Metho	d l	_g N	/ethod	<u> </u>	Photo			AirPl	noto	_	- Discoules	UTM (Z/E/N)		Method
093L.08	0 88500	BD	2.0	GE			GE	R: 9	91 F:	21 L	<u>.:</u>	-	#:		9.6		606795	,o	GIS
Comn	nents: located	80m upst	ream of	road cro	ssing														
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	Name						- 10 at 1 at 100 kinds			C	ommen	ts		.authori					
	Rearing Habita							and un	dercut ba	ınks									
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	pawning Habit	at	Low -	associati	ea with	ack of C	ean patc	ries of	gravel ot	served				_					

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

2.0

093L.080

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	DI	noto	1	Food a	Dir	РНОТО В
_	<u> </u>	1010		Foc Lg	Dir	Comments
R:	91	F:	21	STD	D	photo towards beaver dam
R:	91	F:	22	STD	U	upstream photo of typical channel found within site
R:	91	F:	23	STD	D	downstream photo includes typical riparian vegetation within sample site
	des in					COMMENTS
		Se	ction			Comments
		SITE	CARD	Beaver dam	80m above road	
					ht	

FDIS Fish Card

South Fulton Study Area

Watershed Code:

Reach #

2.0

ILP Map # 093L.080 ILP#

Gazetted Name: WATERBODY.

Waterbody ID:

Project ID: 3496

ILP Map #: 093L.080 ILF Lake/Stream: S

ILP #: 10079 Reach #:

Lake From Date:

Fish Permit #: 145085K Date: 2001/10/05 To: 2001/10/05 Agency: C172 Crew: JA/SH F

F	ish Pe	mit#:	145	5085K		Date: 2	2001/10/0	5	To	: 20	01/10/05	Age	ency: C17	72 Crew:	JA/SH	Resample:	
				****	4			8	ITE	1	HETH	OD -				1. 18	17.17
Site#	NID	Мар	סוא)# (UTM:Z	one/East	/North/Mt	hd	MTD	/NO	Temp	Cond	Turbid		Comr	ment	
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12.5	14.3		1			i.		A. I	GEA	R	SETT	NGS		A	.		e la la
Site#	MTE)/NO	H/P	Date I	in	Time In	Date	Out	Time	Out		_		Comme	nt		
371	EF	1	1	2001/10)/05	09:00	2001/1	0/05	09:	40							
						C. E	LECT	RO	FIS	HE	R SPE	CIFI	CATI	ONS			

Site#	MT	D/NO	H/P	Encl	Sec	Lengt	h Wi	idth	Voltage	Frequen	icy	Pulse	Make	Model
371	EF	1	1	0	220	100.0	5	3.0	500	\top		5	SMITH	12B
													ROOT	
	fra carr		4-6	77		F481			V .	7.4		W 5		(5)
	*			dag ar	is teen.					11-16-11	(*)			
Site#	MTE	D/NO	H/P	Species	Stage	Age	Total #	, I.A	Min/Max)	FishAct	to a		Comment	
Site# 371	MTE EF	D/NO 1	H/P 1	Species RB				, I.A	er z				Comment	

371	E	FL	1	1	RB	J			4	60		24	R	1		
			1	16.JK			IN	DIVI	DUAL	15 H	DA	TA.	10 mg	i te page		
Site#	MT	D/NO	H/P	Species	Length	Weight		Mat	Age		Vch#			Roll #	Frame#	
									Str/Smpli	#/Age		Str/S	Smpl#			
371	EF	1	1	RB	60		U	IM								
371	EF	1	1	RB	67		IJ	IM								
371	EF	1	1	RB	124		U	IM								
371	EF	1	_1	RB	98		U	[IM				_				



Site #371, photo towards beaver dam. Roll #91, Frame #21, Date: 2001/10/05



Site #371, upstream photo of typical channel found within site. Roll #91, Frame #22, Date: 2001/10/05



Site #371, downstream photo includes typical riparian vegetation within sample site. Roll #91, Frame #23, Date: 2001/10/05

South Fulton Study Area

Reach # ILP Map #

ILP#

Watershed Code: 480-742900-26000-72510-0000-0000-000-000-000-000-000-000

3.0 093L.080

	STREAM	REFE	RENCI	NG	· · · · · · · · · · · · · · · · · · ·			14.	
Gazetted Name:			Local	Name:	-	_			
Watershed Code: 480-742900-2600	00-72510-0000-0000-000-000-	000-000-000	-000	IL	P Map #: 093L.08	0	ILF	#:	10055
	Project Control of the Control of th	REACH	1	2			I de la companya de l	174	
Reach #: 3.0	UTM(Zone/East/North): 9	0.683250.606	37051			ample '	Туре:	Biase	ed .
Length (km): .71	Coupling: Coupled	Magnit	tude: 1			BGC 2	Zone: E	SSF	
Gradient (%): 5.5 Co	onfinement: Occasionally Cor		rder: 1			pen wat	er: Abse	ent	
US Elev (m): 1124	Islands: NONE	Ripari	an Vegetati	ion: Mi	ced C/D				
Bars: None 🗸 Side 🗌 Diagona	Mid-channel Spa	n Braid	Lan	duse: N	lot Specified				
The Property of the State of th	And the second second	8172	and a	*	By H. S. Carllette	4.89	W 3	27.44	
	UTM		Agency: C	172	Crew: JA/	JH	Date:	2001/0	7/31
Site Length (m): 200 GIS	S UTM 9.683656.6066911		Agency Na	ime: Tri	ton Environmental	Consult	ants (Te	rrace)	
	<u> </u>	HANN	EL				,4		
No Vis.Ch.: 🗹 Intermittent: 🗌	Avg	Min M	/lax #			Avg	Min	Max	#
Dewatered: Tribs.:	Channel Width (m): 0.00		0 0] [Gradient %:	0.00	0	0	0
Stage: Low	Wetted Width (m): 0.00		0 0	- L	Pool Depth (m):	0.00	0	0	0
Med	Bankfull Depth (m): 0.00	0	0 0	╛	Turbi	dity.:	Turbid		Low
High Temp (C):	pH:	Con	ductivity:			Mo	derate	_ (Clear
1.0	MO)	RPHOL	OGY					· L	•
Bed Material: Dominant:	D95 (cm):	Bar	rs: Non 🔲	Side	Diagonal] Mid-c	hannel	□ s	pan 🔲
Subdominant:	D (cm):							В	raid 🔲
Channel Pattern:	Islands:	DISTURBA		B1	B2 B3	D1 [)2 D:	3	
Coupling:		INDICAT	ORS						
Confinement:		C1 C2	2 C3	C4 (C5 S1 S2	S3	S4	S5	
Morphology:									
	the second specification	COVER	177		1114 210 115				
Total Cover:	Type: SWD	LWD	В	U	DP O	v T	IV		ļ
LWD:	Amount:								
LWD Dist:	Location: P/S/O:							FS	z: 🗀
Right Bank: Shape:	Texture: Fines Gravel	Cobble	Boulder	Rock	Manmade		Cro	wn Cio	sure
Left Bank: Shape:	Texture: Fines Gravel	Cobble	Boulder	Rock	Manmade				-
Right Bank: Rip.Veg:	Stage:				 -		_	_	
Left Bank: Rip.Veg:	Stage: 		Ins	tream \	/eg: None A	lgae	Moss	Vas	cular 🔲

South Fulton Study Area

Reach # ILP Map # ILP# Site 3.0 093L.080 10055 501 Watershed Code: 480-742900-26000-72510-0000-0000-000-000-000-000-000-000

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	Project Waters					0000-000	0000-00	-000-00	00-000-00	0-000-00	00	•	.0,001.0	,,,,,			0.00		
			114	*pr:	1			WA:	IER8	HED.									
	Gazetted Name										Lo	cal Name	e: None	•					
	Watershed Code	le: 480-742 #: 093L.08			510-0000 LP #: 10				0-000-000 93L.080		ID#: 50	0001	Rea	ich#	t: :	3.0		Site #: 5	01
F	ield UTM (Z.E.N				N	Method:					Site L	g: 200		M	lethod: HC		Acce	ss: H	
•	GIS UTM (Z.E.N	I): 9.68365(3.606691	11						Re	ef. Name	e :							
	Da	ate: 2001/	07/31	1	Time: 09:	:26		Agency	/: C172	С	rew: .	JA/JH			Fish Crd?	: <u> </u>	ŀ	ncomple	te:
4:3			<u> </u>		T	T		CAC RESERVED	IANN		1 1 1 1	1	•	7		507 V A 385-36	1.0/	3.44	
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,	Wetted Width (m)):											0.00	1	Method II:				
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	LB SHF										1	RB SHP	:						
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	RIF	p.										RIP:							
	****	• •																	
	STO											STG							
		G:	11.94				•	¥	VATE	R (*†*						a sa sa			18 AL
	STC EMS	G: S:	11. 14.	473			ro, a		VATE	R (-7.*		STG:			FAR S	7 4 4 4 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10.07		
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	STC EMS	G: 	11.94			<u> </u>	Metho Metho Metho	od: od:	YATE	R 8849	C	STG eq #: ond.:			L C			hod: hod: Gl	4 - 1. 1 • 1.
	STO EMS Temp pH	G: 					Metho Metho	od: od: od:	VANE		C(STG eq #: ond.:			L C				
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	EMS Temp pH Flood Signs	G: :::::::::::::::::::::::::::::::::::				Subdom	Method Method	od: od: od:	PHOL	O.G.Y.	Co T	STG eq #: ond.: urb.: T	M				Met		E
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	EMS Temp pH Flood Signs Bed Material D95 Pattern	G: :: :: :: :: :: :: :: :: :: :: :: ::	ominant:			-	Method Method	od: od: od:	PHOL DISTURE INDICA	D.G.Y. BANCE TORS	O1 C1	eq #: ond.: 'urb.: T	B2	B3 C4	D1 C	D2 D	Mei	hod: Gi	S5
	EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling	G: :: :: :: :: :: :: :: :: :: :: :: ::	ominant:			-	Method Method	od: od: od:	PHOL DISTURE INDICA	O.G.Y.	Cr T (e. * 1) O1	STG	B2	B3	D1 C)2 D	Mel	hod: Gi	
	EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement	G: :: :: :: :: :: :: :: :: :: :: :: ::	ominant:			Morph	Metho Metho	od: od: od:	PHOL DISTURE INDICA	O.G.Y. BANCE TORS	O1 C1	eq #: ond.: 'urb.: T	B2	B3 C4	D1 C	D2 D	Mei	hod: Gi	S5
	EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ	G: :: :: :: :: :: :: :: :: :: :: :: ::	ominant: D (cm):	The Charles	• see nise	Morph	Metho Metho	od: od: od:	PHOL DISTURE INDICA B	D.G.Y. BANCE TORS ars:	O1 C1	eq #: ond.: Turb.: T B1 C2 SIDI	B2	B3 C4	D1 C	D2 D	Med 3 	hod: Gi	S5
	EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ	G: :: :: :: :: :: :: :: :: :: :: :: ::	ominant: D (cm):	le Cha	annel-We	Morph	Metho Metho	od: od: od:	PHOL DISTURE INDICA B	DGY BANCE TORS ars:	01 C1	eq #: ond.: Turb.: T B1 C2 SIDI	B2	B3 C4	D1 C	D2 D	Med 3 	hod: Gi	S5
	EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ	G: :: :: :: :: :: :: :: :: :: :: :: ::	ominant: D (cm): No Visib	le Cha	• see nise	Morph	Metho Metho	od: od: od:	PHOL DISTURE INDICA B	DGY BANCE TORS ars:	01 C1	eq #: ond.: furb.: T B1 C2 SIDI	B2	B3 C4 DIA	D1 C	D2 D	Med 3 	hod: Gi	S5
R: 2	EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ Name Other	G: D: D: Foc	ominant: D (cm): No Visib	vle Cha	annel-We	Morph etland	Method Method	od: od: od:	PHOL DISTURE INDICA B	BANCE TORS	O1 C1 N onment	eq #: ond.: rurb.: T B1 C2 SIDI	MB2 C3 Comme	B3 C4 DIA	D1 C	D2 D	Med 3 	hod: Gi	S5
	EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ Name Other	G: D: D: D: Foc	ominant: D (cm): No Visib	le Cha	annel-We	Morph	Method Method	od: od: lOR ream p	PHOL DISTURE INDICA B	BANCE TORS ars:	O1 C1 N onment	eq #: ond.: rurb.: T B1 C2 SIDI	MB2 C3 Comme	B3 C4 DIA	D1 C	D2 D	Med 3 	hod: Gi	S5

South Fulton Study Area

Reach # ILP Map #

ILP#

Site 501

Watershed Code: 480-742900-26000-72510-0000-0000-000-000-000-000-000

3.0

093L.080

	CONTRACTOR STATES
Section	Comments
CHANNEL	First site, dropped off by helicopter, bead chain, discontinued pockets and puddles
CHANNEL	NVC



Site #501, upstream photo of typical habitat within site. Roll #21, Frame #01, Date: 2001/07/31



Site #501, downstream photo of typical habitat within site. Roll #21, Frame #02, Date: 2001/07/31

South Fulton Study Area

Reach # ILP Map #

093L.080

1.0

Instream Veg: None Algae Moss Vascular

ILP # 10056

Watershed Code: 480-742900-26000-72510-4112-0000-000-000-000-000-000-000

STREAM REFERENCING Local Name: Gazetted Name: Watershed Code: 480-742900-26000-72510-4112-0000-000-000-000-000-000-000 ILP Map #: 093L.080 ILP#: 10056 REACH The Head of the Control of the Contr UTM(Zone/East/North): 9.683020.6066869 Reach #: 1.0 Sample Type: Biased Length (km): .82 Coupling: Partially Couple Magnitude: 1 **BGC Zone:** ESSF Gradient (%): 11.6 Confinement: Occasionally Conf Order: 1 Open water: Absent US Elev (m): 1176 Islands: NONE Riparian Vegetation: Mixed C/D Diagonal Mid-channel Span Braid ___ Bars: None V Side Landuse: Not Specified SITE OF THE PARTY Field UTM .. Site #: 502 Agency: C172 Crew: JA/JH Date: 2001/07/31 Site Length (m): 150 GIS UTM 9.683694.6066737 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL Max No Vis.Ch.: 🗹 Intermittent: Avg Min Max Avg Min 20 Channel Width (m): 0 Gradient %: 16.67 12 0.00 0 0 Dewatered: Tribs.: Wetted Width (m): 0.00 ō 0 Pool Depth (m): 0.00 0 0 0 Low Bankfull Depth (m): 0.00 0 0 0 Turbidity.: Med Turbid Low High Temp (C): pH: Conductivity: Moderate Clear MORPHOLOGY TO TOTAL TOT Bed Material: Dominant: Diagonal Mid-channel D95 (cm): Bars: Non Side Span Subdominant: D (cm): Braid Channel Pattern: Islands: DISTURBANCE 01 В1 **B2 INDICATORS** Coupling: Confinement: C2 C3 C5 S1 S2 S3 **S4 S**5 Morphology: COVER Total Cover: Type: SWD LWD В U DP OV I۷ Amount: LWD: Location: P/S/O LWD Dist: FSZ: Right Bank: Texture: Fines __ Gravel __ Cobble __ Boulder __ Rock __ Shape: Manmade Crown Closure Left Bank: Cobble Boulder Rock Manmade Shape: Texture: Fines Gravel Right Bank: Rip.Veg: Stage:

Stage:

Left Bank:

Rip.Veg:

South Fulton Study Area

Reach # ILP Map # ILP# Site 10056 502 Watershed Code: 480-742900-26000-72510-4112-0000-000-000-000-000-000-000 1.0 093L.080

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	Project	Name:	: Smithers Landing Fish Inventory - 2000																
Stream	m Name	(gaz.):	BABI	NE RI\	/ER							Project Code:				3496			
Project W	atershed	Code:	e: 480-000000-00000-00000-0000-0000-0000-0																
						-127		WAT	ERS	HED									
Gazetted I	Name:										Lo	cal Nam	e: None	•					
Watershed	Code: 48 Map#: 09				510-4112 ILP#: 10			000-000 ap #: 09			ID#: 50	1002	Res	ıch #:	1.0		Site #: 5	02	
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Field UTM (Z	•	683694	60667	737	n	Method:				R	Site Le ef. Name			Method: h	10	Acce	ess: H		
0.0001111 (2					T' 40			•	0470					F!-! 0	-40.				
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				*		4		SC BOOK STO	ANN					- 444 × 141	Lista i i	4.4	(Higher Co		
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	nount:						1												
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							F	W	ATE	R f		RIP STG	:						
E 826 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STG:					TEP TO	E CAPT	W	A FE	R *		RIP STG	:						
	STG:			ř,				od: T4	ATE	R ·	R	RIP STG	:			. L-R	hod: S3		
Ţ	STG: EMS: Femp: pH:			F	, e ; <u> </u>		Metho Metho	od: T4	ARE	R	R C	RIP STG			a ea	Met			
T Flood S	STG: EMS: Femp: pH: Signs:					7 52	Metho Metho	od: T4	(R C	RIP STG *** eq #: ond.:			a ea	Met	hod: S3		
Ţ	STG: EMS: Femp: pH: Signs:						Metho Metho	od: T4 od: P2 od:GE		R S	R C	RIP STG eq #: ond.: urb.: T	: :		c _	Met Met	hod: S3	E	
T Flood S	STG: EMS: Femp: pH: Signs:		in in ant				Metho Metho Metho	od: T4 od: P2 od:GE			R C	RIP STG eq #: ond.: urb.: T		L	C	Met Met	hod: S3	E	
Flood S	STG: EMS: Femp: pH: Signs:	Don		:			Metho Metho Metho	od: T4 od: P2 od:GE	M; (OX)	ogy	R C T	RIP STG ***** eq #: ond.: **urb.: T		L	C	Met Met	hod: S3	E	
Flood S Bed Mai	STG: EMS: Femp: pH: Signs:	Don	ninant	:		Subdom	Metho Metho Metho	od: T4 od: P2 od: GE		OGY	R C T	RIP STG ***** eq #: ond.: **urb.: T		L	C	Met Met	hod: S3	= 	
Flood S Bed Mai	STG: EMS: Femp: pH: Signs: terial: D95:	Don	ninant	:		Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	OGY	C T	RIF STG		B3 D1	C	Met Met	hod: S3	≡ %:2	
Flood S Bed Mai Pa Isl	STG: EMS: Femp: pH: Signs: terial: D95: sttem: ands: pling:	Don	ninant	:		Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	OGY	C T	RIF STG		B3 D1	C	Met Met	hod: S3	≡ %:2	
Flood S Bed Mai Pa Isl Cou	STG: EMS: Femp: pH: Signs: D95: wttern: ands: pling: ment:	Don	ninant	:		Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	OGY BANCE TORS	O1 C1	eq #: eq #: brurb.: T B1 C2	M B2 C3	B3 D1	C D2 C	Met Met	hod: S3 hod: Gl	\$5	
Flood S Bed Mat Pa Ista Coug	STG: EMS: Femp: pH: Signs: terial: D95: attern: ands: pling: ment: FSZ:	Don	ninant	:		Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	OGY	C T	RIF STG	M B2 C3	B3 D1	C	Met Met	hod: S3 hod: Gl	= 	
Flood S Bed Mat Pa Ista Coug	STG: EMS: Femp: pH: Signs: terial: D95: attern: ands: pling: ment: FSZ:	Don	ninant	:		Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL DISTURE INDICA B	OGY BANCE TORS	O1 C1 N	eq #: eq #: brurb.: T B1 C2	M B2 C3	B3 D1	C D2 C	Met Met	hod: S3 hod: Gl	\$5	
Flood S Bed Mat Pa Isl. Coul	STG: EMS: Femp: pH: Signs: terial: D95: attern: ands: pling: ment: FSZ:	Don E	minant D (cm):	:		Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL DISTURE INDICA B	OGN BANCE TORS	O1 C1 N	eq #: ond.: Turb.: T B1 C2 SID	M B2 C3	B3 D1	C D2 C	Met Met	hod: S3 hod: Gl	\$5	
Flood S Bed Mat Pa Isl Cou Confiner Name Other	EMS: Femp: pH: Signs: terial: D95: attem: ands: pling: ment: FSZ:	Don E	minant D (cm):	:		Subdom	Metho Metho Metho	od: T4 od: P2 od: GE IORF	DISTURE INDICA	BANCE TORS	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	M B2 C3	B3 D1	C D2 C	Met Met	hod: S3 hod: Gl	\$5	
Bed Materials of the second se	EMS: Femp: pH: Signs: terial: D95: attem: ands: pling: ment: FSZ:	Dorn C	minant O (cm):	:	annel	Subdom	Metho Metho Metho	od: T4 od: P2 od: GE IORF	HOL DISTURE INDICA B	BANCE TORS	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 C3	B3 D1 C4 C5 DIAG	C D2 C	Met Met	hod: S3 hod: Gl	\$5	
Bed Materials of the second se	EMS: Femp: pH: Signs: terial: D95: attem: ands: pling: ment: FSZ:	Dorn C	minant O (cm): No Visi	:	annel	Subdom Morph	Method Me	od: T4 od: P2 od: GE IORF	HOLDISTURE INDICA	OGY BANCE TORS ars:	O1 C1 N Comment	eq #: ond.: Turb.: T B1 C2 SID	M B2 C3	B3 D1 C4 C5 DIAG	C D2 C	Met Met	hod: S3 hod: Gl	\$5	
Pauls Counting Confiner Name Other Photo R: 21 F: 0	EMS: Femp: pH: Signs: terial: D95: attem: ands: pling: ment: FSZ:	Dorn C	lo Visi	:	annel	Subdom	Method Me	od: T4 od: P2 od: GE IORF	HOLDISTURE INDICA	BANCE TORS	O1 C1 N Comment	eq #: ond.: Turb.: T B1 C2 SID	M B2 C3 E	B3 D1 C4 C5 DIAG	C D2 C	Met Met	hod: S3 hod: Gl	\$5	
Pauls Counting Confiner Name Other Photo R: 21 F: 0	EMS: Femp: pH: Signs: terial: D95: attem: ands: pling: ment: FSZ: 33	Dor C	lo Visi	:	annel	Subdom Morph Morph	Method Me	od: T4 od: P2 od: GE IORF	HOLDISTURE INDICA	OGY BANCE TORS ars: CO S	O1 C1 N Comment	eq #: ond.: Turb.: T B1 C2 SID	B2 C3 CComme	B3 D1 C4 C5 DIAG	C D2 C	Met Met	hod: S3 hod: Gl	\$5	

South Fulton Study Area

Reach # ILP Map #

ILP#

Site 502

Watershed Code: 480-742900-26000-72510-4112-0000-000-000-000-000-000-000

1.0

093L.080

	COMMENTS
Section	Comments
CHANNEL	No Visible Channel



Site #502, upstream photo taken of No Visible Channel. Roll #21, Frame #03, Date: 2001/07/31



Site #502, downstream photo taken of No Visible Channel. Roll #21, Frame #04, Date: 2001/07/31

South Fulton Study Area

Reach # ILP Map #

ILP#

Watershed Code: 480-742900-26000-72510-0000-0000-000-000-000-000-000-000

1.0 093L.080

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Gazetted Na	ame:				L	ocal Name:			-
Watershed	Code: 480-742	2900-26000-72	510-0000-0000-0	000-000-000-	000-000-000	iLP	Map #: 093L.	.080.	-₽#: 10055
742.000.000	a de la companya de l		alie and the second second	rie Ri	EACH		*		1. 2005 34
Reach #:	1.0		UTM(Zone/East/	North): 9.684	358.6066826			Sample Type:	Random
Length (km): .52	Co	upling: Decouple	ed	Magnitude:	2		BGC Zone:	ESSF
Gradient (%); 9.8	Confir	ement: Occasio	nally Conf	Order: 2	=		Open water: Ab	sent
US Elev (m): 1069	i	slands: NONE		Riparian Veg	etation: Shru	bs		
Bars: None	✓ Side	Diagonal	Mid-channel	_ Span _	Braid 🔙	Landuse: No	t Specified		
		State 1			ITE		general con-	1 - 10	
Site #	: 503	Field UTA	A		Agenc	y: C172	Crew: J	JA/JH Date:	2001/07/31
Site Length	(m): 300	GIS UT	M 9.684645.6066	773	Agend	y Name: Trito	n Environmen	ntal Consultants (1	Гегтасе)
			4 7 4 4 4 44	CH.	NNEL	de la de		4 . 4 . 4	
No Vis.Ch.:	Intermitt	ent: 🗹		Avg N	fin Max	#		Avg Min	Max #
Dewatered:	Tri	bs.: 🗌 🔲	hannel Width (m): 0.94 0.	600 1.230	6	Gradient 9	%: 15.75 13	20 4
Stage: Low	✓		Wetted Width (m	4	45 0.9		Pool Depth (n	n): 0.12 0.090	0.150 3
Med	ñ	<u> </u>	ankfull Depth (m): 0.47 (0.4 0.5	3	Tu	rbidity.: Turbid	Low
High	Te	emp (C): 6	pH: 7.7		Conductivity	y: 6 0		Moderate	Clear ✓
***		Martin Co.	er en saggar.	HORP	HOLOGY	A AMADA SA	and a special	Acres of water	A STATE OF BELLEVILLE
		**************************************		Charles Charles					
Bed Materia	l: Dominant:	Fines	D95 (cm): 1		Bars: Non		Diagonal	_	Span
	l: Dominant: Subdominant:			5.00			✓ Diagonal	_	Span Braid
		Gravels	D95 (cm): 1	5.00 2.00			Diagonal	Mid-channe	
Channel Pa	Subdominant:	Gravels	D95 (cm): 1 D (cm): 2	5.00 2.00 one DI	Bars: Non	Side	_ •	Mid-channe	Braid
Channel Pa Cou Confine	Subdominant: attern: Sinuous ipling: Decoupl ment: Unconfil	Gravels led ned	D95 (cm): 1 D (cm): 2	5.00 2.00 one DI	Bars: Non STURBANCE NDICATORS	O1 B1	B2 B3	Mid-channe	Braid
Channel Pa Cou Confine	Subdominant: attern: Sinuous ipling: Decoupl	Gravels ed	D95 (cm): 1 D (cm): 2	5.00 2.00 one DI: II	Bars: Non STURBANCE NDICATORS	O1 B1	B2 B3	Mid-channe	Braid D3
Channel Pa Cou Confine	Subdominant: attern: Sinuous upling: Decoupl ment: Unconfi ology: RP	Gravels led ned Riffle Pool	D95 (cm): 1 D (cm): 2	5.00 2.00 one DI: C	Bars: Non STURBANCE NDICATORS	O1 B1 C4 C5	B2 B3	Mid-channe	Braid D3
Channel Pa Cou Confine Morpha	Subdominant: attern: Sinuous ipling: Decoupl ment: Unconfii ology: RP	Gravels led ned Riffle Pool	D95 (cm): 1 D (cm): 2 Islands: No	5.00 2.00 one Di II C	Bars: Non STURBANCE NDICATORS 1 C2 C3	O1 B1 C4 C5	B2 B3	Mid-channe	Braid D3
Channel Pa Cou Confine Morph Total Cover:	Subdominant: attern: Sinuous upling: Decoupl ment: Unconfin ology: RP	Gravels led ned Riffle Pool	D95 (cm): 1 D (cm): 2 Islands: No	5.00 2.00 one Di II C	Bars: Non STURBANCE NDICATORS 1 C2 C3	O1 B1 C4 C5	B2 B3 S1 S2	Mid-channe D1 D2 2 S3 S4	Braid D3
Channel Pa Cou Confine Morph Total Cover: LWD:	Subdominant: attern: Sinuous upling: Decoupl ment: Unconfin ology: RP	Gravels led ned Riffle Pool	D95 (cm): 1 D (cm): 2 Islands: No	5.00 2.00 one Di II C	Bars: Non STURBANCE NDICATORS 1 C2 C3 VER LWD B S N	O1 B1 C4 C5	B2 B3 S1 S2 DP	Mid-channe D1 D2 2 S3 S4 OV IV	Braid D3
Channel Pa Cou Confine Morph Total Cover: LWD:	Subdominant: attern: Sinuous upling: Decoupl ment: Unconfin ology: RP Trace Few	Gravels led ned Riffle Pool	D95 (cm): 1 D (cm): 2 Islands: No Type: Amount: Location: P/S/O:	5.00 2.00 one DI: II C	Bars: Non STURBANCE NDICATORS 1 C2 C3 VER LWD B S N	O1 B1 C4 C5	B2 B3 S1 S2 DP	Mid-channe D1 D2 2 S3 S4 OV IV D S	Braid D3
Channel Pa Cou Confine Morphe Total Cover: LWD: LWD Dist:	Subdominant: attern: Sinuous upling: Decoupl ment: Unconfil ology: RP Trace Few Evenly Distribut	Gravels led ned Riffle Pool uted pping (g Text	D95 (cm): 1 D (cm): 2 Islands: No Type: Amount: Location: P/S/O:	5.00 2.00 one Di: II C	Bars: Non STURBANCE NDICATORS 1 C2 C3 LWD B S N	O1 B1 C4 C5 U T Rock	B2 B3 S1 S2 DP N	Mid-channe D1 D2 2 S3 S4 OV IV D S C	Braid D3 S5 FSZ:
Channel Pa Cou Confine Morpho Total Cover: LWD: LWD Dist: Right Bank:	Subdominant: attern: Sinuous upling: Decoupl ment: Unconfil ology: RP Trace Few Evenly Distrib	Gravels led ned Riffle Pool uted pping (g Text pping (g Text	D95 (cm): 1 D (cm): 2 Islands: No Type: Amount: Location: P/S/O: ure: Fines G	5.00 2.00 DI: II CC SWD S II Variable Cot	Bars: Non STURBANCE NDICATORS 1 C2 C3 LWD B S N S N Soble Boulde Boulde Boulde	O1 B1 C4 C5 U T Rock	B2 B3 S1 Si DP N Manmade	Mid-channe D1 D2 2 S3 S4 OV IV D S C	Braid D3 S5 FSZ:
Channel Pa Cou Confine Morphi Total Cover: LWD: LWD Dist: Right Bank: Left Bank:	Subdominant: attern: Sinuous upling: Decoupl ment: Unconfil ology: RP Trace Few Evenly Distrib Shape: Sk Shape: Sk	Gravels led ned Riffle Pool uted pping (g Text pping (g Text	D95 (cm): 1 D (cm): 2 Islands: No Type: Amount: Location: P/S/O: ure: Fines G Sta	5.00 2.00 Display to the contract of the contr	Bars: Non STURBANCE NDICATORS 1 C2 C3 LWD B S N LWD B S	O1 B1 C4 C5 U T Rock	B2 B3 S1 Si DP N Manmade Manmade	Mid-channe D1 D2 2 S3 S4 OV IV D S Calculate the control of t	Braid D3 S5 FSZ: Crown Closure
Channel Pa Cou Confine Morpho Total Cover: LWD: LWD Dist: Right Bank; Left Bank: Right Bank:	Subdominant: attern: Sinuous apling: Decoupl ment: Unconfit ology: RP Trace Few Evenly Distribt Shape: Sic Shape: Sic Rip.Veg: Sh	Gravels led ned Riffle Pool uted pping (g Text pping (g Text	D95 (cm): 1 D (cm): 2 Islands: No Type: Amount: Location: P/S/O: ure: Fines G Sta	SWD S Cotravel Cot	Bars: Non STURBANCE NDICATORS 1 C2 C3 LWD B S N LWD B S	O1 B1 C4 C5 U T Rock Instream Ve	B2 B3 S1 Si DP N Manmade Manmade	Mid-channe D1 D2 2 S3 S4 OV IV D S Calculate the control of t	Braid D3 S5 FSZ: Cown Closure 1-20%
Channel Pa Cou Confine Morpho Total Cover: LWD: LWD Dist: Right Bank; Left Bank: Right Bank:	Subdominant: attern: Sinuous upling: Decoupl ment: Unconfil ology: RP Trace Few Evenly Distrib Shape: Sic Shape: Sic Rip.Veg: Sh Rip.Veg: Sh	gravels led ned Riffle Pool uted pping (g Text pping (g Text prubs	D95 (cm): 1 D (cm): 2 Islands: No Type: Amount: Location: P/S/O: ure: Fines G Star Star	SWD S Cotravel Cot	Bars: Non STURBANCE NDICATORS 1 C2 C3 LWD B S N LWD B S	O1 B1 C4 C5 U T Rock Instream Ve	B2 B3 S1 Si DP N Manmade Manmade G: None	Mid-channe D1 D2 2 S3 S4 OV IV D S CI Algae Moss	Braid D3 S5 FSZ: Cown Closure 1-20%
Channel Pa Cou Confine Morphi Total Cover: LWD: LWD Dist: Right Bank: Left Bank: Left Bank:	Subdominant: attern: Sinuous upling: Decoupl ment: Unconfil ology: RP Trace Few Evenly Distrib Shape: Sk Shape: Sk Rip.Veg: Sh Rip.Veg:	Gravels led ned Riffle Pool uted pping (g Text pping (g Text pring)	D95 (cm): 1 D (cm): 2 Islands: No Type: Amount: Location: P/S/O: ure: Fines G Star	5.00 2.00 DI: II CC SWD S IV IV Cotravel V Cotge: Mature fo	Bars: Non STURBANCE NDICATORS 1 C2 C3 LWD B S N LWD B S	O1 B1 C4 C5 U T Rock Instream Ve	B2 B3 S1 Si DP N Manmade Manmade g: None	Mid-channe D1 D2 2 S3 S4 OV IV D S CI Algae Moss	Braid □ D3 S5 FSZ: □ rown Closure 1-20% ✓ Vascular ✓

South Fulton Study Area

Reach # ILP Map #

RB SHP: S

RIP: S

C3

C4

C5 S1

S2 S3

Texture: F G C B R A

ILP#

Site

.

S5

Watershed Code: 480-742900-26000-72510-0000-0000-000-000-000-000-000-000 1.0 093L.080 10055 503 PROJECT Bellion Calabatan Care Project Name: Smithers Landing Fish Inventory - 2000 Project Code: 3496 Stream Name (gaz.): BABINE RIVER WATERSHED 10.104 Local Name: None Gazetted Name: Watershed Code: 480-742900-26000-72510-0000-0000-000-000-000-000-000-000 NID #: 50003 Reach #: ILP Map#: 093L.080 ILP #: 10055 NID Map #: 093L.080 1.0 Site #: 503 Field UTM (Z.E.N): .. Method: Site Lg: 300 Method: HC Access: H GIS UTM (Z.E.N): 9.684645.6066773 Ref. Name: Crew: JA/JH Agency: C172 Fish Crd?: Date: 2001/07/31 Time: 11:13 incomplete: the second secon CHANNEL Gadient % Mtd width Avg Mtd Avg Method I: 20.0 16.0 0.60 1,23 1.11 1.01 0.94 С 15.75 Channel Width (m): MS 0.80 0.91 Wetted Width (m): 0.45 0.64 Method II: 14.0 13.0 MS 0.61 0.90 0.60 Pool Depth (m): MS 0.09 0.15 0.13 0.12 No Vis.Ch.: Intermittent: Method: MS .5 .5 Stage: L M H H Dw: Tribs. Wb Depth: Avg: 0.47 COVER Total: T SWD **CROWN CLOSURE** LWD DP ŌV īV Type: В 1-20% Amount Loc: P/S/O: INSTREAM VEG: N A M V V

STG: MF	STG: MF									
	WATER	the state of the state of								
EMS:		Req #:								
Temp: 6	Method: T4	Cond.: 60	Method: \$3							
pH: 7.7 Flood Signs: None	Method: P2 Method: GE	Turb.: T M L C	Method: GE							
· · · · · · · · · · · · · · · · · · ·	WORRHOLDS	STATE OF THE STATE	THE RESERVE OF							
Bed Material: Dominant: F	Subdom: G	O1 B1 B2 B3 D1 D2	D3							

DISTURBANCE INDICATORS

C1 C2

Islands, N	
Coupling: DC	
Confinement: UN	
FSZ:	Bars: N SIDE DIAG MID SPAN BR
	HABITAT QUALITY 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2
Name	Comments
Spawning Habitat	Poor-no clean patches of gravel observed
Rearing Habitat	Poor-intermittent flow, limited stream cover
OverWinter Habitat	Poor-limited by intermittent flow and lack of deep pools

Morph: RP

				s, 441	andpipe in the	and by Senter Carte 1975 per seco	PHOTOS: The contract of the co
		Ph	oto_		Foc Lg	Dir	Comments
_ [F	R:	21	F:	05	STD	U	upstream photo of typical habitat
F	R:	21	F:	06	STD	D	downstream photo
F	R:	21	F:	07	STD	Ŭ	upstream photo

LWD: F

RIP: S

D95: 15.0

Pattern: SI

LB SHP: S

DIST: E

Texture: F G G C B R A ∏

D (cm): 2.00

South Fulton Study Area

Reach # ILP Map #

Site

503

Watershed Code: 480-742900-26000-72510-0000-0000-000-000-000-000-000

1.0

093L.080

10055

ILP#

	Pł	hoto		Foo	Lg	Dir	Comments
R:	21 F: 08 S		D	D	downstream photo		
		•	APPEN		#4		COUNTRY SECTION OF THE SECTION OF TH
		Se	ction				Comments
		CHA	NNEL				inues. Channel gradient at stream junction was 28% for approx. 30 m. S6 upstream of confluence with instem is non fish bearing.
		CHA	NNEL	·	S6 Stream		

South Fulton Study Area

Reach#

ILP Map#

ILP#

Watershed Code:

480-742900-26000-72510-0000-0000-000-000-000-000-000

1.0

093L.080

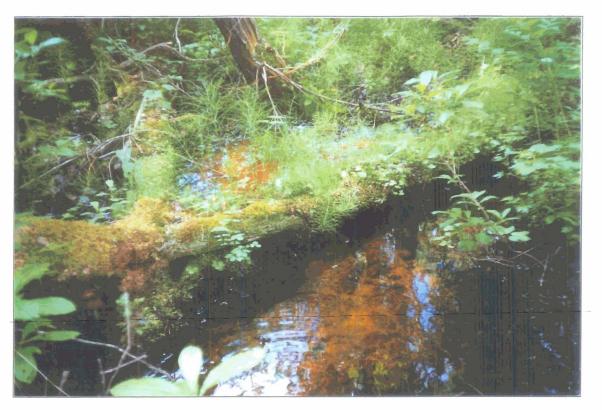
Gaz	zetted N	ame:										Loc	al: No	one				
F	-				0000-0000													
14	WS C aterbod			42900-2	6000-7251	0-0000	J-0000-0	00-00			10-000 093L.08	0		ILP#:	10055	_	Reach #:	1 -
**		•	3496						ILIT IVI	αμ π.	U33E.U0	Lake/St	ream:			-	m Date:	1 -
F	ish Pem	nit#:	145	085K	Da	te: 20	001/07/3	1	To:	2001	/07/31	Age	ency: (C172	Crew:	JA/JH	Res	ample:
		7			4.4			8	ITE	7 4	ga ji	D D						in the
Site#	NID N	ар	NID	#	JTM:Zone	/East/l	North/Mt	hd _	MTD/	NO	Temp	Cond	Turb	id			mment	
503	093L.0	080	5000	03				GPU	EF	1	6	60	С					
		j.	. (2), 14	77	(Markin)			A. 1	BEA	R S	ETT!	NGS	15. ja	e i jes	e acarti e a	1.3	Mill Market	
Site#	MTD/I	10	H/P	Date	n Tin	ie In	Date	Out	Time (Out				(Comment			
503	EF	1]	1	2001/07		:40	2001/0	_	11:3	-								
. 44			ta turk	19:57:4	C.	EL	ECT	RO	F18#	IER	2 P E	CIFI	CAT	HOME.		5, T		
Site#	M	D/N	0	H/P	Enc		Sec	L	ength		Width	Vol	tage	Frequenc	y Pi	ulse	Make	Mode
503	EF	\mathbf{J}	1	1	0		173		300.0		1.1	5	00			5	SMITH	12B
		Kareli							E H								ROOT	
	7 7 7 7		_	1.5%	7 (2.3	· ·									100	1 45	C Paris	9-49-5-3
Site#	EF.	D/N	<u></u>	H/P	Species		tage	Age		Total #	t Lgti	(Min/M	ax)	FishAct			Comment	



Site #503, upstream photo of typical habitat. Roll #21, Frame #05, Date: 2001/07/31



Site #503, downstream photo. Roll #21, Frame #06, Date: 2001/07/31



Site #503, upstream photo. Roll #21, Frame #07, Date: 2001/07/31



Site #503, downstream photo. Roll #21, Frame #08, Date: 2001/07/31

FDIS Reach Card

South Fulton Study Area

Reach #

ILP Map #

ILP#

		PROJEC	T			141
Stream Name (gaz.):	Smithers Landing Fish Invento BABINE RIVER 480-000000-00000-00000-0000	ry - 2000	and the second of the second o	Project Code: (3496	
	garak ing Lindson and	WATERSH	ED		A. C. L. C.	
Reach Watershed Code: ILP Map #:	480-742900-26000-00000-000 ILP #:	0-0000-000-000-000-000 Reach #: 4.0		NID Map #: 093L.080) NID	#: 50180
Air Photos LINE: 30BCC97158 #: 69	Gaz.: Local:	Names			UTM(Zone/East/North 9.683475.6065948 Sample Type: B	/Method) GIS Wetland:
		SURVEY	NFO.			is a second
Date: 1900/07/06		Agency: C172			Crew: SH	
		ATTRIBUT	ES.	A SECTION		
Length (km): 1.09 DS Elev.: 1070 US Elev: 1098	Gradient: 2.57 Order: 2 Magnitude: 2 BGC Zone: ESSF	Setting: Open water: Confinement: Coupling:	VW A OC PC		لا با لا	D1 D2 D3
Valley Flat: N Active Floodplain Visible: Channel Pattern: SI	C/D: Est. Width:	Ba		ement: L	G MID SP Exposed/Eroded Landuse	I: NS
	P S					
Map Type Map TRIM 093L.08						

South Fulton Study Area

Reach#

ILP Map #

ILP#

Watershed Code:

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Gaz	zetted Na	ıme:										Loca	al: No	ne					
F	Project C	ode:	480-0	0000	0-00000	-00000-	0000-0000	-000-00	00-000-0	000-00	0-0								
	WS C	ode:	480-7	4290	0-26000	-00000-	0000-0000	-000-00	0-000-0	00-00	000-00								
W	/aterbod	y ID:							ILP M	ap #:				ILP#:		F	Reach #:	4 -	
	Projec	t ID:	3496									Lake/St	eam:	S	L	ake Fro	m Date:		
F	Fish Permit #: 145085K							/31	To:	2001	/07/31	Age	ency: (C172	Crew:	JA/JH	R	esamp	le:
***	r		40	-1715	1034			71.8	TTE	7 1	B) H	00				; 7		14.	T. 1778)
Site#	NID M	ар	NID	#	UTM	:Zone/E	ast/North/N	Athd	MTD/	NO	Temp	Cond	Turb	id		Co	mment		
504	093L.0	080	500	04				GPU	EF	1	6	40	U						
10 mg	a partic	111	* 1	10.		n r	140	A	GEA	R S	ETT	INGS	A.	e Britania		- (#)	P House		7.67 1
Site#	MTD/I	40	H/P	Di	ate In	Time	in Dat	e Out	Time (Out				(Commer	nt			
504	EF	1	_ 1	200	1/07/31	12:0		/07/31	12:3										
				4		C.	ELEC	TRO	F 18 H	ER	SPI	CIF	CAT	IONS		4.3			
Site#	M	D/N	Ю	Н	/P	Encl	Sec	l	ength		Width	Vol	age	Frequenc	y F	^o uls e	Make	3	Model
504	EF		1		1	0	150		150.0		2.1	60	00			5	SMITI		12B
Service Commence		400	: Ker-Cheki	1. 2000		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1011	011		B.V.	- 10		2 W	-	R00	T	**************************************
9.9	1					1,00	L Marin		ISH	8 J. C.	- (A) (A) (A)	e distribution		1997	92 ,		4 4		
Site#		D/N	0	H/I		ecies	Stage	Ag	e '	Total #	# Lg1	th (Min/M	ax)	FishAct			Commen		
504	EF		_1	1	N	FC		<u> </u>		0									

South Fulton Study Area

Reach # ILP Map #

ILP#

		STI	REAMI	REFEREN	CING			
Gazetted Name:					ocal Name:			
Watershed Code:	480-742900-26000	0-00000-0000-0000-0	00-000-000	-000-000-000	iLP	Map #:	HL	P#:
	1.7		, a R	EACH		e de la		
Reach #: 3.0		UTM(Zone/East/N	North): 9.68	34376.6066520			Sample Type:	Biased
Length (km): 1.37		Coupling: Decouple	ed	Magnitude:	4		BGC Zone:	
Gradient (%): 7.3		nfinement: Occasion	ally Conf	Order:	_		Open water: Abs	sent
US Elev (m): 1070		Islands: NONE			getation: Shru			
Bars: None 🗹 S	ide Diagonal	Mid-channel	Span	Braid	Landuse: No	t Specified		
	15			SITE		1	\$1.49	* * * * * * * * * * * * * * * * * * * *
Site #: 505	Field I	UTM		Agend	y: C172	Crew: J	IA/JH Date:	2001/07/31
Site Length (m): 40	00 GIS	UTM 9.684947.6066	995	Agen	cy Name: Trito	n Environmen	ntal Consultants (T	errace)
		t di	CH	ANNEL	# 15 m	-		We see the
No Vis.Ch.:	ntermittent:	_	Avg	Min Max	# 7		Avg Min	Max #
Dewatered:	Tribs.: 🔲 📗	Channel Width (m)	2.72	2.400 3.1	6	Gradient 9	%: 7.50 5	10 4
Stage: Low		Wetted Width (m)	2.58	2 3	6	Pool Depth (m	n): 0.22 0.150	0.300 6
Med ✓		Bankfull Depth (m)	0.57	0.5 0.7	3	Tur	rbidity.: Turbid	Low
High	Temp (C): 6	pH: 7.4		Conductivi	ty: 40		Moderate	Clear ✓
					Y-1111	CALL AND	AND DESCRIPTION OF PARTY AND DESCRIPTION OF	processors and the contract of
			HOR	PHOLOGY	<u> </u>			
Bed Material: Dor	minant: Cobble	D95 (cm): 40	A	Bars: Nor		Diagonal	Mid-channe	
	minant: Cobble minant: Gravels	D95 (cm): 40 D (cm): 10	0.00			Diagonal	Mid-channe	
Subdor		D (cm): 10	0.00 0.00			Diagonal		I Span
Subdor	minant: Gravels Irregular Meanders	D (cm): 10	0.00 0.00	Bars: Nor	n ✓ Side [Span Braid
Subdor Channel Pattern: I Coupling: [minant: Gravels Irregular Meanders	D (cm): 10	0.00 0.00 one E	Bars: Nor	O1 B1	B2 B3	D1 D2 [Span Braid
Subdor Channel Pattern: I Coupling: [minant: Gravels Irregular Meanders Decoupled Occasionally Confi	D (cm): 10 Islands: No	0.00 0.00 one E	Bars: Nor DISTURBANCE INDICATORS	O1 B1	B2 B3	D1 D2 [Span Braid C
Subdor Channel Pattern: I Coupling: I Confinement: (minant: Gravels Irregular Meanders Decoupled Occasionally Confi	D (cm): 10 Islands: No	0.00 0.00 one E	Bars: Nor DISTURBANCE INDICATORS C1 C2 C	O1 B1	B2 B3	D1 D2 [Span Braid C
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology:	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F	D (cm): 10 Islands: No	0.00 0.00 one E	Bars: Nor DISTURBANCE INDICATORS C1 C2 C	O1 B1	B2 B3	D1 D2 L 2 S3 S4	Span Braid C
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology: Total Cover: Abunda	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F	D (cm): 10 Islands: No	0.00 0.00 one E	Bars: Nor DISTURBANCE INDICATORS C1 C2 C	O1 B1 3 C4 C5	B2 B3 S1 S2	D1 D2 [Span Braid C
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology: Total Cover: Abunda	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F	D (cm): 10 Islands: No ne Pool Type:	0.00 0.00 one E	Bars: Nor DISTURBANCE INDICATORS C1 C2 C OVER LWD B	O1 B1 3 C4 C5	B2 B3 S1 S2	D1 D2 [2 S3 S4 OV IV	Span Braid S5
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology: Total Cover: Abunda LWD: Few LWD Dist: Evenly	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F	D (cm): 10 Islands: No ne Pool Type: Amount: Location: P/S/O:	0.00 0.00 one E	Bars: Nor DISTURBANCE INDICATORS C1 C2 C OVER LWD B D T	O1 B1 3 C4 C5 U S	B2 B3 S1 S2 DP T	D1 D2 [2 S3 S4 OV IV S T	Span Braid S5 S5 FSZ:
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology: Total Cover: Abunda LWD: Few LWD Dist: Evenly Right Bank: Sh	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F ant / Distributed [] [] [] [] [] [] [] [D (cm): 10 Islands: No ne Pool Type: Amount: Location: P/S/O: Texture: Fines G	SWD S	Bars: Nor DISTURBANCE INDICATORS C1 C2 C OVER LWD B D T Obble Bould	O1 B1 3 C4 C5 U S P Rock	B2 B3 S1 S2 DP T WManmade	D1 D2 [2 S3 S4 OV IV S T	Span Braid S5 S5 FSZ: Sown Closure
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology: Total Cover: Abunda LWD: Few LWD Dist: Evenly Right Bank: Sh Left Bank: Sh	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F ant / Distributed [pape: Sloping (g 1) pape: Sloping (g 1) pape: Sloping (g 1)	D (cm): 10 Islands: No ne Pool Type: Amount: Location: P/S/O: Texture: Fines Gr Grexture: Fines Gr Grexture: Fines Gr	SWD S Pravel C Cravel C C	Bars: Nor DISTURBANCE INDICATORS C1 C2 C OVER LWD B D T Obbie Bould obbie Bould	O1 B1 3 C4 C5 U S P Rock	B2 B3 S1 S2 DP T	D1 D2 [2 S3 S4 OV IV S T	Span Braid S5 S5 FSZ:
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology: Total Cover: Abund: LWD: Few LWD Dist: Evenly Right Bank: Sh Left Bank: Sh Right Bank: Rip.)	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F ant / Distributed [] [] [] [] [] [] [] [D (cm): 10 Islands: No ne Pool Type: Amount: Location: P/S/O: Fexture: Fines Gr Stag	SWD S	Bars: Nor DISTURBANCE INDICATORS C1 C2 C DYER LWD B D T Obble Bould obble Bould forest	O1 B1 3 C4 C5 U S P Rock	B2 B3 S1 S2 DP T W Manmade Manmade	D1 D2 [2 S3 S4 OV IV S T	Span Braid S5 S5 FSZ: Sown Closure 1-20%
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology: Total Cover: Abund: LWD: Few LWD Dist: Evenly Right Bank: Sh Left Bank: Rip. Left Bank: Rip.	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F ant / Distributed [nape: Sloping (g 1) nape: Sloping (g 1) Veg: Shrubs	D (cm): 10 Islands: No ne Pool Type: Amount: Location: P/S/O: Fexture: Fines Gr Stag	SWD S S Pavel C Cavel C Coge: Mature 1	Bars: Nor DISTURBANCE INDICATORS C1 C2 C DYER LWD B D T Obble Bould obble Bould forest	O1 B1 3 C4 C5 U S P Rock Rock	B2 B3 S1 S2 DP T W Manmade Manmade	D1 D2 [2 S3 S4 OV IV S T	Span Braid S5 S5 FSZ: Sown Closure 1-20%
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology: Total Cover: Abund: LWD: Few LWD Dist: Evenly Right Bank: Sh Left Bank: Rip. Left Bank: Rip.	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F ant / Distributed [nape: Sloping (g 1) nape: Sloping (g 1) Veg: Shrubs	D (cm): 10 Islands: No ne Pool Type: Amount: Location: P/S/O: Fexture: Fines Gr Stag Stag	SWD S S Pavel C Cavel C Coge: Mature 1	Bars: Nor DISTURBANCE INDICATORS C1 C2 C OVER LWD B D T Obble Bould obble Bould forest forest	O1 B1 3 C4 C5 U S P Rock Instream Ve	B2 B3 S1 S2 DP T W Manmade Manmade	D1 D2 I 2 S3 S4 OV IV S T Cr Algae Moss	Span Braid S5 S5 FSZ: Sown Closure 1-20% Vascular
Subdor Channel Pattern: I Coupling: I Confinement: (Morphology: Total Cover: Abund: LWD: Few LWD Dist: Evenly Right Bank: Sh Left Bank: Rip.: Left Bank: Rip.: Site Number Cap	minant: Gravels Irregular Meanders Decoupled Occasionally Confi CP Cascade F ant / Distributed Inape: Sloping (g T Page: Shrubs Veg:	D (cm): 10 Islands: No ne Pool Type: Amount: Location: P/S/O: Fexture: Fines Gr Stag Stag Of Length fished	SWD S Cavel C Cavel C Caye: Mature in ge: Ma	Bars: Nor DISTURBANCE INDICATORS C1 C2 C DYER LWD B D T Obble Bould obble Bould forest	O1 B1 3 C4 C5 U S P Rock Rock	B2 B3 S1 S2 DP T WManmade Manmade G: None	D1 D2 [2 S3 S4 OV IV S T	Span Braid S5 S5 FSZ: Sown Closure 1-20%

South Fulton Study Area

ILP Map # Reach #

Site

3.0

ILP# 505

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		St	ream N	ame (gaz	.): BAB	INE RIV	'ER							F	Project Co	ode:		3496		
	F			shed Cod				0000-000	00-0000-	-000-000	0-000-00	0-000-00	00							
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t			Vidth (m		2.80	2.20	2.80	2.70	3.00	2.00		 			2.58	Metho	d II: 8.0	5.0	С	
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			EM: Tem	G: MF S: p: 6 H: 7.4					Metho Metho	od: T4	ATCE		R	RIP STG ***********************************	: S : MF		C S	Meth	4 (P	
			EM: Tem	G: MF S: p: 6					Metho Metho Metho	od: T4 od: P2 od:GE			R	RIP STG ***********************************	: S : MF			Meth	od: S3	
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		Floo	EMS Tem pl od Sign Materia D9:	G: MF S: p: 6 1: 7.4 s: Rafted II: I 5: 40.0 n: IM	debris Dominan	t: C		Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	(e) e) y	R C	RIP STG Req #: Cond.: 40 Turb.: T	: S : MF M		C D2	Metr Metr	nod: S3	
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South Fulton Study Area

Reach # ILP Map #

ILP#

Site

3.0

	CONNENTS
Section	Comments
CHANNEL	No Fish Caught
CHANNEL	Downstream barrier on mainstem
CHANNEL	S6 Stream

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

WATERBODY Gazetted Name: Local: ILP Map #: ILP#: Reach #: Waterbody ID: Project ID: 3496 Lake/Stream: S Lake From Date: Date: 2001/07/31 Fish Permit #: 145085K To: 2001/07/31 Agency: C172 Crew: JA/JH Resample: AND THE ROOM OF THE PARTY OF TH Site# NID Map NID# UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid 505 093L.080 50005 IGPULEF T 1 40 C A. GEAR SETTINGS × × 8 , 5 5 7 MTD/NO H/P Date in Date Out Time Out Site# Time In 505 EF 1 1 2001/07/31 12:30 2001/07/31 13:40 CHIEFLECTROFISHER SPECIFICATIONS organization per de Pik. Site# MTD/NO Encl Length Width Voltage Pulse Make H/P Frequency Model Sec 505 EF 300 400.0 600 SMITH 12B ROOT FISH SUBBARYOR HOLE TO CARE MTD/NO Species Total # Lgth (Min/Max) Site# Stage Age Comment 505 EF NFC 0



Site #505, upstream photo of cobble/gravel substrates typical within sample site. Roll #21, Frame #09, Date: 2001/07/31



Site #505, downstream photo. Roll #21, Frame #10, Date: 2001/07/31

South Fulton Study Area

Reach # ILP Map #

IIP#

1-20%

Instream Veg: None ☐ Algae ☐ Moss ✔ Vascular ☐

Watershed Code: 480-742900-26000-49569-0000-0000-000-000-000-000-000-000

1.0 093L.080 10052 STREAM REFERENCING Gazetted Name: Local Name: Watershed Code: 480-742900-26000-49569-0000-0000-000-000-000-000-000 ILP Map #: 093L.080 ILP#: 10052 REACH Reach #: 1.0 UTM(Zone/East/North): 9.685809.6066267 Sample Type: Length (km): 1.15 Coupling: Decoupled Magnitude: 7 BGC Zone: SBS Gradient (%): 4.8 Confinement: Occasionally Conf Order: 3 Open water: Absent US Elev (m): 1012 Islands: NONE Riparian Vegetation: Shrubs Braid Bars: None 🗹 Side 🗌 Diagonal 🖳 Mid-channel Span Landuse: Not Specified SITE Site #: 506 Field UTM .. Agency: C172 JA/JH Date: 2001/07/31 GIS UTM 9.685750.6067053 Site Length (m): 360 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL No Vis.Ch.: Intermittent: Min Max Avg Channel Width (m): 2.13 1.4 3.1 6 Gradient %: 6.75 8 4 Dewatered: Tribs.: Wetted Width (m): 1.89 1.5 2.200 6 Pool Depth (m): 0.24 0.13 0.400 6 Stage: Low Bankfull Depth (m): 0.57 0.4 0.7 3 Turbid Med -Turbidity.: Low High Temp (C): 8 pH: 7.6 Conductivity: 90 Moderate Clear 🗸 MORPHOLOGY Bed Material: Dominant: Cobble D95 (cm): 33.00 Bars: Non 🗸 Side Diagonal Mid-channel Span Subdominant: Gravels D (cm): 3.00 Braid DISTURBANCE Channel Pattern: Irregular, Wandering Islands: None **B2** D3 **INDICATORS** Coupling: Decoupled Confinement: Unconfined C1 C2 C3 C4 C5 S1 S2 S3 **S4 S**5 Morphology: RP Riffle Pool COVER SWD LWD DP οv Total Cover: Abundant Type: B U ١V Amount: s D s s Ť LWD: Few Location: P/S/O: LWD Dist: Evenly Distributed FSZ: Right Bank: Shape: Undercut Boulder Rock Manmade Crown Closure

				, F.J.	SH				
Site Number	Capture	Number of	Length fished	Total	Voltage	Species	Total	Minimum	Maximum
:	Method	Events	(m)	Time			Fish	Length (mm)	Length (mm)
506	EF	1	360	263 sec	600	NFC	0		

Stage: Mature forest

Stage: Mature forest

Texture: Fines Gravel Cobble Boulder Rock Manmade

Left Bank:

Right Bank:

Left Bank:

Shape: Undercut

Rip.Veg: Shrubs

Rip.Veg:

South Fulton Study Area

Reach # ILP Map #

ILP#

Site 506

Watershed Code: 480-742900-26000-49569-0000-0000-000-000-000-000-000 1.0 093L.080 10052

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			Pro	oject Na	me: Smi	thers L	anding F	ish Invent	ory - 20	00											
		St	ream N	lame (ga	z.): BA	SINE R	IVER							ı	Project C	ode:			3496		
	F	Proj e C	t Water	shed Co	de: 480	-00000	0-00000-	00000-00	00-0000	-000-00	0-000-00	00-000-00	00								
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1	اماح		I (Z.E.I					Method:		•			Site L	a: 360		Metho	od: HC		Acce	ee. H	
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E. P. Marie			EMS											eq #:	<u> </u>						
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			Habita					itat- assoc					(LWD,	Overstre	eam Veg	., Under	cut ban	ks)			
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South Fulton Study Area

Reach # ILP M

ILP Map#

ILP#

Site 506

Watershed Code: 480-742900-26000-49569-0000-0000-000-000-000-000-000-000

1.0 093L.080

To Company to the Company of the Com	COMMENTS
Section	Comments
CHANNEL	No Fish Caught
CHANNEL	S6

South Fulton Study Area

Reach #

ILP Map#

ILP#

Watershed Code:

480-742900-26000-49569-0000-0000-000-000-000-000-000

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vv		erbod Projed	•	3496						ILP Map) #: U:		Lake/Str	eam:	ILP#: S	10052 La	ike From	J. J	1 -
F	ish	Pem	nit #:	145	5085K		Date: 2	001/07/31		To: 2	2001/0	07/31	Age	ency:	C172	Crew:	JA/JH	Resa	mple:
			o _{st} ,		4				S	ITE 1	М	TH	DD.						
Site#	Ti	NID N	ар	NID	#	UTM:Zo	ne/East/	North/Mth	1	MTD/NO) T	emp	Cond	Turl	oid		Con	nment	
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Site#	T	M ⁻	D/N	10	H/P) E	ncl	Sec	L	ength	٧	/idth	Volt	age	Frequenc	y Pu	ılse	Make	Mode
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Site#	T	M	D/N	10	H/P	Spec	ies S	tage	Age	е То	tal#	Lgt	(Min/M	ax)	FishAct		(Comment	or Oliver and Charles of Control of Control
506	Т	EF	Т	1	1	NFC					0			T					



Site #506, upstream photo within sample site. Roll #21, Frame #11, Date: 2001/07/31



Site #506, downstream photo within sample site. Roll #21, Frame #12, Date: 2001/07/31

FDIS Reach Card

South Fulton Study Area

Reach # ILP Map #

ILP#

2.0

		PROJECT		
Stream Name (gaz.):	Smithers Landing Fish Inventory BABINE RIVER 480-000000-00000-00000-00000-		Project Code: 3	1496
		WATERSHED		
Reach Watershed Code:	480-742900-26000-00000-0000-			
ILP Map #:	ILP #: F	Reach #: 2.0	NID Map #: 093L,080	NID #: 50178
Air Photos LINE: 30BCC97158 #: 127	Gaz.: Local:	Names		UTM(Zone/East/North/Method) 9.685600.6067198 GIS Sample Type: B Wetland:
		SURVEY INFO		(49)
Date: 1900/07/06		Agency: C172		Crew: SH
		ATTRIBUTES		
Length (km): 1.77 DS Elev.: 945 US Elev: 970	Gradient: 1.41 Order: 4 Magnitude: 12 BGC Zone: ESSF	Setting: VF Open water: A Confinement: UN Coupling: DC	DISTURBANCE INDICATORS C1 C2	O1 B1 B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Valley Flat: L Active Floodplain Visible: Channel Pattern: IR	C/D: C : Est. Width:	Bars:	Islands: N N SIDE DIAG Mass Movement: L Ripanan Veg.: S	B MID SPAN BR Exposed/Eroded: NS Landuse: NS
Map Type Map		,		

TRIM

093L.080

South Fulton Study Area

Reach#

ILP Map#

ILP#

Watershed Code:

480-742900-26000-00000-0000-0000-000-000-000-000-000-000

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W		ody ID						ILP	Map #:				ILP#:		Reach #:	2 -	
	Pro	ject ID	: 3496								Lake/St	ream:	S	Lake	From Date:		
F	ish Pe	emit#	: 14	5085K	Date	e: 2001/07	7/31	To	o: 200	1/07/31	Age	ency:	C172	Crew: JA/	JH	Resamp	le:
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Site#	MT	D/NO	H/P	Date	In Time	In Da	te Out	Time	e Out					Comment	_		
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507	EF	· T	1	1	NFC		T		0	\dashv		_		-			

FDIS Reach Card

South Fulton Study Area

Reach # ILP Map #

ILP#

				PROJE	CT	Trace Library		January Zwiebos		
	Project I	Name: Smithers Landing Fis	h Inventory - 20	00						400
	Stream Name	(gaz.): BABINE RIVER				Proj	ect Code: 3	3496		
	Project Watershed	Code: 480-000000-00000-0	0000-0000-0000	0-000-000-000	000-000					
15				WATERS			Aw .	Kyr-Er (, , ,
		Code: 480-742900-00000-0			0-000-000					
ILP I	Мар #:	ILP#:	Reac	h#: 4.0		NID Map #	: 093L.080		NID #:	50200
	Air Photos			Names				UTM(Zone	e/East/North/Me	ethod)
	30BCC97158	Gaz.:						9.68809	4.6066615	GIS
#:	72	Local:						Sample Ty	pe: B W	etland:
6 · · · · · ·				SURVEY	NFO.	al (a)			i de la	
Da	te: 1900/07/06			Agency: C172				Crew:	SH	
				ATTRIBU	res		1 × 1 × 1 × 1			
L	ength (km): 1.84	Gradient:	3.97	Setting:	vw	DIST	URBANCE	O1 B	B2 B3 [D1 D2 D3
	DS Elev.: 893	Order:	4	Open water:	Α	iNi	DICATORS			
	US Elev: 966	Magnitude:	53	Confinement:	co		C1 C2	C3 C4 C	S1 S2 S	33 S4 S5
		BGC Zone:	SBS	Coupling:	PC		[1] [1]			
	Valley Flat: N	C/D:				Islands:	N			
	Active Floodplain V	/isible: Est. Width	n:	В	ars:		DIAG	П МІП	SPAN	BR
	Channel Pattern:	IR			Ma		M		sed/Eroded:	NS
					ı	Riparian Veg.:	м		Landuse:	NS
		MAPS								
Ма	ір Туре	Map# Ye	ear							
	TRIM 0	931 080								

South Fulton Study Area

Reach #

ILP Map#

ILP#

Watershed Code:

4.0

WATERBODY AND SHOP OF Gazetted Name: Local: Sockeye Creek Waterbody ID: ILP Map #: ILP#: Reach #: Lake/Stream: S Project ID: 3496 Lake From Date: Fish Permit #: 145085K Date: 2001/08/01 To: 2001/08/01 Agency: C172 Crew: JA/JH Resample: SITE / METHOD MTD/NO Temp Site# NID Map NID# UTM:Zone/East/North/Mthd Cond Turbid Comment 093L.080 IGPU EF | 1 50 508 50008 9 С A. GEAR SETTINGS Service of W. . Site# MTD/NO H/P Date In Time In Date Out Time Out Comment 2001/08/01 508 EF 1 1 09:00 2001/08/01 09:30 C. ELECTROFISHER SPECIFICATIONS Site# MTD/NO H/P Encl Sec Length Width Voltage Frequency Pulse Make Model SMITH 508 200 400.0 700 12B EF 0 8.5 ROOT FISH SUNWARY Application of the second Site# MTD/NO H/P Species Stage Total # Lgth (Min/Max) FishAct Comment NFC 508 ĘF

South Fulton Study Area

Reach # ILP Map #

3.0

ILP#

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Gazetted Name:					ι	.ocal Nar	ne:					
Watershed Code: 480)-742900-0000	0-0000-0000-0	000-000-000	-000-000-	000-000		ILP Map #:			ILF	P #:	
10 (10 ps	ar Mari	*		REA	CH.		i eu					17.00
Reach #: 3.0	_	UTM(Zone	/East/North):	9.688614	6067651				Sample	Туре:	Rando	m
Length (km): 2.45		Coupling: Pa		e Ma	gnitude:			_	_	Zone:		
Gradient (%): 2.9 US Elev (m): 893	C	onfinement: Co Islands: N0		Di-	Order:		Mixed C/D	O	pen wa	iter: Abse	ent	
Bars: None Side	Diagon	Mid-chai			raid : :		e: Not Specifi	ad				
bars: None 💽 Side	Diagona	ii Mio-chai	nnei Sp			Landus	e: Not Specifi	eu 2 24,525,6	45 - 15 1	200		
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7. J. W. H. + 1. + 1.			M C	RPHC	LOG'	f		****			ir sud	
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Channel Pattern: Sin	luous	,	cm): 15.00 nds: None		RBANCE	01	B1 B2	В3	<u>D1</u>	D2 D	Br	aid 🗌
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Channel Pattern: Sin Coupling: Coi Confinement: Coi Morphology: Ri Total Cover: Abundani LWD: Abundani LWD Dist: Clumped Right Bank: Shap Left Bank: Shap	t t t e: Sloping (g e: Sloping (g gg: Coniferous	Islar An Location: F Texture: Fines	Type: SWI nount: T P/S/O: Gravel Gravel Stage: Ma	COVID LWI D Cobble Cobble	CATORS C2 C R D B S S W Bould	3 C4	C5 S1 DP S CK Mann	S2	\$3	S4	S5 FSZ	: [] sure
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South Fulton Study Area

Reach # ILP Map #

ILP#

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Site #:	: 509	Field UTN	1			Agen	cy: C172	Crew: J	A/JH	Date:	2001/08	3/01
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No Vis.Ch.:	Intermit	tent:		Avg	Min	Max	#		Avg	Min	Max	#
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Stage: Low			Wetted Width (m)	5.03	2.5	8.100	6	Pool Depth (m	1): 0.36	0.21	0.52	6
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High	· 	emp (C): 8	pH: 7.7		(Conductiv	ity: 40		•	loderate		Clear
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Bed Material	: Dominant:	Cobble	D95 (cm): 18	1.00	_	Bars: No	n Sid	le Diagonal	✓ Mid	-channe	ı √ s	pan
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Morpho	ology: RP	Riffle Pool			<u> </u>		.3 (4	C5 S1 S.	2 83	S4	So	
	in the Ships	Riffle Pool	Tune	- Transportation	COV	E R					55 	
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South Fulton Study Area

Reach # ILP Map #

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Site 509

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	Ove Ove	Bed (Conf Na awnir earin erWin	EMM Tem p p od Sign Materia D9 Patter Islanc Couplininemer FS Amane ag Habit ter Hat	S: p: 8 H: 7.7 s: Braided al: 5: 181.0 n: SI ls: N g: DC nt: UN Z: tat at at	Dominant: D (cm): Moderal High real	C 15.00	vning hal abitat-ass ring hab	Morph bitat-ass sociated itat-asso	Metho Metho B: B : RP	bd: T4 bd: P2 bd: GE I O R P D BITA with clean od cover with deep	HOLDISTURE INDICATE I	OGY BANCE TORS ars: Coes of gra by falls k perennia	O1 C1 N Cimmel	STG Req #: Cond.: 40 Turb.: T B1 C2 SIDI SIDI Silved by fa Sownstream imited by fa	B2 B C3 C	DIAG stream	D2 S1	D3 S2 S3	S4 S5
R:	Ove Pho 21	Bed (Conf Na awnir earing erWin oto F:	EMM Tem p p dd Sign Matenia D9 Patter Islanc Couplininemer FS g Habi g Habi ter Hat	S: p: 8 H: 7.7 s: Braided al: 5: 181.0 n: SI ls: N g: DC nt: UN Z: tat at sitat stat stat stat	Dominant: D (cm): Moderat High reat High over	C 15.00	vning hal abitat-ass ring hab	Morph bitat-ass sociated itat-asso	Method Me	BITA with clean od cover with deep PH	HOLDISTURE INDICATION PROPERTY OF THE PROPERTY	BANCE TORS Ars: Coes of graby falls keeperennia	O1 C1 N Commentation Commentati	STG Req #: Cond.: 40 Turb.: T B1 C2 SIDI silted by fa bownstream imited by fa	B2 B C3 C BIS downs n falls in Re	DIAG stream	D2 S1	D3 S2 S3	S4 S5
R: R: R:	Ove Ove	Bed (Conf Na awnir earin erWin	EMM Tem p p od Sign Materia D9 Patter Islanc Couplininemer FS Amane ag Habit ter Hat	S: p: 8 H: 7.7 s: Braided al: 5: 181.0 n: SI ls: N g: DC nt: UN Z: tat at sitat stat stat stat stat	Dominant: D (cm): Moderal High real	C 15.00	rning hal abitat-ass ring hab D L	Morph bitat-ass sociated itat-asso	Method Me	BITA with clean od cover with deep PH	HOLDISTURE INDICATION PROPERTY OF THE PROPERTY	BANCE TORS Ars: Coes of graby falls keeperennia	O1 C1 N Commentation Commentati	STG Req #: Cond.: 40 Turb.: T B1 C2 SIDI SIDI Silved by fa Sownstream imited by fa	B2 B C3 C BIS downs n falls in Re	DIAG stream	D2 S1	D3 S2 S3	S4 S5

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

3.0

						PHOTOS
	Ph	noto		Foc Lg	Dir	Comments
R:	21	F:	16	STD	D	photo over waterfall
R:	21	F:	17	STD	U	photo of waterfall
	*,01			rasificador de de la compansión de la comp Compansión de la compansión de		CONMENTS
		Sec	ction			Comments
		CHA	NNEL	No Fish Cau	ght	
		CHA	NNEL	Strong % of	invertebrates in s	tream, pictures 15-17 are of waterfalls in Reach 3
		CHA	NNEL	S5 Stream		

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

3.0

	10	i i i				PHOTOS
V: 42-7	Pi	hoto		Foc Lg	Dir	Comments
R:	21	F:	16	STD	D	photo over waterfall
R:	21	F:	17	STD	U	photo of waterfall
						CONNENTS
		Se	ction			Comments
		CHA	NNEL	No Fish Cau	ught	
	_	CHA	NNEL	Strong % of	invertebrates in s	tream, pictures 15-17 are of waterfalls in Reach 3
		CHA	NNEL	S5 Stream		

509

EF

South Fulton Study Area

Watershed Code:

0

500

Reach #

3.0

ILP#

ILP Map #

SMITH

5

12B

WATERBODY Local: Sockeye Creek Waterbody ID: ILP Map #: ILP#: Reach #: 3 -Project ID: 3496 Lake/Stream: S Lake From Date: Fish Permit #: To: 2001/08/01 145085K Date: 2001/08/01 Agency: C172 Crew: JA/JH EL/J 是例如此是是其他知识的 SITE (METHOD NID Map MTD/NO Temp Site# NID# UTM:Zone/East/North/Mthd Cond Turbid Comment 509 093L.080 50009 GPU EF С 8 40 1 9 093L.080 10009 GPU EF 8 40 C A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment 2001/08/01 08:30 2001/08/01 09:45 509 2001/08/01 09:30 EF 2001/08/01 11:50 C. ELECTROFISHER SPECIFICATIONS MTD/NO Voltage Make H/P Encl Sec Width Frequency Pulse Site# Length Model 9 EF 1 0 416 400.0 4.0 800 60 6 SMITH 12B ROOT

	1							-			ROOT	
Sharing.				na takes in		FIS	HSUM	MARY			2. 电复数	
Site#	MTI	D/NO	H/P	Species	Stage	Age	Total #	Lgth (N	lin/Max)	FishAct	Comment	
9	EF	1	1	NFC			0					
509	EF	1	1	NFC			0					

8.0

700



Site #509, upstream photo of habitat within site. Roll #21, Frame #13, Date: 2001/08/01



Site #509, downstream photo of typical habitat within site. Roll #21, Frame #14, Date: 2001/08/01



Site #509, photo of waterfall. Roll #21, Frame #15, Date: 2001/08/01



Site #509, photo over waterfall. Roll #21, Frame #16, Date: 2001/08/01



Site #509, photo of waterfall. Roll #21, Frame #17, Date: 2001/08/01

South Fulton Study Area

Reach # ILP Map #

ILP#

8.0 093L.080 10220

	W.	STR	EAM	REF	EREN	CING		***		941;	4) J.		
Gazetted Name: DEASY	CREEK	<u>-</u>			L	ocal Name	:						
Watershed Code: 480-72	9600-00000-00	000-0000-0000-00	00-000-00	00-000-0	000-000	1	LP Map #:	093L.00	в0	IL	P #:	10220	
, was			4.0	REA	СН	- Tana		**		W.		40 L	
Reach #: 8.0		UTM(Zone/East/N	orth): 9.	684141.	6068636				Sample	Type:	Rand	om	
Length (km): 1.39	Co	upling: Decouple	d	Ma	gnitude:	6			BGC	Zone:	SBS		
Gradient (%): 3.5	Confin	onfinement: Frequently Confin Order:				2 Open water: Absent							
US Elev (m): 964	l:	slands: NONE		Rip	oarian Veç	getation: M	lixed C/D						
Bars: None 🗹 Side 🗓	Diagonal	Mid-channel	Span	В	raid	Landuse:	Not Specif	ied					
			en pro-	811	Ę.		- All -				144	ri-t-t-	
Site #: 510	Field UTM	A			Agenc	y: C172	Cre	w: JA	/JH	Date:	2001/0	8/01	
Site Length (m): 505	GIS UT	TM 9.684360.6068604 Agency Name: Triton Environmental Consultants (Terrace)											
			C	HAN	NEL								
No Vis.Ch.: Intermit	tent:		Avg	Min	Max	#			Avg	Min	Max	#	
Dewatered: Tr	ibs.: C	hannel Width (m):	1.97	1.5	2.400	6	Gra	dient %:	3.25	1	6	4	
Stage: Low 🗸		Wetted Width (m):	1.67	1	2	6	Pool De	pth (m):	0.16	0.100	0.26	6	
Med	<u> B</u>	ankfull Depth (m):	0.67	0.6	0.7	3		Turb	idity.:	Turbid		Low	
High T	emp (C): 9	pH: 7.8		C	Conductivit	y: 70			M	oderate		Clear	
	Mark Transfer	liga-y like	MOR	PHO	LOGI	1		N. Gryt		144		38. 8. 5	
Bed Material: Dominant:	Gravels	D95 (cm): 15	.00		Bars: Non	Sid	e 🗸 Dia	gonal	Mid-	channel	□ s	pan 🗌	
Subdominant:	Fines	D (cm): 1.	00								В	raid 🗌	
Channel Pattern: Sinuous	3	Islands: No	ne	DISTU	RBANCE	O1 B	1 B2	B3	D1	D2 D	3		
Coupling: Decoup	led			INDIC	ATORS								
Confinement: Unconfi	ned			C1	C2 C	3 C4	C5 S1	\$2	S3	S4	S5		
Morphology: RP	Riffle Pool												
April 1986		e Marie in a	1	OV	ER :	* **					17	13	
Total Cover: Moderate		Type:	SWD	LWE	В		DP		DV	IV			
LWD: Few		Amount:	S	S	T	S	T		D	T			
LWD Dist: Evenly Distrib	outed	Location: P/S/O:									FS	z : 🔲	
Right Bank: Shape: U	ndercut Text	ure: Fines 🗸 Gr	avel	Cobble	Boulde	er Roci	Manr	nade	7	Cro	own Clo	sure	
Left Bank: Shape: U		ure: Fines 🗸 Gra		Cobble				nade		.		20%	
Right Bank: Rip.Veg: M			e: Mature	e forest	_	_		_	_				
Left Bank: Rip.Veg:		Stag	e: Mature	e forest		Instream	Veg: Nor	ne 🗌 🖊	Alg a e 🗌	Moss	✓ Vas	cular 🗌	
	Santa and Santa			FIS	Н			7				100	
Site Number Capture Method	Number of Events	Length fished (m)	Tota Time		Voltage	Specie		tal sh	Minim Length	1		lmum th (mm)	
510 EF	1	750	300 s		600	NFC	_	0		(,		()	
													

South Fulton Study Area

Reach # ILP Map #

8.0

#

093L.080

ILP# 10220 Site 510

PROJECT Project Name: Smithers Landing Fish Inventory - 2000 Stream Name (gaz.): BABINE RIVER Project Code: 3496 WATERSHED. and the second of the second o Local Name: None Gazetted Name: DEASY CREEK NID#: 50010 8.0 Site #: 510 ILP Map#: 093L.080 ILP #: 10220 NID Map #: 093L.080 Reach #: Site Lg: 505 Method: HC Field UTM (Z.E.N): .. Method: Access: H GIS UTM (Z.E.N): 9.684360.6068604 Ref. Name: Date: 2001/08/01 Time: 13:40 Agency: C172 Crew: JA/JH Fish Crd?: Incomplete: CHANNEL T.01 ** Gadient % Mtd Mtd width Avg Avg Channel Width (m): 2.40 1.80 2.00 1.50 1.97 Method I: 2.0 1.0 \overline{c} 3.25 MS 2.20 1.90 Method II: 6.0 С 1.90 1.00 1.67 4.0 Wetted Width (m): MS 2.00 1.50 1.80 1.80 Pool Depth (m): MS 0.18 0.10 0.26 0.19 0.10 0.16 0.15 No Vis.Ch.: Intermittent: Stage: L 🗸 M 🗌 H 🦳 Wb Depth: Method: MS Dw: Tribs.: .7 Avg: 0.67 COVER Total: M **CROWN CLOSURE** LWD OV īV Type: 1-20% ח Amount Loc: P/S/O: INSTREAM VEG: N A M V LWD: F DIST: E 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: Req #: Temp: 9 Method: T4 Cond.: 70 Method: S3 pH: 7.8 Method: P2 Turb.: T 🔲 M 🥽 L 📄 C 🔽 Method: GE Flood Signs: None Method: GE MORPHOLOGY В1 **B**2 D1 D2 D3 Bed Material: Dominant: G Subdom: F D95: 15.0 D (cm): 1.00 Morph: RP DISTURBANCE **INDICATORS** Pattern: SI C1 C2 СЗ C4 C5 S1 S2 S3 S4 **S**5 Islands: N Coupling: DC Confinement: UN DIAG Bars: SIDE MID SPAN BR FSZ: HABITAT QUALITY Name Spawning Habitat Low spawning habitat-limited amount of clean patches of gravel were observed Rearing Habitat Moderate rearing habitat-LWD and overstream vegetation are present OverWinter Habitat Low overwintering habitat-no deep pools observed. Possible overwintering in wetland above PHOTOS THE RESERVE AND AND ASSESSED FOR THE PARTY OF THE PARTY O Photo Foc Lg Dir Comments 18 STD Ū 21 F upstream photo of habitat within site downstream photo of habitat within site R: 21 F: 19 STD D

South Fulton Study Area

Reach # ILP Map #

ILP#

10220

Site

8.0

093L.080

	CONMENTS
Section	Comments
CHANNEL	No fish caught with extensive electroshocking. Habitat below lake should contain fish. No fish were observed in lake.
CHANNEL	S6 Stream

South Fulton Study Area

Watershed Code:

Reach #

ILP Map # 093L.080 ILP#

Gaz	etted Name	DEAS	SY CREEK					Local:	None						
P	roject Code	: 480-0	80-000000-00000-00000-0000-0000-000-000												
			29600-0000	0-00000-000	0-000-000-00										
W	aterbody ID					ILP Map	#: 093L.08			ILP#:	10220		8 -		
	Project ID	3496						Lake/Stream	m: S	_	Lake F	rom Date:			
Fi	sh Permit #	145	085K	Date: 2	2001/08/01	To: 20	001/08/01	Agenc	y: C1	72 (Crew: JA/JI	H Resa	mple:		
71 ten 72		, le	146		/ # - S	ITE /	METH	O Dive	1	4353	Ar. 2. 6	.			
Site#	NID Map	NID	# UTI	∕I:Zone/East	/North/Mthd	MTD/NO	Temp	Cond T	urbid	Comment					
510	093L.080	500	10		GPL	EF 1	9	70	С				_		
		774	12-		Α.	GEAR	SETT	INGS .	1.0	1.0			104		
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	1			Co	mment				
510	EF 1	1	2001/08/01	13:40	2001/08/01	14:30									
**************************************	The state of	100	7 (4)	C.E	LECTRO	FIBHE	R SP	QIFIC.	ATI	ONS	944 ()				
Site#	MTD/N	10	H/P	Encl	Sec	Length	Width	Voltage	e 1	Frequency	Pulse	Make	Mod		

				a Miller		, FISI	SUM	HART	44	i ini	AND AND DESCRIPTION
Site#	MTC)/NO	H/P	Species	Stage	Age	Total #	Lgth (Min.	/Max)	FishAct	Comment
510	_ EF	1	1	NFC			0				



Site #510, upstream photo of habitat within site. Roll #21, Frame #18, Date: 2001/08/01



Site #510, downstream photo of habitat within site. Roll #21, Frame #19, Date: 2001/08/01

FDIS Reach Card

South Fulton Study Area

Watershed Code: 480-729600-73466-41727-2864-0000-000-000-000-000-000

Reach #

1.0

ILP Map#

093L.080

ILP# 10084

PROJECT Project Name: Smithers Landing Fish Inventory - 2000 Stream Name (gaz.): BABINE RIVER Project Code: 3496 WATERSHED Reach Watershed Code: 480-729600-73466-41727-2864-0000-000-000-000-000-000-000 ILP Map #: 093L.080 ILP#: 10084 Reach #: 1.0 NID Map #: 093L.080 NID#: 50147 Air Photos UTM(Zone/East/North/Method) 9.683840.6068271 LINE: 30BCC96154 Gaz.: GIS #: 86 Local: Sample Type: B Wetland: SURVEY INFO Date: 1900/07/06 Agency: C172 Crew: SH ATTRIBUTES ... The second second second DISTURBANCE B1 B2 B3 D1 D2 D3 Length (km): .53 Gradient: 3.21 Setting: **INDICATORS** DS Elev.: 958 Open water: A Order: 1 US Elev: 975 Confinement: UN C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 Magnitude: BGC Zone: SBS Coupling: DC Valley Flat: B Islands: Y N SIDE DIAG MID SPAN Active Floodplain Visible: Est. Width: Bars: Channel Pattern: SI Mass Movement: L Exposed/Eroded: NS Riparian Veg.: M Landuse: NS MAPS

Map Type

TRIM

Map#

093L.080

Year

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

480-729600-73466-41727-2864-0000-000-000-000-000-000

Gaze	etted 1	Name:									Loca	al: No	ne				
P	roject	Code:	480-0	00-00000	000-00000	-0000-0000	-000-00	00-000-00	00-000-	0							
	ws	Code:	480~7	7 296 00-73	466-41727-	-2864-0000	-000-00	00-000-00	000-00	000							
Wa	aterbo	dy ID:						ILP Ma	p #:				ILP#:		Reach		-
	Proje	ect ID:	3496								Lake/Str	eam:	S	Lal	ke From Dat	e:	
Fis	sh Pe	mit#:	145	5085K	Date	: 2001/08/	01	To:	2001/0	8/01	Age	ency: (172	Crew: J	A/JH	Resan	nple: _
	10.7			-11	- August		1.8	ITE /	THE STATE OF	TH	O.D			,		Car of	a al ra
Site#	NID	Мар	NID	# L	TM:Zone/E	ast/North/M	ithd	MTD/N	O To	qme	Cond	Turbi	d	<u> </u>	Commer	nt	
511	0931	.080	500	11			GPU		1	9	70	o					
	1.1		54		-		A .	GEAR		TT!	NGS.	****		11111	respect	, 41. i-ui	1146
Site#	MT	/NO	H/P	Date I	n Time	In Date	Out	Time O	ut	_			C	omment			
511	EF	1	1	2001/08			08/01	12:50									
y	4.62	7.			C.	ELEC:	RO	FISH	ER:	SPE	CIFI	CAI	IONS				, energia
Site#	٨	ATD/N	0	H/P	Encl	Sec		_ength	W	idth	Volt	age	Frequency	Pul	se l	<i>l</i> ake	Mode
511	EF		1	1	0	320		100.0		1.0	60	00		5		MITH ROOT	12B
				4.444			r, F	18 H S	3 U N	WA!	RY.	*	12	Mary Lean	P		17.45
Site#		ATD/N	0	H/P	Species	Stage	Ag	e T	otal #	Lgtf	n (Min/Ma	ax)	FishAct		Com	nent	

FDIS Reach Card

South Fulton Study Area

Reach # ILP Map #

ILP#

Watershed Code: 480-729600-73466-41727-0000-0000-000-000-000-000-000-000

2.0 093L.080

Stream Name (gaz.):	Smithers Landing Fish Inve BABINE RIVER 480-000000-00000-00000-0	·	-000-000	Project Co	ode: 3496		
		WATERSH	ED	a jose kanika	'a light		
Reach Watershed Code: ILP Map #: 093L.080	480-729600-73466-41727-0 ILP #: 10141	0000-0000-000-000-000-000 Reach #: 2.0	-000-000	NID Map #: 093	. 080	NIC	#: 50150
	1L1 #. 10141			147D Wap #. 093			
Air Photos LINE: 30BCC97158	Gaz.:	Names			•	Zone/East/North 5041.6067911	/Method) GIS
#: 130	Local:					Type: R	Wetland:
						.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
		SURVEY	NFO				
Date: 1900/07/06		Agency: C172	786440015		Crew:	SH	
		ATTRIBU	ES :			· · · · · ·	
Length (km): 1.01	Gradient: 5.05	Setting:	VF	DISTURBA	NCE 01	B1 B2 B3	D1 D2 D3
DS Elev.: 919	Order: 2	Open water:	A	INDICAT			
US Elev: 970	Magnitude: 2	Confinement:	ос	C1	C2 C3 C4	C5 S1 S2	2 S3 S4 S5
	BGC Zone: SBS	S Coupling:	DC				
Valley Flat: B	C/D: C			Islands: N			
Active Floodplain Visible:	· —-	В	ars: 🗸 N		DIAG	MID SP	AN BR
Channel Pattern: IR			Mass M	fovement: L	E	Exposed/Erodeo	
			Ripa	rian Veg.: M		Landuse	: NS
JA	98						
Map Type Map							

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

480 - 729600 - 73466 - 41727 - 0000 - 0000 - 000 - 000 - 000 - 000 - 000 - 000

		11.			1. 1.		WAT	ERB	0 D 1	7	i.		da yaka a sa		3.5	
Gaz	zetted Nan	ne:								Loca	al: No	one				
F	Project Cod	de: 480-	-000000-0	0000-0000	0-0000-0000	-000-00	0-000-0	00-000-	0							
	WS Cod	de: 480-	729600-7	3466-4172	7-0000-0000	-000-00	0-000-0	00-000-	000							
W	Vaterbody I	ID:					ILP Ma	p#:				ILP#	:	F	Reach #:	2 -
,	Project I	D: 3496	5						l	_ake/Str	eam:	S	l	Lake Fro	m Date:	
F	ish Permit	#: 14	5085K	Dat	e: 2001/08	/01	To:	2001/0	B/01	Age	ency:	C172	Crew:	JA/JH	Resa	mple:
	- 4		186		det in	. 5	ITE	1 45	THO) D. 🕌			,)	49.0		Lat. at A
Site#	NID Ma	p Nii	O#	UTM:Zone/	East/North/I	/Ithd	MTD/N	10 Te	mp	Cond	Turb	oid		Co	mment	
512	093L.08	0 500)12			GPU	EF	1	6	60	С					
		440	- 1	Y		A. 1	GEAL	RSE	TTI	NGS	s: 1	H -1	ar i i i i i i i i i i i i i i i i i i i			100
Site#	MTD/NO) H/P	Date	In Tim	e In Dat	e Out	Time C	Out					Commer			
512	EF 1	1	2001/0	8/01 15	:00 2001	/08/01	16:20)								
			or a	С.	ELEC	TRO	FISH	ER 4	SPE	CIFE	C A	FIONS			4	Http://
Site#	MTC	/NO	H/P	Encl	Sec	L	.ength	W	idth	Volt	age	Freque	ncy l	oulse	Make	Model
512	EF	1	1	0	190		100.0		1.0	60	ю	l		5	SMITH ROOT	12B
		,; ,*1 ;		A. Her	10.00	a F	13 H	SUM	MAF	(1)	37	7 🕊 🤙		1,5		
Site#	MTD	/NO	H/P	Species	Stage	Age	e T	otal #	Lgth	(Min/Ma	ax)	FishAct			Comment	
512	EF	1	1	NFC				0		1						

South Fulton Study Area

Reach # ILP Map #

ILP#

The said of the sa	STREAM	REFERENC	ING	Commence in the
Gazetted Name: STRIMBOLDH CR	EEK	Lo	cal Name:	<u>–</u>
Watershed Code: 480-705800-5720	0-0000-0000-0000-000-000	00-000-000-000	ILP Map #:	ILP#:
1.00 mg/s		REACH .	# 1. 3. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	
Reach #: 1.0	UTM(Zone/East/North): 9.6	676563.6061406	<u> </u>	Sample Type: Biased
Length (km): 2.31	Coupling: Decoupled	Magnitude: 3	33	BGC Zone: SBS
• •	infinement: Occasionally Conf		Anti-n. Missed C/D	Open water: Present
US Elev (m): 1075	Islands: NONE		etation: Mixed C/D	
Bars: None Side Diagona			Landuse: Not Specified	
	UTM S UTM 9.675861.6062022	Agency:		JA/JH Date: 2001/08/02 ntal Consultants (Terrace)
3 , ,				
	V	WOOD KIND I WATER DO DE SERVED	<u> </u>	TAUS THE THEORY
No Vis.Ch.: Intermittent:	Channel Width (m): 2.72		# Gradient	Avg Min Max #
Stage: Low	Wetted Width (m): 2.40		6 Pool Depth (
Med 🗸	Bankfull Depth (m): 0.47	0.4 0.5	3 Tu	urbidity.: Turbid Low
High Temp (C): 7	pH: 7.8	Conductivity		Moderate ☐ Clear ✔
20%,100mm(20mm)(***********************************	MOR	PHOLOGY	76 (m. 1961)	The state of the second second
Bed Material: Dominant: Cobble Subdominant: Gravels	D95 (cm): 30.00 D (cm): 3.00	Bars: Non	Side 🗹 Diagona	Mid-channel Span Braid
	D (cm): 3.00	Bars: Non		Braid 🗌
Subdominant: Gravels	D (cm): 3.00			Braid 🗌
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined	D (cm): 3.00 Islands: None	DISTURBANCE _	O1 B1 B2 B3	Braid 🗌
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled	D (cm): 3.00 Islands: None	DISTURBANCE INDICATORS	O1 B1 B2 B3	Braid
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined	D (cm): 3.00 Islands: None	DISTURBANCE INDICATORS	O1 B1 B2 B3	Braid
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined	D (cm): 3.00 Islands: None	DISTURBANCE INDICATORS C1 C2 C3 C0 VER LWD B	O1 B1 B2 B3 C4 C5 S1 S	Braid D1 D2 D3 B2 S3 S4 S5 B4 S5 B5 B4 S5 B7 B4
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo	D (cm): 3.00 Islands: None Type: SWD Amount: T	DISTURBANCE INDICATORS C1 C2 C3 COVER	O1 B1 B2 B3 C4 C5 S1 S U DP S S	Braid D1 D2 D3 D2 S3 S4 S5 DV IV S T
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo	D (cm): 3.00 Islands: None Type: SWD	DISTURBANCE INDICATORS C1 C2 C3 C0 VER LWD B	O1 B1 B2 B3 C4 C5 S1 S	Braid D1 D2 D3 B2 S3 S4 S5 B4 S5 B5 B4 S5 B7 B4
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Moderate LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Sloping (g	Type: SWD Amount: T Location: P/S/O:	DISTURBANCE INDICATORS C1 C2 C3 OVER LWD B D T Cobble Boulder	O1 B1 B2 B3 C4 C5 S1 S U DP S S S Rock Manmade	Braid D1 D2 D3 12 S3 S4 S5 OV IV S T Crown Closure
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Moderate LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Sloping (g Left Bank: Shape: Sloping (g	Type: SWD Amount: T Location: P/S/O: Texture: Fines Gravel	DISTURBANCE INDICATORS C1 C2 C3 C0 V E R LWD B D T Cobble Boulder Cobble Boulder	O1 B1 B2 B3 C4 C5 S1 S U DP S S S Rock Manmade	Braid D1 D2 D3 12 S3 S4 S5 OV IV S T Crown Closure
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Moderate LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Sloping (g	Type: SWD Amount: T Location: P/S/O:	DISTURBANCE INDICATORS C1 C2 C3 OVER LWD B D T Cobble Boulder of forest	O1 B1 B2 B3 C4 C5 S1 S U DP S S S Rock Manmade	Braid D1 D2 D3 12 S3 S4 S5 OV IV S T Crown Closure
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Moderate LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Sloping (g Right Bank: Rip.Veg: Mixed C/D	Type: SWD Amount: T Location: P/S/O: Texture: Fines Gravel Stage: Mature:	DISTURBANCE INDICATORS C1 C2 C3 OVER LWD B D T Cobble Boulder e forest e forest	O1 B1 B2 B3 C4 C5 S1 S U DP S S Rock Manmade Rock Manmade	Braid D1 D2 D3 B2 S3 S4 S5 BY S5 T FSZ: Crown Closure 1-20%
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Moderate LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Sloping (g Left Bank: Shape: Sloping (g Right Bank: Rip.Veg: Mixed C/D Left Bank: Rip.Veg:	Type: SWD Amount: T Location: P/S/O: Texture: Fines Gravel Stage: Mature: Stage: Mature	DISTURBANCE INDICATORS C1 C2 C3 C1 C2 C3 COVER LWD B D T Cobble Boulder of forest of forest	O1 B1 B2 B3 C4 C5 S1 S U DP S S S Rock Manmade Rock Manmade	Braid D1 D2 D3 B2 S3 S4 S5 B2 S3 S4 S5 B3 T B4
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Moderate LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Sloping (g Right Bank: Rip.Veg: Mixed C/D	Type: SWD Amount: T Location: P/S/O: Texture: Fines Gravel Catego: Mature Stage: Mature Tota	DISTURBANCE INDICATORS C1 C2 C3 OVER LWD B D T Cobble Boulder cobble Boulder e forest e forest	O1 B1 B2 B3 C4 C5 S1 S U DP S S Rock Manmade Rock Manmade	Braid D1 D2 D3 B2 S3 S4 S5 BY S5 T FSZ: Crown Closure 1-20%

South Fulton Study Area

Reach # ILP

ILP Map #

ILP#

Site 513

1.0

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South Fulton Study Area

Reach # ILP Map# ILP#

Site

 $\textbf{Watershed Code: } 480\text{-}705800\text{-}57200\text{-}00000\text{-}0000\text{-}0000\text{-}000\text{-$

1.0

	COMMENTS
Section	Comments
CHANNEL	RB caught, 3 age classes of fish were captured, fry, juveniles, adults
CHANNEL	S3 Stream

South Fulton Study Area

Reach #

1.0

ILP Map #

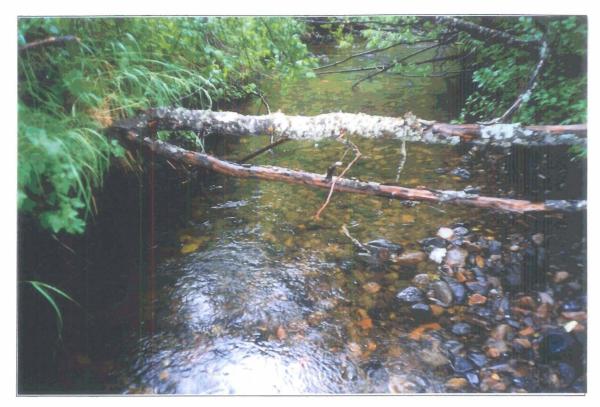
ILP#

Watershed Code:

WATERBODY Gazetted Name: STRIMBOLDH CREEK Local: None ILP Map #: IIP# Waterbody ID: Reach # 1 -Lake/Stream: S Lake From Date: Project ID: 3496 Fish Permit #: 145085K Date: 2001/08/02 To: 2001/08/02 Agency: C172 Crew: JA/JH Resample: BATE / WETHODAY MTD/NO Temp NID Map UTM:Zone/East/North/Mthd NID# Cond Turbid Comment Site# 513 093L.069 50013 GPU EF 1 40 С A. GEAR SETTINGS , i i i i 1257 Date Out Time Out MTD/NO H/P Time In Site# Date In 513 EF 1 1 2001/08/02 13:10 2001/08/02 14:00 B. ELECTROFISHER SPECIFICATIONS and the state of t Voltage Pulse Site# MTD/NO H/P Encl Sec Length Width Frequency Make Model 513 0 170 100.0 3.0 600 SMITH 12B 1 ROOT FISH SUNMARY Lgth (Min/Max) Stage Site# MTD/NO H/P Species Total # FishAct Comment EF 513 RΒ Α 175 R 513 FF 1 1 RB .1 5 70 85 R EF RB 45 55 R F 3 513 1 1 INDIVIDUAL FISH DATA actions. and the MTD/NO Weight Site# H/P Species Length Sex Mat Age Genetic Roll# Framet Comment Str/Smpl#/Age Str/Smpl# 513 EF 1 RB 45 U U 50 513 FF 1 RB Ü 1 П RB 55 513 EF 1 1 U U 513 EF 1 1 RB 70 Ü U FF RB 80 U ш 513 1 1 513 EF 1 1 RB 85 U U 513 EF 1 1 RB 75 Ū υ 513 RR 75 FF 1 П 1 U 513 EF 1 1 RB 175 U U 513 EF 1 1 RB 200 U Ų RB 513 FF 190 11 1 1 П COMMENTS Section Comments

Rainbow caught. Fry, Juvenile and Adult age class

WATERBODY



Site #513, downstream photo of typical habitat within site. Roll #22, Frame #0, Date: 2001/08/02



Site #513, upstream photo of typical habitat within site - riffle pool morphology. Roll #22, Frame #X, Date: 2001/08/02

South Fulton Study Area

Reach # ILP Map #

ILP# 10164

Watershed Code: 480-705800-70123-61560-0000-0000-000-000-000-000-000

1.0 093L.069

STREAM REFERENCING Watershed Code: 480-705800-70123-61560-0000-0000-000-000-000-000-000 ILP Map #: 093L.069 ILP#: 10164 REACH UTM(Zone/East/North): 9.676234.6056982 Reach #: 1.0 Sample Type: **BGC Zone:** SBS Length (km): 1.00 Coupling: Decoupled Magnitude: 1 **Gradient (%): 2.9** Confinement: Occasionally Conf Order: 1 Open water: Absent Islands: NONE US Elev (m): 1133 Riparian Vegetation: Shrubs Diagonal Mid-channel Span Braid Bars: None 🗹 Side Landuse: Not Specified SITE Field UTM .. Site #: 514 Agency: C172 Crew: JA/JH Date: 2001/08/02 GIS UTM 9.675385.6056989 Site Length (m): 100 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL No Vis.Ch.: Max # Min Max Intermittent: Avg Min Avg Channel Width (m): 2.28 1.600 3.3 6 Gradient %: 3.00 Dewatered: Tribs.: 2 4 Wetted Width (m): 2.28 1.600 3.3 6 Pool Depth (m): 0.49 0.71 6 Low V Stage: Bankfull Depth (m): 0.47 0.4 0.5 3 Med Turbidity.: Turbid Low Clear High Temp (C): 9 pH: 7.1 Conductivity: 30 Moderate MORPHOLOGY 7.17 Bed Material: Dominant: Fines D95 (cm): 2.00 Bars: Non 🗸 Side _ Diagonal Mid-channel Span Subdominant: Gravels D (cm): 2.00 Braid Channel Pattern: Irregular, Wandering Islands: None DISTURBANCE **INDICATORS** Coupling: Decoupled Confinement: Unconfined C2 C3 C4 C5 S1 S2 S3 **S4 S5** Morphology: RP Riffle Pool COYER Total Cover: Moderate Type: SWD LWD В Ū DP ΩV īV Amount: T D s S s LWD: None Location: P/S/O: **V** LWD Dist: Not Applicable FSZ: Right Bank: Texture: Fines ♥ Gravel Cobble Boulder Rock Manmade Shape: Undercut Crown Closure Left Bank: Shape: Undercut Texture: Fines Gravel Cobble Boulder Rock Manmade 1-20% Right Bank: Rip.Veg: Shrubs Stage: Shrub/herb stage Rip.Veg: Left Bank: Instream Veg: None Algae Moss Vascular Stage: Shrub/herb stage

		1.0	in the	FI	8 H		100	Treft.	ed.
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
514	EF	1	100	110 sec	600	NFC	0	_	

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

Watershed Code: 480-705800-70123-61560-0000-0000-000-000-000-000-000-000 1.0 093L.069 10164 514 PROJECT orii" Project Name: Smithers Landing Fish Inventory - 2000 Stream Name (gaz.): BABINE RIVER Project Code: 3496 WATERSHED Local Name: None Gazetted Name: Watershed Code: 480-705800-70123-61560-0000-0000-000-000-000-000-000 NID#: 50014 ILP Map#: 093L.069 ILP #: 10164 NID Map #: 093L.069 Reach #: 1.0 Site #: 514 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: HC Access: V2 GIS UTM (Z.E.N): 9.675385.6056989 Ref. Name: Agency: C172 Fish Crd?: Date: 2001/08/02 Time: 15:00 Crew: JA/JH Incomplete: CHANNEL width width width width Mtd Mtd width width width width width width Avg Gadient % Avg Channel Width (m): MS 2.40 3.30 2.60 1.90 1.60 1.90 2.28 Method I: 3.0 4.0 С 3.00 Wetted Width (m): 2.28 Method II: 3.0 2.0 $\overline{\mathsf{c}}$ MS 2 40 2.60 1.90 1.60 1.90 3.30 Pool Depth (m): MS 0.71 0.50 0.43 0.35 0.45 0.51 0.49 No Vis.Ch.: Intermittent: Wb Depth: .5 Avg: 0.47 Method: MS Stage: L 🕡 M 🥅 H 🦳 Dw: 🗔 Tribs.: COVER Total: M Туре: **CROWN CLOSURE** SWD LWD В ΙĪ 5 OV IV 1-20% D s s s Amount: Loc: P/S/O INSTREAM VEG: N A M V DIST: NA LWD: N LB SHP: U RB SHP: U Texture: F G C B R A Texture: F G C B R A RIP: S RIP S STG: SHR STG: SHR WATER FMS: Req #: Method: T4 Cond.: 30 Temp: 9 Method: S3 pH: 7.1 Method: P2 Turb.: T M L C Method: GE Flood Signs: None Method: GE MORPHOLOGY -01 В1 В2 В3 D1 D2 D3 Bed Material: Dominant: F Subdom: G D95: 2.00 D (cm): 2.00 Morph: RP DISTURBANCE INDICATORS Pattern: IR C1 C2 C4 C5 C3 S1 **S2 S**3 **S5** Islands: N Coupling: DC Confinement: UN Bars: SIDE DIAG MID : SPAN-BRI FSZ: HABITAT QUALITY Spawning Habitat Low spawning habitat-limited by no clean patches of gravel available Rearing Habitat Moderate rearing habitat-associated with undercut banks and deep pools

Moderate overwintering habitat-associated with deep pools

OverWinter Habitat

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

Watershed Code: 480-705800-70123-61560-0000-0000-000-000-000-000-000

1.0

093L.069

10164

	COMMENTS
Section	Comments
CHANNEL	Sample site under power line. No fish caught. Ponded area
CHANNEL	S3 Inferred

South Fulton Study Area

480-705800-70123-61560-0000-0000-000-000-000-000-000

1.0

ILP Map#

ILP#

Watershed Code:

Reach #

093L.069

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Ga	zetted Nar	ne:										Loc	al: N	one					
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	WS Co	ie:	480-7	0580	0-70123	-61560-0	0000-0000-	000-00	00-000-00	0-000	-000								
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	Project	D:	3496			_						Lake/St	ream:	s		Lake Fn	om Date:	_	
F	ish Permit	#:	145	085K		Date:	2001/08/	02	To:	2001/0	08/02	Ag	ency:	C172	Crew	: JA/JH	Re	sample	: 🗇
		2.5		Ų.	N.	1,1	-1.		ITE /	41	TH.	0 D	<i>(</i>)			>-		(4)	L.L.
Site#	NID Ma	ρŢ	NID	#	UTM	Zone/Ea	st/North/M	lthd	MTD/N	OΓ	emp	Cond	Turt	oid		Ç	omment		
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Site#	MTC	/N(<u> </u>	H/F		ecies	Stage	Ag	e To	otal #	Lgti	h (Min/M	ax)	FishAct			Comment		
514	EF		1	1	N	FC				0									



Site #514, upstream photo of habitat typical within sample site. Roll #22, Frame #01, Date: 2001/08/02



Site #514, downstream photo of habitat typical within sample site. Roll #22, Frame #03, Date: 2001/08/02

FDIS Reach Card

South Fulton Study Area

Reach #

ILP Map #

ILP#

43		AT ALBANIA DENGAL AND		-	A. 44.2 Sec. 17.2 Sec. 17.			
	e, a zakatini,		PROJEC					
Projec	t Name: Smither	s Landing Fish Inventory	- 2000					
· ·	e (gaz.): BABINI	•		F	Project Code:	3496		
		0000-00000-00000-0000-	0000-000-000-000	-000-000	·			
		Sec. 35, 75, 17, 27	WATERS	ED.		**		15
Reach Watershee	d Code: 480-718	3600-00000-00000-0000-	0000-000-000-000-000	-000-000		-		
ILP Map #:	1L	P#: F	Reach #: 7.0	NID Ma	p#: 093L.080)	NID#:	50115
Air Photos			Names			UTM(Zone/E	ast/North/Met	thod)
LINE: 30BCC96154	Ga	z .:				9.682210.6		GIS
#: 87	Loc					Sample Type:		etland:
1								
			SURVEY	NFO			ijek, sk	
Date: 1900/07/06			Agency: C172	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		Crew: S	SH	<u>. Falanti jeran pilot i</u>
			ATTRIBUT	E8,	11.		· · · · •	and the second
Length (km): .78	<u></u>	Gradient: 3.46	Setting:	DI	STURBANCE	O1 B1 8	32 B3 D	1 D2 D3
DS Elev.: 923		Order: 1	Open water:		INDICATORS		58 6	188
US Elev: 950		Magnitude: 1	Confinement:	ос	C1 C2	C3 C4 C5	S1 S2 S	3 S4 S5
		BGC Zone: SBS	Coupling:	PC	[7]			
					<u></u>			
Valley Flat: N	C/D:			Islands:			_	
Active Floodplain		Est. Width:	В	ars: 🔽 N 🔙 SIC			SPAN	BR
Channel Pattern:	SI			Mass Movement:	M	•		NS
				Riparian Veg.:			Landuse:	NS
	MAPS		1					
Map Type	Map#	Year	1					
TRIM	093L 080		1					

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

7.0

WATERBODY Gazetted Name: Local: None ILP Map #: ILP#: Waterbody ID: 7 -Reach #: Project ID: 3496 Lake/Stream: S Lake From Date: Fish Permit #: 145085K Date: 2001/08/02 To: 2001/08/02 Crew: JA/JH Agency: C172 Resample: Market Committee of the State o SITE / METHOD NID Map UTM:Zone/East/North/Mthd MTD/NO Temp Site# Cond Turbid Comment 515 093L.080 50015 GPU EF 1 40 С A. GEAR SETTINGS Site# MTD/NO H/P Date In Time in Date Out Time Out 515 EF 1 1 2001/08/02 16:50 2001/08/02 17:37 C. ELECTROFISHER SPECIFICATIONS MTD/NO H/P Width Site# Encl Sec Length Voltage Frequency Pulse Make Model 515 EF 173 150.0 1.0 600 SMITH 12B ROOT FISH SUNMARY A ... MTD/NO Site# Lgth (Min/Max) Species Stage Age Total # FishAct Comment 515 EF NFC 0

South Fulton Study Area

Reach # ILP Map #

iLP#

		STR	EAM	REF	EREN	CING			4.C	13	w 117
Gazetted Name:					L	ocal Name	:				
Watershed Code: 480-7	18600-00000-00	000-0000-0000-00	00-000-00	0-000-0	000-000	ı	LP Map #:		ILI	P#:	
and the state of t	April 1987	ere year	4 1.	REA	CH.	reus .	· (448.85 g)			, * , , ,),	P.,
Reach #: 2.0		UTM(Zone/East/N						Sample	• •	Biase	d
Length (km): 2.18		oupling: Decouple			gnitude: Order:				: Zone: ater: Abs		
Gradient (%): 4.1 US Elev (m): 828		nement: Frequently Islands: NONE	y Coniin		•	o g etation : Si	hrubs	Open w	aler: ADS	eill	
Bars: None 🗸 Side		Mid-channel	Span		raid		Not Specified				
				SIT	E		4.				
Site #: 516	Field UTN	и			Ageno	y: C172	Crew:	JA/JH	Date:	2001/08	3/03
Site Length (m): 100	GIS UT	M 9.685892.60725	563		Agen	cy Name: T	nton Environmer	ntal Consi	ultants (To	errace)	
		41	C	HAN	NEL.			•	ag" , i	J. le	
No Vis.Ch.: Interm	nittent:		Avg	Min	Max	#		Avg	Min	Max	#
Dewatered:		channel Width (m):		0.7	1.4	6	Gradient		4	7	4
Stage: Low 🗸		Wetted Width (m): Bankfull Depth (m):		0.600	1.200 0.7	6	Pool Depth (n	n): 0.20	0.140	0.270	6
Med	L_ <u>-</u> :	bankiuli Depin (m).	0.60	0.5	0.7	_3	Tu	rbidity.:	Turbid		Low
High	Temp (C): 8	pH: 7.3		C	Conductivit	y: 40		N	oderate		lear 🗹
			MAS		CD/16/06/11/05/07/10/07/07/07/07/07/07/07/07/07/07/07/07/07				THE RESERVE AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO PARTY.	CONTRACTOR	
			NUK	PHO	LOGI				1 2 4 7 70	#* N	* ***
Bed Material: Dominari		D95 (cm): 15			LOG1 Bars: Nor			r—-	l-channel	Sp	oan 📃
Bed Material: Dominari Subdominari		7,00	.00					r—-	l-channel	Sp	
Subdominan Channel Pattern: Sinuo	it: Fines us	D95 (cm): 15	5.00 .00	DISTUR	Bars: Nor		e Diagonal	r—-		Sp	oan 📃
Subdominan Channel Pattern: Sinuo Coupling: Decou	t: Fines us upled	D95 (cm): 15 D (cm): 1.	5.00 .00	DISTUR INDIC	Bars: Nor RBANCE CATORS	O1 B	e Diagonal 1 B2 B3	D1	D2 D	Sr Br	oan 📃
Subdominan Channel Pattern: Sinuo Coupling: Decou Confinement: Uncor	t: Fines us upled nfined	D95 (cm): 15 D (cm): 1.	5.00 .00	DISTUR	Bars: Nor	O1 B	e Diagonal	D1		Sp Br	oan 📃
Subdominan Channel Pattern: Sinuo Coupling: Decou	t: Fines us upled nfined Riffle Pool	D95 (cm): 15 D (cm): 1. Islands: Noi	5.00 .00 ne	DISTUR INDIC	Bars: Nor RBANCE CATORS	O1 B	e Diagonal 1 B2 B3	D1	D2 D	Sr Br	oan 📃
Subdominan Channel Pattern: Sinuo Coupling: Decou Confinement: Uncor	t: Fines us upled nfined Riffle Pool	D95 (cm): 15 D (cm): 1.	5.00 .00 ne	DISTUR INDIC	Bars: Nor RBANCE ATORS C2 C:	O1 B	Diagonal 1 B2 B3 C5 S1 S	D1 2 S3	D2 D	Sr Br 3 S5	oan 📋
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Subdominan Channel Pattern: Sinuo Coupling: Decou Confinement: Uncor Morphology: RP	t: Fines us upled fined Riffle Pool	D95 (cm): 15 D (cm): 1. Islands: Not Type: Amount:	5.00 00 ne SWD	DISTURINDIC C1	Bars: Nor RBANCE CATORS C2 C:	01 B 3 C4	Diagonal 1 B2 B3 C5 S1 S DP T	D1 2 S3 OV S	D2 D	Sr Br 3 S5	oan 📋
Subdominan Channel Pattern: Sinuo Coupling: Decou Confinement: Uncor Morphology: RP Total Cover: Moderate	t: Fines us upled nfined Riffle Pool	D95 (cm): 15 D (cm): 1. Islands: Not Type: Amount:	5.00 .00 ne	DISTURINDIC C1 C0 VI	Bars: Nor RBANCE CATORS C2 C:	O1 B 3 C4	Diagonal 1 B2 B3 C5 S1 S	D1 2 S3 OV S	D2 D	Sr Br 3 S5	pan Dan Dan Dan Dan Dan Dan Dan Dan Dan D
Subdominan Channel Pattern: Sinuo Coupling: Decou Confinement: Uncor Morphology: RP Total Cover: Moderate LWD: Few LWD Dist: Evenly Distr	it: Fines us upled ifined Riffle Pool	D95 (cm): 15 D (cm): 1. Islands: Not Type: Amount:	5.00 .00 ne SWD S	DISTURINDIC C1 C0 VI	Bars: Nor RBANCE: ATORS C2 C: BR	O1 B 3 C4	Diagonal B2 B3 C5 S1 S DP T	D1 2 S3 OV S	D2 D S4	Sp Br	pan aid
Subdominan Channel Pattern: Sinuo Coupling: Decou Confinement: Uncor Morphology: RP Total Cover: Moderate LWD: Few LWD Dist: Evenly Distr Right Bank: Shape: I	it: Fines us upled ifined Riffle Pool	D95 (cm): 15 D (cm): 1. Islands: Nor Type: Amount: Location: P/S/O:	SWD S	DISTUFINDIC C1 LWD S Cobble	Bars: Nor RBANCE: ATORS C2 C: BR	O1 B 3 C4 U D Receipt Rock	Diagonal B2 B3 C5 S1 S DP T WManmade	D1	D2 D S4	Sp Br 3 S5 FS2	pan aid
Subdominan Channel Pattern: Sinuo Coupling: Decou Confinement: Uncor Morphology: RP Total Cover: Moderate LWD: Few LWD Dist: Evenly Distr Right Bank: Shape: \(\) Right Bank: Rip.Veg: S	it: Fines us upled ifined Riffle Pool sibuted Undercut Text V - shape Text	D95 (cm): 15 D (cm): 1. Islands: Nor Type: Amount: Location: P/S/O: ture: Fines Graviure: Fines Graviure: Stage	SWD S Savel	DISTURINDIC C1 LWD S Cobble Cobble e forest	Bars: Nor RBANCE: ATORS C2 C: D B N N Boulde	O1 B 3 C4 U D CF Rocker Rock	DP T Manmade Manmade	D1	D2 D	Sp Br 3 S5 FSZ own Closs 1-20	can
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South Fulton Study Area

ILP Map # ILP# Reach # Site 2.0 516

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EMS										Re	eq #:						
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Confinemen ESZ	t: UN Z: [Ba	ars:	N 🕟	SIDE		DIAG	MID	SPAN		BR
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South Fulton Study Area

	CT captured
CHANNEL	S4 Stream

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

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G	azette	d Name	: :		_							Loc	al: N	one				
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		body ID						ı	LP Ma	ap #:				ILF	'#:	~		? -
	Pro	oject ID	: 3496	<u> </u>								Lake/St	ream:	<u> </u>		Lake F	rom Date:	
	Fish P	ermit#	: 14	5085K	D	ate: 20	01/08/0	3	To:	2001/	08/03	Ag	ency:	C172	Cre	ew: JA/JH	H Resar	mple:
	rahia.		. 15		P		14	81	T-E-	7 4	ETH!	3 D			1.	120		942134
Site#		D Map	NIC		UTM:Zone	e/East/N			MTD/I	VO 1	Temp	Cond	Turt	oid			Comment	
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Site#	-	TD/NO	H/P	Date		me In	Date (Time (Com	ment		
516	EF		1	2001/08		4:25	2001/0		15:0	_	6-1		>*********		*	_		
		Locale	Commence Agency	7 - 17	THE WAR OF STREET	. EL	P., A., W. 18		No.	60 cm - 1 1 1 1 1 1 1	. V albado			110	/ Company	Acres 1	Negli ."	94.7
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Site #516, upstream photo of typical morphology within site. Roll #22, Frame #05, Date: 2001/08/03

South Fulton Study Area

Reach # ILP Map #

1.0

ILP#

093L.080 10099

			6T#	REAM	REF	EREN	CING			. 12	ar Ser at	
Gazetted Na	me:	_				ı	ocal Name	:				
Watershed C	Code: 480-718	3600-21400-00	0000-0000-0000-0	00-000-00	000-00	000-000	ll.	_ P Map # : 093L	.080	IL	P#:	10099
		No. of the second	di mana		REA	CH		A.				. 4.1
Reach #: 1	.0		UTM(Zone/East/f	North): 9.6	684925.	6070837			Sample	Type:	Biase	ed
Length (km)	: 1.05	Co	upling: Decouple	ed .	Mag	gnitude:	6		BGC	Zone:	SBS	
Gradient (%)	: 2.0	Confir	nement: Occasion	ally Conf		Order:	2		Open w	ater: Abs	ent	
US Elev (m)	: 846	ı	slands: NONE		Rip	arian Ve	getation: Sh	nrubs				
Bars: None	✓ Side	Diagonal _	Mid-channel	Span	□ В	raid	Landuse:	Not Specified				
					SIT	E			. 1		j , # .3	* * *
Site #:	: 517	Field UT	И.,			Agend	y: C172	Crew:	JA/JH	Date:	2001/0	8/03
Site Length	(m): 100	GIS UT	M 9.684884.6071	557		Agen	cy Name: Tr	iton Environme	ntal Consi	ultants (T	ептасе)	
			.5	C	HĀN	NEL			7.1	****	* *	T7 1.2
No Vis.Ch.:	Intermitt	ent:		Avg	Min	Max	#		Avg	Min	Max	#
Dewatered:	Tri	bs.: C	hannel Width (m)	: 1.73	1.600	1.9	6	Gradient	%: 6.00	5	7	4
Stage: Low			Wetted Width (m)	1.67	1.4	1.9	6	Pool Depth (m): 0.16	0.100	0.21	6
Med	-	LE	Bankfull Depth (m)	0.53	0.4	0.7	3	Ti	urbidity.:	Turbid		Low
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Bed Material: S Channel Pa Coup Confiner	Subdominant: attern: Irregular pling: Decoupl ment: Unconfil	Gravels r, Wandering led	D (cm): 2	5.00	DISTUR	Bars: Nor RBANCE ATORS	O1 B1	B2 B3	D1	D2 [S B	pan 🔲
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Bed Material: S Channel Pa Coup Confiner Morpho	Subdominant: uttern: Irregular pling: Decoupl ment: Unconfir plogy: RP	Gravels r, Wandering led ned	D (cm): 2	5.00 0.00 one	DISTURINDIC	Bars: Nor RBANCE ATORS C2 C	O1 B1	B2 B3	D1 52 S3	D2	S B	pan 🗍
Bed Material: S Channel Pa Coup Confiner Morpho Total Cover: N	Subdominant: uttern: Irregular pling: Decoupl ment: Unconfir plogy: RP	Gravels r, Wandering led ned Riffle Pool	D (cm): 2 Islands: No	5.00 2.00 one	DISTURINDIC	Bars: Nor RBANCE ATORS C2 Ci	O1 B1	B2 B3 C5 S1 S	D1 52 S3 OV D	D2 C	S B	pan raid
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Bed Material: Channel Pa Coup Confiner Morpho Total Cover: I LWD: f LWD Dist: I Right Bank: Left Bank:	Subdominant: attem: Irregular pling: Decoupl ment: Unconfir plogy: RP Moderate Few Evenly Distrib Shape: Ska	Gravels r, Wandering ed ned Riffle Pool uted oping (g Text oping (g Text	Type: Amount: Location: P/S/O: ture: Fines Gr	SWD T avel 0	DISTURINDIC C1 LWC S Cobble Cobble of forest	Bars: Nor	O1 B1 3 C4 U S V Rock	B2 B3 C5 S1 S DP T W Manmade	D1	D2 E	S B B S S S S S S S S S S S S S S S S S	pan
Bed Material: Channel Pa Coup Confiner Morpho Total Cover: I LWD: f LWD Dist: I Right Bank: Left Bank: Right Bank:	Subdominant: attem: Irregular pling: Decoupl ment: Unconfir plogy: RP Moderate Few Evenly Distrib Shape: Sic Shape: Sic Rip.Veg: Sh	Gravels r, Wandering ed ned Riffle Pool uted oping (g Text oping (g Text	Type: Amount: Location: P/S/O: ture: Fines Gr	SWD T avel (avel (DISTURINDIC C1 LWC S Cobble Cobble of forest	Bars: Nor RBANCE ATORS C2 C: B N B N Boulde	O1 B1 3 C4 U S V Rock	B2 B3 C5 S1 S DP T Manmade Manmade	D1	D2 C	S B B S S S S S S S S S S S S S S S S S	pan
Bed Material: Channel Pa Coup Confiner Morpho Total Cover: I LWD: f LWD Dist: I Right Bank: Left Bank: Right Bank:	Subdominant: attem: Irregular pling: Decoupl ment: Unconfir plogy: RP Moderate Few Evenly Distrib Shape: Sic Shape: Sic Rip.Veg: Sh	Gravels r, Wandering ed ned Riffle Pool uted oping (g Text oping (g Text	Type: Amount: Location: P/S/O: ture: Fines Gr	SWD T vavel (ge: Mature	DISTURINDIC C1 LWC S Cobble Cobble forest	Bars: Nor RBANCE ATORS C2 C: B N B N Boulde	O1 B1 3 C4 U S V Rock	B2 B3 C5 S1 S DP T Manmade Manmade Manmade	D1 S2 S3 OV D Algae	D2 C	S B B S S S S S S S S S S S S S S S S S	pan

South Fulton Study Area

Reach # ILP Map #

ILP# 10099 Site 517

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South Fulton Study Area

CHANNEL CHANNEL Reach #

ILP Map #

ILP# 10099 Site 517

S3 Stream

1.0 093L.080

K.C.	CONNENTS
Section	Comments
CHANNEL	CT caught

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

1.0

093L.080

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Site #517, upstream photo of riffle pool habitat. Roll #22, Frame #06, Date: 2001/08/03



Site #517, downstream photo of riffle pool habitat. Roll #22, Frame #08, Date: 2001/08/03

South Fulton Study Area

Watershed Code: 480-718600-21906-00000-0000-000-000-000-000-000-000

Reach # ILP Map # IIP# 093L.080

10094

10

STREAM REFERENCING Local Name: Gazetted Name: Watershed Code: 480-718600-21906-00000-0000-0000-000-000-000-000-000 ILP Map #: 093L.080 ILP#: 10094 REACH UTM(Zone/East/North): 9.684544.6071890 Reach #: 1.0 Sample Type: Random BGC Zone: SBS Length (km): .37 Coupling: Decoupled Magnitude: 2 **Gradient (%): 6.5** Confinement: Frequently Confin Order: 2 Open water: Absent **US Elev (m): 853** Islands: NONE Riparian Vegetation: Shrubs Bars: None 🗹 Side 🗌 Diagonal 📗 Mid-channel 📄 Span 🔝 Braid 📗 Landuse: Not Specified Broken in the Arthur Broken in the Still S The state of the s Site #: 518 Field UTM .. Agency: C172 Crew: JA/JH Site Length (m): 170 GIS UTM 9.684735.6071837 Agency Name: Triton Environmental Consultants (Terrace) The state of the s Avg No Vis.Ch.: Intermittent: Avg Max Min Max # 1.200 Dewatered: ___ Tribs.: Channel Width (m): 0.89 0.600 7 Gradient %: 7.00 5 10 4 Wetted Width (m): 0.88 0.7 1.100 6 Pool Depth (m): 0.09 0.04 0.150 6 Stage: Low 🗸 Bankfull Depth (m): 0.4 Turbidity.: Turbid Med Low Clear 🗸 High Temp (C): 7 pH: 7.3 Conductivity: 40 Moderate MORPHOWOGY Bed Material: Dominant: Fines D95 (cm): 8.00 Bars: Non 🗹 Side 🗌 Diagonal 🗍 Mid-channel 📗 Subdominant: Not Applicable D (cm): 1.00 Braid 🗌 Channel Pattern: Sinuous Islands: None DISTURBANCE **INDICATORS** Coupling: Decoupled Confinement: Unconfined C2 C3 C4 C5 S1 S2 S3 **S**4 S5 Morphology: RP Riffle Pool COVER Total Cover: Moderate Туре SWD LWD В DP ΟV īV N ۵ S Amount S S LWD: Few Location: P/S/O: ~ FSZ: LWD Dist: Evenly Distributed Shape: Sloping (g Texture: Fines Gravel Cobble Boulder Rock Right Bank: Manmade ___ Crown Closure Left Bank: Shape: Sloping (g Texture: Fines 🗹 Gravel Cobble Boulder Rock Manmade 1-20% Right Bank: Rip.Veg: Shrubs Stage: Mature forest Left Bank: Rip.Veg: Stage: Mature forest Instream Veg: None Algae V Moss V Vascular FISH Site Number Capture Number of Length fished Total Voltage Species Total Minimum Maximum Method **Events** (m) Time Fish Length (mm) Length (mm) 518 170 310 sec NFC 0

South Fulton Study Area

Reach # ILP Map # ILP # Site
1.0 093L.080 10094 518

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					h Invento	ory - 200	0											
Stream Name							000 000			NO	F	Project C	ode:			3496		
Project Watershed	d Code	: 480-0	00000-	00000-0	0000-000	XV-UUUU-	000-000	7-000-00	0-000-00	,0								
Production of the second		12. 8					WAT	ER8	HED			777	127		- 1	411	*** **	dk j
Gazetted Name:								_	-	Lo	cal Name	e: None						
Watershed Code: 4															4.0		<i>u</i> =.	4.0
ILP Map#: 0		0	ı	ILP #: 10		NID Ma	ap #: 09	3L.080	N.	ID#: 50		Rea	ch #:		1.0		Site #: 5	18
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GIS UTM (Z.E.N): 9	9.004/3	5.00716	007						T.C	si. Naiile	.							
Date:	: 2001.	/08/03		Time: 15	:40		Agency:	C172		rew:	JA/JH		F	ish Crd?	: 🗹	in	complet	e:
	Lav	pp.					CH	ANN	EL .		2			il de	. I X		A. I	
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pH: 7.	.3					Metho	od: P2			Т	urb.: T	: M	_ L	□ c		Meti	nod: Gl	Ē
Flood Signs: N	ione					Metho	od: GE					L:		ٔ نــا	\			
			7		4000	M	ORF	HOL	OGY			*			1.09	111/24		7.
Bed Material:	D	ominant	: F		Subdom	: NA				01	B1	B2	B3	D1 [D2 D3	3		
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Pattern: S								INDICA	TORS	C1	C2	C3	C4	C5 S	S1 S2	2 53	S4	S5
Islands: N																		
Coupling: D Confinement: U																		
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Name Spawning Habitat		No clea	an patci	hes of a	avel obse	erved	<u> </u>			ommen	<u>.</u>							
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OverWinter Habitat	STATE OF THE STATE		rwinter													mangungere	g verstjaar verskrook	
	and the st		(* S		-		PH	OTO	8	-, 1	1.4			179				
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South Fulton Study Area	
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Reach # ILP Map # ILP# Site

	Watershed Code: 480-71	8600-21906-00000-0000-0000-000-000-000-000-000	1.0	093L.080	10094	518
1	Section		Comments			_
	CHANNEL	electro fishing efforts resulted in no fish caught			_	
	CHANNEL	downstream beaver dam may block upstream fish access				
	CHANNEL	piped channel less than 2 m				
	CHANNEL	highly ephemeral stream, numerous organic barriers				

South Fulton Study Area Watershed Code:

Reach #

ILP Map #

ILP#

480-718600-21906-00000-0000-0000-000-000-000-000-000

1.0

093L.080

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	٧	/S Cod	le:	480-7	18600)-21906	-00000-0	000-0000-	000-00	000-00	-000-0	00-000									
٧	Vate	rbody I	D:							ILP I	vlap #:	093L.0	В0			ILP	#: 10	094	Reach #	: 1	-
	Ρ	roject I	D:	3496									Lake	e/Stre	eam:	s		Lake	From Date	:	
F	ish	Permit	#:	145	085K		Date:	2001/08/	D3	To	: 200	1/08/03		Age	ncy:	C172	Cre	w: JA	/JH	Resam	ple:
	1.1		•	1127			7.8	a and	- 8	ITE	1.1	ETA	O D	e.			.		4		4
Site#	N	ID Ma	ρŢ	NID	#	UTM	:Zone/Ea	st/North/M	thd	MTD	/NO	Temp	Co	nd	Turt	oid			Comment		
518	09	93L.08	0]	5001	8				GPU		1	7	4	0	С				NA CONT. CONT. CONT. AND CONT.		
		L- '-		107		1	477		4.	G E (R	T T	IN								
Site#	V	TD/N	2	H/P	Da	ite In	Time i		Out	Time							Com	nent			_
518	E	F 1		1	2001	/08/03	15:40		08/03	16:								Name and Address of the Owner, where			
n in				e de			.C. 1	LECT	RO	FIS	HE	I SP	E G J	F	G A	FION	S			t.	+100
Site#		MTC	/NC)	H/	P	Encl	Sec		ength		Width		Volta	age	Frequ	ency	Pulse	e M	ake	Model
518		F		1		1	0	310		170.0		1.0		60	0			5	_	HTH T	12B
1				141			(C)		· F	IS H	8 U	M M A	RY					- 0	RO	оот Г	
Site#	T	MTD)/NC) T	H/F	S	ecies	Stage	Ag	e	Total	# Lo	th (Mi	in/Ma	ıx) T	FishAct			Comm	California de la companio del la companio del la companio de la companio de la c	
518	┿,	F		1	1	- 1	IFC	34	- 10	-			1				+-	_			



Site #518, downstream photo of typical habitat within site. Roll #22, Frame #10, Date: 2001/08/03

South Fulton Study Area

Reach # ILP Map #

ILP#

Watershed Code: 480-718600-21906-21838-0000-0000-000-000-000-000-000-000

Λ

093L.080

			317	EAMR	EFERE	NCINC		and compared the		•
Gazetted Na	ame:					Local Na	me:			
Watershed	Code: 480-718	3600-21906-21	838-0000-0000-0	00-000-000	-000-000-000)	ILP N	Map #: 093L.	080 11	.P#: 10093
				R	EACH					4.4
Reach #:	1.0		JTM(Zone/East/N	lorth): 9.68	4152.607211	8			Sample Type:	Random
Length (km): .55	Co	upling: Decouple	đ	Magnitude	r: 1			BGC Zone:	SBS
Gradient (%): 1.3	Confin	ement: Unconfine	ed	Orde	r: 1			Open water: Ab	sent
US Elev (m): 848	l	slands: NONE		Riparian \	egetation:	Shrub	s		
Bars: None	✓ Side	Diagonal	Mid-channel	Span _	Braid	Landus	se: Not	Specified		
		4			SITE				- 14 4	TALL ALT
Site #	: 519	Field UTN	(Age	ency: C172	2	Crew: J	A/JH Date:	2001/08/03
Site Length	ı (m): 100	GIS UT	M 9.684376.60718	385	Ag	ency Name	: Triton	Environmen	tai Consultants (`	Геггасе)
and the state of t		en Paris A	•	CH	ANNEL					
No Vis.Ch.:	Intermitt	ent:		Avg	Min Max	#	_		Avg Min	Max #
Dewatered:	Tri	bs.: C	hannel Width (m):	0.60 0	.400 1	6		Gradient %	6: 2.50 2	3 2
 Stage: Low			Wetted Width (m):	0.58 0	.400 1	6	P	ool Depth (m): 0.40 0.300	0.5 6
Med	=	В	ankfull Depth (m):	0.53	0.5 0.6	3			bidity.: Turbid	Low
High		emp (C): 10	pH: 7.8	_	Conduct	ivity: 30			Moderate	=
	area?			MORE	HOLOG	Y		•	* 11/1/19	7
Red Materia	l: Dominant:	Fines	D95 (cm): 1.	00	Bars: N	lon 🗸 🤇	Side	Diagonal	Mid-channe	Span
		Not Applicable	D (cm): 1		Dais. I		Jide	Diagonal	MIG-CHAILIRE	Braid
		, ,	, ,		IOTI IDD AND	~ 04	D4	B0 B0	D4 D0	
ŀ	attern: Irregula ipling: Decoup	-	Islands: No		ISTURBANC INDICATORS		B1	B2 B3	D1 D2	<u>D3</u>
,	ment: Unconfi				C1 C2	C3 C4		S1 S2	2 S3 S4	 \$5
1	ology: RP	Riffle Pool			51 C2	C3 C4		31 34	2 33 34	30
I WOLDIN					<u> </u>	<u>'—' </u>	<u> L_ </u>	<u> </u>		
	**		****	C	OVER:		*17*	1000	7 5 8 4	- 1 (
Total Cover:	Moderate		Type:	SWD	LWD		U	DP	OV IV]
LWD:	Few		Amount:	T	S	N	T	D	TT	_
LWD Dist:	Clumped		Location: P/S/O:							FSZ:
Right Bank:	Shape: Ur	dercut Text	ure: Fines 🗸 Gr	avel: Co	hble Bo	ılder R	ock	Manmade		rown Closure
Left Bank:	Shape: Ur			avei 🗸 Co			ock	Manmade [7	1-20%
Right Bank:	Rip.Veg: Sh			e: Shrub/he				a.	نــ	1-2070
Left Bank:	Rip.Veg:		•	e: Mature fo	-	Instrea	am Veg	: None	Algae Moss	Vascular 🗸
			74 to 1 14 4 1 1 1			URES				
NID Map	NID Type	l Hat I		Method	1 × 1 × 1	oto		AirPh	-10	UDM /7/E/N
093L.080	50501 BD	Hgt 1	GE 5	GE	R:	F:]	L: I	AllFil	T#: T	UTM (Z/E/N 9.684487.6071
	: beaver dam	1.0	<u> </u>	_ <u> </u>	(,,,,	' '	<u> </u>		#.	3.007407.0071
211-16-17 41-4 Z 4336-24	30.2 30.2	<u> </u>	1		200 6 3 90000 7 9	ecomo composit e	- 00m/05/2/2000	A D B A CONTRACTOR OF THE PARTY OF		eren er an er
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	e Spec	cies	Total Fish	Minimum Length (mm)	Maximum Length (mm)
519	EF	1	100	110 sec	600	NF	-C	0		
	L	<u></u>	J		1			l,		

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

Watershed Code: 480-718600-21906-21838-0000-0000-000-000-000-000-0000 1.0 093L.080 10093 519

Project Name: Smithers Landing Fish Inventory - 2000 Stream Name (gaz.): BABINE RIVER Project Code: 3496 Project Watershed Code: 480-000000-00000-0000-0000-000-000-000-0											
Project Watershed Code: 480-000000-00000-00000-0000-0000-0000-0											
Gazetted Name: Local Name: None Watershed Code: 480-718600-21906-21838-0000-0000-000-000-000-0000-0000											
Gazetted Name: Local Name: None Watershed Code: 480-718600-21906-21838-0000-0000-000-000-000-000-000											
Watershed Code: 480-718600-21906-21838-0000-0000-000-000-000-000-000	Starf3										
· ·	: 519										
Field UTM (Z.E.N): Method: Site Lg: 100 Method: GE Access: V.	Access: V2										
GIS UTM (Z.E.N): 9.684376.6071885 Ref. Name:											
Date: 2001/08/03 Time: 16:30 Agency: C172 Crew: JA/JH Fish Crd?: 🗹 Incom	olete:										
CHANNEL 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	38.										
Mtd width Avg Gadient % Mtd											
Channel Width (m): GE 1.00 0.50 0.60 0.40 0.60 0.50 0.50 0.60 Method I: 2.0 3.0 Channel Width (m): GE 1.00 0.50 0.60 0.40 0.50 0.50 0.50 0.58 Method II: Channel Width (m): GE 1.00 0.50 0.60 0.40 0.50 0.50 0.50 0.50 0.58 Method II: Channel Width (m): GE 1.00 0.50 0.60 0.40 0.50 0.50 0.50 0.50 0.60 0											
Wetted Width (m): GE 1.00 0.50 0.60 0.40 0.50 0.50 0.50											
No Vis.Ch.: Intermittent:											
Wb Depth: .5 .5 .6 Avg: 0.53 Method: MS Stage: L ✓ M ☐ H ☐ Dw: ☐ Tribs.: ☐											
COVER Total: M Type: SWD LWD B U DP OV IV CROWN CLOSURE											
Type: SWD											
Loc: P/S/O: V N A M V											
LWD: F DIST: C											
LB SHP: U RB SHP: U											
Texture: F G G C B R A T											
RIP: M	_										
STG: MF STG: SHR											
WATER	ide 1										
WATER EMS: Req#:											
EMS: Req #: Temp: 10 Method: T4 Cond.: 30 Method:	S3										
EMS: Req #: Temp: 10 Method: T4 Cond.: 30 Method: pH: 7.8 Method: P2 Turb: T											
EMS: Req #: Temp: 10 Method: T4 Cond.: 30 Method: pH: 7.8 Method: P2 Turb.: T											
EMS: Temp: 10 Method: T4 Cond.: 30 Method: pH: 7.8 Method: P2 Turb.: T											
EMS: Temp: 10											
EMS:	GE										
EMS: Temp: 10											
EMS: Temp: 10	GE										
EMS: Temp: 10	GE										
EMS: Temp: 10	GE 54 S5										
EMS: Temp: 10 pH: 7.8 Flood Signs: None Bed Material:	GE S4 S5 BR										
EMS: Temp: 10 pH: 7.8 Flood Signs: None Bed Material: Dominant: F Subdom: NA D95: 1.00 D (cm): 1.00 Pattern: IR Islands: N Coupling: DC Confinement: UN FSZ:	GE S4 S5 BR Method										
EMS: Temp: 10 pH: 7.8 Flood Signs: None Bed Material:	GE S4 S5 BR										
EMS: Temp: 10	GE S4 S5 BR Method										
EMS: Temp: 10 pH: 7.8 Flood Signs: None Bed Material: Dominant: F Subdom: NA D95: 1.00 D (cm): 1.00 Morph: RP Pattern: IR Islands: N Coupling: DC Confinement: UN FSZ:	GE S4 S5 BR Method										
EMS: Temp: 10 pH: 7.8 Flood Signs: None Method: T4	GE S4 S5 BR Method										

South Fulton Study Area

ILP Map # Reach #

ILP#

Site

 $\textbf{Watershed Code: } 480\text{-}718600\text{-}21906\text{-}21838\text{-}0000\text{-}0000\text{-}000\text{-$ 1.0 093L.080 10093 519

. \$							HABITAT QUALITY						
		N	ame			Comments							
		0	ther		684000/60670	000							
							PHOTOS						
	Photo			Foo	: Lg	Dir	Comments						
R:	22	F:	12	ST	D	D	downstream photo from wetland						
					4		COMMENTS						
	Section					Comments							
Г	CHANNEL				fish bearing by	default, beave	r dams and organic obstructions likely block upstream access.						
		CHA	NNEL		possible seepa	age area							
	CHANNEL				questionable whether stream existed prior to beaver dam activity								
		CHA	NNEL		numerous bea	ver dams have	back-flooded area to create numerous pools (isolated)						

South Fulton Study Area

Watershed Code:

Site#

519

EF

Species

NFC

Stage

Age

480-718600-21906-21838-0000-0000-000-000-000-000-000

1.0

Reach #

ILP Map # 093L.080

Comment

ILP# 10093

Gazetted Name:			:								Loca	l: None	е				
F	roject	Code	480-0	480-000000-00000-00000-0000-0000-000-000													
	ws	Code	480-7														
W	aterbo	dy ID:						ILP Map	#: 09	3L.08	0		ILP#:	10093	Reach #	: 1	
	Proj	ect ID:	3496								Lake/Stre	am: S	3	Lal	e From Date	:	
F	sh Pe	rmit #:	145	085K	Date:	2001/08/03		To: 2	2001/0	8/03	Age	ncy: C1	72	Crew: J.	A/JH	Resamp	ole:
	1 11 - 1						8	TE /	ME	ara:u	0 D	, and a					
Site#	NID	Мар	NID	# U	M:Zone/Ea	ast/North/Mtho	e e e	MTD/N) Э Те	emp	Cond	Turbid	T T	+4	Comment	*******	
519	093	.080	500°	19			3PU	EF 1	1	10	30	L	1				
					edder ge		()	BEAR	5.5	TIT.	NGS		4				
Site#	МТ)/NO	H/P	Date In Time In Date Out		Time O	Out Comment										
519	19 EF 1		1	2001/08/0	6 16:30	2001/08	/06	16:55				_					_
					C.	ELECT	01	ISH	ER.	SPE	CIFIC	SATI	ONS.	ter i	34.44	(4)	H: I
Site#	l l	MTD/N	TD/NO H/P Enci Sec		Lo	Length		idth	Voltage		Frequency	y Pulse	se Ma	ake	Mod		
519	EF		1	1	0	110	_	100.0		0.6	600	. 		7	SM	ITH	12E

Total #

0

Lgth (Min/Max)

FishAct



Site #519, downstream photo from wetland. Roll #22, Frame #12, Date: 2001/08/03

FDIS Reach Card

South Fulton Study Area

Reach #

ILP Map#

ILP#

***		PROJECT		The state of the s
Stream Name (gaz.):	Smithers Landing Fish Invento BABINE RIVER 480-000000-00000-00000-000		Project Code: 3	1496
		WATERSHE		
Reach Watershed Code: ILP Map #: Air Photos LINE: 30BCC96154	480-718600-00000-00000-000 ILP #: Gaz.:	0-0000-000-000-000-000 Reach #: 3.0 Names	-000 NID Map #: 093L.080	NID #: 50111 UTM(Zone/East/North/Method) 9.684052.6071234 GIS
#: 46	Local:			Sample Type: B Wetland:
Date: 1900/07/06		SURVEY INF	O STATE OF S	Crew: SH
		ATTRIBUTE	real comments of the second	Control of the second
Length (km): 1.21 DS Elev.: 828 US Elev: 867	Gradient: 3.22 Order: 2 Magnitude: 3 BGC Zone: SBS	Setting: VF Open water: A Confinement: FC Coupling: DC	INDICATORS C1 C2	O1 B1 B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Valley Flat: B Active Floodplain Visible: Channel Pattern: SI	C/D: C Est. Width:	Bars:	Islands: N ✓ N SIDE DIAG Mass Movement: L Riparian Veg.: S	BR Exposed/Eroded: NS Landuse: NS
Map Type Map Type TRIM 093L.08	# Year	1904 1		

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

WATERBODY

WATERBODY As a station Gazetted Name: Local: Waterbody ID: ILP Map #: ILP#: Reach #: Project ID: 3496 Lake/Stream: S Lake From Date: Date: 2001/08/03 To: 2001/08/03 Fish Permit #: 145085K Agency: C172 Crew: JA/JH Resample: SITE / NETHOD 文·《大學》、"在一次的一个學學 Site# NID Map UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid 520 093L.080 50020 GPULEF I 1 **4**0 С Site# MTD/NO H/P Date In Time In Date Out Time Out 520 EF 1 1 2001/08/03 17:00 2001/08/03 17:30 C. ELECTROFISHER SPECIFICATIONS 14.14 MTD/NO H/P Encl Sec Width Voltage Pulse Make Model Site# Length Frequency ō 110 100.0 2.0 600 SMITH 12B ROOT FISH SUMMARY Site# MTD/NO H/P Species Stage Total# Lgth (Min/Max) FishAct Age 520 EF 1 CT .ī 2+ 3 110 115 R INDIVIDUAL FISH DATA 12 Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Roll# Frame# Comment Str/Smpl#/Age Str/Smpl# 520 EF 1 СТ 110 Ū ΪM 1 520 FF СТ 115 Ū ΙM 520 EF 1 1 СТ 105 IM Τü COMMENTS Comments

fish captured at bottom of reach ~50m upstream of confluence

South Fulton Study Area

Reach # ILP Map #

ILP#

The said was a fi		STREA	MREFE	ERENC	NG				i (i da ani
Gazetted Name:				Loca	l Name:				
Watershed Code: 480-	-776600-25000-	00000-0000-0000-000	0-000-000-00	00-000	ILP	Мар # :		ILP#:	
are an experience	構造され		REAC	Н	li er				****
Reach #: 1.0		UTM(Zone/East/North)	: 9.694482.6	060981		<u> </u>	Sample Typ	e: Biase	d
Length (km): .92		Coupling: Decoupled	•	nitude: 12		_	BGC Zon		
Gradient (%): 4.5 US Elev (m): 966	Con	finement: Frequently Con islands: NONE		Order: 3 arian Vegeta	tion: Shrub		Open water:	Absent	
Bars: None V Side	Diagonal		_		nduse: Not				
					(100	**	.64		
Site #: 527	Field U	TM		Agency: (C172	Crew: JA	/JH Da	te: 2001/08	/15
Site Length (m): 260	GIS I	JTM 9.695098.6061124		Agency N	lame: Triton	Environmenta	a) Consultant	s (Terrace)	
			CHANN	IEL		n yerge or the	34-10-14		4000
No Vis.Ch.: Inter	mittent:	Av	g Min	Max #			Avg M	n Max	#
Dewatered:	Tribs.:	Channel Width (m): 2.6		2.8 6		Gradient %:			4
Stage: Low		Wetted Width (m): 1.7		2.700 6	┦╚	ool Depth (m)	0.22 0.0	50 0.360	6
Med ✓	L.	Bankfull Depth (m): 0.5	3 0.3	0.8 3		Turb	idity.: Tur	bid	Low
High 🗍	Temp (C): 7	pH: 7.6	Co	onductivity: 4	0		Moden	ateC	lear 🗹
process and the second for section of									
		N C	ORPHOI	LOGY		****	tel T	10 M 10 H	12.4
Bed Material: Domina	ant: Cobble	D95 (cm): 21.00		LOGY Jars: Non	Side ✓	Diagonal	Mid-char	nnel 🗹 Sp	oan 🔲
Bed Material: Domina	ant: Cobble ant: Gravels				Side 🗹	Diagonal	Mid-char	nnel 🗹 Sp	
Bed Material: Domina Subdomina Channel Pattern: Irreg	ant: Gravels gular, Wandering	D95 (cm): 21.00 D (cm): 2.00	B DISTURI	BANCE C	Side 🗸	Diagonal B2 B3	Mid-char	nnel 🗹 Sp	oan 🔲
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Deco	ant: Gravels pular, Wandering pupled	D95 (cm): 21.00 D (cm): 2.00	B DISTURI INDICA	BANCE CATORS)1 B1	B2 B3	D1 D2	nnel Sp Br D3	oan 🔲
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Deco Confinement: Unc	ant: Gravels gular, Wandering pupled onfined	D95 (cm): 21.00 D (cm): 2.00	B DISTURI INDICA	BANCE C		_		nnel Sp Br D3	oan 🔲
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Dec Confinement: Unc Morphology: RP	ant: Gravels gular, Wandering oupled onfined Riffle Pool	D95 (cm): 21.00 D (cm): 2.00 Islands: None	DISTURI INDICA C1 (BANCE CATORS C2 C3)1 B1	B2 B3 S1 S2	D1 D2	nnel Sp Br D3	oan 🔲
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Decc Confinement: Unco Morphology: RP	ant: Gravels gular, Wandering oupled onfined Riffle Pool	D95 (cm): 21.00 D (cm): 2.00 Islands: None	DISTURI INDICA C1 (BANCE CATORS C2 C3	01 B1 C4 C5	B2 B3 S1 S2	D1 D2	nnel Sp Br D3	oan 🔲
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Dec Confinement: Unc Morphology: RP	ant: Gravels gular, Wandering oupled onfined Riffle Pool	D95 (cm): 21.00 D (cm): 2.00 g Islands: None	DISTURI INDICA C1 (C2 COVE D LWD	BANCE CATORS C2 C3	D1 B1 C4 C5	B2 B3 S1 S2 DP C	D1 D2 S3 S4	nnel Sp Br D3	oan 🔲
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Dect Confinement: Unc. Morphology: RP	ant: Gravels gular, Wandering pupled onfined Riffle Pool	D95 (cm): 21.00 D (cm): 2.00 Islands: None Type: SWI Amount: S	DISTURI INDICA C1 (C) COVE D LWD	BANCE CATORS C2 C3	D1 B1 C4 C5 U	B2 B3 S1 S2 DP C	D1 D2 S3 S4 DV IV S T	D3 S5	oan Caid
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Dect Confinement: Unc. Morphology: RP	ant: Gravels gular, Wandering pupled onfined Riffle Pool	D95 (cm): 21.00 D (cm): 2.00 g Islands: None	DISTURI INDICA C1 (C2 COVE D LWD	BANCE CATORS C2 C3	D1 B1 C4 C5 U	B2 B3 S1 S2 DP C	D1 D2 S3 S4	nnel Sp Br D3	oan Caid
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Dect Confinement: Unco Morphology: RP Total Cover: Moderate LWD: Few LWD Dist: Evenly Dist Right Bank: Shape	ant: Gravels gular, Wandering pupled onfined Riffle Pool stributed E. Undercut Te	D95 (cm): 21.00 D (cm): 2.00 Islands: None Type: SWI Amount: S Location: P/S/O:	DISTURI INDICA C1 (C0 VE D LWD T Cobble	BANCE CATORS C2 C3 B N B N B Doubler	01 B1 C4 C5 U D Rock	B2 B3 S1 S2 DP C T	D1 D2 S3 S4 DV IV S T	Br Br Br S5 FSZ Crown Clos	pan :: aid :: :: :: :: :: :: :: :: :: :: :: :: ::
Bed Material: Domina Subdomina Subdomina Channel Pattern: Irreg Coupling: Dect Confinement: Unco Morphology: RP Total Cover: Moderate LWD: Few LWD Dist: Evenly Dist Right Bank: Shape Left Bank: Shape	ant: Gravels gular, Wandering pupled onfined Riffle Pool stributed :: Undercut Te :: Sloping (g Te	D95 (cm): 21.00 D (cm): 2.00 Islands: None Type: SWI Amount: S Location: P/S/O: Exture: Fines Gravel Gravel	DISTURI INDICA C1 (C1 (COVE D LWD T Cobble Cobble	BANCE CATORS C2 C3 B B N	01 B1 C4 C5 U D	B2 B3 S1 S2 DP C T	D1 D2 S3 S4 DV IV S T	D3 S5 FSZ	pan :: aid :: :: :: :: :: :: :: :: :: :: :: :: ::
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Dect Confinement: Unco Morphology: RP Total Cover: Moderate LWD: Few LWD Dist: Evenly Dist Right Bank: Shape Left Bank: Shape Right Bank: Rip.Veg	ant: Gravels gular, Wandering pupled onfined Riffle Pool stributed :: Undercut Te :: Sloping (g Te :: Coniferous	D95 (cm): 21.00 D (cm): 2.00 Islands: None Type: SWI Amount: S Location: P/S/O: Exture: Fines Gravel Stage: Ma	DISTURI INDICA C1 (C1 (C1 (C2 C) C2 C) C3 C C C C C C C C C C C C C C C C C C	BANCE CATORS C2 C3 R B N Boulder Boulder	C4 C5 U D Rock Rock	B2 B3 S1 S2 DP C T Manmade Manmade	D1 D2 S3 S4 DV IV S T	Br B	ean
Bed Material: Domina Subdomina Subdomina Channel Pattern: Irreg Coupling: Dect Confinement: Unco Morphology: RP Total Cover: Moderate LWD: Few LWD Dist: Evenly Dist Right Bank: Shape Left Bank: Shape	ant: Gravels gular, Wandering pupled onfined Riffle Pool stributed :: Undercut :: Sloping (g Te	D95 (cm): 21.00 D (cm): 2.00 Islands: None Type: SWI Amount: S Location: P/S/O: Exture: Fines Gravel Stage: Ma	DISTURI INDICA C1 (C) C O V E D LWD T Cobble Cobble Cobble ature forest	BANCE CATORS C2 C3 B N B N Boulder Boulder	01 B1 C4 C5 U D Rock	B2 B3 S1 S2 DP C T Manmade Manmade	D1 D2 S3 S4 DV IV S T	Br Br Br S5 FSZ Crown Clos	ean
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Dect Confinement: Unco Morphology: RP Total Cover: Moderate LWD: Few LWD Dist: Evenly Dist Right Bank: Shape Left Bank: Rip.Veg Left Bank: Rip.Veg	ant: Gravels gular, Wandering pupled onfined Riffle Pool stributed :: Undercut Te :: Sloping (g Te :: Coniferous	D95 (cm): 21.00 D (cm): 2.00 Islands: None Type: SWI Amount: S Location: P/S/O: Exture: Fines Gravel Stage: Ma Stage: Ma	DISTURI INDICA C1 (C) COVE D LWD T Cobble Cobble Sture forest	BANCE CATORS C2 C3 R B N Boulder In	C4 C5 U D Rock Rock	B2 B3 S1 S2 DP C T Manmade Manmade Manmade	S3 S4 DV IV S T	Br B	ean
Bed Material: Domina Subdomina Channel Pattern: Irreg Coupling: Dect Confinement: Unco Morphology: RP Total Cover: Moderate LWD: Few LWD Dist: Evenly Dist Right Bank: Shape Left Bank: Shape Right Bank: Rip.Veg	ant: Gravels gular, Wandering pupled onfined Riffle Pool stributed : Undercut Te :: Sloping (g Te :: Coniferous	D95 (cm): 21.00 D (cm): 2.00 Islands: None Type: SWI Amount: S Location: P/S/O: exture: Fines Gravel Stage: Ma Stage: Ma	DISTURI INDICA C1 (C) COVE D LWD T Cobble Cobble Sture forest	BANCE CATORS C2 C3 R B N Boulder In	C4 C5 U D Rock Rock	B2 B3 S1 S2 DP C T Manmade Manmade	D1 D2 S3 S4 DV IV S T	Bar	can Caid Sure

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

527

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	F	Projec	t Water	shed Coo	le: 48	3-0000	00-00000	00000-000	0000-00	-000-0	00-000-0	00-000-0	.00								
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			ILP Ma)# :			ILP#:		NID M	ap #: (093K.061	N	!D#: 5	0027	Rea	ch #:	1	1.0	: 527		
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	GIS	S UTN	VI (Z.E.	N): 9.695	098.60	31124						R	ef. Nam	ie:							
				Date: 200	01/08/1	5	Time: 1	0:43		Agend	y: C172	(Crew:	JA/JH			Fish Crd?	: _	Incom	plete:	
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*	. D.E									OF	PHO	LOGY							100	35477	
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E3848.03	W. 7 C	noto			oc Lg	6.9		Dir					erana Pó		Comme	nts		e e e		ander (* E	
R:	23	F:			STD			U									• •		ithin sample	site	
R:	23	F:	12		STD			D	dow	nstrea	am photo	taken of c	obble s	ubstrates	found w	vithin	sample si	te			

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

1.0

Section	COMMENTS
CHANNEL	No fish caught, S6

South Fulton Study Area

ILP Map #

ILP#

Watershed Code:

527

EF

NFC

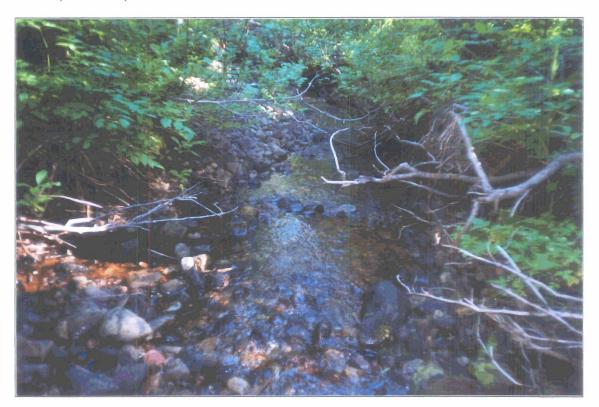
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Reach #

	zetted N Project C			000-000	00-00000-00	000-0000-000-0	00-000-0	000-000-	-0	Loca	al: No	one					
W	/aterboo	y ID:			00-00000-00	000-0000-000-0	00-000-0 ILP M		-000	Lake/Str	eam:	ILP#:	ı	R Lake Fro	teach #: m Date:	1 -	
F	ish Perr	nit #:	145	5085K	Date:	2001/08/15	To:	2001/0	8/15	Age	ency: (C172	Crew:	JA/JH	Re	sample:	-
			1.4	69		*	RITE	/ ME	TH	O D		1 X 2.8	19 att				•
Site#	NID	lap	NID	# UT	M:Zone/Eas	t/North/Mthd	MTD/	NO To	emp	Cond	Turb	id		Co	mment		
527	093K.	061	5002	27		GPU	J EF	1	7	40	С						
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527	EF	1	1	2001/08/1	5 10:30	2001/08/15	10:5	7									
167A	Carlotte.			And the part was to	G. E	LECTRO	FISH	ER.	SPE	CIFI	CAI	TIONS		124 411			
Site#	M	TD/N	0	H/P	Encl	Sec	Length	T w	fidth	Volt	age	Frequenc	y F	² uls e	Make	1	Mode
527	EF		1	1	0	810	300.0		2.4	50	00	ı		5	SMITH		12B



Site #527, upstream photo taken of SWD and overhanging vegetation, typical habitat within sample site. Roll #23, Frame #11, Date: 2001/08/15



Site #527, downstream photo taken of cobble substrates found within sample site. Roll #23, Frame #12, Date: 2001/08/15

FDIS Reach Card

South Fulton Study Area

Reach # ILP Map #

ILP#

				PROJEC	T		r LU Vi)		
	Stream Name (ga	ime: Smithers Landing Fi az.): BABINE RIVER ode: 480-000000-00000-0			-000-000	Project Code:	3496		
				WATERSH	ED				
		ode: 480-776600-00000-0		-	-000-000				
(LP	Map #:	ILP#:	F	Reach #: 2.0		NID Map #: 093K.061		NID#:	50843
	Air Photos			Names			UTM(Zone	/East/North/Met	hod)
LINE:	30BCC98024	Gaz.:					9.69536	5.6061155	GIS
#:	160	Local:					Sample Typ	e: B We	tland:
s Tegli				SURVEY	NFO		Carlo No.		
Da	ate: 1900/07/06			Agency: C172			Crew:	SH	
			an village	ATTRIBUT	ES.			Carrier and	
	Length (km): 2.18	Gradient	5.28	Setting:	vw	DISTURBANCE	O1 B1	B2 B3 D1	D2 D3
	DS Elev.: 813	Order	: 4	Open water:	Α	INDICATORS			
	US Elev: 928	Magnitude:	35	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 Vis	sible: Est. Wid	th:	В	ars: 🗸	N SIDE DIAC	MID 🗔	SPAN	BR
	Channel Pattern: IF	₹			Mas	s Movement: M	Expo	sed/Eroded: 1	NS .
	_				R	lipanan Veg.: M		Landuse: 1	1 S
in cliptal		(APS	li pre						
M	lap Type	Map# Y	'ear	1					
	TRIM 093	3K.061		7					

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

528

EF

NFC

Gaz	etted i	Name:										Loca	al:					
F	Project	Code:	480-0	00000-0	000-000	000-000	00-0000-00	00-00	0-000-000	-000-0								
	ws	Code:	480-7	76 60 0-0	0000-000	000-000	00-0000-00	00-00	0-000-000	-000-00	00							
W	aterbo	dy ID:							ILP Map	#:				ILP#:		F	Reach #:	2 -
	Proje	ect ID:	3496	_		_				_	_	Lake/Str	eam:	s 		ake Fro	m Date:	
F	ish Pe	rmít#:	145	085K		Date: 2	2001/08/15		To: 20	001/08	/15	Age	ency: (C172	Crew:	JA/JH	Re	esample:
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Site#	NID	Мар	NID	# !	JTM:Zor	re/East	t/North/Mth	d	MTD/NO	Ten	np	Cond	Turb	id		Co	mment	
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Site#	MT)/NO	H/P	Date	ln T	ime In	Date C	Out	Time Out					Ç	ommer	t		
528	EF	1	1	2001/08	1/15	11:15	2001/08	/15	11:49									
1 4 5 48		74.13			· C	. E	LECTI	101	ISHE	R S	PI	CIFI	CAT	LIONS			-1	n nangara t
Site#	N	ATD/N	0	H/P	Er	nci	Sec	L	ength	Wid	th	Volt	age	Frequency	/ F	ulse	Make	Mod
528	EF		1	1			161	1	0.00	2	.8	60)0		Ι	5	SMITH	
ng ing ke	Set in		(4)					FI	SHS	UNK	1 A	RY	1 1 100					
Site#	T	ATD/N	$\overline{}$	H/P	Specie	e T	Stage	Age	Tot	al # T	1.01	h (Min/Ma	~\\ T	FishAct			Comment	

FDIS Reach Card

South Fulton Study Area

Reach # ILP Map #

ILP#

		PROJEC		The second secon
Stream Name (gaz.):		entory - 2000 -0000-0000-000-000-000-000	Project Code: -000-000	3496
No. 1 Property of the second		WATERSH	E ye a san dayan ka	ring and the state of the state
Reach Watershed Code: ILP Map #:	480-776600-00000-00000- ILP #:	-0000-0000-000-000-000-000- Reach #: 3.0	-000-000 NID Map #: 093K.06	1 NID #: 50844
Air Photos LINE: 30BCC98024 #: 159	Gaz.: Local:	Names		UTM(Zone/East/North/Method) 9.694863.6059240 GIS Sample Type: B Wetland:
		SURVEY II	IFO	And the second s
Date: 1900/07/06		Agency: C172		Crew: SH
		ATTRIBUT	E5.	
Length (km): 2.37 DS Elev.: 928 US Elev: 1032	Gradient: 4.39 Order: 3 Magnitude: 23 BGC Zone: SB	Open water: Confinement:	VW DISTURBANCE A INDICATORS FC C1 C2 PC	
Valley Flat: N Active Floodplain Visible: Channel Pattern: IR	C/D: Est. Width:	Ba	islands: N ars: ☑ N ☐ SIDE ☐ DIA Mass Movement: M Riparian Veg.: M	G MID SPAN BR Exposed/Eroded: NS Landuse: NS
en e	P8			

robalika (MAPS	
Мар Туре	Map #	Year
TRIM	093K.061	

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

	Ргоје		: 480-	000000-00				00-00	00-000-00	0-000-	0	Loc	ACREST SECTIONS						
W	/ateri	oody ID oject ID			000-0	3000-000	0-0000-0	00-00	ILP Map			Lake/Str	eam:	ILP#: S	_ (F Lake Fro	Reach #: m Date:	3 -	
F	ish P	ermit #	145	5085K		Date: 2	001/08/1	5	To: 2	2001/0	8/15	Age	ency: (C172	Crew:	JA/JH	Re	sample	
				14			10.20	S	ITE /	WE	TH	O D		11 M		, M	(1) (a)		
Site#	NI	D Map	NID	# (TM:Z	ne/East/	North/Mtl	nd	MTD/NO	O Te	emp	Cond	Turb	d		Co	mment		- Anna -
529	09:	3K.061	500.					GPU	EF 1		5	30	С						
114				. 72			ne. i	١.	GEAR	SE	TT	INGS	. 6					a i e	
Site#	М	D/NO	H/P	Date i	٦	Time In	Date	Out	Time Ou	ıt				С	ommer	nt			
529	EF	1	1	2001/08	/15	11:55	2001/0	8/15	12:20										
11.5	de de			A	ij.	C. EI	ECT	RO	FISH	ER "	3 P E	CIF	CAT	IONS				4	i di e
Site#	T	MTD/N		H/P		ncl	Sec	Į	ength.	W	idth	Vol	age	Frequency	F	Pulse	Make		Model
529	Ε	F	1	1		0	100		75.0		2.7	60	00		T	5	SMITH		12B
								F	ISH S	UM	ША	RY					1 <u>ROOT</u>		
Site#		MTD/N	Ю	H/P	Spec	ies S	tage	Ag	e To	tal#	Lgt	h (Min/M	ax)	FishAct			Comment		
529	E	F	1	1	NFC	:	- 1			0									

South Fulton Study Area

Reach # ILP Map #

ILP#

Watershed Code: 480-776600-44246-52938-0000-0000-000-000-000-000-000

1.0 093L.070 10333

Gazetted Name: Local Name: Watershed Code: 480-776600-44246-52938-0000-0000-000-000-000-000-000-000 ILP Map #: 093L.070 ILP #: 10333 REACH 13 G. M. UTM(Zone/East/North): 9.692970.6058023 Reach #: 1.0 Sample Type: Biased BGC Zone: SBS Length (km): .70 Coupling: Decoupled Magnitude: 1 Confinement: Occasionally Conf Order: 1 Open water: Absent Gradient (%): 2.3 Islands: NONE **US Elev (m): 1122** Riparian Vegetation: Mixed C/D Mid-channel Bars: None 🗸 Side Diagonal Span Braid ___ Landuse: Not Specified SITE Alexander (1979) in 1880 (1880), in Site #: 530 Field UTM .. Agency: C172 Crew: JA/JH Date: 2001/08/15 GIS UTM 9.693344.6058231 Site Length (m): 100 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL and the second second second second Min # No Vis.Ch.: intermittent: Avg Avg Dewatered: Tribs.: _ Channel Width (m) 3.37 2.900 3.700 6 Gradient %: 2.75 4 Wetted Width (m): 6 Pool Depth (m): 0.36 0.270 0.5 5 1,75 1.600 1.9 Low Bankfull Depth (m): 0.53 0.4 0.7 Med 🗸 Turbidity.: Turbid Low Clear 🗸 Conductivity: 20 Moderate High Temp (C): 6 pH: 7.8 MORPHOLOGY Bed Material: Dominant: Cobble Side V Diagonal V Mid-channel D95 (cm): 15.00 Bars: Non Span Subdominant: Gravels D (cm): 2.00 Braid Channel Pattern: Irregular, Wandering Islands: Occasional DISTURBANCE INDICATORS Coupling: Decoupled Confinement: Unconfined C5 S1 Morphology: RP Riffle Pool COVER The second secon Туре: LWD DΡ Oν Total Cover: Moderate В U Amount s S N D S LWD: Few Location: P/S/O: ~ **V** V **V** LWD Dist: Evenly Distributed FSZ: Right Bank: Shape: Undercut Texture: Fines 🗹 Gravel Cobble Boulder 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 [FISH CASON CONTRACTOR Company of the Control of the Contro Capture Site Number Number of Length fished Total Voltage Species Total Minimum Maximum Method **Events** (m) Fish Length (mm) Length (mm) 530 FF 210 230 sec 600 NFC 0

South Fulton Study Area

Reach # ILP Map # ILP# Site Watershed Code: 480-776600-44246-52938-0000-0000-000-000-000-000-000-000 1.0 093L.070 10333 530 PROJECT Project Name: Smithers Landing Fish Inventory - 2000 Stream Name (gaz.): BABINE RIVER Project Code: 3496 Local Name: None Gazetted Name Watershed Code: 480-776600-44246-52938-0000-0000-000-000-000-000-000 ILP Map#: 093L.070 ILP#: 10333 NID Map #: 093L.070 NID #: 50030 Reach #: 1.0 Site #: 530 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: HC Access: H GIS UTM (Z.E.N): 9.693344.6058231 Ref. Name: Time: 13:07 Fish Crd?: Date: 2001/08/15 Agency: C172 Crew: JA/JH Incomplete: CHANNEL The second second Mtd width width width width width width width width Avg Mtd Avg 2.75 Method I: 20 40 ΔI Channel Width (m): MS 2 90 3 50 3.50 3.10 3.70 3.50 3 37 Wetted Width (m): MS 1.60 1.60 1.70 1.90 1.90 1.80 1.75 Method II: 3.0 2.0 AL Pool Depth (m): MS 0.27 0.50 0.31 0.41 0.30 0.36 No Vis.Ch.: Intermittent: Dw: Stage: L M M H Wb Depth: .4 .5 Avg: 0.53 Method: MS Tribs.: COVER Total: M **CROWN CLOSURE** Type: SWD LWD В 11 DΡ C۷ ١V 1-20% n S S s Amount Loc: P/S/O: INSTREAM VEG: N A M V I WD: F DIST: E LB SHP: U RB SHP: U Texture: F G C B R A Texture: F G C B R A RIP: S RIP: M STG: MF STG: MF WATER WATER FMS: Rea #: Temp: 6 Method: T4 Cond.: 20 Method: S3 pH: 7.8 Method: P2 Turb.: T M M L C 🕟 Method: GE Method: GE Flood Signs: None Figure 100 to 100 MORPHOLOGY 01 D2 D1 Subdom: G Bed Material: Dominant: C D95: 15.0 D (cm): 2.00 Morph: RP DISTURBANCE

		Patterr	: IR			INDICATORS	C1	C2 C3	C4	C5	S1	S2	S3	S4 S5
		Islands	s: O											
	(Coupling	: DC											
	Conf	inement	: UN			_	Norm	0.55		-				
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	Na	me					Comment	s						
Sp	awnir	g Habit	at	Moderate -	associated with clean	patches of gravel								
F	learing	Habita	t	Moderate -	associated with overh	anging vegetation, LWD and u	indercut b	anks						
Ov	erWin	ter Habi	tat	Low - limit	ed by lack of deep pool	ls								
19.64		-317			Hadibəri Jik	PHOTOS	4 J.S.	4 134	100	4				1800
Pi	noto		Fo	c Lg	Dir			Cor	nments					
R: 23	F:	13	S	ΤD	U	upstream photo taken of cot	ble island	is typicai w	ithin sam	pie site				
R: 23	F:	14	S	TD	D	downstream photo taken of	overhang	ing vegetati	on typica	l within	sample	site		
						-								

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

530

Watershed Code: 480-776600-44246-52938-0000-0000-000-000-000-000-000

1.0

093L.070

	COMMENTS
Section	Comments
CHANNEL	S5
CHANNEL	Stream was the largest observed by helicopter RECCI therefore it is most likely to be the mainstern

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

480-776600-44246-52938-0000-0000-000-000-000-000-000

1.0

093L.070

71.15		Y. V		0.0,44	,,-\\\.	***	T. WIRE	**	WA	TEI	₹ B	O D	Y		456	· 5. 1. 0 ·	4137			**
Gaz	etted l	Name	:										Loc	al; N	lone					
P	roject	Code	480-0	000000-0	0000-00	000-000	00-0000-00	00-00	0-000	-000-0	00-0)								
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Fi	sh Pe	mit #:	145	085K		Date: 2	2001/08/15	;	To	o: 200	1/08	/15	Ag	ency:	C172	2	Crew:	JA/JH	Resa	mple:
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Site #530, upstream photo taken of cobble islands typical within sample site. Roll #23, Frame #13, Date: 2001/08/15



Site #530, downstream photo taken of overhanging vegetation typical within sample site. Roll #23, Frame #14, Date: 2001/08/15

South Fulton Study Area

Reach # ILP Map #

ILP#

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South Fulton Study Area

Reach # ILP Map #

ILP#

Site 531

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South Fulton Study Area

Reach # ILP Map #

ILP#

Site

8.0

i	COMMENTS THE PARTY OF THE PARTY
Section	Comments
CHANNEL	\$5
CHANNEL	ponded areas
CHANNEL	habitat sampled is suitable for DV and RB/CT
CHANNEL	downstream barriers observed in RECCI
CHANNEL	no fish caught
CHANNEL	ephemeral flows
CHANNEL	high amount of invertebrates

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

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F	ish P	ermit	#:	145	085K		Date:	2001/08/	15	T	o: 20	001/08	3/15	Age	ency:	C172	Crew:	JA/JH	Res	ample:	
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7.00		-17							-, F	ISI	S	U NA I	NA.	RY					ROOT		
Site#		MTC)/N	0	H/P	Sp	ecies	Stage	Ag	e	Tota	al#	Lgti	n (Min/M	ax)	FishAct			Comment		
531	El	=		1	1	N	FC					0			T						



Site #531, upstream photo of typical habitat within site. Roll #23, Frame #15, Date: 2001/08/15



Site #531, downstream photo of habitat found within site. Roll #23, Frame #16, Date: 2001/08/15

South Fulton Study Area

Reach # ILP Map #

ILP#

I SUSPENIE	Je goda k		STR	EAM	REF	EREN	CING			: 10		n e age
Gazetted Na	me:					l	Local Name	D:				
Watershed C	ode: 480-77	0700-00000-00	000-0000-0000-00	0-000-00	00-000-0	000-000		ILP Map #:		ILF	* :	
		. d			REA	CH		ografia	71		. 1.	
Reach #: 8.	.0	(UTM(Zone/East/N	orth): 9.	690025	6059753			Sample	Type:	Biase	ed
Length (km):			oupling: Partially C	cuple	Ma	gnitude:				Zone:		
Gradient (%):			nement: Confined		D i-	Order:	-		Open wa	iter: Abse	ent	
US Elev (m): Bars: None	_ ,_		Mid-channel	- Snan		raid	getation: C	: Not Specified				
bars: None		_ Diagonal	Mild-Channel	Span	SIT		Languse	. Not Specified	4 ar 898	A A CONTROL		Service Service
Site #:		Field UTM			<u> </u>	Name of the same	C170	C 1		D-4-	2004/06	44.5
Site #:			л M 9.690344.60600	09		•	cy: C172 icv Name: T	Crew: J. riton Environment	VJH al Consu		2001/08 errace)	סו ע
					HAN			Carata (
No Vis.Ch.:	Intermit	tent:	s and the profession was a second	Ava	Min	Max	# 7	87 8 (97 86 J.C. u.S. 179)	Ava	Min	Max	# 7
Dewatered:			hannel Width (m):	النسا	2.5	3.1	6	Gradient %		4	7	4
Stage: Low			Wetted Width (m):		1.5	3.1	6	Pool Depth (m): 0.18	0.050	0.300	6
Med	Ž	В	ankfull Depth (m):	0.27	0.1	0.4	3	Tur	oidity.:	Turbid		Low
High	T	emp (C): 7	pH: 7.8		C	Conductivi	ity: 20		M	oderate [lear 🗸
POST AND FINE	·	4	THE ENGLAND	MOR	846	100	ALCONOL SECTION	- A - D - A - D - D - D	S. S. Shirt	18 S 1	METANGENESS PLOT	TORONO COMPANION PROPERTY
COMPANDATE STREET	11.77 II. TATE STEEL	Office of the state of the stat	18		<i>5</i> 7.000	LUG				7.3		A STATE OF
Bed Material:			D95 (cm): 41.			Bars: No		le 🗹 Diagonal			r -	oan 🗌
		Cobble	D95 (cm): 41.	.00							□ s	
S Channel Pat	Dominant: Subdominant: ttern: Sinuou	Cobble Gravels	` '	.00 00	DISTUI	Bars: No	n 🗍 Sid		Mid-	channel	□ s	oan 🗌
S Channel Pat Coup	Dominant: Subdominant: Ittern: Sinuous oling: Decoup	Cobble Gravels s	D (cm): 2.0	.00 00	DISTUI	Bars: No RBANCE CATORS	O1 E	Diagonal B2 B3	Mid-	channel	S _I	oan 🗌
S Channel Pat Coup Confinen	Dominant: Subdominant: Itern: Sinuou: oling: Decoup ment: Unconf	Cobble Gravels s oled fined	D (cm): 2.0	.00 00	DISTUI	Bars: No	O1 E	le 🗹 Diagonal	Mid-	channel	St Br	oan 🗌
S Channel Pat Coup Confinen	Dominant: Subdominant: Ittern: Sinuous oling: Decoup	Cobble Gravels s	D (cm): 2.0	.00 00 ne	DISTUI INDIC	Bars: Nor RBANCE CATORS C2 C	O1 E	Diagonal B2 B3	Mid-	channel	S _I	oan 🗌
S Channel Pat Coup Confinen Morphol	Dominant: subdominant: ttern: Sinuous bling: Decoup nent: Unconf logy: RP	Cobble Gravels s oled fined	D (cm): 2.0 Islands: Nor	.00 00 ne	DISTUI INDIC C1	Bars: No	O1 E	Diagonal 1	D1 S3	D2 D S4	S _I	oan 🗌
S Channel Pat Coup Confinen	Dominant: subdominant: ttern: Sinuous bling: Decoup nent: Unconf logy: RP	Cobble Gravels s oled fined	D (cm): 2.0 Islands: Nor	.00 00 ne SWD	DISTUI INDIC C1 3 O V I	Bars: No	O1 6 3 C4	Diagonal 1	D1 S3	D2 D S4	S _I	oan 🗌
S Channel Pat Coup Confinen Morphol Total Cover: M	Dominant: subdominant: ttern: Sinuou: oling: Decoup ment: Unconf logy: RP	Cobble Gravels s oled ined Riffle Pool	D (cm): 2.0 Islands: Nor Type: Amount:	.00 00 ne SWD S	DISTUI INDIC C1 OVA	Bars: No	01 E	Diagonal 1	D1 S3	D2 D S4	Si Bi	pan []
S Channel Pat Coup Confinen Morphol Total Cover: M	Dominant: subdominant: ttern: Sinuou: bling: Decoup ment: Unconfi logy: RP	Cobble Gravels s oled ined Riffle Pool	D (cm): 2.0 Islands: Nor Type: Amount:	.00 00 ne SWD	DISTUI INDIC C1 3 O V I	Bars: No	O1 6 3 C4	Diagonal 1	D1 S3	D2 D S4	S _I	pan []
Channel Pat Coup Confinen Morphol Total Cover: M LWD: F LWD Dist: E Right Bank:	Dominant: siubdominant: ttern: Sinuous bling: Decoupment: Unconfilogy: RP Moderate Few Evenly Distrib Shape: U	Cobble Gravels s sled ined Riffle Pool	Type: Amount: Location: P/S/O: ure: Fines Gra	.00 00 ne SWD S	DISTUII INDIC	Bars: No	O1 E 3 C4 U S V er Roci	Diagonal B2 B3 C5 S1 S2 DP T	D1 S3 OV T	Channel D2 D S4	Si Bi	pan [] raid []
Channel Pat Coup Confinen Morphol Total Cover: M LWD: F LWD Dist: E Right Bank: Left Bank:	Dominant: subdominant: stern: Sinuous bling: Decoup ment: Unconf logy: RP Moderate Few Evenly Distrib Shape: U Shape: U	Cobble Gravels s sled ined Riffle Pool outed ndercut Text	Type: Amount: Location: P/S/O: ure: Fines Graure: Fines Graure:	SWD S	DISTUI INDIC C1 LWE D	Bars: No	O1 E 3 C4 U S V er Roci	Diagonal B2 B3 C5 S1 S2 DP T	D1 S3 OV T	Channel D2 D S4	Si Bi	pan [] raid []
Channel Pat Coup Confinen Morphol Total Cover: M LWD: F LWD Dist: E Right Bank:	Dominant: subdominant: stern: Sinuous bling: Decoupment: Unconfilogy: RP Moderate Few Evenly Distrib Shape: U	Cobble Gravels s sled ined Riffle Pool outed ndercut Text	Type: Amount: Location: P/S/O: ure: Fines Gra Stage	SWD S	DISTUI INDIC C1 LWE D Cobble	Bars: No	O1 E 3 C4 U SS V er Rock	Diagonal B2 B3 C5 S1 S2 DP T T Manmade Manmade	D1 S3	Channel D2 D S4 IV T Cro	Signal Si	pan [] raid [] raid [] sure
Channel Pat Coup Confinen Morphol Total Cover: M LWD: F LWD Dist: E Right Bank: Left Bank: Right Bank:	Dominant: subdominant: stern: Sinuous bling: Decoup ment: Unconf logy: RP Moderate Few Evenly Distrit Shape: U Shape: U Rip.Veg: C	Cobble Gravels s sled ined Riffle Pool outed ndercut Text	Type: Amount: Location: P/S/O: ure: Fines Gravier: Stage	SWD S	DISTUINDIC C1 LWE D Cobble Cobble forest	Bars: Noi RBANCE CATORS C2 C D B T Bould Bould	O1 E 3 C4 U SS V er Rock	Diagonal B2 B3 C5 S1 S2 DP T	D1 S3	Channel D2 D S4 IV T Cro	Signal Si	pan [] raid [] raid [] sure
Channel Pat Coup Confinen Morphol Total Cover: N LWD: F LWD Dist: E Right Bank: Left Bank: Left Bank:	Dominant: subdominant: stern: Sinuous bling: Decoup ment: Unconf logy: RP Moderate Few Evenly Distrit Shape: U Shape: U Rip.Veg: C Rip.Veg:	Cobble Gravels s sled ined Riffle Pool buted ndercut Textindercut Textioniferous	Type: Amount: Location: P/S/O: ure: Fines Gravier: Stage	SWD S	DISTUINDIC C1 LWE D Cobble forest forest	Bars: Noi RBANCE CATORS C2 C T Bould Bould	O1 B 3 C4 U S V S Instream	Diagonal B2 B3 C5 S1 S2 DP T T Manmade Manmade Veg: None	D1 S3 OV T Algae	Channel D2 D S4 IV T Cro Moss (s	Signal Si	can Canada
Channel Pat Coup Confinen Morphol Total Cover: M LWD: F LWD Dist: E Right Bank: Left Bank: Right Bank:	Dominant: subdominant: stern: Sinuous bling: Decoup ment: Unconf logy: RP Moderate Few Evenly Distrit Shape: U Shape: U Rip.Veg: C	Cobble Gravels s sled ined Riffle Pool outed ndercut Text	Type: Amount: Location: P/S/O: ure: Fines Gravier: Stage	SWD S	DISTUINDIC C1 LWE D Cobble forest forest	Bars: Noi RBANCE CATORS C2 C D B T Bould Bould	O1 E 3 C4 U SS V er Rock	Diagonal B2 B3 C5 S1 S2 DP T T Manmade Manmade Veg: None	D1 S3	Crownell D2 D S4 S4 IV T Crown Moss (Signal Si	can Canada

South Fulton Study Area

ILP Map # Reach#

Site 532

8.0

ILP#

		(4.4.1)			PR	OJE	CT,	1.5			7.02		scale is	diam'r
Project Name	: Smithers	Landing Fis	h Invento	ry - 200	0									
Stream Name (gaz.)		_							F	Project C	ode:		3496	
Project Watershed Code			0000-000	0-0000-	000-000	-000-00	00-000-00	00						
	(1 6%				WAT	ER5	HED	7 /1			, the		1	17
Gazetted Name:								Loc	cal Name	e: None				
Watershed Code: 480-776	700-00000	-00000-0000	0-0000-00	0-000-0	00-000-	000-000)							
ILP Map#:		ILP#:		NID Ma	ap #: 093	3L.070	N	ID #: 50	032	Rea	ch #:	8.0	Site #	: 532
Field UTM (Z.E.N):		ı	Method:					Site Lg	g: 150		Method:	HC	Access: H	
GIS UTM (Z.E.N): 9.69034	14.6060009						Re	ef. Name	: :					
Date: 2001	/08/15	Time: 16	:05		Agency:	C172	c	rew: .	JA/JH		Fish (Ord?:	Income	olete:
	700/10	11110: 10					Fr A series							
	.7a	4.			CH	4,8 8	EL)				144		4 4 4	
Mtd		dth width	width	width	width	width	width	width	width	Avg			ent % Mtd	 _
Channel Width (m): MS Wetted Width (m): MS	2.70 2.6 1.60 2.	0 3.00	2.60 1.50	2.50 1.60	3.10 3.10		<u> </u>			2.75 1.92	Meth Metho		5.0 AL	
Wetted Width (m): MS Pool Depth (m): MS		05 0.30	0.18	0.19	0.10	 	 		 	0.18	- Interior	7.0	_ 0.0 _ AL	J
	<u> </u>		1.5 1			L	<u> </u>		<u> </u>		J No Vi	s.Ch.: 🔲	Intermittent:	
Wb Depth: .3	.1	4 Av	g: 0.27	M	lethod:	MS	St	age: L	M	V H	3	Dw:	Tribs.:	
COVER		Total: M												
Type: SWD	TLWD	В	U	DP	7	ov T	IV	CRO	OWN CL	.OSURE	i			
Amount: S	D	Ŧ	s	T	_	T	T	1	1	-20%				
Loc: P/S/O:		V	V	~				INS	TREAM	VEG:	N [A	M	v	
LWD. F		DIST: E						•						
LWD: F		ם.וכות						_						,
LB SHP: U	0 = 0	D	5 — .						RB SHP			B		,
Texture: F	G		K _ A	لا									R A	
RIP: S									RIP					
STG: MF									STG	ME				
	and the second		Sant Miles	1. 1-1.	· W	ATE	R	* *	9 60 8	* .	A S	744.24	The special Re	
EMS:								R	eq #:					
Temp: 7				Metho	d: T4			C	ond.: 20				Method:	S3
pH: 7.8					d: P2			Т	urb.: T	□ M		C 🗾	Method:	GE
Flood Signs: braided	channel			Metho	d: GE							: <u>*</u>		
				N.	ORP	HOL	OGY			age life or	are the second			4.4
Bed Material: D	ominant: C		Subdom	·G				O 1	B1	B2	B3 D1	D2 D)3	
D95: 41.0	D (cm): 2	.00	Morph:	_	_		241105		FIT	FIT		THI	77	ļ
Pattern: SI	- 1	-				ISTURI INDICA		C1	C2	СЗ	C4 C5	S1 S	 32 S3 S	S4 S5
Islands: N												7 1 1		7 7 7
Coupling: DC										<u> </u>	<u> </u>	1 -11 -		<u></u>
Confinement: UN						_				_				
FSZ:						8	ars:	N	SID		DIAG	MID	SPAN	BR
							e in section 2				mate Lawrett	anders (11 · •)		
	44.	- 46 3	. Villakiri		ATIE	10.4	The Part of							
Name Securing Hebitet	Louis lines	nd by law	nount of -	leas ==	al ==*-	bac at		omment	ts					
Spawning Habitat Rearing Habitat		ed by low ar												
OverWinter Habitat		ed by lack o												
Call Municipal	112	946	15 10 10	-J. 141	PH	OTE	8,			32.3				
Photo Fo	c Lg	l r)ir			****			701 (4	Comme	nts	43.44.8		o, seebići
	TD		Ü	upst	ream ph	oto take	en of brai	ded char						
R: 23 F: 18 S	TD		D	dow	nstream	photo t	aken of t	ypical LV	VD withi	n sampl	e site			
									_	_			-	

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

8.0

	COMMENTS
Section	Comments
CHANNEL	S6
CHANNEL	high % of blowdown overtop of stream
SITE CARD	sampled downstream of confluence
CHANNEL	substrates are highly angular
CHANNEL	falls observed downstream via helicopter are barriers for upstream

South Fulton Study Area

Reach #

ILP Map#

ILP#

Watershed Code:

480-770700-00000-00000-0000-0000-0000-000-000-000-000-000

WS Waterbo Proj Fish Pe	Code: ody ID: ject ID: ermit #:	480-7 3496 145	770700-0000	00-00000-000	00-0000-000-00 00-0000-000-00 0001/08/15	ILP Map #	000-000		eam: {		F Lake Fro		8 - mple:
Waterbo Proj Fish Pe	ody ID: ject ID: ermit #:	3496 145			2001/08/15	ILP Map #	01/08/15	Age		3	Lake Fro	m Date:	
Proj Fish Pe	ject ID: ermit #:	3496 145		Date: 2		To: 20	01/08/15	Age		3	Lake Fro	m Date:	
Fish Pe	ermit#:	145		Date: 2				Age					mple:
ite# NID			5085K	Date: 2					ncy: C1	172 C	rew: JA/JH	Resar	mple:
	NU		: 147		S	ITE /	ETU						
	1112				and the second second		··	OD.	. 7				Tours
	Map	NID	# UTN	M:Zone/East/	/North/Mthd	MTD/NO	Temp	Cond	Turbid		Co	mment	
532 093	L.070	5003	32		GPU	EF 1	7	20	С				
		u , v .	- 4	ia D	A.	GEAR:	SETT	INGS		(Article)			7
ite# MTI	D/NO	H/P	Date in	Time in	Date Out	Time Out				Con	nment		
532 EF	1	1	2001/08/15	16:05	2001/08/15	16:40							
7.	and the		4.1	, C. E	LECTRO	FISHE	R SPI	CIF	CAT	ONS			
ite#	MTD/N	0	H/P	Encl	Sec 1	ength	Width	Volta	age	Frequency	Pulse	Make	Mode
532 EF		1	1	0	650	326.0	2.6	60	0	Ī	5	SMITH	12B
		n ar i bis			F	ISH SI	MMA	RY.				ROOT	
ite#	MTD/N	<u> </u>	H/P IS	species S				th (Min/Ma	ν) E	ishAct		Comment	
532 EF		- -1		NFC S	Stage Ag		0 1.91	(MITVMA	<u> </u>	ISTIACI		Comment	



Site #532, upstream photo taken of braided channel within site. Roll #23, Frame #17, Date: 2001/08/15



Site #532, downstream photo taken of typical LWD within sample site. Roll #23, Frame #18, Date: 2001/08/15

South Fulton Study Area

Reach # ILP Map #

ILP#

	- 19		SIR	EAM	KEI	EKE	ACIN	G .			and a		
Gazetted Na	ame:						Local N	ame:					
Watershed (Code: 480-768	3300-00000-00	000-0000-0000-00	00-000-00	-000-00	000-000		ILP N	fap #:		IL	P#:	
são na lo za sa	9.5				REA	CH	14.124	137 E	es sees	*			
Reach #: 3	3.0		UTM(Zone/East/N	orth): 9.0	694609	.6063372	!		_	Samp	le Type:	Biase	:d
Length (km)	•		upling: Partially C		Ma	gnitude:					C Zone:		
Gradient (%)			nement: Frequently	y Confin		Order:				Open	water: Abs	ent	
US Elev (m)	,		slands: NONE	-		parian Vo	_						
Bars: None	✓ Side _	Diagonal	Mid-channel	Span		raid	Landu	se: Not	Specified				
			***		SIT	E		X 22	, A ₁ ,			4.47	
Site #:	: 533	Field UTM				•	cy: C17			A/JH		2001/08	3/16
Site Length	(m): 260	GIS UT	M 9.694848.60635	69		Age	ncy Nam	e: Triton	Environmen	tal Con	sultants (T	errace)	
	96.05			C	HAN	NEL							***
No Vis.Ch.:	Intermitte	ent: 🗹		Avg	Min	Max	#			Avg	Min	Max	#
Dewatered:	Tril		hannel Width (m):		2.1	3.1	6		Gradient %	-	-	3	4
Stage: Low	✓		Wetted Width (m):		0.5	0.7	3	P	ool Depth (m): 0.2	1 0.050	0.5	3
Med		<u></u>	ankfuil Depth (m):	0.40	0.3	0.5	3		Tur	bidity.:	Turbid		Low
High	Te	emp (C): 6	pH: 7.0		(Conductiv	rity: 60				Moderate		lear 🗸
			acceptable #	HAR	20.00			. S. C. S. C. T. C. S. C	SECURE CARREST SECURIOR	200000000000000000000000000000000000000	ALC: USB COMMISSION	ACTOR CONTRACT SHEET OF	ARTHUR TOWNS TOWNS
300 St. 1 1 1 1 1 1 2 4	The second second				FRS	JLUG	Y				: 4		
	: Dominant:		D95 (cm): 20	AMERICANIA (1.23)	FAL	Bars: No		Side	Diagonal		lid-channel	_ s	oan 🗌
Bed Material		Cobble		.00	FAL	2 E T T T T T T T T T T T T T T T T T T			-		lid-channel		oan 🗌
Bed Material	: Dominant:	Cobble Gravels	D95 (cm): 20	.00 00		2 E T T T T T T T T T T T T T T T T T T	on 🗸		-				
Bed Material	: Dominant: (Cobble Gravels	D95 (cm): 20. D (cm): 2.0	.00 00	DISTU	Bars: No	on 🗸	Side	Diagonal	M		Br	
Bed Material Channel Pa Cou	: Dominant: (Subdominant: (attern: Sinuous	Cobble Gravels	D95 (cm): 20. D (cm): 2.0	.00 00	DISTU	Bars: No RBANCE CATORS	on 🗸	Side B1	Diagonal	M	D2 [Br	
Bed Material Channel Pa Cou Confine	l: Dominant: (Subdominant: (attern: Sinuous pling: Decoupl ment: Unconfir	Cobble Gravels	D95 (cm): 20. D (cm): 2.0	.00 00	DISTU	Bars: No RBANCE CATORS	On 🗸	Side B1	Diagonal	M	D2 [Br	
Bed Material Channel Pa Cou Confine	l: Dominant: (Subdominant: (attern: Sinuous pling: Decoupl ment: Unconfir	Cobble Gravels : led ned	D95 (cm): 20. D (cm): 2.0	.00 00 ne	DISTU	RBANCE CATORS C2 (On 🗸	Side B1	Diagonal	M	D2 [Br	
Bed Material Channel Pa Cou Confine	l: Dominant; i Subdominant; i attern: Sinuous ipling: Decoupl ment: Unconfir blogy: RP	Cobble Gravels : led ned	D95 (cm): 20. D (cm): 2.i Islands: Nor	.00 00 ne	DISTU INDIC C1	Bars: No RBANCE CATORS C2 (O1 C3 C4	Side B1	Diagonal	M	D2 [Br	
Bed Material Channel Pa Cou Confine Morpho	t: Dominant; is Subdominant; is attern: Sinuous upling: Decouplement: Unconfir blogy: RP	Cobble Gravels : led ned	D95 (cm): 20. D (cm): 2. Islands: Nor	.00 00 ne	DISTU INDIC C1	Bars: No RBANCE CATORS C2 (on 🗸	B1 C5	Diagonal B2 B3 S1 S2	D1 2 S3	D2 [Br	
Bed Material Channel Pa Cou Confine Morpho Total Cover:	t: Dominant; is Subdominant; is attern: Sinuous upling: Decouplement: Unconfir blogy: RP Moderate Few	Cobble Gravels led ned Riffle Pool	D95 (cm): 20. D (cm): 2. islands: Nor	.00 00 ne	DISTUINDIC	Bars: No RBANCE CATORS C2 (ER	on 🗸	B1 C5	Diagonal B2 B3 S1 S2 DP	D1 2 S3	D2 [Br 03	
Bed Material Channel Pa Cou Confine Morpho Total Cover: LWD: LWD: LWD Dist:	l: Dominant: (Subdominant:) Subdominant: (Sinuous spling: Decoupl ment: Unconfinology: RP Moderate Few Evenly Distribution	Cobble Gravels ided ned Riffle Pool	D95 (cm): 20. D (cm): 2.1 Islands: Nor Type: Amount: Location: P/S/O:	.00 00 ne SWD T	DISTUINDIC C1	Bars: No RBANCE CATORS C2 (01 C3 C4	B1 C5	Diagonal B2 B3 S1 S2 DP N	D1	D2	Br 03	aid 🗌
Bed Material Countries Confines Morpho Total Cover: LWD: LWD Dist: Right Bank:	l: Dominant: (Subdominant:) sattern: Sinuous upling: Decoupl ment: Unconfir plogy: RP Moderate Few Evenly Distribut Shape: Un	Cobble Gravels ided ned Riffle Pool uted uted Text	D95 (cm): 20. D (cm): 2.1 Islands: Nor Type: Amount: Location: P/S/O: ure: Fines Gra	.00 00 ne SWD T	DISTUINDIC C1 LWI S CObble	Bars: No RBANCE CATORS C2 (C2 (C3 (C4 (C	01 C3 C4	B1 C5 U S Rock	Diagonal B2 B3 S1 S2 DP N	D1	D2	Br 33 S5	z:
Bed Material Cou Confine Morpho Total Cover: LWD: LWD Dist: Right Bank: Left Bank:	l: Dominant: (Subdominant: (Subdominant: (Sinuous)) attern: Sinuous upling: Decoupl ment: Unconfii plogy: RP Moderate Few Evenly Distribu Shape: Un	Cobble Gravels led ned Riffle Pool uted uted dercut Text	D95 (cm): 20. D (cm): 2.1 Islands: Nor Type: Amount: Location: P/S/O: ure: Fines ✓ Graure: Fines ✓ Graure:	SWD T	DISTUINDIC C1 LWI S Cobble	Bars: No RBANCE CATORS C2 (ER D E Bould Bould	01 C3 C4	B1 C5	Diagonal B2 B3 S1 S2 DP N	D1	D2	Br 03	z:
Bed Material Countries Confines Morpho Total Cover: LWD: LWD Dist: Right Bank:	l: Dominant: (Subdominant:) sattern: Sinuous upling: Decoupl ment: Unconfir plogy: RP Moderate Few Evenly Distribut Shape: Un	Cobble Gravels led ned Riffle Pool uted uted dercut Text	D95 (cm): 20. D (cm): 2.1 Islands: Nor Type: Amount: Location: P/S/O: ure: Fines ✓ Gravier: Fines ✓ Gravier:	.00 00 ne SWD T	DISTUINDIC C1 C1 LWI S Cobble Cobble	Bars: No RBANCE CATORS C2 (ER D E Bould Bould	O1 C3 C4 S der F	B1 C5 U S Rock Rock	Diagonal B2 B3 S1 S2 DP N	D1 2 S3 OV D	D2 C	Br B	z:
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South Fulton Study Area

Reach # ILP Map #

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South Fulton Study Area

Reach #

ILP Map #

ILP#

Site

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	CONNENTS
Section	Comments
CHANNEL	S6
CHANNEL	possible downstream barrier
CHANNEL	habitat present was sampled extensively
CHANNEL	highly ephemeral flows

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

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Site #533, upstream photo taken of Dry/Int flow typically found within sample site. Roll #23, Frame #19, Date: 2001/08/16



Site #533, downstream photo of cobble substrates found within sample site. Roll #23, Frame #20, Date: 2001/08/16

South Fulton Study Area

Reach # ILP Map #

ILP#

Watershed Code: 480-768300-00000-00000-0000-0000-0000-000-0000-000

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Comments	Barner to	o upstream fis	n mig	ration											
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Site Number	Captur	The state of the s		Length f		Tota Time		Voltage		Species	Total Fish	100000000000000000000000000000000000000	imum th (mm)	Maxii Length	
40	EF	1		200	A	69 se	ec	600	+	RB	3		140	18	-
41	EF	1		300		402 s		600		NFC	0				
534	EF	1		450	0	400 s	ec	600		NFC	0				

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

	期間								WA	T.	RB	OD							No.
G	azette	Name	:										Lo	al: No	one				
	Projec	t Code	: 480-	-000000-0	00000-000	000-0000	-0000-0	00-00	0-000	-000-	-000-0)							
	W	S Code	: 480-	768300-0	00000-000	000-0000	-0000-0	00-00	0-000	-000-	-000-0	000							
	Watert	ody ID	:						ILP I	Map #	#:				ILP	#:		Reach #: 2	2 -
	Pro	ject ID	: 3496	ô			Lake/Stream: S Lake From Date:										rom Date:		
	Fish P	ermit #	: 14	5085K		ate: 20	01/08/1	6	To	o: 20	001/08	3/16	Ag	gency:	C172	Cr	ew: JD/D	T Resar	mple:
A PARA	Total in		S(-9)	10.00	LA ARRENTA	15 Lend		S	TE	413	ME	THO	D D	135.2	in enget	LAND SE		Awar Bankara	ALL SHARE
Site#	NII	D Map	NIC)#	UTM:Zon	e/Fast/N	lorth/Mt	COLUMN TOWN	MTE	85.77 Je	The second	mp	Cond	Turb	id I			Comment	The street of the street
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41	_	3K.061	100		+			GPU	EF	1		0	110	C	+				
40		3K.061	100		+			GPU	EF	1	_	0	110	C	\vdash				
() 图制		Marie 1	Ball Ball	· 語寫錄	100			A . (EA	R	SE	TTI	NGS			1 24	200		
Site#	ТМ	D/NO	H/P	Date	In T	me In	Date	Out	Time	Out	T T	AND GROUP OF				Com	ment		Table 1 Was a strange and
40	EF	1	1	2001/0	8/16	9:00	2001/0	8/16	09:	30									
41	EF	1	1	2001/0	8/16	9:40	2001/0	8/16	10:	30									
534	EF	1	1	2001/0	8/16 1	0:30	2001/0	8/16	11:	10									
					C	EL	ECT	ROF	IS	ΗE	R S	PE	CIE	GA:	HO.N	Sink		弹性性线	
Site#		MTD/N	10	H/P	En	cl	Sec	Le	ength	T	Wid	dth	Vo	Itage	Freq	uency	Pulse	Make	Model
40	EF		1	1	C		69	2	0.00		0.5		600		6	0	6	SMITH	12B
41	I EF	- —	1	1 1	1 0		402	1 -	300.0 T).5	1 4	00	1 0	60 T	6	ROOT	12B
41	Cr		1	1			402	-	0.00		-	1.5		000		0		ROOT	120
534	EF	-	1	1	1 0		400		450.0		2.6		600			1	5	SMITH	12B
							100.0 2.0						ROOT						
清洁的	构即		T.C.		MALE			-FI	SH	SI	JMI	WAF	Yes	特別盟	100	对的	點性就		
Site#	T	MTD/N	Ю	H/P	Specie	s Sta	age	Age		Tota	otal # Lgth		n (Min/Max) Fis		FishAc	t			
40	EF		1	1	RB	A					3 14		0	180	R				
41	EF		1	1	NFC						0								
534	EF		1	1	NFC						0								
到特殊	2.565			NATION OF			INI	DIVI	DU	AL	. FI	SH	DA	TA	Who ha				43550 - 24
Site#	MTD	/NO	H/P	Species	Length	Weight	Sex	Mat	T	-	Age		Vch#	Ge	netic	Roll #	Frame#	Comn	nent
									5	Str/Sr	mpl#/	Age]	Str/S	Smpl#				
40	EF	1	1	RB	180		U	U											
40	EF	1	1	RB	140		U	U	T	T									
40	EF	1	1	RB	160		U	U											
					编辑	men yend		CA.	CO	MN	IEN	TS					and the same		
THE RESERVE	COLOR SECTION SE	ction		THE PARTY NAMED IN	section (4.5%)		CONT. IN SUCH	V-4 (153)	- NA -	11961115	AND THE RESERVE	445	Comr	A CONTRACTOR OF THE PARTY OF TH		10 miles 17 17 2	TOWN OF THE	THE RESERVE AND ADDRESS OF THE PARTY OF THE	Date Control Ball of
	WATE	RBOD	Υ	Cha	nnel De-v	vatered i	n lower	reach											
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South Fulton Study Area

Reach # ILP Map #

ILP#

	STRE	EAMRE	FEREN	CING			11.0
Gazetted Name:			L	ocal Name:			
Watershed Code: 480-764900-0000	00-00000-0000-0000-000	-000-000-00	0-000-000	ILP	Мар #:	li.	.P#:
		RE	ACH				
Reach #: 1.0	UTM(Zone/East/Noi	rth): 9.6947	46.6064939			Sample Type:	Biased
Length (km): .74	Coupling: Partially Co		Magnitude:			BGC Zone:	
Gradient (%): 3.8 C US Elev (m): 742	onfinement: Occasional! Islands: NONE	•	Order: 3 Riparian Veg	; etation: Shrul		Open water: Abs	sent
' '	Mid-channel		Braid	Landuse: No			
		SJ	TE				
Site #: 535 Field	UTM		Agency	y: C172	Crew: JA	VJH Date:	2001/08/16
Site Length (m): 110 Gl	S UTM 9.695298.6064946	6	Agend	y Name: Trito	n Environment	al Consultants (7	errace)
		CHA	NNEL			S 60 /4. 1	AT 144
No Vis.Ch.: Intermittent:		Avg Mir		#		Avg Min	Max #
Dewatered: Tribs.:	<u>`</u>	1.55 1.3 0.40 0.40		6	Gradient %		6 4
Stage: Low 🗸		0.40 0.40		'	Pool Depth (m)	., 0.00	
Med	pH:	0.00	Conductivity	_ <u>-</u>	Turt	oidity.: Turbid Moderate	Low
		MARINE			and the second second	Moderate	
Bed Material: Dominant: Cobble				r1 -			
							Casa
Subdominant: Gravels	D95 (cm): 21.0 D (cm): 1.00		Bars: Non	⊻ Side :	_, Diagonal	Mid-channe	l
	` '	o e DIST	URBANCE	Side O1 B1	B2 B3		
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled	D (cm): 1.00	DIST	TURBANCE DICATORS	O1 B1	B2 B3	D1 D2 [Braid
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined	D (cm): 1.00	o e DIST	URBANCE	O1 B1	B2 B3		Braid 🗌
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled	D (cm): 1.00	DIST	TURBANCE DICATORS C2 C3	O1 B1	B2 B3	D1 D2 [Braid
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined	D (cm): 1.00 Islands: None	DIST	TURBANCE DICATORS C2 C3	O1 B1	B2 B3 S1 S2	D1 D2 (S3 S4	Braid
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined	D (cm): 1.00 Islands: None	DIST	C2 C3	O1 B1	B2 B3 S1 S2	D1 D2 (S3 S4	Braid
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poor Total Cover: Abundant LWD: Few	D (cm): 1.00 Islands: None	DIST INI C1 SWD LV	TURBANCE DICATORS C2 C3	O1 B1 C4 C5	B2 B3 S1 S2 DP C	D1 D2 1 S3 S4 DV IV D T	Braid D3 S5
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Abundant LWD: Few LWD Dist: Evenly Distributed	D (cm): 1.00 Islands: None Type: S Amount: Location: P/S/O:	DISTI	TURBANCE DICATORS C2 C3 VER MD B S N	O1 B1 C4 C5	B2 B3 S1 S2 DP (N	D1 D2 (S3 S4	Braid D3 S5 FSZ:
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Abundant LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Undercut	Type: S Amount: Location: P/S/O:	DISTI	TURBANCE DICATORS C2 C3 VER MD B S N	O1 B1 C4 C5 U S Rock	B2 B3 S1 S2 DP (N	D1 D2 C	Braid
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Abundant LWD: Few LWD Dist: Evenly Distributed	Type: S Amount: Location: P/S/O: Texture: Fines Grave Grave Grave Texture: Fines Grave	DISTI	C2 C3 VER WD B S N Boulde Boulde Boulde	O1 B1 C4 C5 U S Rock	B2 B3 S1 S2 DP (N	D1 D2 C	Braid D3 S5 FSZ:
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poo Total Cover: Abundant LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Undercut Left Bank: Shape: Undercut	Type: S Amount: Location: P/S/O: Texture: Fines Grave Grave Stage:	DISTIPLE OF THE PROPERTY OF TH	C2 C3 VER WD B S N Boulde Boulde St	O1 B1 C4 C5 U S Rock Rock	B2 B3 S1 S2 DP C N Manmade Manmade	D1 D2 C	Braid D3 S5 FSZ: Cown Closure 1-20%
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poc Total Cover: Abundant LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Undercut Left Bank: Shape: Undercut Right Bank: Rip.Veg: Mixed C/D	Type: S Amount: Location: P/S/O: Texture: Fines Grave Grave Stage:	DISTINE C1 SWD LV T CObb et Cobb Mature fore	C2 C3 VER WD B S N Boulde Boulde St	O1 B1 C4 C5 U S Rock Rock	B2 B3 S1 S2 DP C N Manmade Manmade	D1 D2 (S3 S4	Braid D3 S5 FSZ: Cown Closure 1-20%
Subdominant: Gravels Channel Pattern: Sinuous Coupling: Decoupled Confinement: Unconfined Morphology: RP Riffle Poc Total Cover: Abundant LWD: Few LWD Dist: Evenly Distributed Right Bank: Shape: Undercut Left Bank: Shape: Undercut Right Bank: Rip.Veg: Mixed C/D	Type: S Amount: Location: P/S/O: Texture: Fines Grave Stage: Stage:	DISTINE C1 SWD LV T CObb et Cobb Mature fore	TURBANCE DICATORS C2 C3 VER WD B S N Ile Boulde st st	O1 B1 C4 C5 U S Rock Rock	B2 B3 S1 S2 DP C N Manmade Manmade	D1 D2 (S3 S4	Braid D3 S5 FSZ: Cown Closure 1-20%

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

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1	Stream Na											F	Project C	Code:			;	3496		
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	EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement:	E: F E: S E: MF None E: 21.0 E: SI E: N E: DC UN	Dominan	t: C		Subdom	Metho Metho Metho : G	od: T4 od: P2 od: GE	HIGH DISTURI INDICA B	BANCE	Rr Ca T	RIP STG eq #: ond.: urb.: T B1 C2	F ✓ MF MF M B2 C3	B3 C4	D1 C5	C	D3 S2	Methode Methode Sa	od: S3 od: GE	S5
	EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ:	E: F V	Dominant D (cm)	t: C		Subdom	Metho Metho Metho : G	od: T4 od: P2 od: GE	HIGH DISTURI INDICA B	BANCE STORS	Rr Ca T	RIP STG eq #: ond.: urb.: T	F ✓ MF MF M B2 C3	B3 C4	D1 C5	C	D3 S2	Methode Methode Sa	od: S3 od: GE	S5
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South Fulton Study Area

Reach #

ILP Map#

ILP#

Site 535

	COMMENTS
Section	Comments
CHANNEL	S5
CHANNEL	fish observed in small pocket of water approximately 65m from outlet

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

G	aze	etted Name:	:											Loca	af: N	lone						
	Pr	oject Code:	480-0	0-00000	0000-	00000	-0000-	0000-0	00-00	0-00	-000-0	0-00										
		WS Code:	480-7	764900-0	0000-	00000	-0000-	0000-0	00-00	0-00	-000-0	000-000										
	Wa	iterbody ID:								ILP	Map#	:				IL	P#:		Re	each #:	1 -	
		Project ID:	3496										L	.ake/Str	eam:	s		Lake From Date:				
	Fis	h Permit #:	145	5085K		Date	e: 200	1/08/1	6	т	o: 200)1/08/1	6	Age	ency:	C172	-	rew: .	JA/JH	F	Resample:	
	1,7		1-4481- 270 -1-488-1						, S	ITE	7.1	I E.T.	H C	0.					774.	4	- 5	
Site#		NID Map	NID	#	JTM:	Zone/E	ast/No	orth/Mt	hd	MT	D/NO	Temp		Cond	Tur	bid			Con	nment		
535		093K.061	500	35					GPU		1		T						_	_		
	11			e He	12				4.0	SE	AR.	SĘT	Ti.	165					44		142	
Site#		MTD/NO	H/P	Date	n	Time	ı In	Date	Out	Tim	e Out			**************************************			Cor	nment				*****
535	I	VO 1	1	2001/08	/16	12:	13 :	2001/0	8/16	12	:40											
				10	æ.,	e e e e			·F	SH	1 . S U		A.R	Y		i i is			40.0		100	
Site#		MTD/N	0	H/P	Spe	ecies	Sta	ge	Age	,	Total	# L	gth	(Min/Ma	ax)	FishA	ct		(Commer	nt	138637303
535	\Box	vo	1	1	C	5	F		0+		- 2	?	30		\$0	R						
		w N/2		25000	ar i			JN	DIV	10	JAL	FIS	#	DA	I A		94	100				
ite#	ı	MTD/NO	H/P	Species	Len	gth V	Veight	Sex	Mat	t	A	ge		Vch#	G	enetic	Roll #	Fra	me#	(Comment	a a sa a
										Г	Str/Sm	pi#/Ag	e		Str	Smpl#	7					
535	V	0 1	1	CO	30)		U	IM		T						Ţ-					
535	V	0 1	1	СО	40	\Box		U	IM	Т	\neg	$\neg \neg$				Ī		1				



Site #535, upstream photo taken shows dominant cover of overhanging vegetation. Roll #23, Frame #21, Date: 2001/08/16



Site #535, downstream photo of typical habitat within site. Roll #23, Frame #22, Date: 2001/08/16

South Fulton Study Area

Reach # ILP Map #

ILP#

		STF	REAM	REF	EREN	CING	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		5 to 140			Α,
Gazetted Name:					L	ocal Name	:					
Watershed Code: 480-76	60400-36400-00	0-0000-0000-0	00-000-0	00-000-	000-000		LP Map #:			IL	P #:	
sure sure sure sure sure sure sure sure	d print	See the second second		REA	СН				\$4. *** *	ning is		100
Reach #: 2.0	_	UTM(Zone/East/l	North): 9.	.691284	.6064860				Sample	Type:	Biase	d
Length (km): 1.19		oupling: Partially	•	Ma	gnitude:	3		_		Zone:		
Gradient (%): 5.9		nement: Confined Islands: NONE		Dì.	Order: 2	2 retation: C	oniforous	C	pen wa	ater: Abs	ent	
US Elev (m): 924		-	¬ •	•	raid	=						
Bars: None ✓ Side	Diagonal '	Mid-channel _	Span			Languse:	Not Specif	ea	N. 3 V. J. 163	_		
				SIT								7
Site #: 536 Site Length (m): 200	Field UTI	M TM 9.692074.6064	ana		•	y: C172 -v Name: T	Cred riton Enviro		/JH	_	2001/08 errace)	3/16
Site Length (III). 200		W 5.052074.0004		HAN	NEL			, minerite	ii Const	manus (T		
N. Vis Obs.			Avg	Min	Max	# 1			Avg	Min	Max	#
No Vis.Ch.: Interm Dewatered: 7		Channel Width (m)		1.700	2.1	6	Grad	dient %:	6.50	5	9	4
		Wetted Width (m)	_	0.65	1.600	6	Pool De	pth (m):	0.10	0.050	0.150	3
Stage: Low Med		Bankfull Depth (m)	0.60	0.5	0.7	3		Turbi	idity.:	Turbid		Low
127	Temp (C): 7	pH: 7.8		(Conductivit	y: 100			•	loderate	_	lear 🗸
		AND THE RESERVE OF THE PERSON NAMED IN COLUMN 1							Chical Company			
	7.4	April 1	. BUN	CPAL	LOGY		182		124.		500	11.
Bed Material: Dominant	t: Cobble	D95 (cm): 1		CPHL	Bars: Non			зопа!		-channel		oan 🗌
			7.00	CPAL				200			Sp	
Bed Material: Dominan	t: Gravels	D95 (cm): 1	7.00 .00	DISTU	Bars: Non		e 🗸 Dia	200		-channel	Sp	oan 🗌
Bed Material: Dominani Subdominani Channel Pattern: Sinuoi Coupling: Decou	t: Gravels us pled	D95 (cm): 1 D (cm): 1	7.00 .00	DISTU	Bars: Non RBANCE CATORS	O1 B	Dia	B3	Mid	-channel	Sp Br	oan 🗌
Bed Material: Dominant Subdominant Channel Pattern: Sinuot Coupling: Decou Confinement: Uncon	t: Gravels us pled fined	D95 (cm): 1 D (cm): 1	7.00 .00	DISTU	Bars: Non	O1 B	e 🗸 Dia	зопа! [Mid	-channel	Sp Br	oan 🗌
Bed Material: Dominani Subdominani Channel Pattern: Sinuoi Coupling: Decou	t: Gravels us pled	D95 (cm): 1 D (cm): 1	7.00 .00	DISTU	Bars: Non RBANCE CATORS	O1 B	Dia	B3	Mid	-channel	Sp Br	oan 🗌
Bed Material: Dominant Subdominant Channel Pattern: Sinuot Coupling: Decou	t: Gravels us pled fined	D95 (cm): 1 D (cm): 1	7.00 .00 one	DISTU	Bars: Non RBANCE CATORS C2 C3	O1 B	Dia	B3	Mid	-channel	Sp Br	oan 🗌
Bed Material: Dominant Subdominant Channel Pattern: Sinuot Coupling: Decou	t: Gravels us pled fined	D95 (cm): 1 D (cm): 1 Islands: No	7.00 1.00 one SWD	DISTU INDIC	Bars: Non RBANCE CATORS C2 C:	O1 B 3 C4	Diagram Diagra	B3 S2	Mid D1 S3	D2 D S4	Sp Br	oan 🗌
Bed Material: Dominani Subdominani Channel Pattern: Sinuot Coupling: Decou Confinement: Uncon Morphology: RP	t: Gravels us pled fined	D95 (cm): 1 D (cm): 1 Islands: No	7.00 1.00 one	DISTU INDIC	Bars: Non	O1 B 3 C4 U S	e ✓ Dia	B3 S2	Mid D1 S3 DV D	D2 D S4 IV T	Sp Br	oan 🗌
Bed Material: Dominani Subdominani Channel Pattern: Sinuoi Coupling: Decou Confinement: Uncon Morphology: RP	t: Gravels us pled fined Riffle Pool	D95 (cm): 1 D (cm): 1 Islands: No	7.00 1.00 one SWD	DISTU INDIC	Bars: Non RBANCE CATORS C2 C:	O1 B 3 C4	Diagram Diagra	B3 S2	Mid D1 S3 DV D	D2 D S4	Sp Br	pan 🗌
Bed Material: Dominani Subdominani Channel Pattern: Sinuol Coupling: Decou Confinement: Uncon Morphology: RP Total Cover: Abundant LWD: Few LWD Dist: Evenly Distri	t: Gravels us pled fined Riffle Pool	D95 (cm): 1 D (cm): 1 Islands: No Type: Amount: Location: P/S/O:	7.00 .00 one SWD T	DISTU INDIC	Bars: Non RBANCE CATORS C2 C: B N D B N D Boulde	O1 B 3 C4 U S	Diagram Diagram DP N N N N N N N N N N N N N N N N N N	B3 S2 C	Mid D1 S3 DV D	D2 D S4	Sp Br	ean
Bed Material: Dominani Subdominani Channel Pattern: Sinuol Coupling: Decou Confinement: Uncon Morphology: RP Total Cover: Abundant LWD: Few LWD Dist: Evenly Distri Right Bank: Shape: U	t: Gravels us pled fined Riffle Pool buted Judercut Tex Judercut Tex	D95 (cm): 1 D (cm): 1 Islands: No Type: Amount: Location: P/S/O: ture: Fines Giture: Fines Giture: Git	SWD T	DISTU INDIC	Bars: Non RBANCE CATORS C2 C: B N D B N D Boulde	O1 B 3 C4 U S	Diagram Diagram DP N N N N N N N N N N N N N N N N N N	B3 S2 C	Mid D1 S3 DV D	D2 D S4	Sp Br 3 S5 FS2	pan
Bed Material: Dominani Subdominani Subdominani Channel Pattern: Sinuoli Coupling: Decou Confinement: Uncon Morphology: RP Total Cover: Abundant LWD: Few LWD Dist: Evenly Distri Right Bank: Shape: U Right Bank: Shape: U Right Bank: Rip.Veg: C	t: Gravels us pled fined Riffle Pool	D95 (cm): 1 D (cm): 1 Islands: No Islands: No Type: Amount: Location: P/S/O: ture: Fines Gature: Fines Gature:	7.00 .00 .00 SWD T ravel ravel ge: Matur	DISTU INDIC	Bars: Non RBANCE CATORS C2 C: B N D B N D Boulde	O1 B 3 C4 U S V Roci	DP N Mann	B3 S2 CO Inade Inade	Mid D1 S3 DV D	Creen Control of	Sp. Br. 3 S5 FS2 Dwn Clos 1-20	pan
Bed Material: Dominani Subdominani Subdominani Channel Pattern: Sinuol Coupling: Decou Confinement: Uncon Morphology: RP Total Cover: Abundant LWD: Few LWD Dist: Evenly Distri Right Bank: Shape: U	t: Gravels us pled fined Riffle Pool buted Judercut Tex Judercut Tex	D95 (cm): 1 D (cm): 1 Islands: No Islands: No Type: Amount: Location: P/S/O: ture: Fines Gature: Fines Gature:	SWD T	DISTU INDIC	Bars: Non RBANCE CATORS C2 C: B N D B N D Boulde	O1 B 3 C4 U S V Roci	Diagram Diagram DP N N N N N N N N N N N N N N N N N N	B3 S2 CO Inade Inade	Mid D1 S3 DV D	Creen Control of	Sp Br S5 S5 FS2 Sown Close	pan
Bed Material: Dominani Subdominani Subdominani Channel Pattern: Sinuoli Coupling: Decou Confinement: Uncon Morphology: RP Total Cover: Abundant LWD: Few LWD Dist: Evenly Distri Right Bank: Shape: U Right Bank: Rip.Veg: U Left Bank: Rip.Veg: C	t: Gravels us pled fined Riffle Pool buted Judercut Tex Coniferous	Type: Amount: Location: P/S/O: ture: Fines Gature: Fines Gature: State	SWD T ravel V ravel ge: Matur	DISTU INDIC	Bars: Non RBANCE CATORS C2 C: D B N D B N D Boulde Boulde	O1 B 3 C4 U S V Roci	DP N N Mann	B3 S2 CO III	Mid D1 S3 DV D	Crownell D2 D S4 IV T Crown Moss	Sp. Br. 3 S5 FS2 Dwn Clos 1-20 Vasc	ean
Bed Material: Dominani Subdominani Subdominani Channel Pattern: Sinuoli Coupling: Decou Confinement: Uncon Morphology: RP Total Cover: Abundant LWD: Few LWD Dist: Evenly Distri Right Bank: Shape: U Right Bank: Shape: U Right Bank: Rip.Veg: C	t: Gravels us pled fined Riffle Pool buted Judercut Tex Judercut Tex	D95 (cm): 1 D (cm): 1 Islands: No Islands: No Type: Amount: Location: P/S/O: ture: Fines Gature: Fines Gature:	7.00 .00 .00 SWD T ravel ravel ge: Matur	DISTU INDIC	Bars: Non RBANCE CATORS C2 C: D B N Boulde Boulde	O1 B 3 C4 U S V Roci	DP N N Mann	B3 S2 CO C	Mid D1 S3 DV D	S4 IV T Cro Moss	Sp. Br. 3 S5 FS2 Dwn Clos 1-20	ean

South Fulton Study Area

Reach # ILP Map #

ILP#

Site 536

2.0

PROJECT. Project Name: Smithers Landing Fish Inventory - 2000 Project Code: 3496 Stream Name (gaz.): BABINE RIVER THE PROPERTY OF THE WATERSHED Local Name: None Gazetted Name ILP#: NID Map #: 093L.070 NID #: 50036 Reach #: 2.0 Site #: 536 ILP Map#: Site Lg: 200 Method: HC Access: H Field UTM (Z.E.N): .. Method: GIS UTM (Z.E.N): 9.692074.6064909 Ref. Name: Agency: C172 JA/JH Fish Crd?: Incomplete: Date: 2001/08/16 Time: 13:24 Crew: CHANNEL Kir da i width width width Mtd Mtd width width width width width width Avg Avg width Method i: 9.0 6.50 Channel Width (m) 1.90 2.00 1.80 1.70 2.10 1.92 7.0 ΑL 2.00 1.03 Method II: 5.0 5.0 AL 0.65 Wetted Width (m): MS 1.30 1.60 0.73 0.80 1.10 Pool Depth (m): MS 0.10 0.15 0.05 0.10 No Vis.Ch.: Intermittent: Method: MS Wb Depth: .6 Avg: 0.60 Stage: L 📝 M 🗀 H 🗀 Dw: Tribs.: COVER Total: A CROWN CLOSURE SWD LWD В 11 DP OV īV Type: D 1-20% S Ν Amount S Ν Loc: P/S/O: INSTREAM VEG: N A M V LWD: F DIST: E RB SHP: U LB SHP: U Texture: F G G C B R A Texture: F G C B R A RIP: C RIP: S STG: MF STG: MF **经**工作。 W人工目標では、「ATTACATION AND ATTACATION Marie Committee EMS: Rea #: Cond.: 100 Method: S3 Temp: 7 Method: T4 pH: 7.8 Method: P2 Turb.: T 🗀 M 🗀 L 🗀 C 🙀 Method: GE Flood Signs: None Method: GE MORPHOLOGY 01 В1 D2 D3 Bed Material: Dominant: C Subdom: G D95: 17.0 D (cm): 1.00 Morph: RP DISTURBANCE **INDICATORS** Pattern: SI C1 C2 СЗ C4 C5 S1 S2 S3 S4 S5 Islands: N Coupling: DC Confinement: UN Bars: SIDE DIAG MID BR FSZ: OUALITY : Name Comments Spawning Habitat Moderate - associated with clean patches of gravel Rearing Habitat Moderate - associated with overhanging vegetation OverWinter Habitat Low - limited by lack of deep pools Photo Foc Lg Dir Comments 23 23 STD U upstream photo of overhanging vegetation above stream typical within site R. 23 F 24 STD D downstream photo of gravel side bar

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

2.0

	COLNENIS CONTRACTOR OF THE PARTY OF THE PART
Section	Comments
CHANNEL	\$3*
CHANNEL	Reach upstream of NiD 50818

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

2.0

WATERBODY Local: None Gazetted Name: ILP Map #: ILP#: Reach #: 2 -Lake/Stream: S Lake From Date: Project ID: 3496 Fish Permit #: 145085K Date: 2001/08/16 To: 2001/08/16 Agency: C172 Crew: JA/JH Resample: SITE / WETHOD MTD/NO Temp Site# NID Map NID# UTM:Zone/East/North/Mthd Cond Turbid Comment 093L.070 50036 GPU EF 1 7 50 С 536 A. GEAR SETTINGS ALC: Y Site# MTD/NO H/P Date In Time In Date Out Time Out 2001/08/16 13:15 2001/08/16 FF 13:55 536 1 1 C. ELECTROFISHER SPECIFICATIONS i la 10.00 Site# MTD/NO H/P Sec Length Make Encl Voltage Frequency Pulse Model 200 600 536 EF 1 0 150.0 SMITH 12B ROOT FISH SUBMARY AND THE PARTY OF T 11.7 Site# MTD/NO H/P Species Stage Total # Lgth (Min/Max) FishAct NFC 536



Site #536, upstream photo of overhanging vegetation above stream typical within site. Roll #23, Frame #23, Date: 2001/08/16



Site #536, downstream photo of gravel side bar. Roll #23, Frame #24, Date: 2001/08/16

FDIS Reach Card

South Fulton Study Area

Reach #

(LP Map #

ILP#

		PROJEC	T	The second second second
Stream Name (gaz.):	Smithers Landing Fish Inventory BABINE RIVER 480-000000-00000-00000-0000-		Project Code: 3	3496
4.1		WATERSH	ED	
Reach Watershed Code:	480-760400-36400-00000-0000-	0000-000-000-000-000-	000-000	
ILP Map #:	ILP#: F	Reach #: 1.0	NID Map #: 093L.070	NID #: 50818
Air Photos		Names		UTM(Zone/East/North/Method)
LINE: 30BCC98027	Gaz.:			9.692305.6065008 GIS
#: 23	Local:			Sample Type: B Wetland:
		SURVEY IN	IFO	The Company of the Co
Date: 1900/07/06		Agency: C172		Crew: SH
		ATTRIBUT	E8	The state of the s
Length (km): 1.46	Gradient: 6.44	Setting:	VW DISTURBANCE	O1 B1 B2 B3 D1 D2 D3
DS Elev.: 760	Order: 3	Open water:	A INDICATORS	
US Elev: 854	Magnitude: 5	Confinement:	CO 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:	Ва	rs: 🔽 N 🗌 SIDE 🗌 DIAG	B MID SPAN BR
Channel Pattern: SI			Mass Movement: M	Exposed/Eroded: NS
			Riparian Veg.: M	Landuse: NS
MA	PS			
Map Type Ma	p# Year			

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

1000				111					NAT	ERB	O D	Y	P .	F (4.)					
G	azette	d Name): :									Loc	al:						
1	Proje	ct Code	: 480-	000000-0	0000-000	000-0000	0000-0	00-000	-000-0	00-000-	0								
ļ	V	/S Code	: 480-	760400-3	6400-000	000-0000-	0000-0	00-000	-000-0	00-000-	000								
	Waterbody ID:													ILF	#:		Reach #: 1	•	
·	Project ID: 3496											Lake/St	ream:	s	S Lake From Date:				
	Fish Permit #: 145085K Date: 2001/08/16									2001/0	8/16	Ag	ency:	C172	Cr	ew: JA/JI	H Resar	nple:	
-	1.5	- 4) - 4		7.50	i Trans			. \$1	TE ,	/ 48	3 (1)	001		4.4	0747		2 2.	14 12	
Site#	N	ID Map	NIE)#	UTM:Zor	e/East/N	orth/Mt	nd	MTD/N	IO To	emp	Cond	Tur	bid			Comment		
537		3L.070	500						EF	1	7	100	C						
	e a			THE THE	a la			L. G	EAF	SE	TTI	NGS		. 4	W			, 	
Site#	М	TD/NO	H/P	Date	n T	ime In	Date (Out	Time C)ut			<u> </u>		Com	ment		****	
537	E	F 1	1	2001/08			2001/0		14:15	· L				_					
	77	44	l (e	* 7	C	. EL	ECT	ROF	ISH	ER	SPE	CIF	CA	TION	8	14	4-11	THE RES	
Site#		MTD/I	10	H/P	Er	ncl	Sec	Le	ngth	W	idth	Vol	tage	Freq	uency	Pulse	Make	Model	
537		F	_1_	1			800	60	0.00		2.1	6	00			5	SMITH	12B	
198.2	47.04		er valend					E	e u	SUM	T NOTE:	- 17	Shirt Li	on (a America	er a least		ROOT		
00.0			10	16		1 0	l je j				177		34×80		an Pries	100	4		
Site#		MTD/N	1	H/P	Specie CT	s Sta	ge	Age 1+		otal #	Lgtr 4	h (Min/M	71	FishAc R	1		Comment		
337		F Augustin		<u> </u>]]						DA		N C				701 V 7 101 V 7 100	
Site#	1000	DAIO) / Y	1000 300 00	4	18/-1-54	100	26.0000000	707	********	13 11		Season of the season of		5 3 3	14 14 14 1		deren er	
Sile#	ite# MTD/NO H/P Species Length Weight Se						Sex	Mat		Age /Smpl#	/400	Vch#	_	enetic 'Smpl#	Roli#	Frame#	Comn	nent	
537	537 EF 1 1 1 CT 45 U							IM	30	73mpi#	T	+	311/	7	<u> </u>		 		
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537		1	1					IM						t		 			

South Fulton Study Area

Reach # ILP Map #

ILP#

	Harry Co.	STR	REAMR	EFEREN	CING	*		
Gazetted Name:				L	ocal Name:			
Watershed Code: 480	-760400-00000	0-00000-0000-0000-0	00-000-000-	000-000-000	ILP	Мар #:	IL	.P #:
	PH -		R	ACH:				
Reach #: 2.0		UTM(Zone/East/l	North): 9.692	516.6066101			Sample Type:	Biased
Length (km): .98	_	Coupling: Partially	•	Magnitude:			BGC Zone:	
Gradient (%): 4.9 US Elev (m): 810	Co	nfinement: Occasion Islands: NONE	nally Conf	Order: 3	s p etation: M ixed	I C/D	Open water: Abs	sent
Bars: None 🗸 Side	Diagonal		Span		Landuse: Not			
				ITE				
Site #: 538	Field	UTM	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Agenc	y: C172	Crew: J	A/JH Date:	2001/08/16
Site Length (m): 100	GIS	UTM 9.693359.6065	946	Agend	y Name: Tritor	Environmen	tal Consultants (T	егтасе)
			СН	ANNEL				
No Vis.Ch.: Inte	mittent:		Avg N	fin Max	#		Avg Min	Max #
Dewatered:	Tribs.:	Channel Width (m)		3.3 4.7	6	Gradient %		6 4
Stage: Low	-	Wetted Width (m)		.3 3	6 F	Pool Depth (m	n): 0.26 0.100	0.41 6
Med 🗸	L	Bankfull Depth (m)	: 0.40 0			Tur	bidity.: Turbid	
High	Temp (C): 5	pH: 7.6		Conductivity	y: 40 		Moderate	Clear 🗹
54 4 4 60 4 10 10 10 10 10 10 10 10 10 10 10 10 10		and the second second	MADD	HOLOGY		30.00		The second secon
	<u> </u>		MUNE	HOLUG!			- 6	****
Bed Material: Domin		D95 (cm): 3	1.00	Bars: Non		Diagonal	Mid-channe	l Span
Subdomin	ant: Gravels	D (cm): 2	1.00	Bars: Non	Side ⊌		Mid-channe	Span Braid
Subdomin Channel Pattern: Irre	ant: Gravels gular, Wandeni	D (cm): 2	1.00 2.00 one DI	Bars: Non		Diagonal B2 B3	Mid-channe	l Span
Subdomin	ant: Gravels gular, Wandeni coupled	D (cm): 2	1.00 2.00 one DI	Bars: Non STURBANCE NDICATORS	Side W	B2 B3	Mid-channe	Span Braid D3
Subdomin Channel Pattern: Irre Coupling: Dec	ant: Gravels gular, Wanderir coupled confined	D (cm): 2	1.00 2.00 one DI	Bars: Non STURBANCE NDICATORS	O1 B1	B2 B3	Mid-channe	Span Braid
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und	ant: Gravels gular, Wanderir coupled confined	D (cm): 2	1.00 2.00 one DI C	Bars: Non STURBANCE NDICATORS 1 C2 C3	O1 B1 C4 C5	B2 B3 S1 S2	Mid-channe D1 D2 C 2 S3 S4	Span Braid S
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und Morphology: Rf	ant: Gravels gular, Wanderir coupled confined	D (cm): 2	1.00 2.00 one Di: C	Bars: Non STURBANCE NDICATORS 1 C2 C3	O1 B1 C4 C5	B2 B3 S1 S2	Mid-channe	Span Braid S
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und Morphology: RF	ant: Gravels gular, Wanderir coupled confined	D (cm): 2	1.00 2.00 one Di: C	Bars: Non STURBANCE NDICATORS 1 C2 C3	O1 B1 C4 C5	B2 B3 S1 S2	Mid-channe D1 D2 C 2 S3 S4	Span Braid S
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und Morphology: Rf	ant: Gravels gular, Wandeni coupled confined P Riffle Pool	D (cm): 2 Islands: No	1.00 2.00 one Di: II C	Bars: Non STURBANCE NDICATORS 1 C2 C3 VER LWD B S N	O1 B1 C4 C5	B2 B3 S1 S2 DP	Mid-channe D1 D2 C 2 S3 S4 OV IV	Span Braid S
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und Morphology: RF Total Cover: Moderate LWD: Few LWD Dist: Evenly Di	ant: Gravels gular, Wandenr coupled confined P Riffle Pool	D (cm): 2 Islands: No Type: Amount: Location: P/S/O:	1.00 2.00 Die Di	Bars: Non STURBANCE NDICATORS 1 C2 C3 VER LWD B S N	O1 B1 C4 C5	B2 B3 S1 S2 DP	Mid-channe D1 D2 C 2 S3 S4 OV IV S T	Span Braid S5
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und Morphology: RF Total Cover: Moderate LWD: Few LWD Dist: Evenly Di Right Bank: Shape	ant: Gravels gular, Wanderir coupled confined P Riffle Pool stributed e: Undercut	D (cm): 2 Islands: No	1.00 2.00 Die Die Ui Growe Gro	Bars: Non STURBANCE NDICATORS 1 C2 C3 VER LWD B S N	O1 B1 C4 C5 U D Rock	B2 B3 S1 S2 DP T	Mid-channe D1 D2 C 2 S3 S4 OV IV S T Cr	Span Braid S5
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und Morphology: RF Total Cover: Moderate LWD: Few LWD Dist: Evenly Di Right Bank: Shap Left Bank: Shap	ant: Gravels gular, Wanderir coupled confined P Riffle Pool stributed e: Undercut	D (cm): 2 Islands: No Type: Amount: Location: P/S/O: Texture: Fines ✓ G Fexture: Fines ✓ G	1.00 2.00 Die Die Ui Growe Gro	Bars: Non STURBANCE NDICATORS 1 C2 C3 VER LWD B S N Oble Boulde Boulde Boulde	O1 B1 C4 C5 U D Rock Rock	B2 B3 S1 S2 DP T WManmade Manmade	Mid-channe D1 D2 C 2 S3 S4 OV IV S T Cr	Span Braid S5 S5 FSZ: Cown Closure 1-20%
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und Morphology: RF Total Cover: Moderate LWD: Few LWD Dist: Evenly Di Right Bank: Shap Left Bank: Shap	ant: Gravels gular, Wandenir coupled confined P Riffle Pool stributed e: Undercut e: Undercut g: Mixed C/D	Type: Amount: Location: P/S/O: Texture: Fines G G Sta	1.00 2.00 Die Die Die CO	Bars: Non STURBANCE NDICATORS 1 C2 C3 VER LWD B S N Oble Boulde pole Boulde rest	O1 B1 C4 C5 U D Rock Rock	B2 B3 S1 S2 DP T WManmade Manmade	Mid-channe D1 D2 C 2 S3 S4 OV IV S T Cr	Span Braid S5 S5 FSZ: Cown Closure 1-20%
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und Morphology: RF Total Cover: Moderate LWD: Few LWD Dist: Evenly Di Right Bank: Shap Left Bank: Shap Right Bank: Rip.Ve	ant: Gravels gular, Wandenir coupled confined P Riffle Pool stributed e: Undercut e: Undercut g: Mixed C/D	Type: Amount: Location: P/S/O: Texture: Fines G G Sta	SWD S Coravel Colge: Mature for ge: Mature for supplemental columns of the column	Bars: Non STURBANCE NDICATORS 1 C2 C3 VER LWD B S N Oble Boulde pole Boulde rest	O1 B1 C4 C5 U D Rock Rock	B2 B3 S1 S2 DP T WManmade Manmade	Mid-channe D1 D2 C 2 S3 S4 OV IV S T Cr	Span Braid S5 S5 FSZ: Cown Closure 1-20%
Subdomin Channel Pattern: Irre Coupling: Dec Confinement: Und Morphology: RF Total Cover: Moderate LWD: Few LWD Dist: Evenly Di Right Bank: Shap Left Bank: Shap Right Bank: Rip.Ve	ant: Gravels gular, Wandenir coupled confined P Riffle Pool stributed e: Undercut e: Undercut g: Mixed C/D g:	Type: Amount: Location: P/S/O: Texture: Fines G G Stag Stag	SWD S Coravel Colge: Mature for ge: Mature for supplemental columns of the column	Bars: Non STURBANCE NDICATORS 1 C2 C3 VER LWD B S N Oble Boulde rest rest	O1 B1 C4 C5 U D Rock Rock	B2 B3 S1 S2 DP T WManmade Manmade	Mid-channe D1 D2 C 2 S3 S4 OV IV S T Cr	Span Braid S5 S5 FSZ: Cown Closure 1-20%

South Fulton Study Area

Reach # ILP Map #

ILP#

Site 538

2.0

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Project Name: Smithers Landrey Fish Inventory - 2000 Stream Name (agaz): Bankle RVER Project Watershed Code: 480-000000-0000-0000-0000-0000-000-000-0			197			PK	UJE	~ 1	300		**		2.00	.+ 35a.#	1 4 P	
Project Watershed Code: 480 000000-00000-0000-0000-0000-0000-00	Project Name	: Smithers	Landing Fis	h Inventor	y - 2000)										
Casetied Name: Cocal Name: None	Stream Name (gaz.)	: BABINE	RIVER							F	Project C	ode:		349	16	
Gazetled Name: Watershed Code: 460-760400-00000-0000-0000-0000-0000-000	Project Watershed Code	: 480-0000	0-00000-0	0000-0000	-0000-0	000-000)-000-00	00-000-00	0							
Gazetled Name: Watershed Code: 460-760400-00000-0000-0000-0000-0000-000															energy or a name of the	
Watershed Code: 480-780400-00000-0000-0000-0000-0000-000	res All State	ega i				HAT	ERS	HED		- 41	A			79,85		
ILP Maps: ILP #: NID Map #: 093K:071 NID #: 50038 Reach #: 2.0 Site #: 538	Gazetted Name:								Loc	al Nam	e: None					
Field UTM (Z.E.N.)	Watershed Code: 480-766	0400-00000	-00000-0000	-0000-000	0-000-00	00-000-	000-000	D								
Ref. Name: Ref	ILP Map#:		ILP#:		NID Ma	p #: 093	3K.071	NI	D#: 50	038	Rea	ch #:	2.0		Site #: 5	538
Date: 2001/08/16 Time: 14:39 Agency: C172 Crew: JA/JH Fish Crt7: Incomplete:	Field UTM (Z.E.N):			Method:					Site Lg	g: 100		Method	d: HC	Ac	cess: H	
Mid Addit	GIS UTM (Z.E.N): 9.69333	59.6065946						Re	f. Name) :						
Mid Addit	Date: 2001	100116	Time: 14	-20		Geneur.	C172	C	row.	IA/ IH		Fiel	Crd2		te.	
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Channel Width (m) MS 4.10 4.30 3.80 3.50 4.70 4.20		77.	4	. (4	i Vig	CH	ARR	EL.			d :	i ji di		, 4,35		A 1.
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Pool Depth (m); MS 0.30 0.41 0.10 0.25 0.35 0.15 0.26								4		<u> </u>		<u> </u>				3.50
Wo Depth: 3								+		ļ		мет	nod II: 3	3.0 6.0	AL	_
COVER	Pool Depth (m): MS	0.30 0.	41 0.10	0.25	0.33	0.15					0.20	No \	/is.Ch.:	Inter	mittent:	7
COVER Total: M Type: SWD LWD B U DP OV IV CROWN CLOSURE 1 -20% INSTREAM VEG: N A M V INSTREAM VEG: N A M M M M V INSTREAM VEG: N A M M M M M M M M M	Wb Depth: .3	.3 .	6 Av	g: 0.40	М	ethod:	MS	Sta	age: L	ΠМ	J H		Dw:		Tribs.:	
Type: SWD LWD	COVER		Total: M								- ت					
Amount S S N D T S T 1 1-20% INSTREAM VEG: N A M V V INSTREAM VEG: N A M M V V INSTREAM VEG: N A A M A M V INSTREAM VEG: N A A M A M V V INSTREAM VEG: N A A M A M V INSTREAM VEG: N A A M A M V INSTREAM VEG: N A A M A M V INSTREAM VEG: N A A M A M V INSTREAM VEG: N A A M A M A M V INSTREAM VEG: N A A M A M A M V INSTREAM VEG: N A A M A M A M V INSTREAM VEG: N A A M A M A M A M V INSTREAM VEG: N A M A M A M A M A M A M A M A M A M A					DD			IV/	CRO		OSLIBE					
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LWD.F		_					-		INS			N \square A	. — м	V	7	
LB S HP: U Texture: F			<u> []']</u>			ديكا ل				.,,,,,,						
Texture: F G C B R A Texture: F G C B R A RIP: M RIP: M STG: MF EMS: Temp: 5 Method: T4 Cond: 40 Method: S3 PH: 7.6 Method: GE Bed Material: Dominant: C Subdom: G D95: 31.0 D (cm): 2.00 Morph: RP DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 Islands: N Coupling: DC Confinement: UN FSZ: Spawning Habitat Moderate - associated with undercut banks and LWD CoverWinter Habitat Low - limited by lack of deep pools Photo Foc Lg Dir Comments R 24 F 01 STD U upstream photo of cobble substrates found within site	LWD: F		DIST: E													
RIP: S STG: MF STG:	LB SHP: U															*
STG: MF	Texture: F	G C	В	R 🔲 A						Texture	: F 🗸	G 🗀	С 🗌 В	R	^]
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EMS:	STG: MF									STG	: MF					
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Temp: 5	EMC.			* 3				•	D.	#:	Left.	- P- 1		de la c	36_ 3 50000000	<u> </u>
PHOLOG P2					Metho	d· TA				•				M	athod: S	2
Flood Signs: None Method: GE MORPHOLOGY Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3 D95: 31.0 D (cm): 2.00 Morph: RP Pattern: IR Islands: N Coupling: DC Confinement: UN FSZ: Bars: N SIDE DIAG MID SPAN BR Rearing Habitat Moderate - associated with clean patches of gravel Rearing Habitat Low - limited by lack of deep pools Photo Foc Lg Dir Comments R: 24 F: 01 STD U upstream photo of cobble substrates found within site	'															_
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Bed Material: Dominant: C Subdom: G D95: 31.0 D (cm): 2.00 Morph: RP DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 Islands: N Coupling: DC Confinement: UN FSZ: Name Comments Spawning Habitat Moderate - associated with clean patches of gravel Rearing Habitat DoverWinter Habitat Name Foc Lg Dir Comments Comments PHOTOS PHOTOS Comments				_			W 1 W 10	Mar Million of St. Andr.			CALA		_	_		
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Pattern: IR Islands: N Coupling: DC Confinement: UN FSZ: Name Name Spawning Habitat Rearing Habitat Moderate - associated with clean patches of gravel Rearing Habitat OverWinter Habitat Rearing Habitat District Carriage C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 Bars: N SIDE DIAG MID SPAN BR Comments Comments PHOTOS PHOTOS PHOTOS R: 24 F: 01 STD U upstream photo of cobble substrates found within site	Bed Material: D	ominant: C		Subdom:	G				O1	B1	B2	B3 D1	D2	D3		
Islands: N Coupling: DC Confinement: UN FSZ: Name Name Spawning Habitat Rearing Habitat Moderate - associated with clean patches of gravel Rearing Habitat Moderate - associated with undercut banks and LWD OverWinter Habitat Low - limited by lack of deep pools PHOTOS PHOTOS R: 24 F: 01 STD U upstream photo of cobble substrates found within site	D95: 31.0	D (cm): 2	.00	Morph:	RP	D	ISTUR	BANCE								
Coupling: DC Confinement: UN FSZ: Bars: N SIDE DIAG MID SPAN BR	Pattern: IR						INDICA	TORS	C1	C2	C3 (C4 C5	S1	S2	S3 S4	S5
Confinement: UN FSZ: Bars: N SIDE DIAG MID SPAN BR HABITAT QUALITY Name Comments Spawning Habitat Moderate - associated with clean patches of gravel Rearing Habitat Moderate - associated with undercut banks and LWD OverWinter Habitat Low - limited by lack of deep pools PHOTOS PHOTOS R: 24 F: 01 STD U upstream photo of cobble substrates found within site	Islands: N															
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Rearing Habitat Moderate - associated with undercut banks and LWD OverWinter Habitat Low - limited by lack of deep pools Photo Foc Lg Dir Comments R: 24 F: 01 STD U upstream photo of cobble substrates found within site		Moderate -	- associated	with clear	patche	s of gra	vel									
Photo Foc Lg Dir Comments R: 24 F: 01 STD U upstream photo of cobble substrates found within site																
Photo Foc Lg Dir Comments R: 24 F: 01 STD U upstream photo of cobble substrates found within site	OverWinter Habitat	Low - limite	ed by lack of	deep poo	ols											
R: 24 F: 01 STD U upstream photo of cobble substrates found within site	And the second second		(2)	i di	ng par - I	PH	QTC) 5			н.	- 4		115		
	Photo Fo	c Lg	[)ir					** ***********************************		Commer	nts	**************************************		man di salam ka	
R: 24 F: 02 STD D downstream photo of overhanging vegetation found within site					_											
	R: 24 F: 02 S	TD		D	down	stream	photo o	of overhar	ging ve	getation	found w	ithin site				

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

2.0

	COMMENTS
Section	Comments
CHANNEL	S3
CHANNEL	moderate flows, good access from Babine
COVER	habitat suitable for juvenile species

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

2.0

WATERBODY Local: None Gazetted Name: ILP Map #: ILP#: Reach #: 2 -Project ID: 3496 Lake/Stream: S Lake From Date: Fish Permit #: 145085K Date: 2001/08/16 To: 2001/08/16 Agency: C172 Crew: JA/JH Resample: SITE (METHOD MTD/NO Temp Cond Turbid Site# NID Map NID# UTM:Zone/East/North/Mthd Comment GPU EF | 1 093K.071 50038 6 30 С 538 A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out EF 1 2001/08/16 14:39 2001/08/16 15:26 538 1 Length Site# MTD/NO H/P Voltage Frequency Make Model SMITH 600 12B 538 0 350 200.0 1 3.8 ROOT A THE REST OF THE PARTY OF THE Total # Lgth (Min/Max) Site# MTD/NO FishAct H/P Species Stage Age Comment 538 EF СТ 50 83 HOLVIDUAL FISH DATA H/P Species Length | Weight | Sex Site# Mat Age Genetic Roll # Frame# Comment Str/Smpl#/Age Str/Smpi# 538 FF 1 CT 75 H IM 538 EF СТ 83 U IM 1 1 538 EF 1 СТ 50 U IM 56 538 EF 1 CT IJ IM 538 EF 1 1 СТ 65 Ū IM



Site #538, upstream photo of cobble substrates found within site. Roll #24, Frame #01, Date: 2001/08/16



Site #538, downstream photo of overhanging vegetation found within site. Roll #24, Frame #02, Date: 2001/08/16

FDIS Reach Card

South Fulton Study Area

Reach # ILP Map #

ILP#

		PROJECT		and the second s
Stream Name (gaz.)	Smithers Landing Fish Inventory BABINE RIVER 480-000000-00000-00000-0000-		Project Code: 34	96
医据除异态 医皮质	计算是否则的 基础	WATERSHED	(A) 10 10 10 10 10 10 10 10 10 10 10 10 10	1000年展刊了2000基本展
Reach Watershed Code: ILP Map #: Air Photos LINE: 30BCC97158 #: 76	480-760400-00000-00000-0000- ILP #: F Gaz.: Local:	0000-000-000-000-000-000 Reach #: 1.0 Names	NID Map #: 093K.071	NID #: 50331 UTM(Zone/East/North/Method) 9.693429.6065957 GIS ample Type: B Wetland:
	建智觀意思 诗题	SURVEY INFO		第四人是国际的
Date: 1900/07/06		Agency: C172		Crew: JA/JH
		ATTRIBUTES		
Length (km): 1.98 DS Elev.: 715 US Elev: 762	Gradient: 2.37 Order: 4 Magnitude: 20 BGC Zone: SBS	Setting: VW Open water: A Confinement: FC Coupling: PC	DISTURBANCE INDICATORS C1 C2 C	O1 B1 B2 B3 D1 D2 D3
Valley Flat: N Active Floodplain Visible Channel Pattern: SI	C/D: : Est. Width:	Bars:	Islands: N N SIDE DIAG lass Movement: M Riparian Veg.: M	MID SPAN BR Exposed/Eroded: NS Landuse: NS
MA	PS (III AMPLIAN)			
Map Type Ma TRIM 093K.0	p# Year 71			

South Fulton Study Area

Reach #

ILP Map # ILP #

Watershed Code:

Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment	1353					海南			STY.	WATE	RB	ODY	1	Pin Pi			111 精育		
WS Code: 480-760400-00000-00000-0000-0000-0000-0000	G	azett	ted Name):									Loc	al:					
Waterbody D:		Proj	ject Code	: 480-	000000-0	0000-000	00-0000-0	0000-00	00-00	0-000-000-	-000-0)							
Project ID: 3496		١	WS Code	: 480-	760400-0	0000-000	00-0000-0	0000-00	00-00	0-000-000-	-000-0	000							
Fish Permit #: 145085K Date: 2001/08/16 To: 2001/08/16 Agency: C172 Crew: JA/JH Resample:		Wate	erbody ID	:						ILP Map #	¥:				ILP	#:		Reach #: 1	*
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment		F	Project ID	: 3496	5								_ake/Str	ream:	S		Lake Fr	om Date:	
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment		Fish	Permit #	: 14	5085K	D	ate: 200	1/08/16	5	To: 20	001/08	3/16	Age	ency: (C172	Cre	ew: JA/JH	Resan	nple:
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment	1545							4	S	TE /	ME	THO	D						
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment	Site#	1	NID Map	NIE)#	UTM:Zon	e/East/No	rth/Mth	ıd	MTD/NO	Te	mp	Cond	-	id		С	omment	
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment	539	0	93K.071	500	39									С					
Site# MTD/NO								1	1. 0	EAR	SE	TTI	NGS			把 在 100			
C. ELECTROFISHER SPECIFICATIONS Site# MTD/NO H/P Encl Sec Length Width Voltage Frequency Pulse Make Mo Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Str/Smpi# Roll # Frame# Comment Site# Site# MTD/NO H/P Species Length Weight Sex Mat Age Str/Smpi# Site# Site#	Site#	P	MTD/NO	H/P	Date	In Ti	me In	Date 0	Out	Time Out			Comment						
Site# MTD/NO	539	[EF 1	1	2001/08					0.000,000									
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment						C	. ELE	CTI	ROF	ISHE	R S	PE	CIFI	CAT	LION	S			
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment	Site#	\top	MTD/i	10	H/P	En	cl (Sec	L	ength	Wi	,						Model	
Site# MTD/NO	539	\perp	EF	1	1	0		400	2	0.00								12B	
Site# MTD/NO					建合属				FI	SH SI	UMI	MAF	Y			學與語		STATE OF THE STATE	
NDIVIDUAL FISH DATA Site# MTD/NO	5500000	\perp	MTD/N	10	H/P		Stag	ge	Age	Tota	al#	_	,	ax)		t		Comment	
Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Roll # Frame# Comment 539 EF 1 1 CT 58 U IM	539		EF	1	1	CT	J				_				R				
Str/Smpl#/Age Str/Smpl# Str/Smpl# Str/Smpl# Str/Smpl#					Marie Av			SHALL BE TO	CHICA SELE	CONTRACTOR OF STREET	7 E 2 C A	SH	SECTION SESSION	Marie Committee	是的生	論的學			
539 EF 1 1 CT 58 U IM 539 EF 1 1 CT 51 U IM 539 EF 1 1 CT 60 U IM 539 EF 1 1 CT 67 U IM 539 EF 1 1 CT 55 U IM	Site#	M	TD/NO	H/P	Species	Length	Weight	Sex	Mat		_		Vch#			Roll #	Frame#	Comm	nent
539 EF 1 1 CT 51 U IM 539 EF 1 1 CT 60 U IM 539 EF 1 1 CT 67 U IM 539 EF 1 1 CT 55 U IM	500			_	0.7	50			12.4	Str/Si	mpl#/	Age		Str/S	Smpl#		-		
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509 EF	539 EF 1 1 CT 62 U IM																		

South Fulton Study Area

Reach # ILP Map # ILP #

4.0 093K.071 10227

		是此次的	STR	EAMR	REF	EREN	CING			te la	Charles !	当性能
Gazetted Na	me:					L	ocal Name:					
Watershed C	code: 480-755	241-00000-000	00-0000-0000-00	0-000-000	-000-0	000-000	ILP I	//ap #: 093K.0)71	1L	P#:	10227
The Sales	AL CONTRACT			R	EA	CH						
Reach #: 4 Length (km) Gradient (%) US Elev (m)	: 1.69 : 3.8 : 893	Confine Confine Is	TM(Zone/East/N upling: Decoupled ment: Occasional lands: NONE Mid-channel	d ally Conf	Ma _t	gnitude: Order: 1 parian Veg	1 etation: Shrub	S	Sample BGC	Zone:		ed
Bars: None	A. Side —	Diagonal	Mid-channel		Languse. Not	Ореспе	275-01-01-02	NE VALUE	DESCRIPTION OF THE PARTY OF THE	STATE OF		
SITE Site #: 540 Field UTM Agency: C172 Crew: JA/JH Date: 2001/08/ Site Length (m): 100 GIS UTM 9.691546.6067107 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL												
				CH	AN	NEL			ANY TO	Helia)	A CONTRACTOR OF THE PARTY OF TH	ter year
No Vis.Ch.: Dewatered: Stage: Low Med High	Tril	bs.: CI	nannel Width (m): Vetted Width (m): ankfull Depth (m): pH: 7.8	0.68	Min 0.41 0.300 0.3	1 0.600 0.6 Conductivit	3	Gradient % ool Depth (m)	0.06	Min 2 0.03 Turbid	3 0.12	# 4 6 Low Clear
				MORE	RPHOLOGY							
Bed Material	: Dominant:		D95 (cm): 10 D (cm): 0.	.00		Bars: Non		Diagonal	Mid-	channel		pan
Cou Confine	attern: Sinuous pling: Decoupt ment: Unconfir plogy: RP	ed	Islands: No			RBANCE CATORS C2 C3	O1 B1 C4 C5	B2 B3 S1 S2	D1 S3	D2 [S5	
THE PROPERTY.	STREET, STREET	可用的专业业		С	0 V I	ER						W 4 1/4
Total Cover: LWD: LWD Dist:		. I	Type: Amount: ocation: P/S/O:	SWD S	LW[D B	S	DP N	OV D	IV T	FS	z: 🗌
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: Stage: Pole-sapling stage Left Bank: Rip.Veg: Stage: Pole-sapling stage Instream Veg: None Algan												osure 20% scular 🗸
		解,造类。			FIS	Н					Parent.	
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time		Voltage	Species	Total Fish	Minim Length			imum th (mm)
540	FF	1	110	298 sec		500	NEC	0				

South Fulton Study Area

Reach #

ILP Map #

ILP#

Site

4.0 093K.071 10227 540 PROJECT Project Name: Smithers Landing Fish Inventory - 2000 Project Code: 3496 Stream Name (gaz.): BABINE RIVER WATERSHED Gazetted Name: NID#: 50040 Reach #: 4.0 Site #: 540 ILP Map#: 093K.071 ILP #: 10227 NID Map #: 093L.080 Site Lg: 100 Method: HC Access: H Field UTM (Z.E.N): .. Method: Ref. Name: GIS UTM (Z.E.N): 9.691546.6067107 Fish Crd?: Incomplete: Date: 2001/08/16 Time: 08:53 Agency: C172 Crew: JA/JH CHANNEL Avg Mtd width width width width width width width width Gadient % Mtd Avg 2.75 Channel Width (m): MS 1.00 0.90 0.50 0.70 0.41 0.60 0.68 Method I: 3.0 2.0 AL Wetted Width (m): 0.40 0.50 0.60 0.30 0.30 0.43 Method II: 3.0 3.0 AL MS 0.50 Pool Depth (m): MS 0.04 0.03 0.05 0.07 0.08 0.12 0.06 No Vis.Ch.: Intermittent: 🗹 Stage: L V M H Wb Depth: .6 Avg: 0.47 Method: MS Dw: Tribs.: COVER Total: M CROWN CLOSURE Type: SWD LWD B U DP OV 1\/ S N D 1-20% N Amount Loc: P/S/O INSTREAM VEG: N A A M V V DIST: LWD: N LB SHP: U RB SHP: U Texture: F G C B R A Texture: F G C B R A RIP: S RIP: D STG: PS STG: PS WATER FMS: Reg #: Temp: 6 Method: T4 Cond.: 140 Method: S3 pH: 7.8 Method: P2 Turb.: T M M L C Method: GE Flood Signs: None Method: GE MORPHOLOGY 01 B2 D1 D3 Bed Material: Dominant: G Subdom: F D95: 10.0 D (cm): 0.08 Morph: RP DISTURBANCE **INDICATORS** Pattern: SI S2 **S**5 C2 C5 **S**3 Islands: N Coupling: DC Confinement: UN Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name Comments Spawning Habitat Low - limited by lack of clean patches of gravel and low flows Rearing Habitat Low - associated with overhanging vegetation, limited by low flow OverWinter Habitat None - limited by lack of deep pools PHOTOS Photo Foc Lg Dir Comments

upstream photo of overhanging vegetation within sample site

downstream photo of typical habitat within site

03

04

STD

STD

U

D

24

F

R:

R: 24

South Fulton Study Area

 Reach #
 ILP Map #
 ILP #
 Site

 4.0
 093K.071
 10227
 540

	COMMENTS
Section	Comments
CHANNEL	S6 Stream
CHANNEL	highly ephemeral stream with heavily overgrown sections/patches. Discontinuous channel with heavily vegetated sections.
CHANNEL	downstream of NID 50321

South Fulton Study Area

Watershed Code:

540

Reach # 4.0

ILP Map # 093K.071

SMITH

12B

ILP# 10227

WATERBODY

Gazetted Name: Project Code:	480-000000-00000-00000-0000-0000-000-000	Local:	None			
WS Code:	480-755241-00000-00000-0000-0000-000-000-000-000	000				
Waterbody ID:	ILP Map #: 093	3K.071	ILP#:	10227	Reach #:	
- 1 11	0.400	Late Miles		1 -1	- F D-4	

298

Lake/Stream: S Lake From Date: Project ID: 3496

		LUI ID.	0-100								Gairin G					
F	Fish Permit #: 145085K Date: 2001/08/11										ency: C1	72 C	rew: JA/JH	Resan	nple:	
	1	trial		相望能力	いに関する	S	ITE.	/ 8	METH	O D						
Site#	NID	Мар	NID	# UTI	M:Zone/East	t/North/Mthd	MTD/N	10	Temp	Cond	Turbid		Co	omment		
540	093L	.080	5004	40		GPU	EF	1	6	140	С					
	1			泛湖地方	第 分别。	A.	GEAF	3	SETT	NGS						
Site#	MTE)/NO	H/P	Date In	Time In	Date Out	Time C	out				Con	nment			
540	EF	1	1	2001/08/11	08:55	2001/08/11	09:20)								
				STATE OF	C. E	LECTRO	FISH	EF	RSPE	CIFI	CATI	ONS				
Site#	1	MTD/N	10	H/P	Encl	Sec	Length	T	Width	Vol	tage	Frequency	Pulse	Make	Model	

340		'			200	110.0		0.0				ROOT	
FISH SUMMARY													
Site#	MT	O/NO	H/P	Species	Stage	Age	Total #	Lgth (N	/lin/Max)	FishAct		Comment	
540	EF	1	1	NFC			0						



Site #540, upstream photo of overhanging vegetation within sample site. Roll #24, Frame #03, Date: 2001/08/16



Site #540, downstream photo of typical habitat within site. Roll #24, Frame #04, Date: 2001/08/16

FDIS Reach Card

South Fulton Study Area

Reach #

ILP Map#

ILP#

1.0

093L.080

		PROJEC		Lab.	
Stream Name (gaz	e: Smithers Landing Fish Invent .): BABINE RIVER e: 480-00000-00000-00000-00			ject Code: 34	196
		WATERSH	ED		· · · · · · · · · · · · · · · · · · ·
Reach Watershed Cod	e: 480-745100-00000-00000-000 ILP #: 10024	00-0000-000-000-000 Reach #: 1.0		#: 093L.080	NID #: 50215
Air Photos LINE: 30BCC97158 #: 124	Gaz.: Local:	Names			UTM(Zone/East/North/Method) 9.692137.6068551 GIS Sample Type: R Wetland:
	and the second of the second o	SURVEY I	NFO	• 10 - 17	ng a said and a
Date: 1900/07/06		Agency: C172			Crew: SH
		ATTRIBUT	ES		San Hill State of the State of
Length (km): .55 DS Elev.: 713 US Elev: 725	Gradient: 2.18 Order: 2 Magnitude: 3 BGC Zone: SBS	Setting: Open water: Confinement: Coupling:		URBANCE IDICATORS C1 C2 C	O1 B1 B2 B3 D1 D2 D3 3 C4 C5 S1 S2 S3 S4 S5
Valley Flat: B Active Floodplain Visib Channel Pattern: SI	C/D: C le: Est. Width:	Ва	Islands: ars: ☑ N ☐ SIDE Mass Movement: Riparian Veg.:	N DIAG	MID SPAN BR Exposed/Eroded: NS Landuse: NS
	APS				
Map Type N	lap # Year .080				

South Fulton Study Area

Reach#

ILP Map#

ILP#

Watershed Code:

G		d Name										Loc						
	•			000000-0 745100-0														
,		body ID oject ID							ILP Ma	p#:		Lake/St	ream:		P #:	Lake F	Reach #: 1 rom Date:	l -
	Fish F	ermit #	: 14	5085K	D	ate: 200	1/08/17	7	To:	2001/0	8/17	Ag	ency:	C172	С	rew: JA/JI	d Resar	mple:
		0.00		34				S	TE'/	N.	TH	0 D				4		44 4
Site#		D Map	NIC)#	JTM:Zon	e/East/No	rth/Mth	nd	MTD/N	O T	emp	Cond	Turl	bid		(Comment	
541	09	3L.080	500					GPU	EF .	1	7	40	C			APPROPRIE TO SERVICE AND LAND		
			- 4	10.00	Margaliti			.	EA			NGS		, a 🛊	0.0	er a seksel	r tradition	Bod SEP
Site#		TD/NO	H/P	Date		me in	Date 0		Time 0						Con	nment		
541	Ef		1	2001/08			2001/0		11:00				_					
	1	er, H		4		. ELJ	S G (1)	KOF	18 H	ER:	SPE	CIF	CA	1101	8			, 1 244,
Site#		MTD/I	VO_	H/P	En		Sec		ength	W	/idth		age	Freq	uency	Pulse	Make	Model
541	E	F	_1	11_	0		100	1	00.00		2.0	5	00		1	5	SMITH	12B
j livij								FI	SH S	S U N	MA	RY	4.	100			A Part of the sale	4 5 1 2 3 2
Site#	T	MTD/	40	H/P	Specie	s Sta	ge	Age		otal #		h (Min/M	ax)	FishAc	at I	<u> </u>	Comment	
541	E	F (1	1	co	J		1+	十	4	1 4	17	50	R	_			
	15						INI	VIV	BUA	LF	15 H	DA	F-A				No. 123 Mar	
Site#	МТ	D/NO		Species	Length	Weight	Sex	Mat		Age /Smpl#	/4	Vch#		enetic Smpl#	Roll #	Frame#	Comr	nent
541	ĒF	1	1	co	50	}	lu-	IM	1 311	/Simpl#	, Age	+	317	T	├	 	 	
541	EF	1 +	1	co	41	 	u	IM	┼	├	╁─	+		+	 -	 		
541	EF	1	1	co	45	 	Ü	IM	+		+ -	+		+-		+	<u> </u>	
541	EF	1	1	co	50		u	IM	+	1	+-			+	 	 	<u> </u>	

South Fulton Study Area

Reach # ILP Map # ILP #

093K.071

		# \$ ₹ \$ ₹ !	REAM	REF	ERE	NCI	NG	P. A.			5,4416	de me
Gazetted Name	e:					Loca	l Name:					
Watershed Cod	de: 480-7 55241-0000	0-0000-0000-0000-0	00-000-0	00-000-00	000-000		IL	P Map #: 09	3K.071	IL	P #:	10227
				REAC	Н					5 J. 7		
Reach #: 1.0		UTM(Zone/East/l	•	.693408.6	06725					ple Type:	Biase	∍d
Length (km): .6		Coupling: Partially	•	_	nitude:				_	3C Zone:		
Gradient (%): 4		onfinement: Frequent Islands: NONE	ly Contin		Order	_	dan Ch		Open	water: Abs	ent	
US Elev (m): 7				`		•	tion: Sh					
Bars: None 🗸	Side Diagona	l Mid-channel	Span		id	La	nduse: N	lot Specified			SC 10. 1300 11 100 100 100	
				SITE								
Site #: 54		UTM	454		-	ncy: (Crew:	JA/JH		2001/08	3/17
Site Length (m		S UTM 9.693772.6067						ton Environr		isuitants (i		
			Control of the second	HANN	CANALTY DAMA	Marrie Linia	- -	1000	2 200 est 200 a		1000	TP TH
No Vis.Ch.:	= ,	Ob 1 146 446 />	Avg	Min 0	Max 0	#	⊣	O di-	Av		Max	#
Dewatered:	, Tribs.: 🗔	Channel Width (m) Wetted Width (m)		0	0	0	—i ⊦	Gradie Pool Depti			0	0
Stage: Low	ł	Bankfull Depth (m)		0	0	10	⊣ └	r our Depti	<u> </u>		<u> </u>	
Med High	Temp (C):	pH:			onducti	vito:	_		Turbidity.:	Turbid Moderate	===	Low
' "g,'	remp (c):	μι.							Section Control to the	Moderate		JICAI
		<u>-</u>	MUN	PHO		,					_	
Bed Material:		D95 (cm):		В	ars: No	on	Side	Diago	nal 🔛 N	fid-channel		pan 🔛
}	odominant:	D (cm):									В	raid 💹
Channel Patte		Islands:		DISTUR			1 B1	B2 E	33 D1	D2 [3	
Couplir Confineme	•					 С3	C4 (C5 S1	S2 S	2 64	 S5	
Morpholog					-		C4 (10 6	32 3	3 S4	33	
			X 40.0 40.0 40.0 40.0							المحا زل		
			7. 4-2 DOMESTIC	COVE			in the Law	===			in many	***
Total Cover:		Type:	SWD	LWD	-	В	U	DP	ov	IV_		
LWD:		Amount: Location: P/S/O:			- 				1			
LWD Dist:		Eddation: 17670.	<u>!!</u>	<u>السالحال</u>		الــالــ	_از_ا				FS	Z: 🔝
Right Bank:	Shape:	Texture: Fines Gr		Cobble	Boul		Rock	Manma		Cr	own Clos	sure
Left Bank:		Texture: Fines Gr		Cobble	Boul	der	Rock	Manma	de			
•	Rip.Veg:	Stag					-t	lan. Nas-			- v	
Leit Dank:	Rip.Veg: 	Stag	j e .				siream v	/eg: None	Algae	Moss	vas	cular

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

542

1.0

093K.071

10227

PROJECT Project Name: Smithers Landing Fish Inventory - 2000 Stream Name (gaz.): BABINE RIVER Project Code: 3496 WATERSHED Local Name: None Gazetted Name: ILP #: 10227 NID Map #: 093K.071 NID#: 50042 1.0 ILP Map#: 093K.071 Site #: 542 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: HC Access: H GIS UTM (Z.E.N): 9.693772.6067454 Ref. Name: Date: 2001/08/17 Time: 12:18 Agency: C172 Crew: Fish Crd?: incomplete: CHANNEL Property of the second second accidents had seen in 30% Mar. Mtd Avg width Gadient % Mtd Avg Channel Width (m) 0.00 Method I: 4.0 3.0 ΑL 3.75 Wetted Width (m): 0.00 Method II: 4.0 4.0 AL Pool Depth (m): 0.00 No Vis.Ch.: 🗹 Intermittent: Wb Depth: Tribs.: Avg: 0.00 Method: MS Stage: L A M H Dw: COVER Total: Type: SWD LWD В U DΡ ΩV 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: **EMS** Req#: Temp: Method: Cond.: Method: pH: Method: Turb.: T | M | L | C | Method: GE Flood Signs: Method: MORPHOLOGY ВЗ D1 D2 D3 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 **S**1 S2 **S**3 **S**5 Islands: Coupling: Confinement: BR Bars: SIDE FSZ: Name Comments Other No Visible Channel Photo Foc Lg Dir Comments R STD 11 upstream photo of vegetated gully R: 24 F: 06 STD Ö downstream photo of vegetated gully COMMENTS Section

South Fulton Study Area

Reach #

ILP Map#

ILP#

Site

1.0

093K.071

Section	COMMENTS Comments
CHANNEL	No Visible Channel



Site #542, upstream photo of vegetated gully. Roll #24, Frame #05, Date: 2001/08/17



Site #542, downstream photo of vegetated gully. Roll #24, Frame #06, Date: 2001/08/17

South Fulton Study Area

Reach # ILP Map # ILP # 2.0 093L.080 10152

			STR	EAMRE	FEREN	CING				TO BE
Gazetted Na	ime:				L	ocal Name:				
Watershed (Code: 480-735	600-00000-00	00-0000-0000-00	00-000-000-00	0-000-000	ILP I	Map #: 093L.	D80 IL	P#: 1	0152
		CONTRACTOR THE PROPERTY OF THE PARTY OF THE		RE	ACH		-		and the Personal	LOCAL VICES
Reach #: 2 Length (km) Gradient (%) US Elev (m) Bars: None	: 1.25 : 4.3 : 826	Confin II	JTM(Zone/East/N upling: Decouple ement: Occasions slands: NONE Mid-channel	d I	Magnitude: Order: 3 Riparian Veg	9 etation: Shrub Landuse: Not	S	Sample Type: BGC Zone: Open water: Pre		m
	Data in			SI	TE					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Site #: Site Length		Field UTM GIS UTI	 M 9.690064.60698		Agend	y: C172 sy Name: Triton	0.0	A/JH Date: tal Consultants (1	2001/08/ [errace)	/17
				CHA	NNEL		的复数形成	的的概要是是	是對於意	
No Vis.Ch.: Dewatered: Stage: Low Med High	Tri ✔	bs.: C	hannel Width (m): Netted Width (m): ankfull Depth (m): pH: 8.1		2.200	3	Gradient % ool Depth (m			# 4 5 Low
The Arthur		PHILIP		MORPH	OLOGY			(4) (4) (4) (4) (4) (4) (4) (4) (4) (4)		問論
Channel Pa Cou Confine	: Dominant: Subdominant: attem: Sinuous pling: Decoupl ment: Occasio blogy: RP	Cobble	D95 (cm): 21 D (cm): 0. Islands: Oc	70 casional DIST INU C1	C2 C3	O1 B1	B2 B3 S1 S2		Bra	
				CO	VER					
Total Cover: LWD: LWD Dist: Right Bank: Left Bank:		dercut Text	Type: Amount: Location: P/S/O: Lire: Fines Graure: Fines Graure: Graure: Graure:	S Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z			DP T Wanmade	OV IV D T	FSZ: rown Closi	ure
Right Bank: Left Bank:	Rip.Veg: De		Stag	e: Mature fore	st			Algae Moss		
(32)646/67				FI	SH					CONTRACT.
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maxin Length	
543	EF	1	400	600 sec	500	NFC	0			

South Fulton Study Area

ILP Map # ILP# Site Reach # 2.0 093L.080 10152 543

The state of the s		Hallen				PR	OJE	CT						Au	
Project Stream Name Project Watershed	(gaz.):		VER				-000-00	0-000-00	00	Project Code: 3496					
2月1日本保護性質的。	Section 1				High I	WAT	ERS	HED				CASILLE CAS	建 以解析的		
Gazetted Name:									Loc	cal Name	e: None				
Watershed Code: 4		0-00000-00							D " =0	0.40					
ILP Map#: 0			ILP #: 10		NID M	ap #: 093	SL.080	N	ID#: 50		Rea	ch #:	2.0	Site #: 54	13
Field UTM (Z.E.N):		000044	1	viethod:				D.	Site Lo			Method: I	HC	Access: H	
GIS UTM (Z.E.N): 9	.090004.0	110800						170	71. I Verille	J.					_
Date:	2001/08	/17	Time: 13	:22	,	Agency:			rew:	JA/JH		Fish C	rd?: 🗸	Incomplet	e:
		1,500	Helia S	100	TANKS.	CH	ANN	EL						- (A.S VI	裁划社
		dth width	_	width	width	width	width	width	width	width	Avg	Math		ent % Mtd	Avg
	MS 1.5	0 1.90 30 1.00	0.60	2.10 0.75	1.80	2.00 0.51					1.92 0.93	Metho		8.0 AL 5.0 AL	6.75
		21 0.10		0.26	0.13						0.16				
W/h Donth	.4	7 .6		0.57		lathad.	Me	Ct				No Vis		Intermittent:	
Wb Depth:	.4			g: 0.57	, IN	/lethod:	MO	30	age. L	✓ M			Dw:	IIIDS	J
COVER	CIAID		otal: A	- 11	1 00	1 /	3V T	11/	l ce	OWN CL	OSLIDE				
Type:	SWD	LWD	N	U S	DP		D	T	1		-20%				
Loc: P/S/O:									INS	TREAM	VEG:	N A	M	V	
LWD: F			DIST: E			1			1						
LB SHP: U Texture: F G C B R A Texture: F G C B R A															
RIP: S										RIP					
STG: M										STG					
Male All Table 1		TV-billion in				W	ATE	R			on the	the state of	SALES I SUPER		
EMS:					REAL PROPERTY.				Re	eq #:	2.0127010	COLUMN CONTRACTOR			
Temp: 7					Metho	d: T4				ond.: 130)			Method: S3	
pH: 8.						od: P2			Т	urb.: T	п м		C	Method: G8	
Flood Signs: No	one				Metho	od: GE							•		
				图 製 建	M	ORP	HOL	OGY			先的				
Bed Material:	Dom	inant: G		Subdom	: C				01	B1	B2	B3 D1	D2 D	3	
D95: 2	1.0 D	(cm): 0.70)	Morph	: RP	D	STURE	BANCE							
Pattern: SI							INDICA:	TORS	C1	C2	C3 (C4 C5	S1 S	2 S 3 S 4	S 5
Islands: O															
	_														
Confinement: Of															
Confinement: OC FSZ:	С						Ва	ars:	N	SIDI		DIAG	MID	SPAN	BR
Confinement: O	С	Devis / Car			HAI	BITA				SIDI		DIAG	MID	SPAN	BR
Confinement: O	С				HAI	BITA		ALIT				DIAG	MID	SPAN	BR
Confinement: OC FSZ:		w - limited	by lack of	f clean gr				ALIT	Y			DIAG	MID	SPAN	BR
Confinement: OG FSZ: Name Spawning Habitat Rearing Habitat	C LC	oderate - a	ssociated	with den	avel pat	ches	T QU	JALI1 C	Y			DIAG	MID	SPAN	BR
Confinement: Of FSZ: Name Spawning Habitat	C LC		ssociated	with den	avel pat	ches nanging v	T Q U	C	Y			DIAG	MID	SPAN	BR
Confinement: OG FSZ: Name Spawning Habitat Rearing Habitat OverWinter Habitat	Lc M	oderate - as w - limited	ssociated by lack of	with den	avel pat	ches nanging v	T QU	C	Y	ts			MID	SPAN_	BR
Confinement: OG FSZ: Name Spawning Habitat Rearing Habitat	C LC	oderate - as w - limited	ssociated by lack of	with den	avel pate se overh	ches nanging v	T QU	C	omment	is .	Commer		MID	SPAN	BR

South Fulton Study Area

Reach # ILP Map #

ILP#

Site 543

2.0 093L.080

3. 当业性积损	COMMENTS
Section	Comments
CHANNEL	coho captured upstream of outlet
CHANNEL	every equare inch of stream through confinement was not walked. Potential barrier may exist under dense canopy of devil's club.

South Fulton Study Area

Watershed Code:

Reach # 2.0

ILP Map # 093L.080

ILP# 10152

WATERBODY Local: None Gazetted Name: ILP Map #: 093L.080 ILP#: 10152 Reach #: 2 -Waterbody ID: Lake/Stream: S Lake From Date: Project ID: 3496 To: 2001/08/17 Crew: JA/JH Fish Permit #: 145085K Date: 2001/08/17 Agency: C172 Resample: SITE / METHOD UTM:Zone/East/North/Mthd MTD/NO Temp Cond Site# NID Map NID# Turbid Comment 543 093L.080 50043 GPU EF 1 7 130 A. GEAR SETTINGS

THE RESERVE OF THE PERSON NAMED IN	Straff to the strain	20010000	2012/01/2012	A STATE OF THE PARTY OF THE PAR	TENTE DE TRE DA	STATE OF THE PARTY	A SHALL MAKE BY THE PARTY	STAID STANDARD STANDARD	A SECTION AND PROPERTY OF	Chip & Talk and Sales and the Albert	Mark Street, ASS, STANSON, S.	Table of the Control of the Control	MANAGE STATE OF THE STATE OF TH				
Site#	MTD)/NO	H/P	Date In	Time In	Date 0	Out Time	Out	ut Comment								
543	EF	1	1	2001/08/17	13:22	2001/08	3/17 14:1	4									
1.41					C. E	LECTI	ROFISH	IER SPE	CIFICA.	TIONS							
Site#	N	/ITD/N	10	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
543	EF		1	1	0	600	400.0	2.1	500	I.	5	SMITH	12B				
												ROOT					

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



Site #543, upstream photo of dense overhanging vegetation. Roll #24, Frame #07, Date: 2001/08/17



Site #543, downstream photo of typical habitat within site. Roll #24, Frame #08, Date: 2001/08/17

FDIS Reach Card

South Fulton Study Area

Reach # ILP Map #

ILP#

1.0 093L.080

					DIECI		MALE PROPERTY	d'ampaire		Maran Ethin		
Pr	Smithers Landing Fish Inventory - 2000											
Stream N	BABINE RIVER Project Code: 3496											
Project Water	480-000000-00000-00000-0000-0000-000-000											
是对多的关系。在				WATI	RSHE	D		- 146	OF RESIDEN	A THE REAL PROPERTY OF THE PARTY OF THE PAR		
Reach Water	480-735600-	-00000-00000-	-0000-0000-000-000-	0000-000-000-000-000-000								
ILP Map #: 093L.0	ILP Map #: 093L.080		10152	Reach #:	1.0		NID Map #: 093L.	080	NID	#: 50236		
Air Photos			Name	Names			UTM(Zone/East/North/Method)					
LINE: 30BCC96154	LINE: 30BCC96154								9.690224.6069847 GIS			
#: 83		Local:						Sample	Туре: В	Wetland:		
5 (18) S. T. T.				SURV	EY IN	FO		Establish T	Part Ming			
Date: 1900/07/0	Date: 1900/07/06			Agency	C172			Crew:	SH			
			N. Talking	ATTR	IBUTE	S				阿爾斯		
Length (km): .	Length (km): .54		Gradient: 10.93		Setting: VW DISTUR			CE 01	B1 B2 B3	D1 D2 D3		
	DS Elev.: 713		Order: 3		Open water: P			RS				
US Elev: 7	72	Mag	gnitude: 9	Confir	ement: F	C	C1 (22 C3 C4	C5 S1 S2	S3 S4 S5		
		BG	C Zone: SB	S Co	oupling: F	C						
Valley Flat:	N	C/D:					Islands: N					
Active Floodpl		E	st. Width:		Bars	V N	IAG N	IID SP	AN BR			
Channel Patte	ern: SI					Mass N	Movement: M	E	kposed/Eroded	: NS		
						Ripa	arian Veg.: M		Landuse	: NS		
Walter Tale Manager	MA	PS										
Map Type	Map Type Mag		Year									
TRIM 093L.0		80										

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code: 480-7

WATERBODY Gazetted Name: Local: ILP#: Waterbody ID: ILP Map #: Reach #: Project ID: 3496 Lake/Stream: S Lake From Date: To: 2001/08/17 Agency: C172 Fish Permit #: 145085K Date: 2001/08/17 Crew: JA/JH Resample: SITE / METHOD NID Map NID# UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Site# Comment 544 093L.080 50044 GPU EF 1 6 130 A. GEAR SETTINGS Date Out | Time Out Site# MTD/NO H/P Date In Time In Comment 544 2001/08/17 14:22 2001/08/17 15:10 C. ELECTROFISHER SPECIFICATIONS MTD/NO Pulse Site# H/P Encl Sec Length Width Voltage Frequency Make Model 544 EF 0 800 500.0 SMITH 12B ROOT FISH SUMMARY Site# MTD/NO Stage Total # Lgth (Min/Max) Species Age Comment 544 CO 30 49 INDIVIDUAL FISH DATA MTD/NO Site# H/P Species Length Weight Sex Mat Age Vch# Genetic Roll # Frame# Comment Str/Smpl#/Age Str/Smpl# 544 EF 1 CO 49 U IM 1 544 EF CO 30 U IM EF CO 38 U IM 544 1 1 COMMENTS Section Comments WATERBODY CO captured upstream of outlet

South Fulton Study Area

Texture: Fines Gravel

Gravel

Stage: Stage:

Texture: Fines

1.0 093L.080 10114 STREAM REFERENCING Gazetted Name: Local Name: ILP Map #: 093L.080 ILP#: 10114 REACH UTM(Zone/East/North): 9.689079.6070700 Reach #: 1.0 Sample Type: Random BGC Zone: SBS Coupling: Coupled Length (km): .49 Magnitude: 4 Gradient (%): 23.5 Confinement: Confined Order: 2 Open water: Absent US Elev (m): 828 Islands: NONE Riparian Vegetation: Mixed C/D Bars: None 🗸 Side 🗌 Diagonal Mid-channel Span Braid Landuse: Not Specified SITE Site #: 545 Field UTM .. Agency: C172 Crew: JA/JH Date: 2001/08/17 Site Length (m): 100 GIS UTM 9.689211.6071061 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL Min Max Min No Vis.Ch.: 🗸 Intermittent: Avg Avg Max Tribs.: Channel Width (m): 0.00 0 0 0 Gradient %: 6.25 5 4 Dewatered: Wetted Width (m): 0.00 0 0 Pool Depth (m): 0.00 0 0 Stage: Low Bankfull Depth (m): 0.00 0 0 0 Med Turbidity.: Turbid Low Temp (C): Conductivity: High pH: Moderate Clear MORPHOLOGY Bed Material: Dominant: D95 (cm): Side Diagonal Mid-channel Bars: Non Subdominant: D (cm): Braid Channel Pattern: Islands: DISTURBANCE 01 **B1** B2 **B**3 D1 D2 INDICATORS Coupling: Confinement: C2 C3 C4 C5 S1 S2 **S**3 **S4** S5 Morphology: COVER Total Cover: Type: SWD LWD В OV IV Amount LWD: Location: P/S/O LWD Dist: FSZ:

Cobble

Cobble

Boulder

Boulder

Rock

Manmade

Instream Veg: None Algae Moss Vascular

Rock Manmade

Crown Closure

Reach # ILP Map #

ILP#

Right Bank:

Left Bank:

Right Bank:

Left Bank:

Shape:

Shape:

Rip.Veg:

Rip.Veg:

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

1.0 093L.080

10114

	別類型					其語	PR	OJE	CT	4877							的問題
Proje Stream Nar Project Watersh	ne (gaz.)): BABI	NE RIV	ER	sh Invento			0-000-00	0-000-00	00	ı	Project C	ode:		3496		
		DE L	190	ME SERVER		A SECTION	WAT	ERS	HED				12 15 15 15	明长 、建	NAME OF		
Gazetted Name	:									Loc	cal Nam	e: None					
Watershed Code	: 480-730	0049-00															
ILP Map#	: 093L.08	80	1	LP #: 10	1114	NID Ma	ap #: 09	3L.080	N	ID #: 50)045	Read	ch #:	1.0		Site #: 5	45
Field UTM (Z.E.N)	:			P	Method:					Site Lo			Method	: HC	Acce	ss: H	
GIS UTM (Z.E.N)	: 9.68921	11.60710	061						Re	ef. Name	9:						
Dat	te: 2001	1/08/17	7	Time: 15	:27	,	Agency			rew:	JA/JH		Fish	Crd?:	1	ncomple	te:
然对其他是一个人		1200 P					CH	ANN	EL	market.			The rest of the state of	2000年	的基础分		新生活生
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg			dient %	Mtd	Avg
Channel Width (m):								-				0.00		nod II: 7.0	_	AL	6.25
Wetted Width (m): Pool Depth (m):											_	0.00	Meth	100 11. 7.0	5.0	AL	i.
Tool Bepair (III).												0.00	No V	is.Ch.: 🗸	Interm	ittent:	
Wb Depth:				Av	g: 0.00	N	lethod:	MS	St	age: L	M	Н		Dw:		ribs.:	
COVER			Tota	al:													
Type:	SWD	LV	/D	В	U	DP		OV	IV	CR	OWN CL	OSURE					
Amount:																	
Loc: P/S/O:										INS	TREAM	VEG:	N A	M	V _		
LWD:	e e		D	IST:													
LB SHP:											RB SHP	j.					
		G	C	В	R A								G	СВ	R	АП	
RIP											RIP						
STG:											STG						
			The State Country		10 1/ 4	10073	JC34400.37.4			OPISION SCHOOL			Saute When by		ato tala 1967	XXXXXXXXXX	Sing Marie and Street
FIAO								ATE	K				Marie Service		的日本		
EMS: Temp:						Metho	vd.				eq #: ond.:				Met	hod:	
pH:						Metho							1				_
Flood Signs:						Metho	od:			1	urb.: I	M	L	C	Met	hod: Gl	=
	TENES.	5.8 E.75	X 131276		Sept. Sept. 1	M	ORF	HOL	OGY		(C) FLESS	600	40 ME AR				CHART WA
2					0					01	B1	B2 I	B3 D1	D2	D3		
Bed Material: D95:	D	ominant D (cm)			Subdom												
1,000		D (CIII)	•		MOIDI			DISTURE		04	00	00	04 05	04	00 0		0.5
Pattern: Islands:								IIIDIOA	10110	C1	C2	C3 (C4 C5	S1	S2 S	3 S4	S 5
Coupling:																	
Confinement:																	
FSZ:								В	ars:	N	SID	E	DIAG	MID	SPA	N.	BR
万世。图 1072 00 5				13% viii 179 24		HAE	BITA	TQL									整数 图
Name Other		No Via	ible Cha	nnel					С	ommen	ts						
Other		140 418	DIE CITA	KG III	149.15		PH	ОТО	S	2.18							graphe of a
Photo	En	c Lg	Ser Const		Dir						PARTY A	Commer	nte	Sheet like	Sheet of		PRINT
R: 24 F: 09		TD	_		U	upst	ream pl	hoto of ve	egetated	depress		Johnnet	110				
R: 24 F: 10		TD			D			n photo o	_	_							
		191810		dig-				MEN				(5)(5)	2.6	7. J. J. S.		W. just	為自有
Section					terrores in west da	Tarib Palace (La			C	ommen	ts				and the second hard.	and the last	reserved peaks.

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

1.0

093L.080

10114

	COMMENTS
Section	Comments
CHANNEL	UTM's 689196 / 6071049



Site #545, upstream photo of vegetated depression. Roll #24, Frame #09, Date: 2001/08/17



Site #545, downstream photo of vegetated depression. Roll #24, Frame #10, Date: 2001/08/17

South Fulton Study Area

Reach # ILP Map #

ILP# 8.0 093L.080 10079

计数据经过过发现程式		然工作的	的对象是是有一个		a sa Ma M	Mark Albert	是是不可用			ROWER TO
Gazetted N	lame:				L	ocal Name:				
Watershed	Code: 480-71	8600-59500-00	0000-0000-0000-0	000-000-000-0	00-000-000	ILP	Map # : 093L.	080	_P #:	10079
				RE	ACH				32,17,9	
Reach #:	8.0		UTM(Zone/East/	North): 9.6820	610.6065589			Sample Type:	Bias	ed
Length (km	n): 2.17	Co	oupling: Decouple	ed	Magnitude:	4		BGC Zone:	ESSF	
Gradient (%	,		ement: Occasion	nally Conf	Order: 2			Open water: Ab	sent	
US Elev (m		1	slands: NONE		Riparian Veg	etation: Decid	uous			
Bars: None	✓ Side	Diagonal	Mid-channel	Span	Braid	Landuse: Not	Specified			
对 的新统	的學術問題	類的原理的	经产品的	S	It =		A Sans			新新疆
Site #		Field UTA				y: C172			2001/0	8/18
Site Length	h (m): 100	GIS UT	M 9.682523.6065	556	Agend	y Name: Triton	Environmen	tal Consultants (1	Гептасе)	
中無信之行政	加斯亞德	基本是 的制度	在為德沙縣	CHA	NNEL	Pier in a	CONTRACTOR OF STREET	在一个人		计划地址
No Vis.Ch.:	Intermit			Avg M		#		Avg Min	Max	#
Dewatered:	Tr		hannel Width (m)		11.1	6	Gradient 9		4	4
Stage: Low	~		Wetted Width (m)			6 P	ool Depth (m): 0.12 0.08	0.200	6
Med				0.40 0.	- 1 1		Tur	bidity.: Turbid		Low
High	To To	emp (C): 10	pH: 8.0		Conductivity	y: 80		Moderate		Clear 🗸
NAME OF BRIDE	是可能的時候	是自由的		MORPI	HOLOGY		為認識都	E DE LA COMPANION DE LA COMPAN		Page Mar.
Bed Materia			D95 (cm): 1:		Bars: Non	✓ Side	Diagonal	Mid-channe	_	pen 🔲
	l: Dominant: Subdominant:		D95 (cm): 19		Bars: Non	✓ Side	Diagonal	Mid-channe	_	pen
Channel Pa	Subdominant: attern: Sinuous	Gravels		00 one DIS	TURBANCE	Side O1 B1	Diagonal B2 B3	Mid-channe	_	
Channel Pa	Subdominant: attern: Sinuous upling: Decoup	Gravels	D (cm): 2	2.00 one DIS IN	TURBANCE DICATORS	01 B1	B2 B3	D1 D2 I	D3	
Channel Pa Cou Confine	Subdominant: attern: Sinuous upling: Decoup ement: Occasio	Gravels led enally Confine	D (cm): 2	00 one DIS	TURBANCE	01 B1	B2 B3 S1 S2	D1 D2 I	_	
Channel Pa Cou Confine	Subdominant: attern: Sinuous upling: Decoup	Gravels	D (cm): 2	2.00 one DIS IN	TURBANCE DICATORS	01 B1	B2 B3	D1 D2 I	D3	
Channel Pa Cou Confine	Subdominant: attern: Sinuous upling: Decoup ement: Occasio	Gravels led enally Confine	D (cm): 2	one DIS	TURBANCE DICATORS	01 B1	B2 B3	D1 D2 I	D3	
Channel Pa Cou Confine	Subdominant: attern: Sinuous upling: Decoup ement: Occasio ology: RP	Gravels led enally Confine	D (cm): 2 Islands: No Type:	DIS IN C1	TURBANCE DICATORS C2 C3 VER	01 B1 C4 C5	B2 B3 S1 S2 DP	D1 D2 0 2 S3 S4	D3	
Channel Pr Cou Confine Morph	Subdominant: attern: Sinuous upling: Decoup ement: Occasio ology: RP	Gravels sided shally Confine Riffle Pool	D (cm): 2 Islands: No Type: Amount:	DIS IN CO	TURBANCE DICATORS C2 C3 VER WD B T N	01 B1 C4 C5	B2 B3 S1 S2	D1 D2 [D3	
Channel Pa Cou Confine Morph Total Cover: LWD:	Subdominant: attern: Sinuous upling: Decoup ement: Occasio ology: RP	Gravels seled enally Confine Riffle Pool	D (cm): 2 Islands: No Type:	DIS IN C1	TURBANCE DICATORS C2 C3 VER WD B T N	01 B1 C4 C5	B2 B3 S1 S2 DP	D1 D2 0 2 S3 S4	D3	raid
Channel Pa Cou Confine Morph Total Cover: LWD:	Subdominant: attern: Sinuous upling: Decoup ement: Occasio ology: RP Abundant Few	Gravels sided shally Confine Riffle Pool	D (cm): 2 Islands: No Type: Amount:	DIS IN C1	TURBANCE DICATORS C2 C3 VER WD B T N	01 B1 C4 C5	B2 B3 S1 S2 DP	D1 D2	S5	raid
Channel Pa Cou Confine Morph Total Cover: LWD: LWD Dist: Right Bank: Left Bank:	Subdominant: attern: Sinuous upling: Decoup ement: Occasic ology: RP Abundant Few Evenly Distrib Shape: Occasic	Gravels ided ided inally Confine Riffle Pool uted rerhangi Texti rerhangi Texti	Type: Amount: Location: P/S/O: ure: Fines G G G G	DIS IN C1 SWD L T Avei Cobt avei Cobt	TURBANCE DICATORS C2 C3 VER WD B T N Die Boulde Boulde Boulde	01 B1 C4 C5 U S Rock	B2 B3 S1 S2 DP N	D1 D2	S5 FS.	raid
Channel Pa Cou Confine Morph Total Cover: LWD: LWD Dist: Right Bank: Left Bank: Right Bank:	Subdominant: attem: Sinuous upling: Decoup ement: Occasic ology: RP Abundant Few Evenly Distrib Shape: On Shape: On Rip.Veg: De	Gravels ided ided inally Confine Riffle Pool uted rerhangi Texti rerhangi Texti	Type: Amount: Location: P/S/O: ure: Fines Gr Stag	DIS IN C1 CD SWD L T Aveel Cobb aveel Cobb ge: Young fore	TURBANCE DICATORS C2 C3 VER WD B T N Die Boulde Boulde st	O1 B1 C4 C5 U S Rock Rock	B2 B3 S1 S2 DP N Manmade Manmade	D1 D2	S5 FS. rown Clo	Z: Sure
Channel Pa Cou Confine Morph Total Cover: LWD: LWD Dist: Right Bank: Left Bank:	Subdominant: attern: Sinuous upling: Decoup ement: Occasic ology: RP Abundant Few Evenly Distrib Shape: Occasic	Gravels ided ided inally Confine Riffle Pool uted rerhangi Texti rerhangi Texti	Type: Amount: Location: P/S/O: ure: Fines Gr Stag	DIS IN C1 SWD L T Avei Cobt avei Cobt	TURBANCE DICATORS C2 C3 VER WD B T N Die Boulde Boulde st	O1 B1 C4 C5 U S Rock Rock	B2 B3 S1 S2 DP N Manmade Manmade	D1 D2	S5 FS. rown Clo	raid
Channel Pa Cou Confine Morph Total Cover: LWD: LWD Dist: Right Bank: Left Bank: Left Bank:	Subdominant: attem: Sinuous upling: Decoup ement: Occasic ology: RP Abundant Few Evenly Distrib Shape: On Shape: On Rip.Veg: De Rip.Veg:	Gravels ided ided inally Confine Riffle Pool uted verhangi rexti rectionus	D (cm): 2 Islands: No Type: Amount: Location: P/S/O: ure: Fines Gr Stag Stag	DIS IN C1 SWD L T Wavel Cobb avel Cobb e: Young fore	TURBANCE DICATORS C2 C3 VER WD B T N Die Boulde Boulde st	O1 B1 C4 C5 U S Rock Rock	B2 B3 S1 S2 DP N Manmade Manmade	D1 D2	S5 FS. rown Clo	Z: Sure
Channel Pa Cou Confine Morph Total Cover: LWD: LWD Dist: Right Bank: Left Bank: Right Bank:	Subdominant: attern: Sinuous upling: Decoup ement: Occasio ology: RP Abundant Few Evenly Distrib Shape: Occasio Shape: Occasio Rip.Veg: De Rip.Veg: De Capture	Gravels led led mally Confine Riffle Pool uted verhangi rethangi rethangi rethangi rethangi rethangi rethangi	Type:I Amount: Location: P/S/O: ure: Fines Gray Stag Stag	DIS IN C1 CD SWD L T Wavel Cobb avel Cobb ge: Young fore ge: Young fore	TURBANCE DICATORS C2 C3 VER WD B T N Die Boulde Boulde st st	O1 B1 C4 C5 U S Rock Rock	B2 B3 S1 S2 DP N Manmade Manmade : None	D1 D2 Cr Algae Moss	S5 S5 FS. cown Clo	z: ☐ sure 40% cular ✓
Channel Pa Cou Confine Morph Total Cover: LWD: LWD Dist: Right Bank: Left Bank: Left Bank:	Subdominant: attem: Sinuous upling: Decoup ement: Occasic ology: RP Abundant Few Evenly Distrib Shape: On Shape: On Rip.Veg: De Rip.Veg:	Gravels ided ided inally Confine Riffle Pool uted verhangi rexti rectionus	D (cm): 2 Islands: No Type: Amount: Location: P/S/O: ure: Fines Gr Stag Stag	DIS IN C1 CO SWD L T Avel Cobb	TURBANCE DICATORS C2 C3 VER WD B T N Die Boulde Boulde st st	O1 B1 C4 C5 U S Rock Rock Instream Veg	S1 S2 DP N Manmade Manmade : None _	D1 D2 C	S5 S5 Sown Clo 21- Vas Max Lengt	z: ☐ sure 40% cular ✔

South Fulton Study Area

2.7.4 自然基金的人 **Gazetted Name:** Local: None Waterbody ID: ILP Map #: 093L.080 ILP#: 10079 Reach #: Project ID: 3496 Lake/Stream: S Lake From Date: Fish Permit #: To: 2001/08/18 145085K Date: 2001/08/18 Agency: C172 Crew: JD/DT Resample: SITE I MEITHOD NID Map UTM:Zone/East/North/Mthd Temp Turbid 0 546 093L.080 50046 GPU FF 60 51 093L.080 10051 GPU EF 1 80 C GEAR SEITINGS MTD/NO Date Out 51 FF 2001/08/18 09:00 2001/08/18 09:35 546 EF 2001/08/18 09:00 2001/08/18 09:30 S. EFECTROFFS HER SPECTFICATIONS MTD/NO H/P Encl Sec Voltage Frequency Pulse Make SMITH 51 0 98 100.0 1.0 700 60 6 128 ROOT 546 EF 0 110 100.0 1.0 600 SMITH 12B ROOT FISH SUMMARY 77 S 的。这种是一种的一种 Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 51 RB R J 3 62 85 1 546 EF RB 60 70 R INDIVIDUAL FISH H/P MTD/NO Site# Species Length Weight Sex Mat Vch# Genetic Comment Age Str/Smpl#/Age Str/Smpl# FF RB 51 85 U U 51 EF 1 RB 62 U U 1 51 EF 1 1 RB 70 U U FF 546 1 RB 60 11 IM 546 EF RB 70 U IM 546 EF RB 65 U IM COMMENTS Section Downstream of RB Lake @ ILP 10067 confluence WSC on map is not readable WATERBODY

FDIS Reach Card

South Fulton Study Area

Reach # ILP Map #

ILP#

1.0 093L.069

			OF PERSON	PI	ROJECT		1040年	1		100		
Stream N	Name (gaz.):	Smithers Land BABINE RIVE 480-000000-00	R	0000-0000-000-00			Proj	ect Code:	3496			
				WA.	TERSHE	D						
Reach Water ILP Map #: 093L.0		000-000000-00 ILP #:	0000-00000-0 10071	0000-0000-000-00 Reach #:	00-000-000-00 1.0	000-000	NID Map#	: 093L.070		NI	D#:	50638
Air Photos LINE: 30BCC97158 #: 67	_	Gaz.: Local:		Nan	nes				9.681	one/East/Nor 428.6064800 Type: R	1	od) GIS and:
		To Calley		SUR	VEY IN	FO						N. W.
Date: 1900/07/0	06			Agen	cy: C172				Crew:	SH		
		And Land		ATT	RIBUTE	S		14 3 8		1 3 H L	WI STAN	
Length (km): . DS Elev: 1 US Elev: 1	1032	Magn	ndient: 6 Order: 2 nitude: 3 Zone: ESS	Cor	pen water: /	VF A SC		URBANCE DICATORS C1 C2		B1 B2 B3 C5 S1 S		D2 D3 S4 S5
Valley Flat: Active Floodpl Channel Patte		C/D: C Es	t. Width:		Bars	Mass Me	SIDE overnent:	N DIAG		ID Sposed/Erode		
50年 30年 3	MAI	PS	LE GARLES	A STATE OF THE STA								
Map Type TRIM	Map 093L.07		Year									

547

EF

South Fulton Study Area Watershed Code:

NFC

Reach # ILP Map #

ILP#

1.0

093L.080

TO AL	"Sales	13.7				1 Sec. 17	*1#**;	W	ATE	RBOE	Y	S. A.		15.7	100 E	通過生		
Ga	zetted	Name									Loc	al:						
1	Project	Code	480-0	0-00000	0000-0000	0-0000	-0000-000-	000-00	0-000-0	000-0								
	WS	Code:	000-0	0-00000	0000-0000	0-0000	-0000-000-	000-00	0-000-0	000-000								
V	Vaterbo	dy ID:						ILP	Map #	: 093L.0	80		ILF	#: 1	0071	Reach #:	1 -	
	Proj	ect ID:	3496								Lake/St	ream:	S		Lake i	From Date:		
F	Fish Pe	rmit #:	145	085K	De	te: 200	01/08/18	٦	Γο: 200	01/08/18	Age	ency:	C172	Cr	ew: JH/I	OS F	Resamp	ole:
v Ban	1			1.39	SEL ACT		非智证 。	SITI	E L I	BETH	OD		27.2	透透			がいい	可以的
Site#	NID	Мар	NID	#	JTM:Zone	East/N	orth/Mthd	MT	D/NO	Temp	Cond	Turb	id			Comment		
547	0931	080	5004	17			GP	U EF	1	8	90	С						
	學問題			市場的	19	经过是	A.	GE	AR	SEUT	INGS	Sec.	"特别"	是导类		100 沙底部	特別的	技能影響
Site#	MTE	O/NO	H/P	Date	in Tin	ne In	Date Out	Tim	ne Out					Com	ment			
547	EF	1	1	2001/08	3/18 10	:00	2001/08/18	B 1	0:50							1999 - 1 1000		
LINE'S	4.	(0) 1 (0) 1	and and		C.	EL	ECTRO	OFIS	HEI	RSP	ECIFI	CA.	LION	S		能臨高		dia an
Site#	1	MTD/N	10	H/P	Enc		Sec	Lengt	th	Width	Vol	tage	Freq	uency	Pulse	Mak	е	Model
547	EF		1	1	0		160	150.	0	1.0	50	00		1	5	SMIT		12B
E ISON	54.77	经销		1234	Shirt of	in it	21495	FISI	H SU	MMA	RY	**	ALC:	1	1000年	新西班 ·布里	4535	
Site#	1	ATD/N	10	H/P	Species	Sta	age A	\ge	Tota	I# Lg	th (Min/M	ax)	FishAc	t		Commer	nt	

South Fulton Study Area

Reach # ILP Map # ILP# 093L.079 10397

			STI	REAMRE	FEREN	CING		是一份。	
Gazetted Na	ame:				L	ocal Name:			
Watershed	Code: 480-718	8600-76300-00	000-0000-0000-0	00-000-000-00	0-000-000	ILP I	Map #: 093L.	079 IL	P#: 10397
				RE	ACH				
Reach #: 6 Length (km Gradient (% US Elev (m) Bars: None): 1.16): 5.0): 1103	Co Confin	JTM(Zone/East/lupling: Decouple ement: Frequent slands: NONE	ed N	flagnitude: Order: 2 Riparian Veg	5 etation: Decid		Sample Type: BGC Zone: Open water: Abs	
T-13-7				SI	TE		100	Na 55 100	WE WELL TO
Site # Site Length		Field UTM GIS UTI	I M 9.678740.6063	773		y: C172 y Name: Triton		H/DS Date: tal Consultants (T	2001/08/18 errace)
			A STATE OF THE STATE OF		NNEL	克 兰生态	沙里 总统		产生产生产生产生
No Vis.Ch.: Dewatered: Stage: Low Med High	Tri	bs.: C	hannel Width (m) Wetted Width (m) ankfull Depth (m) pH: 7.9): 1.67 0.5): 0.57 0.5	3.700 3.200 0.6 Conductivity	,	Gradient % Depth (m		Max # 3 2 0.5 6 Low Clear ✔
D - 1 5 4 - 4 - 1 - 1		FF1			OLOGY	process process	7		
Channel Pa Cou Confine	Subdominant: attern: Irregular pling: Decoupl ment: Unconfil	Gravels , Wandering ed	D95 (cm): 5 D (cm): 2 Islands: No	2.00 one DIST	Bars: Non URBANCE DICATORS C2 C3	01 B1	B2 B3 S1 S2		Span Braid S
	Complete	為的學典	等 法 自为 包	CO	/ER		SA PARTY	na liberation	門共產黨的物理的
Total Cover: LWD: LWD Dist: Right Bank: Left Bank:	Few	dercut Text	Type: Amount: cocation: P/S/O: ure: Fines Grure: Fines Grure:	T V	======	r Rock	DP T Manmade Manmade		FSZ: own Closure 1-20%
Right Bank: Left Bank:	Rip.Veg: De Rip.Veg:		Stag	ge: Pole-sapling	stage stage	Instream Veg		Algae Moss	Vascular ✓
Site Number	Capture	Number of	Longth fight	F1:	The state of the s	Seedle VAV			Mitalson
oite Number	Method	Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
548	EF	1	310	340 sec	600	NFC	0		

South Fulton Study Area

Reach # ILP Map # ILP # Site
6.0 093L.079 10397 548

		PROJECT	T See See See See See See See See See Se	· 表別。在1887年1884年18
Stream Name (gaz.	e: Smithers Landing Fish Invent): BABINE RIVER e: 480-000000-00000-00000-000	00-0000-000-000-000-000-0		de: 3496
		WATERSH	ED	方是自己的社会是否是自由的自由。
Gazetted Name:			Local Name: None	
Watershed Code: 480-71	8600-76300-00000-0000-0000-0	00-000-000-000-000		
ILP Map#: 093L.0	79 ILP #: 10397	NID Map #: 093L.069	NID #: 50048 Reach	n #: 6.0 Site #: 548
Field UTM (Z.E.N):	Method:		Site Lg: 310	Method: MAP Access: H
GIS UTM (Z.E.N): 9.6787	40.6063773		Ref. Name:	
Date: 200	1/08/18 Time: 12:10	Agency: C172	Crew: JH/DS	Fish Crd?: Incomplete:
Bate. 200	11110. 12.10	CHANNE		
				· 注意。 · · · · · · · · · · · · · · · · · · ·
Channel Width (m): MS	width width width width 1.00 1.20 3.10 2.40	width width width v	vidth width width Avg 2.18	Gadient % Mtd Avg Method I: 3.0 2.0 C 2.50
Wetted Width (m): MS	0.60 1.00 3.10 0.50	1.60 3.20	1.67	Method II: C
Pool Depth (m): MS	0.40 0.50 0.40 0.30	0.20 0.20	0.33	Metrice II.
				No Vis.Ch.: Intermittent:
Wb Depth: .6	.6 .5 Avg: 0.57	Method: MS	Stage: L M M H	Dw: Tribs.:
COVER	Total: M			
Type: SWD	LWD B U	DP OV	V CROWN CLOSURE	
Amount: T	D N T	TS	T 1 1-20%	
Loc: P/S/O:			INSTREAM VEG: N	A M V V
LWD: F	DIST: C			
	DIS1. C		DD 0115 11	
LB SHP: U			RB SHP: U	
	GCCBCRZA	`		G C B R A
RIP: D STG: PS			RIP: D STG: PS	
51G: P5			316: P3	
		WATER		2. 定位的,以及特别的国际的管理和15
EMS:			Req #:	
Temp: 8		Method: T4	Cond.: 80	Method: S3
pH: 7.9		Method: P2	Turb.: T M	L C Method: GE
Flood Signs: None		Method: GE		
		MORPHOLO	GY	现在是是一种的 经和 基本通過。例
Bed Material:	Oominant: F Subdom	n: G	O1 B1 B2 B3	3 D1 D2 D3
D95: 5.00	D (cm): 2.00 Morph	: RP DISTURBAL	KCE	
Pattern: IR		INDICATO		4 C5 S1 S2 S3 84 85
Islands: N				
Coupling: DC				
Confinement: UN		D	N OIDE	
FSZ:		Bars	: N✓ SIDE D	IAG MID SPAN BR
是是自己的人们的		HABITAT QUA	LITY	
Name			Comments	AM TANK AND PARTY TO THE TANK
OverWinter Habitat	Low - potential overhanging veg	getation exists in ponded an		
Rearing Habitat	Moderate - associated with pon			
Spawning Habitat	Low - patches of gravel			
		PHOTOS		
	c Lg Dir		Comments	S
	TD U		ghy area with stagnant water	
R: 24 F: 12 S	TD D	downstream photo of sl	oughy area with stagnant water	

South Fulton Study Area

Watershed Code: 480-718600-76300-0000-0000-0000-000-000-000-000-000

Reach # ILP Map # 6.0 093L.079

ILP#

Site 548

	COMMENTS
Section	Comments
CHANNEL	difficult electro fishing because of sampling conditions - large pools and deep ponds/wetlands
CHANNEL	No fish caught
CHANNEL	access from downstream questionable - braided sections and heavily vegetated areas likely block access

South Fulton Study Area

548

Watershed Code:

NFC

Reach #

6.0

ILP Map # 093L.079 ILP#

Gaz	zetted Name:	:						Loca	al: Non	ie			
F	Project Code:	480-0	00000-0000	0-00000-000	0-0000-000-00	00-000-000-	-000-0						
	WS Code:	480-7	718600-7630	0-00000-000	0-0000-000-00	00-000-000-	000-000						
V	Vaterbody ID:					ILP Map #	: 093L.07	9		ILP#:	10397 F	Reach #: 6	-
	Project ID:	3496						Lake/Str	eam:	S	Lake Fro	m Date:	
F	ish Permit #:	145	5085K	Date: 2	001/08/18	To: 20	01/08/18	Age	ency: C	172 C	rew: JH/DS	Resar	mple:
	建 計模		THE WATER		S	ITE /	METH	OD	100 E				
Site#	NID Map	NID	# UTN	/I:Zone/East/	North/Mthd	MTD/NO	Temp	Cond	Turbid		Co	mment	
548	093L.069	5004	48		GPU	EF 1	8	80	С				
					A.	GEAR	SETT	NGS					
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out				Cor	nment		
548	EF 1	1	2001/08/18	12:10	2001/08/18	13:40							
		1543		C. EL	ECTRO	FISHE	RSPE	CIFI	CAT	IONS			
Site#	MTD/N	10	H/P	Encl	Sec I	ength	Width	Volta	age	Frequency	Pulse	Make	Mode
548	EF	1	1	0	340	310.0	1.5	60	00	I	5	SMITH ROOT	12B



Site #548, upstream photo of sloughy area with stagnant water. Roll #24, Frame #11, Date: 2001/08/18



Site #548, downstream photo of sloughy area with stagnant water. Roll #24, Frame #12, Date: 2001/08/18

FDIS Reach Card

South Fulton Study Area

Watershed Code: 480-705800-57200-68352-0000-000-000-000-000-000-000-000

Reach # ILP Map #

2.0 093L.070

ILP# 10348

		PROJECT	and the Pine of	
Stream Name (gaz.):		ory - 2000 00-0000-000-000-000-000-000-0	Project Code: 3	3496
		WATERSHED		
Reach Watershed Code: ILP Map #: 093L.070 Air Photos LINE: 30BCC98024 #: 145	480-705800-57200-68352-00 ILP #: 10348 Gaz.: Local:	00-0000-000-000-000-000-000-0 Reach #: 2.0 Names	000 NID Map #: 093L.070	NID #: 50494 UTM(Zone/East/North/Method) 9.682667.6059358 GIS Sample Type: B Wetland:
5.67.12 To Print 1.7.2	A STATE OF S	SURVEY INFO	2000年100日 100日 100日 100日 100日 100日 100日 1	(A) 在下下的一种。
Date: 1900/07/06		Agency: C172		Crew: SH
		ATTRIBUTES	等。 第二十二章 第二十二章	
Length (km): 1.48 DS Elev: 1373 US Elev: 1554	Gradient: 12.23 Order: 2 Magnitude: 3 BGC Zone: SBS	Setting: VW Open water: A Confinement: CO Coupling: CO	INDICATORS	O1 B1 B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Valley Flat: N Active Floodplain Visible: Channel Pattern: SI	C/D: Est. Width:	Bars:	Islands: N ✓ N SIDE DIAG Mass Movement: H Riparian Veg.: M	BR Exposed/Eroded: NS Landuse: NS
Map Type Map				

TRIM

093L.070

South Fulton Study Area

Watershed Code:

Site#

549

MTD/NO

H/P

Species

NFC

Stage

Age

480-705800-57200-68352-0000-0000-000-000-000-000-000

2.0

Reach #

ILP Map #

Comment

ILP#

	A SHARE THE PARTY OF THE PARTY											での開催制	
Ga	zetted Name:							Loc	at:				
F	Project Code:	480-0	00000-00000	-00000-000	0-0000-000-00	0-000-0	0-000-0						
	WS Code:	480-7	05800-57200	-68352-000	0-0000-000-00	0-000-0	00-000-00						
V	Vaterbody ID:					ILP Ma	ар #:			ILP#:	R	teach #: 2	-
	Project ID:	3496						Lake/St	ream:	S	Lake From	m Date:	
F	ish Permit #:	145	085K	Date: 2	001/08/18	To:	2001/08/1	B Ag	ency: C	172 (Crew: JH/DS	Resar	nple:
NAME OF	16.71E.815	10.28	THE RESERVE A	11 2 8 8 5 3 M	9	ITE	/ MET	100	SURFICE CHARGE	SECTION SHAPE AND ADDRESS.	FOR DOOR SHARE SHARE	STATISTICS AND STREET	CONTRACTOR STATE
				STATE OF THE STATE			/ MEI	нов		新聞的學科	科学科学		但是實際
Site#	NID Map	NID	# UTM	:Zone/East/	以前的 是是一个	MTD/I	E DIE POR	美国公司	Turbio	经过的特别	Co	mment	2001034
Site# 549	NID Map 093L.070	NID 5004		:Zone/East/	以前的 是是一个	MTD/I	色 引出通過影	美国公司	Turbio		Co	mment	
	_			:Zone/East/	North/Mthd GPU	MTD/I	NO Tem	Cond 50	_		Co	mment	
	_			:Zone/East/	North/Mthd GPU	MTD/I	NO Temp	Cond 50	_	and the same of th	Co	mment	
549	093L.070	5004	45 I		North/Mthd GPU	MTD/I	NO Temp 1 6 R SET	Cond 50	_	and the same of th		mment	77
549 Site#	093L.070	5004	Date In	Time In 14:00	North/Mthd GPU A. Date Out	MTD/II EF G E A Time (14:3	NO Temp 1 6 R SET Out 0	Cond 50	С	Con		mment	
549 Site#	093L.070	5004 H/P 1	Date In	Time In 14:00	Date Out 2001/08/18	MTD/II EF G E A Time (14:3	NO Temp 1 6 R SET Out 0	Cond 50 TINGS	С	Con		mment Make	Model

Total #

Lgth (Min/Max)

FishAct

FDIS Reach Card

South Fulton Study Area

Watershed Code: 480-705800-57200-68352-0000-000-000-000-000-000-000-000

Reach # ILP Map #

1.0 093L.070

ILP#

	Charles and a		PROJEC	T	18050 S PAS	- 150KC - 100 P. L. C	Late No. 19	
	计广从中国	Sold Street State of			Barrel Marian	and The hope	to the street of	经运输数
	The state of the s	Landing Fish Inventory	- 2000					
	lame (gaz.): BABINE				roject Code: 3	496		
Project Water	rshed Code: 480-000	000-00000-00000-0000-0	0000-000-000-000-000	-000-000				
			WATERSH	ED				
Reach Water	shed Code: 480-7058	300-57200-68352-0000-0	000-000-000-000-000	-000-000				
ILP Map #: 093L.0)70 ILP	#: 10348 R	leach #: 1.0	NID Map	#: 093L.070		NID#:	50493
Air Photos	3		Names			UTM(Zone/E	ast/North/Meth	od)
LINE: 30BCC98024	Gaz	4				9.681783.6	058483	GIS
#: 145	Loca	:			.3	Sample Type:	B Wet	and:
			SURVEY II	NFO				
Date: 1900/07/0	6		Agency: C172			Crew:	SH	
THE WASTE			ATTRIBUT	ES			1545 346	
Length (km): .	74	Gradient: 8.38	Setting:	VW DIS	STURBANCE	O1 B1 i	B2 B3 D1	D2 D3
DS Elev.:		Order: 2	Open water:	A	INDICATORS	:		
US Elev: 1	1373	Magnitude: 3	Confinement:	OC	C1 C2 (C3 C4 C5	S1 S2 S3	S4 S5
		BGC Zone: SBS	Coupling:	PC				
Valley Flat:	N C/D:			lalanda	A)			
Active Floodp		Est. Width:	D	islands:	N E DIAG	MID	SPAN	BR
Channel Patte	1-22	ESt. VVIGUI.	De	Mass Movement:	M DIAG		d/Eroded: N	
Original Fatt	J111. O1			Riparian Veg.:	M	,,	Landuse: N	
			1	p 709				
alpha (1) and	MAPS							
Map Type	Map #	Year						
TRIM	093L.070		I					

South Fulton Study Area

Watershed Code:

Site#

550

EF

H/P

Species

NFC

Stage

Age

480-705800-57200-68352-0000-0000-000-000-000-000-000

1.0

Lgth (Min/Max)

FishAct

Reach # ILP Map #

Comment

ILP#

Gaz	zetted Name	e:						Loca	al:				
F	Project Cod	e: 480-	000000-00000	0-00000-000	0-000-000-00	0-000-000-	0-000						
	WS Code	: 480-	705800-57200	-68352-000	0-0000-000-00	0-000-000-	000-000						
V	Vaterbody II):				ILP Map #	t:			ILP#:	F	Reach #: 1	-
	Project II	3496						Lake/Str	ream:	S	Lake Fro	m Date:	
F	ish Permit #	: 14	5085K	Date: 2	001/08/18	To: 20	01/08/18	Age	ency: C	172 C	rew: JH/DS	Resar	mple:
1688		Total S			S	ITE /	METH	OD	JAN.			ALCOHOL: S	
Site#	NID Map	NIC	# UTM	:Zone/East/	North/Mthd	MTD/NO	Temp	Cond	Turbio	1	Co	mment	
550	093L.070	500	50		GPU	EF 1	6	50	С				
					A. (GEAR	SETT	INGS					(1) 注意。 (1) 注: (2) 注: (3) 注: (4) 注: (5) 注: (6) 注: (7)
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out				Con	nment		
	EF 1	1	2001/08/18	14:40	2001/08/18	15:30							
550	现于5.5公里			C. EI	ECTRO	FISHE	R SPI	CIFI	CAT	IONS	ALC: N		A STATE
550				F I	Sec L	ength	Width	Volt	ane T	Frequency	Pulse	Make	Model
550 Site#	MTD/	NO	H/P	Encl	Sec L	engui	AAIGILI	VOIL	age	requeries	i disc	IVIANO	MIOGE

Total #

South Fulton Study Area

Reach # ILP Map # ILP # 4.0 093L.080 10133

STREAM REFERENCING **Gazetted Name:** Local Name: ILP Map #: 093L.080 ILP#: 10133 REACH Reach #: 4.0 UTM(Zone/East/North): 9.681392.6072313 Sample Type: Length (km): .67 Coupling: Decoupled Magnitude: BGC Zone: SBS Order: 2 Gradient (%): 4.0 Confinement: Occasionally Conf Open water: Present Islands: NONE US Elev (m): 879 Riparian Vegetation: Shrubs Bars: None 🗸 Side Mid-channel Landuse: Not Specified Diagonal Braid Span SITE Field UTM .. Agency: C172 Date: 2001/08/19 Site #: 791 Crew: JA/JH Site Length (m): 100 GIS UTM 9.681529.6072562 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL Min Max Min No Vis Ch : Max Intermittent: V Avg # Avg # Channel Width (m): 0.97 0.7 1.200 6 Gradient %: 2.25 2 3 4 Dewatered: Tribs.: Wetted Width (m): 0.00 0 0 0 Pool Depth (m): 0.00 0 0 Stage: Low 🗸 Bankfull Depth (m): 0.5 0.40 3 0.3 Med Turbidity .: Turbid Low Moderate High Temp (C): Conductivity: Clear MORPHOLOGY Bed Material: Dominant: Gravels D95 (cm): 4.00 Bars: Non 🗸 Side Diagonal Mid-channel Span Subdominant: Fines D (cm): 0.10 Braid Channel Pattern: Sinuous Islands: None DISTURBANCE **INDICATORS** Coupling: Decoupled Confinement: Unconfined C2 C4 C5 S2 S5 C3 S1 S3 **S4** Morphology: RP Riffle Pool COVER SWD LWD В U DP Total Cover: Abundant Type: OV IV S D S Amount: Ν I WD: Few Location: P/S/O: LWD Dist: Evenly Distributed FSZ: Right Bank: Shape: Undercut Texture: Fines Gravel Cobble Boulder Rock Crown Closure Manmade Shape: Undercut Texture: Fines 🗸 Gravel Cobble Boulder Rock Manmade 1-20% Right Bank: Rip.Veg: Deciduous Stage: Pole-sapling stage Left Bank: Rip.Veg: Instream Veg: None Algae Moss V Vascular V Stage: Pole-sapling stage

South Fulton Study Area

ILP#

Site

Reach # ILP Map #

(表) 型(温度)费							PR	OJE	CT					Helph				Marine S.
Project Name: Smithers Landing Fish Inventory - 2000 Stream Name (gaz.): BABINE RIVER Project Watershed Code: 480-000000-00000-0000-0000-0000-0000-00																		
Stream Na						F	Project C	ode:			3496							
Project Watersh	ned Code	e: 480-0	000000-	00000-0	000-000	00-000-	-000-000	0-000-00	00-000-00	00								
	Habita VIII		PENNS		50 77 STIN	101 Hates	WAT	EDE	HED	8.3.7						W 100 D 3	Salast	WHAT SEE
						Para I	WAI	ENS	HEU	eprinter.	! М	. Nasa			D VALUE SHOP			
Gazetted Name Watershed Code		5900.06	200-000	000.000	0-0000-00	20-000-0	000.000	000-000	1	Loc	cal Name	e: None						
ILP Maph				LP #: 10			ap #: 09			ID#: 70	0091	Read	ch #:	4	4.0		Site #: 7	91
					Method:		- P 11			Site Lg				hod: HC		Acce		
Field UTM (Z.E.N)	GIS UTM (Z.E.N): 9.681529.6072562									ef. Name			Met	nou. no		Acce	55. FI	
OIO OTM (E.E.IV)	,, 0,0010	20.0012	.002.							DI. 140/110								
Da	Date: 2001/08/19 Time: 09:25									Crew: .	JA/JH		F	ish Crd?	: 🔲	Ir	ncomple	ete:
是的表现代的结果	See 1	CH	ANN	EL							Telef.)							
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg			Gadie	ent %	Mtd	Avg
Channel Width (m):	MS	0.80	0.70	1.10	1.20	0.90	1.10					0.97	-	Method I:		2.0	AL	2.25
Wetted Width (m):	MS	_						_	-	_		0.00	l l	lethod II:	3.0	2.0	AL	
Pool Depth (m):	MS											0.00	l N	o Vis.Ch	. 🗆	Intermi	ttent:	/
Wb Depth:	.3	.4	.5	Av	g: 0.40	N	Method:	MS	St	age: L	✓ M	Н		Dw			ribs.:	
COVER			Tota	al: A														
Type	SWD	LV	VD	В	U	DP		OV T	IV	CRO	OWN CL	OSURE.						
Amount	-	-	Т	N	S	N		D	S	1	1	-20%						
Loc: P/S/O	V	V			V		V		V	INS	TREAM	VEG:	N	Α	M 🗸	VV		
LWD	·F			IST: E						,								
				101. L							20 0110	. 11						
LB SHP		- G	0	R	p A						RB SHP		G			Р	A	1
					R _ A							-	٥	c		-	^ _	
RIP STG											RIP STG							
310	. 7 0										010	. 1 0						
新4年以前中 基 新	Marin.			W. Sale		CONT.	W	ATE	R	40. 顺奥				學學是	機學			特化学等
EMS:											eq #:							
Temp:							od: T4			Co	ond.:					Met	hod: S	3
pH: Flood Signs:							d: P2			Т	urb.: T	□ M	L	C		Met	hod: G	E
r lood digits.	None																	
		美的作 标				M	ORP	HOL	OGY			No. of the			A HEAD			Salar VIII
Bed Material:		Dominan	t: G		Subdom	: F				01	B1	B2 E	B3	D1 D)2 D	3		
D95:	4.00	D (cm)): 0.10		Morph	: RP		ISTUR	BANCE									
Pattern:	SI							INDICA	TORS	C1	C2	C3 (C4	C5 S	1 S	2 S	3 S4	S5
Islands:	N																	
Coupling:																		
Confinement:								В	ars:	NV	SIDE	E	DIAG		MID	SPA	N	BR
FSZ:																		
						HAE	BITA	T QI	JALIT	TY						KE II		
Name									С	omment	s							
Spawning Habita	t	_			unt of gra													
Rearing Habitat OverWinter Habita	n f	_	Dry/Int, I - Dry/Int	nigh ove	rhanging	vegetati	on for c	over										
Over writter Fidblis	- CESTRI	Lisone -	Dry/Int	1505010	164	N. A. ST	РН	ОТО	S	to Establish		No. To See	Specific		l majo	State 6	E. 124	制建设置 72。
Photo	Fo	c La	NOVEL ST	Г)ir	unis ell			2. 指了2. 地		AND PROVIDE	Commer	nts		ではなべ	STATE OF THE PARTY.		Sant Es
			_			upst	ream ph	oto of o	verhangir	ng veget				nant cov	er throu	ahout s	sample s	site
										upstream photo of overhanging vegetation which is the dominant cover throughout sample site downstream photo of typical habitat found within site								

South Fulton Study Area

Reach # ILP Map #

093L.080

4.0

ILP# 10133

	COMMENTS
Section	Comments
CHANNEL	S4 inferred, no barriers observed within site or during RECCI flight
CHANNEL	braided sections observed
CHANNEL	stream has a high amount of vascular plants within stream bed



Site #791, upstream photo of overhanging vegetation which is the dominant cover throughout sample site. Roll #24, Frame #13, Date: 2001/08/19



Site #791, downstream photo of typical habitat found within site. Roll #24, Frame #14, Date: 2001/08/19

South Fulton Study Area

Reach # ILP Map # ILP# 5.0 093L.080 10133

AND REAL PROPERTY.			STR	EAMF	REFEREN	CING			
Gazetted Na	ime:				L	ocal Name:			
Watershed (Code: 480-705	800-06200-00	000-0000-0000-0	00-000-000	-000-000-000	ILP !	Map #: 093L.	080 II.	.P#: 10133
	Consume	125		R	EACH	L	liter.	75 1850	表现作业
Reach #: 5 Length (km) Gradient (%) US Elev (m) Bars: None): .53): 4.9): 905	Co Confin	JTM(Zone/East/Nupling: Decouple ement: Occasion slands: NONE Mid-channel	d ally Conf Span	Magnitude: Order: 2 Riparian Veg	4 2 getation: Mixed Landuse: Not	C/D	Sample Type: BGC Zone: Open water: Pre	
					SITE				
Site # Site Length		Field UTM GIS UTI	I М 9.681238.6072		Agend	y: C172 cy Name: Triton		A/JH Date: tal Consultants (T	2001/08/19 [errace]
				CH	ANNEL				9
No Vis.Ch.: Dewatered: Stage: Low Med High	Tril	bs.: C	hannel Width (m) Wetted Width (m) ankfull Depth (m) pH: 7.7	0.00	Min Max 0.7 1.5 0 0 0 0.2 0.3 Conductivit	3 y: 150	Gradient 9 Pool Depth (m		Max # 5 4 0 0 Clear
2				MORE	HOLOGY				
Channel Pa Cou Confine	Subdominant: attern: Sinuous pling: Decoupl ment: Unconfir	Gravels ed	D95 (cm): 4 D (cm): 1 Islands: No	.00 one D	Bars: Non DISTURBANCE INDICATORS C1 C2 C3	O1 B1	B2 B3 S1 S2		Braid D3
17101,5110	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
					OVER				
Total Cover: LWD: LWD Dist:		uted	Amount: Location: P/S/O:	SWD T	LWD B T N	S	DP N	OV IV D S	FSZ:
Right Bank: Left Bank: Right Bank: Left Bank:	Shape: Un Shape: V - Rip.Veg: Mis Rip.Veg:	shape Text		_			Manmade Manmade		own Closure 1-20% Vascular
				1	ISH	- I - I		12 12 12 12 14 A 16 A	
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
792	EF	1	40	27 sec	400	NFC	0		

FDIS Site Card South Fulton Study Area ILP Map # ILP# Site Reach # 5.0 093L.080 10133 792 PROJECT

r rojour trateroriou (gaz.): BA Code: 480	BINE RIV	'ER	0000-00)-000-00	0-000-00	00	F	Project Co	ode:			3496		
Comments of			100			WAT	ERS	HED	Steet.	SHAN		Made 1	Santa Se	R.	in the		
Gazetted Name:									فيا.	cal Nam	e: None						
Watershed Code: 48	0-705800-0	06200-000	000-0000	0-0000-0	00-000-0	000-000-	000-000	1									
ILP Map#: 09:	3L.080	1	LP#: 10	133	NID M	ap #: 09:	3L.080	N	ID#: 70	0092	Read	h #:	5	.0		Site #: 7	792
Field UTM (Z.E.N):				Method:					Site L	a: 100		Metho	d. HC		Acce	ess: H	
GIS UTM (Z.E.N): 9.8	01000 607	79984	,	victioa.				R	ef. Name	_		14101110	, a. 110		71000	700.11	
CIG OTH (Z.E.H.). 8.0	10 1 A 319 . U/U /	2001						13	or. rearrie								
Date:	2001/08/19	9 .	Time: 10	:43		Agency:	C172		Crew:	JA/JH		Fis	h Crd?:	~	1	ncomple	ete:
A STATE OF THE PARTY OF THE PARTY.	Specific School		A 2018	VALUE OF THE OWNER OF	A File of the	СН	ANN	FI	100700	0165586		Contract to	ME HILL		Corner III	SAMMEN	TO THE
		OF SPINS	1107		PACE MARKET			_	220(13)	1.111	and the	79.50	AND VALUE	O-4	1.0/		LA
	Itd width		width	width	width	width	width	width	width	width	Avg	1.4	Ale and I		ent %	Mtd	A
	1S 1.10	0.90	1.50	1.20	0.70	0.80	-	-	-	-	1.03		ethod I:	5.0	3.0	AL	4.
, ,	IS IS	+	-	-				-			0.00	Me	thod II:	4.0	4.0	AL	J
Pool Depth (m): M	10										0.00	No	Vis.Ch.		Interm	ttent: 5	7
Wb Depth:	3 .3	.2	7 Ave	: 0.27	i i	Aethod:	MS	SI	anar L	ER M	Н		Dw			l'ribe.:	-
	0 10	-1					12.5	-		A.d.	Ļ., ·· Ļ.			-			
COVER			al: A														
Type: S	SWD L	WD	В	U	DF		ov	IV	d .		OSURE						
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Texture: F	✓ G	_ c _	В	R	\					RB SHP Texture	U Fy	G 🗍	c 🗌	8	R] ^ [
Texture: F RIP: S STG: MF		c	В	R							: F 📝	G [С	8	R] ^ [
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RIP: S STG: MF EMS: Temp: 6		c	В	R _ /	Metho	od: T4	ATE	R	R. C.	RIP STG eq #: ond.: 150	M : MF	U-1,000) 15 M	Met		3
RIP: S STG: MF EMS: Temp: 6 pH: 7.7		C	В	R	Metho Metho Metho	od: T4 od: P2 od: GE			R C	RIP STG eq #: ond.: 150	: MF	U-1,000) 15 M	Met	thod: S	3
RIP: S STG: MF EMS: Temp: 6 pH: 7.7 Flood Signs: Nor	ne		В		Metho Metho Metho	od: T4 od: P2 od: GE		R	R C	RIP STG eq #: ond.: 150	: F : MF	U-1,000	C.	>	Met Met	thod: S	3
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor	ne	ant: F	В	Subdom	Metho Metho Metho	od: T4 od: P2 od: GE			R C	RIP STG eq #: ond.: 150 urb.: T	: F : MF	L	C.	>	Met Met	thod: S	3
RIP: S STG: MF EMS: Temp: 6 pH: 7.7 Flood Signs: Nor	ne		В		Metho Metho Metho	od: T4 od: P2 od: GE	HOL	OGY	R C	RIP STG eq #: ond.: 150 urb.: T	: F : MF	L	C.	>	Met Met	thod: S	3
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor	ne	ant: F	В	Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	OGY	R C	RIP STG eq #: ond.: 150 urb.: T	: F : MF	L	C.	2 D	Met Met	thod: S	33 6E
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor	ne	ant: F	В	Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	OGY	R C	RIP STG eq #: ond.: 150 urb.: T	: F : MF	L	C .	2 D	Met Met	thod: S	33 6E
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor Bed Material: D95: 4.0 Pattern: SI	ne	ant: F	В	Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	OGY	R C	RIP STG eq #: ond.: 150 urb.: T	: F : MF	L	C .	2 D	Met Met	thod: S	33 SE
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor Bed Material: D95: 4.0 Pattern: SI Islands: N	ne	ant: F	В	Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	O G Y	O1	PIP STG eq #: ond.: 150 urb.: T	B2 E	33 D	C .	2 D	Met Met	thod: S. thod: G	33 SE
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor Bed Material: D95: 4.0 Pattern: SI Islands: N Coupling: DC	ne	ant: F	В	Subdom	Metho Metho Metho	od: T4 od: P2 od: GE	HOL	OGY	R C	RIP STG eq #: ond.: 150 urb.: T	B2 E	L	C .	2 D	Met Met	thod: S. thod: G	33 SE
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor Bed Material: D95: 4.0 Pattern: SI Islands: N Coupling: DC Confinement: UN	ne	ant: F m): 1.00	В	Subdom	Metho Metho Macho Ma Macho Macho Ma Ma Macho Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma	od: T4 od: P2 od: GE IORP	HOL	OGY BANCE TORS	O1	PIP STG eq #: ond.: 150 urb.: T	B2 E	33 D	C .	2 D	Met Met	thod: S. thod: G	33 SE
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor Bed Material: D95: 4.0 Pattern: SI Islands: N Coupling: DC Confinement: UN FSZ:	ne	ant: F m): 1.00		Subdom	Metho Metho Macho Ma Macho Macho Ma Ma Macho Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma Ma	od: T4 od: P2 od: GE IORP	HOL	OGY BANCE TORS ars:	R C	PIP STG eq #: ond.: 150 urb.: T B1 C2 SID	B2 E	33 D	C .	2 D	Met Met	thod: S. thod: G	33 SE
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor Bed Material: D95: 4.0 Pattern: SI Islands: N Coupling: DC Confinement: UN FSZ:	Domina 00 D (cr	ant: F m): 1.00		Subdom	Metho	od: T4 od: P2 od: GE	HOL DISTURE INDICA B	OGY BANCE TORS ars:	O1	PIP STG eq #: ond.: 150 urb.: T B1 C2 SID	B2 E	33 D	C .	2 D	Met Met	thod: S. thod: G	33 SE
RIP: S STG: MF EMS: Temp: 6 pH: 7.7 Flood Signs: Nor Bed Material: D95: 4.0 Pattern: SI Islands: N Coupling: DC Confinement: UN FSZ: Name Spawning Habitat	Domina 00 D (cr	ant: F m): 1.00	lack of c	Subdom Morph	Metho	od: T4 od: P2 od: GE IORP	HOLDISTURE INDICA	OGY BANCE TORS ars:	O1 O1 TY Commen	PIP STG eq #: ond.: 150 urb.: T B1 C2 SID	B2 E	L 333 D CA CC	C .	2 D	Met Met	thod: S. thod: G	33 SE
EMS: Temp: 6 pH: 7.7 Flood Signs: Nor Bed Material: D95: 4.0 Pattern: SI Islands: N Coupling: DC Confinement: UN FSZ:	Domina 00 D (cr	ant: F m): 1.00	lack of c	Subdom Morph	Metho	od: T4 od: P2 od: GE IORP	HOLDISTURE INDICA	OGY BANCE TORS ars:	O1 O1 TY Commen	PIP STG eq #: ond.: 150 urb.: T B1 C2 SID	B2 E	L 333 D CA CC	C .	2 D	Met Met	thod: S. thod: G	33 SE

upstream photo of fine substrate and the high overhanging vegetation found within sample area

downstream photo of high vascular plant distribution within stream bed

15

16

STD

STD

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R:

R: 24

24 F:

South Fulton Study Area

Reach # ILP Map #

5.0

093L.080

ILP# 10133 Site 792

Section Comments

CHANNEL isolated pools in lower 10m were sampled (No fish caught)

CHANNEL high distribution of vascular plants were observed in stream bed

CHANNEL no barriers were observed within sample site

CHANNEL S4 default

South Fulton Study Area

Watershed Code:

Reach #

5.0

ILP Map # 093L.080

ILP# 10133

Gazetted Name:

WATERBODY

Local: None

	442	Code:	480-1	05800-06200	-00000-000	0-000-000-00	0-000-000-0	00-000						
V	/aterbo	dy ID:					ILP Map #:	093L.0	30		ILP #:	10133 Re	each #: 5	i -
	Proje	ect ID:	3496						Lake/Str	eam:	S	Lake From	n Date:	
F	ish Per	mit #:	145	085K	Date: 2	001/08/19	To: 200	1/08/19	Age	ency: C	172	Crew: JA/JH	Resar	nple:
	的,并被自己的政治,但是阿拉巴克斯。在阿拉巴克斯						ITE / N	RETH	OD	UST HAVE				5年 海北
Site#	NID	Мар	NID	# UTM	:Zone/East/	North/Mthd	MTD/NO	Temp	Cond	Turbio	1	Con	nment	
792						GPU	EF 1	6	150	С				
		10 miles			是石类的	A. 1	GEAR :	SETT	INGS					到成型图式
Site#	MTD	/NO	H/P	Date In	Time In	Date Out	Time Out				С	omment		
792	EF	1	1	2001/08/19	10:43	2001/08/19	11:10							
		Side .			C. El	LECTRO	FISHE	SP	ECIFI	CAT	IONS		美国的影响	
Site#	I	/TD/N	Ю	H/P	Encl	Sec L	.ength	Width	Volt	tage	Frequency	Pulse	Make	Model
792	EF		1	1	0	27	40.0	1.1	40	00		5	SMITH	12B
													ROOT	

			and of all	经有条件	AL 美丽树	FISH	SUM	MARY		d on a	U.S. A. D. D. W. A. D. LEO
Site#	MTE	D/NO	H/P	Species	Stage	Age	Total #	Lgth (M	in/Max)	FishAct	Comment
792	EF	1	1	NFC			0				



Site #792, upstream photo of fine substrate and the high overhanging vegetation found within sample area. Roll #24, Frame #15, Date: 2001/08/19



Site #792, downstream photo of high vascular plant distribution within stream bed. Roll #24, Frame #16, Date: 2001/08/19

South Fulton Study Area

Watershed Code: 480-705800-06500-65000-9340-3429-000-000-000-000-000-000

Reach # ILP Map # ILP # 00-000-000-000-000 1.0 093L.080 10139

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South Fulton Study Area

Reach # ILP Map # ILP# Site 093L.080 793 Watershed Code: 480-705800-06500-65000-9340-3429-000-000-000-000-000-000 1.0 10139

							PR	OJE	CT								
Proje	ect Name	: Smith	ners La	nding Fisl	n Invento	ry - 200	0										
Stream Nar	me (gaz.)	: BAB	NE RI	/ER							P	roject Co	ode:	3	3496		
Project Watersh	ned Code	: 480-0	000000	-00000-00	0000-000	0-0000-	-000-000	0-000-00	0-000-00	00							
	-	61556	100		Trusta	VALLER	WAT	ERS	HED	8 4 1		rettle u			かりまれる	SERVER 12-1	
Gazetted Name										Loc	al Name	e: None			And the second	sareare), 2	
Watershed Code		5800-06	500-65	000-9340	-3429-00	0-000-0	000-000	-000-000									
ILP Map#	: 093L.08	30		ILP#: 10	139	NID Ma	ap #: 09	3L.080	N	ID#: 70	093	Reac	h #:	1.0	Site #:	793	
Field UTM (Z.E.N)	:			l. N	fethod:					Site Lg	g: 100		Method: HC		Access: H		
GIS UTM (Z.E.N)	: 9.68122	26.6072	232						R	ef. Name) :						
Da	te: 2001	/08/19		Time: 11:	30	,	Agency:	C172	C	rew:	JA/JH		Fish Crd?	: [Incomplete:		
101000000000000000000000000000000000000	1000		PUR	MATE.		1283	CH	ANN	EL		The second	A TOS	A STATE OF		ALCOHOL:	42000	
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient	t % Mtd	Avg	
Channel Width (m):												0.00	Method I		4.0 AL	4.25	
Wetted Width (m):												0.00	Method II	5.0	5.0 AL		
Pool Depth (m):	Pool Depth (m):										-	0.00	No Vis.Ch	.: V In	termittent:		
Wb Depth:	Wb Depth: Avg: 0.00								St	age: L	T M	- н -	D\	v:	Tribs.:		
COVER			То	tal:		Method: MS Stage							-			- 1	
Type:									IV	CRO	OWN CL	OSURE					
Amount:]							
Loc: P/S/O:										INS	TREAM	VEG: I	NA	M		- }	
LWD:			[DIST:						-							
LB SHP										ı	RB SHP						
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pH:						Metho	od:			Т	urb.: T	М	LC		Method: G	SE	
Flood Signs:						Metho	od:										
	1500			mark t		M	ORP	HOL	OGY		10.00	NAME OF TAXABLE PARTY.		場内的問			
Bed Material:	D	ominan	t:		Subdom					01	В1	B2 B	33 D1 E	D3 D3			
D95:		D (cm)):		Morph:			DISTURE	BANCE								
Pattern:								INDICA		C1	C2	C3 C	C4 C5 S	S1 S2	S3 S	4 S5	
Islands:																	
Coupling:																	
Confinement: FSZ:								Ва	ars:	N	SIDE		DIAG	MID	SPAN	BR	
F32:												-					
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Other	A SAME	No VIS	ible Ch	annel			DH	ОТО	9								
Photo		10		_		2013			T. Y. O.		A SEE	2	TENERS A				
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Section	In the state of the last		EL PAINTED	- HARTEL		HE TON	Later to the	E-SHOW SHIP	C	Comments							

South Fulton Study Area

Watershed Code: 480-705800-06500-65000-9340-3429-000-000-000-000-000-000

Reach # ILP Map #

1.0

093L.080

ILP# 10139 Site 793

	COMMENTS
Section	Comments
CHANNEL	vegetated gully consists of devil's club, alder, lady fern and spruce trees
CHANNEL	No stream or channel observed



Site #793, upstream photo of vegetated gully. Roll #24, Frame #17, Date: 2001/08/19



Site #793, downstream photo of vegetated gully. Roll #24, Frame #18, Date: 2001/08/19

South Fulton Study Area

Watershed Code: 480-705800-57200-31118-0000-0000-000-000-000-000-000

Reach # !LP Map # ILP#

2.0 093L.069 10193 STREAM REFERENCING **Gazetted Name:** Local Name: Watershed Code: 480-705800-57200-31118-0000-0000-000-000-000-000-000 ILP Map #: 093L.069 ILP#: 10193 REACH Reach #: 2.0 UTM(Zone/East/North): 9.679991.6061379 Sample Type: Random Length (km): 1.72 Coupling: Decoupled BGC Zone: SBS Magnitude: 1 Gradient (%): 9.6 Confinement: Confined Order: 1 Open water: Absent US Elev (m): 1298 Islands: NONE Riparian Vegetation: Shrubs Bars: None ✓ Side ☐ Diagonal ☐ Mid-channel ☐ Span ☐ Braid ☐ Landuse: Not Specified SITE Site #: 794 Field UTM .. Site Length (m): 110 GIS UTM 9.678724.6061540 Agency Name: Triton Environmental Consultants (Terrace) CHANNEL Intermittent: ___ No Vis.Ch.: Avg Max Channel Width (m): 0.60 | 0.400 | 0.800 Gradient %: Dewatered: 🗹 Tribs.: 13.50 9 19 4 Wetted Width (m): 0.60 | 0.400 | 0.800 Pool Depth (m): 0.08 0.03 0.150 6 Stage: Low 🗸 Bankfull Depth (m): 0.17 0.1 0.3 Med Turbidity.: Turbid Low Hiah Temp (C): 8 0.8 :Hq Conductivity: 20 Moderate Clear V MORPHOLOGY Bed Material: Dominant: Fines D95 (cm): 10.00 Bars: Non 🗹 Side Diagonal Mid-channel Span Subdominant: Gravels D (cm): 1.00 Braid Channel Pattern: Sinuous Islands: None DISTURBANCE 01 B1 INDICATORS Coupling: Decoupled Confinement: Unconfined C2 C3 C4 C5 81 S2 S4 Morphology: RP Riffle Pool COVER Total Cover: Moderate Type: SWD LWD В U DP OV IV Amount N S LWD: None Location: P/S/O: V LWD Dist: FSZ: Shape: Undercut Texture: Fines Gravel Cobble Boulder Rock Manmade Texture: Fines Gravel Cobble Boulder Rock Manmade Right Bank: Crown Closure Left Bank: 1-20% Right Bank: Rip.Veg: Shrubs Stage: Mature forest Instream Veg: None ☐ Algae ☐ Moss ✔ Vascular ☐ Left Bank: Rip.Veg: Stage: Mature forest

					2 H				
Site Number	Capture Method	Number of Events	Length fished (m)	Total Time	Voltage	Species	Total Fish	Minimum Length (mm)	Maximum Length (mm)
794	EF	1	80	100 sec	500	NFC	0		

South Fulton Study Area

Reach# ILP Map # ILP # Site 2.0 093L.069 10193 794

Watershed Code: 480-70	5800-57200-311	18-0000-0000-00	0-000-0	000-000-	000-000		2.	.0	-	093L.069	101	193	794	4
				PR	OJE	C T								
	e: Smithers Land		ry - 200	0										
Stream Name (gaz.): BABINE RIVE	ER						-	Project Co	ode:		3496		
Project Watershed Code	e: 480-000000-0	0000-00000-000	0-0000-	000-000	-000-00	0-000-00	00							
			Have	WAT	ERSI	HED		- C + E -	eron a subject to	- Carlotte	Section 1	A (NAME OF S	SC SCHOOL BOX	Acada are
					-110									
Gazetted Name:	5000 57000 044	40 0000 0000 00	0 000 0	00.000	000 000		Lo	cal Nam	e: None					
Watershed Code: 480-70							ID#: 70	2004	Read	Jr. 44.	2.0	0:	4- 4- 70	4
ILP Map#: 093L.00	DB IE	.P #: 10193	MID IM	ap #: 093	3L.009	N			Read				te #: 794	4
Field UTM (Z.E.N):		Method:					Site Lo			Method: HC		Access	:: H	
GIS UTM (Z.E.N): 9.6787:	24.6061540					Re	of. Name	9:						
Date: 200	1/08/19 T	ime: 13:29	,	Agency:	C172	C	rew:	JA/JH		Fish Crd	?: 🗸	Inc	omplete	: 🗀
是是这个种的性质的			4.5	СН	ANN	EL	10	Tan S			K BIG			
Mtd	width width	width width	width	width	width	width	width	width	Avg		Gadie	ent %	Mtd	Avg
Channel Width (m): MS	0.80 0.40	0.60 0.70	0.60	0.50					0.60	Method	1: 9.0	19.0	C	13.50
Wetted Width (m): MS	0.80 0.40	0.60 0.70	0.60	0.50					0.60	Method I	1: 14.0	12.0	С	
Pool Depth (m): MS	0.09 0.10	0.15 0.08	0.04	0.03					0.08					
Wb Depth: .3	.1 .1	Avg: 0.17	N.	fethod:	MS	St	age: L	M	ПН	No Vis.Ci □ D	h.: w: 🗸	Intermitte Tril	bs.:	
COVER	Tota	_					-g							
Type: SWD		B U	DP		OV T	IV	1 CP/	OWN CI	OSURE					
Amount: T	N	N D	N		S	T	1		1-20%					
Loc: P/S/O:							1			N A	M Ca	v 🗀		
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LB SHP: V								RB SHP	: U					
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RIP: S								RIP						
STG: MF								STG						
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EMS:	MISSES HISTORY	NEW AND AND	STORY.	VV	ATE	X SPEEDS	D	eq #:			为即是			新聞問題
Temp: 8			Metho	d: T4				eq #. ond.: 20				Mothe	od: S3	
pH: 8.0				d: P2								Metric		
Flood Signs: None				d: GE			Т	urb.: T	M	_ L _ C	~		GE	
-						001								
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Bed Material: D	lominant: F	Subdom:	G				01	B1	B2 E	33 D1 I	D2 D3	5		
D95: 10.0	D (cm): 1.00	Morph:	RP	D	ISTURB	ANCE								
Pattern: SI					INDICAT		C1	C2	C3 C	C4 C5	S1 S2	2 S3	S4	S 5
Islands: N														
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			HAE	BITA	TQU	ALI	ГҮ		MUSIC .	NATIONAL	2 10 40	(M) (M)		
Name		国际区域中国企业	用型势负型		(N) 74 101 (S)	C	ommen	ts	尼 沙里斯(普)	WAR STANKS			· 唯二二	いと
Spawning Habitat	Low - limited by	lack of clean par	tches of	gravel			J. H. HOLL							
Rearing Habitat		lack of cover an	_								-			
OverWinter Habitat		lack of deep poo	_											
				PH	ОТО	S			A A					
Photo Fo	c Lg	Dir	T	A A VIII	100		DESCRIPTION OF		Commen	ts	S. China			
	TD	U	upst	ream ph	oto of de	-watere	d section	n commo		hout sample s	site			

downstream photo of typical morphology found within sample site

STD

D

R: 24 F: 20

South Fulton Study Area

Reach # ILP Map #

ILP#

Site

Watershed Code: 480-705809-57200-31118-0000-0000-000-000-000-000-000-000

2.0 093L.069 10193

	COMMENTS
Section	Comments
CHANNEL	dewatered sections throughout site
CHANNEL	No fish caught
CHANNEL	S4 default

South Fulton Study Area

MTD/NO

EF

H/P

Species

NFC

Stage

Age

Site#

794

Watershed Code: 480-705800-57200-31118-0000-000-000-000-000-000-000

Reach # ILP Map #

2.0

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ILP#

093L.069 10193

Comment

G-	zetted Name							1.00	el: Non					
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			03800-37200	F3 1 1 10-000	0-0000-000-00			20		0.55.8	10100			
V	Vaterbody ID:		ILP Map #: 093L.069										2 -	
	Project ID:	3496	3496 Lake/Stream: S Lake From Date:											
F	Fish Permit #:	145	085K	Date: 2	001/08/19	To: 200	01/08/19	Agency: C172		72 0	rew: JA/JH	Resar	npie:	
L COL					S	ITE / I	METH	OD			Preside			
Site#	NID Map	NID	# UTM	:Zone/East/l	North/Mthd	MTD/NO	Temp	Cond	Turbid		Cor	mment		
	0001 000	7009	14		GPU	EF 1	8	20	С	1				
794	093L.069	7008	94		0,0									
794	093L.069	700	94	Medical Cons		GEAR				AL THE				
794 Site#	093L.069	H/P	Date In	Time In						Cor	mment			
VI Phi	HOLE TO		李等声	Time In 13:29	Α.	GEAR				Cor	mment			
Site#	MTD/NO		Date In	13:29	A. Date Out	GEAR Time Out 13:47	SETT	INGS			mment			
Site#	MTD/NO	H/P 1	Date In	13:29	Date Out 2001/08/19	GEAR Time Out 13:47	SETT	INGS	CAT		mment	Make	Model	

Total #

Lgth (Min/Max)

FishAct



Site #794, upstream photo of de-watered section common throughout sample site. Roll #24, Frame #19, Date: 2001/08/19



Site #794, downstream photo of typical morphology found within sample site. Roll #24, Frame #20, Date: 2001/08/19

South Fulton Study Area

Reach#

ILP Map #

ILP# 30005

Watershed Code:

5.0

093L.080

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				480-729600-73200-00000-0000-000-000-000-000-000-000													
V													5 -				
	Proj	ect ID:	3496								Lake/Stre	eam: L	Lake Fro	m Date:			
F	ish Pe	rmit #:	14	5085K		Date: 2	001/08/04	T	o: 200	1/08/05	Age	ency: C172	Crew: JA/DS	Re	esample:		
1							S	ITE	/ A	METH	OD						
Site#	NID	NID Map NID #		UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment					
870	0931	080	308	30870			GPU		5	7		С					
870	0931	080	308	30870		GPL		MT	4	7		С					
870	0931	080	308	30870		GPU		MT	3	7		С					
870	0931	93L.080 30870		70			GPU		2	7		С					
870	0931	080	308	70			GPU		1	7		С					
			MANUT.	7 (1) (2)(0 (Y			Α.	GEA	AR S	SETT	INGS			10 42			
Site#	MTE	D/NO	H/P	Date	In Time In Date Out				me Out Comment								
870	MT	1	1	2001/0	2001/08/04 11:15 2001/08/0				5 12:45								
870	MT	2	1	2001/0	8/04	/04 11:15 2001/08/0		12	:45	¥5							
870	MT	3	1	2001/0	8/04	11:15	2001/08/05	12	:45								
870	MT	4	1	2001/0	8/04	11:15 2001/08/0		8/05 12:45									
870	MT	5					2001/08/05	12	1.00								
			12.00			В	NET/T	RAI	SI	ECI	FICAT	IONS	STATE SHIPE				
Site #			MTD/NO.			H/P N		Net Type		gth	Depth	Mesh	Set	Habitat			
870		M			1		1					1.5		BT	L		
870		М		2			1					1.5		BT	L		
870 M				3		1				1.5			BT	L			
		М			4		1					1.5		BT	L		
870		М	Т		5		1					1.5		BT	L		
		NAME.	FIGURE	HEALTH	是是		F	ISH	SU	MMA	RY		是某种情報的	B			
ite#	_	/TD/N	0	H/P	Spec		tage Age	e	Total	# Lg	th (Min/Ma	x) FishAct		Comment			
870	MT		1					0		_							
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South Fulton Study Area

WATERBODY Gazetted Name: Local: WS Code: 480-718600-21400-00000-0000-000-000-000-000-000-000 Waterbody ID: 01309BABL ILP#: 30000 ILP Map #: 093L.080 Reach #: 2 -Project ID: 3496 Lake/Stream: L Lake From Date: Fish Permit #: 145085K Date: 2001/08/05 To: 2001/08/05 Agency: C172 Crew: JS/DS Resample: SITE / METHOD MTD/NO Temp Site# NID Map NID# UTM:Zone/East/North/Mthd Turbid Cond Comment 093L.080 30871 GPU MT 5 C 0931_080 30871 GPU MT 871 4 8 C 871 093L.080 30871 GPU MT 3 8 C 871 093L.080 30871 GPU MT 2 8 С 093L.080 871 30871 GPU MT 8 C A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment 871 MT 2001/08/04 10:25 2001/08/05 10:40 2 2001/08/04 2001/08/05 10:40 871 MT 10:25 3 2001/08/04 2001/08/05 871 MT 1 10:25 10:40 871 MT 4 1 2001/08/04 10:25 2001/08/05 10:40 871 МТ 5 2001/08/04 10:25 2001/08/05 10:40 B. NET/TRAP SPECIFICATIONS Site # MTD/NO. H/P Net Type Length Depth Mesh Set Habitat 871 MT 1.5 L 871 MT 2 1 1.5 BT L МТ 871 3 1.5 1 вт L 871 MT 4 1.5 ВТ L 871 MT 5 1.5 ВТ FISH SUMMARY Site# MTD/NO H/P Species Total # Lgth (Min/Max) Stage Age FishAct Comment 871 MT LKC 14 40 90 R 871 2 LKC J 5 50 80 R 871 MT 3 1 LKC J 1 60 60 R 871 МТ 4 LKC 50 .1 3 75 R 871 MT 5 LKC 10 50 90 R INDIVIDUAL FISH DATA Site# MTD/NO H/P Species Length Weight Sex Mat Vch# Genetic Roll# Age Frame# Comment Str/Smpl#/Age Str/Smpl# 871 МТ LKC 70 U IM 871 MT 1 LKC 65 U IM 871 MT 1 LKC 65 U IM МТ 871 1 LKC 60 11 IM LKC 50 871 MT U IM 871 MT LKC 55 U IM 871 MT LKC 45 U IM 871 LKC MT 45 U IM 871 MT 1 LKC 45 U IM 871 МТ LKC 1 55 U 1 IM LKC 50 871 MT U IM 871 MT LKC 90 U IM 871 МТ LKC 60 U IM 871 MT 1 LKC 80 U IM 871 MT 2 1 LKC 50 U IM 871 MT 2 LKC 80 1 U IM 871 MT LKC 55 U IM 871 MT LKC 66 U IM

South Fulton Study Area

Watershed Code:

Reach #

ILP Map # 093L.080

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Site#	MT	D/NO	H/P	Species	Length	Weight	Sex	Mat		Age		Vch#	Ge	netic	Roll #	Frame#	Comment
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871	MT	2	1	LKC	55		U	IM									
871	MT	4	1	LKC	50		U	IM									
871	MT	4	1	LKC	55		U	IM									
871	MT	4	1	LKC	75		U	IM									

South Fulton Study Area

Reach #

ILP Map #

ILP#

Watershed Code:

6.0

093L.080

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Ga	zetted	Name:	:							Loc	al:					
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V		•		3BABL			ILP	Map #	: 093L.0			ILP#			-	
	Proj	ect ID:	3496		_					Lake/S1	ream:	L	La	ike From Date:		
F	Fish Pe	rmit #:	145	5085K	Date: :	2001/08/04	T	o: 2 0	01/08/05	Ag	ency:	C172	Crew:	JA/DS	Resample:	_
			1.77	WAR:			ITE	7 1	METI	DOI	** , j	s IV.			- 1.2 757	
Site#	NID	Мар	NID	# UTM	1:Zone/East	/North/Mthd	MTI	D/NO	Temp	Cond	Turt	oid		Comment		
872	093	L.080	308	72			MT	5								
872		L.080	308			GPU		4								
872		L.080	308			GPU		3		<u> </u>	<u> </u>					
872		L.080	308			GPU		2		ļ						
872		L.080	308			GPU		1							_	10000000
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Site#		D/NO	H/P	Date In	Time In			e Out					Comment			
872	MT		1	2001/08/04	08:05	2001/08/05		:40								
872 872	MT	3	1	2001/08/04	08:05 08:05	2001/08/05		:40						_		
872	MT	4	1	2001/08/04	08:05	2001/08/05		:40								
872	MT	5	1	2001/08/04	08:05	2001/08/05		:40							_	-
1.571 - 354 .70	11.0	_				. NET/T	RAI	PS	PECI	FICA	Tilo	N S	27 T 865			
Site #				TD/NO.	<u> </u>		Net Ty		ela can	igth	De	4.10	Mesh	Set	Habita	•
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872			iT	2	_	1						.9		BT BT	 	
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872	MT		1		IFC			()							
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South Fulton Study Area

ILP Map # Reach # 480-729600-73466-41727-0000-0000-000-000-000-000-000 093L.080 Watershed Code: 9.0

ILP#

30006

WATERBODY Gazetted Name: Local: WS Code: 480-729600-73466-41727-0000-0000-000-000-000-000-000 Waterbody ID: 03028BABL ILP Map #: 093L.080 ILP#: 30006 Reach #: 9 -Project ID: 3496 Lake/Stream: L Lake From Date: 145085K To: 2001/08/05 Agency: C172 Crew: JA/DS Fish Permit #: Date: 2001/08/04 Resample: SITE / METHOD Site# NID Map NID# UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 873 093L.080 30873 GPU MT 4 30873 GPU MT 3 873 093L.080 30873 GPU MT 2 873 093L.080 873 093L.080 30873 GPU MT 1 A. GEAR SETTINGS. Comment MTD/NO Time In Site# H/P Date In Date Out Time Out 873 2001/08/04 09:40 2001/08/05 11:00 873 ΜŤ 2 1 2001/08/04 09:40 2001/08/05 11:00 09:40 2001/08/05 11:00 873 MT 3 2001/08/04 1 873 MT 4 2001/08/04 09:40 2001/08/05 11:00 B. MET/TRAP SPECIFICATIONS 1.00 Site # MTD/NO. H/P Net Type Length Depth Mesh Set Habitat 873 ВТ 1.8 L 1 873 2 1 1.6 BT L RT 873 MT 3 1.6 L MT 873 4 1 1.7 ВТ L FISH SUMMARY 96 Site# MTD/NO H/P Species Stage Total # Lgth (Min/Max) FishAct Comment 873 MT NFC ō 873 МТ 2 NFC 0 1 873 МТ 3 1 NFC 0

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MT

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NFC

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South Fulton Study Area

Reach #

11.0

ILP Map # ILP #

Watershed Code:

WATERBODY Gazetted Name: Local: Waterbody ID: 01314BABL ILP Map #: ILP#: Reach #: 11 -Project ID: 3496 Lake/Stream: W Lake From Date: Fish Permit #: Date: 2001/08/04 To: 2001/08/05 Agency: C172 Crew: JA/DS 145085K Resample: SITE / NETHOD Site# NID Map NID# UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 874 093L.080 30874 GPU MT 5 GPU MT 30874 4 093L.080 874 30874 GPU MT 874 093L.080 3 874 093L.080 30874 GPU MT 2 GPU MT 1 874 093L.080 30874 A, GEAR SETTINGS Site# MTD/NO Date Out Time Out Date In Time In 874 MT 1 1 2001/08/04 08:04 2001/08/05 12:20 874 MT 2 2001/08/04 08:04 2001/08/05 12:20 1 874 ΜT 3 2001/08/04 08:04 2001/08/05 12:20 1 874 MT 4 1 2001/08/04 08:04 2001/08/05 12:20 5 874 ΜT 1 2001/08/04 08:04 2001/08/05 12:20 B. NET/TRAP SPECIFICALIONS A SECURE AND SECURE and the second second MTD/NO. Site # H/P Net Type Length Depth Mesh Set Habitat 874 MT 1.5 ВТ L 874 MT 2 1 1.5 ВТ L 874 MT 3 1 1.5 ВТ L 874 МТ 4 1 1.5 BT Ĺ 874 МТ 5 1.5 вт 1 FISH SUMMARY SHAPE SAME Maria de la compa MTD/NO Site# H/P Species Stage Total # Lgth (Min/Max) FishAct 874 NFC 0 874 ΜŢ NFC 0 874 МТ 3 1 NFC 0 874 МТ 4 NFC 1 0 874 МТ 5 NFC 0

South Fulton Study Area

Reach #

ILP Map #

ILP#

093L.080 30004 000-00000-00000-00000-0000-0000-000-000-000-000-000-000 2.0 Watershed Code: WATERBODY: Gazetted Name: Local: ILP Map #: 093L.080 ILP#: 30004 2 -Reach #: Waterbody ID: Project ID: 3496 Lake/Stream: L Lake From Date: Fish Permit #: Date: 2001/08/04 To: 2001/08/05 Agency: C172 Crew: JA/DS 145085K Resample: SITE / METHOD UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid NID Map NID# Site# 093L.080 30875 **GPU** MT 5 GPU MT 4 093L.080 30875 875 875 093L.080 30875 GPU MT 3 093L.080 30875 GPU MT 2 875 875 093L.080 30875 GPU MT 1 A. GEAR SETTINGS . Site# MTD/NO H/P Date In Time In Date Out Time Out ΜT 1 2001/08/04 12:00 2001/08/05 10:10 875 2001/08/04 2001/08/05 10:10 875 MT 2 1 12:00 875 MT 3 2001/08/04 12:00 2001/08/05 10:11 1 875 ΜT 4 2001/08/04 12:00 2001/08/05 10:15 10:15 мт 5 2001/08/04 12:00 2001/08/05 875 1 B. NET/TRAP SPECIFICATIONS Site # MTD/NO. H/P Net Type Length Depth Mesh Set Habitat 875 MT 1 2.5 BT L ВТ МТ 27 875 2 1 L МТ 875 3 1 2.7 ВТ L 875 MT 4 1 2.7 BT L МТ 2.7 BT 1 875 5 ï FISH SUMMARY IN THE SECOND OF Site# MTD/NO H/P Total # Lgth (Min/Max) FishAct Species Stage Age Comment 875 MT 1 LKC J 3 50 70 R 875 MT 1 RB 4 50 65 R J 875 MT 1 LKC 3 50 83 R J MT RB 875 3 1 .1 2 50 65 R 875 MT 3 LKC J 50 65 R 1 875 МТ 4 LKC J 50 70 R мт 5 875 LKC 50 1 .1 3 75 R INDIVIDUAL FISH DATA Za Grana til samme 24/20 MTD/NO Weight Sex Site# H/P |Species | Length Mat Age Vch# Genetic Roll# Frame# Comment Str/Smpl#/Age Str/Smpl# 875 MT LKC 50 IM 875 MT 1 1 LKC 70 U IM 875 МТ LKC 60 IM 1 IJ 1 мт 2 U 875 1 LKC 60 IM 875 MT 2 1 LKC 85 П IM 875 МТ 2 LKC 50 U IM 1 50 875 MT 1 RB U IM 2 875 MT 1 RB 60 П IM 875 МТ 2 1 RB 65 Ū IM 875 MT 2 RB 60 Ū 1 IM 875 MT 3 1 RB 65 Ū IM 875 МТ 3 RB 50 U IM 1 875 MT 3 LKC 65 U łМ

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South Fulton Study Area

Watershed Code:

Reach #

ILP Map # 093L.080 ILP# 30004

Site#	MT	D/NO	H/P	Species	Length	Weight	Sex	Mat		Age	Vch	#	Genetic	Roll#	Frame#	Comment
									Str/S	Str/Smpl#/Age		Str/Smpl#		Str/Smpl#		
875	MT	3	1	LKC	60		υ	IM								
875	MT	3	1	LKC	65		U	IM								
875	MT	4	1	LKC	70		U	IM								
875	MT	4	1	LKC	50		U	IM				1				
875	MT	4	1	LKC	50		U	IM				1				
875	мт	5	1	LKC	75		U	IM								
875	МТ	5	1	LKC	50		U	IM						_		
875	мт	5	1	LKC	60		Ų	IM		<u> </u>		Ī				

FDIS Reach Card

South Fulton Study Area

Watershed Code: 480-742900-26000-72510-0000-0000-000-000-000-000-000-000

Reach # ILP Map #

093L.080

2.0

ILP# 10055

PROJECT Project Name: Smithers Landing Fish Inventory - 2000 Stream Name (gaz.): BABINE RIVER Project Code: 3496 WATERSHED Reach Watershed Code: 480-742900-26000-72510-0000-0000-000-000-000-000-000-000 ILP Map #: 093L.080 ILP#: 10055 Reach #: 2.0 NID Map #: 093L.080 NID#: 50173 Air Photos Names UTM(Zone/East/North/Method) LINE: 30BCC97158 GIS Gaz.: 9.683840.6066764 #: 131 Local: Sample Type: B Wetland: SURVEYINFO Date: 1900/07/06 Agency: C172 Crew: SH ATTRIBUTES Gradient: 2.86 DISTURBANCE Length (km): .56 Setting: vw B1 B2 B3 INDICATORS DS Elev.: 1069 Order: 2 Open water: A US Elev: 1085 Magnitude: 2 Confinement: OC C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 BGC Zone: ESSF Coupling: DC Valley Flat: N Islands: Active Floodplain Visible: Est. Width: Bars: ✓ N SIDE DIAG MID SPAN Channel Pattern: SI Mass Movement: M Exposed/Eroded: NS Riparian Veg.: S Landuse: NS

	MAPS	
Мар Туре	Map#	Year
TRIM	093L.080	

South Fulton Study Area

Reach#

ILP Map#

ILP#

Watershed Code:

480-742900-26000-72510-0000-0000-000-000-000-000-000

2.0

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			-742900-	26000-72	2510-000	0-0000-00	J - 00					_					_		_
W	aterbody Project	ID: ID: 349	6					ILP	Map #	: 09:	3L.08	0 Lake/St	ream:		.P#:	10055 Lake	Read From D		2 -
F	ish Permi	#: 14	15085K		Date: 20	001/07/31		To	o: 20	01/07	7/31	Ag	ency:	C172	C	Crew: JA/	JH	Resar	mple:
i als	Asia.						S	ITE	\mathbf{d}_{i}	15	TH	O D					- 14-		
Site#	NID Ma	p NI	D#	UTM:Zo	ne/East/l	North/Mtho		MTC)/NO	Те	mp	Cond	Turt	oid			Comm	ent	
953	093L.08		953			G	PU	EF	1	•	6	60	С						
	trick:		-4-3	47	print prope	44 - JA		BEI	LR.	SĘ,	TT	NGS			1110				4 1 144 - 1 5 14
Site#	MTD/N	O H/P	Date	In	Time In	Date O	ut	Time	Out						Co	nment			
953	EF	1	2001/0	7/31	10:15	2001/07/	31	10:	:35										
		* ***	rina fire	ig Edi v	G. EL	ECTR	0	FJS	HE	R S	PE	CIF	CA	TIO	N 8		4	- 4	100
Site#	MT	D/NO	H/P	E	ncl	Sec	Ļ	ength.	T	Wi	dth	Vol	tage	Fre	quency	Pulse	,	Make	Model
953	EF	1	1		0	100		100.0		1	1.0	6	00		1	5		SMITH ROOT	12B
							F	13 H	SI	J [M 1	MA	RY					. 17	KOOT	
Site#	MTI)/NO	H/P	Spec	ies S	tage	Age	9	Tota	i#	Lgtl	h (Min/M	ax)	FishA	ct		Co	mment	
953	EF	1	1	NFC						0						_			
				hr.	, ,			CO	M N	EN	ITS				1.0		-475		. Mary
		1										Comm							

APPENDIX II

Phase Completion Reports

PROJECT PHASE COMPLETION REPORT - PHASE I-III

MELP Project Number:CNF_C172_010_2001FRBC Activity Number:716564

FRBC Activity Number: 716564 FDIS Project Code: 3496

Project Name: Reconnaissance (1:20,000 scale) Fish and Fish Habitat Inventory in

selected tributaries within the Babine Lake watershed

Project Type: 1:20,000 Scale Reconnaissance

Report Date: July 25, 2000

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

MELP Project Monitor:Paul GirouxFRBC Coordinator:Todd Mahon

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)		

Activity Log (Phase I-III)

Date	Activity	Time Spent
June 01, 2000	Project meeting with Todd Mahon.	15h
June 5, 2000	Stream and Lake file search @ MELP Smithers	15 h
June 5-20, 2000	Requests for information	15 h
June 5-20, 2000	Request for FISS maps and information	10 h
June 15-30 2000	Assign ILP's, delineate watershed boundaries	140 h
June 20-26, 2000	Completing Reach Tables and Quality Control	36 h
June 20-27, 2000	Completing Interim Maps and Quality Control	22.5 h
June 20-29, 2000	Lakes planning and lakes information tables	20.5 h
June 12-30, 2000	Completing Basin Classification, Reach Breaks, Lakes	228.5 h
	Classification and Quality Control	
July 6-30, 2000	Create contact list, bibliography	15 h
June 15-20, 2000	Project Plan development	15 hrs
June 20-25, 2000	Interim Maps/Sample Site Locations	31 hrs
June 15-30, 2000	Crew and Equipment List	5 hrs
June 20, 2000	Sample Site Selection Rationale	4 hrs
June 30, 2000	Phase 3 meeting (Todd Mahon)	15 hrs

Summary of Work Completed

A meeting was conducted with Todd Mahon (contract monitor) to obtain information regarding the project specifications and project area.

A background data review was conducted to establish existing information within the Tanglechain, Smithers Landing, South Fulton and Guess working areas. These reports were obtained from the Ministry of Environment Land and Parks (MELP) office in Smithers, the Morice Forest District office in Houston, CanFor in Houston, various consultants and the BC Conservation Data Centre. A bibliography listing these reports was completed (attached).

In the process of data collection and compilation consultants and government agencies 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 at Phase 5.

The project area boundaries were delineated on trim maps and all streams, wetlands and lakes were assigned, waterbody identifiers or ILP's. Watershed codes and ILP's were assigned using Arcview and FDIS.

Twenty-seven working TRIM mapsheets are being used for the project.

Detailed map and air 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 interm 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 rational for sample site selection is provided in the project plan (attached).

Planning for the field sampling portion of this project followed a balanced approach between MELP 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:

- MELP's Reach Sampling Summary table for each watershed (attached);
- existing fish species distribution data;
- strategies to determine fish distribution within each watershed; and
- CanFor's 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 2000.

Table 1. Project Area Statistics

	Smithers Landing	Tanglechain	Guess	Fulton South
Project Area (Ha)	11,498 ha	11,185 ha	31,937 ha	59,973 ha
Number of TRIM maps	4	5	11	7
Largest watershed (stream) order	4	3	5	5
Number of 3rd order basins	6	3	_32	21
km of streams in project area	199.41 kms	136.84 kms	605.45 kms	912.38 kms
Number of stream reaches in project	215	184	1281	820
area			_	
Number of lakes in project area	0	16	41	9

Table 2. Number of Reach Sample Sites Selected by FDIS (Random)

	Smithers Landing	Tanglechain	Guess	Fulton South
Number of stream reaches in project area	215	184	1281	820
Number of sample sites (random)	47	43	99	89
Random sampling %	21.9%	23.9%	7.7%	10.9%
Number of sample sites (bias)	5	3	41	55
Bias sampling %	2.3%	1.6%	3.2%	6.7%
Total sampling % (bias and random)	24.2%	25%	10.9%	17.6%

Progress and Problems Summary

Phase I-III was completed as scheduled. Watershed codes were assigned to a significant portion of the streams within each watershed. Searching through the watershed atlas was time consuming and much slower than using ILP's for stream delineation. The use of watershed codes will allow easier access to data management (by CanFor) and possibly increase turnaround time for watershed code assignment from MELP.

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 licesee, ministry representatives and during the sampling program. We anticipate several changes to the sampling plan, and as discussed with Paul Giroux and CanFor 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. After discussions with Paul Giroux and CanFor, 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 MELP (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 Phase V of the project 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 August 15, 2000

Summary of Phase 1-3 Costs

Professional Fees \$32,255.00 Disbursements \$2,458.00

Costs as per original budget

Contract Monitor Acceptance

Report Submitted By: Jason Harris	Date: July 20, 2000
Phase Completion Approved:	Date:
Comments:	

PROJECT PHASE COMPLETION REPORT

PHASE 4

• MELP Project Number: CNF_C172_010_2002

Contract Name: Fish and Fish Habitat Inventory in selected tributaries within

the Babine Lake watershed (Morice Forest District)

• FRBC Project Number: HFRBC 16-1

• FRBC Region Skeena-Bulkley Region

MELP Region Skeena 06FDIS Project Code: 3496

Forest District Morice Forest District
 Project Type: 1:20 000 Reconnaissance

• Report Date: October 15, 2001

• 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

MELP Project Monitor: Paul Giroux
 FRBC Coordinator: Todd Mahon
 Proponent QA Monitor: Chris Schell

List of Deliverables Submitted

Deliverable Product	Received	Approved
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	

At Paul Giroux's request, some of the above listed items will be delivered at project completion (as attachments to the final report or appendices).

Activity Log

Date	Activity
July 31, 2001 –	Gear up, travel, fieldwork and gear down for stream inventory in the Morice
October 6, 2001	Forest District.

Summary of Work Completed

Total number of stream reaches sampled:

288*

*Includes 3 lakes sampled - overnight gillnet sets

Summary of Phase Costs

Professional Fees

\$57,732.00

Disbursements

\$23,435.00

^{*}Includes 31 lakes / wetlands sampled - overnight minnow trap sets

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 recee of the stream or by strategically moving sample sites while still in the field.

Field crews were in constant contact with Paul Giroux (Fisheries Inventory Specialist) and Todd Mahon (FRBC contract monitor) 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, 2001
Phase Completion Approved:	Date:
Comments:	

PROJECT PHASE COMPLETION REPORT

PHASE 5/6

• MELP Project Number: CNF_C172_010_2002

• Contract Name: Fish and Fish Habitat Inventory in selected tributaries within

the Babine Lake watershed (Morice Forest District)

FRBC Project Number: HFRBC 16-1

• FRBC Region Skeena-Bulkley Region

MELP Region Skeena 06FDIS Project Code: 3496

Forest District Morice Forest District
 Project Type: 1:20 000 Reconnaissance

• Report Date: January 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

MELP Project Monitor: Paul Giroux
 FRBC Coordinator: Todd Mahon
 Proponent QA Monitor: Chris Schell

List of Deliverables Submitted

Deliverable Product	Received	Approved (QA)
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>	Activity	Time Spent
October - November 2001	site card entry	
November - December 2001	fish collection form entry	
November - December 2001	photo development/scanning/printing	
November - December 2001	watershed reporting	
January – February 2002	mapping project/interpretive/overview	

Summary of Work Completed

Total number of stream reaches processed:

288*

*Includes 3 lakes sampled - overnight gillnet sets

Summary of Phase I-III Costs

Professional Fees	\$32,255.00
Disbursements	\$2,458.00

Summary of Phase IV Costs

Professional Fees	\$57,732.00
Disbursements	\$23,435.00

Summary of Phase V Costs

Professional Fees	\$24,800.00
Disbursements	\$2,160,00

Summary of Phase VI Costs

Professional Fees	\$54,07600
Disbursements	\$8,051.00

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 MELP's QA/QC tool prior to inclusion into the watershed reports.

^{*}Includes 31 lakes / wetlands sampled - overnight minnow trap sets

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, 2002
Phase Completion Approved:	Date:
Comments:	

APPENDIX III Quality Assurance Forms and Correspondence

Todd Mahon FRBC Co-ordinator, Canadian Forest Products Ltd. PO Box 158 Houston, BC, V0J 1Z0

Deidre:

The stage 1 quality assurance (QA) reviews of the 1:20k stream inventory program conducted by Triton Environmental Consultants Ltd. has been completed. Resources Inventory Committee standard QA forms were filled-out during the audit and are included with this letter. These forms list objectives that were met and comments pertaining to any problems that were identified during the QA review.

Overall, I have no significant comments on this project. ILPs were generated correctly and the maps and tables are to standards. Reach delineation was completed properly. There was one issue with the background search that I have outlined on form 1B. I found a few minor errors in the map/FDIS reach check, but well within the acceptable limits. The lake check uncovered a very few "zero-tolerance" errors that will require correction, but these appeared to be accidental and do not represent a systematic misapplication of the standards. The sampling and project plans were both completed to RIC standards.

This project has passed QA evaluation. If you have any questions regarding the information presented in this memo or in the QA forms, please contact me by e-mail (schell@mail.bulkley.net) or by telephone (250-847-0180).

Sincerely,

Chris Schell QA/QC Monitor Fish and Fish Habitat Inventory

cc. Jason Harris, Triton Environmental Consulting Ltd., Terrace, BC

Project name:	FISH INVENTORY QUALITY ASSURANCE CHECK FORM Canfor Fish and Fish Habitat Inventory 2000-2001		
FRBC project number:	unknown	MELP project number: unknown	
Submitted by: QA review by:	Triton Environmental Consultants I Chris Schell Review date:	August 2000	

FORM 1A

DELIVERABLE CHECKLIST FOR PRE-FIELD - PAGE 1 OF 1

Check to ensure that a pre-field project planning report was received with all the associated deliverable products.

Deliverable	Hardcopy	Digital	Comments
1. Cover page	Y	Y	
2. List of digital products	Y	Y	<u> </u>
3. Overview map	Y	na	
4. FISS map	na	na	
5. Existing data review			
• list of references	Y	Y	{
 list of contacts 	Y	Y	
 new FISS information summary and products 	na	na	to be submitted with phases 5-6
6. ILP data*			
 ILP data sheets 	Y	Y	
• ILP maps	Y	Y	
 ILP information sent to ministry 		Y	
7. Interim maps*	Y	na	
8. FDIS database	na	Y	
9. Sampling design sheets	Y	Y	
10. Aerial video record (optional)	na	na	
11. Project plan	Y	Y	

•						1	
Α	*	n	r.	U.K	744	"	٠

Yes

Comments:

Recommended actions:

Have a nice day.

^{*} If ILP maps and ILP data sheets have been sent to the ministry for processing, ILPs must be shown on the interim maps to allow QA to proceed.

Project name:	FISH INVENTORY QUALITY ASSURANCE CHECK FORM Canfor Fish and Fish Habitat Inventory 2000-2001		
FRBC project number:	unknown	MELP project number: unknown	
Submitted by:	Triton Environmental Consultants Ltd		
OA review by:	Chris Schell Review date:	August 2000	

FORM 1B

EXISTING DATA REVIEW - PAGE 1 OF 1

Deliverable	Deliverable check	Acceptable Y/N	Comments
List of contacts	Is list of contacts provided in acceptable format?	?	Some of these people were not actually contacted.
	Have all relevant contacts for the project area in question been pursued?	Y	
	If NO, report known important contacts not provided on list.		
Bibliography	Is bibliography provided in acceptable format?	Y	
	Does the bibliography adequately cover the information known to be available for the project area in question?	Y	
	If NO, report known available information that was not provided in bibliography.		
FISS information	Has FISS update information been provided for new sources of fisheries information that were not referenced in FISS as required in the contract:	No	To be submitted with phase 5-6 deliverables.
	FISS forms	· · · · · · · · · · · · · · · · · · · 	
	clean NTS maps	_ _	
	a copy of each new source provided		
	a reference to each new source provided		
	If NO, report required information not provided.		

Approved: Y

Comments:

Recommended actions:

Please limit you contact list to people you actually talked to. J. DeGisi has no memory of talking to Triton staff this year. A long list of people is not impressive if it is not believable. Also, the comments section should quickly list what information you learned from these people with respect to fish distribution in the project areas. That is the reason for a contact list, to list the people who gave you fisheries information about an area.

Project name		FISH IN Canfor			•								ck F	ORM		
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Submitted by	:	Triton E	nviro	n <u>me</u> n	tal C	onsu	ltant	s Ltd	<u> </u>			_				_
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FORM 1D	Contin	UED — PAGE	2 2 C)F 4									
Reaches	to be field s	ampled	1	2	3	4	5	6	7	8	9	10	Comments
BCG zone													
Setting													
Open water													
Coupling		-											
Valley flat				-									
Active floodpl	ain												
Islands													
Bars													
Disturbance in	dicators												
Mass moveme	nt												
Riparian veget	ation												
Exposed/Erod	ed												
Land use													
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Comments:

Recommended actions:

Project name	e:	FISH IN Canfor				_							CK F	ORM		
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ILP # or NID	50015	50580	103	00	10	117	!	1007	1	103	48	113	300	11060	10033	10007
Map	931.079	931.061	931.0	070	93	1.080) 9	31.08	30	931.0	070	931	.099	93m.009	93m.097	931.088
Reach #	14	2	1		<u> </u>	2	<u> </u>	4		4			1	2	11	1
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Watershed co	de or															
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Note: Any error identified in a shaded cell constitutes a failure.

Project name: FRBC project numbe	FISH INVENTORY QUALITY <u>Canfor Fish and Fish Habitat In</u> er: unknown	
Submitted by: QA review by:	Triton Environmental Consultants Chris Schell Review date:	

FORM 1D CONTINUED - PAGE 4 OF 4

Reaches to be field sampled	1	2	3	4	5	6	7	8	9	10	Comments
BCG zone	1										
Setting											
Open water											
Coupling											
Valley flat											
Active floodplain					_						
Islands							-				
Bars											
Disturbance indicators											· · · · · · · · · · · · · · · · · · ·
Mass movement											
Riparian vegetation											
Exposed/Eroded											
Land use											
Total errors											

QA Summary

	All r	eaches	Fea	atures	Sam	Sampled reaches		
Number of reaches sampled		20		0	T			
Number of marks (N reaches sampled × attributes)	N×15	300	N×2		N×13	260		
Maximum errors acceptable (12% of marks)		36			-			
Number of errors found		1						
Is the number of errors acceptable (Y/N)		Y			+			
Number of errors in zero-tolerance attributes	0		1		1			

Approved:

Y

Comments:

Very nice.

Recommended actions:

Fill out reach form for sampled reaches. I will check these during the phase 5-6 QA.

FISH INVENTORY QUALITY ASSURANCE CHECK FORM Project name: Canfor Fish and Fish Habitat Inventory 2000-2001 FRBC project number: unknown MELP project number: unknown Submitted by: Triton Environmental Consultants Ltd QA review by: Chris Schell Review date: August 2000

FORM 1E CON	ABINED CHECK OF PRE-FIELD I	Lake Information – page 1	OF 1

	l(tang)	2 (S.L.)	3 (S.F.)	4 (S.F.)	5 (S.F.)	6 (guess)	7 (guess)	8 (guess)	9 (guess)	10 (gues)
ILP # or WBID	00544 BABL	13022	20029	20049	30000	22001	31550	95002	01388 BABL	01602 BABL
Reach #	8	2	2	3	2	9	3	2	_2	3
Map #	93m.007	931.099	931.69	931.070	931.080	931.078	931.078	931.088	931.078	931.067

Attribute	1	2	3	4	5	6	7	8	9	10	Comments
Official name											
Alias or local name											
WSC and waterbody identifier "or"											
ILP number and ILP map number		Х									
NID # and NID map #					Х						
Reach number											
Basin type											
Group											
Class (P/S)											
Genesis											
Surface area											
Magnitude							X			X	
Biogeoclimatic zone											
Wetland											
Total errors for each lake	0	1	0	0	1	0	1	0	0	1	

QA Summary

	Lakes
Number of lakes sampled	10
Number of marks (N lakes sampled x attributes)	N×13 130
Maximum errors acceptable (12% of marks)	15.6
Number of errors found	4
Is the number of errors acceptable (Y/N)	Yes
Number of errors in zero-tolerance attributes	2

Approved:

 $\theta Y = 4 N$

Comments:

- 2) ILP label missing from map.
- 5) NID for lake is on the wrong inlet.
- 7, 10) magnitude should be 0

Recommended actions:

Fix the zero tolerance errors.

Project name: FRBC project number:	FISH INVENTORY QUALITY A Canfor Fish and Fish Habitat Inventory	
Submitted by: QA review by:	Triton Environmental Consultants L Chris Schell Review date:	

FORM 1G

STREAM SAMPLING DESIGN - PAGE 1 OF 1

	Acceptable (Y/N)	Comment
Is the inventory watershed based (i.e., entire watershed)?	Y	separated but distinct watersheds, each with its own FDIS database
Are random reaches selected for sampling based on the FDIS statistical sampling design?	Y	
For low gradient or small/medium sized streams, is the sample size of reaches ≥ 8 ?	Y	
For higher gradient (20–30%) or large sized streams, is the minimum sample size 2 and maximum 25?	Y	
Are discretionary reach samples included?		
above or below barriers	Y	
adjacent to identified cutblocks	Y	
 major inlets and outlets to secondary lakes 	NA	
 of inlets and outlets to primary lakes 	NA	
 to achieve connectivity within sub-basins for fish distribution and identification of upstream limits. 	Y	As much as possible.
Are proposed reach sample sites shown on TRIM maps with solid and dashed green lines?	Y	
Are planning tables complete with gear and voucher requirements indicated?	Y	Even reaches not to be sampled have gear requirements filled in.
Does the distribution of sample sites adequately represent all basin types and basin connectivities.	Y	As much as possible with number of samples.
Is the overall sampling rate (sample number vs total number of reaches) acceptable?	Y	A bit low for Guess Creek, but the others are fine
Does the sample design adequately cover the requirements for a reconnaissance inventory?	Y	

Note: Any error identified in a shaded cell constitutes a failure.

Approved: Comments:

Recommended actions:

Y

FISH INVENTORY QUALITY ASSURANCE CHECK FORM Project name: Canfor Fish and Fish Habitat Inventory 2000-2001			
FRBC project number:	unknown	MELP project number: unknown	
Submitted by: QA review by:	Triton Environmental Consultants L Chris Schell Review date:	August 2000	

FORM 1H

LAKES SAMPLING DESIGN - PAGE 1 OF 1

	Acceptable (Y/N)	Comment
Is the lakes planning table complete and accurate (including classification of lakes as primary, secondary or not sampled)?	na	
Will all identified primary lakes be sampled?	na	
Is there at least one lake from each lake group identified that will be sampled?	na	
Will at least 20% of all identified secondary lakes be sampled?	na	
Is justification provided for those lakes that will not be sampled?	na	
Are lakes proposed for sampling outlined on TRIM maps with solid and dashed green lines?	na	
Are planning tables complete with gear and voucher requirements indicated?	na	
Does the sample design adequately cover the requirements for a reconnaissance inventory? If no, the sampling design is rejected.	na	No lakes sampling is planned.

Approved: Comments:

Y

Recommended actions:

Project name: FRBC project number:	FISH INVENTORY QUALITY A Canfor Fish and Fish Habitat Inv	
Submitted by: QA review by:	<u>Triton Environmental Consultants L</u> <u>Chris Schell</u> Review date:	td August 2000

FORM 1

PROJECT PLAN - PAGE 1 OF 1

	Acceptable (Y/N)	Comment
Does the project plan cover field inventory procedures?	Y	
Does the project plan cover data compilation?	Y	
Does the plan cover reporting requirements?	Y	
Does the plan include proposed staff for field phase?	Y	
Has existing data been considered and used in the project plan?	Y	
Have sampling intentions of relevant WRP projects or other inventory project requirements been incorporated into the plan to avoid duplication?	Y	
Has the plan integrated the sampling of lake and stream habitats, in particular, with any aerial over flights and sampling of lake tributaries?	na	no lakes sampling is planned, no aerial overflights were conducted during phase 1-3.
Have requirements for effective sampling methods in relation to stream reach and lake types been addressed?	Y	
Have requirements for biological and water samples been properly considered?		
water sampling particularly in primary lakes	Y	
• fish voucher specimens	Y	
• other samples.	na	
Does and should the plan incorporate any special fish species level inventory needs on a provincial or regional scale?	Y	
Are budget and schedule adequate to complete the project as planned?	na	
If the answer to any of the above is no, is this going to have an impact on the inventory project? If so, the project plan is rejected.	N	Project plan is accepted.

Approved: Comments:

Recommended actions:

Y

Jay Baker, Silvicon Services Inc. FRBC Co-ordinator, Pacific Inland Resources Ltd. PO Box 3130 Smithers, BC, V0J 2N0

Jay:

The stage 2 quality assurance (QA) audits of the 1:20k stream inventory field data collection performed by Triton Environmental Consulting Ltd. has been completed. Resources Inventory Committee standard QA forms were completed during the audit and are included with this letter. The forms list objectives that were met and comments pertaining to any problems that were identified during the QA evaluation.

All crews passed the stage 2 QA audit with no comments. All demonstrated a proficient knowledge of how to collect and record data for the site card and fish collection form to full RIC standards. Fish collection effort and technique was also to standards and safety measures were maintained.

This letter concludes the stage 2 QA audit and reporting. If you have any questions regarding the information presented in this letter or in the QA forms please contact me by e-mail (schell@bulkley.net) or by telephone (250-847-0180).

Sincerely,

Chris Schell Quality Assurance Monitor Fish and Fish Habitat Inventory

cc. Jason Harris, Triton Environmental Consulting Ltd., Terrace, BC

Project name: FRBC project	<u>Paci</u>			d. 1:20l	Aquatic I	CHECK FORM nventory - 200 ect number:	01	
Contractor:	Trite	on Environme	ntal Cons	sulting L	td.			
Field audit by:	<u>Chri</u>	is Schell	Site ide	ntifier:_	<u>na</u> Fielo	l audit date:_ <i>_</i>	August, 2001	<u> </u>
FORM 2A Crew inform	FIELD AUDI	T: CREW IN	FORMA 1	rion, P	ERMITS A	ND SAFETY		
	bers' names	Listed in contract or plan	Are expe (bio,	geo,	Fi	rst aid	Electro	fishing
					Level 1	Transport- ation	Crew member	Crew leader
Jason Harris		Y	Bio -	tech	Y	Y		Y
Jason Dore		Y	Bio -		Y	Y		Y
Jesse Anaka		Y	Bio -		Y	Y		<u>Y</u>
David Taft		Y	Bio –	tech	Y	Y		Y
Group		Item		Acceptable		Specify problem		
				Y	N			
Permits		llection permit		Y				
G. C 1	DFO fish coll	-		Y				
Safety plan	Safety plan in Is safety plan	place followed		Y				
QA comments a	•			1	1 1			
	•							
	obvious WCE nsible contract						ediately info	orm the
Field Audit Co	nfirmation der: <u>Chris So</u>	hell	F	or field (crew: <u>All</u>			

Project name: Project number:		Resour		0k Aquatic Inve MELP project r	entory - 2001 number:				
_	riton Enviro hris Schell		Consulting te identifier:		dit date: <u>August, 200</u>	00			
FORM 2B FIELD AU	DIT FOR S	TREAM	Surveys:	SITE CARD PI	ROCEDURES CHEC	K PAGE 1 OF 2			
Materials present in fi	eld Y	N	Notes		•		Accep	otable	
Site cards	Y				Group	Item	Tech.	Data	Notes
Field reference materials	Y	1		•	Site selection	Representative site	Y	Y	†
Field maps	\overline{Y}				Reference	Stream name (Gaz)	Y	Y	1
						Alias	Y	Y	
	Cal	ibrated	Proper			WSD code or	Y	Y	
List equipment used		Y/N)	use (Y/N)	Notes		ILP # and ILP map #	Y	Y	
pH – electronic meter		Y	Y			Map NID and NID map #	Y	Y	
Conductivity – electronic m	eter	Y	Y			Field UTM (and method)	Y	Y	
Temperature - alcohol them	n.	Y	Y			Reach number	Y	Y	
						Site number	Y	Y	
						Site length (and method)	Y	Y	
			 			Access	Y	Y	
			 			Date, time	Y	Y	1
			 			Agency	Y	Y	Ţ
			<u> </u>	 		Crew	Y	Y	
						Fish form	Y	Y	
					Channel	Equipment	Y	Y	
						Channel widths	Y	Y	
•						Wetted widths	Y	Y	
Notes:					Notes:				

Field Audit Confirmation:

Field audit leader: Chris Schell

For field crew: ALL

FORM 2B

CONTINUED – PAGE 2 OF 2

		Acce		
Group	Item	Tech.	_Data_	Note
Channel	Residual pool depth	Y	Y	L
(continued)	Bankfull depth	Y	Y	
	Gradient	Y	Y	
	Stage	Y	Y	
	NVC; Dry/Int; DW; Tribs	Y	Y	
Cover	Total cover	Y	Y	
	Cover elements			
	amountlocation	Y	Y	
	• location	Y	Y	
	Crown closure	Y	Y	
	Large woody debris	Y	Y	
	• function	Y	Y	
	• distribution	Y	Y	
	Instream vegetation	Y	Y	
	Left and right bank shape	Y	Y	
	Texture	Y	Y	
•	Riparian vegetation	Y	Y	
	Stage	Y	Y	
Morphology	Flood signs	Y	Y	
	Bed material	Y	Y	
	D95	Y	Y	
	D	Y	Y	
	Morhpology	Y	Y	
	Disturbance indicators	Y	Y	
	Channel pattern	Y	Y	

	Ţ	Accer	otable	
Group	Item	Tech.	Data	Notes
Morphology	Islands	Y	Y	l
(cont.)	Bars	Y	Y	
	Coupling	Y	Y	
	Confinement	Y	Y	
Water	Equipment	Y	Y	
	Temperature	Y	Y	
	pH	Y	Y	
	Conductivity	Y	Y	
	Turbidity	Y	Y	T
Features	NID map #, NID	Y	Y	
	Туре	Y	Y	
	Height, length	Y	Y	
	Photo	Y	Y	
Habitat	Keywords	Y	Y	
quality	Relevant comments	Y	Y	
	FSZ	Y	Y	
Photodocu-	Roll #	Y	Y	
mentation	Photo #	Y	Y	
	Focal length	Y	Y	
	Direction	Y	Y	
	NID #, NID map #	Y	Y	
	UTM and method	Y	Y	
Wildlife	Group	Y	Y	
	Relevant comment	Y	Y	

Notes:	Notes:	

Field Audit Confirmation:

Field audit leader: Chris Schell For field crew: ALL

Field Audit Confirmation:

Field audit leader: Chris Schell _____ For field crew: ALL____

FISH INVENTORY QUALITY ASSURANCE CHECK FORM Pacific Inland Resources Ltd., 1:20k Aquatic Inventory - 2001 Project name: FRBC project number: MELP project number: Contractor: Triton Environmental Consulting Ltd. Site identifier: na Field audit date: August, 2001 Field audit by: **Chris Schell** FIELD AUDIT: FISH COLLECTION FORM 2D Acceptable CHECK - PAGE 1 OF 3 Sampling technique Notes Number and duration of gill Lakes na nets set Materials present in field Y Notes Number and duration of Y na Fish collection forms minnow traps set Y Individual fish data forms Other na Y Field data reference Streams Y Site selection and length Field key to freshwater fishes Y Number and duration of Y of BC minnow traps set Approved electroshocker Y Other Ancillary fish capture equipment Y Tilt/safety switch Electrofisher Y (buckets, dip nets, stop net) Main power switch function Y Measuring board/ruler Ÿ Anode deadman's switch Y Y Weigh scale $\overline{\mathbf{Y}}$ Ouick release harness Fish samples (e.g., scale Y envelopes, tissue vials) Anode clean $\overline{\mathbf{Y}}$ Ÿ Voucher containers, preservative, Electrofishing Safe operation and signals Y labels techniques Site coverage - all habitats Y Effective fish capture Y Y Impact on fish Impacts on fish Y Fish handling Notes: Notes:

Field Audit Confirmation:

Field audit leader: <u>Chris Schell</u> For fi

For field crew: All

CONTINUED – PAGE 2 OF 3

		Accer		
Sa	mpling technique	Y	N	Notes
Fish	Correct identification	Y		
identification	Correct use of fish key	Y		
	Unidentified fish procedure	Y		
Fish samples	Age sampling, labeling	na		
	Voucher storage, labeling	na		

		Accer	Acceptable				
Group	Item	Tech.	Data	Notes			
Header	Name	Y	Y				
	Stream/Lake/Wetland	Y	Y				
	Watershed code or ILP	Y	Y				
	Waterbody ID	Y	Y				
	ILP map #	Y	Y				
	Project ID	Y	Y				
	Reach #	Y	Y				
•	MELP fish permit #	Y	Y				
	Date start, end	Y	Y				
	Agency, crew	Y	Y				
	Resample	Y	Y				
Site/Method	Site #	Y	Y				
	NID map #, NID #	Y	Y				
	Site UTM	Y	Y				
	Method, method no.	Y	Y	<u> </u>			
	Temp, cond., turbidity	Y	Y				

		Acce	otable	
Group	Item	Tech.	Data	Notes
Fish summary	Site #	Y	Y	
	Method, method no.	Y	Y	
	Haul/Pass (H/P)	Y	Y	
	Species, stage, total #	Y	Y	
	Min. length	Y	Y	
	Fish activity	Y	Y	
Gear	Site #	Y	Y	
specifications	Method, method no.	Y	Y	
	Haul	Y	Y	
	Date, time in	Y	Y	
	Date, time out	Y	Y	
	Net type, length & depth	Y	Y	
	Mesh size	Y	Y	
	Set, habitat	Y	Y	
Electrofisher	Site #	Y	Y	
specifications	Method, method no.	Y	Y	
	Pass	Y	Y	
	Time in, time out	Y	Y	
	EF sec.	Y	Y	
	Length, width	Y	Y	
	Enclosure	Y	Y	
	Voltage, freq., pulse	Y	Y	
	Make, model	Y	Y	
Individual	Fish collection form #	Y	Y	
fish data	Site #	Y	Y	

Notes: Notes:	

Field Audit Confirmation:

Field audit leader: Chris Schell For field crew: All

FORM 2D CONTINUED - PAGE 3 OF 3

		Acce	ptable	
Group	Item	Tech.	Data	Notes
Individual	Method, method no.	Y	Y	
fish data	Haul/Pass	Y	Y	
continued	Species	Y	Y	1
	Length	Y	Y	
	Weight	na	na	
	Sex	na	na	
	Maturity	na	na	
	Age structure	na	na	
	Age sample #	na	na	
	Age	na	na	
	Voucher	na	na	
	Genetic structure	na	na	
	Genetic sample #	na	na	
	Photos	na	na	
•	Number of fish sampled	na	na]

Notes:

Field Audit Confirmation:

Field audit leader: Chris Schell For field crew: All

Notes:

February 4, 2002

Todd Mahon, Wildfor Consultants FRBC Co-ordinator, Canadian Forest Products Ltd. PO Box 158, Houston, BC, VOJ 1Z0

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 Canfor has been completed. Resources Inventory Committee standard QA forms were completed during the audit and are included with this letter. I also performed a stream classification QA, where I evaluated the resampling data supporting non-fish bearing stream recommendations. All forms list objectives that were met and comments pertaining to any problems that were identified during the QA evaluation.

The list of deliverables check found almost all present. Digital files were examined and all were in order with the exception printouts from the digital mapping QA programs, which was missing. This program should be run, and the results printed up, marked-up with Triton's response to each error, then submitted (digitally is fine) to me for a quick review.

The card/FDIS/map check found vanishingly few typographical errors and no systematic problems. GIS derived UTM's have not yet been imported into FDIS, and this should be done before final submission of the database. I noted a few minor, mostly editorial issues while checking the reports; these are listed on QA form 3k. FISS update deliverables and the photodocumentation package were complete and to standards. The maps were to RIC standards (in Triton's own format) and complete. I reviewed the interpretive stream coding and compared that to gradient and site information that was displayed on the map, and found no discrepancies.

To finalise QA approval, I would ask Triton to forward the mapping QA file as requested, and a letter listing how they have addressed each of the points noted in this 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 (250-847-0180).

Sincerely,

Chris Schell

cc. Jason Harris, Triton Environmental Consultants Ltd., Triton, BC

Project name:

Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton

FRBC project number: 3496

MELP project number: <u>CNF-C172-010-2002</u>

Contractor:

Triton Environmental Consultants Ltd.

QA review by:

Chris Schell

Review date: February, 2002

FORM 3 v

DATA COMPILATION AND REPORTING DELIVERABLES FOR QA - PAGE 1 OF 1

	Deliverable	Hardcopy	Digital	Comments
Watershed	Watershed report	Y	Y	
reporting	Appendices			
	I. FDIS summary and photographs	Y	Y	
	II. Hardcopy maps	Y	Y	
	Attachments	 		
	I. Pre-field planning document	Y	N	submitted during phase 1-3
	II. Field notes and forms	Y	na	
	III. Fish aging structures	Y	na	
	IV. Fish samples and vouchers	na	na	
	V. Photodocumentation	Y	Y	
	VI. Digital data	na	Y	
	VII. FISS update data	Y	na	
	VIII. Aerial photography	na	na	
Individual lake	Lake report			No lake reporting.
reporting	Appendices			
(for each lake)	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			

For each FDIS file provided:

FDIS filename:

	Acce	ptable	1
			Comments
	Y	N	
Conversions done:			
ILP to WSC	X		Not expected at this time
NID-UTM		X	Not done at this time
Update bathymetry			NA
FDIS QA report attached			
Acceptable error report	Y		see comment below

For each FDIS file and digital map file set:

ARCView fish QA tool

	Filename	Acce	ptable	Comments
		Y	N	
Digital map files				
Metadata table	m6200261.dbf m6200262.dbf	Y		
Map attributes table	a6200261.dbf a6200262.dbf	Y		Guess attribute table is in "Plots" directory.
FDIS data check				
 Sequential reach numbering: 		Y		
 Point locations on TRIM streams: 	qaprox.doc	Y		all "errors" are lakes and one unmapped stream
Copy of ARCView fish QA tool error report attached				
Acceptable error report			N	Only the proximity test is done. Where are the other mapping checks?

The FDIS automated QA noted "fish sampling only" sites that were electrofished, with no conductivity or temperature data taken. This is the only comment in the QA report that has any merit. Conductivity data is needed to evaluate the effectiveness of electrofishing.

Project name:

Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton

FRBC project number: 3496

MELP project number: <u>CNF-C172-010-2002</u>

Contractor:

Triton Environmental Consultants Ltd.

QA review by:

Chris Schell

Review date: February, 2002

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 #	1	9	39	49	52	59	351	365	503	513
NID map #	93L.070	93L.080	93L.070	93L.80	931.70	93L.070	93L.069	93L.080	93L.080	93L.069
NID#	10001	10009	10039	10049	10052	10059	30051	30065	50003	50013

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		,	3	4	5	6	_	8	9	10	Error locations
Header	Stream name	1, 2, 3, 4	<u> </u>	2	3	4	3	0	7	0	9	10	locations
Header			ļ	L-	_	<u> </u>				_			
	Watershed code or ILP map # and ILP #	1, 2, 3, 4	<u> </u>			_							
	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					\dashv						
	Functional LWD (amount, distribution)	1, 2		\neg			\dashv						
	Crown closure	1, 2					ヿ	,					
	Instream vegetation	1, 2										-	
	Bank shape, texture, riparian vegetation	1, 2		7	_	-	\dashv			·			

FORM 3C

CONTINUED - PAGE 2 OF 6

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 -	Flood signs	1, 2											
morpho	Bed material	1, 2, 3											
logy	D95, D	1, 2											
	Morphology	1, 2, 3	П								_		
	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	General comments	1, 2											
quality	Fisheries sensitive zones	1, 2	\Box										
Photo-	Roll #	1, 2	П	\neg									
documen-	Frame #	1, 2											
tation	Focal length	1, 2	П										
	Direction	1, 2	П					7					
	Comments	1, 2											
Wildlife	Group	1, 2									\exists		
	Observations	1, 2			\exists			\neg			\dashv		
Comments	General comments	1, 2		\neg							7		
Total errors	:		\vdash					寸	\dashv	7	寸	+	

Comments:

10) Flood signs "braided channels", but bars are "side" only?

Project name:

Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton

FRBC project number: <u>3496</u>

MELP project number: <u>CNF-C172-010-2002</u>

Contractor:

Triton Environmental Consultants Ltd.

QA review by:

Chris Schell

Review date: February, 2002

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 #	518	530	538	548	19	26	65	76	88	99
NID map #	93L.080	93L.070	93K.071	93L.069	93L.0	93L.068	93L.077	93L.079	93L.068	93L.079
NID#	50018	10333	50038	50048	10019	10026	10065	10076	10088	10099

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		Where to											Error
section	Attribute	check	1	2	3	4	5	6	7	8	9	10	locations
Header	Stream name	1, 2, 3, 4	<u> </u>										
	Watershed code or ILP map # and ILP #	1, 2, 3, 4		Ĺ						_			
	NID map # and NID #	1, 2	<u> </u>										
	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									П		
	Tribs	1, 2, 3, 4											
Cover	Total cover	1, 2											
	Cover elements	1, 2											
	Functional LWD (amount, distribution)	1, 2									\sqcap		
	Crown closure	1, 2						,					
	Instream vegetation	1, 2											
	Bank shape, texture, riparian vegetation	1, 2											

FORM 3C

CONTINUED - PAGE 4 OF 6

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 -	Flood signs	1, 2											
morpho	Bed material	1, 2, 3											
logy	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	П										
	UTM	1, 2										\neg	
Habitat	General comments	1, 2	П									\neg	
quality	Fisheries sensitive zones	1, 2						\exists			\neg	\neg	
Photo-	Roll#	1, 2	\sqcap			٦	\neg	7	٦				
documen-	Frame #	1, 2	П			٦	\neg	٦					
tation	Focal length	1, 2						7					····
	Direction	1, 2										\neg	
	Comments	1, 2	П				\neg	\neg		\neg	\neg	1	
Wildlife	Group	1, 2	П				コ	٦			ヿ		
	Observations	1, 2	П			\exists	寸		_	\neg	7	1	
Comments	General comments	1, 2			\neg	\neg		7			\dashv	\neg	
Total errors	s:						_		┪	╗	丁		

Comments:

⁷⁾ the comments and UTM about the high gradient section is unclear. Wouldn't it be easier to make this a cascade reach feature?

Project name: FRBC project number:		Fish Habitat Inventory: Guess and South Fulton MELP project number: CNF-C172-010-2002
Contractor:	Triton Environmental Consultant	s Ltd.
QA review by:	Chris Schell	Review date: February, 2002

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 #	757	795	810	818	831	836	842	855	863	956
NID map #	93L.068	93L.077	93L.077	93L.077	93L.067	93L.077	931.077	931.078	93L.079	93L.068
NID#	70857	70095	70810	70818	70831	70836	70842	70855	90863	90956

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									X		
	Wetted width	1, 2									X		
	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						٦					
	Functional LWD (amount, distribution)	1, 2											
	Crown closure	1, 2						.]					
	Instream vegetation	1, 2											_
	Bank shape, texture, riparian vegetation	1, 2	П					$\neg \uparrow$				$\neg \neg$	

FORM 3C

CONTINUED - PAGE 6 OF 6

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 -	Flood signs	1, 2											
morpho	Bed material	1, 2, 3											
logy	D95, D	1, 2				,							
	Morphology	1, 2, 3											
	Disturbance indicators	1, 2, 3	П										
	Pattern	1, 2, 3											
	Islands, bars, coupling	1, 2						\neg					
	Confinement	1, 2, 3											
Features	NID map # and NID #	1, 2											
	Type, height/length	1, 2, 3, 4			\neg								
	Photo, comments	1, 2, 3, 4											
	UTM	1, 2											
Habitat	General comments	1, 2									ヿ		
quality	Fisheries sensitive zones	1, 2	П								ヿ		
Photo-	Roll#	1, 2				7		1			ヿ	7	
documen-	Frame #	1, 2				┪	\neg	┪			┪	7	
tation	Focal length	1, 2	П	\neg	ヿ゙	=	7	T		1	7		
	Direction	1, 2	П	\neg	ヿ	┪	7	1		寸		\neg	
	Comments	1, 2	П	\dashv	\dashv	寸	7	\dashv		7	\neg	\dashv	
Wildlife	Group	1, 2	П				\neg	\dashv		\dashv	7	_	
	Observations	1, 2	\Box	\dashv	寸	\dashv	7	7	\neg	\dashv	\dashv		
Comments	General comments	1, 2		\dashv	寸	\dashv	7	+	7	\exists	1	_	
Total errors	otal errors:		\vdash	\dashv	\neg	\dashv	$\neg \dagger$	7	┪	ᅱ	十	$\neg \dagger$	

Summary of stream site in	formation check:
---------------------------	------------------

Number of marks (# cards * 52):1560	Maximum number of errors acceptable (5%): 78
	Is the number of errors acceptable: Yes

Comments:

9) channel widths, seems to have extra values added to the end; res. pool depth missing one value.

Project name:

Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton

FRBC project number: 3496

MELP project number: <u>CNF-C172-010-2002</u>

Contractor:

Triton Environmental Consultants Ltd.

QA review by:

Chris Schell

Review date: February, 2002

FORM 3E

CONSISTENCY CHECK: FISH COLLECTION FORM, FDIS, PROJECT MAP, INTERPRETIVE MAP, LAKE OUTLINE MAP - PAGE 1 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	1	9	39	49	52	59	351	365	503	513
NID map #	931.070	93L.080	93L.070	93L.80	931.70	93L.070	93L.069	93L.080	93L.080	93L.069
NID#	10001	10009	10039	10049	10052	10059	30051	30065	50003	50013

Record errors below with an 'x'. An error occurs if there is inconsistency among I) 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											<u>-</u>
	Haul/Pass (H/P)	1, 2											<u>-</u>
	Species	1, 2, 3, 4											
	Stage, total #	1, 2											
	Min. length	1, 2							\exists				
	Fish activity	1, 2	\Box						一	\exists	\dashv		

FORM 3E

CONTINUED – PAGE 2 OF 6

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	П										
	Make, model	1, 2	П										
_	-	Total:											

Comments:

 Project name:
 Canfor. - 2001/2002 - Fish and Fish Habitat Inventory : Guess and South Fulton

 FRBC project number:
 3496
 MELP project number:
 CNF-C172-010-2002

Contractor: <u>Triton Environmental Consultants Ltd.</u>

QA review by: Chris Schell Review date: February, 2002

FORM 3E

CONSISTENCY CHECK: FISH COLLECTION FORM, FDIS, PROJECT MAP, INTERPRETIVE MAP, LAKE OUTLINE MAP – PAGE 3 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	518	530	538	548	19	26	65	76	88	99
NID map #	93L.080	93L.070	93K.071	93L.069	93L.0	93L.068	93L.077	93L.079	93L.068	93L.079
NID#	50018	10333	50038	50048	10019	10026	10065	10076	10088	10099

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.

Croup	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Group			<u> </u>	<u> </u>	3	4	3	0	<u> </u>	0	9	10	locations
Header	Name	1, 2, 3, 4, 5							<u> </u>				
	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											<u>-</u>
	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											

FORM 3E

CONTINUED – PAGE 4 OF 6

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Gear	Method, method no.	1, 2											
specifications	Haul	1, 2											
	Date, time in/out	1, 2											
	Net type, lgth, dpth	1, 2											
	Mesh size	1, 2								-			
	Set, habitat	1, 2											
Electrofisher	Method, method no.	1, 2											
specifications	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											
	1	Total:											-

Comments:

Project name: FRBC project number:		MELP project number: CNF-C172-010-2002
Contractor:	Triton Environmental Consulta	ants Ltd
OA review by:	Chris Schell	Review date: February 2002

FORM 3E

CONSISTENCY CHECK: FISH COLLECTION FORM, FDIS, PROJECT MAP, INTERPRETIVE MAP, LAKE OUTLINE MAP – PAGE 5 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	757	795	810	818	831	836	842	855	863	956
NID map #	93L.068	93L.077	93L.077	93L.077	93L.067	93L.077	931.077	931.078	93L.079	93L.068
NID#	70857	70095	70810	70818	70831	70836	70842	70855	90863	90956

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											_

FORM 3E

CONTINUED - PAGE 5 OF 6

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Gear	Method, method no.	1, 2											
specifications	Haul	1, 2											
	Date, time in/out	1, 2											-
	Net type, lgth, dpth	1, 2											
	Mesh size	1, 2											
	Set, habitat	1, 2											
Electrofisher	Method, method no.	1, 2											
specifications	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									X		
	Make, model	1, 2											-
		Total:		_									

Number of marks (# cards * 36):1080	Maximum number of errors acceptable (5%): <u>54</u>
Number of errors found:1	Is the number of errors acceptable: Yes

Comments:

9) voltage is 600 on the card. and 60 in FDIS.

Otherwise, excellent work.

FISH INVENTORY QUALITY ASSURANCE CHECK FORM Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton Project name: MELP project number: <u>CNF-C172-010-</u>2002 FRBC project number: <u>3496</u> Triton Environmental Consultants Ltd. Contractor: Review date: February, 2002 QA review by: Chris Schell CONSISTENCY CHECK: INDIVIDUAL FISH DATA CARD, FDIS - PAGE 1 OF 1 FORM 3F 7 2 3 5 8 9 4 6 10 1 19 365 513 538 26 76 853 825 846 Site # 65 NID map # 93L.080 93L.069 93K.071 93L.0 93L.068 93L.077 93L.079 93L.078 93L.077 93L.088 NID# 30065 50013 50038 10019 10026 10065 10076 70853 90846 70825 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. Where to **Error** 7 9 Group Item check 1 2 3 4 5 6 8 10 locations Individual Site # 1, 2 fish data Method, method no. I, 2 Haul/Pass 1, 2 1, 2 Species Length 1, 2 \mathbf{X} Weight 1, 2 1, 2 Sex Maturity 1, 2 1, 2 Age structure 1, 2 Age sample

Number of marks (# cards * 15):150_	Maximum number of errors acceptable (5%): 7
Number of errors found:1	Is the number of errors acceptable:

1, 2

1, 2

1, 2

1, 2

Comments:

Age Voucher

Photos

Genetic structure

Genetic sample #

8) fish with scale sample # 110 is 118mm long on the card and 110 in FDIS.

Project name:

Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton

FRBC project number: <u>3496</u>

MELP project number: <u>CNF-C172-010-2002</u>

Contractor:

Triton Environmental Consultants Ltd.

QA review by:

Chris Schell

Review date: February, 2002

FORM 3K

WATERSHED REPORT - PAGE 1 OF 4

Report section	Attribute	Accept. (Y/N)	Notes
Title page	Proper title	N	1
	Watershed code below title	N	2
	Prepared for	Y	
	Prepared by	Y	
	Signature of R.P.Bio	Y	
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	Y	
	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.	N	3
	Impacts and uses by wildlife	Y	
	Existing water quality data	Y	
	Previous fish presence	Y	
Methods	Reference to RECCE standards	N	4
	Reference to project plan	Y	
	Deviations from RIC standards	Y	
	Deviations from project plan	Y	
	List of sampling equipment used	Y	

Notes:

- 1) "...selected tributaries to the south side of the Fulton River Watershed"
- "...tributaries to the southwest shore of Babine Lake, south of Topley Landing."
- 2) Please list the main watersheds in the project area, or the first and last.
- 3) No discussion of logging in the area.

4) both reports cite the 1998 standards. The 2001 standards include all the errata and should be the one that you cite.

FORM 3K

CONTINUED - PAGE 2 OF 4

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	Table defining each sub-drainage	Y	missing
biophysical information	Sub-drainages not sampled but included in the planning document	-	na
	Previous sampling reference	-	in 2.1
Habitat and fish	Characteristics of fish habitats	Y	
distribution	Pattern of fish distribution	Y	
	Location of significant fish pop.s	Y	2
	Lakes treated as a reach of the stream	Y	
	Upstream limits of fish presence	N	3
	Obstructions influencing fish	N	3
•	Table of all barriers present	Y	

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	
	Length-frequency histograms	Y	
	Histograms have the same x-axis	-	na
	Table: Summary of length-at-age.	Y	1
	Data presented by species	Y	
	Data presented by sub-drainage	-	no
	Age classes appear correct	•	na
Significant features and	Fish and fish habitat	-	1
fisheries observations	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	L	<u> </u>
	Fisheries sensitive zones	Y	
	Fish above 20% gradients	N	4
	Restoration opportunities	Y	
	Problem culverts	Y	
	Unstable slopes	Y	
Fish bearing status	Brief narrative section	Y	
	Table: Summary of fish bearing reaches	Y	

Notes:

- 1) What does your length frequency data say about how long the juvenile coho remain rearing in these streams?
- 2) noted in "Significant fisheries observations."
- 3) the upstream limit of spawning SK is noted, but there is no mention of any of other barriers listed in table 3. All those that are barriers and create an "end of

Notes:

fish use" should be noted and discussed.

4) You should discuss the WSU and LKC populations upstream of the cascade in R2 of -697200-12300. Discuss any reasons you see why no sport species are present and why you feel this population should not receive special status under the code.

Stream Report Appendices - cont.

Stream Rep	oort Forma	ıt — cont.
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Report section	Attribute	Accept. (Y/N)	Notes
Fish bearing status (cont.)	Table: Summary of non-fish bearing reaches		2
	Table: Follow-up sampling required	Y	1
References	All sources in report listed		
	According to CBE style manual		

Stream Report Appendices

Report section	Attribute	Accept. (Y/N)	Notes
Appendix I.	In ascending order by WSC	-	
FDIS summary and	Grouped by site	Y	
photographs	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)	-	
Appendix II.	"E" size plots	Y	
Hardcopy maps –	Folded in pocket in report	N	
General	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	

Report section	Attribute	Accept. (Y/N)	Notes
Appendix II.	Inset map box	Y	
Hardcopy maps -	Fish species box	Y	
General (cont.)	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	gradient
	Features, obstructions, etc.	Y	
	Reach breaks and numbers	Y	
Interpretive map	Reach summary symbols for all reaches in the project area	Y	
	Features, obstructions	Y	
	Fish distribution limits	Y	
	Stream class	Y	

Notes:

- 1) you need to clearly state in this section that the reaches in the additional sampling table are also listed in the fish bearing table.
- 2) you say that NCD is a timber industry term it's a Forest Practices Code term.

		N	0	t	e	S
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FORM 3K

CONTINUED – PAGE 4 OF 4

Stream Report Attachments

Report section	Attribute	Accept. (Y/N)	Notes
Attachment I.	Budget breakdown by phase	na	1
Planning document	Project sampling design	na	1
	Process of site selection	na	ı
	Reach table	na	1
	Lake table	na	1
	Random sample table	na	1
	References, contacts list	na	1
Attachment II.	Field book or facsimile	Y	
Field notes	Site cards	Y	
	Fish collection forms	Y	
	Individual fish data forms	Y	
	Field working maps	na	
Attachment III.	Actual ageing structures	Y	
Fish ageing structures	Labelled photocopies	Y	
	Annuli identified with red	Y	
	Age data are correct	Y	
Attachment IV.	Table: Vouchers collected	N	
Voucher, DNA samples	Table: DNA collected	N	
Attachment V.	Table: Photo summary report	Y	
Photodocumentation	Colour thumbnail reference	Y	
	Photo CD	Y	2
	CD Image #s match digital	Y	
	Negatives in plastic sleeves	Y	
	Negatives labelled	Y	

Report section	Attribute	Accept. (Y/N)	Notes
Attachment V.	Negative #s match digital	na	
Photodocumentation	Prints in plastic sleeves	Y	
(cont.)	Prints labelled	Y	
Attachment VI.	Budget breakdown by phase	na	
Digital data	Project sampling design	Y	in FDIS
	References, contacts list	na	1
	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)	Y	-
	Mapping files (metadata and map features files)	Y	
Attachment VII.	FISS data forms and maps	Y	
FISS update data	Copies of reference material	na	
	Data on forms match FDIS	Y	
Attachment VIII.	Purchased aerial photos	na	
Aerial photography	Aerial video tape	na	

	١,		
- 1	v	ores	

1) submitted with phases 1-3

2) If all the CDs are going to be kept in the South Fulton photodoc binder, it

Misc. errors:

93L.078 – Fedral Creek, reach 5, site is not labeled with a site number.

Site 838: first page of site card print out is missing in the appendix

Site 842: fish form printout is missing from appendix Site 956: fish form printout is missing from appendix

Photodoc

roll 25 frames 9-10 CD # missing from FDIS. roll 29 frame 14. I found prints with this same label.

From:

Jason Harris

To:

schell@bulkley.net 2/14/02 12:36PM

Date: Subject:

Stage 3 Quality Assurance (QA) review

Chris:

Re: Stage 3 Quality Assurance (QA) review of final deliverables for the 1:20k stream inventory sampling program performed by Triton Environmental Consultants Ltd. for Canadian Forest Products, Houston.

As discussed, please find attached Triton's response to the Quality Assurance (QA) review of final deliverables for the 1:20k stream inventory completed by you for Canadian Forest Products, Houston. As part of the QA we are submitting this report to you for review and acceptance before inclusion in CanFor's 2001-2002 Fish and Fish Habitat final deliverables.

We have gone through the Stage 3 QA review and addressed your edits and suggestions for the final deliverables. I trust finalising this project in this manner is acceptable to you.

Should you require additional information, please contact me at (250) 635-1494.

Yours truly,

Jason Harris

Todd Mahon, Wildfor Consultants FRBC Co-ordinator, Canadian Forest Products Ltd. PO Box 158, Houston, BC, VOJ 1Z0

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 Canfor has been completed. Resources Inventory Committee standard QA forms were completed during the audit and are included with this letter. I also performed a stream classification QA, where I evaluated the resampling data supporting non-fish bearing stream recommendations. All forms list objectives that were met and comments pertaining to any problems that were identified during the QA evaluation.

The list of deliverables check found almost all present. Digital files were examined and all were in order with the exception printouts from the digital mapping QA programs, which was missing. This program should be run, and the results printed up, marked-up with Triton's response to each error, then submitted (digitally is fine) to me for a quick review. <u>Done, Chris Schell found these in the Digital Data section (February 8th over the phone).</u>

The card/FDIS/map check found vanishingly few typographical errors and no systematic problems. GIS derived UTM's have not yet been imported into FDIS, and this should be done before final submission of the database. Done, Chris Schell found these in the Digital Data section (February 8th over the phone). I noted a few minor, mostly editorial issues while checking the reports; these are listed on QA form 3k. FISS update deliverables and the photodocumentation package were complete and to standards. The maps were to RIC standards (in Triton's own format) and complete. I reviewed the interpretive stream coding and compared that to gradient and site information that was displayed on the map, and found no discrepancies.

To finalise QA approval, I would ask Triton to forward the mapping QA file <u>Done</u> as requested, and a letter listing how they have addressed each of the points noted in this 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 (250-847-0180).

Sincerely,

Chris Schell

cc. Jason Harris, Triton Environmental Consultants Ltd., Triton, BC

FISH INVENTORY QUALITY ASSURANCE CHECK FORM Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton MELP project number: <u>CNF-C172-010-2002</u> FRBC project number: <u>3496</u>

Contractor:	Triton Environmental Cons

sultants Ltd.

Review date: February, 2002 QA review by: Chris Schell

Form 3 v

Project name:

DATA COMPILATION AND REPORTING DELIVERABLES FOR QA - PAGE 1 OF 1

	Deliverable	Hardcopy	Digital	Comments
Watershed	Watershed report	Y	Y	
reporting	Appendices			
	I. FDIS summary and photographs	Y	Y	
	II. Hardcopy maps	Y	Y	
	Attachments	†		
	I. Pre-field planning document	Y	N	submitted during phase 1-3
	II. Field notes and forms	Y	na	
	III. Fish aging structures	Y	na	
	IV. Fish samples and vouchers	na	na	
	V. Photodocumentation	Y	Y	
	VI. Digital data	na	Y	
	VII. FISS update data	Y	na	
	VIII. Aerial photography	na	na	
Individual lake	Lake report			No lake reporting.
eporting	Appendices			
for each lake)	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: Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton MELP project number: CNF-C172-010-2002 Contractor: Triton Environmental Consultants Ltd. QA review by: Review date: February, 2002

FORM 3B

DIGITAL DATA CHECKING - PAGE 1 OF 1

For each FDIS file provided:

FDIS filename:

	Acce	ptable	
			Comments
	Y	N	
Conversions done:			
ILP to WSC	X		Not expected at this time
NID-UTM		X	Not done at this time <u>Done and discussed</u> with Chris Schell
Update bathymetry			NA
FDIS QA report attached			
Acceptable error report	Y		see comment below

For each FDIS file and digital map file set:

ARCView fish QA tool

	Filename	Acce	ptable	Comments
		Y	N	
Digital map files				
Metadata table	m6200261.dbf m6200262.dbf	Y		
Map attributes table	a6200261.dbf a6200262.dbf	Y		Guess attribute table is in "Plots" directory.
FDIS data check				
 Sequential reach numbering: 		Y		
 Point locations on TRIM streams: 	qaprox.doc	Y		all "errors" are lakes and one unmapped stream
Copy of ARCView fish QA tool error report attached				
Acceptable error report			N	Only the proximity test is done. Where are the other mapping checks? Done and discussed with Chris Schell

The FDIS automated QA noted "fish sampling only" sites that were electrofished, with no conductivity or temperature data taken. This is the only comment in the QA report that has any merit. Conductivity data is needed to evaluate the effectiveness of electrofishing. Taken under advisement.

Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton Project name: FRBC project number: <u>3496</u>

MELP project number: <u>CNF-C172-010-2002</u>

Contractor:

Triton Environmental Consultants Ltd.

Review date: February, 2002 QA review by: Chris Schell

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 #	1	9	39	49	52	59	351	365	503	513
NID map #	93L.070	93L.080	93L.070	93L.80	931.70	93L.070	93L.069	93L.080	93L.080	93L.069
NID#	10001	10009	10039	10049	10052	10059	30051	30065	50003	50013

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				\neg							
	Crown closure	1, 2											
	Instream vegetation	1, 2											
	Bank shape, texture, riparian vegetation	1, 2											·

FORM 3C

CONTINUED – PAGE 2 OF 6

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 -	Flood signs	1, 2											
morpho	Bed material	1, 2, 3											
logy	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	General comments	1, 2											
quality	Fisheries sensitive zones	1, 2	П										
Photo-	Roll#	1, 2											
documen-	Frame #	1, 2									T		
tation	Focal length	1, 2	П										
	Direction	1, 2	П										
	Comments	1, 2	\Box										
Wildlife	Group	1, 2	\sqcap									\neg	
	Observations	1, 2	П			\neg				\neg			
Comments	General comments	1, 2	П								\exists	7	
Total errors	::								\neg	7	T	一十	

Comments:

10) Flood signs "braided channels", but bars are "side" only?

Project name:

Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton

FRBC project number: <u>3496</u>

496 MELP project number: <u>CNF-C172-010-2002</u>

Contractor: QA review by:

Triton Environmental Consultants Ltd.

Chris Schell

Review date: February, 2002

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 #	518	530	538	548	19	26	65	76	88	99
NID map #	93L.080	93L.070	93K.071	93L.069	93L.0	93L.068	93L.077	93L.079	93L.068	93L.079
NID#	50018	10333	50038	50048	10019	10026	10065	10076	10088	10099

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									$-\overline{}$		
	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										$\neg \uparrow$	
	Instream vegetation	1, 2											
	Bank shape, texture, riparian vegetation	1, 2											

FORM 3C

CONTINUED – PAGE 4 OF 6

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	1										
Channel -	Flood signs	1, 2											
morpho	Bed material	1, 2, 3											
logy	D95, D	1, 2											
	Morphology	1, 2, 3	П										
	Disturbance indicators	1, 2, 3	\Box									_	
	Pattern	1, 2, 3	П										
	Islands, bars, coupling	1, 2	П									_	
	Confinement	1, 2, 3											
Features	NID map # and NID #	1, 2	T										
	Type, height/length	1, 2, 3, 4											
	Photo, comments	1, 2, 3, 4											
	UTM	1, 2	\Box									1	
Habitat	General comments	1, 2	П		-								
quality	Fisheries sensitive zones	1, 2											
Photo-	Roll #	1, 2											
documen-	Frame #	1, 2	П										
tation	Focal length	1, 2											
	Direction	1, 2							,				
	Comments	1, 2											
Wildlife	Group	1, 2											
	Observations	1, 2	\sqcap										
Comments	General comments	1, 2			\neg		\neg			\neg	\dashv		
Total errors	:								ヿ				

Comments:

⁷⁾ the comments and UTM about the high gradient section is unclear. Wouldn't it be easier to make this a cascade reach feature?

Project name: FRBC project number:		Fish Habitat Inventory: Guess and South Fulton MELP project number: CNF-C172-010-2002
Contractor:	Triton Environmental Consultan	ts Ltd.
OA review by:	Chris Schell	Review date: February, 2002

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 #	757	795	810	818	831	836	842	855	863	956
NID map #	93L.068	93L.077	93L.077	93L.077	93L.067	93L.077	931.077	931.078	93L.079	93L.068
NID#	70857	70095	70810	70818	70831	70836	70842	70855	90863	90956

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		<u> </u>									
	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									X		
	Wetted width	1, 2									X		_
	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											

FORM 3C

CONTINUED - PAGE 6 OF 6

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	Γ										
Channel -	Flood signs	1, 2	Г										
morpho	Bed material	1, 2, 3											
logy	D95, D	1, 2											<u></u>
	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	General comments	1, 2											
quality	Fisheries sensitive zones	1, 2											
Photo-	Roll #	1, 2											
documen-	Frame #	1, 2											
tation	Focal length	1, 2											
	Direction	1, 2											
	Comments	1, 2	П										
Wildlife	Group	1, 2	П										
	Observations	1, 2	П										
Comments	General comments	1, 2	П										
Total errors	<u> </u>		Γ		П					\neg			

Summary of stream site information check:

Number of marks (# cards * 52):1560	Maximum number of errors acceptable (5%):78
Number of errors found: 1	Is the number of errors acceptable: Yes

Comments

9) channel widths, seems to have extra values added to the end; res. pool depth missing one value. Checked to be fine.

Project name:

Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton

FRBC project number: 3496

MELP project number: <u>CNF-C172-010-2002</u>

Contractor:

Triton Environmental Consultants Ltd.

QA review by:

Chris Schell

Review date: February, 2002

FORM 3E

CONSISTENCY CHECK: FISH COLLECTION FORM, FDIS, PROJECT MAP, INTERPRETIVE MAP, LAKE OUTLINE MAP - PAGE 1 OF 6

	1	2	3	4	5	6	7	8	9	10	
Site #	1	9	39	49	52	59	351	365	503	513	
NID map #	931.070	93L.080	93L.070	93L.80	931.70	93L.070	93L.069	93L.080	93L.080	93L.069	
NID#	10001	10009	10039	10049	10052	10059	30051	30065	50003	50013	

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											

FORM 3E

CONTINUED - PAGE 2 OF 6

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	<u> </u>										
	Length, width	1, 2											
	Enclosure	1, 2						-					
	Voltage, freq., pulse	1, 2					_						
	Make, model	1, 2	\Box										
	<u> </u>	Total:											

Comments:

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name:	Canfor 2001/2002 - Fish and Fish	h Habitat Inventory: Guess and South Fulton
FRBC project number:	3496	MELP project number: <u>CNF-C172-010-2002</u>
Contractor:	Triton Environmental Consultants I	.td
OA review by:	Chris Schell	Review date: February, 2002

FORM 3E

CONSISTENCY CHECK: FISH COLLECTION FORM, FDIS, PROJECT MAP, INTERPRETIVE MAP, LAKE OUTLINE MAP - PAGE 3 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	518	530	538	548	19	26	65	76	88	99
NID map #	93L.080	93L.070	93K.071	93L.069	93L.0	93L.068	93L.077	93L.079	93L.068	93L.079
NID#	50018	10333	50038	50048	10019	10026	10065	10076	10088	10099

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	\vdash										
	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									T		
	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									\Box		

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CONTINUED - PAGE 4 OF 6

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Gear	Method, method no.	1, 2											=
specifications	Haul	1, 2											-
	Date, time in/out	1, 2											-
	Net type, lgth, dpth	1, 2											
	Mesh size	1, 2											
	Set, habitat	1, 2											
Electrofisher	Method, method no.	1, 2											
specifications	Pass	1, 2											
	Time in, time out	1, 2											
	EF sec.	1, 2	1										
	Length, width	1, 2											
	Enclosure	1, 2											
	Voltage, freq., pulse	1, 2											
	Make, model	1, 2											
	 	Total:		-								_	

Comments:

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton Project name: FRBC project number: <u>3496</u> MELP project number: <u>CNF-C172-010-2002</u> Triton Environmental Consultants Ltd. Contractor: Chris Schell Review date: February, 2002

FORM 3E

QA review by:

CONSISTENCY CHECK: FISH COLLECTION FORM, FDIS, PROJECT MAP, INTERPRETIVE MAP, LAKE OUTLINE MAP - PAGE 5 OF 6

	1	2	3	4	5	6	7	8	9	10
Site #	757	795	810	818	831	836	842	855	863	956
NID map #	93L.068	93L.077	93L.077	93L.077	93L.067	93L.077	931.077	931.078	93L.079	93L.068
NID#	70857	70095	70810	70818	70831	70836	70842	70855	90863	90956

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											

FORM 3E

CONTINUED - PAGE 5 OF 6

Group	Item	Where to check	1	2	3	4	5	6	7	8	9	10	Error locations
Gear	Method, method no.	1, 2											
specifications	Haul	1, 2											
	Date, time in/out	1, 2											
	Net type, lgth, dpth	1, 2											_
	Mesh size	1, 2											
	Set, habitat	1, 2					-	-					
Electrofisher	Method, method no.	1, 2											
specifications	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									X		
	Make, model	1, 2											
	-	Total:											

Number of marks (# cards * 36): _1080	Maximum number of errors acceptable (5%): 54
Number of errors found:1	Is the number of errors acceptable: Yes

Comments:

9) voltage is 600 on the card. and 60 in FDIS. Corrected in FDIS

Otherwise, excellent work.

FISH INVENTORY QUALITY ASSURANCE CHECK FORM Project name: Canfor. - 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fulton MELP project number: CNF-C172-010-2002 Contractor: Triton Environmental Consultants Ltd. QA review by: Review date: February, 2002

FORM 3F	Consis	STENCY	Снеск:	Indivi	dual Fis	SH DATA	CARD,	FDIS –	PAGE 1	OF 1
	1	2	3	4	5	6	7	8	9	10
Site #	365	513	538	19	26	65	76	853	825	846
NID map #	93L.080	93L.069	93K.071	93L.0	93L.068	93L.077	93L.079	93L.078	93L.077	93L.088
NID#	30065	50013	50038	10019	10026	10065	10076	70853	70825	90846

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	Site #	1, 2											
fish data	Method, method no.	1, 2	T										
	Haul/Pass	1, 2											
	Species	1, 2											
	Length	1, 2								X			
	Weight	1, 2											
	Sex	1, 2											
	Maturity	1, 2		_									
	Age structure	1, 2	1										
	Age sample #	1, 2		_									
	Age	1, 2											
	Voucher	1, 2											
	Genetic structure	1, 2											
	Genetic sample #	1, 2											
	Photos	1, 2		-									 _

Number of marks (# cards * 15):150	Maximum number of errors acceptable (5%): _7_
Number of errors found:I	Is the number of errors acceptable:

Comments:

8) fish with scale sample # 110 is 118mm long on the card and 110 in FDIS. Corrected in FDIS.

FISH INVENTORY QUALITY ASSURANCE CHECK FORM

Project name: Canfor 2001/2002 - Fish and Fish Habitat Inventory: Guess and South Fu
--

FRBC project number: 3496 MELP project number: CNF-C172-010-2002

Contractor: Triton Environmental Consultants Ltd.

WATERSHED REPORT - PAGE 1 OF 4

QA review by: Chris Schell Review date: February, 2002

Accept. Report section Attribute Notes (Y/N)Title page Proper title 1 N Watershed code below title N _ Y Prepared for... Y Prepared by... Signature of R.P.Bio Y Reference information Project reference information Y Y Watershed information Sampling design summary Y Contractor information Y Y Disclaimer Standard wording disclaimer Y Acknowledgements Table of contents Page numbering correct Y Y Report outline follows standard

List of Tables

List of Figures
List of Attachments

List of Appendices

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.	N	3
	Impacts and uses by wildlife	Y	
	Existing water quality data	Y	
	Previous fish presence	Y	
Methods	Reference to RECCE standards	N	4
	Reference to project plan	Y	
	Deviations from RIC standards	Y	
	Deviations from project plan	Y	
	List of sampling equipment used	Y	

Notes:

Lists

FORM 3K

- 1) "...selected tributaries to the south side of the Fulton River Watershed" Changed title.
- "...tributaries to the southwest shore of Babine Lake, south of Topley Landing." Changed title.

Notes:

Y

Y

Y

Y

4) both reports cite the 1998 standards. The 2001 standards include all the

errata and should be the one that you cite. Changed references.

- 2) Please list the main watersheds in the project area, or the first and last. Added.
- 3) No discussion of logging in the area. Added.

CONTINUED - PAGE 2 OF 4

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	Table defining each sub-drainage	Y	missing
biophysical information	Sub-drainages not sampled but included in the planning document	-	na
	Previous sampling reference	-	in 2.1
Habitat and fish	Characteristics of fish habitats	Y	
distribution	Pattern of fish distribution	Y	<u> </u>
	Location of significant fish pop.s	Y	2
	Lakes treated as a reach of the stream	Y	
	Upstream limits of fish presence	N	3
	Obstructions influencing fish	N	3
	Table of all barriers present	Y	

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	
	Length-frequency histograms	Y	
	Histograms have the same x-axis	-	na
	Table: Summary of length-at-age.	Y	1
	Data presented by species	Y	
	Data presented by sub-drainage		no
	Age classes appear correct	-	na
Significant features and	Fish and fish habitat		
fisheries observations	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	N	4
	Restoration opportunities	Y	
	Problem culverts	Y	
	Unstable slopes	Y	
Fish bearing status	Brief narrative section	Y	
	Table: Summary of fish bearing reaches	Y	

Notes:

- 1) What does your length frequency data say about how long the juvenile coho remain rearing in these streams?
- 2) noted in "Significant fisheries observations."
- 3) the upstream limit of spawning SK is noted, but there is no mention of any of

Notes:

fish use" should be noted and discussed. Discussed.

4) You should discuss the WSU and LKC populations upstream of the cascade in R2 of -697200-12300. Discuss any reasons you see why no sport species are present and why you feel this population should not receive special status under the code. Section submitted to John Brockley and Matt Jessop for review and approval prior to inclusion in report.

Stream Report Format - cont.

Report section	Attribute	Accept. (Y/N)	Notes
Fish bearing status (cont.)	Table: Summary of non-fish bearing reaches		2
	Table: Follow-up sampling required	Y	1
References	All sources in report listed		
	According to CBE style manual		

Stream Report Appendices

Report section	Attribute	Accept. (Y/N)	Notes
Appendix I.	In ascending order by WSC	-	
FDIS summary and	Grouped by site	Y	
photographs	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)	-	
Appendix II.	"E" size plots	Y	
Hardcopy maps –	Folded in pocket in report	N	
General	UTM projection	Y	
	1:20 000 map grid	Y	
	1:20 000 scale	Y	_
	Complete title box	Y	\vdash
	Complete legend box	Y	
<u> </u>	Source information box	Y	

Report section	Attribute	Accept. (Y/N)	Notes
Appendix II.	Inset map box	Y	
Hardcopy maps -	Fish species box	Y	
General (cont.)	100 m contour lines	Y	
	WSCs or ILPs for all sampled streams	Y	
	WSCs or ILPs for all 3 rd order or	Y	

higher streams WSCs or ILPs for every other 1st Y and 2nd order stream WBIDs for all lakes Y Sample site locations Y Project map All site data symbols attached Y to sites Y Lake summary symbols Reach data symbols on all reaches Y gradient <30% gradient and all reaches containing sites Features, obstructions, etc. Y Reach breaks and numbers Y Interpretive map Reach summary symbols for all Ÿ reaches in the project area Y Features, obstructions

Fish distribution limits

Stream class

Y

Notes:

1) you need to clearly state in this section that the reaches in the additional sampling table are also listed in the fish bearing table. Added comments that address this.

Notes:

2) you say that NCD is a timber industry term - it's a Forest Practices Code term. Added comments that address this.	

FORM 3K

CONTINUED – PAGE 4 OF 4

Stream Report Attachments

Report section	Attribute	Accept. (Y/N)	Notes
Attachment I.	Budget breakdown by phase	na	1
Planning document	Project sampling design	na	1
	Process of site selection	na	1
	Reach table	na	1
	Lake table	na	1
	Random sample table	na	1
	References, contacts list	na	1
Attachment II.	Field book or facsimile	Y	
Field notes	Site cards	Y	
	Fish collection forms	Y	
	Individual fish data forms	Y	
	Field working maps	na	
Attachment III.	Actual ageing structures	Y	
Fish ageing structures	Labelled photocopies	Y	
	Annuli identified with red	Y	
	Age data are correct	Y	
Attachment IV.	Table: Vouchers collected	N	
Voucher, DNA samples	Table: DNA collected	N	
Attachment V.	Table: Photo summary report	Y	
Photodocumentation	Colour thumbnail reference	Y	
	Photo CD	Y	2
	CD Image #s match digital	Y	
	Negatives in plastic sleeves	Y	
	Negatives labelled	Y	

Report section	Attribute	Accept. (Y/N)	Notes
Attachment V.	Negative #s match digital	na	
Photodocumentation	Prints in plastic sleeves	Y	
(cont.)	Prints labelled	Y	
Attachment VI.	Budget breakdown by phase	na	
Digital data	Project sampling design	Y	in FDIS
	References, contacts list	na	1
	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)	Y	
	Mapping files (metadata and map features files)	Y	
Attachment VII.	FISS data forms and maps	Y	
FISS update data	Copies of reference material	na	
	Data on forms match FDIS	Y	
Attachment VIII.	Purchased aerial photos	na	
Aerial photography	Aerial video tape	na	

1) submitted with phases 1-3

2) If all the CDs are going to be kept in the South Fulton photodoc binder, it <u>Added</u> to both binders.

Misc. errors:

93L.078 - Fedral Creek, reach 5, site is not labeled with a site number. Corrected.

Site 838: first page of site card print out is missing in the appendix Corrected.

Site 842: fish form printout is missing from appendix Corrected.

Site 956: fish form printout is missing from appendix Corrected.

Photodoc

roll 25 frames 9-10 CD # missing from FDIS. Corrected.

roll 29 frame 14. I found prints with this same label. Corrected.

February 15, 2002

Todd Mahon, Wildfor Consultants FRBC Co-ordinator, Canadian Forest Products Ltd. PO Box 158, Houston, BC, VOJ 1Z0

RE: Triton's response to stage 3 (phase 5-6) QA review of reconnaissance (1:20k) fish and fish habitat inventory for Canadian Forest Products, Houston.

Todd,

I have completed my review of Triton's reply to my QA. They have responded to each of my comments, points by point. All outstanding issues have been addressed, and this letter is to inform you that this project has passed QA review.

Sincerely,

Chris Schell MSc, RPBio

cc. Jason Harris, Triton Environmental Consultants Ltd., Triton, BC

From:

"Jessop, Matthew SRM:EX" < Mathew.Jessop@gems4.gov.bc.ca>

To:

"'Jason Harris"' < JHarris@triton-env.com>

Date:

2/19/02 11:33AM

Subject:

Morice TSA Non-fish bearing status reports

Hello Jason,

This message indicates my approval of the Non-Fish Bearing Status Reports for Fish and Fish Habitat Inventory work done by Triton Environmental Consultants Ltd in the Guess Creek and South Fulton Watersheds in the Morice Forest District during the 2001/2002 field season.

Thank you, Matt.

Matthew Jessop Fisheries Inventory Specialist Ministry of Sustainable Resource Management Skeena Region Bag 5000, Smithers, BC, V0J 2N0

Phone: (250) 847-7538 Fax: (250) 847-7217

Mathew.Jessop@gems4.gov.bc.ca http://srmwww.gov.bc.ca/ske/fshinv/

CC:

"Larden, Troy WLAP:EX" <Troy.Larden@gems1.gov.bc.ca>

From:

Jason Harris

To:

SRM:EX, Jessop, Matthew

Date:

2/27/02 11:59AM

Subject:

Re: LKC and WSU in Baboon system

Matt: In response to your email 'LKC and WSU in Baboon System 02/06/02, I have provided you with the following for the Baboon Lake drainage:

Referencing Information, Fish Inventory, Data Summary Tables, and Habitat Protection Concerns (to be included in RFFHI final report).

The RFFHI final report will include the <u>Habitat and Protection Concerns</u> section located at the end of this document. This email will also be included in the correspondence appendix of the RFFHI final report, as an attachment.

Should you require additional information please contact me.

Jason Harris

Triton Environmental Consultants Ltd.

Referencing Information

The Baboon Lake drainage (WSC 480-697200-12300) is a tributary to Fulton Lake in the Babine Lake watershed group. A small portion of the Baboon Lake drainage is located in Canfor's Guess operating area, west of Topley Landing, BC. A cascade (8 / 3 m) approximately 2 km upstream of the mouth prevents access to the drainage by resident species within the Fulton River watershed, however resident fish such as lake chub (Couesius plumbeus), white sucker (Catostomus commersoni) and redside shiner (Richardsonius balteatus) are present upstream of the cascade. TRIM map sheets for the area include; 93L.079, 93L.078 and 93L.069.

Fish Inventory

Twenty (20) baited (boraxed coho or chinook salmon roe) minnow traps were set throughout the drainage. Water depths at trap sites were between 0.3 m and 0.9 m and trap entrances were placed parallel to the shore and adjacent to submerged cover. Minnow traps fished for a total of 414.15 hours within the watershed.

One multi-panel sinking gill net was set across the center of unnamed lake (WBID01254BABL) at 11:00 h on October 24, 2001 and was retrieved at 10:20 h (23 h 33 min set) on October 25, 2001. The floating gill net was placed perpendicular to the shore and secured to the shore from a point of land with a 5 m rope. The gill net was used to sample the main basin of the lake.

One stream reach within the drainage was electrofished for 200 m. The average gradient within this stream was 2% and the average channel width was 2.85 m. This section of stream was characterized by a pool, riffle glide complex typically containing gravel / cobble substrates. Common riparian vegetation was mixed shrubs. Access through this site is considered fair for coarse species. Salmonid spawning is lacking (no significant accumulations of suitable sized gravels, too large), but spawning substrates for coarse fish are abundant. Instream spawning substrates for coarse fish included; instream vegetation, LWD, SWD and undercut banks.

Previous sampling conducted by Hatfield Consultants Ltd. indicates the presence of redside shiner in Baboon Lake. The results of the Hatfield sampling efforts within the drainage can be found in the following reference:

Hatfield Consultants Ltd. 1998. Secondary Lake Survey of Baboon Lake (01607BABL). Ministry of Environment, Lands and Parks, Skeena Region. April 1998.

The fish-sampling summary of gear type and effort is provided in the attached tables. White sucker, lake chub and redside shiner were the only species captured in the drainage upstream of the cascade.

Habitat Protection Concerns

One drainage within the Guess Creek study area is known to contain fish species above a physical barrier. The Baboon Lake drainage (WSC 480-697200-12300) is a tributary to the Fulton Lake in the Babine Lake watershed group. A small portion of the Baboon Lake drainage is located in Canfor's Guess operating area, west of Topley Landing, BC. A cascade (8 / 3 m) approximately 2 km upstream of the mouth prevents access to the drainage by resident species within the Fulton River watershed, however resident fish; lake chub, white sucker and redside shiner are present upstream of the cascade.

The key issue with this population is that it is isolated from other populations of fish by the 8 / 3 m cascade on the mainstem. The subdued terrain and limited development within the area reduces the level of concern for protection of sensitive fish habitat. Additionally, several small wetlands, ponds and lakes provide natural buffers against the potential impacts of existing and future forest development.

Under the Forest Practices Code (FPC) streams containing lake chub, white sucker and redside shiner are not considered fish streams and given that no other fish exist within this drainage, all streams are classified as non fish bearing (S5 or S6). Under the code, these fish and their habitat do not require an equivalent level of protection to salmonids and other species listed as 'code species'. Facilitating unobstructed passage for these species through stream crossing structures in the outlets of the following would, therefore, be considered a best management practice and a positive proactive measure by Canfor:

- " Baboon Lake (WBID1455BABL);
- " Lennac Lake (WBID 1377BABL);
- " Unnamed Lake (WBID1207BABL);
- " Unnamed Lake (WBID1254BABL);
- " Unnamed Lake (WBID1533BABL); and,
- " Other large potentially fish bearing lakes and permanent water bodies within the drainage.

Unobstructed passage through these areas is considered important to the sustainability of the species discussed above in the Baboon Lake drainage.

>>> "Jessop, Matthew SRM:EX" <Mathew.Jessop@gems4.gov.bc.ca> 02/06/02 02:23PM >>> Hi Jason,

I spoke with Paul Giroux, Dana Atagi and Andy Witt regarding the presence of lake chub and white sucker above the barrier in the Baboon Lake system. The consensus was that you could treat it in a similar fashion as the LKC above the falls on Pimpernel Creek.

It should be mentioned in the report that best management practices should be used to maintain unobstructed passage of these species throughout the watershed. While they are not a Code species this is not a license to install substandard culverts and crossings. Connectivity should be maintained throughout the sub-basin. For riparian management purposes the streams may be classified as non-fish bearing upstream of the barrier. Based on our discussions, the protection afforded to these particular species by the management areas allowed should provide for fish conservation.

I will be writing a memo for the lake and stream files stating the above. Could you please send me all the info you have on this particular system (480-697200-12300)? I'm looking for the size of the cascade, morphology, map sheets, total number of sites, number of fish sample sites etc. Basically anything that will help me describe the system and the rationale for classifying it as NFB above the barrier.

Thanks, Matt.

Matthew Jessop Fisheries Inventory Specialist Ministry of Sustainable Resource Management Skeena Region Bag 5000, Smithers, BC, V0J 2N0 Phone: (250) 847-7538

Fax: (250) 847-7217

Mathew.Jessop@gems4.gov.bc.ca http://srmwww.gov.bc.ca/ske/fshinv/

CC: JBrockley@mail.canfor.ca

Table 1. Gill Netting and Minnow Trapping Summary for the Baboon Drainage

					Date		Method		GN/MT S	ettings			Fish captu	ired	Length		Commen
Referenc	Site	II D / WS	AKE WBI	Parch	from	to	Туре	Amount	Depth (m)	Time In	Time Out	Total Hours	Species	Total	Min	Max	
Referenc	3110	ILF / WS	AVE AADI	Reacii	I II UM	10	1 Abe	Allouit	71117	111/16/11	Tame Out	1.0013	- OPECINO			W # 1 1 17/	Part Cart
a Low en Philip	54.5 (StA5e)	W 16 C 18 B	EGIDASTAN	0.050000	1 100 ESTABLE	No. of Street	NEWS REEDS		Factors.	A STREET, SEC.	DESCRIPTION OF THE PARTY OF THE	Losses	S2003711-01	SECULIAR STATE		CAPITAL COM	Cength ≈
			5 7 5 5							THE STATE OF							91.2m
										清明 號	THE REAL PROPERTY.						Type = F
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		480-	0.0000					18 7 18 18	THE VALUE		A 1500		100000			多多数是	Set = SU
455		697200- 12300-	01254BA	经发表		第一条数据					15 25 3						Habitat =
T2001	335	16900	BL	2	9/24/2001	9/25/2001	GN	1 set	2	11:00	10:20	23.33				在主题。但	L
12001	550	10300	DL.	4	O/A-WADO!	OVED/EDO I	- Cit	1 000		11,00			LKC	22	95	125	5
													WSU	14	110	210	
A STORE	SSHAR	SUPERIOR SE		ASSESSED OF	PASSA S	104 053	STOP IN	1500000	SERVICE CO.	型の手が発	光。宏观线		ESSENTE:	BEN WES	建造型基础	BERRE	THE SECTION OF
			No. of the last				C SALE				200						Length =
	1 A RESE		AL STATE			11.5					是是不是		医遗传节		2010153		91.2m
													13000000000000000000000000000000000000				Type = F
							564				The state of		197		435.00		Mesh =
		400							STATE OF				数数是20				Set = SU
Tree St		480- 697200-	01607BA					- 温度/安	新疆等原		1			final a			Habitat =
Hatfield97	45	123001	BL	1	9/24/1997	0/24/1007	CN	1 set	1	12:05	14:25	2.33				ALC: NO	L
Hamouar	40	12.000	DL		3/24/1301	3/24/130/	CIT	1 001	000000000000000000000000000000000000000	12.00	17,20	Libo	RSC	1	99	99	
	MEN INC.	480-	Contract Ass	Darie	RC 1,723	- 0.5 Kg	GRAUGES	W. S. Chill	ZUE DEW	7175-75	から まりは			BUT TO	250	escoria.	
1.00		697200-											E PALS	SEE AN			经由的
		12300-	01533BA								BK BLAD						Set = L
T2001	630	79800	BL	4	9/7/2001	9/8/2001		5 traps		12:40	9:40	21		N. C. 15.3	THE REAL PROPERTY.	SOUTH LAND	Habitat=L
							MT	1	0.6				LKC	10	65	80	
							MT	2	0.7				LKC	12	45 50	90	
		-			-		MT	3 4	0.7		-		LKC	10	50	80	
		-			-		MT	5	0.8				LKC	9		90	
15000740	10000	480-	7 S. S. S. S. S.	ANT STATE		P S S S S S S S S S S S S S S S S S S S	TOTAL STREET	TEXAL PROPERTY.	DIA SEE	AND SHEET		And De Store	SAME ASSESSED.	A51-235		W. 3 W. 19	12 July 1911
可供於沙陸		697200-						SEPTION.									Set = L
T2001	631	12300	NA	2	9/7/2001	9/8/2001	MT	5 traps		13:20	10:20	21				The same of the sa	Habitat=L
							MT	1	0.4				LKC	7	50	80	
							MT	2	0.6				LKC	6		85	
							MT	2	0.6				WSU	3	50	70	
		-			-		MT	3	0.6				LKC	8	40 60	65 95	
		-			-		MT	4	0.5				USU LKC	8	50	75	
		-					MT	5	0.3				LKC	12	45	85	
Control of the Contro	POLICE RES	480-	Sell-ergren	BISHOLOG	S14000	D 12 m (40)	1011 1012 1013 1013 1013 1013 1013 1013	OR SHEET WATER OF	0.4 0.4	10.491016	SECTION STATE	ED # 3/2 17	NEOF/HERE	SEE FOR SEE		A STATE OF THE PARTY OF THE PAR	EASTERN PARTY
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A LEE		697200-	1000	**	RES RES			TEN STATE	M AND			MERCON.		SHAR	THE PERSON NAMED IN		Set = L
T2001	633	12300	NA	4	9/7/2001	9/8/2001	MT	5 traps		14:10	11:00	19.83	8.00 E.S.		Park-18		Habitat=L
							MT	1	0.3				LKC	6	50	80	
							MT	1	0.3				WSU	6	45	95	
							MT	2	0.4				WSU	8	40	85	
							MT	3.	0.3				WSU	12	50	90	
							MT	4	0.3				WSU	4	70	95	
							MT	5	0.4				LKC	3 9	45 60	100	
							MT	5	0.4	La Lanciera de la Constantina			WSU	9	00	100	1

Table 2. Electrofishing Sum mary for the Baboon Drainage

				Date		Method		Electrosh	ocking Sp	ecifications	B			Fish Capt	ired	Length	
Referenc	Site	ILP / WS	Reach	from	to	Type	Amount	Dist. (m)	Time (s)	Voltage	Freq	Pulse	Temp.	Species	Total	Min	Max
		480-															
		697200-		1	1		1	l								1	
T2001	760	12300	19	9/7/2001	9/7/2001	EF	1 pass	200	262	500	60	6	8	wsu	2	65	97
		1												LKC	15	60	85
																1	

APPENDIX IV

Phase I-III Project Plan (with attachments)

PHASES I-III PRE-FIELD PROJECT PLANNING REPORT

Reconnaissance (1:20,000) Fish and Fish Habitat Inventory in selected tributaries within the Babine Lake watershed

WSC 480-548800 - 480-776600

Prepared for:

Canadian Forest Products Ltd.

PO Box 158 Houston, BC V0J 1Z0

July, 2000

Prepared by:



P.O. Box 88, Terrace, B.C. Canada V8G 4A2 Telephone: 1 (250) 635-1494

Fax: 1 (250) 635-1494

July 31, 2000

Reference:

3139WP#T-1023

Wildfor Consultants Ltd.

PO Box 2962

Smithers BC, V0J 2N0

Attention:

Todd Mahon

Dear Mr. Mahon:

Re:

Canadian Forest Products Ltd. Reconnaissance (1:20,000 Scale) Fish and Fish Habitat Inventory Phase J-III Deliverables

Please find attached project deliverables for Phases I-III (planning phases) as outlined in the General Services Agreement for FRBC Stream Inventory.

The attached report is organized as follows:

- Phase I-III Pre-Field Project Planning Report
- Phase I-III Completion Report (Appendix 1/Tab 1)
- Phase I-III Attachments (Appendix 1/Tabs 2-7)
- Phase I-III Digital Data (sleeve in report)
- Phase I-III Interim Maps (tube)

Should you have any questions or comments please do no hesitate to contact me at (250) 635-1494.

Yours truly,

Triton Environmental Consultants Ltd.

Jason Harris

enclos.

This checklist was designed as a template for use by Project Co-ordinators to track submissions.

Please submit electronic and hard copies as a means to indicate what has been submitted for your Fish Inventory Project. Complete areas indicated with RED text and shade in cells to indicate submission is included in package.

2000/2001 FRBC Funded Fish and Fish Habitat Inventory Program

Deliverables Submitted for Fiscal Year 2000/2001

Canadian Forest Products Inventory

Paul Giroux	Canadian Forest Produ	cts inventory
Phase I - III	4.46.46.46	Smithers, Tangle, Guess, Fulton
Pre-Field Planning Report	Digital	Shade in cells to indicate submission
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Excel/Word File Names		hardcopy in planning report
Overview Map		hardcopy in planning report
List of References/contacts		hardcopy and digital in planning report
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ILP Map Status	copy of e-mail or cover letter	hardcopy attached
FDIS File Status	(FDIS file copy optional)	hardcopy attached
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Project Plan		hardcopy and digital in planning report
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Fish Collection Forms	submit at Phase VI; provide #	
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Lakes

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Date Due as per Standards Agreement Phase V-VI

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Databases

FDIS.dat

Photographs

Photo form 1 binder with index 2 CD's with index Digital copy of index

FISS Updates

Forms Maps

Lake Surveys

Draft Report

Paul Giroux

lake reports 6 hard copies

2 electronic copies

outline map in report ariel photo in report

bathymap 6 hard copies 2 electronic copies

Watershed Reports
Draft Report

Final Report 6 hard copies

2 Digital

Maps

Draft Maps Digital copy Hard copy

Project Maps 5 hard copies

2 digitial

Interpretive Map 5 hard copies

2 digitial

Overview 6 hard copies (1 copy per report)

2 digitial

QA Report hard copy

digitial

Phase Completion Report hard copy

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Date Due as per Standards Agreement

Information for Quality Certificate

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PHASE V-VI			
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Jason Harris

From: Edward Lem <elem@triton-env.com>

To: Cc:

Sean.Cheesman@gems5.gov.bc.ca>
Dave Warburton <DWarburton@triton-env.com>; Jason
Harris <JHarris@triton-env.com>
Thursday, July 20, 2000 9:49 AM
smithers, ZIP; TANGLE.ZIP; guess.ZIP; fulton.ZIP

Sent:

Attach:

ILP Tables Subject:

Sean,

Here are the ILP tables for the Canfor projects for Jason Harris project manager for Triton Environmental in Terrace. The ZIP files are named by watershed area. If you have any problems please don't hesitate to call.

Thanks,

Jason Harris

Miers, Lynn FISH:EX <Lynn.Miers@gems1.gov.bc.ca> <jharris@triton-env.com> Friday, July 21, 2000 2:44 PM waterbdy.exp From: To: Sent:

Attach:

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PHASES I-III PRE-FIELD PROJECT PLANNING REPORT

Reconnaissance (1:20,000) Fish and Fish Habitat Inventory in selected tributaries within the Babine Lake watershed

WSC 480-548800 - 480-776600

Prepared for:

Canadian Forest Products Ltd.

PO Box 158 Houston, BC V0J 1Z0

July, 2000

Prepared by:



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Tab 4:	Smithers Landing Reach Sampling Summary Report (with sample selection)
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Tab 7:	Fulton South Reach Sampling Summary Report (with sample selection)

Phase I to III Pre-field Project Planning Report - 1:20,000 Fish and Fish Habitat Inventory in the Fulton River and Babine Lake project area

FRBC Multiyear agreement number:

Contract Number:

FRBC Project Number:

FDIS Project Code:

Project Name:

Fish Habitat Inventory in selected tributaries

within the Babine Lake watershed

Project Type:

Report Date:

Proponent:

Company/Agency: **Contact Person:**

Contact Phone:

Contact E-Mail:

Ministry Representative:

FRBC Coordinator

3496

Reconnaissance (1:20,000 scale) Fish and

1:20.000 Reconnaissance July 25, 2000

Canadian Forest Products Ltd.

Triton Environmental Consultants Ltd.

Jason Harris

(250) 635-1494 jharris@triton-env.com

Paul Giroux

Todd Mahon

LIST OF DIGITAL PRODUCTS

List of References List of Contacts Project Planning Report

Phase Completion Report

Guess Lake ILP Data Sheet

South Fulton Lake ILP Data Sheet Tanglechain Lake ILP Data Sheet

Guess Stream ILP Data Sheet

Smithers Landing Stream ILP Data Sheet South Fulton Stream ILP Data Sheet Tanglechain Stream ILP Data Sheet

Guess FDIS

Smithers Landing FDIS South Fulton FDIS Tanglechain FDIS

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canfphasecomp1232000.doc

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tangle/lilpall.dbf

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smithers/silpall.dbf

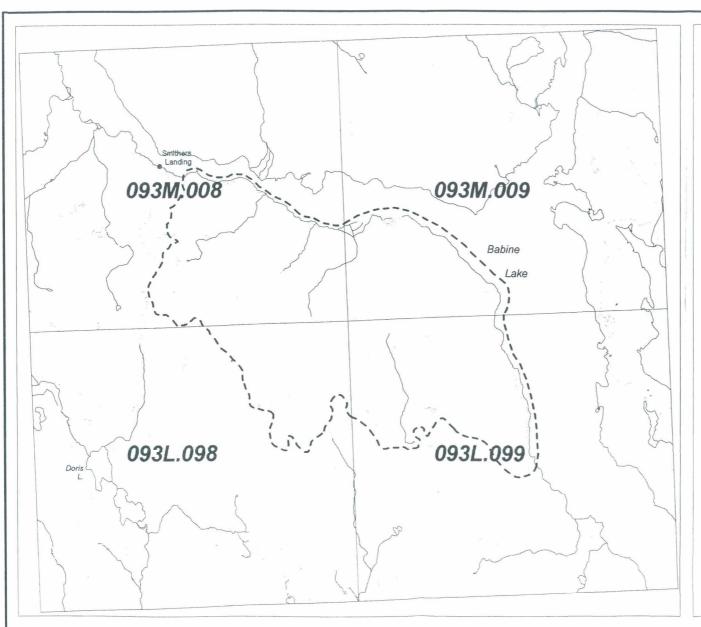
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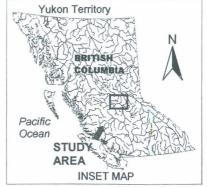
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Unnamed Tributaries to Babine Lake Smithers Landing Planning Unit Reconnaissance (1:20,000) Fish and Fish Habitat Inventory





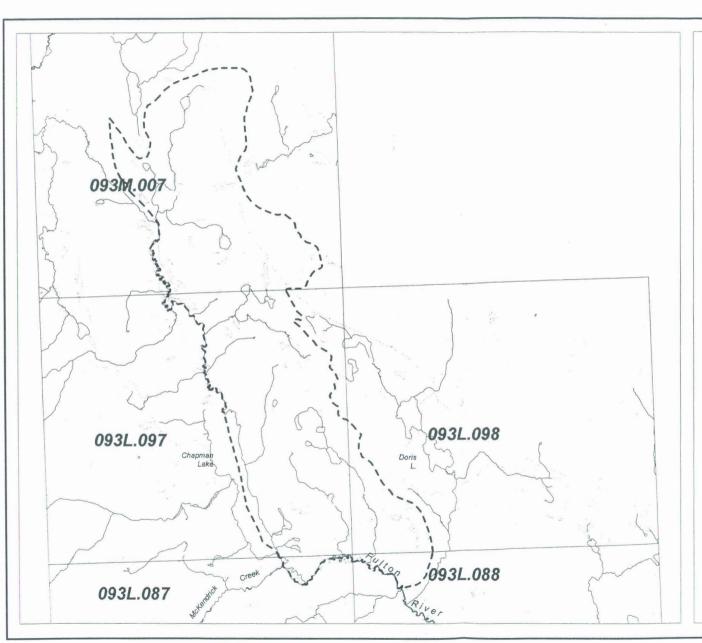
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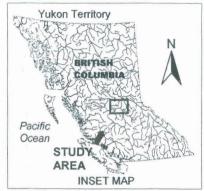
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Date: July 15, 2000 Created by: SM





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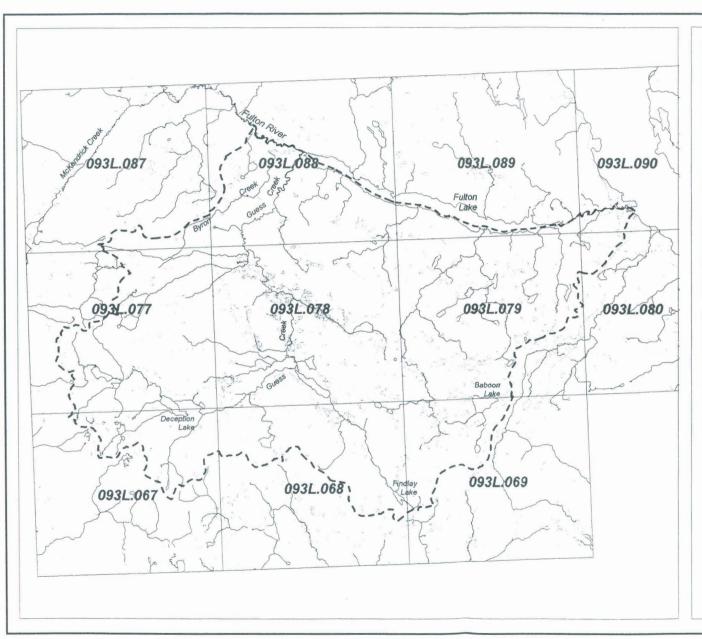
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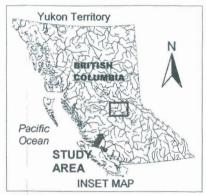
Date: July 15, 2000 Created by: SM



Environmental Consultants Ltd. "v (804) 2/4 2040 Hev (804) 173-3047 C-404) skribninger ==



Unnamed Tributaries to Fulton Lake Guess Planning Unit Reconnaissance (1:20,000) Fish and Fish Habitat Inventory





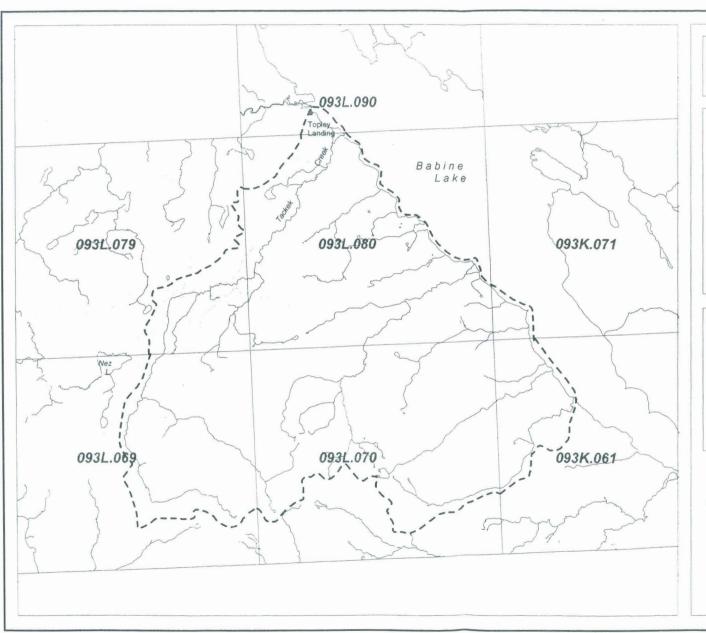
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Source: 1:20,000 TRIM Projection: UTM

Date: July 15, 2000 Created by: SM





Unnamed Tributaries to Babine Lake South Fulton Planning Unit Reconnaissance (1:20,000) Fish and Fish Habitat Inventory





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Source: 1:20,000 TRIM Projection: UTM

Date: July 15, 2000 Created by: SM



1.0 INTRODUCTION

Triton Environmental Consultants Ltd. was retained by Canadian Forest Products Ltd. (CanFor) in partnership with Forest Renewal British Columbia (FRBC) and Ministry of Environment Lands and Parks (MELP) to conduct a reconnaissance level fish and fish inventory in selected tributaries within the Babine Lake watershed. 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;
- summary of phase costs;
- progress and problems summary; and
- next phase project plans and constraints.

2.0 STUDY AREA AND ACCESS

2.1 List of Trim Maps

The Babine Lake study area is located around the town of Topley Landing, BC. Topley Landing is located at the confluence of the Fulton River with Babine Lake. The 1:20,000 TRIM sheets covering this project area include:

Smithers Landing Working Area

93M.008	93M.009	93L.098	93L.099			
Tanglechain V	Working Area					
93M.007	93L.097	93L.098	93L.087	93L.088		
Guess Working Area						
93L.087 93L.077	93L.088 93L.078	93L.089 93L.079	93L.090 93L.080	93L.077 93L.067	93L.066 93L.069	
Fulton South Working Area						

93L.090 93L.079 93L.080 93K.071 93L.069 93L.070 93K.061

2.2 Working areas and major Sub-basins within the Babine Lake project area

The sub-basins to be sampled in the study area include:

Smithers Landing Working Area

Unnamed tributaries to Babine Lake (WSC 480-548800 – 480-627900)

Tanglechain Working Area

Bristol Creek (WSC 480-697200-65700) Covert Creek (WSC 480-697200-36700)

Guess Working Area

Betty Creek (WSC 480-697200-25400-50500) Bryon Creek (WSC 480-697200-27500) Cynthia Creek (WSC 480-697200-25400-87600) Doray Creek (WSC 480-697200-25400-24500) Eggleston Creek (WSC 480-697200-23400-73800) Fredral Creek (WSC 480-697200-25400-49800) Guess Creek (WSC 480-697200-25400) Martorie Creek (WSC 480-697200-25400-84100) Nicholson Creek (WSC 480-697200-16400) Stimson Creek (WSC 480-697200-24500-03800)

Fulton South Working Area

Strimboldh Creek (WSC 480-705800-57200) Tachek Creek (WSC 480-707580)

2.3 Access

Road access is fairly extensive in the lower reaches of the Guess and Fulton South working areas. Several roads are located throughout the Smithers Landing and Tanglechain working areas, with mainline logging roads and secondary spur roads providing most of the access. 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/MELP 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 I. The background review indicated that the following species are present within project area:

- coho salmon (Oncorhynchus kisutch);
- pink salmon (O. gorbuscha);
- chinook salmon (O. tshawytscha);
- sockeye salmon (O. nerka);
- steelhead/rainbow trout (O. mykiss);
- cutthroat trout (O. clarki);
- Dolly Varden char/Bull Trout (Salvelinus malma);
- lake trout (S. namaycush);
- largescale sucker (Catostomus macrocheilus);
- longnose sucker (C. columbianus);
- white sucker (*C. commersoni*);
- northern pikeminnow (*Ptychocheilus oregonensis*);
- peamouth chub (Mylocheilus caurinus);
- redside shiner (*Richardsonius balteatus*);
- longnose dace (*Rhinichthys cataractae*);
- mountain whitefish (*Prosopium williamsoni*);
- pygmy whitefish (*P. coulteri*);
- lake whitefish (Coregonus clupeaformis);
- burbot (*Lota lota*); and
- prickly sculpin (*Cottus asper*)

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.

Potential obstructions identified during map and air photo review have been identified on the map with a P.O. (potential obstruction) abbreviation. These potential obstructions have not been included in the FDIS database because of problems associated with floating nids (GIS) and removal of these nids after ground truthing (data entry).

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 licesee, ministry representatives and during the sampling program. We anticipate several changes to the sampling plan, and as discussed with Paul Giroux and CanFor 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.

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 Canadian Forest Products (CanFor). Fish collection permits will be obtained from the Ministry of Environment, Lands and Parks (MELP) 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 the majority of field equipment necessary to complete the project. Rental vehicles (4X4 trucks) and hand held radios will be secured prior to the commencement of Phase 4 (Field work).

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 a Bell Jet Ranger 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 (on the ground). Reaches will be largely accessed using compass bearings, hip chains and GPS units. Fluorescent pink flagging tape labeled with TECL (Triton Environmental Consultants Ltd.) will be used to mark the surveyed section of stream.

All streams will be surveyed with the intent that the information gathered will be used in developing Local Area Agreements for tributaries to the Babine watershed.

5.1.4 Fish Species Sampling

Fish sampling efforts will focus on reaches of <20% gradient (>20% at the FRBC Coordinator, Regional Inventory Specialist and 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* (May, 1998) 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, or where requested by the Project Monitor.

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 or a species of fish out of its normal range will be preserved and submitted to the Implementation Contractor as well as all non-game fish captured from each 2nd 4th order watershed.

For all reaches with 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.

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 all 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. Field crews understand the importance of

locating and finding barriers to adequately address distribution and will be in constant contact with Paul Giroux should the proposed plan need modifications or altering. 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.

5.1.5 Habitat (Site) Description

A reach description will be completed for each reach (at fish sampling sites), consistent with the Site Description form and entered into MELP's MS Access 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:

- reach length;
- site length;
- stream gradient;
- 6 individual channel width measurements;
- estimates of bed material size;
- measurements of stream cover / riparian vegetation and large organic debris;
- channel confinement;
- water temperature;
- conductivity (ambient);
- flow (see 3.3.2.4 Water Quality);
- 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.

5.1.6 Water Quality

Consistent with the terms outlined in Schedule A, 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 and receiving requirements. 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. Water quality measurements will be taken in each sampled reach as specified in the RFP.

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, recorded and presented as per the RIC Guide to Photodocumentation (March, 1996). Photographs will be taken of each sample site (including downstream and upstream 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 1-3 we have identified specific reaches to sample in each working area. Sample sizes are outlined in Table 1.

Table 1.	Sample Site	Summary by	y Inventory	Area.

Inventory Area	Total No. of Reaches	Number of Reaches to be Sampled	Percent of Inventory Reaches Sampled
Smithers Landing	215	52	24.2%
Tanglechain	184	46	25.0%
Guess	1281	140	10.9%
Fulton South	820	144	17.6%

The criterion for sample site selection was discussed with MELP's Fisheries Inventory Specialist, Mr. Paul Giroux. 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; and
- CanFor's operational needs.

5.1.10 Lakes Sampling

Lakes have not been specifically selected for sampling. After discussions with Paul Giroux (Regional Fisheries Inventory Specialist) and CanFor, 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 MELP (watershed wide fish distribution) and CanFor (headwater lakes which support fish).

Planning for the lakes sampling portion of the project will follow a balanced approach between Ministry of Environment Lands and Parks (MELP) requirements and CanFor's operational needs. 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 in CanFor's operating areas.

5.2.2 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 have been obtained from MELP and DFO as part of pre-field planning.

5.2.3 Equipment

Triton possesses most of the field equipment necessary to complete a lakes project. A rental vehicle (4X4 truck) and programmable VHF hand held radios will be secured prior to the commencement of Phase 4 (Field work). Additional lakes sampling equipment is owned by Triton including, Zodiacs and outboard motors, Van Dorn bottles, depth sounders, electroshockers and cameras.

5.2.4 Field Assessment

Fieldwork for lakes will be conducted by a 2-person field crew. 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 a Bell Jet Ranger helicopter from Westland Helicopters (Houston).

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 of sampling primary lakes in 2 days and secondary lakes over 1 day is attained.

5.2.5 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.

5.2.6 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 streams inventory.

5.2.7 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 as will all non-game fish captured from each 2nd - 4th order watershed.

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. Fish killed in gill nets will have otoliths removed for aging. 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 MELP's MS Access 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:

- reach length
- site length
- stream gradient
- 6 individual channel and wetted width measurements
- estimates of the percentage areas of the different habitat units
- estimates of bed material size, by size class
- compaction of bed materials
- measurements of stream cover / riparian vegetation and large organic debris
- measurements of bank instability
- channel confinement
- percentage of stream bars
- air temperature
- water temperature
- conductivity (ambient)
- discharge
- 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.

5.2.8 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 cm 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 feature, 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.

5.2.9 Water Quality

Triton field crews will sample water quality parameters in the field at each limnology station. EMS numbers will be acquired from MELP prior to the commencement of field work in primary lakes. Parameters will be measured in the field in order to reduce laboratory costs and shipping and receiving requirements. On primary lakes, water samples are required to be sent to a certified laboratory for analysis. Parameters analyzed will follow the Lake and Stream Inventory manual and will be discussed on a case by case basis with the regional Fisheries Inventory Specialist.

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 and a Secchi depth measurement to 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. Lake water samples will be collected with a Van Dorn bottle.

5.2.10 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.

5.2.11 Photographic Documentation

Triton will make extensive use of photography throughout the project. For lakes, a series of lake panorama 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 forms and Triton's photodocumentation form and presented in the report in a manner that meets RIC standards.

6.0 PHASE 5 - DATA MANAGEMENT (WATERSHED AND LAKE INVENTORIES)

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. ILP's, submitted during the initial phases will be converted to watershed codes and NID's will be converted to UTM coordinates for mapping and georeferencing purposes. Photographs taken during the field season will be developed, captioned and coupled with Lake Forms/Site Cards where applicable. Additional photographs will be indexed in referenced binders with Photodocumentation Cards and negatives. Bathymetric and lake outline mapping will be completed during Phase 5.

7.0 PHASE 6 - REPORTING AND MAPPING (WATERSHED AND LAKE INVENTORIES)

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 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 reach 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 a GIS software program. Maps produced digitally will include all information as per the requirements outlined in the Reconnaissance (1:20,000) Inventory Standards. The 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. Bulkley 1996/97, WRP projects, CanFor stream classification projects) 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. Where historical information is sufficient and if further sampling is not required, sample sites will be moved or eliminated from the plan.

8.0 PROJECT TIMELINES

Completion of Phase I to III Activities July 31, 2000

Completion of Phase IV Activities October 31, 2000

Completion of Phase IV Deliverables December 15, 2000

Completion of Draft Phase V and VI Deliverables March 15, 2001

9.0 PROPOSED STAFF

Project Director Dave Gordon

Project Manager/Crew Supervisor Jason Harris

Project Biologist Bryan Williams

Crew Supervisor Jason Dorey

Fisheries Technician Eamon Miyagi

Fisheries Technician Karen Timlick

Fisheries Biologist Eva Wichman

GIS Coordinator Dave Warburton

GIS Technician Ed Lem

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
T: N.C.

Misc

RIC inventory standards
contract
fish identification key
project contact list
winch
jack-all
tire iron
spare tire
shovel
axe
Swede saw
горе
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

Based on conversations with Paul Giroux and Todd Mahon the following contingency plan was agreed to:

- It is critical that sampling be approached strategically, rather than (or in addition to) site based. In cases where sampling could not be conducted, or where conditions for sampling were unfavorable, crews can move sites within the same gradient class and size class. Moving sites and keeping them within the same class will not be considered modifications to the approved plan.
- Crews can relocate sites within the watershed to a maximum of 10% if the site varies from the approved plan. Moving a site from one gradient class to another (i.e. class 1 to class 2) or from one size class to another (i.e. small to large) will be considered a modification to the approved plan.
- To allow maximum sampling efficiency and also allow crews to assess barriers and fisheries values throughout the watershed, crews can add 10 additional sample sites to each area if required.

PROJECT PHASE COMPLETION REPORT - PHASE I-III

Contract Number:

FRBC Project Number:

FDIS Project Code:

3496

Project Name:

Reconnaissance (1:20,000 scale) Fish and Fish Habitat

Inventory in selected tributaries within the Babine Lake

watershed

Project Type:

1:20,000 Scale Reconnaissance

Report Date:

July 25, 2000

Proponent:

Canadian Forest Products Ltd.

Company/Agency:

Triton Environmental Consultants Ltd.

Contact Person: Contact Phone: Jason Harris (250) 635-1494

Contact E-Mail:

jharris@triton-env.com

MELP Project Monitor:

Paul Giroux

FRBC Coordinator:

Todd Mahon

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)		

Activity Log (Phase I-III)

Date	Activity	Time Spent
June 01, 2000	Project meeting with Todd Mahon.	15h
June 5, 2000	Stream and Lake file search @ MELP Smithers	15 h
June 5-20, 2000	Requests for information	15 h
June 5-20, 2000	Request for FISS maps and information	10 h
June 15-30 2000	Assign ILP's, delineate watershed boundaries	140 h
June 20-26, 2000	Completing Reach Tables and Quality Control	36 h

June 20-27, 2000	Completing Interim Maps and Quality Control	22.5 h
June 20-29, 2000	Lakes planning and lakes information tables	20.5 h
June 12-30, 2000	Completing Basin Classification, Reach Breaks,	228.5 h
	Lakes Classification and Quality Control	
July 6-30, 2000	Create contact list, bibliography	15 h
June 15-20, 2000	Project Plan development	15 hrs
June 20-25, 2000	Interim Maps/Sample Site Locations	31 hrs
June 15-30, 2000	Crew and Equipment List	5 hrs
June 20, 2000	Sample Site Selection Rationale	4 hrs
June 30, 2000	Phase 3 meeting (Todd Mahon)	15 hrs

Summary of Work Completed

A meeting was conducted with Todd Mahon (contract monitor) to obtain information regarding the project specifications and project area.

A background data review was conducted to establish existing information within the Tanglechain, Smithers Landing, South Fulton and Guess working areas. These reports were obtained from the Ministry of Environment Land and Parks (MELP) office in Smithers, the Morice Forest District office in Houston, CanFor in Smithers, various consultants and the BC Conservation Data Centre. A bibliography listing these reports was completed (attached).

In the process of data collection and compilation consultants and government agencies were contacted. A list of contacts made during this process was completed (attached).

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 at Phase 5.

The project area boundaries were delineated on trim maps and all streams, wetlands and lakes were assigned, waterbody identifiers or ILP's. Watershed codes and ILP's were assigned using Arcview and FDIS.

Twenty working TRIM mapsheets are being used for the project.

Detailed map and air photo analysis was conducted in order to identify and classify subbasins 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 interm 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 rational for sample site selection is provided in the project plan (attached).

Planning for the field sampling portion of this project followed a balanced approach between MELP requirements and CanFor's operational needs. Initial sample site selection was undertaken utilizing the FDIS random generator. Further discretionary sites were added to the initial randomly generated sampling sites. Discretionary sites were selected using the following criteria:

- MELP's Reach Sampling Summary table for each watershed (attached);
- existing fish species distribution data;
- strategies to determine fish distribution within each watershed;
- CanFor's 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 2000.

Table 1. Project Area Statistics

	Smithers Landing	Tanglechain	Guess	Fulton South
Project Area (Ha)	11,498 ha	11,185 ha	31,937 ha	59,973 ha
Number of TRIM maps	4	5	11	7
Largest watershed (stream) order	4	3	5	5
Number of 3rd order basins	6	3	32	21
km of streams in project area	199.41 kms	136.84 kms	605.45 kms	912.38 kms
Number of stream reaches in project area	215	184	1281	820
Number of lakes in project area	0	16	41	9

Table 2. Number of Reach Sample Sites Selected by FDIS (Random)

	Smithers Landing	Tanglechain	Guess	Fulton South
Number of stream reaches in project area	215	184	1281	820
Number of sample sites (random)	47	43	99	89
Random sampling %	21.9%	23.9	7.7	10.9
Number of sample sites (bias)	5	3	41	55
Bias sampling %	2.3%	1.6	3.2	6.7
Total sampling % (bias and random)	24.2%	25%	10.9%	17.6%

Progress and Problems Summary

Phase I-III was completed as scheduled. Watershed codes were assigned to a significant portion of the streams within each watershed. Searching through the watershed atlas was time consuming and much slower than using ILP's for stream delineation. The use of watershed codes will allow easier access to data management (by CanFor) and possibly increase turnaround time for watershed code assignment from MELP.

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 licesee, ministry representatives and during the sampling program. We anticipate several changes to the sampling plan, and as discussed with Paul Giroux and CanFor 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. After discussions with Paul Giroux and CanFor, 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 MELP (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 Phase V of the project 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 August 15, 2000

Summary of Phase 1-3 Costs

Professional Fees \$32,255.00 Disbursements \$2,458.00

Costs as per original budget

Contract Monitor Acceptance

Report Submitted By: Jason Harris	Date: July 20, 2000
Phase Completion Approved:	Date:
Comments:	

Bibliography

- Anonymous. (undated) Ministry of Environment, Lands and Parks Stream Summary Files Various Creeks Draining into Babine Lake/Babine River/Morrison Lake. Ministry of Environment, Lands and Parks, Smithers, BC
- Bustard, D. (1987). Babine Lake Creel Survey 1985-86.
- Bustard, D. (1989). Assessment of Rainbow Trout Recruitment from Streams Tributary to Babine Lake. Unpublished manuscript prepared for British Columbia Ministry of Environment and Parks. 70 pp.
- Bustard, D. (1990) Assessment of Coho Salmon Recruitment from Stream Tributary to Babine Lake. Prepared for Department of Fisheries and Oceans.
- **DeGisi, Joseph S. and Jeffrey A. Burrows.** (1995). Reconnaissance Survey of Bristol Lake; Watershed Code 480-69720-65700-0100. Ministry of Environment, Lands and Parks, Smithers BC.
- Graham, C.C., R.A. McIndoe, D.N. Meyers. (1974) Biophysical Stream Survey of Several Streams in the Babine-Nilkitkwa Area
- Fish Habitat Inventory and Information Program. (1991). Stream Summary Catalogue. Subdistrict 4D, Smithers. Volume 2. Department of Fisheries and Oceans, Vancouver, BC.
- Hancock, M.J., A.J. Leaney-East and D.E. Marshall. (1983). Catalogue of Salmon Streams and Spawning Escapement for Statistical Area 4 (Upper Skeena River) April, 1983. Canadian Data Report of Fisheries and Aquatic Sciences, No. 394. 323 pp.
- Hatfield Cosultants Ltd. (1997). Secondary Lake Survey of Baboon Lake (01607BABL). Ministry of Environment, Lands and Parks. Skeena Region.
- Hatfield Cosultants Ltd. (1997). Secondary Lake Survey of Unnamed Lake (01466BABL). Ministry of Environment, Lands and Parks. Skeena Region.
- Hatfield Cosultants Ltd. (1997). Secondary Lake Survey of Unnamed Lake (01648BABL). Ministry of Environment, Lands and Parks. Skeena Region.
- Hatfield Cosultants Ltd. (1997). Secondary Lake Survey of Unnamed Lake (01529BABL). Ministry of Environment, Lands and Parks. Skeena Region.

- Hatfield Cosultants Ltd. (1997). Secondary Lake Survey of Unnamed Lake (01679BABL). Ministry of Environment, Lands and Parks. Skeena Region.
- Hatlevik, S.P. (1981) A Fisheries Inventory of Some Streams within the Morrison Lake Hatchery Arm Portion of Babine Lake. BC Fish and Wildlife Branch, Smithers, BC.
- Northwood Pulp and Timber Ltd. (1995-97) Stream and Riparian Assessment Field Cards. Unpublished: submitted to BC Ministry of Forests, Morice Forest District Office. Northwood Pulp and Timber Ltd., Houston, BC.
- Canadian Forest Products Ltd. (1999-2000) Stream and Riparian Assessment Field Cards. Unpublished: submitted to BC Ministry of Forests, Morice Forest District Office. Canadian Forest Products Ltd., Houston, BC.
- Shepard, B.G. (1975). Upper Skeena Chinook Stocks, Evaluation of the Bear Sustut, Morice and Lower Babine Stocks. Prepared for North Coastal Division, Northern Operations Branch Fisheries and Marine Service, Department of Environment. Vancouver, BC. 40 pp.
- SKR Consultants Ltd. (1998). Fish and Fish Habitat Inventory for Operational Areas in the Morrison IRM Unit. Three Babine Lake Inlet Streams and a Morrison Creek Tributary. Unpublished manuscript prepared for Houston Forest Products, Houston, BC.
- **Taylor, J.A. 1995.** Synoptic Surveys of Habitat Characteristics and Fish Populations Conducted in Lakes and Streams within the Skeena River Watershed. J.A. Taylor and Associates. Unpublished report for the Department of Fisheries and Oceans. 108 pp.
- **Taylor, J.A. 1996.** Assessment of Juvenile Coho Population Levels in Selected Lakes and Streams within the Skeena River Watershed, British Columbia, Between 11 and 31 August, 1995. J.A. Taylor and Associates. Unpublished report for the Department of Fisheries and Oceans. 102 pp.
- Triton Environmental Consultants Ltd. 1998. Reconnaissance Level Fish and Fish Habitat Inventory in the Bulkley TSA. Report prepared for Pacific Inland Resources and BC Ministry of Environment, Lands and Parks. Smithers, BC. Vols. 1-19. approx. 2000 pg. including appendices, site cards, photos.

- Triton Environmental Consultants Ltd. 1998. Reconnaissance Level Fish and Fish Wabitet Inventory in the Bulkley TSA. Working Unit #9 Fulton. Report prepared for Pacific Inland Resources and BC Ministry of Environment, Lands and Parks. Smithers, BC. Volume #9. approx. 200 pg. including appendices, site cards, photos and 9 TRIM maps.
- Triton Environmental Consultants Ltd. 1999. 1-5,000 Fish and Fish Habitat Inventory of Unnamed Tributaries to the Fulton River Working Unit #9 Fulton. Report prepared for Pacific Inland Resources and BC Ministry of Environment, Lands and Parks. Smithers, BC. approx. 80 pg. including appendices, site cards, photos and 1 TRIM map.

Name	Company/Agency	Title	Contact Numbers	Date	Comments
John Brockley	Canadian Forest Products Ltd.	Division Forester	(250) 845-5200	Ongoing	 guidance throughout project requested relevant CanFor fisheries info.
Todd Mahon	Wildfor Consultants	FRBC Contractor	(250) 846-5449	Ongoing	 guidance throughout project meeting regarding CanFor requirements
Paul Giroux	MELP (Smithers)	Regional Inventory Specialist	(250) 847-7294 p (250) 847-7591 f	Ongoing	guidance throughout project
Colin Johnstone	Canadian Forest Products Ltd.	Forester, Tochcha- Babine Area	(250) 845-5200 p	Ongoing	requested existing stream classification info.
Cam Bentley	Canadian Forest Products Ltd.	Forestry Technician	(250) 845-5204 p	Ongoing	requested existing stream classification info.
Walter Timcoe	Canadian Forest Products Ltd.	Forester	(250) 845-5103 p	Ongoing	requested existing stream classification info.
Dave McCarthur	Canadian Forest Products Ltd.	Forester	(250) 845-5203 p	Ongoing	requested existing stream classification info.
Jim McCormack	Canadian Forest Products Ltd.	GIS Manager	(250) 845-5225 p	Ongoing	 requested GIS digital trim maps requested 1:5000 maps of project area and existing stream classification info.
Barry Watson	Canadian Forest Products Ltd.	GIS Administrator	(250) 845-5274 p	Ongoing	support with GIS digital deliverables
Harry Anaka	Canadian Forest Products Ltd.	Forest Operations Supervisor	(250) 845-5281 p	Ongoing	support regarding forest operations
Andy Witt	Morice Forest District	Forest Ecosystem Specialist	(250) 845-6249 p	Ongoing	 guidance and support throughout project regarding LAA and stream classification. data search
Charlotte Samis	Morice Forest District	Forest Ecosystem Specialist	(250) 845-6105 p	Ongoing	requested existing stream classification info. for study area
Sig Hatlevik	MELP (Smithers)	Fisheries Technician	(250) 847-7291	June 26, 2000	requested fish collection permit
Dana Atagi	MELP (Smithers)	Fisheries Biologist	(250) 847-7290	June 26, 2000	requested FISS reports and other info. pertaining to study area
Ron Tetreau	MELP (Smithers)	Fisheries Technician	(250) 847-7294 p	Ongoing	requested info. regarding project area

Triton Environmental Consultants

Ted	MELP (Prince	Fisheries	(250) 565-6852 p	June 26, 2000	requested info. regarding study area
Zimmerman	George)	Habitat/Inventory			
		Specialist			
Jeff Lough	FRBC - Watershed	Restoration	250) 847-7757 p	June 26, 2000	requested info. regarding WRP reports and
	Restoration;	Technician			current projects within study area
	(Smithers)		<u> </u>		
Steve Jennings	Triton	Project Manager	(250) 635-1494	Ongoing	contacted about inventory in area (Bulkley)
	Environmental				Inventory)
	Consultants Ltd.				
 _	Тегтасе				
Adam Lewis	Triton	Project Manager	(604) 279-2093	Ongoing	contacted about inventory in area (Bulkley)
	Environmental Consultants Ltd.				Inventory)
	Richmond				
Marta Donovan	BC Conservation	Assistant Data	(250) 356-0928 p	June 26, 2000	requested rare occurrences for project area
Maria Donovan	Data Centre	Manager	(230) 330-0928 p	Julie 20, 2000	requested fare occurrences for project area
Violette	DFO	ivianagei	(250) 627-3480 fax	June 26, 2000	requested fish collection permit
Racicot	DIO		(250) 027-5400 Tax	Julic 20, 2000	requested fish concention permit
Scott Northrup	DFO (Nanaimo)	Habitat Biologist	(250) 756-7275 p	June 20, 2000	contacted for info. regarding completed
		Table Table Block	(220) /20 /2/2 P		inventories within the study area
Bruce	DFO (Nanaimo)	Area Chief	(250) 756-7270 p	June 20, 2000	contacted for info. regarding completed works
MacDonald		(Enhancement		,,_,,	within the study area
		Branch)			
Jason Huang	DFO (Prince	Habitat Biologist	(250) - 561-5396 p	June 26, 2000	requested info. pertaining to the study area
	George)	_			
Don Rathford	DFO	Biologist	(250) - 627-3416 p	June 26, 2000	requested info. pertaining to the study area -
_	(Prince Rupert)				referred by Smithers DFO office
Regina	SKR	Biologist	(250) 847-4674	June 26, 2000	requested info.pertaining to work completed
Saimoto	Environmental				in the study area
	Consultants				
Dave Peacock	DFO	Biologist	(250) 627-3416 p	June 26, 2000	escapement info. for waterbodies in project
<u> </u>					area
Ed	Westland	Pilot	(250) - 845-2334 p	June 26, 2000	• project info.
Chernenkoff	Helicopter				

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Jim Beise	Northern Mountain Helicopters Inc.	Pilot	(250) 845-2101 p	June 26, 2000	info. regarding study area
Jirn Trask	Triton Environmental Consultants Ltd. (Prince George)	Consultant	(250) 562-9155 p	June 26, 2000	requested any work completed by firm in study area
Bill Holland	First Nations Traditional Territories, Houston	Elder	(250) 845-7418 p	June 26, 2000	info. pertaining to First Nations Traditional Territory in study area
Jim Schwab	Ministry of Forests Regional Office (Smithers)	Silviculture Planning	(250) 847-7500 p	June 26, 2000	info. search - all info. pertaining to study area is at Canadian Forest Products Ltd office
Dwight Hickey	Environmental Dynamics	Consultant	(250) 562-5412 p	June 28, 2000	requested any work completed by firm in study area
Stephan Schug	Wet'suwet'en office of Heredatoral Chiefs		(250) 847-3630 p	June 28, 2000	ongoing Morice watershed restoration project
Barry Finnegan	DFO, Nanaimo	Fisheries Technican (North Coast)	(250) 756-7038 p	June 28, 2000	re: JA Taylor site locations
Joeseph DeGisi	Consultant	Fisheries Biologist	(250) 847-3575 p	June 28, 2000	Reconnaissance Lake Inventory reports for project area
Chris Schell	Consultant	Fisheries Biologist	(250) 847-0180 p	Ongoing	 RIC Inventory expert guidance throughout project
Dave Bustard	Consultant	Fisheries Biologist	(250) 847-2963 p	June 28, 2000	familiar with fisheries resources throughout the study area
John Rustad	Western Geographic	GIS Coordinator	(250) 564-9191 p	Ongoing	requested Maps and flightline indeces
Catherine Martel	DFO (Prince George)	Habitat Biologist	(250) 561-5396 p	June 23, 2000	requested fisheries information pertaining to study area
Lindsay	Maps BC (Victoria)	Mapping Technician	(250) 387-3022 f	June 23, 2000	flight lines/aerial photographs

Triton Environmental Consultants

Jan	Nanaimo Maps and Charts	_	(250) 754-2313 p	June 23, 2000	trim map request
Garth Taylor	Hatfield Consultants	Biologist	(604) 926-3261 p	June 23, 2000	data search
Beth Rogers	British Columbia Data Conservation Center	Data Manager	(250) 356-0928 p	June 23, 2000	data search
Jas Rehal or Sandy Vogt	DFO (Vancouver)		(604) 666-8614p (604) 666-7112f	June 26, 2000	 recieved info. regarding fish collection permits requested a fish collection permit
Patti Neis	MELP (Smithers)	Program Secretary/ Librarian	(250) 847-7334p (250) 847-7556f	Ongoing	requested relavent fisheries info. from the MELP library in Smithers
J. A. Taylor	J.A. Taylor & Associates	Consultant	(250) 656-0163 p	June 28, 2000	requested info. 1994 and 1995 sample sites; referred to Barry Finnegan

SAMPLE TYPE	WSHD CODE	ILP	NID	NID MAP	REACH	GRAD
В	000-00000-0000-00000-0000-0000-000-000-000-000-	11067	20046	093M.008	2.0	3.75
В	000-00000-00000-00000-0000-0000-000-000-000-000-000-	11300	_	093L.099	3.0	
В	480-568000-00000-00000-0000-0000-000-000-000-	0		093M.008	2.0	
В	480-581200-55500-00000-0000-0000-000-000-000-00	0		0931.099	2.0	8.21
В	480-627900-00000-00000-0000-0000-000-000-000-0	0		0931.099	2.0	
R	000-00000-00000-00000-0000-0000-000-000-000-000-000-	11005		0931.098	1.0	7.12
R	000-00000-00000-0000-0000-0000-000-000-000-000-	11005		0931.098	3.0	1.6
R	000-00000-00000-0000-0000-0000-000-000-000-000-	11008		0931.098	2.0	4.69
R	000-00000-00000-0000-0000-0000-000-000-000-000-	11013		0931.099	2.0	8.18
R	000-000000-00000-0000-0000-0000-000-000-000-000-000-	11014		0931.099	2.0	7.14
R	000-000000-00000-0000-0000-0000-000-000-000-000-	11017		093L.099	1.0	7.17
R	000-000000-00000-0000-0000-0000-000-000-000-000-000-	11021		0931.099	1.0	19.04
R	000-000000-00000-0000-0000-0000-000-000-000-000-	11036	_	0931.099	1.0	13.04
R	000-000000-00000-0000-0000-0000-000-000-000-000-	11048		0931.099	1.0	24.47
R	000-000000-00000-0000-0000-0000-000-000-000-000-	11053		0931.099	1.0	27.71
R	000-000000-00000-00000-0000-000-000-000-000-000-	11056		093M.009	1.0	7.98
R	000-000000-00000-0000-0000-0000-000-000-000-000-	11057	_	093M.009	2.0	5.9
R	000-000000-00000-00000-0000-0000-000-000-000-000-	11057		093M.009	1.0	17.73
R	000-000000-00000-00000-0000-000-000-000-000-000-000-	11060	_	093M.009	1.0	1.28
R	000-000000-00000-0000-0000-0000-000-000-000-000-000-	11061		093M.009		9.42
R	000-000000-00000-00000-0000-0000-000-000-000-000-000-	11061			1.0	
R	000-000000-00000-00000-0000-0000-000-000-000-000-000-	11063		093M.009 093M.009	2.0	4.16
R	000-000000-00000-00000-0000-000-000-000-000-000-		_		1.0	9.18
R		11069		093M.008	1.0	
	000-00000-0000-0000-0000-000-000-000-000-000-000-	11079		093M.008	1.0	
R R	000-000000-00000-00000-0000-000-000-000-000-000-	11082		0931.098	2.0	5.71
R	000-00000-0000-0000-0000-000-000-000-000-000-000-	11082		0931.098	3.0	
R	000-00000-00000-00000-0000-0000-000-00	11083		093M.008 093I.099	1.0	6.71
R		11300			6.0	10.15
R	480-558800-00000-00000-0000-0000-000-000-	0		093M.008	2.0	5.17
R	480-558800-00000-00000-0000-000-000-000-0	0		093M.008	7.0	1.82
R	480-558800-00000-00000-0000-000-000-000-0	0		093M.008	9.0	3.87
	480-559900-00000-0000-0000-000-000-000-000	0		093M.008	1.0	10
R	480-559900-00000-0000-0000-000-000-000-000	0	_	093M.008	4.0	1.39
R	480-568000-00000-0000-0000-0000-000-000-000-0	0		0931.098	8.0	14.41
R	480-575000-00000-0000-0000-000-000-000-000	0		093M.008	3.0	3.16
R	480-575000-00000-0000-0000-0000-000-000-00	0		0931.098	5.0	8.09
R	480-575000-00000-0000-0000-000-000-000-000	0		0931.098	8.0	3
R	480-581200-00000-0000-0000-0000-000-000-000-00			093M.009	1.0	8.78
R	480-581200-00000-0000-0000-0000-000-000-000-00			093M.009	2.0	0.08
R	480-581200-00000-0000-0000-0000-000-000-000-00			093M.009	3.0	4.66
R	480-581200-00000-0000-0000-0000-000-000-000-00	0		0931.099	4.0	4.05
R	480-581200-00000-0000-0000-0000-000-000-000-00	0		0931.099	5.0	
R	480-581200-00000-0000-0000-0000-000-000-000-00	0		0931.099	7.0	6.98
R	480-581200-00000-0000-0000-0000-000-000-000-00	0		0931.099	9.0	1
R	480-581200-55500-00000-0000-0000-000-000-000-00	0		0931.099	5.0	
R	480-581200-83000-0000-0000-0000-000-000-000-000-	0		0931.099	2.0	_
R	480-595100-00000-00000-0000-0000-000-000-000-0			093M.009	1.0	
R	480-598100-00000-0000-0000-000-000-000-000-000	0		093M.009	2.0	4.18
R	480-598100-00000-0000-0000-0000-000-000-000-00	0		093M.009	3.0	
R	480-627900-00000-00000-0000-0000-000-000-000-0			0931.099	1.0	
R	480-627900-02800-00000-0000-000-000-000-000-000-	0		0931.099	1.0	
R	000-000000-00000-0000-0000-000-000-000-000-000-000-	11000	20083	0931.098	1.0	7.26



	IK .		SMALL			MEDIU			LARG	iE .
GRADIEN	FORM	Total	Sample	Actual	Total	Sampl	Actual	Total	Sample	Actual
1	ST/SI	20	5	5	23	5	6	2	2	2
<=4	IM/ME	1	1	1	0	0	0	0	0	0
	AN/BR	0	0	0	0	. 0	0	. 0	0	0
2	ST/SI	38	9	9	25	6	6	2	2	2
>4 and <=8	IM/ME	0	0	0	0	0	0	0	0	0
	AN/BR	0	0	0	0	0	0	0	0	0
3	ST/SI	74	11	11	14	3	7	1	1	1
>8 and <=20	IM/ME	0	0	0	0	0	0	0	0	0
	AN/BR	0	0	0	0	0	0	0	0	0
4	ST/SI	13	2	2	0	0	0	0	0	0
	IM/ME	0	0	0	0	0	0	0	0	0
>20 and <=30	AN/BR	-0	0	0	0	0	0	0	0	0
5	ST/SI	2	0	0	0	0	0	0	0	0 .
>30	IM/ME	0	0	0	0	0	0	0	0	0
	AN/BR	0	0	0	0	0	0	0	0	0



SAMPLE_	WSHD_CODE	ILP	NID	NID_MAP	REACH	GRAD
В	80-697200-36700-0000-0000-0000-000-000-000-000		1080	93L.097	12.0	2.92
В	80-697200-65700-00000-0000-000-000-000-000-000-000		1201	93M.007	9.0	0.36
В	80-697200-65700-11200-0000-000-000-000-000-000-000		1160	93M.007	5.0	0.82
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10000	1013	93L.098	2.0	2.39
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10005	1011	93L.098	3.0	0.89
· R	00-00000-0000-0000-0000-000-000-000-000-000-000	10005	1018	93L.098	6.0	1.08
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10006	1002	93L.088	1.0	4.99
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10007	1007	93L.098	2.0	3.92
R	00-000000-00000-0000-0000-000-000-000-000-000	10009	1029	93L.097	2.0	11.77
R	00-00000-0000-0000-000-000-000-000-000-000-000	10011	1045	93L.097	1.0	7.28
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10011	1047	93L.097	3.0	4.78
R	00-000000-00000-0000-0000-000-000-000-000-000-000	10011	1050	93L.097	6.0	4.19
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10012	1044	93L.097	1.0	10.89
R	00-000000-00000-0000-0000-000-000-000-000-000	10013	1059	93L.097	1.0	8.05
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10013	1061	93L.097	2.0	11.23
R	00-000000-00000-0000-0000-000-000-000-000-000	10013	1062	93L.097	3.0	5.14
R	00-000000-00000-0000-0000-000-000-000-000-000	10017	1066	93L.097	1.0	7.96
R	00-000000-00000-0000-0000-000-000-000-000-000	10019	1075	93L.097	1.0	25.27
R	00-00000-00000-0000-0000-000-000-000-000-000-000	10025	1099	93L.097	2.0	9.59
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10026	1101	93L.097	2.0	5.92
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10028	1103	93L.097	1.0	0.7
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10028	1105	93L.097	3.0	2.31
R	00-00000-0000-0000-000-000-000-000-000-000-000	10030	1131	93M.007	2.0	0.94
R	00-00000-00000-0000-0000-000-000-000-000-000	10031	1118	93L.097	2.0	1.67
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10031	1121	93L.097	5.0	0
R	00-000000-00000-00000-0000-000-000-000-000-000	10032	1122	93L.097	1.0	4.13
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10040	1136	93M.007	1.0	3.64
R	00-00000-0000-0000-0000-000-000-000-000-000-000	10043	1140	93M.007	1.0	10.07
R	00-00000-00000-0000-0000-000-000-000-000-000-000	10049	1188	93M.007	1.0	1.89
R	00-00000-00000-0000-0000-000-000-000-000-000-000	10051	1195	93M.007	1.0	0.66
R	80-697200-36700-00000-0000-000-000-000-000-000-000	_	1022	93L.098	2.0	0.84
R	80-697200-36700-0000-0000-000-000-000-000-000-000		1024	93L.098	4.0	0.22
R	80-697200-36700-0000-0000-0000-000-000-000-000-00		1071	93L.097	7.0	2.25
R	80-697200-38600-00000-0000-0000-000-000-000-000-000		1056	93L.097	8.0	1.98
R	80-697200-38600-00000-0000-0000-000-000-000-000-000		1057	93L.097	9.0	4.68
R	80-697200-38600-21300-0000-000-000-000-000-000-000		1042	93L.097	2.0	4.11
R	80-697200-44600-0000-0000-0000-000-000-000-000-		1037	93L.097	2.0	15.87
R	80-697200-47600-0000-0000-0000-000-000-000-000-000		1087	93L.097	1.0	5.28
R	80-697200-47600-0000-0000-000-000-000-000-000-00		1090	93L.097	3.0	1.56
R	80-697200-55100-00000-0000-000-000-000-000-000-		1109	93L.097	1.0	4.25
R	80-697200-61300-0000-0000-000-000-000-000-000-000		1142	93M.007	1.0	0.71
R	80-697200-61300-0000-0000-000-000-000-000-000-000		1145	93M.007	4.0	2.09
R	80-697200-65700-11200-0000-000-000-000-000-000-000		1162	93M.007	7.0	3.26
R	80-697200-65700-18300-0000-000-000-000-000-000-000		1154	93M.007	4.0	0
R	80-697200-65700-18300-0000-000-000-000-000-000-000		1155	93M.007	5.0	6.91
R	80-697200-65700-36200-0000-0000-000-000-000-000-000		1184	93M.007	1.0	1.88

IANGUR CHAIN -

1	1 ST/SI 58 11 13 45 10 10 0 0 0 0 0 0 0	1 ST/SI 58 11 13 45 10 10 0 0 0 0 0 0 0		1g		SMALL			SIZ MEDIUR			LARG	E
ST/SI	ST/SI	ST/SI	RADIEN	せつお別	Total	Sample	Actual	Fotal	Sampl	Actual	Total	Sample	Actual
AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	ST/SI	The section comme						0		_ 0
2 ST/SI 44 10 10 12 3 3 0 0 0 0 0 0 0 0	2 ST/SI 44 10 10 12 3 3 0 0 0 0 0 0 0 0	2 ST/SI 44 10 10 12 3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<=4	PARKET CHANGE LINE AND ADDRESS OF THE	100		-7	2				0	
SA And SA ST/SI ST/S	SA And SA ST/SI ST/S	SA and <=8 IM/ME 0 0 0 0 0 0 0 0 0		AN/BR	0	0	0	0	. 0	0	. 0	0	0
AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	ST/SI	44	10	10	12	3	3	0	0	0
3 ST/SI 17 4 4 3 2 2 0 0 0 0 0 0 0 0	3 ST/SI 17 4 4 3 2 2 0 0 0 0 0 0 0 0	3 >8 and <=20 ST/SI 17	>4 and <=8	IM/ME	0	0	0	0	. 0	0	. 0	0	0
>8 and <=20	>8 and <=20	>8 and <=20	· currenterm	AN/BR	0	0	0	0	0	0	0	0	0
>8 and <=20	>8 and <=20 IM/ME 0 0 0 0 0 0 0 0 0	>8 and <=20	3	ST/SI	17	4	4	3	2	2	0	0	0
AN/BR: 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR: 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR: 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0		1	100								
A IM/ME	A Sample Total: 184 Sample Total: 44 Sample % 23.9 Actual Total: 46 Actual %: 25.0	A IM/ME	A SECURITY OF SECU	AN/BR	0	0	0	1	1	1	0	0	0
>20 and <=30 IM/ME 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	>20 and <=30	>20 and <=30	4	ST/SI	1		1	0	0	0	. 0	0	. 0
5 ST/SI 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 ST/SI 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 ST/SI 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	1									
>30 IM/ME 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	>30 IM/ME 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	>30 IM/ME 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-20 and 4-30	AN/BR	0	0	0	. 0	0	0	0	0	0
AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5	1 - 1				0	0	0	0	0	
Reach Total: 184 Sample Total: 44 Sample % 23.9 Actual Total: 46 Actual %: 25.0	Reach Total: 184 Sample Total: 44 Sample % 23.9 Actual Total: 46 Actual %: 25.0	Reach Total: 184 Sample Total: 44 Sample % 23.9 Actual Total: 46 Actual %: 25.0	>30								1		
				AN/BR	0	0	0	0	0	0	. 0	0_	0
Group 1 Group 2 Group 3 Group 4	Group 1 Group 2 Group 3 Group 4	Group 1 Group 2 Group 3 Group 4	leach Total:	184 Sa	mple To	tal: 44	Samp	le % 23	.9 A	Actual To	tal: 4	6 Actu	al %: 25.
			Group 1 G	roup 2	Group 3	Group	4						

	Walle Cope	U.D.	VIID	NID MAD	DEACH	CDAD
SAMPLE	WSHD_CODE	ILP	NID	NID_MAP	REACH	GRAD
B	000-000000-00000-00000-0000-0000-000-000-000-000-000-000	10042	51234	093L.088	3	112
B	000-000000-00000-00000-0000-000-000-000-000-000-000	10042	51237	093L.088	6	8.36
В	000-000000-00000-00000-0000-000-000-000-000-000-000-000	10418	50464	093L.079	22	2.92
В	000-000000-00000-00000-0000-0000-000-000-000-000-000	11062	51113	093L.077	2	16.11
В	000-00000-00000-00000-0000-0000-000-000-000-000-000	11092	51154	0931, 077	2	13.26
B	000-000000-00000-00000-0000-0000-000-000-000-000-000	11133	51003	093L.077	7	12.87
				093L.077	8	
B	000-000000-00000-0000-0000-0000-000-000-000-000-000	11133	51004			11.16
B	000-000000-00000-00000-0000-0000-000-000-000-000	11146	50791	093L.078	2	3.59
B	000-000000-00000-00000-0000-0000-000-000-000-000-000	11161	50881	093L.078	2	14.22
В	000-000000-00000-00000-0000-0000-000-000-000-000-000-000	11181	50860	093L.078	1	3.12
В	000-000000-00000-00000-0000-0000-000-000-000-000-000	11198	50557	093L.079	3	8.05
В	000-000000-00000-00000-0000-0000-000-000-000-000-000	11221	50500	093L.079	4	1.46
В	000-000000-00000-00000-0000-0000-000-000-000-000	11221	50502	093L.079	6	4.06
<u>B</u>	000-000000-00000-00000-0000-0000-000-000-000-000-000	11239	50596	093L.079	1	1.28
	480-697200-12300-00000-0000-0000-000-000-000-000-000	1,232	50380	093L 069	35	0.26
<u>B</u>		13010				
B	000-00000-00000-00000-0000-0000-000-000-000-000-000	12010	50028	093L.067	1	7.82
В	000-000000-00000-00000-0000-0000-000-000-000-000-000	12013	50013	093L.067	2	4.88
<u>B</u>	000-000000-00000-00000-0000-0000-000-0	12052	50183	093L.068	4	0.23
В	000-000000-00000-00000-0000-0000-000-000-000-000-000	12064	50224	093L.068	2	2.24
В	000-000000-00000-00000-0000-0000-000-000-000-000-000-000	12107	50142	093L.068	4	8
В	000-000000-00000-00000-0000-0000-000-000-000-000-000	12121	50137	093L.068	1	11.43
<u>B</u>	480-697200-06500-00000-0000-0000-000-000-000-000		50616	093L.079	2	2.51
В В	480-697200-06500-00000-0000-0000-000-000-000-000		50618	093L.079	4	4.91
				093L.079	8	
<u>B</u>	480-697200-07700-00000-0000-0000-000-000-000-0		50582			1.76
B	480-697200-09400-00000-0000-0000-000-000-000-000		50569	093L 079	2	4.42
<u>B</u>	480-697200-11600-60400-0000-0000-000-000-000-000-000		50489	093L.079	3	1.43
В	480-697200-11600-60400-0000-0000-000-000-000-000-000		50492	093L.079	6	3.41
В	480-697200-12300-16900-0000-0000-000-000-000-000-000-000		50550	093L 079	1	0.5
В	480-697200-12300-17800-0000-0000-000-000-000-000-000		50432	093L.079	1	1.37
В	480-697200-12300-32700-0000-0000-000-000-000-000-000		50640	093L.079	1	1.79
<u>B</u>	480-697200-12300-32700-0000-0000-000-000-000-000-000		50649	093L.079	10	1.14
В	480-697200-12300-71000-0000-0000-000-000-000-000-000		50322	093L.068	8	1.09
В	480-697200-12300-79800-0000-0000-000-000-000-000-000		50361	093L.069	3	0.37
В	480-697200-16400-00000-0000-0000-000-000-000-000-000		50828	093L.078	8	2.37
B	480-697200-23400-00000-0000-0000-000-000-000-000-000		51250	093L.088	3	2.37
B	480-697200-23400-00000-000 <u>0-0</u> 000-000 <u>-0</u> 00-000- <u>0</u> 00-000-0		51252	093L.088	5	1.35
В	480-697200-25400-24500-0000-0000-000-000-000-000-000		50665	093L.078	4	1.96
В	480-697200-25400-24500-0380-0000-000-000-000-000-000		50913	093L.077	5	12.7
В	480-697200-25400-34100-0000-0000-000-000-000-000-000		50679	093L.078	4	4.3
В	480-697200-25400-53700-0000-0000-000-000-000-000-000		50285	093L.068	15	0.38
В	480-697200-25400-70700-0000-0000-000-000-000-000-000	<u> </u>	50056	093L.067	7	4.96
В	480-697200-25400-70700-0000-000-000-000-000-000-000		50073	093L.067	2	5.08
B	480-697200-25400-70700-7060-0000-000-000-000-000-000		50095	093L.067	2	2.89
В	480-697200-25400-78000-0000-0000-000-000-000-000-000		50038	093L.067	2	14
B	480-697200-25400-78000-0000-0000-000-000-000-000-000		50041	093L.067	5	3.66
B	480-697200-25400-78000-0000-0000-000-000-000-000-000		50045	093L.067	9	10
В	480-697200-25400-84100-0000-0000-000-000-000-000-000		51099	093L.077	3	16.05
В	480-697200-27500-00000-0000-0000-000-000-000-000-000		51305	093L.088	6	3.87
В	480-697200-27500-00000-0000-0000-000-000-000-000-000	1	51309	093L.088	10	1.41
В	480-697200-30400-00000-0000-0000-000-000-000-000		51279	093L.088	3	0.51
В	480-697200-30400-00000-0000-0000-000-000-000-000	\vdash	51283	093L.088	7	0.63
	000-00000-00000-00000-0000-0000-000-000-000-000-000	10011				
R			51241	093L.088	<u>l</u>	9.51
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	10022	51287	093L.088	1	9.69
R	000-00000-00000-00000-0000-000-000-000-000-000-000	10023	51275	093L.088	2	1.22
R	000-000000-00000-00000-0000-000-000-000-000-000-000	15555	50567	093L.079	2	2.47
R	000-000000-00000-00000-0000-0000-000-000-000-000	10026	51322	093L.088	2	1
R	000-000000-00000-00000-0000-0000-000-000-000-000	10035	51221	093L.088	i	5
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	10406	51343	093L.089	1	9.06
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	10410	50559	093L.079	i	4.58
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	10418	50458	093L.079		0
					16	
R	000-00000-00000-0000-0000-0000-000-000-000-000-000	10501	51358	093L.090	2	3.83
R	000-00000-00000-0000-0000-000-000-000-000-000-000	10502	51399	093L.090	1	5
R	000-000000-00000-00000-0000-000-000-000-000-000-000	11004	50926	093L.077	2	19.23
R	000-000000-00000-00000-0000-000-000-000-000-000	11007	51195	093L.087	2	8
R	000-000000-00000-00000-0000-000-000-000-000-000-000	11008	51196	093L.087	1	16.19
R	000-000000-00000-00000-0000-000-000-000-000-000-000	11012	50929	093L.077	3	2

CAMPLE	WCHD CODE	II D	NID	NID MAD	DEACH	CRAD
SAMPLE	WSHD_CODE	1LP 11024	NID 50981	093L.077	REACH	GRAD
	000-000000-00000-00000-0000-000-000-00	11024	50955	093L.077	<u>'</u>	11.67
R	000-000000-00000-00000-0000-0000-000-000-000-000-000-000	11030	50956	093L.077	2	6.04
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11030	50999	093L.077	2	6.67
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11044	51010	093L.077	1	17,62
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11056	51126	093L.077	1	17.18
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11058	51117	093L.077	2	21.92
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	11067	51108	093L.077	2	26.58
R	000-00000-00000-00000-0000-0000-000-000-000-000-000-000	11080	51069	093L.077	1	3.8
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11084	51065	093L 077	i	3 91
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11085	51057	093L.077	2	10.15
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	11088	51048	093L.077	2	7.5
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11090	51139	093L.077	1	5.71
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11090	50121	093L.067	6	12
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11103	50129	093L.067	3	11.67
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11120	50722	093L.078	1	2.19
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	11126	50714	093L.078	1	1.62
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11129	50712	093L.078	1	5.21
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	11133	51179	093L.077	6	6.98
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11133	51006	093L.077	10	19.14
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	11142	50772	093L.078	2	3 14
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	11156	50869	093L.078	3	1.15
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11158	50875	093L.078	3	1.19
R	000-000000-00000-00000-0000-000-000-000-000-000-000	11184	50710	093L.078	11	6.54
R	000-000000-00000-00000-0000-000-000-000-000-000	11186	50417	093L.079	11	6.84
R	000-000000-00000-0000-0000-000-000-000-000-000-000	11188_	50441	093L.079	1	7.46
R	000-00000-00000-0000-0000-000-000-000-000-000-000	11222	50510	0931079	5	5.81
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	11242	50599	093L.079	1	4.26
R	000-00000-0000-0000-0000-000-000-000-000-000-000	11263	50516	093L.079	3	0
R	480-697200-12300-0000-0000-0000-000-000-000-000-000		50369	093L.069	24	0.3
R	000-00000-0000-0000-0000-000-000-000-000-000-000	12034	50085	093L.067	3	12.99
R	000-00000-0000-0000-0000-000-000-000-000-000-000	12043	50110	093L.067	1	28.81
<u>R</u> _	000-00000-00000-0000-0000-000-000-000-000-000-000	12053	50201	093L.068	4	1.39
<u>R</u>	000-000000-00000-00000-0000-0000-000-000-000-000-000	12062	50899 50230	093L.078 093L.068	3	2
<u>K</u>	000-000000-00000-0000-0000-0000-000-000-000-000-000	12003	50248	093L.068	8 2	6,33
R	000-00000-00000-0000-0000-0000-000-000-000-000-000-000	12072	50277	093L.068	<u>Z</u>	3.99
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	12080	50300	093L.068	3	1.8
R	000-000000-00000-00000-0000-0000-000-000-000-000	12109	50151	093L.068	1	2.73
R	000-000000-00000-00000-0000-0000-000-000-000-000	12116	50169	093L.068	<u> </u>	2.61
R	000-000000-00000-00000-0000-0000-000-000-000-000	12119	50118	093L.067	2	12.37
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	12120	50115	093L.067		4.09
R	480-697200-02900-00000-0000-0000-000-000-000-00		50416	093L.080	3	0.79
R	480-697200-06500-00000-0000-0000-000-000-000-000	_	50615	093L.079	i	6.12
R	480-697200-12300-79800-0000-0000-000-000-000-000-000		50359	093L.069	1	0.86
R	480-697200-12300-79800-0000-0000-000-000-000-000-000		50364	093L.069	6	2.43
R	480-697200-14600-00000-0000-0000-000-000-000-000-000		51337	093L.089	2	3.75
R	480-697200-16400-46600-0000-0000-000-000-000-000-000		50845	093L.078	I	1.82
R	480-697200-20300-0000-0000-0000-000-000-000-000		51231	093L.088	2	5.26
R	480-697200-25400-00000-0000-0000-000-000-000-000-000		51037	093L.077	31	0
R	480-697200-25400-0000-0000-0000-000-000-000-000-000		51039	093L.077	33	7.23
R	480-697200-25400-0000-0000-0000-000-000-000-000-000		51040	093L.077	34	10.4
R	480-697200-25400-0000-0000-0000-000-000-000-000-000		51043	093L.077	37	21.32
R	480-697200-25400-12800-0000-000-000-000-000-000-000		51324	093L.088	1	9.68
R	480-697200-25400-12800-0000-000-000-000-000-000-000		50801	093L.078	9	0.18
R	480-697200-25400-24500-0000-000-000-000-000-000-000	<u> </u>	50942	093L.077	6	9.42
R	480-697200-25400-24500-0000-000-000-000-000-000-000		50943	093L.077	7	5.1
R	480-697200-25400-24500-0000-000-000-000-000-000-000		50946	093L.077	10	4.46
R	480-697200-25400-24500-1280-0000-000-000-000-000-000		50670	093L.078	2	3.24
R	480-697200-25400-24500-1910-0000-000-000-000-000-000	ļ <u> </u>	50986	093L.077	, 3	10.33
R	480-697200-25400-24500-1910-0000-000-000-000-000-000	 	50988	093L.077	5	12.89
R	480-697200-25400-24500-1910-7680-000-000-000-000-000		50993	093L.077		21.63
R	480-697200-25400-24500-7100-0000-000-000-000-000-000		50968	093L.077	1	9.43
R R	480-697200-25400-50500-0000-000-000-000-000-000-000-	_	50742	093L.078	6	1.3
R	480-697200-25400-53700-0000-0000-000-000-000-000-000	1	51023	093L.077	9	1.09
	<u> 190-07/200-23400-33/00-0000-0000-000-000-000-000-000</u>		50179	093L.068	7	0.36

Guess Creek Sample Site Selection

SAMPLE	WSHD_CODE_	ILP	NID	NID_MAP	REACH	GRAD
R	480-697200-25400-70700-4970-0000-000-000-000-000-000		50076	093L.067	5	11.67
R	480-697200-25400-78600-0000-0000-000-000-000-000-000		51135	093L.077	1	3.84
R	480-697200-25400-84100-0000-0000-000-000-000-000-000		51098	093L.077	2	5.77
R	480-697200-25400-87600-0000-0000-000-000-000-000-000		51078	093L.077	3	9.18
R	480-697200-27500-00000-0000-0000-000-000-000-000-000		50919	093L.077	14	5.43
R	480-697200-27500-00000-0000-0000-000-000-000-000-000		50923	093L.077	18	4.24
R	480-697200-27500-00000-0000-0000-000-000-000-000-000		50933	093L.077	19	9.31
R	480-697200-27500-58600-0000-0000-000-000-000-000-000		51188	093L.087	1	4.41

- GUESS CRERK -

	1ķ		SMALL			SIZ			LARG	E
GRADIEN	FORM	Tota	Sample		Total		Actual	Total	Sample	Actual
1	ST/SI	343	16	23	310	15	35	24	2	1
<=4	IM/ME	2	2	2	11	2	1	13	2	0
	AN/BR	0	0.	0	1	1	1	1	1	0
2	ST/SI	180	14	18	76	11	15	2	2	2
>4 and <=8	IM/ME	0	0	0	0	0	0	0	0	0
	AN/BR	0	0	0	0	0	0	0	0	0
3	ST/SI	212	14	16	59	11	20	1	1	1
>8 and <=20	IM/ME	0	0	0	0	0	0	0	0	0
Julia 20	AN/BR	0	0	0	0	0	0	0	0	0
4	ST/SI	33	3	3	5	2	2	0	0	0
>20 and <=30	IM/ME	0	0	0	0	0	0	0	0	0
20 and 4-30	AN/BR	0	0	0	0	0	0	0	0	0
5	ST/SI	8	0	0	0	0	0	0	0	0
>30	IM/ME AN/BR	0	0	0	0	0	0	0	0	0

	SAMPLE	WSHD CODE	ILP	NID	NID MAP	REACU	GDAD
B 600-000000-00000-00000-000-000-000-000-						REACH	GRAD
B 000-00000-00000-00000-0000-000-000-00							
B 000-00000-00000-00000-0000-000-000-000	_	·					
B 000-00000-00000-00000-0000-000-000-000							
B 000-00000-00000-00000-0000-0000-0000-							
B 000-00000-00000-0000-0000-0000-0000-0			+				
B 600-00000-00000-00000-0000-0000-0000-0							
B 090-00000-00000-00000-0000-0000-0000-0							
B 000-00000-00000-0000-0000-0000-000							
B 000-000000-00000-00000-0000-0000-0							
B 000-000000-00000-0000-0000-0000-00						——·	
B 000-000000-000000-00000-00000-0000-00							
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B 000-00000-00000-00000-00000-0000-0			·			- 	
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B 000-00000-00000-00000-0000-000-000-00			-			<u> </u>	
B 000-00000-00000-00000-0000-000-000-00						3	
B 000-00000-00000-0000-0000-0000-000							
B 000-000000-00000-0000-0000-0000-00							
B 000-000000-00000-00000-0000-000-000-0							
B 000-000000-00000-0000-0000-000-000-00			+				
B 000-000000-00000-00000-00000-0000-							
B 000-000000-000000-00000-00000-0000-							
B 000-000000-00000-00000-0000-0000-0000							
B 000-000000-00000-00000-0000-0000-0							
B 000-000000-00000-00000-00000-0000-000	В	000-000000-00000-00000-0000-0000-000-000-000-000	10325			2	
B 000.000000.00000.00000.0000.0000.0000	В	000-000000-00000-00000-0000-0000-000-000-000-000	10331	50775		1	
B 000-000000-00000-0000-0000-0000-00	В	000-000000-00000-00000-0000-0000-000-000-000-000	10348	50493	093L.070	1	8.38
B 000-000000-00000-00000-0000-0000-0000	В	000-000000-00000-00000-0000-0000-000-000-000-000-000	10348	50494		2	
B 000-000000-00000-0000-0000-0000-00	В	000-000000-00000-00000-0000-0000-000-000-000-000	10379	50854			
B 000-000000-00000-00000-0000-0000-0	В	000-000000-00000-00000-0000-0000-000-000-000-000-000	10383	50765		3	
B 000-000000-00000-00000-0000-0000-000-0	В	000-00000-00000-00000-0000-0000-000-000-000-000-000	10388	50869	093K.061	ī	
B	В	000-00000-00000-00000-0000-0000-000-000-000-000-000	10397	50437	093L.069	7	
B	В	000-000000-00000-00000-0000-0000-000-000-000-000-000	11500		093L.070		
B	В	480-705800-00000-0000-0000-0000-000-000-000-0		50067	093L.080	8	
B 480-742900-00000-00000-0000-0000-0000-000-0000-000-0000	В	480-718600-00000-00000-0000-0000-000-000-000-0		50111	093L.080	3	
B 480-742900-00000-00000-0000-0000-0000-000-0000-000-0000	В	480-718600-00000-00000-0000-0000-000-000-000-0		50115	093L.080	7	3.46
B 480-760400-61400-00000-0000-0000-0000-000-000-000-00	В	480-742900-00000-00000-0000-0000-000-000-000-0		50514	093L.070	8	6.38
B 480-764900-00000-00000-0000-0000-0000-000-0000-0000	В	480-742900-00000-0000-0000-0000-000-000-000-00		50516	093L.070	10	4.96
B 480-764900-00000-00000-0000-0000-0000-000-000-	В	480-760400-61400-00000-0000-000-000-000-000-000-000		50616	093L.070	5	6.94
B 480-768300-00000-00000-0000-0000-0000-000-000-	<u>B</u>	480-764900-00000-00000-0000-0000-000-000-000-0		50824	093K.061	2	4.55
B 480-770700-00000-0000-0000-0000-0000-000	В	480-764900-00000-00000-0000-0000-000-000-000-0		50694	093L.070	3	7.7
B 480-77000-00000-0000-0000-0000-000-000-00	В	480-768300-00000-00000-0000-0000-000-000-000-0		50827	093K.061	3	6.06
B 480-770700-00000-00000-0000-0000-000-000-	B			50834	093K.061	2	6.75
B 480-770700-00000-00000-0000-0000-000-000-	B	<u>480-770700-00000-00000-0000-0000-000-000-</u>	[]	50716	093L.070	5	1.71
B 480-776600-00000-00000-0000-0000-0000-000				50718	093L 070	7	5.9
B 480-776600-00000-00000-0000-0000-0000-000				50721	093L 070	10	9.14
B 480-776600-00000-00000-0000-0000-0000-000				50844	093K.061	3	4.39
B 480-776600-10300-00000-0000-0000-0000-000-000-00				50793	093L.070	10	9.39
B 480-776600-25000-00000-0000-0000-0000-000-000-00					093L 070	12	8.7
B 480-776600-25000-00000-0000-0000-0000-000-000-00				50846	093K.061	1	9.43
B 480-760400-36400-00000-0000-0000-0000-000-000-000-00				50859	093K.061	1	4.46
B 480-776600-87197-00000-0000-0000-0000-000-000-000-000-				50860	093K.061	2	6.75
R 000-00000-0000-0000-0000-0000-000-000-				50659	093L 070	2	5.88
R 000-00000-00000-0000-0000-0000-000-000				50802	093L.070	1	7.59
R 000-00000-0000-0000-0000-0000-000-000-						1	2.82
R 000-00000-0000-0000-0000-0000-000-000-			10015		093L.079	1	1.67
R 000-00000-0000-0000-0000-000-000-000-0			10022	50448	093L 069	11	8
R 000-00000-00000-0000-0000-000-000-000-			10023	50657	093L.070	6	3.33
R 000-00000-0000-0000-0000-000-000-000-0			10023	50206	093L.080	3	5.29
R 000-00000-00000-0000-0000-000-000-000-			10023	50208	093L.080	5	4.64
R 000-00000-00000-0000-0000-000-000-000-			10024	50215	093L.080		2.18
R 000-00000-00000-0000-0000-000-000-000-							17.65
P 000 000000 00000 00000 0000 000 000 0						2	
K [000-00000-0000-0000-000-000-000-000-00							
	. к	<u> </u>	10063	50306	093L.080		29.02

	000 000000 00000 0000 0000 0000 000 000 000 000	10040	504.14	(021, 020	, , , , , , , , , , , , , , , , , , , 	10.5
R	000-000000-00000-00000-0000-0000-000-000-000-000	10068	50644	093L.070	1	10.15
R	000-00000-00000-0000-0000-0000-000-000-000-000-000-000	10071	50638 50636	093L 070	1 2	2.5
<u>R</u>					2	
R	000-00000-00000-00000-0000-0000-000-000-000-000-000-000	10079	50311	093L.080	7	0.18
R R	000-000000-00000-00000-0000-0000-000-000-000-000-000	10093	50102	093L.080	 	6.49
<u>K</u>	000-000000-00000-00000-0000-0000-000-000-000-000-000	10109	50280	093L.080	1	
	000-000000-00000-00000-0000-0000-000-000-000-000-000			093L.080	 	4.86
<u>R</u>	000-000000-00000-00000-0000-0000-000-000-000-000-000	10114	50260 50264	093L.080	5	23.47
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	10114	50287	093L.080	1	9.64
- R	000-000000-00000-00000-0000-0000-000-000-000-000-000	10127	50100	093L.080	5	11.54
R	000-000000-00000-00000-0000-0000-000-000-000-000	10127	50065	093L 080	2	2.6
R	000-000000-00000-00000-0000-0000-000-000-000-000	10129	50062	093L 080	1	3.27 5.54
R	000-00000-0000-0000-0000-000-000-000-000-000-000-000	10123	50076	093L.080	2	2.29
R	000-000000-00000-00000-0000-0000-000-000-000-000	10137	50002	093L.080	2	1.29
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	10137	50002	093L.079	1	8.13
R	000-000000-00000-00000-0000-0000-000-000-000-000	10138	50073	093L.080	2	22.19
R	000-000000-00000-00000-0000-0000-000-000-000-000	10139	50150	093L.080	2	5.05
R	000-000000-00000-00000-0000-0000-000-000-000-000	10141	50237	093L.080		
R	000-000000-00000-00000-0000-000-000-000-000-000	10152	50239	093L.080	2 4	4.32 8.82
R	000-000000-00000-00000-0000-0000-000-000-000-000	10152	50380	093L.069	1	2.9
R	000-00000-00000-0000-0000-0000-000-000-000-000	10179	50359	093L.069		_
	000-00000-00000-0000-0000-0000-000-000-000-000	10179	50429	093L.069	2	6.3 1.52
R	000-000000-00000-00000-0000-0000-000-000-000-000	10186	50428	093L.069	 	2.44
- R	000-000000-00000-00000-0000-000-000-000-000-000	10187	50424	093L.069	2	3.33
R	000-00000-00000-0000-0000-000-000-000-000-000-000	10193	50410	093L.069	2	9.59
R	000-000000-00000-00000-0000-000-000-000-000-000	10193	50406	093L.069	2	8.18
	000-000000-00000-00000-0000-000-000-000-000-000	10203	50480	093L.070	2	12
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	10206	50443	093L.069	2	2.66
R	000-00000-00000-00000-0000-0000-000-000-000-000	10200	50130	093L.080	3	2.14
R	000-00000-00000-00000-0000-000-000-000-000-000-000	10220	50135	093L.080	8	3.45
<u>R</u>	000-00000-00000-00000-0000-000-000-000-000-000-000	10220	50139	093L.080	12	2.46
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	10232	50471	093L.070	12	6.78
R	000-000000-00000-00000-0000-0000-000-000-000-000-000	10252	50586	093L.070	 - 	9.5
R	000-000000-00000-00000-0000-0000-000-000-000-000	10256	50572	093L 070	 	14.47
	000-00000-00000-00000-0000-0000-000-000-000-000-000	10257	50573	093L.070	}; 	19.21
R	000-00000-0000-0000-0000-000-000-000-000-000-000	10258	50570	093L.070	- 	15.1
R	000-000000-00000-0000-0000-0000-000-000-000-000	10262	50554	093L.070	5	20.36
R	000-00000-0000-0000-0000-000-000-000-000-000-000	10268	50533	093L.070	1	7.67
R	000-00000-0000-0000-0000-000-000-000-000-000-000	10275	50546	093L.070	2	11.29
R	000-00000-0000-0000-0000-000-000-000-000-000-000-000	10278	50525	093L.070	1	12.44
R	000-00000-0000-0000-0000-000-000-000-000-000-000	10300	50689	093L.070	 	3.15
R	000-00000-00000-00000-0000-0000-000-000-000-000-000	10305	50683	093L.070	2	6.17
R	000-000000-00000-00000-0000-000-000-000-000-000	10303	50755	093L.070	 	11.81
R	000-000000-00000-00000-0000-000-000-000-000-000	10314	50750	093L.070	 	7.79
R	000-00000-00000-00000-0000-000-000-000-000-000	10314	50748	093L.070	2	2.35
R	000-00000-00000-0000-0000-000-000-000-000-000-000	10317	50736	093L.070	2	5.82
R	000-00000-00000-0000-0000-000-000-000-000-000-000	10318	50733	093L.070	3	11.47
R	000-00000-00000-0000-0000-000-000-000-000-000-000	10318	50728	093L.070	1 1	9.43
R	000-00000-0000-0000-0000-000-000-000-000-000-000	10326	50782	093L.070	<u> </u>	4.61
R	000-000000-00000-00000-0000-0000-000-000-000-000	10329	50776	093L.070	 	5.27
R	000-00000-0000-0000-0000-000-000-000-000-000-000	10332	50773	093L.070	 	8.86
R	000-000000-00000-0000-0000-000-000-000-000-000	10340	50804	093L.070	 	2.31
R	000-00000-00000-0000-0000-0000-000-000-000-000-000	10344	50812	093L.070	 	0.49
R	000-000000-00000-00000-0000-0000-000-000-000-000	10351	50499	093L.070	 	7.44
R	000-000000-00000-0000-0000-0000-000-000-000-000	10351	50500	093L.070	2	4.94
	000-00000-00000-0000-0000-000-000-000-000-000-000	10357	50491	093L.070	 - 	1.61
	/OOO-OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO			U/JJL.U/U	ı <u>t</u>	
R				0931 070	1	
R R	000-00000-00000-00000-0000-0000-000-000-000-000-000-000	10361	50763	093L.070	1 2	733
R R R	000-000000-00000-00000-0000-0000-000-0	10361 10370	50763 50697	093L.070	2	7.33
R R R	000-000000-00000-00000-0000-0000-000-0	10361 10370 10386	50763 50697 50863	093L.070 093K.061	2	7.33 1.5
R R R	000-000000-00000-00000-0000-0000-000-0	10361 10370	50763 50697 50863 50871	093L.070 093K.061 093K.061	1	7.33 1.5 5.92
R R R R R	000-000000-00000-00000-0000-0000-000-0	10361 10370 10386	50763 50697 50863 50871 50056	093L.070 093K.061 093K.061 093L.080	2 1 1 2	7.33 1.5 5.92 0.39
R R R R R	000-000000-00000-00000-0000-0000-000-0	10361 10370 10386	50763 50697 50863 50871 50056 50332	093L.070 093K.061 093K.061 093L.080 093L.069	2 1 1 2 17	7.33 1.5 5.92 0.39 1.49
R R R R R R	000-000000-00000-00000-0000-0000-000-0	10361 10370 10386	50763 50697 50863 50871 50056 50332 50336	093L.070 093K.061 093K.061 093L.080 093L.069	2 1 2 17 21	7.33 1.5 5.92 0.39 1.49 0.56
R R R R R	000-000000-00000-00000-0000-0000-000-0	10361 10370 10386	50763 50697 50863 50871 50056 50332	093L.070 093K.061 093K.061 093L.080 093L.069	2 1 1 2 17	7.33 1.5 5.92 0.39 1.49

South Fulton Sample Site Selection

	480-705800-57200-22500-0000-0000-000-000-000-000-000	50419	093L.069	4	0.78
R	480-742900-00000-0000-0000-0000-000-000-000-00	50198	093L.080	2	5.05
R	480-742900-00000-0000-0000-000-000-000-000-000	50199	093L.080	3	2.86
R	480-742900-00000-00000-0000-0000-000-000-000-0		093L.070	1	12.24
<u>R</u>	480-742900-67600-00000-0000-0000-000-000-000-000		093L.070	9	5.61
<u>R</u>	480-760400-61400-00000-0000-0000-000-000-000-000-000		093L.070	8	5.3
R_	480-768300-00000-00000-0000-0000-000-000-000-0		093L.070	9	4.76
R	480-776600-00000-00000-0000-0000-000-000-0	50850	093K.061	2	1.9
R	480-776600-20300-00000-0000-0000-000-000-000-000	50851	093K.061	3	5.27
<u>R</u>	480-776600-20300-00000-0000-0000-000-000-000-000	50564	093L 070	1	8.97
R	480-742900-67600-46593-0000-0000-000-000-000-000-000	50565	093L.070	2	12.47
R	480-742900-67600-46593-0000-0000-000-000-000-000-000	30303	0.552.0.0		

TOUTH FULTON -

ST/SI 142 13	ST/SI		K		SMALL			SIZ MEDIUM			LARG	
1 ST/SI 142 13 14 90 12 16 29 2 3 1 2 4 1 2 2 2 2 2 2 2 2 2	1 ST/SI 142 13 14 90 12 16 29 2 3 1 2 4 1 2 2 2 2 2 2 2 2 2	RADIEN	FORM	Total			Total			Total		
IM/ME	IM/ME	0.000,711	Vicalities.									
AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0											
AN/BR 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0	<=4	100000000000000000000000000000000000000									
AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	ST/SI	167	13	18	84	12	31	10	2	3
3 ST/SI 189 14 22 44 10 26 0 0 0 0 0 0 0 0 0	3 ST/SI 189 14 22 44 10 26 0 0 0 0 0 0 0 0 0	>4 and <=8	IM/ME	0	0	0	1	1	1	0	0	0
No No No No No No No No	No No No No No No No No		AN/BR	0	0	0	0	0	0	0	0	0
>8 and <=20	>8 and <=20	3	ST/SI	189	14	22	44	10	26	0	0	0
AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		IM/ME	0	0	0	0	0	0	0	0	0
4 IM/ME 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 IM/ME 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	o and v=20	AN/BR	0	0	0	0	0	0	0	0	0
>20 and <=30 IM/ME 0 0 0 0 0 0 0 0 0	>20 and <=30 IM/ME 0 0 0 0 0 0 0 0 0	A	ST/SI	23	2	2	2	2	2	0	0	0
5 ST/SI 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 ST/SI 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		IM/ME	0	0	0	0	0	0	0	0	0
>30 IM/ME 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	>30 IM/ME 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	>20 and <=30	AN/BR	0	0	0	0	0	0	0	0	0
AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AN/BR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5	ST/SI	5	0	0	0	0	0	0	0	0
Reach Total: 820 Sample Total: 89 Sample % 10.9 Actual Total: 144 Actual %: 17.6	teach Total: 820 Sample Total: 89 Sample % 10.9 Actual Total: 144 Actual %: 17.6	>30	IM/ME	0	0	0	0	0	0	0	0	0
Reach Total: 820 Sample Total: 89 Sample % 10.9 Actual Total: 144 Actual %: 17.6	teach Total: 820 Sample Total: 89 Sample % 10.9 Actual Total: 144 Actual %: 17.6		AN/BR	0	0	0	0	0	0	0	0	0
		Reach Total:	Y to Principle of				le % 10	9	Actual To	tal: 1	44 Actua	al %: 17.6
		100	Y to Principle of				le % 10	9	Actual To	tal: 1	44 Actua	al %: 17.6
			Y to Principle of				le % 10	9	Actual To	tal: 1	44 Actua	al %: 17.6
		100	· Harman				le % 10	9	Actual To	tal: 1	44 Actua	al %: 17.6