

## **Appendix 6.1-1**

FDIS Fish Habitat Data with KSM Study Area

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.030 ILP # 3006 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Bowser River, BR1  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.030 ILP #: 3006 NID Map #: 104B.030 NID #: 30013 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.434260.6238805 Ref. Name:  
 Date: 2009/07/12 Time: 11:51 Agency: C660 Crew: SM JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	298.00	245.00	315.00	245.00	140.00	125.00					228.00	Method I:	3.0	4.0	C	3.25
Wetted Width (m):	RF	170.00	150.00	135.00	140.00	111.00	90.00					132.67	Method II:	3.0	3.0	C	
Pool Depth (m):												0.00					

Wb Depth: .3 .4 .5 Avg: 0.40 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: N

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

0 0%

INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: N

STG:

RB SHP: S

Texture: F  G  C  B  R  A

RIP: N

STG:

## WATER

EMS: Req #: Temp: 6 Method: T5 Cond.: 81 Method: S3  
 pH: Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Overall Marginal Habitat
OverWinter Habitat	Poor - no DP
Rearing Habitat	Poor - no cover, no pools
Spawning Habitat	Fair - gravel but fast flow, no resting spots

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3006 F: 0067		X	
R: 3006 F: 0070		U	



# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.030      ILP # 3006      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 3006	F: 0071		D	
COMMENTS				
Section		Comments		
CHANNEL		S1 - multi braided section , very turbid H2O. 2 sm tribs entering on NE side of river.		





Stream/ILP: 3006 Site: 1 Image: 71 Comment: Downstream, . 7/12/2009.



Stream/ILP: 3006 Site: 1 Image: 70 Comment: Upstream, . 7/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.038 ILP # 3007 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: South Unuk River, SUNR  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.038 ILP #: 3007 NID Map #: 104B.038 NID #: 30015 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 145 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.409939.6248031 Ref. Name:  
 Date: 2009/07/12 Time: 14:05 Agency: C660 Crew: SM JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg		
Channel Width (m):	T	3.90	18.00	5.50	7.00	9.50	11.00					9.15		Method I:	4.0	2.0	C	3.67
Wetted Width (m):	T	2.70	10.00	4.00	5.00	6.00	5.50					5.53		Method II:	5.0		C	
Pool Depth (m):	MS	0.20	0.30									0.25						

Wb Depth: .3 .4 .5 Avg: 0.40 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:						T	
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: F DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: N

STG:

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: NA

## WATER

EMS: Temp: 8 Method: T5 Req #: Cond.: 64 Method: S3  
 pH: Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 30.0 D (cm): 25.0 Morph: RPG DISTURBANCE INDICATORS          
 Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
OverWinter Habitat	Poor - no DP
Rearing Habitat	Good - pools
Spawning Habitat	Poor - no gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3007 F: 0078		U	
R: 3007 F: 0081		D	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.038	3007	1

COMMENTS	
Section	Comments
CHANNEL	S2 - main channel, side channel assessed.

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# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104B.038 ILP # 3007

WATERBODY															
Gazetted Name:										Local: South Unuk River, SUNR					
Project Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000															
Waterbody ID:					ILP Map #: 104B.038			ILP #: 3007		Reach #: 1 -					
Project ID: 19435					Lake/Stream: S				Lake From Date:						
Fish Permit #:			Date: 2009/07/12			To: 2009/07/12			Agency: C660		Crew: SM JW		Resample: <input type="checkbox"/>		
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
1	104B.038	30016	9			GP3	EF 1	7.7	64	T					
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
1	EF 1	1	2009/07/12	14:13	2009/07/12	14:58									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
1	EF	1	1	O	1001	145.0	8.0	580	30	4	SR	LR24			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
1	EF	1	DV	NS		8	30	183	R						
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	DV	165	53.1	U	IM	FR	1					
1	EF	1	1	DV	183	73.6	U	IM	FR	2					
1	EF	1	1	DV	132	43.2	U	IM	FR	3					
1	EF	1	1	DV	65	2.8	U	IM	FR	4					
1	EF	1	1	DV	64	3.1	U	IM	FR	5					
1	EF	1	1	DV	34	.5	U	IM	FR	6					
1	EF	1	1	DV	33	.4	U	IM	FR	7					
1	EF	1	1	DV	30	.3	U	IM							





Stream/ILP: 3007 Site: 1 Image: 81 Comment: Downstream, . 7/12/2009.



Stream/ILP: 3007 Site: 1 Image: 78 Comment: Upstream, . 7/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.048 ILP # 3008 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk River, UR1  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.048 ILP #: 3008 NID Map #: 104B.048 NID #: 30017 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 110 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.406783.6260575 Ref. Name:  
 Date: 2009/07/12 Time: 15:35 Agency: C660 Crew: SM JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	39.00	23.00	15.00	12.00	10.00	13.00					18.67		Method I: 2.0	3.0	C	2.67
Wetted Width (m):	RF	18.00	13.00	13.00	7.00	8.00	7.00					11.00		Method II: 3.0		C	
Pool Depth (m):	MS	0.30	1.00									0.65					

Wb Depth: .5 .4 .3 Avg: 0.40 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:		S				T	
Loc: P/S/O:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: N

STG:

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: NA

## WATER

EMS: Req #: Temp: 8 Method: T5 Cond.: 110 Method: S3  
 pH: Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3008 F: 0087		D	
R: 3008 F: 0089		U	







Stream/ILP: 3008 Site: 1 Image: 87 Comment: Downstream, . 7/12/2009.



Stream/ILP: 3008 Site: 1 Image: 89 Comment: Upstream, . 7/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3049 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk River, EUR2  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.070 ILP #: 3049 NID Map #: 104B.070 NID #: 30059 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.431148.6278739 Ref. Name:  
 Date: 2009/07/17 Time: 15:06 Agency: C660 Crew: SM JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg		
Channel Width (m):	RF	14.00	10.00	18.00	18.00	16.00	10.00					14.33		Method I:	5.0	3.0	C	4.75
Wetted Width (m):	RF	9.00	5.00	9.00	13.00	13.00	8.00					9.50		Method II:	4.0	7.0	C	
Pool Depth (m):												0.00						

Wb Depth: .5 .3 .4 Avg: 0.40 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:			T			T	
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V

LWD: NS DIST: NS  
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S RB RIP: N  
 STG: SHR STG:

## WATER

EMS: Temp: 2 Method: T5 Req #: Cond.: 113 Method: S3  
 pH: 8.2 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 50.0 D (cm): 30.0 Morph: CP Morph: CP         
 Pattern: ME DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N            
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
OverWinter Habitat	Poor, no DP
Rearing Habitat	Fair - Some low current areas at edge
Spawning Habitat	Fair - Gravel but fast flow

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3049 F: 0194		U	
R: 3049 F: 0195		D	









Stream/ILP: 3049 Site: 1 Image: 195 Comment: Downstream, . 7/17/2009.



Stream/ILP: 3049 Site: 1 Image: 194 Comment: Upstream, . 7/17/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3050 Site 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Treaty Creek, TRC1  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.070 ILP #: 3050 NID Map #: 104B.070 NID #: 30063 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.435476.6274861 Ref. Name:  
 Date: 2009/07/18 Time: 09:20 Agency: C660 Crew: SM JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	21.00	23.00	13.00	20.00	20.00	30.00					0.00	Method I:	3.0	2.0	C	0.00
Wetted Width (m):	RF	16.00	15.00	7.00	13.00	16.00	22.00					0.00	Method II:	4.0		C	
Pool Depth (m):	MS	0.15	0.30									0.00					

Wb Depth: .2 .3 .5 Avg: 0.00 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:			T			D	
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Temp: 3 Method: T5 Req #: Cond.: 99 Method: S3  
 pH: 8.5 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 50.0 D (cm): 25.0 Morph: RP DISTURBANCE INDICATORS         
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: F            
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
OverWinter Habitat	Poor - no deep pools
Rearing Habitat	Good - several off channel, low grade areas
Spawning Habitat	Good - Lots of gravel in side channel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3050 F: 0209		U	MC
R: 3050 F: 0210		U	SC

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.070      ILP # 3050      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 3050	F: 0211		D	Sc
COMMENTS				
Section		Comments		
CHANNEL		S2 - Important habitat, lots of good spawning areas. Frequent off channel areas, water quite turbid		







Stream/ILP: 3050 Site: 1 Image: 211 Comment: Downstream, Side Channel. 7/18/2009.



Stream/ILP: 3050 Site: 1 Image: 209 Comment: Upstream, Main channel. 7/18/2009.





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 1.0 ILP Map #: 104A.061 ILP #: 4001

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: Teigen Creek, South below fall  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061 ILP #: 4001 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/05 To: 2009/08/05 Agency: C660 Crew: CB JW Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
1	104A.061	40001	9			GP3 EF 1	10	99	M	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/08/05	13:15	2009/08/05	13:40	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF 1	1	O	746	100.0	13.0	350	30	4	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF 1	1	RB	NS		1	160 160	R	
1	EF 1	1	DV	NS		5	35 149	R	
1	EF 1	1	BT	NS		1	160 160	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age			Str/Smpl#				
1	EF 1	1	RB	160	53.4	U	U	FR	1	4						
1	EF 1	1	DV	90	8.5	U	U	FR	2	2		TP	1			
1	EF 1	1	BT	160	48.9	U	U	FR	3	3		TP	2			
1	EF 1	1	DV	103	12.6	U	U	FR	4	2		TP	3			
1	EF 1	1	DV	35	.3	U	U									
1	EF 1	1	DV	144	33.7	U	U	FR	5	3		TP	4			
1	EF 1	1	DV	149	33.8	U	U	FR	6	3		TP	5			





Stream/ILP: 4001 Site: 1 Image: 12 Comment: Downstream, . 8/5/2009.



Stream/ILP: 4001 Site: 1 Image: 11 Comment: Upstream, . 8/5/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 2.0 ILP Map # 104A.061 ILP # 4001 Site # 2

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek, South below falls  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 4001 NID Map #: 104A.061 NID #: 40004 Reach #: 2.0 Site #: 2  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.440882.6283411 Ref. Name:  
 Date: 2009/08/05 Time: 16:12 Agency: C660 Crew: CB JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	14.00	15.00	12.00								13.67	Method I:	4.0	5.0	C	4.50
Wetted Width (m):	RF	14.00	13.00	10.00								12.33	Method II:			C	
Pool Depth (m):	MS	0.42	0.17	0.32								0.30					

Wb Depth: 1.4 .7 1.4 Avg: 1.17 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:		S	D		S	T	
Loc: P/S/O:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: PS

RB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: YF

## WATER

EMS: Req #: Method: T5 Cond.: 99 Method: S3  
 Temp: 10 Method: FD Turb.: T  M  L  C  Method: GE  
 pH: Method: GE  
 Flood Signs: rafted debris

## MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3  
 D95: 50.0 D (cm): 40.0 Morph: CP DISTURBANCE INDICATORS         
 Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N            
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
OverWinter Habitat	Fair - some pools, due to base flow
Rearing Habitat	Good
Spawning Habitat	Poor - few gravels

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 4001 F: 1		U	
R: 4001 F: 2		D	

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 2.0 ILP Map # 104A.061 ILP # 4001 Site 2

COMMENTS	
Section	Comments
CHANNEL	S5







Stream/ILP: 4001 Site: 2 Image: 1 Comment: Upstream, . 8/5/2009.



Stream/ILP: 4001 Site: 2 Image: 2 Comment: Downstream, . 8/5/2009.



















Stream/ILP: 4006 Site: 1 Image: 2 Comment: Downstream, . 8/7/2009.



Stream/ILP: 4006 Site: 1 Image: 1 Comment: Upstream, . 8/7/2009.





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104B.070 ILP # 4025

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: Teigen Creek, TEC1  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104B.070 ILP #: 4025 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/10 To: 2009/08/10 Agency: C660 Crew: CB JW Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
1	104B.070	40041	9			GP3 EF 1	10.6	65	C	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/08/10	11:00	2009/08/10	12:00	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF 1	1	O	1016	200.0	5.0	400	30	4	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF 1	1	SP	NS		1	29 29	R	
1	EF 1	1	RB	NS		1	73 73	R	
1	EF 1	1	CO	NS		11	39 57	R	
1	EF 1	1	BT	NS		1	68 68	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	CO	48		U	U							
1	EF	1	1	CO	57		U	U							
1	EF	1	1	CO	45		U	U							
1	EF	1	1	CO	44		U	U							
1	EF	1	1	CO	47		U	U							
1	EF	1	1	CO	39		U	U							
1	EF	1	1	CO	44		U	U							
1	EF	1	1	CO	48		U	U							
1	EF	1	1	SP	29		U	U							
1	EF	1	1	RB	73	4.0	U	U							
1	EF	1	1	CO	44		U	U							
1	EF	1	1	CO	45		U	U							
1	EF	1	1	CO	46		U	U							
1	EF	1	1	BT	69	3.0	U	U			TP	1			













Stream/ILP: 5000 Site: 1 Image: 370 Comment: Downstream, . 8/8/2009.



Stream/ILP: 5000 Site: 1 Image: 372 Comment: Upstream, . 8/8/2009.





# FDIS Site Card

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

Reach # 1.0    ILP Map # 104A.051    ILP # 5523    Site 1

HABITAT QUALITY				
Name		Comments		
Spawning Habitat		Fair - some side channel gravel		
PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 5523	F: 0052		U	cascade
R: 5523	F: 0053		D	
COMMENTS				
Section		Comments		
CHANNEL		S2 - good site but cascades throughout may be a barrier to some life stages or at low flow levels		







Stream/ILP: 5523 Site: 1 Image: 53 Comment: Downstream, . 9/11/2009.



Stream/ILP: 5523 Site: 1 Image: 52 Comment: Upstream, Cascade. 9/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.051 ILP # 5524 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: N Treaty Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.051 ILP #: 5524 NID Map #: 104A.051 NID #: 55026 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 95 Method: T Access: H  
 GIS UTM (Z.E.N): 9.447452.6272456 Ref. Name:  
 Date: 2009/09/10 Time: 14:15 Agency: C660 Crew: SM TH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	6.50	6.00	4.90	6.30	7.50	8.60					6.63	Method I:	11.0	10.0	C	10.50
Wetted Width (m):	T	5.20	5.60	4.50	5.70	6.20	6.10					5.55	Method II:			C	
Pool Depth (m):	MS	1.00	0.30	0.60	0.25							0.54					

Wb Depth: .8 .6 .5 Avg: 0.63 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:		T	S			D	
Loc: P/S/O:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: MF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: MF

## WATER

EMS: Req #: Temp: 6 Method: T5 Cond.: 68 Method: S3  
 pH: 8.7 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: none Method: GE

## MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 60.0 D (cm): 20.0 Morph: CPB DISTURBANCE INDICATORS          
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N            
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
OverWinter Habitat	Fair - Some DP
Rearing Habitat	Good - many pools and LWD
Spawning Habitat	Poor - little gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 5524 F: 0056		U	
R: 5524 F: 0060		U	pool

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.051	5524	1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 5524	F: 57		D	
COMMENTS				
Section		Comments		
CHANNEL		S2 - nice section of stream, some deep pools and eddies under LWD		

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 1.0      ILP Map #: 104A.051      ILP #: 5524

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: N Treaty Creek  
 Project Code: 560-000000-00000-00000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.051      ILP #: 5524      Reach #: 1 -  
 Project ID: 19435      Lake/Stream: S      Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/09/10      To: 2009/09/10      Agency: C660      Crew: SM TH      Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
1	104A.051	55027	9			GP3 EF 1	6	68	L	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/09/10	13:40	2009/09/10	15:37	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF	1	1	O	1014	95.0	6.0	580	30	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF	1	DV	NS		1	132 132	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	DV	132	26.4	U	IM	FR	1 2						





Stream/ILP: 5524 Site: 1 Image: 57 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5524 Site: 1 Image: 56 Comment: Upstream, . 9/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104A.052    ILP # 5543    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER    Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Treaty Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.052    ILP #: 5543    NID Map #: 104A.052    NID #: 55046    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): ..    Method:    Site Lg: 100    Method: RF    Access: H  
 GIS UTM (Z.E.N): 9.454721.6268390    Ref. Name:  
 Date: 2009/09/14    Time: 08:55    Agency: C660    Crew: SM TH    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	15.60	8.60	7.10	8.00	10.00	49.00					16.38		Method I: 4.0	2.0	C	3.00
Wetted Width (m):	RF	4.20	5.50	4.60	6.20	6.00	22.00					8.08		Method II:		C	
Pool Depth (m):	MS	0.45	0.25	0.35								0.35					

Wb Depth: .2    .6    .5    Avg: 0.43    Method: MS    Stage: L  M  H     No Vis.Ch.:     Intermittent:   
 Dw:     Tribs.:

COVER    Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	D	T					
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

0    0%

INSTREAM VEG: N  A  M  V

LWD: F    DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: N

STG:

RB SHP: S

Texture: F  G  C  B  R  A

RIP: N

STG:

## WATER

EMS:    Req #:    Method: T5    Cond.: 121    Method: S3  
 Temp: 5    Method: FD    Turb.: T  M  L  C     Method: GE  
 pH: 9.3    Method: GE  
 Flood Signs: rafted trees on grav

## MORPHOLOGY

Bed Material:    Dominant: C    Subdom: G    O1    B1    B2    B3    D1    D2    D3  
 D95: 35.0    D (cm): 15.00    Morph: RPC    DISTURBANCE INDICATORS   

Pattern: ME    C1    C2    C3    C4    C5    S1    S2    S3    S4    S5  
 Islands: O   

Coupling: PC    Bars:    N     SIDE     DIAG     MID     SPAN     BR

Confinement: UN    FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
OverWinter Habitat	Fair - Some good pools
Rearing Habitat	Good - many pools and SWD for cover
Spawning Habitat	Poor - little gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 5543    F: 0121		U	side channel
R: 5543    F: 0125		U	main channel

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104A.052      ILP # 5543      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 5543	F: 0130		D	side channel
R: 5543	F: 0133		X	across several channels
COMMENTS				
Section		Comments		
CHANNEL		S1 - nice braided section of treaty creek, before it narrows. Plenty of nice slower side channels, H2O not too rough in main channel		







Stream/ILP: 5543 Site: 1 Image: 130 Comment: Downstream, Side channel. 9/14/2009.



Stream/ILP: 5543 Site: 1 Image: 125 Comment: Upstream, Main channel. 9/14/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.051 ILP # 5544 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Treaty Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.051 ILP #: 5544 NID Map #: 104A.051 NID #: 55048 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 132 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.445103.6271974 Ref. Name:  
 Date: 2009/09/14 Time: 14:10 Agency: C660 Crew: SM TH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %			Mtd	Avg
Channel Width (m):	T	12.00	6.00	7.00	8.00	22.00	30.00					14.17	Method I:	2.0	4.0	C	3.00
Wetted Width (m):	T	8.00	4.50	5.00	4.20	18.00	26.00					10.95	Method II:			C	
Pool Depth (m):	MS	0.40	0.50	0.30								0.40					

Wb Depth: .4 .3 .7 Avg: 0.47 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T				T	
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V

LWD: F DIST: E  
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S RB RIP: N  
 STG: SHR STG:

## WATER

EMS: Temp: 8 Method: T5 Req #: Cond.: 145 Method: S3  
 pH: 9.4 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: rafted debris Method: GE

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 50.0 D (cm): 20.00 Morph: RP DISTURBANCE INDICATORS

Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: I

Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC FSZ:

## HABITAT QUALITY

Name	Comments
Other	Important Overall
OverWinter Habitat	Fair - some pools, MC not likely frozen solid
Rearing Habitat	Good - lots of pools, and SWD/LWD
Spawning Habitat	Poor - little gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 5544 F: 0134		X	Photos on FHAP, 0134-0143

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.051	5544	1

COMMENTS	
Section	Comments
CHANNEL	S1 - Nice braided section of stream, good complexity and depth in side channels, main channel fairly low gradient

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# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104A.051 ILP # 5544

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: Treaty Creek  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.051 ILP #: 5544 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/09/14 To: 2009/09/14 Agency: C660 Crew: SM TH Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
1	104A.051	55049	9	GP3	7.5	145	T	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF	1	2009/09/14	14:10	2009/09/14	15:00	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF	1	1	O	1002	132.0	6.0	440	30	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF	1	DV	J		17	89 155	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	DV	140	8.0	U	IM	FR	1	4	FR	1		
1	EF	1	1	DV	155	32.3	U	IM	FR	2	3				
1	EF	1	1	DV	143	24.6	U	IM	FR	3	3				
1	EF	1	1	DV	135	23.6	U	IM	FR	4	3				
1	EF	1	1	DV	141	25.0	U	IM	FR	5	3				
1	EF	1	1	DV	133	26.2	U	IM	FR	6	3				
1	EF	1	1	DV	124		U	IM	FR	7	UA				scale not working
1	EF	1	1	DV	143	24.1	U	IM	FR	8	UA				
1	EF	1	1	DV	140	29.2	U	IM	FR	9	UA				
1	EF	1	1	DV	154	38.3	U	IM	FR	10	3				
1	EF	1	1	DV	103	11.0	U	IM	FR	11	2				
1	EF	1	1	DV	133	20.6	U	IM	FR	12	3				
1	EF	1	1	DV	89	7.2	U	IM							
1	EF	1	1	DV	141	26.1	U	IM	FR	14	3				
1	EF	1	1	DV	146	28.3	U	IM	FR	15	3				
1	EF	1	1	DV	122	15.4	U	IM	FR	16	3				
1	EF	1	1	DV	134	22.7	U	IM	FR	17	3				



Stream/ILP: 5544 Site: 1 Image: 135 Comment: Downstream, Photos on FHAP, 0134-0143. 9/14/2009.



Stream/ILP: 5544 Site: 1 Image: 138 Comment: Upstream, . 9/14/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 5545 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 5545 NID Map #: 104A.071 NID #: 55048 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.442548.6287649 Ref. Name:  
 Date: 2009/09/15 Time: 08:55 Agency: C660 Crew: SM TH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	5.70	4.00	4.90	6.00	6.50	4.50					5.27	Method I:	1.0	1.0	C	1.00
Wetted Width (m):	RF	4.50	3.20	3.70	5.60	4.10	3.10					4.03	Method II:			C	
Pool Depth (m):	MS	0.50	0.36	0.12	0.32							0.33					

Wb Depth: .2 .2 .3 Avg: 0.23 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:		S				D	
Loc: P/S/O:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: F DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: G

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: G

STG: SHR

## WATER

EMS: Temp: 9 Method: T5 Req #: Cond.: 104 Method: S3  
 pH: 8.6 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: none Method: GE

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 25.0 D (cm): 2.00 Morph: RP DISTURBANCE INDICATORS            
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
Over/Winter Habitat	Fair - a few DP, easy access to mainstem
Rearing Habitat	Good - lots of pools, cover, lots of juv fish seen
Spawning Habitat	Good - some nice gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 5545 F: 0149		U	
R: 5545 F: 0150		D	



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104A.071 ILP # 5545 Site 1

W I L D L I F E	
Group	Observations
AMP	Western Toad (shocked it)
C O M M E N T S	
Section	Comments
CHANNEL	S3 - Really nice stream, good substrates and cover, lots of juv fish seen

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104A.071 ILP # 5545

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: Teigen Creek  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.071 ILP #: 5545 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/09/15 To: 2009/09/15 Agency: C660 Crew: SM TH Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
1	104A.071	55049	9	GP3 EF 1	9	104	C	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/09/15	08:50	2009/09/15	09:17	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF	1	1	O	465	100.0	3.0	360	30	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF	1	1	RB	NS	1	81	81	R
1	EF	1	1	DV	NS	13	43	179	R
1	EF	1	1	CO	NS	17	48	102	R

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	CO	55	1.8	U	U							
1	EF	1	1	CO	102	11.3	U	U	FR	2	2				
1	EF	1	1	CO	60	2.6	U	U							
1	EF	1	1	DV	104	12.2	U	U	FR	4	2				
1	EF	1	1	DV	96	8.2	U	U	FR	5	2				
1	EF	1	1	CO	71	3.6	U	U							
1	EF	1	1	DV	45	.8	U	U							
1	EF	1	1	DV	52	1.9	U	U							
1	EF	1	1	DV	50	1.4	U	U							
1	EF	1	1	CO	56	2.1	U	U							
1	EF	1	1	CO	56	2.4	U	U							
1	EF	1	1	DV	170	51.3	U	U	FR	12	3				
1	EF	1	1	DV	61	3.0	U	U							
1	EF	1	1	DV	167	45.1	U	U	FR	14	4				
1	EF	1	1	DV	179	59.1	U	U	FR	15	UA				
1	EF	1	1	CO	69	4.9	U	U							
1	EF	1	1	CO	63	4.3	U	U							
1	EF	1	1	CO	50	3.1	U	U							
1	EF	1	1	CO	71	6.5	U	U							
1	EF	1	1	CO	53	4.5	U	U							
1	EF	1	1	RB	81	8.7	U	U							
1	EF	1	1	CO	48	3.9	U	U							
1	EF	1	1	CO	65	3.9	U	U							
1	EF	1	1	CO	69	6.3	U	U							
1	EF	1	1	CO	65	6.1	U	U							
1	EF	1	1	CO	72	6.7	U	U							
1	EF	1	1	CO	66	5.3	U	U							
1	EF	1	1	DV	78	7.9	U	U							
1	EF	1	1	DV	46	3.7	U	U							
1	EF	1	1	DV	43	3.6	U	U							
1	EF	1	1	DV	53	4.3	U	U							



Stream/ILP: 5545 Site: 1 Image: 150 Comment: Downstream, . 9/15/2009.



Stream/ILP: 5545 Site: 1 Image: 149 Comment: Upstream, . 9/15/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 6001 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: South Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.061 ILP #: 6001 NID Map #: 104A.061 NID #: 1 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: GE Access: FT  
 GIS UTM (Z.E.N): 9.440792.6283597 Ref. Name:  
 Date: 2009/09/09 Time: 11:30 Agency: C660 Crew: DF JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	31.00	20.90	14.80								22.23	Method I:	1.0	2.0	C	1.50
Wetted Width (m):	T	15.10	9.50	12.50								12.37	Method II:			C	
Pool Depth (m):	MS	0.24										0.24					

Wb Depth: 1.8 1.3 1.5 Avg: 1.53 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: NS

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	D	T	N	T	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: A DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: YF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: D

STG: YF

## WATER

EMS: Req #: Method: T5 Cond.: 147 Method: S3  
 Temp: 3 Method: FD Turb.: T  M  L  C  Method: GE  
 pH: 6.8 Method: Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3  
 D95: 58.0 D (cm): 9.00 Morph: CPC DISTURBANCE INDICATORS

Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N

Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 6001 F: 386		U	
R: 6001 F: 387		X	
R: 6001 F: 388		D	

## COMMENTS

Section	Comments
CHANNEL	east flowing cascade morphology, could not get residual pool depth bc there were no pools. Upstream end 440887 6283481







Stream/ILP: 6001 Site: 1 Image: 386 Comment: Upstream, . 9/9/2009.



Stream/ILP: 6001 Site: 1 Image: 387 Comment: Across, . 9/9/2009.





# FDIS Site Card

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

Reach # 2.0      ILP Map # 104A.061      ILP # 6001      Site 2

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 6001	F: 398		U	
COMMENTS				
Section		Comments		
CHANNEL		This stream is characterized by the cascade pool morph. With large boulders providing cover for fish in plunge pool areas (white water)- missed two large fish in those areas		

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 2.0      ILP Map #: 104A.061      ILP #: 6001

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: South Teigen Creek  
 Project Code: 560-000000-00000-00000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061      ILP #: 6001      Reach #: 2 -  
 Project ID: 19435      Lake/Stream: S      Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/09/09      To: 2009/09/09      Agency: C660      Crew: DF JW      Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
2	104A.061	2	9			GP3 EF 1	14	132	T	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
2	EF 1	1	2009/09/09	14:45	2009/09/09	15:45	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
2	EF	1	1	O	1021	200.0	2.0	375	30	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
2	EF	1	DV	J		1	142 142	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
2	EF	1	DV	142	27.9	U	IM	FR	1	UA	TP	1			



Stream/ILP: 6001 Site: 2 Image: 395 Comment: Upstream, Typical plunge pool habitat created by boulders. 9/9/2009.



Stream/ILP: 6001 Site: 2 Image: 391 Comment: Downstream, . 9/9/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 6002 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek, CC1  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 6002 NID Map #: 104B.058 NID #: 3 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): 9.407728.6266354 Ref. Name:  
 Date: 2009/09/10 Time: 09:20 Agency: C660 Crew: DF JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	8.40	11.10	16.50	13.90	8.80	16.50					12.53		Method I: 1.0	2.0	C	1.50
Wetted Width (m):	T	8.70	4.70	4.15	2.70	5.00	5.60					5.14		Method II:		C	
Pool Depth (m):	MS	0.18	0.57	0.64	0.50	0.60	0.62					0.52					

Wb Depth: 1.6 1.5 1.3 Avg: 1.47 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	D	N	S	S	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: A DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: YF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: YF

## WATER

EMS: Temp: 4 Method: T5 Req #: Cond.: 110 Method: S3  
 pH: 6.6 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: rafted debris Method: GE

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
OverWinter Habitat	Good - deep pools, good cover
Spawning Habitat	Fair - gravel and cobble
Rearing Habitat	Fair - low flow, good cover

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 6002 F: 403		D	
R: 6002 F: 404		X	
R: 6002 F: 405		U	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.058	6002	1

COMMENTS	
Section	Comments
CHANNEL	S3 - caught majority of fish in deep pools with lots of LWD and SWD providing cover along with some undercut banks. Good rearing habitat.

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Stream/ILP: 6002 Site: 1 Image: 403 Comment: Downstream, . 9/10/2009.



Stream/ILP: 6002 Site: 1 Image: 405 Comment: Upstream, . 9/10/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 6003 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek, CC2 (south of coulter ck)  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.058 ILP #: 6003 NID Map #: 104B.058 NID #: 5 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): 9.407503.6265710 Ref. Name:  
 Date: 2009/09/10 Time: 13:30 Agency: C660 Crew: DF JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %	Mtd	Avg
Channel Width (m):	T	4.50	4.85	7.90	6.45	5.25	5.60					5.76		C	0.00
Wetted Width (m):	T	2.28	2.80	3.00	3.40	4.60	3.47					3.26		C	
Pool Depth (m):	MS	0.23	0.34	0.27	0.47	0.17	0.20					0.28			

Wb Depth: .8 .7 .8 Avg: 0.77 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	D	N	T	S	T	T
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N  A  M  V

LWD: A DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: MF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: MF

## WATER

EMS: Req #: Method: T5 Cond.: 118 Method: S3  
 Temp: 6 Method: FD Turb.: T  M  L  C  Method: GE  
 pH: 7.5 Method: GE  
 Flood Signs: none

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 21.0 D (cm): 10.0 Morph: RP DISTURBANCE INDICATORS         
 Pattern: IM C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
104B.058	6	F	.6	MS	1	MS	R: 6003 F: 422 L: #:		9.407503.6265710	GP3

Comments: no sat coverage, ~200m upstream of mouth

## HABITAT QUALITY

Name: Rearing Habitat Comments: Good - for fry and juv fish, cover = deep pools formed by log jams, some undercut banks and SWD

## PHOTOS

Photo	Foc Lg	Dir	Comments

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.058      ILP # 6003      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 6003	F: 419		U	
R: 6003	F: 420		X	
R: 6003	F: 421		D	
COMMENTS				
Section		Comments		
CHANNEL		S3 - possible spawning area, saw 2 adult fish following each other. Step pool with some riffles.		





Stream/ILP: 6003 Site: 1 Image: 419 Comment: Upstream, . 9/10/2009.



Stream/ILP: 6003 Site: 1 Image: 420 Comment: Across, . 9/10/2009.



# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.069      ILP # 6004      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 6004	F: 468		D	
R: 6004	F: 479		NS	LWD and SWD providing cover for fry
R: 6004	F: 480		NS	side channel, good rearing habitat for fry
COMMENTS				
Section		Comments		
CHANNEL		S2 - caught BT in deeper eddies, juv Dv in deeper eddies and slow flowing h20. caught fry amongst boulders near the bank and in the small side channel		







Stream/ILP: 6004 Site: 1 Image: 468 Comment: Downstream, . 9/12/2009.



Stream/ILP: 6004 Site: 1 Image: 466 Comment: Upstream, . 9/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.037 ILP # 6006 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk River, UR2  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.037 ILP #: 6006 NID Map #: 104B.037 NID #: 14 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): Method: Site Lg: 300 Method: GE Access: H  
 GIS UTM (Z.E.N): 9.393822.6245554 Ref. Name:  
 Date: 2009/09/13 Time: 12:30 Agency: C660 Crew: DF JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	GE	120.00	80.00	90.00	115.00	80.00	130.00					102.50	Method I:	1.0	1.0	C	1.00
Wetted Width (m):	GE	40.00	50.00	45.00	45.00	48.00	50.00					46.33	Method II:			C	
Pool Depth (m):												0.00					

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

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	D	T	N	S	N	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: NS DIST: NS

LB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: YF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: D

STG: YF

## WATER

EMS: Temp: 2 Method: T5 Req #: Cond.: 53 Method: S3  
 pH: 8.1 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: rafted debris Method: GE

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 57.0 D (cm): 57.0 Morph: RP DISTURBANCE INDICATORS         
 Pattern: IR C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N            
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat, migration for anadromous spp and rearing habitat for resident and salmin
Spawning Habitat	Water very turbid, did not see or feel any spawning gravel, however caught many fry
OverWinter Habitat	Fair - strong flow in side channel, is big enough that it may provide habitat during winter
Rearing Habitat	Good - LWD present in mainstem and SC, providing good rearing habitat for fry and resident fish (DV)

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 6006 F: 518		U	SC on LB
R: 6006 F: 519		D	MC

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.037      ILP # 6006      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 6006	F: 520		U	MC
R: 6006	F: 521		U	view of LWD
COMMENTS				
Section		Comments		
SITE CARD		Range finder trouble, distances are ground estimates		
CHANNEL		S1 - side sampled in characterized by a long and broad riffle, side channel is present, caught majority of fish around LWD where there was slower flowing water.		

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104B.037 ILP # 6006

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: Unuk River, UR2  
 Project Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104B.037 ILP #: 6006 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/09/13 To: 2009/09/13 Agency: C660 Crew: DF JW Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
1	104B.037	15	9	GP3 EF 1	2.4	53	T	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/09/13	09:30	2009/09/13	10:45	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF	1	1	O	1045	200.0	2.0	575	30	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF	1	CO	J		7	66 91	R	
1	EF	1	CH	J		14	59 90	R	
1	EF	1	CAL	J		5	65 105	R	
1	EF	1	RB/CT	J		1	190 190	R	
1	EF	1	DV	J		32	70 186	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	DV	186		U	U					6006	500	501
1	EF	1	1	CT/RB	190		U	U					6006	502	502-503, C Burns thinks sea-run CT
1	EF	1	1	DV	95	8.6	U	U	FR	1	2				
1	EF	1	1	DV	81	5.3	U	U							
1	EF	1	1	DV	86	7.2	U	U							
1	EF	1	1	DV	108	15.9	U	U	FR	2	2				
1	EF	1	1	DV	94	9.1	U	U	FR	3	2				
1	EF	1	1	DV	128	24.4	U	U	FR	4	3				
1	EF	1	1	DV	80	7.1	U	U							
1	EF	1	1	DV	75	5.0	U	U							
1	EF	1	1	DV	70	3.3	U	U							
1	EF	1	1	CAL	105	14.1	U	U							
1	EF	1	1	CAL	105	14.0	U	U							
1	EF	1	1	CAL	95	9.4	U	U							
1	EF	1	1	CAL	96	11.7	U	U							
1	EF	1	1	DV	111	16.7	U	U	FR	5	3				
1	EF	1	1	DV	108	14.1	U	U	FR	6	2				
1	EF	1	1	DV	87	8.2	U	U							
1	EF	1	1	DV	93	9.1	U	U	FR	7	UA				
1	EF	1	1	DV	89	7.0	U	U							
1	EF	1	1	DV	85	6.6	U	U							
1	EF	1	1	CH	82	8.4	U	U						1	
1	EF	1	1	CH	77	8.4	U	U							
1	EF	1	1	DV	91	6.8	U	U							
1	EF	1	1	DV	81	3.9	U	U							
1	EF	1	1	CO	81	4.7	U	U							
1	EF	1	1	CH	90	8.7	U	U	FR	8					
1	EF	1	1	CH	70	3.1	U	U							
1	EF	1	1	CO	91	7.6	U	U							
1	EF	1	1	CO	74	4.7	U	U							







Stream/ILP: 6006 Site: 1 Image: 519 Comment: Downstream, main channel. 9/13/2009.



Stream/ILP: 6006 Site: 1 Image: 521 Comment: Upstream, View of LWD. 9/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.048 ILP # 6007 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk River, UR3  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.048 ILP #: 6007 NID Map #: 104B.048 NID #: 16 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: GE Access: H  
 GIS UTM (Z.E.N): 9.403038.6256870 Ref. Name:  
 Date: 2009/09/13 Time: 16:00 Agency: C660 Crew: DF JW Fish Crd?:  Incomplete:

## CHANNEL

Mtd	width	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %	Mtd	Avg	
Channel Width (m):												0.00	Method I: 1.0	1.0	C	1.00
Wetted Width (m):												0.00	Method II:		C	
Pool Depth (m):												0.00				

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

COVER Total: NS

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	D	S	N	N	N	N
Loc: P/S/O:	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: NS DIST: NS

LB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: NS

RB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: NS

## WATER

EMS: Req #: Method: T5 Cond.: Method: S3  
 Temp: Method: FD Turb.: T  M  L  C  Method: GE  
 pH: Method: GE  
 Flood Signs: none

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 55.0 D (cm): 55.0 Morph: RP DISTURBANCE INDICATORS   
 Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: O   
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
Spawning Habitat	Good - did not observe any spawning gravel or spawning fish but caught many fry
OverWinter Habitat	Good - large channel with a heavy flow- side channels probably still maintain flow
Rearing Habitat	Fair - boulders in the side channels provide cover for fry and juv fish. LWD in th eMC offers cover for adult migratory and resident fish.

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 6007 F: 532		D	aerial
R: 6007 F: 533		D	aerial











Stream/ILP: 6007 Site: 1 Image: 532 Comment: Downstream, Aerial. 9/13/2009.



Stream/ILP: 6007 Site: 1 Image: 533 Comment: Downstream, Aerial. 9/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.053 ILP # 6008 Site # 25

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Treaty Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.053 ILP #: 6008 NID Map #: 104A.053 NID #: 18 Reach #: 1.0 Site #: 25  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.463360.6268338 Ref. Name:  
 Date: 2009/09/14 Time: 09:00 Agency: C660 Crew: DF SW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	64.00	67.00	76.00	80.00	80.00	77.00					74.00		Method I: 1.0	2.0	C	1.50
Wetted Width (m):	RF	55.00	41.00	52.00	46.00	51.00	71.00					52.67		Method II:		C	
Pool Depth (m):												0.00					

Wb Depth: 1.1 1.4 1.1 Avg: 1.20 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV	
Amount:	T	T	N	N	D	T	N	
Loc: P/S/O:	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: NS DIST: NS

LB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: MF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: MF

## WATER

EMS: Temp: 4 Method: T5 Req #: Cond.: 134 Method: S3  
 pH: 8.5 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: rafted SWD Method: GE

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 4E+0 D (cm): 20000 Morph: RP DISTURBANCE INDICATORS         
 Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N            
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
Spawning Habitat	Poor - very turbid water and lots of silt, suspect low chance of spawning habitat bc of heavy silt load
OverWinter Habitat	Good - deeper water present (flow would be maintaine through the winter)
Rearing Habitat	habitat present in deeper water at the edges of the banks where water velocity is considerably slower (Fair)

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 6008 F: 555		U	aerial view of confluence fo bell irving and treaty creek
R: 6008 F: 566		U	upstream view of fast flowing glide.









Stream/ILP: 6008 Site: 25 Image: 555 Comment: Upstream, Aerial view of confluence of Bell Irving/Treaty Creek. 9/14/2009.



Stream/ILP: 6008 Site: 25 Image: 566 Comment: Upstream, Upstream view of fast flowing glide.. 9/14/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.052 ILP # 6009 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Treaty Creek, TR3.5  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.052 ILP #: 6009 NID Map #: 104A.052 NID #: 20 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.452566.6268146 Ref. Name:  
 Date: 2009/09/14 Time: 12:00 Agency: C660 Crew: DF JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	259.00	193.00	179.00	223.00	245.00	210.00					218.17	Method I:	1.0	2.0	C	1.50
Wetted Width (m):	RF	100.00	65.00	87.00	57.00	52.00	57.00					69.67	Method II:			C	
Pool Depth (m):												0.00					

Wb Depth: 1.0 1.5 1.9 Avg: 1.47 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV	
Amount:	S	D	N	N	T	T	N	
Loc: P/S/O:	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

CROWN CLOSURE

0 0%

INSTREAM VEG: N  A  M  V

LWD: NS DIST: NS

LB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: YF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: YF

## WATER

EMS: Temp: 2 Method: T5 Req #: Cond.: 136 Method: S3  
 pH: 8.4 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: rafted debris Method: GE

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat, critical if determined spawning gravel.
Spawning Habitat	Good - saw some gravel patches but lots of fry
OverWinter Habitat	Good - strong flow with some deeper glides would provide habitat for the winter
Rearing Habitat	Fair - Limited habitat available, some side channels and deeper glides provide cover

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 6009 F: 568		U	view of LB side channel (good DV habitat)
R: 6009 F: 572		U	view of mainstem

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104A.052      ILP # 6009      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 6009	F: 573		NS	Lots of fines
COMMENTS				
Section		Comments		
CHANNEL		S1 - stream is characterized by long riffles and braided channels, noticeably a lot more fines than any other site. Caught majority of dv in small off channels and in the side channels close to the bank in the slower moving water.		







Stream/ILP: 6009 Site: 1 Image: 568 Comment: Upstream, View of left bank side channel (good DV habitat). 9/14/2009.



Stream/ILP: 6009 Site: 1 Image: 572 Comment: Upstream, View of mainstem. 9/14/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.080 ILP # 6800 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.080 ILP #: 6800 NID Map #: 104B.080 NID #: 8 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 150 Method: RF Access: H  
 GIS UTM (Z.E.N): 9.429780.6289634 Ref. Name:  
 Date: 2009/09/11 Time: 17:00 Agency: C660 Crew: DF JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	6.10	8.10	7.05	8.30	7.50	15.70	9.00				8.82		2.0	1.0	C	1.50
Wetted Width (m):	RF	6.80	8.50	7.05	8.30	7.10	15.00	4.80				8.22				C	
Pool Depth (m):	MS	0.15										0.15					

Wb Depth: .7 1.1 .1 Avg: 0.63 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	N	D	S	T	S	T
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: PS

RB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: PS

## WATER

EMS: Temp: 7 Method: T5 Req #: Cond.: 35 Method: S3  
 pH: 8.0 Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: none Method: GE

## MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3  
 D95: 100.0 D (cm): 6.00 Morph: RP DISTURBANCE INDICATORS         
 Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: O            
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Critical Habitat - due to spawning area
Spawning Habitat	Good - saw two patches of spawning gravel (potential)
OverWinter Habitat	Fair - some deeper glides stream channel overall had good depth to it
Rearing Habitat	Good - stream offers good cover for fry to juv fish through large boulders, riffles and overganging veg

## COMMENTS

Section	Comments
CHANNEL	S3 - stream is characterized by even glide to riffle into boulders. Offers good cover for and and res fish



# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104B.080 ILP # 8001

## WATERBODY

Gazetted Name: Local: Teigen Creek, M1  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: ILP Map #: 104B.080 ILP #: 8001 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date:

Fish Permit #: Date: 2009/09/11 To: 2009/09/11 Agency: C660 Crew: MS VR Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
1	104B.080	9090	9	GP3 EF 1	8.2	87	M	left bank

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/09/11	08:30	2009/09/11	09:10	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF	1	1	O	1043	150.0	1.5	350	40	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF	1	DV	J		1	95	95	R
1	EF	1	CH	F		19	43	64	R
1	EF	1	RB	F		20	30	45	R
1	EF	1	RB	J		2	84	85	R

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	RB	85	6.5	U	IM							
1	EF	1	1	RB	84	6.2	U	IM							
1	EF	1	1	DV	95	8.2	U	IM	FR	1		TP	1		
1	EF	1	1	CH	64	2.9	U	IM							
1	EF	1	1	CH	52	1.6	U	IM							
1	EF	1	1	CH	55	1.7	U	IM							
1	EF	1	1	CH	59	1.9	U	IM							
1	EF	1	1	CH	54	1.9	U	IM							
1	EF	1	1	CH	59	2.0	U	IM							
1	EF	1	1	CH	51	1.5	U	IM							
1	EF	1	1	CH	56	2.1	U	IM							
1	EF	1	1	CH	54	1.4	U	IM							
1	EF	1	1	CH	56	2.3	U	IM							
1	EF	1	1	CH	55	2.1	U	IM							
1	EF	1	1	CH	55	1.7	U	IM							
1	EF	1	1	CH	51	1.4	U	IM							
1	EF	1	1	CH	57	2.7	U	IM							
1	EF	1	1	CH	58	2.1	U	IM							
1	EF	1	1	CH	62	2.3	U	IM							
1	EF	1	1	RB	35	.4	U	IM							
1	EF	1	1	RB	40	.7	U	IM							
1	EF	1	1	CH	55	1.6	U	IM							
1	EF	1	1	RB	40	.6	U	IM							
1	EF	1	1	RB	40	.7	U	IM							
1	EF	1	1	RB	42	.8	U	IM							
1	EF	1	1	RB	40	.7	U	IM							
1	EF	1	1	RB	45	.9	U	IM							
1	EF	1	1	RB	45	1.3	U	IM							
1	EF	1	1	RB	45	.8	U	IM							
1	EF	1	1	RB	40	.6	U	IM							
1	EF	1	1	CH	50	1.3	U	IM							
1	EF	1	1	CH	43	.8	U	IM							







# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104A.071 ILP # 8003

## WATERBODY

Gazetted Name: Local: Teigen Creek, M3  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: ILP Map #: 104A.071 ILP #: 8003 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date:

Fish Permit #: Date: 2009/09/11 To: 2009/09/11 Agency: C660 Crew: MS VR Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
1	104A.071	9092	9	GP3 EF 1	9.7	129	M	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/09/11	14:15	2009/09/11	14:45	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF	1	1	O	1043	150.0	1.5	250	40	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF	1	1	RB	F	13	30 39	R	
1	EF	1	1	DV	J	2	57 69	R	
1	EF	1	1	CH	F	40	46 74	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	CH	74	4.3	U	IM							
1	EF	1	1	CH	56	2.0	U	IM							
1	EF	1	1	CH	56	2.2	U	IM							
1	EF	1	1	CH	49	1.4	U	IM							
1	EF	1	1	CH	69	3.5	U	IM							
1	EF	1	1	CH	64	2.9	U	IM							
1	EF	1	1	CH	61	2.7	U	IM							
1	EF	1	1	CH	62	2.4	U	IM							
1	EF	1	1	CH	57	2.2	U	IM							
1	EF	1	1	CH	56	2.1	U	IM							
1	EF	1	1	CH	59	2.5	U	IM							
1	EF	1	1	CH	60	2.2	U	IM							
1	EF	1	1	CH	56	2.2	U	IM							
1	EF	1	1	CH	55	1.9	U	IM							
1	EF	1	1	CH	61	2.5	U	IM							
1	EF	1	1	CH	56	1.9	U	IM							
1	EF	1	1	CH	57	2.3	U	IM							
1	EF	1	1	CH	56	1.9	U	IM							
1	EF	1	1	CH	58	2.3	U	IM							
1	EF	1	1	CH	65	3.0	U	IM							
1	EF	1	1	CH	57	2.0	U	IM							
1	EF	1	1	CH	61	2.6	U	IM							
1	EF	1	1	CH	54	2.0	U	IM							
1	EF	1	1	DV	57	1.8	U	IM							
1	EF	1	1	CH	56	1.9	U	IM							
1	EF	1	1	CH	55	1.8	U	IM							
1	EF	1	1	CH	59	2.4	U	IM							
1	EF	1	1	CH	59	2.2	U	IM							
1	EF	1	1	DV	69	3.1	U	IM							
1	EF	1	1	CH	55	1.7	U	IM							
1	EF	1	1	CH	59	2.0	U	IM							
1	EF	1	1	CH	51	1.4	U	IM							
1	EF	1	1	CH	58	1.6	U	IM							





# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.062 ILP # 9057 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Oweegee Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.062 ILP #: 9057 NID Map #: 104A.062 NID #: 90057 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: HC Access: H  
 GIS UTM (Z.E.N): 9.456849.6276296 Ref. Name:  
 Date: 2009/09/17 Time: 14:50 Agency: C660 Crew: CB Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	8.10	10.60	5.20	6.90							7.70	Method I:	1.0	1.0	C	1.00
Wetted Width (m):	T	7.40	7.70	6.00	6.80							6.98	Method II:			C	
Pool Depth (m):	MS	0.25	0.45	0.28	0.44							0.35					

Wb Depth: .7 1.1 .4 Avg: 0.73 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	S		T	D	S	
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: D  
 STG: PS

## WATER

EMS: Temp: 12 Method: T5 Req #: Cond.: 87 Method: S3  
 pH: Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: none Method: GE

## MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 25.0 D (cm): 30.0 Morph: RP DISTURBANCE INDICATORS  
 Pattern: IR Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: DC Confinement: UN FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Overall Critical Habitat
OverWinter Habitat	Good - base flow from lake
Rearing Habitat	Good - many rb rearing in creek, abundant LWD and Pools
Spawning Habitat	Good - for salmonids, sk observed spawning

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 9057 F: 1		U	
R: 9057 F: 2		D	





Stream/ILP: 9057 Site: 1 Image: 2 Comment: Downstream, . 9/17/2009.



Stream/ILP: 9057 Site: 1 Image: 1 Comment: Upstream, . 9/17/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.080 ILP # 9058 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.080 ILP #: 9058 NID Map #: 104B.080 NID #: 90060 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: HC Access: H  
 GIS UTM (Z.E.N): 9.431572.6287001 Ref. Name:  
 Date: 2009/09/18 Time: 11:00 Agency: C660 Crew: CB Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %			Mtd	Avg
Channel Width (m):	T	31.00	17.00	17.00	5.00	25.00						19.00	Method I:	3.0	2.0	C	2.25
Wetted Width (m):	T	13.00	17.00	16.00	5.00	24.00						15.00	Method II:	3.0	1.0	C	
Pool Depth (m):	MS	0.70										0.70					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:		T	D		S	T	
Loc: P/S/O:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: SHR

## WATER

EMS: Temp: 8 Method: T5 Req #: Cond.: 58 Method: S3  
 pH: Method: FD Turb.: T  M  L  C  Method: GE  
 Flood Signs: none Method: GE

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 45.0 D (cm): 23.0 Morph: CP DISTURBANCE INDICATORS            
 Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N              
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
OverWinter Habitat	Good
Rearing Habitat	Good
Spawning Habitat	Poor

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 9058 F: 1		D	
R: 9058 F: 2		U	



# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104B.080 ILP # 9058

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: Teigen Creek  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104B.080 ILP #: 9058 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/09/18 To: 2009/09/18 Agency: C660 Crew: CB Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
1	104B.080	90059	9	GP3 EF 1	8	58	C	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/09/18	09:00	2009/09/18	10:00	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF	1	1	O	1013	200.0	5.0	500	30	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF	1	1	RB	NS	23	35 149	R	
1	EF	1	1	CH	NS	41	46 73	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	CH	63	2.5	U	IM							
1	EF	1	1	CH	61	2.3	U	IM							
1	EF	1	1	CH	65	1.8	U	IM							
1	EF	1	1	CH	61	2.2	U	IM							
1	EF	1	1	CH	60	2.2	U	IM							
1	EF	1	1	CH	48	1.0	U	IM							
1	EF	1	1	CH	54	1.7	U	IM							
1	EF	1	1	CH	54	1.7	U	IM							
1	EF	1	1	CH	46	.9	U	IM							
1	EF	1	1	CH	53	1.2	U	IM							
1	EF	1	1	CH	57	1.8	U	IM							
1	EF	1	1	CH	72	4.4	U	IM							
1	EF	1	1	CH	73	4.0	U	IM							
1	EF	1	1	CH	72	3.7	U	IM							
1	EF	1	1	CH	65	3.0	U	IM							
1	EF	1	1	CH	61	2.2	U	IM							
1	EF	1	1	CH	57	2.0	U	IM							
1	EF	1	1	CH	58	2.5	U	IM							
1	EF	1	1	CH	56	2.2	U	IM							
1	EF	1	1	CH	53	1.8	U	IM							
1	EF	1	1	CH	51	1.3	U	IM							
1	EF	1	1	CH	54	1.7	U	IM							
1	EF	1	1	CH	58	2.3	U	IM							
1	EF	1	1	CH	49	1.2	U	IM							
1	EF	1	1	RB	149	35.8	U	IM							
1	EF	1	1	RB	79	4.5	U	IM							
1	EF	1	1	RB	40	.5	U	IM							
1	EF	1	1	RB	35	.4	U	IM							
1	EF	1	1	RB	38	.6	U	IM							
1	EF	1	1	RB	38	.4	U	IM							
1	EF	1	1	RB	35	.4	U	IM							
1	EF	1	1	RB	36	.5	U	IM							
1	EF	1	1	RB	36	.4	U	IM							
1	EF	1	1	RB	35	.9	U	IM							







Stream/ILP: 9058 Site: 1 Image: 1 Comment: Downstream, . 9/18/2009.



Stream/ILP: 9058 Site: 1 Image: 2 Comment: Upstream, . 9/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104A.051    ILP # 9060    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER    Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Treaty Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
 ILP Map#: 104A.051    ILP #: 9060    NID Map #: 104A.051    NID #: 90061    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): ..    Method:    Site Lg: 200    Method: HC    Access: H  
 GIS UTM (Z.E.N): 9.439861.6276041    Ref. Name:  
 Date: 2009/09/18    Time: 14:00    Agency: C660    Crew: CB    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	49.00	24.00									36.50	Method I:	3.0	3.0	C	3.00
Wetted Width (m):	RF	30.00	22.00									26.00	Method II:			C	
Pool Depth (m):												0.00					

Wb Depth: .6    .7    1.0    Avg: 0.77    Method: MS    Stage: L  M  H     No Vis.Ch.:     Intermittent:     Dw:     Tribs.:

COVER    Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:			D				
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 0    0%  
 INSTREAM VEG: N  A  M  V

LWD: F    DIST: C  
 LB SHP: S    RB SHP: S  
 Texture: F  G  C  B  R  A     Texture: F  G  C  B  R  A   
 RIP: S    RIP: S  
 STG: SHR    STG: SHR

## WATER

EMS:    Req #:    Method: T5    Cond.: 84    Method: S3  
 Temp: 3    Method: FD    Turb.: T  M  L  C     Method: GE  
 pH:    Method: GE  
 Flood Signs: rafted debris

## MORPHOLOGY

Bed Material:    Dominant: C    Subdom: G    O1 B1 B2 B3 D1 D2 D3  
 D95: 55.0    D (cm): 35.00    Morph: RP    DISTURBANCE INDICATORS         
 Pattern: SI    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N               
 Coupling: DC    Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Overall Important Habitat
OverWinter Habitat	Good
Rearing Habitat	Fair - only for DV
Spawning Habitat	Poor

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 9060    F: 1		U	
R: 9060    F: 2		D	





Stream/ILP: 9060 Site: 1 Image: 2 Comment: Downstream, . 9/18/2009.



Stream/ILP: 9060 Site: 1 Image: 1 Comment: Upstream, . 9/18/2009.









# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104A.071 ILP # 9082

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: Teigen Creek, M4  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.071 ILP #: 9082 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_  
 Fish Permit #: \_\_\_\_\_ Date: 2009/09/15 To: 2009/09/15 Agency: C660 Crew: MS VR Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
1	104A.071	9083	9	GP3 EF 1	8.2	124	T	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/09/15	17:00	2009/09/15	18:00	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF	1	1	O	975	100.0	5.0	300	40	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF	1	CH	F		89	45	R	
1	EF	1	RB	NS		9	25	R	
1	EF	1	DV/BT	NS		6		R	
1	EF	1	BT	NS		9	54	272	R
1	EF	1	MW	NS		19	40	342	R

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	MW	342		U	U	FR	1	9				
1	EF	1	1	MW	270		U	U							
1	EF	1	1	MW	260		U	U							
1	EF	1	1	MW	215		U	U							
1	EF	1	1	MW	214		U	U							
1	EF	1	1	BT	272		U	U	FR	2	4				
1	EF	1	1	BT	152	40.2	U	U	FR	3	3				
1	EF	1	1	BT	211	88.3	U	U	FR	4	4				
1	EF	1	1	MW	116	15.8	U	U							
1	EF	1	1	MW	145	31.5	U	U							
1	EF	1	1	MW	112	12.7	U	U							
1	EF	1	1	MW	117	16.9	U	U							
1	EF	1	1	MW	117	16.9	U	U							
1	EF	1	1	BT	109	12.9	U	U	FR	5	2				
1	EF	1	1	CH	73	4.6	U	U							
1	EF	1	1	CH	55	1.6	U	U							
1	EF	1	1	CH	49	1.3	U	U							
1	EF	1	1	CH	59	1.9	U	U							
1	EF	1	1	CH	58	2.2	U	U							
1	EF	1	1	CH	57	2.6	U	U							
1	EF	1	1	CH	58	1.9	U	U							
1	EF	1	1	CH	62	3.1	U	U							
1	EF	1	1	CH	56	1.8	U	U							
1	EF	1	1	CH	55	1.9	U	U							
1	EF	1	1	RB	76	4.8	U	U							
1	EF	1	1	CH	64	3.2	U	U							
1	EF	1	1	CH	60	1.9	U	U							
1	EF	1	1	CH	52	1.5	U	U							
1	EF	1	1	CH	58	1.9	U	U							
1	EF	1	1	CH	59	2.1	U	U							
1	EF	1	1	CH	56	1.9	U	U							







Stream/ILP: 9082 Site: 1 Image: 501 Comment: Downstream, . 9/16/2009.



Stream/ILP: 9082 Site: 1 Image: 502 Comment: Upstream, . 9/16/2009.



















# FDIS Fish Card

Watershed Code: 560-409900-52000-00000-00000-00000-000-000-000-000-000-000  
 Reach #: 4.0  
 ILP Map #  
 ILP #

## WATERBODY

Gazetted Name: Local: N Treaty Creek, Pond4  
 Project Code: 560-000000-00000-00000-00000-000-000-000-000-000-0  
 WS Code: 560-409900-52000-00000-00000-00000-000-000-000-000-000-000  
 Waterbody ID: ILP Map #: ILP #: Reach #: 4 -  
 Project ID: 19435 Lake/Stream: S Lake From Date:

Fish Permit #: Date: 2009/07/20 To: 2009/07/20 Agency: C660 Crew: KM NM Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd		MTD/NO	Temp	Cond	Turbid	Comment
4	104A.061	20106	9		GP3 MT 5				
4	104A.061	20106	9		GP3 MT 4				
4	104A.061	20106	9		GP3 MT 3				
4	104A.061	20106	9		GP3 MT 2				
4	104A.061	20106	9		GP3 MT 1				

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
4	MT 1	1	2009/07/20	14:30	2009/07/21	15:30	
4	MT 2	1	2009/07/20	14:30	2009/07/21	15:30	
4	MT 3	1	2009/07/20	14:30	2009/07/21	15:30	
4	MT 4	1	2009/07/20	14:30	2009/07/21	15:30	
4	MT 5	1	2009/07/20	14:30	2009/07/21	15:30	

## B. NET/TRAP SPECIFICATIONS

Site #	MTD/NO.	H/P	Net Type	Length	Depth	Mesh	Set	Habitat
4	MT 1	1	SK	0.0	0.5		BT	L
4	MT 2	1	SK		0.5		BT	L
4	MT 3	1	SK		0.5		BT	L
4	MT 4	1	SK		0.5		BT	L
4	MT 5	1	SK		0.5		BT	L

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
4	MT 1	1	NFC			0			
4	MT 2	1	NFC			0			
4	MT 3	1	NFC			0			
4	MT 4	1	NFC			0			
4	MT 5	1	NFC			0			

Appendix 6.1-1. Roads



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2001 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2001 NID Map #: NID #: 20001 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.442433.6287758 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/10 Time: 08:35 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	GE	220.00	40.00	50.00	50.00	55.00						83.00		Method I: 2.0	0.0	C	1.00
Wetted Width (m):	GE	22.00	28.00	50.00	45.00	50.00						39.00		Method II:			
Pool Depth (m):	GE	0.00	0.00	0.00	0.00	0.00						0.00					

Wb Depth: 1.0 .8 Avg: 0.90 Method: MS Stage: L  M  H  No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	N	S	T	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

CROWN CLOSURE

0 0%

INSTREAM VEG: N  A  M  V

LWD: F DIST: E

LB SHP: U

Texture: F  G  C  B  R  A

RIP: D

STG: MF

RB SHP: V

Texture: F  G  C  B  R  A

RIP: M

STG: MF

## WATER

EMS: Temp: 9 Method: T3 Req #: Cond.: 90 Method: S3  
 pH: 8.6 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: eroded bks rafted db Method: GE

## MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 18.0 D (cm): 18.0 Morph: RP DISTURBANCE INDICATORS         
 Pattern: IM C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: O            
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Good - no barriers, good flow
Rearing Habitat	Poor (main channel) - low cover; Good (side channel) - good, abundant cover, slow flow
OverWinter Habitat	Poor - side channel likely dries up or freezes, main channel has low cover, no pools
Spawning Habitat	Fair - some gravel okay for salmon, but few holding areas

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 100 F: 0001		U	side channel
R: 100 F: 0002		D	side channel on LB, good rearing habitat

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2001 Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	100	F:	0003	seasonally flooded area between main channel and side channel on LB
R:	100	F:	0004	main channel at road crossing
R:	100	F:	0005	main channel looks downstream from road crossing
WILDLIFE				
Group		Observations		
MAM		Bear and moose tracks on LB bar		
COMMENTS				
Section		Comments		
WATER		Should brige S/C to protect fish habitat or move RC ~50 m d/s to narrower section.		
MORPHOLOGY		(channel cont) S/C joins M/C and crossing would be narrower and banks more stable. No sampling, but fish use. Overall Important.		
CHANNEL		S1. S/C on LB provides some of the only good rearing habitat in this section. Should bridge S/C to protect habitat. Land b/w S/C and M/C likely floods, increasing risk to bridge. LB eroding at proposed road crossing. ~50 m downstream of current RC		



Stream/ILP: 2001 Site: 1 Image: 2 Comment: Downstream, Side channel on LB, good rearing habitat. 7/10/2009.



Stream/ILP: 2001 Site: 1 Image: 4 Comment: Upstream, Main channel at road crossing. 7/10/2009.



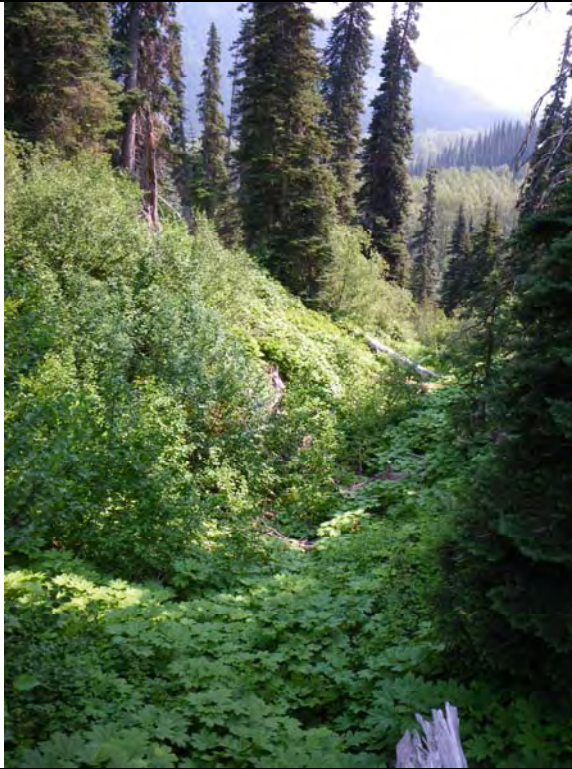
# FDIS Site Card

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

Reach # 1.0      ILP Map # 104A.071      ILP # 2002      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	100	F:	0010	U from road crossing
COMMENTS				
Section		Comments		
CHANNEL		S6. Very small, shallow channel carrying low flow. No pools, water flows through rocks and cobble, likely dries up. Steep, no fish habitat. Not shocked - not enough water. Overall Marginal.		





Stream/ILP: 2002 Site: 1 Image: 8 Comment: Downstream, Stream looking downstream from road offset. 7/10/2009.



Stream/ILP: 2002 Site: 1 Image: 9 Comment: Downstream, At road crossing. 7/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2003 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2003 NID Map #: NID #: 20003 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.442879.6288673 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/10 Time: 12:35 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 100 F: 0011		D	NCD look downstream

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD





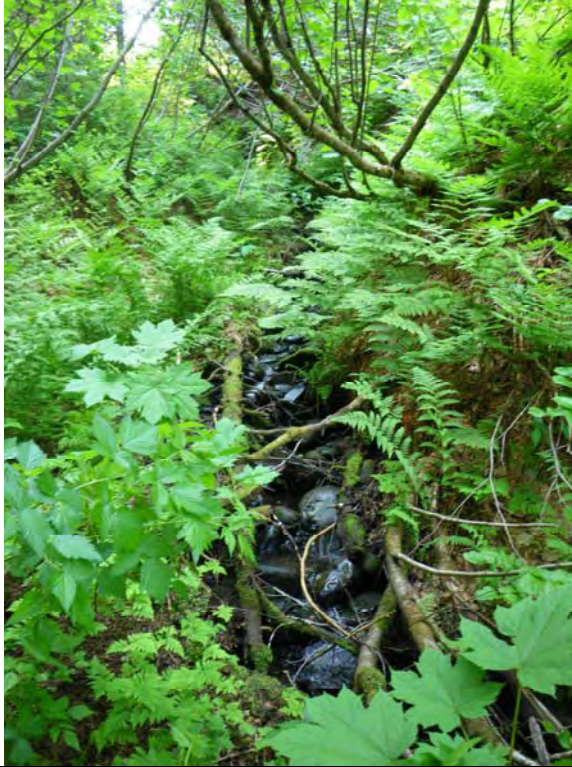
Stream/ILP: 2003 Site: 1 Image: 11 Comment: Downstream, NCD looking downstream.  
7/10/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2004 Site 1

HABITAT QUALITY				
Name		Comments		
Spawning Habitat		None - no suitable substrate, steep		
PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 100	F: 0013		U	from road crossing
R: 100	F: 0014		D	from road crossing
R: 100	F: 0015		D	from falls
COMMENTS				
Section		Comments		
SITE CARD		No satellite reception at feature therefore no UTM		
CHANNEL		S6. Small steep stream - 27% at crossing and steeper below. Bedrock falls ~ 15 m upstream from road crossing. No fish habitat. No shocking, too little water too steep. Drops off at 50 m cliff (at least) ~10 m d/s of road crossing. Overall Marginal.		



Stream/ILP: 2004 Site: 1 Image: 14 Comment: Downstream, From road crossing. 7/10/2009.



Stream/ILP: 2004 Site: 1 Image: 13 Comment: Upstream, From road crossing. 7/10/2009.









Stream/ILP: 2005 Site: 1 Image: 16 Comment: Downstream, From road crossing. 7/10/2009.



Stream/ILP: 2005 Site: 1 Image: 17 Comment: Upstream, From road crossing. 7/10/2009.





# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000      Reach # 1.0      ILP Map # 104A.071      ILP # 2006      Site 1

HABITAT QUALITY				
Name		Comments		
Spawning Habitat		None - no suitable substrate		
PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 100	F: 0018		D	Small stagnant pond downstream of road crossing (UTM 9V 442962 6289037)
R: 100	F: 0019		U	7% section of road crossing
R: 100	F: 0020		D	flat section downstream of road crossing
COMMENTS				
Section		Comments		
CHANNEL		S6. Shallow stream through avalanche chute, flattens out at road crossing and flows into small stagnant pond. Likely barriers downstream due to high gradient. Shocked to confirmed NFC, including pond edge. Overall Marginal.		





Stream/ILP: 2006 Site: 1 Image: 18 Comment: Downstream, Small stagnant pond downstream of road crossing. 7/10/2009.



Stream/ILP: 2006 Site: 1 Image: 19 Comment: Upstream, 7% section of road crossing. 7/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2007 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.071 ILP #: 2007 NID Map #: NID #: 20010 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.442934.6289159 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/10 Time: 14:40 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):		1.00	0.80	0.60	0.60	1.10	0.70					0.80	Method I:	20.0	C	20.00
Wetted Width (m):												0.00	Method II:			
Pool Depth (m):												0.00				

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	N	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 2 21-40%  
 INSTREAM VEG: N  A  M  V

LWD: N DIST: NA  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: M  
 STG: YF

RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: D  
 STG: YF

## WATER

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

## MORPHOLOGY

Bed Material: Dominant: G Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 8.00 D (cm): 4.00 Morph: RP DISTURBANCE INDICATORS            
 Pattern: ST C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N                 
 Coupling: CO Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: None
Spawning Habitat	None
OverWinter Habitat	None
Rearing Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 100 F: 21		U	at road crossing

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104A.071 ILP # 2007 Site 1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: No wetted width, pool depths nor water chemistry due to lack of water (dry channel).
CHANNEL	S6. Dry channel , no fish habitat. Overall Marginal.



Stream/ILP: 2007 Site: 1 Image: 21 Comment: Upstream, At road crossing. 7/10/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2008 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.071 ILP #: 2008 NID Map #: NID #: 20011 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.442832.6290119 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/10 Time: 17:20 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %		Mtd	Avg	
Channel Width (m):	GE	30.00	24.00	28.00	24.00	22.00						25.60	Method I:	6.0	4.0	C	5.00
Wetted Width (m):	GE	8.00	6.00	15.00	9.00	8.00						9.20	Method II:				
Pool Depth (m):	GE	0.00	0.00	0.00	0.00	0.00						0.00					

Wb Depth: .8 1.5 .5 Avg: 0.93 Method: GE Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	D	N	N	T	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 0 0%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: M  
 STG: MF

LWD: F DIST: E  
 LB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: D  
 STG: MF

## WATER

EMS: Temp: 4 Method: T3 Req #: Cond.: 80 Method: S3  
 pH: 7.8 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 46.0 D (cm): 37.0 Morph: CP DISTURBANCE INDICATORS         
 Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: F             
 Coupling: CO Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: fast, but no barriers
Spawning Habitat	Poor - no suitable substrates
OverWinter Habitat	Poor - fast, turbid, no pools, low cover
Rearing Habitat	Poor - fast, turbid, no pools, low cover

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 100 F: 24		U	at elevated bards downstream of road crossing
R: 100 F: 25		U	towards road crossing

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104A.071      ILP # 2008      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	100	F:	26	
			D	from road crossing`
R:	100	F:	27	
			U	towards road bank at road crossing
R:	100	F:	28	
			D	at elevated bars downstream of road crossing
COMMENTS				
Section		Comments		
CHANNEL		S1. Fast Turbid glacial river with unstable banks and lots of bedload movement. No pools, poor habitat through out. Shocked July 16, 2009 and confirmed fish presence. Overall Marginal.		





Stream/ILP: 2008 Site: 1 Image: 26 Comment: Downstream, From road crossing`. 7/10/2009.



Stream/ILP: 2008 Site: 1 Image: 25 Comment: Upstream, Towards road crossing. 7/10/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2009 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.071 ILP #: 2009 NID Map #: NID #: 20012 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.442450.6287586 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 08:45 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	T	3.50	3.90	3.50	4.00	3.30						3.64	Method I:	0.0	C	0.00
Wetted Width (m):	T	3.10	2.40	2.90	3.20	2.40						2.80	Method II:			
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00						0.00				

Wb Depth: .7 Avg: 0.70 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	N	N	N	T	T	D
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 0 0%  
 INSTREAM VEG: N  A  M  V

LWD: N DIST: NA  
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: W RB RIP: W  
 STG: NA STG: NA

## WATER

EMS: Temp: 8 Method: T3 Req #: Cond.: 90 Method: S3  
 pH: 7.7 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: NA O1 B1 B2 B3 D1 D2 D3  
 D95: 16.0 D (cm): 0.01 Morph: LC DISTURBANCE INDICATORS         
 Pattern: IR C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
104A.071	20013	BD	1.0	GE	50	GE	R: 101 F: 29 L: #:		..	

Comments: looks upstream from road crossing at BD

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Fair - BD may create difficulties but not a barrier
Spawning Habitat	None - no suitable substrate
OverWinter Habitat	Good - BD creates pond for overwintering

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2009 Site 1

HABITAT QUALITY				
Name		Comments		
Rearing Habitat		Good - lots of cover, moderated flow, beaver pond for coho fry		
PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	101	F:	30	
				D from BD look downstream to road crossing (pink flag)
R:	101	F:	31	
				U at beaver pond upstream at road crossing
R:	101	F:	32	
				X at BD
R:	101	F:	33	
				D from road crossing at multiple channels
R:	101	F:	34	
				U towards road crossing
COMMENTS				
Section		Comments		
MORPHOLOGY		(Channel continued) May be preferable to move road crossing downstream ~ 100 m where W/L is less extensive and creek flows in one channel. Overall Important - Critical.		
CHANNEL		S2. BD ~ 30 m upstream of road crossing causes stream (likely offshoot of Teigen Creek) to split into 2 channels. W/L surrounding creek may be FSZ - likely floods and provides shelter for coho fry. Not shocked - trib to Teigen with no barriers.		





Stream/ILP: 2009 Site: 1 Image: 33 Comment: Downstream, From road crossing at multiple channels. 7/11/2009.



Stream/ILP: 2009 Site: 1 Image: 34 Comment: Upstream, Towards road crossing. 7/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2010 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2010 NID Map #: NID #: 20014 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.442420.6287483 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 09:55 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LB SHP: RB SHP:  
 Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 101 F: 0040		D	looking downstream at road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104A.071 ILP # 2010 Site 1

COMMENTS	
Section	Comments
CHANNEL	NCD. Tiny seepage with small amount of channelization.



Stream/ILP: 2010 Site: 1 Image: 40 Comment: Downstream, Looking downstream at road crossing. 7/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104A.071    ILP # 2011    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER    Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071    ILP #: 2011    NID Map #:    NID #: 20015    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.442414.6287468    Method: GP3    Site Lg: 100    Method: GE    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/11    Time: 10:05    Agency: C660    Crew: KM/NM    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	1.30	1.40	1.20	1.10	0.80	1.30					1.18		Method I: 31.0	C	31.00
Wetted Width (m):	MS	1.30	1.30	0.40	0.40	0.30	0.80					0.75		Method II:		
Pool Depth (m):	MS	0.14	0.12									0.13				

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

COVER    Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	S	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 4    71-90%  
 INSTREAM VEG: N  A  M  V

LWD: N    DIST: NA  
 LB SHP: S    RB SHP: S  
 Texture: F  G  C  B  R  A     Texture: F  G  C  B  R  A   
 RIP: D    RIP: D  
 STG: SHR    STG: SHR

## WATER

EMS:    Req #:    Method: T3    Cond.: 50    Method: S3  
 Temp: 10    Method: P3    Turb.: T  M  L  C     Method: GE  
 pH: 7.6    Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material:    Dominant: C    Subdom: G    O1 B1 B2 B3 D1 D2 D3  
 D95: 64.0    D (cm): 9.00    Morph: CP    DISTURBANCE INDICATORS  
 Pattern: ST    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N  
 Coupling: PC  
 Confinement: UN  
 FSZ:     Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: None - too shallow
OverWinter Habitat	None, no deep pools
Spawning Habitat	None - too steep, no suitable substrate
Rearing Habitat	Poor - few pools, steep, low flow

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 101    F: 42		D	from road crossing
R: 101    F: 43		U	at road crossing

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104A.071 ILP # 2011 Site 1

COMMENTS	
Section	Comments
CHANNEL	S6. Small, steep stream through alder and DC. No real pools, low flow. No fish habitat. Overall Marginal.





Stream/ILP: 2011 Site: 1 Image: 42 Comment: Downstream, From road crossing. 7/11/2009.



Stream/ILP: 2011 Site: 1 Image: 43 Comment: Upstream, At road crossing. 7/11/2009.









Stream/ILP: 2012 Site: 1 Image: 44 Comment: Upstream, From road crossing. 7/11/2009.



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.071	2013	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: No wedged widths, pool depths, WbDP, nor water chemistry due to lack of water (dry channel).
CHANNEL	S6. Dry channel through steep alder. Overall Marginal.



Stream/ILP: 2013 Site: 1 Image: 51 Comment: Downstream, At road crossing. 7/11/2009.



Stream/ILP: 2013 Site: 1 Image: 50 Comment: Upstream, At road crossing. 7/11/2009.







Stream/ILP: 2014 Site: 1 Image: 52 Comment: Downstream, Alluvial deposits at road crossing.  
7/11/2009.



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.071	2015	1

COMMENTS	
Section	Comments
CHANNEL	S5. Steep, fast step pool stream with few pools, evidence of prior debris is rock slides. 30% upstream and downstream of road crossing. No fish habitat. Overall Marginal.



Stream/ILP: 2015 Site: 1 Image: 54 Comment: Downstream, Downstream of road crossing.  
7/11/2009.



Stream/ILP: 2015 Site: 1 Image: 53 Comment: Upstream, Towards road crossing 36% slope.  
7/11/2009.

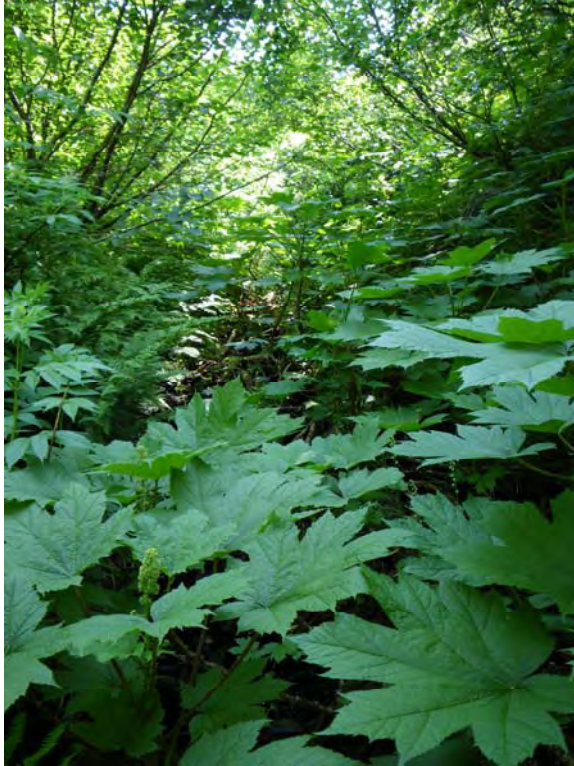








Stream/ILP: 2016 Site: 1 Image: 55 Comment: Downstream, At road crossing. 7/11/2009.



Stream/ILP: 2016 Site: 1 Image: 56 Comment: Upstream, From road crossing. 7/11/2009.





# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104A.071 ILP # 2017 Site 1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: No water chemistry/quality due to lack of enough water
CHANNEL	S6. Very steep, small drainage - only gradient keeps it channelized. No fish habitat. Overall Marginal.



Stream/ILP: 2017 Site: 1 Image: 57 Comment: Downstream, From road crossing. 7/11/2009.



Stream/ILP: 2017 Site: 1 Image: 58 Comment: Upstream, From road crossing at 57% gradient. 7/11/2009.





Stream/ILP: 2018 Site: 1 Image: 59 Comment: Upstream, Seepage with low flow and minor channelization. 7/11/2009.



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.071	2019	1

COMMENTS	
Section	Comments
CHANNEL	S6. No fish habitat. Steep drainage down alder. 35% gradient downstream of road crossing and 55% upstream of road crossing

---





Stream/ILP: 2019 Site: 1 Image: 60 Comment: Downstream, From road crossing. 7/11/2009.



Stream/ILP: 2019 Site: 1 Image: 61 Comment: Upstream, At 55% gradient. 7/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2020 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2020 NID Map #: NID #: 20024 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.442229.6286897 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 14:30 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LB SHP: RB SHP:  
 Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 101 F: 62		D	Dry seepage

## COMMENTS

Section	Comments
CHANNEL	NCD. Poorly defined drainage with no water - some cour among rocks but mostly seepage. No fish habitat.



Stream/ILP: 2020 Site: 1 Image: 62 Comment: Downstream, Dry seepage. 7/11/2009.



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.071	2021	1

COMMENTS	
Section	Comments
CHANNEL	S6. Very steep stream with few pools and low cover. Gradient barrier. Overall Marginal.

---





Stream/ILP: 2021 Site: 1 Image: 65 Comment: Downstream, From road crossing. 7/11/2009.



Stream/ILP: 2021 Site: 1 Image: 66 Comment: Upstream, From road crossing. 7/11/2009.





# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.071	2022	1

COMMENTS	
Section	Comments
CHANNEL	S6. Small stream, branches off previous ILP. Very steep, no pools, no fish habitat. Located 30m upstream from W/L - avoid sidecasting or blasting material downslope. Overall Marginal.



Stream/ILP: 2022 Site: 1 Image: 76 Comment: Downstream, Towards road crossing. 7/12/2009.



Stream/ILP: 2022 Site: 1 Image: 77 Comment: Upstream, From road crossing. 7/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2023 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2023 NID Map #: NID #: 20027 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.442114.6286663 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 09:30 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.80	0.80	1.40	1.63	1.70	1.50					1.31		Method I: 20.0	54.0	C	37.00
Wetted Width (m):	MS	0.00	0.00	0.00	0.60	1.00	0.60					0.37		Method II:			
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00					

Wb Depth: .4 .2 .3 Avg: 0.30 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	N	T	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 4 71-90%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: SHR

## WATER

EMS: Temp: 10 Method: T3 Req #: Cond.: 110 Method: S3  
 pH: 7.5 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: B Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 43.0 D (cm): 5.00 Morph: SP DISTURBANCE INDICATORS         
 Pattern: ST C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - dewater, too steep
Spawning Habitat	None - no suitable substrate, too steep
OverWinter Habitat	None - no pools
Rearing Habitat	Poor - in water downstream of road crossing, too steep upstream, no pools

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 102 F: 78		U	at 54% gradient from road crossing
R: 102 F: 79		D	at dry 20% gradient from road crossing

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104A.071      ILP # 2023      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	102	F:	80	U base of slope, no water, no channel
COMMENTS				
Section		Comments		
CHANNEL		S6. Downstream of road crossing, graident is 20% but stream is dewatered. Road crossing is ~30 m upstream of W/L at base of slope, water seeps in disappers. NO channel no connectivity to open water. Seepage barrier, no fish habtat. Overall Marginal.		



Stream/ILP: 2023 Site: 1 Image: 80 Comment: Upstream, Base of slope, no water, no channel.  
7/11/2009.



Stream/ILP: 2023 Site: 1 Image: 78 Comment: Upstream, At 54% gradient from road crossing.  
7/11/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2024 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.071 ILP #: 2024 NID Map #: NID #: 20028 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.442116.6286697 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/12 Time: 09:50 Agency: C660 Crew: KMMN Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.00	0.80	0.90	0.80	1.30	1.40					1.03		Method I: 54.0	18.0	C	36.00
Wetted Width (m):	MS	0.00	0.00	0.00	0.70	0.40	0.50					0.27		Method II:			
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00					

Wb Depth: .2 .4 .3 Avg: 0.30 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	D	T	T	N	N	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

4 71-90%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Temp: 8 Method: T3 Req #: Cond.: 110 Method: S3  
 pH: 7.5 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 17.0 D (cm): 8.00 Morph: SP DISTURBANCE INDICATORS            
 Pattern: IR C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: O            
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: None
Spawning Habitat	None
OverWinter Habitat	None
Rearing Habitat	Poor - dewater downstream of road crossing, too steep upstream of road crossing

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 102 F: 82		D	at lower gradient downstream of road crossing
R: 102 F: 83		U	at slope break upstream of road crossing

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.071	2024	1

COMMENTS	
Section	Comments
CHANNEL	S6. Same situation as previous ILP. Steep u/s of road slope decreases d/s of road and stream, dewater, then disappears at base of slope. Located ~ 5m west of previous ILP. Several channel through leve. No connectivity to open water d/s. Overall Marginal





Stream/ILP: 2024 Site: 1 Image: 82 Comment: Downstream, At lower gradient downstream of road crossing. 7/12/2009.



Stream/ILP: 2024 Site: 1 Image: 83 Comment: Upstream, At slope break upstream of road crossing. 7/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2025 Site 1

HABITAT QUALITY				
Name		Comments		
Rearing Habitat		Fair - some deep pools but may not be connected-may be provide high water refuge in areas near Tiegen Creek. Coho fry observed in pool near Teigen Creek		
PHOTOS				
Photo	Foc Lg	Dir	Comments	
R: 102 F: 84		D	Down flood channel - road ribbon is 15m to right of photo	
R: 102 F: 85		U	Up flood channel to Teigen Creek. Road is 20 m to left and turns away from main channel	
R: 102 F: 86		U	road ribbon over sand deposited from Teigen Creek floodwaters	
R: 102 F: 87		X	isolated pool where ~6 juv coho observed - right on route	
COMMENTS				
Section		Comments		
SITE CARD		Incomplete: Site is a FSZ therefore no channel or morphology info and limited cover info.		
MORPHOLOGY		Should avoid this area - active floodplain and keep road up on sidehill. Return at high water to sample and see whats going on with water. MOVE ROAD!		
CHANNEL		4419945 6286508 - road within 5m of Teigen Creek. From this point, road traverses W/L with occasional dry channels and flood channels. Approaches Teigen Creek and runs within 15 m of flood channels (currently dry). Evidence of flooding from Teigen Creek		





Stream/ILP: 2025 Site: 1 Image: 84 Comment: Downstream, Down flood channel - road ribbon is 15m to right of photo. 7/12/2009.



Stream/ILP: 2025 Site: 1 Image: 87 Comment: Across, Isolated pool where ~6 juv coho observed - right on route. 7/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2026 Site 1

HABITAT QUALITY				
Name		Comments		
Rearing Habitat		Poor - steep and fast with no pools or rest areas		
PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 102	F: 90		D	chute, just downstream of road crossing
R: 102	F: 91		U	log wedge creating chute at road crossing
R: 102	F: 92		U	log wedge creating chute at road crossing
R: 102	F: 93		D	chute at road crossing
R: 102	F: 94		U	open stream upstream of road crossing
COMMENTS				
Section		Comments		
MORPHOLOGY		Mostly cascade. No definite barriers, but fish are unlikely to use reach at road crossing due to 20% gradient and poor habitat quality. Overall Marginal.		
CHANNEL		S2. Steep stream runs down avalanche chute. At road crossing, log wedge and boulders create chute - 15 m long and 3 m drop with one 1 m falls - possible barrier. Poor quality habitat - only ~ 100 m is accessible upstream of road crossing before gradient		

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104B.070 ILP # 2026

WATERBODY															
Gazetted Name:										Local: Teigen Creek					
Project Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000															
Waterbody ID:					ILP Map #: 104B.070				ILP #: 2026		Reach #: 1 -				
Project ID: 19435					Lake/Stream: S				Lake From Date:						
Fish Permit #:			Date: 2009/07/16			To: 2009/07/16			Agency: C660		Crew: KM/NM		Resample: <input type="checkbox"/>		
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/Start(East/North)/End(East/North)/Mthd				MTD/NO	Temp	Cond	Turbid	Comment				
1		20067	9			441788	6286366	GP3	EF	1	10	207	C		
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
1	EF	1	2009/07/16	12:50	2009/07/16	13:15									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
1	EF	1	1	O	295	80.0	2.0	500	30	4	SR	LR-24			
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
1	EF	1	DV	J	U	2	82 85	R							
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	DV	82		U	U	FR	003						
1	EF	1	DV	85		U	U	FR	004						
COMMENTS															
Section			Comments												
WATERBODY			Shocked 40 m downstream at first cascade (photos: 106-203, 106-204). Caught 2 DV. Shocked ~ 40 m upstream of first cascade - NFC. Multiple large drops and chute at road crossing. S5 at road crossing, S3 below cascade.												





Stream/ILP: 2026 Site: 1 Image: 94 Comment: Upstream, Open stream upstream of road crossing. 7/12/2009.



Stream/ILP: 2026 Site: 1 Image: 91 Comment: Upstream, Log wedge creating chute at road crossing. 7/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2027 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.071 ILP #: 2027 NID Map #: NID #: 20033 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.441864.6286331 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/12 Time: 13:30 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	1.00	1.00	1.80	2.00							1.45	Method I:	18.0	C	18.00
Wetted Width (m):	MS	0.70	0.80	1.00	0.40							0.73	Method II:			
Pool Depth (m):	MS	0.00	0.00	0.00	0.00							0.00				

Wb Depth: .4 .2 .2 Avg: 0.27 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	N	T	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 4 71-90%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S RB RIP: S  
 STG: SHR STG: SHR

## WATER

EMS: Req #: Method: T3 Cond.: 170 Method: S3  
 Temp: 7 Method: P2 Turb.: T  M  L  C  Method: GE  
 pH: 7.6 Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 5.00 D (cm): 3.00 Morph: RP DISTURBANCE INDICATORS  
 Pattern: ST C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N  
 Coupling: PC  
 Confinement: UN FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - shallow, steep, small
Spawning Habitat	None - too shallow
OverWinter Habitat	None - no pools
Rearing Habitat	None - no pools, too shallow

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 102 F: 116		U	near source at road crossing
R: 102 F: 117		D	from road crossing







Stream/ILP: 2027 Site: 1 Image: 117 Comment: Downstream, From road crossing. 7/12/2009.



Stream/ILP: 2027 Site: 1 Image: 116 Comment: Upstream, Near source at road crossing. 7/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2028 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2028 NID Map #: NID #: 20034 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.441783.6286156 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/12 Time: 14:15 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 102 F: 118		X	surface flow at road crossing

## COMMENTS

Section	Comments
CHANNEL	NCD. Small, partially channelized seep flows down alder swale and into small stream at base of slope. No fish hab at road crossing but

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104A.071 ILP # 2028 Site 1

COMMENTS	
Section	Comments
	possible FSZ at base of slope.



Stream/ILP: 2028 Site: 1 Image: 118 Comment: Across, Surface flow at road crossing.  
7/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104A.071    ILP # 2029    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER    Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071    ILP #: 2029    NID Map #:    NID #: 20035    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.441756.6286083    Method: GP3    Site Lg: 100    Method: GE    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/12    Time: 14:30    Agency: C660    Crew: KMMN    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	2.50	2.30	2.80	2.30	2.80	2.60					2.55	Method I:	30.0	20.0	C	25.00
Wetted Width (m):	MS	1.30	1.40	1.00	2.00	1.40	1.90					1.50	Method II:				
Pool Depth (m):	MS	0.13										0.13					

Wb Depth: .5    .6    .6    Avg: 0.57    Method: MS    Stage: L  M  H     No Vis.Ch.:     Intermittent:   
 Dw:     Tribs.:

COVER    Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	D	S	S	N	N	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

0    0%

INSTREAM VEG: N  A  M  V

LWD: F    DIST: E

LB SHP: V

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: V

Texture: F  G  C  B  R  A

RIP: S

STG: INIT

## WATER

EMS:    Req #:    Method: T3    Cond.: 110    Method: S3  
 Temp: 12    Method: P2    Turb.: T  M  L  C     Method: GE  
 pH: 7.4    Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material:    Dominant: B    Subdom: C    O1 B1 B2 B3 D1 D2 D3  
 D95: 82.0    D (cm): 23.00    Morph: SP    DISTURBANCE INDICATORS  
 Pattern: ST    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N  
 Coupling: CO  
 Confinement: OC  
 FSZ:     Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - steep with seepage barriers at base of slope
Spawning Habitat	None
OverWinter Habitat	None - no deep pools
Rearing Habitat	Poor - steep but with step pools. Pools not very deep

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 102    F: 120		D	
R: 102    F: 121		U	





Stream/ILP: 2029 Site: 1 Image: 120 Comment: Downstream, . 7/12/2009.



Stream/ILP: 2029 Site: 1 Image: 121 Comment: Upstream, . 7/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2030 Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	102	F:	129	log wedge with 2 m drop over 4 m
COMMENTS				
Section		Comments		
SITE CARD		Incomplete: No defined banks thefore no channel widths or WbDp.		
MORPHOLOGY		(channel cont.) and potential washouts by shifting road ~ 50 m upstream closer to head of fan. Walked downstream to mainstem - no barriers. Shocked and confirmed NFC. Overall Marginal.		
CHANNEL		S5. Steep channel down alluvial fan, no defined channel, evidence that channel moves often, extensive bedload movement. Unlikely to find fish at road crossing. Splits into 2 stream ~ 30 m upstream of road crossing. Could avoid 3 crossings		







Stream/ILP: 2030 Site: 1 Image: 128 Comment: Downstream, From road crossing. 7/12/2009.



Stream/ILP: 2030 Site: 1 Image: 129 Comment: Upstream, Log wedge with 2 m drop over 4 m. 7/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104A.071    ILP # 2031    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER    Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071    ILP #: 2031    NID Map #: 104A.071    NID #: 20037    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.441521.6285647    Method: GP3    Site Lg: 100    Method: GE    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/13    Time: 08:55    Agency: C660    Crew: KM/NM    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS											0.00		Method I: 24.0	2.0	C	13.00
Wetted Width (m):	MS	1.10	1.20	1.60	2.00	1.60	1.30					1.47		Method II:			
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00					

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

COVER    Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	S	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: F    DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS:    Req #:    Method: T3    Cond.: 80    Method: S3  
 Temp: 4    Method: P2    Turb.: T  M  L  C     Method: GE  
 pH: 7.9    Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material:    Dominant: G    Subdom: C    O1 B1 B2 B3 D1 D2 D3  
 D95: 33.0    D (cm): 17.00    Morph: CP             
 Pattern: SI    DISTURBANCE INDICATORS    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N                 
 Coupling: CO  
 Confinement: NA    Bars: N  SIDE  DIAG  MID  SPAN  BR   
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - steep
Spawning Habitat	Poor - steep, few suitable substrates
OverWinter Habitat	None
Rearing Habitat	Poor - no pools, steep

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 103    F: 132		U	from road crossing
R: 103    F: 133		D	steep 21% downstream of road crossing





Stream/ILP: 2031 Site: 1 Image: 133 Comment: Downstream, Steep 21% downstream of road crossing. 7/13/2009.



Stream/ILP: 2031 Site: 1 Image: 132 Comment: Upstream, From road crossing. 7/13/2009.







Stream/ILP: 2032 Site: 1 Image: 134 Comment: Downstream, Seepage at road crossing.  
7/13/2009.





# FDIS Site Card

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

Reach # 1.0      ILP Map # 104A.071      ILP # 2033      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	103	F:	137	D at alluvial fan at road crossing
COMMENTS				
Section		Comments		
MORPHOLOGY		No connectivity with main channel. Road crosses small (~ 5 m) alluvial fan at bottom of slope		
CHANNEL		S6. Small stream joins previous seepage at bottom of slope. Upstream of road crossing has low flow but well-defined banks, moderate gradient, no pools. Downstream of road gradient decreases, stream dries out, spreads out and eventually disappears.		



Stream/ILP: 2033 Site: 1 Image: 137 Comment: Downstream, At alluvial fan at road crossing.  
7/13/2009.



Stream/ILP: 2033 Site: 1 Image: 136 Comment: Upstream, At flowing channel upstream of road.  
7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2035 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2035 NID Map #: NID #: 20041 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.441296.6285354 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 10:10 Agency: C660 Crew: KMMN Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LB SHP: RB SHP:  
 Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Good
Spawning Habitat	Good - some good gravel in s/c
OverWinter Habitat	Fair - may not be deep enough
Rearing Habitat	Good - slow flow, lots of water

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 103 F: 139		U	S/C of Teigen Creek with road to the left
R: 103 F: 140		U	road ribbon descends to floodplain within 3 m of crossing

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104A.071      ILP # 2035      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	103	F:	141	
			D	off-channel habitat of Teigen right under road ribbon - coho seen
R:	103	F:	142	
			U	O/C habitat looking upstream with pink ribbon
COMMENTS				
Section		Comments		
CHANNEL		FSZ. Road parallels S/C of Teigen Crek ~10 m away on steep sidehill. Must avoid encroaching on S/C. Road descends to floodplain after ~30 m and goes right over off-channel habitat for Teigen Creek-no-go zone. MOVE ROAD. Overall Critical		
WATER		Coho seen using O/C habitat under pink ribbon.		





Stream/ILP: 2035 Site: 1 Image: 141 Comment: Downstream, Off-channel habitat of Teigen right under road ribbon - coho seen. 7/13/2009.



Stream/ILP: 2035 Site: 1 Image: 139 Comment: Upstream, Side channel of Teigen Creek with road to the left. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2036 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2036 NID Map #: NID #: 20042 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.441285.6285316 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 10:30 Agency: C660 Crew: KMMN Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	1.30	1.50	1.40	1.20	1.20	2.00					1.43		Method I: 1.0	C	1.00
Wetted Width (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00		Method II:		
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00				

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	D	S	N	S	N	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 4 71-90%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: U RB SHP: U  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: SHR

## WATER

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

## MORPHOLOGY

Bed Material: Dominant: G Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 16.0 D (cm): 12.0 Morph: RP DISTURBANCE INDICATORS  
 Pattern: SI Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: DC Confinement: UN FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - dries out
Spawning Habitat	None - dries out
OverWinter Habitat	None
Rearing Habitat	Fair - may provide high water refuge in spring

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 103 F: 143		U	dry channel at road crossing
R: 103 F: 144		D	dry channel at road crossing







Stream/ILP: 2036 Site: 1 Image: 144 Comment: Downstream, Dry channel at road crossing.  
7/13/2009.



Stream/ILP: 2036 Site: 1 Image: 143 Comment: Upstream, Dry channel at road crossing.  
7/13/2009.







Stream/ILP: 2037 Site: 1 Image: 146 Comment: Downstream, Dry channel at road crossing. 7/13/2009.



Stream/ILP: 2037 Site: 1 Image: 145 Comment: Upstream, Isolated pool with coho ~10 m downstream at road crossing. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2038 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2038 NID Map #: NID #: 20044 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.441226.6285207 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 11:20 Agency: C660 Crew: KMMN Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LB SHP: RB SHP:  
 Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 103 F: 147		U	Tiny amount of water running under logs upstream of road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.071	2038	1

COMMENTS	
Section	Comments
CHANNEL	NCD. Very small stream running down avalanche chute turns to NCD just upstream of road crossing. No visible channel downstream of road crossing. No fish habitat.

---





Stream/ILP: 2038 Site: 1 Image: 147 Comment: Upstream, Tiny amount of water running under logs upstream of road crossing. 7/13/2009.









Stream/ILP: 2039 Site: 1 Image: 148 Comment: Across, Stagnant pond looking East. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2040 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2040 NID Map #: NID #: 20046 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.441122.6284964 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 12:35 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 103 F: 149		D	

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD





Stream/ILP: 2040 Site: 1 Image: 149 Comment: Downstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2041 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2041 NID Map #: NID #: 20047 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.441132.6284922 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 12:50 Agency: C660 Crew: KMMN Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LB SHP: RB SHP:  
 Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 103 F: 150		X	at road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD







Stream/ILP: 2041 Site: 1 Image: 150 Comment: Across, At road crossing. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2042 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2042 NID Map #: NID #: 20048 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.441304.6284434 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 14:30 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg		
Channel Width (m):	MS	1.20	0.90	1.10	1.00	1.10						1.06		Method I:	25.0	27.0	C	27.33
Wetted Width (m):	MS	0.80	0.70	0.70	0.60	0.50						0.66		Method II:	30.0		C	
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00						0.00						

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	D	S	T	T	N	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

3 41-70%

INSTREAM VEG: N  A  M  V

LWD: F DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: V

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Temp: 5 Method: T3 Req #: Cond.: 186 Method: S3  
 pH: 8.6 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 17.0 D (cm): 4.00 Morph: SP DISTURBANCE INDICATORS            
 Pattern: ST C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N                 
 Coupling: CO Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Spawning Habitat	None
Other	Migration Habitat: Poor - too steep, little water
OverWinter Habitat	None
Rearing Habitat	None - too steep, no pools

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 103 F: 151		U	at road crossing
R: 103 F: 152		D	30% downstream of road crossing





Stream/ILP: 2042 Site: 1 Image: 152 Comment: Downstream, 30% downstream of road crossing. 7/13/2009.



Stream/ILP: 2042 Site: 1 Image: 151 Comment: Upstream, At road crossing. 7/13/2009.









Stream/ILP: 2043 Site: 1 Image: 153 Comment: Downstream, At road crossing. 7/13/2009.



Stream/ILP: 2043 Site: 1 Image: 154 Comment: Upstream, Upstream of road crossing. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2044 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2044 NID Map #: NID #: 20050 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 16:10 Agency: C660 Crew: KMMN Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 103 F: 155		D	downslope

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD. No satellite reception therefore no UTM.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104A.071 ILP # 2044 Site 1

COMMENTS	
Section	Comments
CHANNEL	NCD. Extremely steep (80%) drainage with scoured base but almost no flow. Scour possibly from mud/debris slides rather than water



Stream/ILP: 2044 Site: 1 Image: 155 Comment: Downstream, Downslope. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104A.071    ILP # 2045    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER    Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071    ILP #: 2045    NID Map #:    NID #: 20051    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.440912.6283335    Method: GP3    Site Lg: 100    Method: GE    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/14    Time: 12:00    Agency: C660    Crew: KM/NM    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	GE	22.00	20.00	25.00	22.00	30.00						23.80	Method I:	3.0	2.0	GE	2.50
Wetted Width (m):	GE	22.00	20.00	25.00	22.00	30.00						23.80	Method II:				
Pool Depth (m):	GE	0.00	0.00	0.00	0.00	0.00						0.00					

Wb Depth: .8    1.0    Avg: 0.90    Method: GE    Stage: L  M  H     No Vis.Ch.:     Intermittent:   
 Dw:     Tribs.:

COVER    Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	T	D	N	N	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

0    0%

INSTREAM VEG: N  A  M  V

LWD: F    DIST: E

LB SHP: V

Texture: F  G  C  B  R  A

RIP: D

STG: PS

RB SHP: V

Texture: F  G  C  B  R  A

RIP: D

STG: PS

## WATER

EMS:    Req #:    Method: T4    Cond.: 103    Method: S3  
 Temp: 6    Method: P2    Turb.: T  M  L  C     Method: GE  
 pH: 9.0    Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material:    Dominant: B    Subdom: C    O1    B1    B2    B3    D1    D2    D3  
 D95: 90.0    D (cm): 30.00    Morph: SP   

Pattern: SI    DISTURBANCE INDICATORS    C1    C2    C3    C4    C5    S1    S2    S3    S4    S5

Islands: N  
 Coupling: PC  
 Confinement: CO  
 FSZ:

Bars:    N     SIDE     DIAG     MID     SPAN     BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Fair - no barriers, deep water
Spawning Habitat	Poor - no gravel
OverWinter Habitat	Poor - no cover, no pools, fast flow
Rearing Habitat	Poor - no cover, no pools, fast flow

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 104    F: 157		D	from road crossing
R: 104    F: 158		U	from road crossing

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.071	2045	1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	104	F:	159	X at road crossing
COMMENTS				
Section		Comments		
CHANNEL		S1. Large turbulent river, no barriers.		

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104B.070 ILP # 2045

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: South Teigen Creek  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104B.070 ILP #: 2045 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/07/16 To: 2009/07/16 Agency: C660 Crew: KM/NM Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/Start(East/North)/End(East/North)/Mthd		MTD/NO	Temp	Cond	Turbid	Comment
1		20069	9		440796 6823737	GP3 EF 2	9	118	M
1		20068	9		440774 6823807	GP3 EF 1	9	118	M

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/07/16	14:15	2009/07/16	14:35	
1	EF 2	1	2009/07/16	15:10	2009/07/16	15:40	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF 1	1	O	450	50.0	4.0	550	30	4	SR	LR-24
1	EF 2	1	O	694	80.0	2.0	550	30	4	SR	LR-24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment
1	EF 1	1	DV/BT	A		2	150	177	R	
1	EF 1	1	DV/BT	J		7	84	136	R	
1	EF 1	1	DV/BT	F		2	26	56	R	
1	EF 2	1	DV/BT	A		1	150	150	R	
1	EF 2	1	DV/BT	J		3	105	130	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF 1	1	DV/BT	56		U	IM								
1	EF 1	1	DV/BT	125		U	IM	FR	005						
1	EF 1	1	DV/BT	26		U	IM								
1	EF 1	1	DV/BT	136		U	IM								re-capture
1	EF 1	1	DV/BT	94		U	IM	FR	006						
1	EF 1	1	DV/BT	150		U	M	FR	007						
1	EF 1	1	DV/BT	177		U	M	FR	008						
1	EF 1	1	DV/BT	110		U	IM	FR	009						
1	EF 1	1	DV/BT	84		U	IM	FR	010						
1	EF 1	1	DV/BT	112		U	IM	FR	011						
1	EF 1	1	DV/BT	111		U	IM	FR	012						
1	EF 2	1	DV/BT	111		U	IM	FR	013						
1	EF 2	1	DV/BT	130		U	IM	FR	014						
1	EF 2	1	DV/BT	105		U	IM	FR	015						
1	EF 2	1	DV/BT	150		U	M	FR	016						

## COMMENTS

Section	Comments
WATERBODY	Shocked South Teigen near camp because channel at road crossing is fast and turbulent. Shocked S/C and creek margin. Most DV/BT caught in S/C. No other species seen or captured.





Stream/ILP: 2045 Site: 1 Image: 157 Comment: Downstream, From road crossing. 7/14/2009.



Stream/ILP: 2045 Site: 1 Image: 158 Comment: Upstream, From road crossing. 7/14/2009.





Stream/ILP: 2046 Site: 1 Image: 162 Comment: Upstream, Partial scour at road crossing.  
7/14/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2047 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2047 NID Map #: NID #: 20053 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.440379.6281966 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/14 Time: 12:50 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 104 F: 163		D	at road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD







Stream/ILP: 2047 Site: 1 Image: 163 Comment: Downstream, At road crossing. 7/14/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2048 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Tegin Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2048 NID Map #: NID #: 20054 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.440279.6281336 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/14 Time: 13:50 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 104 F: 164		D	at road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD







Stream/ILP: 2048 Site: 1 Image: 164 Comment: Downstream, At road crossing. 7/14/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 2049 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk River  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 2049 NID Map #: NID #: 20055 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.440279.6281336 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 11:50 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 105 F: 174		U	defined channel through bog at road crossing
R: 105 F: 175		D	no visible channel downstream of road crossing

## COMMENTS

Section	Comments





Stream/ILP: 2049 Site: 1 Image: 175 Comment: Downstream, No visible channel downstream of road crossing. 7/15/2009.



Stream/ILP: 2049 Site: 1 Image: 174 Comment: Upstream, Defined channel through bog at road crossing. 7/15/2009.



# FDIS Site Card

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

Reach # 1.0      ILP Map # 104A.071      ILP # 2051      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	105	F:	180	U
COMMENTS				
Section		Comments		
CHANNEL		S6. Small, narrow stream, low flow, not entirely continuous with cobbles blocking flow of water.		





Stream/ILP: 2051 Site: 1 Image: 179 Comment: Downstream, . 7/15/2009.



Stream/ILP: 2051 Site: 1 Image: 180 Comment: Upstream, . 7/15/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 2052 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk River  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 2052 NID Map #: NID #: 20057 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.439079.6280764 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 13:15 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 105 F: 182		D	at road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD





Stream/ILP: 2052 Site: 1 Image: 182 Comment: Downstream, At road crossing. 7/15/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 2053 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk River  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 2053 NID Map #: NID #: 20058 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.439075.6280872 Method: GP3 Site Lg: 200 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 13:30 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.20	1.11	1.10	0.60	1.10	0.80					0.99		Method I: 24.0	27.0	C	25.50
Wetted Width (m):	MS	1.20	1.13	0.90	0.80	1.15	0.80					1.00		Method II:			
Pool Depth (m):	MS	0.22	0.20	0.21								0.21					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	S	D	N	T	T
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

LWD: F DIST: E  
 LB SHP: U RB SHP: U  
 Texture: F  G  C  B  R  A   
 RIP: C RB SHP: U  
 STG: MF STG: MF

CROWN CLOSURE 2 21-40%  
 INSTREAM VEG: N  A  M  V

## WATER

EMS: Temp: 11 Method: T3 Req #: Cond.: 38 Method: S3  
 pH: 8.9 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 65.0 D (cm): 4.00 Morph: SP DISTURBANCE INDICATORS            
 Pattern: IR C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N                 
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - okay in some places but large drops overland flow instream
Spawning Habitat	Poor - few suitable substrates
OverWinter Habitat	Poor - few deep pools, may freeze
Rearing Habitat	Fair - some good pools and cover, good flow - steep upstream of road crossing

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 105 F: 183		D	from road crossing
R: 105 F: 184		U	from road crossing

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	2053	1

COMMENTS	
Section	Comments
CHANNEL	S6. Steep small stream (probably same as previous stream). Some good pools bus overall poor access. No fish habitat. Overall Marginal.

---





Stream/ILP: 2053 Site: 1 Image: 183 Comment: Downstream, From road crossing. 7/15/2009.



Stream/ILP: 2053 Site: 1 Image: 184 Comment: Upstream, From road crossing. 7/15/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 2054 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104A.061 ILP #: 2054 NID Map #: 104A.061 NID #: 20059 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.439086.6281065 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 13:55 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.40	0.90	1.00	0.70	0.70	1.00					0.78	Method I:	9.0	19.0	C	14.00
Wetted Width (m):	MS	0.30	1.00	1.00	0.80	0.75	1.00					0.81	Method II:				
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	D	S	T	T	N	T	T
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: A DIST: E

LB SHP: U

Texture: F  G  C  B  R  A

RIP: C

STG: MF

RB SHP: U

Texture: F  G  C  B  R  A

RIP: C

STG: MF

## WATER

EMS: Temp: 10 Method: T3 Req #: Cond.: 40 Method: S3  
 pH: 8.9 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: G Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 17.0 D (cm): 4.50 Morph: CP DISTURBANCE INDICATORS  
 Pattern: IR Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: DC Confinement: UN FSZ:  Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - lots of seepage barriers
Spawning Habitat	Poor - some gravel, but very shallow and low flow
OverWinter Habitat	None
Rearing Habitat	Poor - shallow, no pools

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 105 F: 185		U	at road crossing - seepage turn to stream
R: 105 F: 186		D	downstream of road crossing - channelized

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	2054	1

COMMENTS	
Section	Comments
CHANNEL	S6. Very small borderline stream - seepage upstream at road crossing, turns to stream at road crossing. Several seepage barriers and overland flow d/s of road crossing. No fish habitat. Overall Marginal.

---



Stream/ILP: 2054 Site: 1 Image: 186 Comment: Downstream, Downstream of road crossing - channelized. 7/15/2009.



Stream/ILP: 2054 Site: 1 Image: 185 Comment: Upstream, At road crossing - seepage turn to stream. 7/15/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 2055 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 2055 NID Map #: 104A.061 NID #: 20060 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.439230.6281287 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 14:20 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 105 F: 187		D	at road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD





Stream/ILP: 2055 Site: 1 Image: 187 Comment: Downstream, At road crossing. 7/15/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 2056 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk River  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 2056 NID Map #: NID #: 20061 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.439482.6281283 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 14:40 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	0.40	0.58	0.40	0.38	0.41	0.30					0.41		Method I: 55.0	C	55.00
Wetted Width (m):	MS	0.45	0.56	0.30	0.18	0.47	0.28					0.37		Method II:		
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00				

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	D	S	T	T	N	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

3 41-70%

INSTREAM VEG: N  A  M  V

LWD: A DIST: E

LB SHP: V

Texture: F  G  C  B  R  A

RIP: C

STG: MF

RB SHP: V

Texture: F  G  C  B  R  A

RIP: C

STG: MF

## WATER

EMS: Req #: Method: T3 Cond.: 30 Method: S3  
 Temp: 10 Method: P2 Turb.: T  M  L  C  Method: GE  
 pH: 9.1 Method: Method:  
 Flood Signs: Method: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 26.0 D (cm): 8.00 Morph: SP DISTURBANCE INDICATORS  
 Pattern: ST Islands: N Coupling: DC Confinement: UN FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 105 F: 188		D	at 55% slope
R: 105 F: 189		U	at road crossing

## COMMENTS

Section	Comments



# FDIS Site Card

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

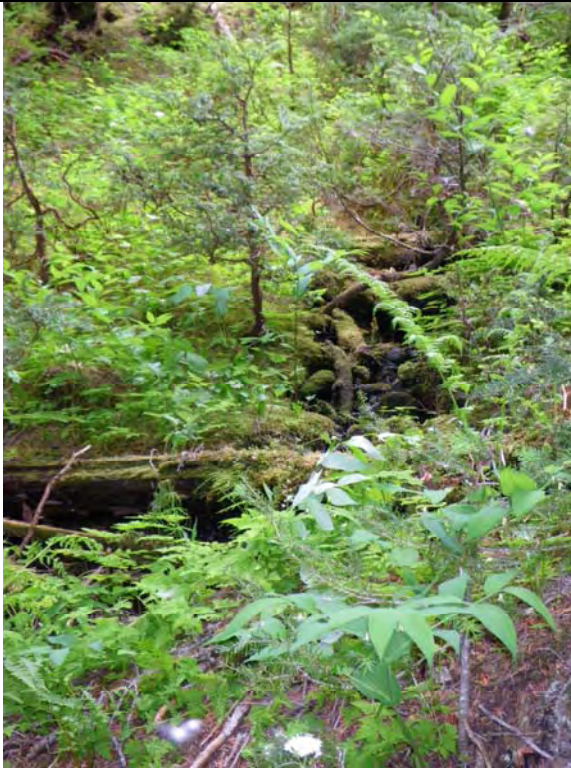
Reach #	ILP Map #	ILP #	Site
1.0	104A.061	2056	1

COMMENTS	
Section	Comments
CHANNEL	S6. Very steep small stream and no fish habitat. Overall Marginal.

---



Stream/ILP: 2056 Site: 1 Image: 188 Comment: Downstream, At 55% slope. 7/15/2009.



Stream/ILP: 2056 Site: 1 Image: 189 Comment: Upstream, At road crossing. 7/15/2009.



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	2057	1

COMMENTS	
Section	Comments
CHANNEL	S6. Very steep, very small stream, not much water and no fish habitat. Overall Marginal.

---



Stream/ILP: 2057 Site: 1 Image: 191 Comment: Downstream, At 55% gradient. 7/15/2009.



Stream/ILP: 2057 Site: 1 Image: 190 Comment: Upstream, At road crossing. 7/15/2009.



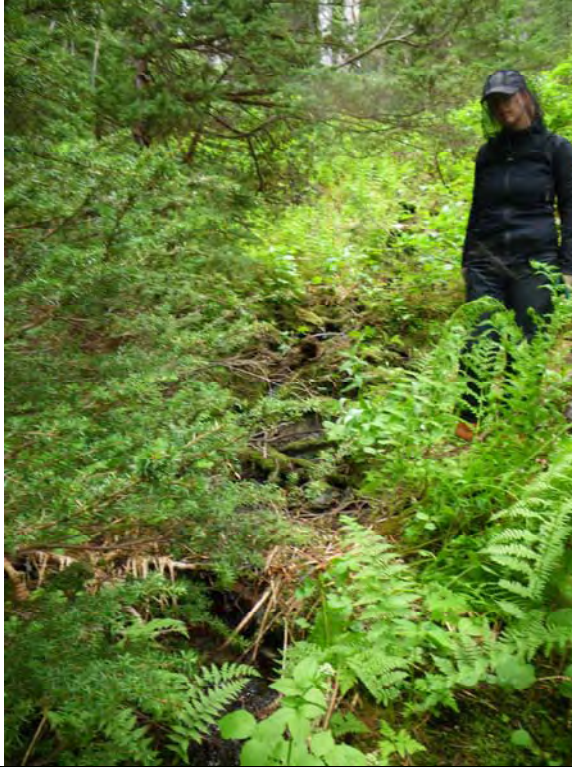
# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	2058	1

CHANNEL	S6. Very steep graident, low flow. Overall Marginal.
---------	--





Stream/ILP: 2058 Site: 1 Image: 193 Comment: Upstream, From crossing. 7/15/2009.



Stream/ILP: 2058 Site: 1 Image: 194 Comment: Across, At crossing. 7/15/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104A.061 ILP # 2059 Site 1

COMMENTS	
Section	Comments
CHANNEL	NCD. Seepage draining W/L with ponded water



Stream/ILP: 2059 Site: 1 Image: 195 Comment: Downstream, Poned water at road crossing.  
7/15/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2060 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2060 NID Map #: 104B.058 NID #: 20070 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407703.6266547 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/17 Time: 10:55 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.95	2.05	1.60	1.78	2.00	2.00					1.90	Method I:	0.0	1.0	C	0.50
Wetted Width (m):	MS	1.95	2.05	1.60	1.78	1.70	2.00					1.85	Method II:				
Pool Depth (m):												0.00					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	T	N	N	N	D	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N  A  M  V

LWD: F DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: MF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: MF

## WATER

EMS: Temp: 5 Method: T3 Req #: Cond.: 97 Method: S3  
 pH: 9.1 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: NA O1 B1 B2 B3 D1 D2 D3  
 D95: 0.00 D (cm): 0.00 Morph: RP DISTURBANCE INDICATORS  
 Pattern: IR Islands: N Coupling: DC Confinement: UN FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Good - no barriers, low gradient, good flow
OverWinter Habitat	Fair - lots of cover but may freeze
Rearing Habitat	Good - lots of cover, good flow, some okay pools - mostly glide
Spawning Habitat	None - no gravel

## PHOTOS

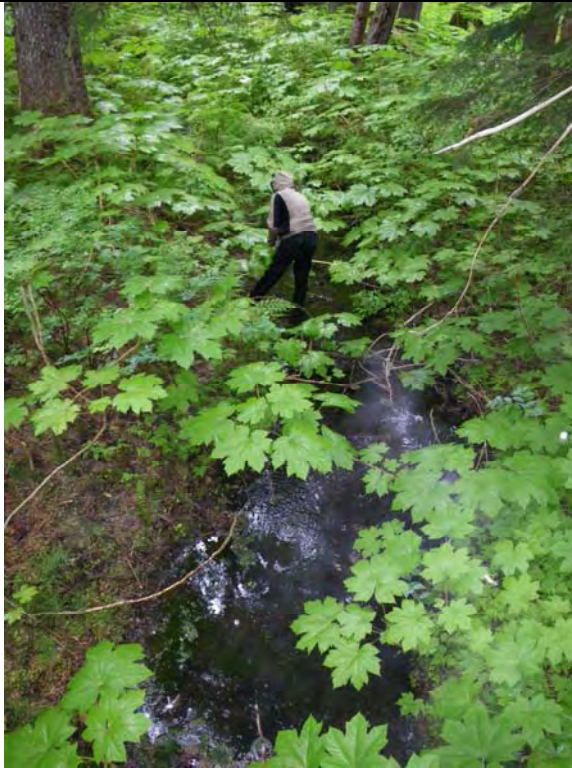
Photo	Foc Lg	Dir	Comments
R: 107 F: 205		U	from road crossing
R: 107 F: 206		D	at road crossing







Stream/ILP: 2060 Site: 1 Image: 206 Comment: Downstream, At road crossing. 7/17/2009.



Stream/ILP: 2060 Site: 1 Image: 205 Comment: Upstream, From road crossing. 7/17/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2061 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.058 ILP #: 2061 NID Map #: 104B.058 NID #: 20071 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407561.6266553 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/17 Time: 11:15 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %		Mtd	Avg	
Channel Width (m):	GE	15.00	17.00	12.00	15.00	17.00	20.00					16.00	Method I:	2.0	1.0	C	1.50
Wetted Width (m):	GE	10.00	14.00	9.00	13.00	13.00	14.00					12.17	Method II:				
Pool Depth (m):	MS	0.70	0.90	0.50	0.60	0.20	0.50					0.57					

Wb Depth:  .5  .6  Avg: 0.55 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	D	N	T	S	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: U  
 Texture: F  G  C  B  R  A   
 RIP: G  
 STG: MF

LWD: A DIST: E  
 LB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

## WATER

EMS: Req #: Method: S3  
 Temp: 7 Method: T5 Cond.: 75 Method: GE  
 pH: 8.7 Method: P2  
 Flood Signs: rafted debris Method: GE  
 Turb.: T  M  L  C

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Very good - good flow, large channel and wetted width
OverWinter Habitat	Ver good - lots of LWD cover, deep pools
Rearing Habitat	Very good - lots of gravel, shallow areas and pools
Spawning Habitat	Very good - lots of gravel, LWD cover, shallow areas and pools

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 107 F: 209		D	from road crossing
R: 107 F: 210		U	from road crossing

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.058      ILP # 2061      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	107	F:	211	X from road crossing
COMMENTS				
Section		Comments		
MORPHOLOGY		Leave functional LWD in stream when building crossing - creates critical pools		
CHANNEL		S2. Very good fish habitat! Lots of gravel, functional LWD creating habitat, deep pools, good flow, good cover. Possible fish sensitive zone ~ 25 m SW of crossing. Leave functional LWD in stream when building road crossing. Overall Critical.		



Stream/ILP: 2061 Site: 1 Image: 209 Comment: Downstream, From road crossing. 7/17/2009.



Stream/ILP: 2061 Site: 1 Image: 210 Comment: Upstream, From road crossing. 7/17/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2062 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk River  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2062 NID Map #: 104B.058 NID #: 20072 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/17 Time: 13:50 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	D	N	N	N	S	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 2 21-40%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

LWD: N DIST: NA  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

## WATER

EMS: Temp: 14 Method: T5 Req #: Cond.: 117 Method: S3  
 pH: 8.5 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: NA O1 B1 B2 B3 D1 D2 D3  
 D95: 0.00 D (cm): 0.00 Morph: NS DISTURBANCE INDICATORS            
 Pattern: C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands:              
 Coupling: Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habiat: Poor - doesn't go anywhere
Spawning Habitat	None
OverWinter Habitat	Poor - likely freezes to bottom
Rearing Habitat	Fair - good cover but stagnant

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 107 F: 212		U	NCD at road crossing
R: 107 F: 213		D	FSZ downstream at road crossing

# FDIS Site Card

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

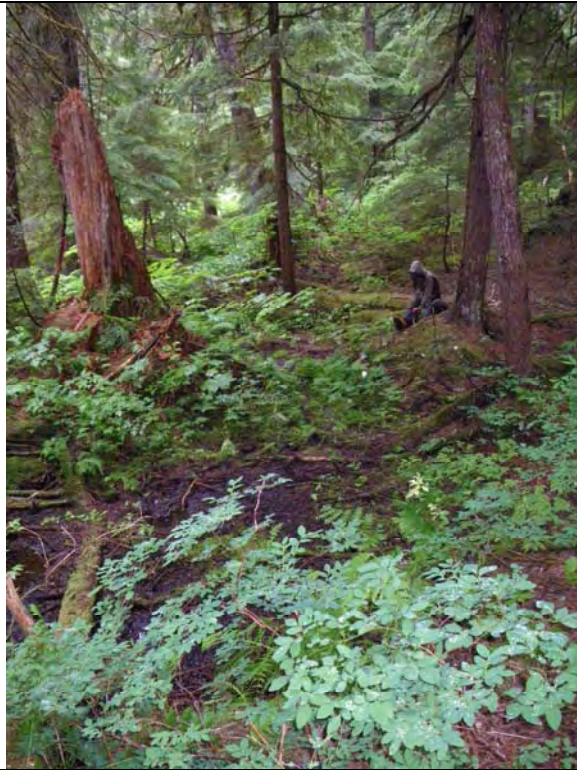
Reach #	ILP Map #	ILP #	Site
1.0	104B.058	2062	1

COMMENTS	
Section	Comments
MORPHOLOGY	Avoid encroaching on open water habitat d/s of road
SITE CARD	Incomplete: Site is a NCD upstream of road crossing, FSZ downstream; no satellite reception therefore no UTM.
CHANNEL	NCD upstream of road crossing. Turns into FSZ with continous ponded water along base at slope about 50 m downstream, opens into wetland along Unuk banks, possilbe high water refuge/rearing for Coho. Overall Marginal.





Stream/ILP: 2062 Site: 1 Image: 213 Comment: Downstream, FSZ downstream at road crossing. 7/17/2009.



Stream/ILP: 2062 Site: 1 Image: 212 Comment: Upstream, NCD at road crossing. 7/17/2009.





# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.058      ILP # 2063      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	107	F: 217	U	functional LWD downstream of road crossing
R:	107	F: 218	U	functional LWD downstream of road crossing
COMMENTS				
Section		Comments		
MORPHOLOGY		Right bank at crossing has bedrock outcrop that looks quite fractured and unstable. Avoid breaking rock into stream		
SITE CARD		No Wb depths specified		
CHANNEL		S2. Excellent fish habitat at road crossing - lots of LWD creating pools and cover. Right bank at crossing has bedrock outcrop that looks quite fractured-avoid breaking into stream. Overall Critical.		



Stream/ILP: 2063 Site: 1 Image: 214 Comment: Upstream, At log wedges and functional LWD. 7/17/2009.



Stream/ILP: 2063 Site: 1 Image: 217 Comment: Upstream, Functional LWD downstream of road crossing. 7/17/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2064 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2064 NID Map #: 104B.058 NID #: 20074 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407274.6265770 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/17 Time: 14:45 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gradient %		Mtd	Avg	
Channel Width (m):	MS	1.11	1.20	1.60	1.73	1.30	1.23					1.36	Method I:	20.0	8.0	C	14.00
Wetted Width (m):	MS	0.28	0.24	0.45	1.85	0.62	0.72					0.69	Method II:				
Pool Depth (m):	MS	0.15	0.18	0.19	0.34							0.22					

Wb Depth:    Avg: 0.33 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	S	T	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

LWD: A DIST: E  
 LB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

## WATER

EMS: Temp: 12 Method: T5 Req #: Cond.: 121 Method: S3  
 pH: 8.8 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 69.0 D (cm): 17.00 Morph: SP DISTURBANCE INDICATORS            
 Pattern: ST C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N              
 Coupling: CO Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - low flow, gradient steepens at road crossing
OverWinter Habitat	Poor - no deep pools
Spawning Habitat	None
Rearing Habitat	Fair - downstream of road crossing, some pools, moderate gradient, high cover

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 107 F: 219		D	at low gradient
R: 107 F: 220		U	at high gradient

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.058	2064	1

COMMENTS	
Section	Comments
CHANNEL	S4. Small stream is tributary at previous ILP, Moderate gradient downstream of road crossing, accessible to fish with okay rearing habitat. Upstream is steeper (20%) with few pools, low flow and poor access. Overall Marginal.





Stream/ILP: 2064 Site: 1 Image: 219 Comment: Downstream, At low gradient. 7/17/2009.



Stream/ILP: 2064 Site: 1 Image: 220 Comment: Upstream, At high gradient. 7/17/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2065 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2065 NID Map #: 104B.058 NID #: 20075 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407337.6265672 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/17 Time: 15:00 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 107 F: 221		U	No channel

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD







Stream/ILP: 2065 Site: 1 Image: 221 Comment: Upstream, No channel. 7/17/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2066 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.058 ILP #: 2066 NID Map #: 104B.058 NID #: 20076 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407324.6265677 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/17 Time: 15:00 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	1.40	0.75	0.65	0.60	0.80	1.45					0.94	Method I:	25.0	C	25.00
Wetted Width (m):	MS	0.50	0.50	0.60	0.50	0.30	55.00					9.57	Method II:			
Pool Depth (m):	MS	0.12	0.30									0.21				

Wb Depth: .1 .2 .3 Avg: 0.20 Method: GE Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	S	T	N	T	D	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: V

Texture: F  G  C  B  R  A

RIP: S

STG: MF

RB SHP: V

Texture: F  G  C  B  R  A

RIP: M

STG: MF

## WATER

EMS: Temp: 11 Method: T5 Req #: Cond.: 99 Method: S3  
 pH: 8.6 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: rafted debris Method: GE

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 30.0 D (cm): 10.0 Morph: SP DISTURBANCE INDICATORS  
 Pattern: IR Islands: N Coupling: PC Confinement: OC FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - steep gradient, narrow, low flow, not continuous
OverWinter Habitat	Poor - low flow, shallow pools
Spawning Habitat	Poor - steep gradient
Rearing Habitat	Poor - low flow, steep gradient

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 107 F: 222		U	from crossing
R: 107 F: 223		X	at crossing

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.058	2066	1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	107	F:	224	D from crossing
COMMENTS				
Section		Comments		
CHANNEL		S6. Poor habitat, low flow and not continuous, steep gradient. Overall Marginal.		



Stream/ILP: 2066 Site: 1 Image: 224 Comment: Downstream, From crossing. 7/17/2009.



Stream/ILP: 2066 Site: 1 Image: 222 Comment: Upstream, From crossing. 7/17/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2067 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.058 ILP #: 2067 NID Map #: 104B.058 NID #: 20077 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407381.6264971 Method: GP3 Site Lg: 200 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/18 Time: 10:05 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	3.00	2.50	3.50	3.50	2.70	2.80					3.00		24.0	8.0	C	16.00
Wetted Width (m):	T	3.00	2.10	1.50	2.70	2.40	2.10					2.30					
Pool Depth (m):	MS	0.35	0.40	0.00								0.25					

Wb Depth: .5 .4 .5 Avg: 0.47 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	S	D	T	T	S	T
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: V

Texture: F  G  C  B  R  A

RIP: C

STG: MF

RB SHP: V

Texture: F  G  C  B  R  A

RIP: C

STG: MF

## WATER

EMS: Temp: 9 Method: T3 Req #: Cond.: 113 Method: S3  
 pH: 8.8 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 105.0 D (cm): 15.0 Morph: SP DISTURBANCE INDICATORS  
 Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N  
 Coupling: CO  
 Confinement: CO  
 FSZ:  Bars: N  SIDE  DIAG  MID  SPAN  BR

## FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
104B.058	20100	F	2.0	MS	0	GE	R: 110 F: 287 L: #:		..	
Comments: 2 m falls - barrier - no pool										
104B.058	20078	F	1.5	MS	1	MS	R: 108 F: 227 L: #:		..	
Comments: 1.5m falls with 0.4 m feep pool. UTM: 15 m south of road crossing										

## HABITAT QUALITY

Name	Comments

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104B.058    ILP # 2067    Site 1

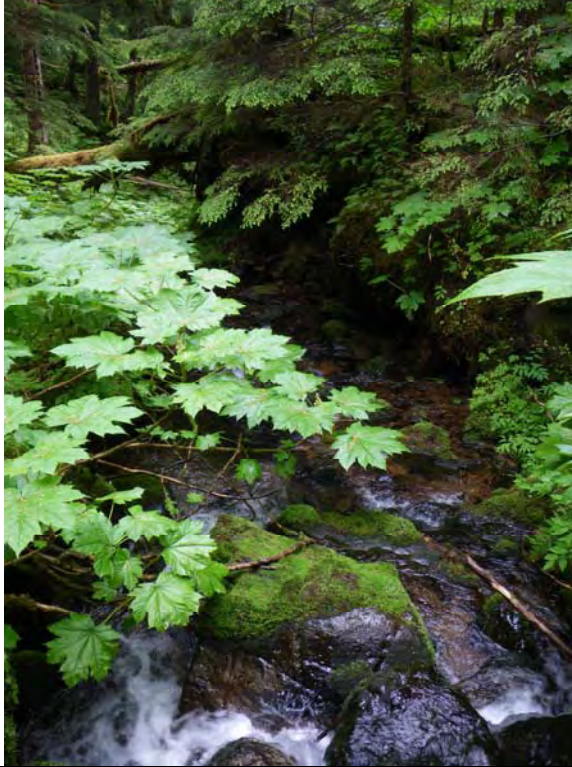
HABITAT QUALITY				
Name		Comments		
Other		Migration Habitat: Fair - step pool morphology with good pools		
OverWinter Habitat		Fair - some goof pools, probably doesn't freeze		
Rearing Habitat		Fair - good cover and lots of pools, but steep and fast		
Spawning Habitat		Poor - few suitable gravels at road crossing		
PHOTOS				
Photo	Foc Lg	Dir	Comments	
R: 108	F: 228	U	at road crossing	
R: 108	F: 229	U	at road crossing	
R: 108	F: 230	D	at raod crossing	
COMMENTS				
Section		Comments		
CHANNEL		S5. SP stream with lower gradient (8%) upstram of road crossing and higher gradient (24%) downstream. Flows down through canyon to Unuk River - followed from ridge but didn't see any permant barriers. Returned July 20 found 2 m fall barrier. Important		

# FDIS Fish Card

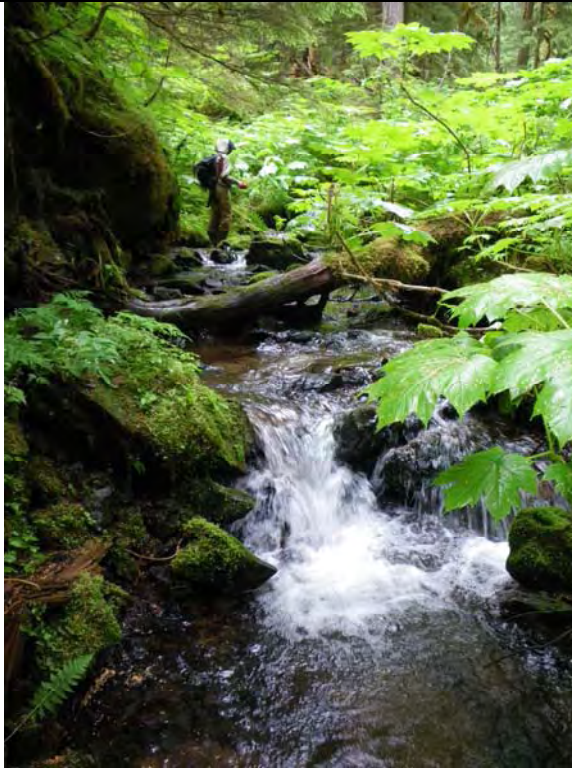
Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104B.068 ILP # 2067

WATERBODY														
Gazetted Name:										Local: Unuk				
Project Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-0														
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000														
Waterbody ID:				ILP Map #: 104B.068				ILP #: 2067		Reach #: 1 -				
Project ID: 19435				Lake/Stream: S				Lake From Date:						
Fish Permit #:			Date: 2009/07/18			To: 2009/07/18			Agency: C660		Crew: KM/NM		Resample: <input type="checkbox"/>	
SITE / METHOD														
Site#	NID Map	NID #	UTM:Zone/Start(East/North)/End(East/North)/Mthd				MTD/NO	Temp	Cond	Turbid	Comment			
1		20099	9			407517	6265084	GP3	VO	1	9	116	C	
1		20099	9			407517	6265084	GP3	EF	1	9	116	C	
A. GEAR SETTINGS														
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment							
1	EF	1	2009/07/18	09:30	2009/07/18	09:50								
1	VO	1	2009/07/18	09:30	2009/07/18	09:50								
C. ELECTROFISHER SPECIFICATIONS														
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model			
1	EF	1	O	389	80.0	2.0	500	30	4	SR	LR-24			
FISH SUMMARY														
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment					
1	EF	1	NFC			0								
1	VO	1	NFC	J		2	70	90	R	missed 2 salmonids while shocking downstream of barrier				
COMMENTS														
Section			Comments											
WATERBODY			Shocked up from Unuk River. Found 2 m falls ~ 40 m upstream of Unuk. Shocked downstream of falls, saw 2 salmonids, couldn't catch. Shocked upstream of falls - multiple 1 m drops, NFC above falls.											





Stream/ILP: 2067 Site: 1 Image: 230 Comment: Downstream, At road crossing. 7/18/2009.



Stream/ILP: 2067 Site: 1 Image: 228 Comment: Upstream, At road crossing. 7/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2068 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.058 ILP #: 2068 NID Map #: 104B.058 NID #: 20079 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407519.6264755 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/18 Time: 10:50 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %		Mtd	Avg	
Channel Width (m):	MS	0.55	0.80	0.66	0.80	0.95	0.76					0.75	Method I:	2.0	3.0	C	2.50
Wetted Width (m):	MS	0.64	0.58	0.28	0.76	0.39	0.65					0.55	Method II:				
Pool Depth (m):												0.00					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	S	N	T	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 2 21-40%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

## WATER

EMS: Temp: 11 Method: T5 Req #: Cond.: 88 Method: S3  
 pH: 8.8 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: shallow, discontinuous
OverWinter Habitat	None
Spawning Habitat	Poor - not enough flow
Rearing Habitat	Poor - very shallow, no pools

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 108 F: 231		D	very shallow water downstream from road crossing
R: 108 F: 232		U	irregular channel upstream of crossing





Stream/ILP: 2068 Site: 1 Image: 231 Comment: Downstream, Very shallow water downstream from road crossing. 7/18/2009.



Stream/ILP: 2068 Site: 1 Image: 232 Comment: Upstream, Irregular channel upstream of crossing. 7/18/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2069 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2069 NID Map #: 104B.058 NID #: 20080 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/18 Time: 11:00 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 108 F: 233		U	seep usptream of road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD





Stream/ILP: 2069 Site: 1 Image: 233 Comment: Upstream, Seep usptream of road crossing.  
7/18/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2070 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2070 NID Map #: 104B.058 NID #: 20081 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407566.6264644 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/18 Time: 11:00 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.30	1.60	1.10	1.35	0.70	1.55					1.27		Method I: 20.0	23.0	C	21.50
Wetted Width (m):	MS	0.55	1.22	0.65	0.86	0.50	1.05					0.80		Method II:			
Pool Depth (m):												0.00					

Wb Depth: .3 .3 .0 Avg: 0.20 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	S	T	T	N	D	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N  A  M  V

LWD: F DIST: E

LB SHP: V

Texture: F  G  C  B  R  A

RIP: M

STG: MF

RB SHP: V

Texture: F  G  C  B  R  A

RIP: M

STG: MF

## WATER

EMS: Req #: Temp: 11 Method: T5 Cond.: 101 Method: S3  
 pH: 8.5 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 35.0 D (cm): 8.00 Morph: SP DISTURBANCE INDICATORS  
 Pattern: IR Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: PC Confinement: OC FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor
OverWinter Habitat	Poor - low flow, no pools
Spawning Habitat	Poor - low flow
Rearing Habitat	Poor - low flow

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 108 F: 234		D	from crossing
R: 108 F: 235		U	from crossing

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.058      ILP # 2070      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	108	F:	236	X across crossing
COMMENTS				
Section		Comments		
SITE CARD		Incomplete: No pool depth due to no pools present		
CHANNEL		S6. Low flow, no pools, gradient barrier downstream. Overall Marginal.		



Stream/ILP: 2070 Site: 1 Image: 235 Comment: Upstream, From crossing. 7/18/2009.



Stream/ILP: 2070 Site: 1 Image: 236 Comment: Across, Across crossing. 7/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2071 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2071 NID Map #: 104B.058 NID #: 20082 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407589.6264577 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/18 Time: 11:35 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 108	F: 237	U	at skunk cabbage growing in seepage

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD





Stream/ILP: 2071 Site: 1 Image: 237 Comment: Upstream, At skunk cabbage growing in seepage. 7/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2072 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2072 NID Map #: 104B.058 NID #: 20083 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407689.6264501 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/18 Time: 11:50 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.90	1.65	1.04	1.11	1.20	2.00					1.48		Method I: 21.0	15.0	C	18.00
Wetted Width (m):	MS	0.20	0.45	0.46	0.81	0.78	0.60					0.55		Method II:			
Pool Depth (m):	MS	0.09	0.11									0.10					

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

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	T	T	T	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

3 41-70%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: V

Texture: F  G  C  B  R  A

RIP: C

STG: MF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: MF

## WATER

EMS: Temp: 11 Method: T5 Req #: Cond.: 67 Method: S3  
 pH: 8.6 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 22.0 D (cm): 20.0 Morph: RP DISTURBANCE INDICATORS          
 Pattern: ST C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: O            
 Coupling: CO Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - trickling flow
OverWinter Habitat	None
Spawning Habitat	Poor - not enough water, few suitable substrates
Rearing Habitat	Poor - no deep pools, low flow

## PHOTOS

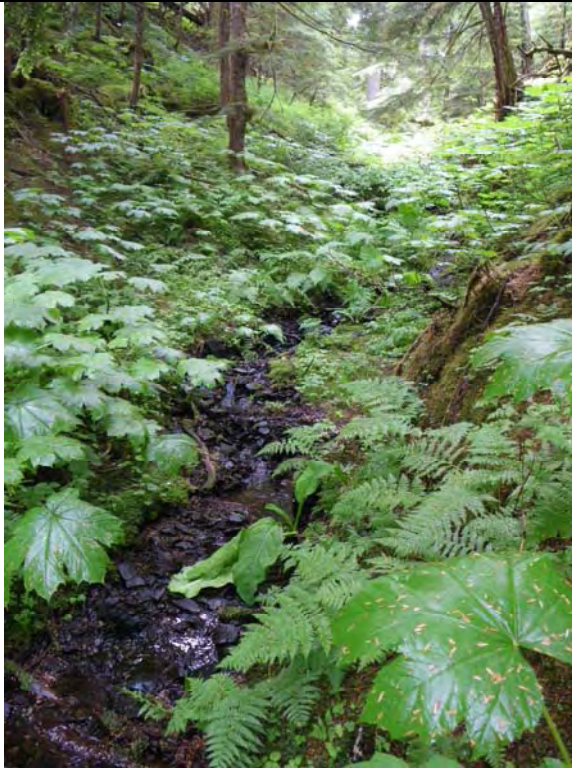
Photo	Foc Lg	Dir	Comments
R: 108 F: 238		U	gully upstream of road crossing
R: 108 F: 239		D	







Stream/ILP: 2072 Site: 1 Image: 239 Comment: Downstream, . 7/18/2009.



Stream/ILP: 2072 Site: 1 Image: 238 Comment: Upstream, Gully upstream of road crossing. 7/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2073 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2073 NID Map #: 104B.058 NID #: 20084 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407904.6264241 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/18 Time: 12:35 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 108 F: 240		U	at road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD





Stream/ILP: 2073 Site: 1 Image: 240 Comment: Upstream, At road crossing. 7/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2074 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2074 NID Map #: 104B.058 NID #: 20085 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407936.6264173 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/18 Time: 12:45 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habtiat

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD





# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.058	2075	1

COMMENTS	
Section	Comments
CHANNEL	S6. Very steep, stream scoured to bedrock at road crossing. No pools, poor habitat. No fish habitat. Overall Marginal.

---



Stream/ILP: 2075 Site: 1 Image: 241 Comment: Downstream, Below road crossing; gradient 41%. 7/18/2009.



Stream/ILP: 2075 Site: 1 Image: 242 Comment: Upstream, At road crossing, looking upstream. 7/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104B.058    ILP # 2076    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS    Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058    ILP #: 2076    NID Map #: 104B.058    NID #: 20087    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.407807.6262859    Method: GP3    Site Lg: 50    Method: GE    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/18    Time: 14:35    Agency: C660    Crew: KM/NM    Fish Crd?:     Incomplete:

## CHANNEL

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

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

COVER    Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	N	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 1    1-20%  
 INSTREAM VEG: N  A  M  V

LWD: N    DIST: NA  
 LB SHP: S    Texture: F  G  C  B  R  A   
 RIP: S    STG: PS

RB SHP: S    Texture: F  G  C  B  R  A   
 RIP: S    STG: PS

## WATER

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

## MORPHOLOGY

Bed Material:    Dominant: F    Subdom: NA    O1 B1 B2 B3 D1 D2 D3  
 D95: 0.00    D (cm): 0.00    Morph:    DISTURBANCE INDICATORS            
 Pattern:    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands:                    
 Coupling:    Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement:    FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: None
Spawning Habitat	None
OverWinter Habitat	None
Rearing Habitat	Poor - shallow, stagnant

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 108    F: 246		D	
R: 108    F: 247		U	





Stream/ILP: 2076 Site: 1 Image: 246 Comment: Downstream, . 7/18/2009.



Stream/ILP: 2076 Site: 1 Image: 247 Comment: Upstream, . 7/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2077 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.058 ILP #: 2077 NID Map #: 104B.058 NID #: 20087 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.408143.6262745 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/19 Time: 09:30 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	D	N	N	S	T	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 0 0%  
 INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: C RB SHP: S  
 STG: MF STG: MF

## WATER

EMS: Req #: Method: T3 Cond.: 72 Method: S3  
 Temp: 18 Method: P2 Turb.: T  M  L  C  Method:  
 pH: 8.8 Method:  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: NA O1 B1 B2 B3 D1 D2 D3  
 D95: 0.00 D (cm): 0.00 Morph: DISTURBANCE INDICATORS          
 Pattern: C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands:            
 Coupling: Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FSZ:

## FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
104B.058	20089	BD	1.2	GE	40	GE	R: 109 F: 257 L: #:		..	

Comments: Old BD at road crossing

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - old BD might block migration in all but wettest months
OverWinter Habitat	Good - deep with complex habitat, lots of cover
Rearing Habitat	Good - deep with complex habitat, lots of cover

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2077 Site 1

HABITAT QUALITY				
Name		Comments		
Spawning Habitat		None		
PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 109	F: 255		U	beaver pond looking upstream from road crossing
R: 109	F: 256		D	channel(s) looking downstream from BD
R: 109	F: 258		X	south bank of pond at road crossing
R: 109	F: 259		U	north bank of pond upstream of crossing
R: 109	F: 260		D	o/c habitat on north side pond under road ribbon
WILDLIFE				
Group		Observations		
COMMENTS				
Section		Comments		
SITE CARD		(morph continued) potential FSZ. More info needed on how this crossing is planned. Beaver pond with o/c habitat on North side under road ribbon. Possibly build ~10m d/s where channel is narrower or along Unuk floodplain (be aware of other potential FSZ)		
MORPHOLOGY		(channel continued) up on slope at bottom of cliff - avoid blasting stuff into pond and side easting. Do not build through pond - try to find another way around, either by bridging stream downstream or going along floodplain upstream. Be aware of other		
CHANNEL		FSZ. Pond ~20 m wide with off channel habitat blocked by old BD which might be passable at high flows. Downstream channel is about 3 m wide with multiple offshoots and o/c habitat. Confined on left bank by cliff. Road parallels south side of FSZ ~20m		





Stream/ILP: 2077 Site: 1 Image: 260 Comment: Downstream, Offchannel habitat on north side pond under road ribbon. 7/19/2009.



Stream/ILP: 2077 Site: 1 Image: 259 Comment: Upstream, North bank of pond upstream of crossing. 7/19/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2078 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.058 ILP #: 2078 NID Map #: 104B.058 NID #: 20090 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.408324.6262820 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/19 Time: 10:15 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	1.10	0.90	0.60	1.30	0.50	1.00					0.90	Method I:	35.0	C	35.00
Wetted Width (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00	Method II:			
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00				

Wb Depth:    Avg: 0.23 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	S	N	T	N	D	N
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 2 21-40%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

LWD: F DIST: E  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

## WATER

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

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 18.0 D (cm): 9.00 Morph: SP DISTURBANCE INDICATORS            
 Pattern: ST C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N                 
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: None
Spawning Habitat	None
OverWinter Habitat	None
Rearing Habitat	None - steep, no pools, dewters

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 109 F: 261		U	at 35% gradient
R: 109 F: 262		X	jagged substrate, dry channel at road crossing







Stream/ILP: 2078 Site: 1 Image: 261 Comment: Upstream, At 35% gradient. 7/19/2009.



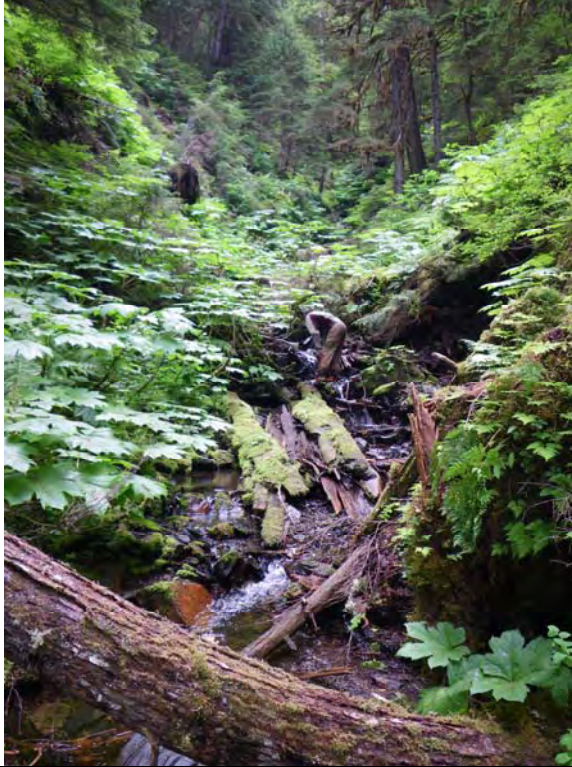
Stream/ILP: 2078 Site: 1 Image: 262 Comment: Across, Jagged substrate, dry channel at road crossing. 7/19/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2079 Site 1

HABITAT QUALITY				
Name		Comments		
Spawning Habitat		Poor - few suitable substrates		
PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 109	F: 263		U	35% gradient SP morphology
R: 109	F: 2634		D	10% gradient downstream of road crossing
COMMENTS				
Section		Comments		
MORPHOLOGY		(channel continued) Returned July 20, 2009, walked around lake downstream of road crossing - no visible channel at shoreline. Walked upstream - stream spreads out and seeps in ~ 50 m upstream at shoreline no connectivity. Overall Marginal.		
CHANNEL		S6. Steep stream upstream of road crossing, but lower gradient downstream. Some small pools may be ok for rearing downstream of road crossing but habitat poor upstream. May be accessible to fish up to road crossing but no above.		



Stream/ILP: 2079 Site: 1 Image: 2634 Comment: Downstream, 10% gradient downstream of road crossing. 7/19/2009.



Stream/ILP: 2079 Site: 1 Image: 263 Comment: Upstream, 35% gradient SP morphology. 7/19/2009.





# FDIS Site Card

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

Reach # 1.0    ILP Map # 104B.048    ILP # 2079    Site 2

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	109	F:	279	X flow at road crossing
COMMENTS				
Section		Comments		
CHANNEL		S6. Second crossing of ILP 2079. Gradient barrier downstream. Fair habitat at crossing, but no fish likely. Overall Marginal.		



Stream/ILP: 2079 Site: 2 Image: 277 Comment: Downstream, At road crossing. 7/19/2009.



Stream/ILP: 2079 Site: 2 Image: 279 Comment: Across, Flow at road crossing. 7/19/2009.



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.048	2080	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Almost dry channel, therefore unable to take water chemistry.
CHANNEL	S6. Marginal stream, 80% downstream at first road crossing. No fish habitat. Little to no water. Overall Marginal.



Stream/ILP: 2080 Site: 1 Image: 275 Comment: Downstream, Channel downstream of road crossing. 7/19/2009.



Stream/ILP: 2080 Site: 1 Image: 276 Comment: Upstream, Upstream of road crossing. 7/19/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.048 ILP # 2080 Site # 2

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Sulphurets Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.048 ILP #: 2080 NID Map #: 104B.048 NID #: 20092 Reach #: 1.0 Site #: 2  
 Field UTM (Z.E.N): 9.408537.6262928 Method: GP3 Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/19 Time: 11:10 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	2.20	1.80	1.50	1.90	1.20	1.50					1.68		Method I: 79.0	C	79.00
Wetted Width (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00		Method II:		
Pool Depth (m):												0.00				

Wb Depth:  .2  .4  2.0 Avg: 0.87 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	N	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 2 21-40%  
 INSTREAM VEG: N  A  M  V

LWD: N DIST: NA  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: C  
 STG: MF

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 109 F: 265		D	79% downstream of road crossing
R: 109 F: 266		U	80% upstream of road crossing

## COMMENTS

Section	Comments



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.048	2080	2

COMMENTS	
Section	Comments
CHANNEL	S6. Extremely steep dry channel (80%). No fish habitat. Overall Marginal.

---



Stream/ILP: 2080 Site: 2 Image: 265 Comment: Downstream, 79% downstream of road crossing.  
7/19/2009.



Stream/ILP: 2080 Site: 2 Image: 266 Comment: Upstream, 80% upstream of road crossing.  
7/19/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2081 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.058 ILP #: 2081 NID Map #: 104B.058 NID #: 20093 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.408650.6263160 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/19 Time: 11:30 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg
Channel Width (m):	MS	1.20	1.40	1.10	0.95	0.70	0.80					1.03		Method I: 20.0	C	20.00
Wetted Width (m):	MS	0.50	0.50	0.65	0.35	0.18	0.70					0.48		Method II:		
Pool Depth (m):	MS	0.18	0.34									0.26				

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	T	T	S	S	T	D	T
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V

LWD: F DIST: E  
 LB SHP: V RB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: S RB SHP: V  
 STG: MF STG: MF

## WATER

EMS: Temp: 10 Method: T3 Req #: Cond.: 54 Method: S3  
 pH: 8.9 Method: P2 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 18.0 D (cm): 8.0 Morph: SP DISTURBANCE INDICATORS  
 Pattern: IR Islands: N Coupling: PC Confinement: CO FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	No fish habitat. Steep gradient, narrow channel, gradient drops > 40% downstream of road.

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 109 F: 269		D	from crossing
R: 109 F: 270		U	from crossing
R: 109 F: 271		X	at crossing

## COMMENTS

Section | Comments

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.058	2081	1

-----	-----
CHANNEL	S6. No habitat, steep gradient, narrow channel, gradient drops > 40% downstream of road. Overall Marginal.



Stream/ILP: 2081 Site: 1 Image: 269 Comment: Downstream, From crossing. 7/19/2009.



Stream/ILP: 2081 Site: 1 Image: 271 Comment: Across, At crossing. 7/19/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2081 Site # 2

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2081 NID Map #: 104B.058 NID #: 20095 Reach #: 1.0 Site #: 2  
 Field UTM (Z.E.N): 9.408717.6263026 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/19 Time: 12:55 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadiant %	Mtd	Avg	
Channel Width (m):	MS	1.85	1.40	1.80	1.05	1.27	1.87					1.54	Method I:	32.0	18.0	C	25.00
Wetted Width (m):	MS	0.78	0.85	0.70	0.65	0.85	0.60					0.74	Method II:				
Pool Depth (m):	MS	0.22	0.20	0.12								0.18					

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

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	D	S	N	T	N	T	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 3 41-70%  
 INSTREAM VEG: N  A  M  V

LWD: A DIST: E  
 LB SHP: V RB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: C RB RIP: C  
 STG: MF STG: MF

## WATER

EMS: Req #: Method: T5 Cond.: 48 Method: S3  
 Temp: 10 Method: P2 Turb.: T  M  L  C  Method: GE  
 pH: 8.8 Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 21.0 D (cm): 7.00 Morph: SP DISTURBANCE INDICATORS  
 Pattern: ST Islands: N Coupling: CO Confinement: CO FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	No fish habitat.

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 109 F: 273		D	32% gradient
R: 109 F: 274		U	at road crossing

## COMMENTS

Section	Comments

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104B.058 ILP # 2081 Site 2

COMMENTS	
Section	Comments
CHANNEL	S6. Second crossing of ILP 2081 (higher). Very open, no understory, steep, downstream of road crossing, eroded banks, low flow. No fish habitat. Overall Marginal.





Stream/ILP: 2081 Site: 2 Image: 273 Comment: Downstream, 32% gradient. 7/19/2009.



Stream/ILP: 2081 Site: 2 Image: 274 Comment: Upstream, At road crossing. 7/19/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 2082 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 2082 NID Map #: 104B.058 NID #: 20094 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 50 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/19 Time: 12:10 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LWD: DIST:  
 LB SHP: RB SHP:  
 Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 109	F: 272	D	ponded water at road crossing

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD. No satellite reception therefore no UTM





Stream/ILP: 2082 Site: 1 Image: 272 Comment: Downstream, Ponded water at road crossing.  
7/19/2009.



# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.048      ILP # 2083      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	109	F:	284	X right bank at road crossing
COMMENTS				
Section		Comments		
CHANNEL		S6. Steep SP morphology, no pools almost dry. No fish habitat. Overall Marginal		





Stream/ILP: 2083 Site: 1 Image: 283 Comment: Upstream, Dry channel. 7/19/2009.



Stream/ILP: 2083 Site: 1 Image: 284 Comment: Across, Right bank at road crossing. 7/19/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.071 ILP # 2304 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): BELL-IRVING RIVER Project Code: 19435  
 Project Watershed Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Teigen Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.071 ILP #: 2304 NID Map #: 104A.071 NID #: 20040 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.441383.6285463 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 09:45 Agency: C660 Crew: KM/NM Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 103 F: 138		U	seepage

## COMMENTS

Section	Comments
CHANNEL	NCD. Undefined drainage through alder. No fish habitat.



Stream/ILP: 2304 Site: 1 Image: 138 Comment: Upstream, Seepage. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.049 ILP # 3000 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Mitchell Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.049 ILP #: 3000 NID Map #: 104B.049 NID #: 30001 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.416440.6262452 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 12:00 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg		
Channel Width (m):	MS	5.00	8.50	5.50	5.00	6.50	7.00					6.25		Method I:	4.0	3.0	C	3.75
Wetted Width (m):	MS	4.00	6.00	5.00	3.00	4.00	4.50					4.42		Method II:	3.0	5.0	C	
Pool Depth (m):												0.00						

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

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	T	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: F DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Temp: 3 Method: T5 Req #: Cond.: 114 Method: S3  
 pH: 8.4 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Scouted banks Method: GE

## MORPHOLOGY

Bed Material: Dominant: C Subdom: B O1 B1 B2 B3 D1 D2 D3  
 D95: 60.0 D (cm): 40.0 Morph: RP DISTURBANCE INDICATORS         
 Pattern: IM C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: O            
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Good
OverWinter Habitat	Poor - few deep pools
Rearing Habitat	Poor - few pools, little cover
Spawning Habitat	Fair - frequent gravels

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 2 F: 0036		U	upstream on faster section
R: 2 F: 0037		D	slower side channel







Stream/ILP: 3000 Site: 1 Image: 37 Comment: Downstream, Slower side channel. 7/11/2009.



Stream/ILP: 3000 Site: 1 Image: 36 Comment: Upstream, Upstream on faster section. 7/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.049 ILP # 3001 Site # 2

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Sulphurets Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.049 ILP #: 3001 NID Map #: 104B.049 NID #: 30003 Reach #: 1.0 Site #: 2  
 Field UTM (Z.E.N): 9.416540.6262458 Method: GP3 Site Lg: 80 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 12:45 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg		
Channel Width (m):	MS	20.00	16.00	16.00	9.00	10.00						14.20		Method I:	2.0	3.0	C	2.25
Wetted Width (m):	MS	13.00	14.00	5.00	6.00	8.00						9.20		Method II:	2.0	2.0	C	
Pool Depth (m):	MS	0.40	0.50	0.80								0.57						

Wb Depth: .4 .5 .8 Avg: 0.57 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	D	N	N	N	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: F DIST: E

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: INIT

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Req #: Method: T5 Cond.: 115 Method: S3  
 Temp: 4 Method: Turb.: T  M  L  C  Method: GE  
 pH: Method: Method: GE  
 Flood Signs: Method: Method: GE

## MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 30.0 D (cm): 20.0 Morph: RPG DISTURBANCE INDICATORS         
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: O            
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: UN  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Good
OverWinter Habitat	Poor - few deep pools
Rearing Habitat	Good - lots of pool, LWD cover
Spawning Habitat	Fair - some gravel, lots of sand

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 2 F: 0038		X	across at bar
R: 2 F: 0039		U	glide section









Stream/ILP: 3001 Site: 2 Image: 39 Comment: Upstream, Glide section. 7/11/2009.



Stream/ILP: 3001 Site: 2 Image: 38 Comment: Across, Across at bar. 7/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.049 ILP # 3002 Site # 3

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Sulphurets Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.049 ILP #: 3002 NID Map #: 104B.049 NID #: 30005 Reach #: 1.0 Site #: 3  
 Field UTM (Z.E.N): 9.415754.6262526 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 14:06 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %			Mtd	Avg
Channel Width (m):	MS	21.00	26.00	9.00	10.00	13.00	5.00					14.00	Method I:	1.0	2.0	C	2.25
Wetted Width (m):	MS	6.00	13.00	11.00	11.50	17.00	17.50					12.67	Method II:	4.0	2.0	C	
Pool Depth (m):	MS	0.20	0.10									0.15					

Wb Depth: .4 .2 .5 Avg: 0.37 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	T	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Temp: 8 Method: T5 Req #: Cond.: 94 Method: S3  
 pH: 8.6 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 50.0 D (cm): 40.0 Morph: RPG DISTURBANCE INDICATORS  
 Pattern: SI Islands: O C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: DC Confinement: OC FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Good - no barriers
OverWinter Habitat	Poor - few deep pools
Rearing Habitat	Good - several off channel low flow areas, good cover by OV
Spawning Habitat	Poor - few gravels, mostly sand and fines

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3 F: 0040		U	side channel
R: 3 F: 0041		U	start of site, enters Sulphurets here

# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.049      ILP # 3002      Site 3

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	3	F:	0042	D
COMMENTS				
Section		Comments		
CHANNEL		S5. Side channel just downstream from where Mitchell joins. Overall Important.		







Stream/ILP: 3002 Site: 3 Image: 42 Comment: Downstream, . 7/11/2009.



Stream/ILP: 3002 Site: 3 Image: 41 Comment: Upstream, Start of site, enters Sulphurets here. 7/11/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104B.059    ILP # 3003    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS    Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.059    ILP #: 3003    NID Map #: 104B.059    NID #: 30007    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.407243.6272984    Method: GP3    Site Lg: 120    Method: RF    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/11    Time: 15:35    Agency: C660    Crew: C660    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %			Mtd	Avg
Channel Width (m):	MS	6.00	17.00	7.00	6.00	12.00	4.50					8.75	Method I:	2.0	3.0	C	2.25
Wetted Width (m):	MS	5.00	13.00	6.00	5.00	5.00	4.00					6.33	Method II:	2.0	2.0	C	
Pool Depth (m):												0.00					

Wb Depth: .4    .2    .3    Avg: 0.30    Method: MS    Stage: L  M  H

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

COVER    Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 1    1-20%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: S    Texture: F  G  C  B  R  A   
 RIP: S    STG: NA

LWD: N    DIST: NA  
 LB SHP: V    Texture: F  G  C  B  R  A   
 RIP: S    STG: NA

## WATER

EMS:    Req #:    Method: T5    Cond.: 19    Method: S3  
 Temp: 4    Method:    Turb.: T  M  L  C     Method: GE  
 pH:    Method:    Method: GE  
 Flood Signs:    Method:

## MORPHOLOGY

Bed Material:    Dominant: C    Subdom: G    O1 B1 B2 B3 D1 D2 D3  
 D95: 20.0    D (cm): 15.00    Morph: RP   

Pattern: ME    DISTURBANCE INDICATORS    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5

Islands: N  
 Coupling: DC  
 Confinement: UN  
 FSZ:

Bars:    N     SIDE     DIAG     MID     SPAN     BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Good - good flow, no barriers
OverWinter Habitat	Poor - no deep pools
Rearing Habitat	Poor - no pools, little cover
Spawning Habitat	Good - lots of gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: C1    F: 0050		U	
R: C1    F: 0052		D	







Stream/ILP: 3003 Site: 1 Image: 52 Comment: Downstream, . 7/11/2009.



Stream/ILP: 3003 Site: 1 Image: 50 Comment: Upstream, . 7/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 3004 Site # 2

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.058 ILP #: 3004 NID Map #: 104B.058 NID #: 30009 Reach #: 1.0 Site #: 2  
 Field UTM (Z.E.N): 9.407385.6273306 Method: GP3 Site Lg: 130 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 16:00 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	13.00	13.00	10.00	8.00	8.00						10.40	Method I:	2.0	2.0	C	3.00
Wetted Width (m):	MS	11.00	12.00	6.00	5.00	7.00						8.20	Method II:	3.0	5.0	C	
Pool Depth (m):												0.00					

Wb Depth: .3 .5 .6 Avg: 0.47 Method: MS Stage: L  M  H  No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	T	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: NA

RB SHP: U

Texture: F  G  C  B  R  A

RIP: G

STG: NA

## WATER

EMS: Req #: Method: T5 Cond.: 12 Method: S3  
 Temp: 3 Method: Turb.: T  M  L  C  Method: GE  
 pH: Method: Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 40.0 D (cm): 20.0 Morph: RP DISTURBANCE INDICATORS         
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Good
OverWinter Habitat	Poor - no deep pools
Spawning Habitat	Good - lots of gravel
Rearing Habitat	Poor - little cover

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: C2 F: 0055		U	smaller substrate
R: C2 F: 0056		D	larger substrate









Stream/ILP: 3004 Site: 2 Image: 56 Comment: Downstream, Larger substrate. 7/11/2009.



Stream/ILP: 3004 Site: 2 Image: 55 Comment: Upstream, Smaller substrate. 7/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.058 ILP # 3005 Site # 3

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.058 ILP #: 3005 NID Map #: 104B.058 NID #: 30011 Reach #: 1.0 Site #: 3  
 Field UTM (Z.E.N): 9.407172.6272776 Method: GP3 Site Lg: 70 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 16:38 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg		
Channel Width (m):	MS	8.00	7.00	6.00	5.00	11.00	13.00					8.33		Method I:	5.0	5.0	C	4.67
Wetted Width (m):	MS	8.00	7.00	7.00	5.00	9.00	8.00					7.33		Method II:	4.0		C	
Pool Depth (m):	MS	0.80	0.50	0.40								0.57						

Wb Depth: .3 .6 .5 Avg: 0.47 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	T	N	N	T	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: G  
 STG: NA

LWD: N DIST: NA  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: G  
 STG: NA

## WATER

EMS: Req #: Method: T5 Cond.: 20 Method: S3  
 Temp: 3 Method: Turb.: T  M  L  C  Method: GE  
 pH: Method: Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: R Subdom: B O1 B1 B2 B3 D1 D2 D3  
 D95: 70.0 D (cm): 30.0 Morph: CP DISTURBANCE INDICATORS         
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: CO Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: EN FSZ:

## FEATURES

NID Map	NID	Type	Hgt	Method	Lg	Method	Photo	AirPhoto	UTM (Z/E/N)	Method
104B.058	1	F	1.5	MS	1	MS	R: 1 F: 0060 L: #:		..	

Comments: Upstream end of site

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - numerous
OverWinter Habitat	Poor - steep but has pools
Rearing Habitat	None

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000      Reach # 1.0      ILP Map # 104B.058      ILP # 3005      Site 3

HABITAT QUALITY				
Name		Comments		
Spawning Habitat		None		
PHOTOS				
Photo	Foc Lg	Dir	Comments	
R: C3 F: 0061		U	upstream end of site	
R: C3 F: 0062		D	downstream through site	
COMMENTS				
Section		Comments		
CHANNEL		S5. Cascade pool section. Site where road crossing is. Overall Marginal.		







Stream/ILP: 3005 Site: 3 Image: 62 Comment: Downstream, Downstream through site. 7/11/2009.



Stream/ILP: 3005 Site: 3 Image: 61 Comment: Upstream, Upstream end of site. 7/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3009 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.070 ILP #: 3009 NID Map #: NID #: 30019 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.433567.6277561 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 09:09 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.50	0.31	0.88	0.31	0.59	0.75					0.56	Method I:	19.0	20.0	C	19.50
Wetted Width (m):	MS	0.52	0.30	0.59	0.28	0.78	0.69					0.53	Method II:				
Pool Depth (m):	MS	0.14	0.06	0.12	0.12							0.11					

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

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	S	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: YF

## WATER

EMS: Temp: 11 Method: T3 Req #: Cond.: 169 Method: S3  
 pH: 8.3 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: G Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 5.00 D (cm): 4.00 Morph: SP DISTURBANCE INDICATORS            
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N                 
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: CO  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - fair
OverWinter Habitat	Poor - no deep pools
Rearing Habitat	Good - lots of pools and cover
Spawning Habitat	Fair - some gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3009 F: 0092		D	
R: 3009 F: 0093		U	









Stream/ILP: 3009 Site: 1 Image: 92 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3009 Site: 1 Image: 93 Comment: Upstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3010 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.070 ILP #: 3010 NID Map #: NID #: 30020 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.433484.6277577 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 09:25 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadiant %	Mtd	Avg	
Channel Width (m):	MS	0.42	0.20	0.61	0.58	0.61	0.47					0.48	Method I:	18.0	10.0	C	14.00
Wetted Width (m):	MS	0.27	0.12	0.53	0.31	0.57	0.39					0.36	Method II:				
Pool Depth (m):	MS	0.03	0.16	0.16	0.04	0.10	0.15					0.11					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	D	N	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 3 41-70%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S RB RIP: C  
 STG: SHR STG: YF

LWD: N DIST: NA  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: SHR

## WATER

EMS: Temp: 8 Method: T5 Req #: Cond.: 89 Method: S3  
 pH: 8.3 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 10.0 D (cm): 4.00 Morph: SP DISTURBANCE INDICATORS            
 Pattern: IM C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N              
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: CO  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor
OverWinter Habitat	None
Rearing Habitat	Fair - pools
Spawning Habitat	Poor - little water

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3010 F: 0094		D	
R: 3010 F: 0095		U	







Stream/ILP: 3010 Site: 1 Image: 94 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3010 Site: 1 Image: 95 Comment: Upstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3011 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3011 NID Map #: NID #: 30021 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.433293.6277642 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 09:47 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.33	0.47	0.62	0.47	0.27	0.56					0.45	Method I:	18.0	5.0	C	11.50
Wetted Width (m):	MS	0.29	0.45	0.60	0.24	0.20	0.50					0.38	Method II:				
Pool Depth (m):	MS	0.04	0.06	0.08	0.07							0.06					

Wb Depth: .1 .0 .0 Avg: 0.03 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	S	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: U

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: U

Texture: F  G  C  B  R  A

RIP: C

STG: YF

## WATER

EMS: Req #: Temp: 6 Method: T5 Cond.: 80 Method: S3  
 pH: 8.0 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 6.00 D (cm): 2.00 Morph: SP DISTURBANCE INDICATORS  
 Pattern: ME Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: DC Confinement: CO FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor
OverWinter Habitat	Poor
Rearing Habitat	Fair - pools
Spawning Habitat	Poor

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3011 F: 0096		D	
R: 3011 F: 0097		U	







Stream/ILP: 3011 Site: 1 Image: 96 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3011 Site: 1 Image: 97 Comment: Upstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3012 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3012 NID Map #: NID #: 30022 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.433134.6277701 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 10:02 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat. Pooling of water at bottom of slope.

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3012 F: 0098		U	showing step
R: 3012 F: 0099		U	

## COMMENTS

Section	Comments

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3012	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Site is a NCD

---





Stream/ILP: 3012 Site: 1 Image: 98 Comment: Upstream, Showing step. 7/13/2009.



Stream/ILP: 3012 Site: 1 Image: 99 Comment: Upstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3013 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.070 ILP #: 3013 NID Map #: NID #: 30023 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.433039.6277766 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 10:09 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat. Pooling at bas of willow plants. Pools disconnected.

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3013 F: 0100		U	
R: 3013 F: 0101		D	

## COMMENTS

Section	Comments







Stream/ILP: 3013 Site: 1 Image: 101 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3013 Site: 1 Image: 100 Comment: Upstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3014 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3014 NID Map #: NID #: 30024 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.433001.6277777 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 10:12 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Disconnected pools, end at road crossing

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3014 F: 0102		U	end of pools
R: 3014 F: 0103		D	

## COMMENTS

Section	Comments

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3014	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Site card is NCD

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Stream/ILP: 3014 Site: 1 Image: 103 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3014 Site: 1 Image: 102 Comment: Upstream, End of pools. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3015 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3015 NID Map #: NID #: 30025 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.432750.6277859 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 10:23 Agency: C660 Crew: C660 Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LB SHP: RB SHP:  
 Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Pooling water ends at road crossing

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3015 F: 0104		D	pools
R: 3015 F: 0105		U	no pools

## COMMENTS

Section	Comments



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3015	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Site is a NCD

---



Stream/ILP: 3015 Site: 1 Image: 104 Comment: Downstream, Pools. 7/13/2009.



Stream/ILP: 3015 Site: 1 Image: 105 Comment: Upstream, No pools. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3016 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3016 NID Map #: NID #: 30026 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.432460.6277958 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 10:34 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.62	0.91	0.71	1.77	1.85	1.95					1.30		Method I: 8.0	6.0	C	7.00
Wetted Width (m):	MS	0.61	0.79	0.62	1.40	1.20	0.80					0.90		Method II:			
Pool Depth (m):	MS	0.23	0.29	0.19	0.15	0.23						0.22					

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

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	D	S	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: YF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: YF

## WATER

EMS: Req #: Temp: 8 Method: T5 Cond.: 11 Method: S3  
 pH: 7.8 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor
OverWinter Habitat	None
Rearing Habitat	Poor - disconnected pools
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3016 F: 0106		U	
R: 3016 F: 0107		D	







Stream/ILP: 3016 Site: 1 Image: 107 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3016 Site: 1 Image: 106 Comment: Upstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3017 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3017 NID Map #: NID #: 30027 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.432271.6278218 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 10:51 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Pooling down slope

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3017 F: 0108		U	
R: 3017 F: 0109		D	

## COMMENTS

Section	Comments



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3017	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Site is a NCD

---



Stream/ILP: 3017 Site: 1 Image: 109 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3017 Site: 1 Image: 108 Comment: Upstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3018 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3018 NID Map #: NID #: 30028 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.432202.6278212 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 10:56 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Water - flowing down moss, no channel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3018 F: 0110		U	
R: 3018 F: 0111		D	

## COMMENTS

Section	Comments

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3018	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Site card is a NCD

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Stream/ILP: 3018 Site: 1 Image: 111 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3018 Site: 1 Image: 110 Comment: Upstream, . 7/13/2009.









Stream/ILP: 3020 Site: 1 Image: 115 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3020 Site: 1 Image: 116 Comment: Upstream, . 7/13/2009.



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3021	1

COMMENTS	
Section	Comments
CHANNEL	S6. Gradient barrier downstream on map. Very poor habitat. Low flow, likely to dry up/freeze except for a few small pools. Overall Marginal.





Stream/ILP: 3021 Site: 1 Image: 118 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3021 Site: 1 Image: 117 Comment: Downstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3022 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3022 NID Map #: NID #: 30031 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.431805.6278713 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 12:01 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Drains depression

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3022 F: 0119		U	
R: 3022 F: 0120		D	

## COMMENTS

Section	Comments







Stream/ILP: 3022 Site: 1 Image: 120 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3022 Site: 1 Image: 119 Comment: Upstream, . 7/13/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104B.070 ILP # 3023 Site 1

COMMENTS	
Section	Comments
CHANNEL	S6. Frequent steps 30 -90 cm. High slope, ~ 30% gradient. Overall Marginal.





Stream/ILP: 3023 Site: 1 Image: 121 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3023 Site: 1 Image: 122 Comment: Upstream, . 7/13/2009.





# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104B.070 ILP # 3024 Site 1

COMMENTS	
Section	Comments
CHANNEL	S6. High gradient lots of steps, likely isolated pools lat in year. Looks like flows into high gradient area on Map; gradient barrier downstream. Overall Marginal.



Stream/ILP: 3024 Site: 1 Image: 123 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3024 Site: 1 Image: 124 Comment: Upstream, Showing step. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3025 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3025 NID Map #: NID #: 30034 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.431704.6278782 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 12:50 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.81	1.91	0.83	1.60	1.50	1.45					1.52	Method I:	5.0	10.0	C	7.50
Wetted Width (m):	MS	1.55	1.38	0.60	1.20	1.30	1.20					1.21	Method II:				
Pool Depth (m):	MS	0.19	0.15	0.24	0.24	0.14	0.23					0.20					

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

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	S	N	N	T	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: M

STG: NA

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: NA

## WATER

EMS: Temp: 6 Method: T5 Req #: Cond.: 95 Method: S3  
 pH: 7.7 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 20.0 D (cm): 8.0 Morph: SP DISTURBANCE INDICATORS          
 Pattern: IR C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: CO  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Fair
OverWinter Habitat	Poor - no deep pools
Rearing Habitat	Good - lots of cover
Spawning Habitat	Fair - some gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 302 F: 0125		U	
R: 3025 F: 0126		D	







Stream/ILP: 3025 Site: 1 Image: 126 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3025 Site: 1 Image: 125 Comment: Upstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3026 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3026 NID Map #: NID #: 30035 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.431249.6278996 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/11 Time: 13:31 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.10	0.60	1.39	0.79	0.56	1.10					0.92		Method I: 34.0	22.0	C	22.00
Wetted Width (m):	MS	0.96	0.59	1.33	0.75	0.50	0.80					0.82		Method II: 10.0		C	
Pool Depth (m):	MS	0.02	0.10	0.11	0.12	0.10	0.21					0.11					

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

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	T	S	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 2 21-40%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: SHR

## WATER

EMS: Req #: Method: T5 Cond.: 68 Method: S3  
 Temp: 1 Method: P3 Turb.: T  M  L  C  Method: GE  
 pH: 7.3 Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material: Dominant: G Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 20.0 D (cm): 4.00 Morph: SP DISTURBANCE INDICATORS  
 Pattern: IM Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: DC Confinement: CO FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor, steep
Over/Winter Habitat	None - no deep pools
Rearing Habitat	Fair - some pools
Spawning Habitat	Poor - steep, little gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3026 F: 0127		D	
R: 3026 F: 0128		U	



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3026	1

COMMENTS	
Section	Comments
CHANNEL	S6. Steep stream, lots of steps, quite small, very steep below, levels off upstream drops off steeply below site (barrier).

---



Stream/ILP: 3026 Site: 1 Image: 127 Comment: Downstream, . 7/11/2009.



Stream/ILP: 3026 Site: 1 Image: 128 Comment: Upstream, . 7/11/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3027 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3027 NID Map #: NID #: 30036 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.431199.6279051 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 13:59 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Flows out from underground

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3027 F: 0129		D	
R: 3027 F: 0130		U	flows from ground

## COMMENTS

Section	Comments

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3027	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Site is a NCD

---





Stream/ILP: 3027 Site: 1 Image: 129 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3027 Site: 1 Image: 130 Comment: Upstream, Flows from ground. 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104B.070    ILP # 3028    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS    Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Uunk  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070    ILP #: 3028    NID Map #:    NID #: 30037    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.431608.6279340    Method: GP3    Site Lg: 100    Method: RF    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/13    Time: 14:39    Agency: C660    Crew: SM/JW    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.10	0.65	2.38	1.60	0.71	1.26					1.28	Method I:	35.0	44.0	C	39.50
Wetted Width (m):	MS	0.98	0.57	2.12	0.90	0.56	0.47					0.93	Method II:				
Pool Depth (m):	MS	0.14	0.13	0.20	0.11	0.08						0.13					

Wb Depth: .1    .1    .0    Avg: 0.07    Method: MS    Stage: L  M  H     No Vis.Ch.:     Intermittent:   
 Dw:     Tribs.:

COVER    Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	D	N	N	T	N	N
Loc: P/S/O:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1    1-20%

INSTREAM VEG: N  A  M  V

LWD: N    DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: YF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: YF

## WATER

EMS:    Req #:    Method: T5    Cond.: 53    Method: S3  
 Temp: 4    Method: P3    Turb.: T  M  L  C     Method: GE  
 pH: 8.2    Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material:    Dominant: F    Subdom: G    O1 B1 B2 B3 D1 D2 D3  
 D95: 20.0    D (cm): 10.00    Morph: CP    DISTURBANCE INDICATORS  
 Pattern: IM    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N  
 Coupling: DC  
 Confinement: CO  
 FSZ:     Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor - many cascades
OverWinter Habitat	None
Rearing Habitat	Poor- cascades, but some pools
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3028    F: 0131		U	
R: 3028    F: 0132		D	



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3028	1

COMMENTS	
Section	Comments
CHANNEL	S6. Steep stream, frequent cascades ~ 6 m long. Overall Marginal.

---



Stream/ILP: 3028 Site: 1 Image: 132 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3028 Site: 1 Image: 131 Comment: Upstream, . 7/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3029 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3029 NID Map #: NID #: 30038 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.431663.6279344 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/13 Time: 14:57 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3029 F: 0133		D	
R: 3029 F: 0134		U	

## COMMENTS

Section	Comments







Stream/ILP: 3029 Site: 1 Image: 133 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3029 Site: 1 Image: 134 Comment: Upstream, . 7/13/2009.





# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3030	1

COMMENTS	
Section	Comments
CHANNEL	S3. Very nice stream, lots of structure, excellent flow, low gradient. Confirmed fish bearing in 2008 sampling. Eroding banks at road crossing due to LWD in stream. Overall Important.

---



Stream/ILP: 3030 Site: 1 Image: 135 Comment: Downstream, . 7/13/2009.



Stream/ILP: 3030 Site: 1 Image: 136 Comment: Upstream, Showing LWD. 7/13/2009.



# FDIS Site Card

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

Reach # 1.0      ILP Map # 104B.070      ILP # 3031      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 3031	F: 0149		U	showing 10 m long channel section
COMMENTS				
Section		Comments		
SITE CARD		Labelled 3030 on flag at site		
CHANNEL		Not a stream at road crossing. Channel from mainstem ~ 10 m long, 3 channels all come from base of hill 10-20 m downstream of road crossing. Looks like snow melt drainage from above that flows underground. Marked S6 at channel. Only fished 100+ secs		







Stream/ILP: 3031 Site: 1 Image: 148 Comment: Upstream, Showing where water comes out of hillside. 7/14/2009.



Stream/ILP: 3031 Site: 1 Image: 149 Comment: Upstream, Showing 10 m long channel section. 7/14/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104B.070    ILP # 3032    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS    Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070    ILP #: 3032    NID Map #:    NID #: 30043    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.434679.6280990    Method: GP3    Site Lg: 100    Method: RF    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/14    Time: 14:04    Agency: C660    Crew: SM/JW    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	T	2.50	2.70	1.90	2.30	3.60	2.30					2.55		Method I: 40.0	32.0	C	32.33
Wetted Width (m):	MS	1.20	1.60	1.70	1.90	2.10	1.60					1.68		Method II: 25.0		C	
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00					

Wb Depth: .2    .3    .2    Avg: 0.23    Method: MS    Stage: L  M  H     No Vis.Ch.:     Intermittent:   
 Dw:     Tribs.:

COVER    Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	T	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1    1-20%

INSTREAM VEG: N  A  M  V

LWD: N    DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS:    Req #:    Method: S3  
 Temp:    Method: P3    Cond.: 148    Method: GE  
 pH: 8.2    Method:    Turb.: T  M  L  C   
 Flood Signs:    Method:

## MORPHOLOGY

Bed Material:    Dominant: C    Subdom: G    O1 B1 B2 B3 D1 D2 D3  
 D95: 50.0    D (cm): 30.00    Morph: CPC    DISTURBANCE INDICATORS         
 Pattern: IM    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N                
 Coupling: PC  
 Confinement: UN    Bars: N  SIDE  DIAG  MID  SPAN  BR   
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Poor
OverWinter Habitat	None - no deep pools
Rearing Habitat	None - no pools or cover
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3032    F: 0150		U	
R: 3032    F: 0151		D	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3032	1

COMMENTS	
Section	Comments
CHANNEL	S6. Steep gradient below site, barrier to upstream movement. Stream is primarily run off from snowmelt above in steep avalance chute. Labelled 3031 on flag in field. Overall Marginal.



Stream/ILP: 3032 Site: 1 Image: 151 Comment: Downstream, . 7/14/2009.



Stream/ILP: 3032 Site: 1 Image: 150 Comment: Upstream, . 7/14/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3033 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3033 NID Map #: NID #: 30044 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.436425.6281456 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 11:21 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat. Water alongside road crossing comes from underground

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3033 F: 0156		D	
R: 3033 F: 0157		U	

## COMMENTS

Section	Comments







Stream/ILP: 3033 Site: 1 Image: 156 Comment: Downstream, . 7/15/2009.



Stream/ILP: 3033 Site: 1 Image: 157 Comment: Upstream, . 7/15/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104B.070    ILP # 3034    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS    Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070    ILP #: 3034    NID Map #:    NID #: 30045    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.436442.6281426    Method: GP3    Site Lg: 100    Method: GE    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/15    Time: 11:32    Agency: C660    Crew: SM/JW    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.61	1.30	1.20	0.80	1.10	1.40					1.24		Method I: 1.0	2.0	C	1.50
Wetted Width (m):	MS	0.90	0.90	0.80	0.70	0.90	0.85					0.84		Method II:			
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00					0.00					

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

COVER    Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	S	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 5 >90%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: S    Texture: F  G  C  B  R  A   
 RIP: S    STG: SHR

## WATER

EMS:    Req #:    Method: T5    Cond.: 230    Method: S3  
 Temp: 7    Method: P3    Turb.: T  M  L  C     Method: GE  
 pH: 8.2    Method:  
 Flood Signs:

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: None
OverWinter Habitat	None
Rearing Habitat	Poor - shallow, no pools, lots of cover
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3034    F: 0158		U	
R: 3034    F: 0159		D	





Stream/ILP: 3034 Site: 1 Image: 159 Comment: Downstream, . 7/15/2009.



Stream/ILP: 3034 Site: 1 Image: 158 Comment: Upstream, . 7/15/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3035 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.070 ILP #: 3035 NID Map #: NID #: 30046 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.436676.6281512 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 12:21 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat. Water seeping out of ground at bottom of slope. No continuous channel or flow.

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3035 F: 0160		U	
R: 3035 F: 0161		D	

## COMMENTS

Section	Comments







Stream/ILP: 3035 Site: 1 Image: 161 Comment: Downstream, . 7/15/2009.



Stream/ILP: 3035 Site: 1 Image: 160 Comment: Upstream, . 7/15/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3036 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3036 NID Map #: NID #: 30047 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.437827.6281778 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 15:09 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat. Non continous ground water. Frequently goes underground or into stagnant pools.

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3036 F: 0136		U	
R: 3036 F: 0162		D	

## COMMENTS

Section	Comments





Stream/ILP: 3036 Site: 1 Image: 162 Comment: Downstream, . 7/15/2009.



Stream/ILP: 3036 Site: 1 Image: 163 Comment: Upstream, . 7/15/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.070 ILP # 3037 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.070 ILP #: 3037 NID Map #: NID #: 30047 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.437997.6281895 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/15 Time: 15:29 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	1.18	1.81	1.35	1.72	1.07	1.13					1.38		Method I: 1.0	2.0	C	1.50
Wetted Width (m):	MS	0.66	0.55	0.81	0.76	1.15	0.81					0.79		Method II:			
Pool Depth (m):	MS	0.15	0.03	0.12	0.04							0.09					

Wb Depth: .1 .1 .0 Avg: 0.07 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	S	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: C

STG: MF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: G

STG: SHR

## WATER

EMS: Temp: 4 Method: T5 Req #: Cond.: 207 Method: S3  
 pH: 7.5 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 30.0 D (cm): 4.00 Morph: NS DISTURBANCE INDICATORS          
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N            
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: OC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: None
OverWinter Habitat	None - no deep pools
Rearing Habitat	Good - cover and some pools, off channel
Spawning Habitat	None - no gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3037 F: 0164		D	
R: 3037 F: 0165		U	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.070	3037	1

COMMENTS	
Section	Comments
CHANNEL	S4. Off channel habitat from main stream. Look fairly established, would provide rearing habitat if it maintains flow levels, whole channel ~ 100 m. Follows along road route for whole length of channel. Overall Marginal but good rearing habitat.





Stream/ILP: 3037 Site: 1 Image: 164 Comment: Downstream, . 7/15/2009.



Stream/ILP: 3037 Site: 1 Image: 165 Comment: Upstream, . 7/15/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 3038 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 3038 NID Map #: NID #: 30048 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.438661.6282087 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/16 Time: 10:00 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	No fish habitat. Old dry channel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3038 F: 0168		D	
R: 3038 F: 0169		U	

## COMMENTS

Section	Comments





Stream/ILP: 3038 Site: 1 Image: 168 Comment: Downstream, . 7/16/2009.



Stream/ILP: 3038 Site: 1 Image: 169 Comment: Upstream, . 7/16/2009.









Stream/ILP: 3039 Site: 1 Image: 171 Comment: Downstream, . 7/16/2009.



Stream/ILP: 3039 Site: 1 Image: 170 Comment: Upstream, . 7/16/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 3040 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 3040 NID Map #: NID #: 30050 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.438900.6282111 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/16 Time: 10:54 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Spawning Habitat	Dry run-off channel. No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3040 F: 0172		D	
R: 3040 F: 0173		U	

## COMMENTS

Section	Comments





Stream/ILP: 3040 Site: 1 Image: 172 Comment: Downstream, . 7/16/2009.



Stream/ILP: 3040 Site: 1 Image: 173 Comment: Upstream, . 7/16/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 3041 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 3041 NID Map #: NID #: 30051 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.438942.6282146 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/16 Time: 11:07 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Dry old channel, hillslope run off.

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3041 F: 0174		D	
R: 3041 F: 0175		U	

## COMMENTS

Section	Comments







Stream/ILP: 3041 Site: 1 Image: 174 Comment: Downstream, . 7/16/2009.



Stream/ILP: 3041 Site: 1 Image: 175 Comment: Upstream, . 7/16/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 3042 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 3042 NID Map #: NID #: 30052 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.439045.6282143 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/16 Time: 11:24 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LB SHP: RB SHP:  
 Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Dry run off channel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3042 F: 0176		U	
R: 3042 F: 0177		D	

## COMMENTS

Section	Comments







Stream/ILP: 3042 Site: 1 Image: 177 Comment: Downstream, . 7/16/2009.



Stream/ILP: 3042 Site: 1 Image: 176 Comment: Upstream, . 7/16/2009.





# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	3043	1

COMMENTS	
Section	Comments
CHANNEL	S6. Very steep stream with large boulders and numerous drops without pools. Overall Marginal.



Stream/ILP: 3043 Site: 1 Image: 179 Comment: Downstream, . 7/16/2009.



Stream/ILP: 3043 Site: 1 Image: 178 Comment: Upstream, . 7/16/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 3044 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 3044 NID Map #: NID #: 30054 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.439506.6282155 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/16 Time: 12:55 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Dry run off channel. No fish habitat.

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3044 F: 0180		D	
R: 3044 F: 0181		U	

## COMMENTS

Section	Comments

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	3044	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Site is a NCD

---





Stream/ILP: 3044 Site: 1 Image: 180 Comment: Downstream, . 7/16/2009.



Stream/ILP: 3044 Site: 1 Image: 181 Comment: Upstream, . 7/16/2009.





# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	3045	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Site is a NCD

---



Stream/ILP: 3045 Site: 1 Image: 182 Comment: Downstream, . 7/16/2009.



Stream/ILP: 3045 Site: 1 Image: 183 Comment: Upstream, . 7/16/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 3046 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 3046 NID Map #: NID #: 30056 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.440440.6282158 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/16 Time: 14:21 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Pooling run off water - no flow, discontinuous. No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3046 F: 0184		X	
R: 3046 F: 0185		U	

## COMMENTS

Section	Comments







Stream/ILP: 3046 Site: 1 Image: 185 Comment: Upstream, . 7/16/2009.



Stream/ILP: 3046 Site: 1 Image: 184 Comment: Across, . 7/16/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 3047 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 3047 NID Map #: NID #: 30057 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.440580.6282119 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/16 Time: 14:32 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Damp area, no channel, no flow. No fish habitat

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3047 F: 0186		D	
R: 3047 F: 0187		U	showing foliage

## COMMENTS

Section	Comments

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	3047	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Site is a NCD

---





Stream/ILP: 3047 Site: 1 Image: 186 Comment: Downstream, . 7/16/2009.



Stream/ILP: 3047 Site: 1 Image: 187 Comment: Upstream, Showing foliage. 7/16/2009.





# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	3048	1

COMMENTS	
Section	Comments
CHANNEL	S3. Nice stream, low gradient, good cover. Flow length of stream, no visual barriers. Canyon-like section still had snow, barrier underneath. Overall Important.

---





Stream/ILP: 3048 Site: 1 Image: 190 Comment: Downstream, . 7/17/2009.



Stream/ILP: 3048 Site: 1 Image: 191 Comment: Upstream, . 7/17/2009.



# FDIS Site Card

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

Reach # 1.0      ILP Map # 104A.061      ILP # 3051      Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R: 3051	F: 0214		U	Side Channel (fished)
COMMENTS				
Section		Comments		
CHANNEL		S2. Nice habitat, good complexity, few pools at mide flow but will be pooling at lower flows. Nice off channel access to get around fast flowing section of main channel.		







Stream/ILP: 3051 Site: 1 Image: 212 Comment: Downstream, Main channel (not fished). 7/18/2009.



Stream/ILP: 3051 Site: 1 Image: 213 Comment: Downstream, Side Channel (fished). 7/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104A.061    ILP # 3052    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS    Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061    ILP #: 3052    NID Map #:    NID #: 30067    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.437125.6281092    Method: GP3    Site Lg: 150    Method: RF    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/07/18    Time: 12:44    Agency: C660    Crew: SM/JW    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg		
Channel Width (m):	RF	13.00	12.50	10.70	7.50	9.50	13.00	14.50				11.53		Method I:	4.0	5.0	C	4.33
Wetted Width (m):	RF	10.00	7.00	6.50	6.00	7.00	11.00	12.00				8.50		Method II:	4.0		C	
Pool Depth (m):	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00						

Wb Depth: .5    .4    .3    Avg: 0.40    Method: MS    Stage: L  M  H     No Vis.Ch.:     Intermittent:   
 Dw:     Tribs.:

COVER    Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	T	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1    1-20%

INSTREAM VEG: N  A  M  V

LWD: F    DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: INIT

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS:    Req #:    Method: T5    Cond.: 195    Method: S3  
 Temp: 4    Method: P3    Turb.: T  M  L  C     Method: GE  
 pH: 8.6    Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material:    Dominant: C    Subdom: F    O1 B1 B2 B3 D1 D2 D3  
 D95: 70.0    D (cm): 25.00    Morph: CPC    DISTURBANCE INDICATORS         
 Pattern: ME    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: O                
 Coupling: PC  
 Confinement: OC  
 FSZ:     Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
OverWinter Habitat	Migration: Good
Rearing Habitat	Fair - no pools but cover from SWD and LWD
Spawning Habitat	Good - lots of gravel with side areas of lower flow

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3052    F: 0215		U	
R: 3052    F: 0216		D	









Stream/ILP: 3052 Site: 1 Image: 216 Comment: Downstream, . 7/18/2009.



Stream/ILP: 3052 Site: 1 Image: 215 Comment: Upstream, . 7/18/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 3053 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Unuk  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104A.061 ILP #: 3053 NID Map #: NID #: 30069 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.438222.6282191 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/07/18 Time: 14:28 Agency: C660 Crew: SM/JW Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	RF	10.50	13.00	18.00	11.00	9.50	13.00					12.50		Method I: 3.5	4.0	C	3.75
Wetted Width (m):	RF	9.00	12.00	16.00	9.00	8.00	10.00					10.67		Method II:			
Pool Depth (m):	MS	0.20	0.40	0.40								0.33					

Wb Depth: .3 .5 .6 Avg: 0.47 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	T	T	N	N	D	N
Loc: P/S/O:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

1 1-20%  
 INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Temp: 4 Method: T5 Req #: Cond.: 172 Method: S3  
 pH: 8.4 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: B Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 70.0 D (cm): 25.0 Morph: RP DISTURBANCE INDICATORS         
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N            
 Coupling: DC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: CO  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat: Good - low gradient section with few pools
OverWinter Habitat	Poor - no deep pools
Rearing Habitat	Good - slight areaa with pools and SWD/LWD cover
Spawning Habitat	Poor - littte suitable gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 3053 F: 0220		U	from bottom of site
R: 3053 F: 0221		D	from top of site

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104A.061	3053	1

COMMENTS	
Section	Comments
CHANNEL	S2. Good habitat with cover/pools from SWD/LWD. OV on RB provides more cover. Gradient increases below site. McElhanney bridge crossing at top of site for road route. Overall Important.







Stream/ILP: 3053 Site: 1 Image: 221 Comment: Downstream, From top of site. 7/18/2009.



Stream/ILP: 3053 Site: 1 Image: 220 Comment: Upstream, From bottom of site. 7/18/2009.





# FDIS Site Card

Watershed Code: 960-250000-74700-47400-5040-3250-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5500	1

COMMENTS	
Section	Comments
CHANNEL	S5. Down stream barriers, nice sub alpine stream, wooden bridge over it. Overall Important.

---



Stream/ILP: 5500 Site: 1 Image: 2 Comment: Downstream, . 9/9/2009.



Stream/ILP: 5500 Site: 1 Image: 1 Comment: Upstream, . 9/9/2009.



# FDIS Site Card

Watershed Code: 960-250000-74700-47400-5040-3250-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5501	1

COMMENTS	
Section	Comments
CHANNEL	S6. Small sub-alpine stream culvert at road. Becomes very steep below site - gradient barrier. Culvert hanging 15 cm. Overall Important.

---





Stream/ILP: 5501 Site: 1 Image: 4 Comment: Downstream, . 9/9/2009.



Stream/ILP: 5501 Site: 1 Image: 3 Comment: Upstream, Pond in 36. 9/9/2009.



# FDIS Site Card

Watershed Code: 960-250000-74700-47400-5040-3250-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5502	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: No pool depths due to no pools present
CHANNEL	S6. Runoff from wetted depression, little flow, steep downstream. Not fish habitat. Overall Marginal (steep runoff stream).





Stream/ILP: 5502 Site: 1 Image: 10 Comment: Downstream, . 9/9/2009.



Stream/ILP: 5502 Site: 1 Image: 9 Comment: Upstream, . 9/9/2009.







Stream/ILP: 5503 Site: 1 Image: 12 Comment: Downstream, . 9/9/2009.



Stream/ILP: 5503 Site: 1 Image: 11 Comment: Upstream, . 9/9/2009.



# FDIS Site Card

Watershed Code: 960-250000-74700-47400-5040-3250-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5504	1

COMMENTS	
Section	Comments
CHANNEL	S6. Gradient barrier downstream to Mackay Creek. Small shallow stream draining alpine pond. Very little veg, no riparian vegetation. Overall Marginal - very open shallow stream





Stream/ILP: 5504 Site: 1 Image: 14 Comment: Downstream, . 9/9/2009.



Stream/ILP: 5504 Site: 1 Image: 13 Comment: Upstream, . 9/9/2009.





# FDIS Site Card

Watershed Code: 960-250000-74700-47400-5040-3250-000-000-000-000-000-000

Reach # 1.0    ILP Map # 104B.068    ILP # 5505    Site 1

PHOTOS				
Photo		Foc Lg	Dir	Comments
R:	1	F:	0017	D
COMMENTS				
Section		Comments		
SITE CARD		Incomplete: No pool depths due to no pools present		
COVER		No riparian cover		
CHANNEL		S6. Alpine stream draining snowbank fed pond, very little habitat. Overall Marginal		



Stream/ILP: 5505 Site: 1 Image: 16 Comment: Upstream, . 9/9/2009.



Stream/ILP: 5505 Site: 1 Image: 15 Comment: Upstream, Snowbank pond. 9/9/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5506 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Tom Mackay Lake  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5506 NID Map #: 104B.068 NID #: 55006 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407063.6275823 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/09 Time: 14:48 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0018		U	
R: 1 F: 0019		D	

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD
CHANNEL	Water draining out of rocks on hillslope. No fish habitat. NCD





Stream/ILP: 5506 Site: 1 Image: 19 Comment: Downstream, . 9/9/2009.



Stream/ILP: 5506 Site: 1 Image: 18 Comment: Upstream, . 9/9/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104B.068    ILP # 5507    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS    Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Tom Mackay Lake  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068    ILP #: 5507    NID Map #: 104B.068    NID #: 55007    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.407020.6275742    Method: GP3    Site Lg: 100    Method: GE    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/09/09    Time: 14:55    Agency: C660    Crew: SMTH    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.69	0.84	0.67	0.60	0.75	0.65					0.70		Method I: 3.0	3.0	C	3.00
Wetted Width (m):	MS	0.62	0.65	0.51	0.47	0.63	0.52					0.57		Method II:			
Pool Depth (m):												0.00					

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

COVER    Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	S	D
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

0    0%

INSTREAM VEG: N  A  M  V

LWD: N    DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: INIT

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: INIT

## WATER

EMS:    Req #:    Method: T5    Cond.: 24    Method: S3  
 Temp: 9    Method: P3    Turb.: T  M  L  C     Method: GE  
 pH: 8.1    Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material:    Dominant: G    Subdom: C    O1 B1 B2 B3 D1 D2 D3  
 D95: 20.0    D (cm): 5.00    Morph: RP    DISTURBANCE INDICATORS  
 Pattern: ME    C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N  
 Coupling: CO  
 Confinement: FC  
 FSZ:     Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor
OverWinter Habitat	None - no deep pools
Rearing Habitat	None - little cover, no pools
Spawning Habitat	Poor

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1    F: 0020		U	
R: 1    F: 0021		D	



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5507	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: No pool depths due to no pools present.
CHANNEL	S6. Small stream draining snow bank. Steep above and below site - gradient barriers. Fairly flat at crossing location. Overall Marginal.



Stream/ILP: 5507 Site: 1 Image: 21 Comment: Downstream, . 9/9/2009.



Stream/ILP: 5507 Site: 1 Image: 20 Comment: Upstream, . 9/9/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5508 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Tom Mackay Lake  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5508 NID Map #: 104B.068 NID #: 55008 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.406904.6275372 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/09 Time: 15:15 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0022		D	Pooling
R: 1 F: 0023		U	Dry

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD
CHANNEL	Water draining out of hillside. Non-continuous. No Fish habitat. NCD.





Stream/ILP: 5508 Site: 1 Image: 22 Comment: Downstream, Pooling. 9/9/2009.



Stream/ILP: 5508 Site: 1 Image: 23 Comment: Upstream, Dry. 9/9/2009.





# FDIS Site Card

Watershed Code: 960-250000-74700-47400-5040-3250-000-000-000-000-000-000

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5509	1

COMMENTS	
Section	Comments
CHANNEL	S6. Steep entrenched drainage stream. Poor habitat, gradient barrier downstream. Overall Very Marginal



Stream/ILP: 5509 Site: 1 Image: 25 Comment: Downstream, . 9/9/2009.



Stream/ILP: 5509 Site: 1 Image: 24 Comment: Upstream, . 9/9/2009.









Stream/ILP: 5510 Site: 1 Image: 27 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5510 Site: 1 Image: 26 Comment: Upstream, . 9/10/2009.









Stream/ILP: 5511 Site: 1 Image: 29 Comment: Downstream, Showing drop. 9/10/2009.



Stream/ILP: 5511 Site: 1 Image: 28 Comment: Upstream, . 9/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5512 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5512 NID Map #: 104B.068 NID #: 50012 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407037.6274653 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 09:03 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LWD: DIST:  
 LB SHP: RB SHP:  
 Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0030		U	showing start of water
R: 1 F: 0031		D	

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD
CHANNEL	Water draining out of channel. No fish habitat. NCD





Stream/ILP: 5512 Site: 1 Image: 31 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5512 Site: 1 Image: 30 Comment: Upstream, Showing start of water. 9/10/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5513 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5513 NID Map #: 104B.068 NID #: 55013 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407051.6274615 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 09:08 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE  
 INSTREAM VEG: N  A  M  V   
 LB SHP: Texture: F  G  C  B  R  A   
 RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0032		U	
R: 1 F: 0033		D	

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD
CHANNEL	Drainage water flowing out of hill. Dry above road crossing. NCD



Stream/ILP: 5513 Site: 1 Image: 33 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5513 Site: 1 Image: 32 Comment: Upstream, . 9/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5514 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.068 ILP #: 5514 NID Map #: 104B.068 NID #: 55014 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407028.6273903 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 09:35 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %		Mtd	Avg	
Channel Width (m):	MS	0.35	0.30	0.19	0.62	0.90	0.40					0.46	Method I:	6.0	4.0	C	5.00
Wetted Width (m):	MS	0.31	0.27	0.16	0.42	0.69	0.36					0.37	Method II:				
Pool Depth (m):												0.00					

Wb Depth: .0 .0 .0 Avg: 0.00 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	S	D
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: G RB RIP: G  
 STG: SHR STG: SHR

LWD: N DIST: NA  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: G  
 STG: SHR

## WATER

EMS: Temp: 7 Method: T5 Req #: Cond.: 12 Method: S3  
 pH: 8.3 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: NA O1 B1 B2 B3 D1 D2 D3  
 D95: 0.00 D (cm): 0.00 Morph: RP DISTURBANCE INDICATORS  
 Pattern: ME Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: DC Confinement: OC FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor - low flow
OverWinter Habitat	None
Rearing Habitat	Poor - few pools
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0034		U	
R: 1 F: 0035		D	







Stream/ILP: 5514 Site: 1 Image: 35 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5514 Site: 1 Image: 34 Comment: Upstream, . 9/10/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5515 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.068 ILP #: 5515 NID Map #: 104B.068 NID #: 55015 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407060.6273592 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 09:55 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.35	0.39	0.27	0.55	0.45	0.30					0.39		Method I: 6.0	4.0	C	5.00
Wetted Width (m):	MS	0.36	0.35	0.27	0.46	0.42	0.30					0.36		Method II:			
Pool Depth (m):	MS	0.10										0.10					

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

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	S	N	D	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: G

STG: PS

RB SHP: S

Texture: F  G  C  B  R  A

RIP: G

STG: PS

## WATER

EMS: Temp: 7 Method: T5 Req #: Cond.: 23 Method: S3  
 pH: 8.1 Method: P3 Method: GE  
 Flood Signs: Method: Turb.: T  M  L  C

## MORPHOLOGY

Bed Material: Dominant: F Subdom: NA O1 B1 B2 B3 D1 D2 D3  
 D95: 10.0 D (cm): 4.00 Morph: RP DISTURBANCE INDICATORS  
 Pattern: ME Islands: N Coupling: PC Confinement: FC FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor
OverWinter Habitat	None
Rearing Habitat	Fair - cover good
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0036		U	
R: 1 F: 0037		D	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5515	1

COMMENTS	
Section	Comments
CHANNEL	S6. Small stream drops off hillslope below site gradient barrier. Overall Marginal.

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Stream/ILP: 5515 Site: 1 Image: 37 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5515 Site: 1 Image: 36 Comment: Upstream, . 9/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5516 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.068 ILP #: 5516 NID Map #: 104B.068 NID #: 55016 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407090.6273429 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 10:07 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %		Mtd	Avg	
Channel Width (m):	MS	0.55	0.79	0.30	0.45	0.32	0.37					0.46	Method I:	3.0	4.0	C	3.50
Wetted Width (m):	MS	0.55	0.79	0.30	0.45	0.32	0.37					0.46	Method II:				
Pool Depth (m):												0.00					

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

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	D	N	S	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S RB RIP: S  
 STG: PS STG: PS

LWD: N DIST: NA  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: PS

## WATER

EMS: Temp: 7 Method: T5 Req #: Cond.: 19 Method: S3  
 pH: 8.0 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 25.0 D (cm): 5.00 Morph: RP DISTURBANCE INDICATORS            
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N                 
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor
OverWinter Habitat	None
Rearing Habitat	Poor
Spawning Habitat	Poor - little gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0038		U	
R: 1 F: 0039		D	







Stream/ILP: 5516 Site: 1 Image: 39 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5516 Site: 1 Image: 38 Comment: Upstream, . 9/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5517 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5517 NID Map #: 104B.068 NID #: 55017 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407046.6272895 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 10:52 Agency: C660 Crew: C660 Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.42	0.50	0.42	0.86	0.51	0.55					0.54		Method I: 6.0	8.0	C	7.00
Wetted Width (m):	MS	0.35	0.42	0.27	0.61	0.39	0.38					0.40		Method II:			
Pool Depth (m):	MS	0.20	0.10									0.15					

Wb Depth: .1 .1 .0 Avg: 0.07 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: T

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:				D		T	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: G

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: G

STG: SHR

## WATER

EMS: Req #: Temp: 8 Method: T5 Cond.: 15 Method: S3  
 pH: 7.8 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 10.0 D (cm): 3.00 Morph: RP DISTURBANCE INDICATORS  
 Pattern: ME Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: DC Confinement: FC FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor
OverWinter Habitat	None - no deep pools
Rearing Habitat	Fair - okay cover
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0040		U	
R: 1 F: 0041		D	







Stream/ILP: 5517 Site: 1 Image: 41 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5517 Site: 1 Image: 40 Comment: Upstream, . 9/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5518 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.068 ILP #: 5518 NID Map #: 104B.068 NID #: 55018 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407137.6272593 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 11:23 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %			Mtd	Avg
Channel Width (m):	MS	6.50	5.00	6.70	9.00	7.70	6.00					6.82	Method I:	2.0	4.0	C	3.00
Wetted Width (m):	MS	5.50	4.70	6.20	8.10	0.50	5.50					5.08	Method II:				
Pool Depth (m):	MS	0.20	0.15	0.30								0.22					

Wb Depth: 2.0 2.0 .3 Avg: 1.43 Method: MS Stage: L  M  H  No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	S	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Req #: Method: T5 Cond.: 48 Method: S3  
 Temp: 8 Method: P3 Turb.: T  M  L  C  Method: GE  
 pH: 7.9 Method: Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 40.0 D (cm): 1.00 Morph: RP DISTURBANCE INDICATORS         
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N            
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: CO FSZ:

## HABITAT QUALITY

Name	Comments
OverWinter Habitat	Poor - no deep pools
Rearing Habitat	Fair - some good areas by bank
Spawning Habitat	Fair - gravel patches

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0042		U	
R: 1 F: 0043		D	



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5518	1

COMMENTS	
Section	Comments
CHANNEL	Very nice section of stream, lots of flow but no too fast. Gradien barrier DS at Coulter Creek. Overall Important.

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Stream/ILP: 5518 Site: 1 Image: 43 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5518 Site: 1 Image: 42 Comment: Upstream, . 9/10/2009.









Stream/ILP: 5519 Site: 1 Image: 45 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5519 Site: 1 Image: 44 Comment: Upstream, . 9/10/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5520 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.068 ILP #: 5520 NID Map #: 104B.068 NID #: 55020 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407466.6271480 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 13:05 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.29	0.39	0.47	0.42	0.40	0.42					0.40		Method I: 5.0	3.0	C	4.00
Wetted Width (m):	MS	0.27	0.35	0.41	0.37	0.36	0.34					0.35		Method II:			
Pool Depth (m):	MS	0.31	0.22	0.23								0.25					

Wb Depth: .3 .2 .1 Avg: 0.20 Method: MS Stage: L  M  H  No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	S	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1 1-20%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: U

Texture: F  G  C  B  R  A

RIP: G

STG: SHR

RB SHP: U

Texture: F  G  C  B  R  A

RIP: G

STG: SHR

## WATER

EMS: Temp: 12 Method: T5 Req #: Cond.: 18 Method: S3  
 pH: 7.9 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Fair
OverWinter Habitat	Poor - no deep pools
Rearing Habitat	Fair - cover and pools
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0048		U	
R: 1 F: 0049		D	





Stream/ILP: 5520 Site: 1 Image: 49 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5520 Site: 1 Image: 48 Comment: Upstream, . 9/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5521 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.068 ILP #: 5521 NID Map #: 104B.068 NID #: 55021 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407317.6271289 Method: GP3 Site Lg: 100 Method: GE Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 13:32 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.57	0.50	0.62	0.46	0.42	0.22					0.46		Method I: 4.0	5.0	C	4.50
Wetted Width (m):	MS	0.42	0.37	0.51	0.44	0.36	0.22					0.39		Method II:			
Pool Depth (m):												0.00					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	D	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 2 21-40%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: SHR

LWD: F DIST: C  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: SHR

## WATER

EMS: Temp: 9 Method: T5 Req #: Cond.: 74 Method: S3  
 pH: 7.8 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor - numerous steps
OverWinter Habitat	None - no deep pools
Rearing Habitat	Good - abundant cover
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0050		U	
R: 1 F: 0051		D	







Stream/ILP: 5521 Site: 1 Image: 51 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5521 Site: 1 Image: 50 Comment: Upstream, . 9/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5522 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.068 ILP #: 5522 NID Map #: 104B.068 NID #: 55022 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407535.6271741 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/10 Time: 12:20 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.45	0.37	0.49	0.36	0.29	0.42					0.40	Method I:	12.0	14.0	C	13.00
Wetted Width (m):	MS	0.25	0.20	0.31	0.27	0.22	0.30					0.26	Method II:				
Pool Depth (m):	MS	0.11	0.23									0.17					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	S	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

2 21-40%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: U

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Temp: 9 Method: T5 Req #: Cond.: 17 Method: S3  
 pH: 8.1 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 5.00 D (cm): 2.00 Morph: CP DISTURBANCE INDICATORS  
 Pattern: IM C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N  
 Coupling: PC  
 Confinement: FC  
 FSZ:  Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor - steep
OverWinter Habitat	None
Rearing Habitat	Fair - good cover and frequent pools
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0046		U	
R: 1 F: 0047		D	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5522	1

COMMENTS	
Section	Comments
CHANNEL	S6. Steep flowing through moss down to pond. Gradient barrier downstream on Coulter Creek. Overall Marginal.

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Stream/ILP: 5522 Site: 1 Image: 47 Comment: Downstream, . 9/10/2009.



Stream/ILP: 5522 Site: 1 Image: 46 Comment: Upstream, . 9/10/2009.





# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5525	1

COMMENTS	
Section	Comments
CHANNEL	S6. Entrenched steep stream. Saw falls below site when in helicopter. Water falls underneath huge boulder ~ 10 m. Location right at 56 point on map. Overall Marginal.



Stream/ILP: 5525 Site: 1 Image: 62 Comment: Downstream, Showing falls under boulder. 9/10/2009.



Stream/ILP: 5525 Site: 1 Image: 61 Comment: Upstream, . 9/10/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5526 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.068 ILP #: 5526 NID Map #: 104B.068 NID #: 55029 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407650.6270702 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 10:35 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.42	0.45	0.30	0.30	0.36	0.35					0.36	Method I:	19.0	26.0	C	22.50
Wetted Width (m):	MS	0.36	0.41	0.27	0.26	0.31	0.33					0.32	Method II:				
Pool Depth (m):	MS	0.07	0.12	0.15								0.11					

Wb Depth: .0 .1 .0 Avg: 0.03 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	D	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 1 1-20%  
 INSTREAM VEG: N  A  M  V

LWD: N DIST: NA  
 LB SHP: V RB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: S RB RIP: S  
 STG: MF STG: MF

## WATER

EMS: Req #: Method: T5 Cond.: 45 Method: S3  
 Temp: 8 Method: P3 Turb.: T  M  L  C  Method: GE  
 pH: 8.4 Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material: Dominant: B Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 10.0 D (cm): 3.00 Morph: CP DISTURBANCE INDICATORS  
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N  
 Coupling: CO  
 Confinement: EN FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor
OverWinter Habitat	None - no deep pools
Rearing Habitat	Poor - steep, but lots of cover
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0064		U	
R: 1 F: 0065		D	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5526	1

COMMENTS	
Section	Comments
CHANNEL	S6. Poor Habitat, water flowing over bedrock with few pools and steep gradient. Overall Marginal.

---





Stream/ILP: 5526 Site: 1 Image: 65 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5526 Site: 1 Image: 64 Comment: Upstream, . 9/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5527 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map #: 104B.068 ILP #: 5527 NID Map #: 104B.068 NID #: 55030 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407668.6269997 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 12:07 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	2.20	1.50	2.00	1.60	1.30	1.80					1.73		Method I: 4.0	3.0	C	3.50
Wetted Width (m):	MS	0.62	0.75	1.50	0.82	0.76	0.74					0.86		Method II:			
Pool Depth (m):												0.00					

Wb Depth: .0 .0 .0 Avg: 0.00 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

4 71-90%

INSTREAM VEG: N  A  M  V

LWD: N DIST: NA

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: SHR

## WATER

EMS: Temp: 8 Method: T5 Req #: Cond.: 23 Method: S3  
 pH: 8.2 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Rafted debris Method: GE

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 25.0 D (cm): 5.00 Morph: RP DISTURBANCE INDICATORS  
 Pattern: ME Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: CO Confinement: OC FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Fair - low grade at site
OverWinter Habitat	None - no deep pools
Rearing Habitat	Poor - lots of cover but shallow and no pools
Spawning Habitat	Poor - gravel but poor quality

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0066		U	
R: 1 F: 0067		D	

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5527 Site 1

W I L D L I F E	
Group	Observations
MAM	Moose tracks across site
C O M M E N T S	
Section	Comments
SITE CARD	Incomplete: No pool depths due to no pools present
CHANNEL	S6. Low grade. Exposed crumbly rock substrate, no instream vegetation at all. Overall Marginal.



Stream/ILP: 5527 Site: 1 Image: 67 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5527 Site: 1 Image: 66 Comment: Upstream, . 9/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5528 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5528 NID Map #: 104B.068 NID #: 55031 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 12:30 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0068		U	
R: 1 F: 0071		D	

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD; No UTM due to no satellite reception but ~ 200 m down road of ILP 5527, site 1





Stream/ILP: 5528 Site: 1 Image: 71 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5528 Site: 1 Image: 68 Comment: Upstream, . 9/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5529 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5529 NID Map #: 104B.068 NID #: 55032 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407801.6269764 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 12:47 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %		Mtd	Avg	
Channel Width (m):	MS	0.62	0.42	0.86	0.78	0.80	0.80					0.71	Method I:	3.0	2.0	C	2.50
Wetted Width (m):	MS	0.47	0.36	0.52	0.75	0.78	0.77					0.61	Method II:				
Pool Depth (m):	MS	0.08	0.10	0.12								0.10					

Wb Depth:  .0  .1  .2 Avg: 0.10 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	D	S
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 4 71-90%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: U RB SHP: U  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: MF

## WATER

EMS: Temp: 8 Method: T5 Req #: Cond.: 28 Method: S3  
 pH: 7.6 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: G Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 20.0 D (cm): 3.00 Morph: CP DISTURBANCE INDICATORS            
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N                 
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Good
OverWinter Habitat	Poor - no deep pools
Rearing Habitat	Good - lots of cover and pools
Spawning Habitat	Fair - some nice gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0078		D	
R: 1 F: 0079		U	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5529	1

COMMENTS	
Section	Comments
CHANNEL	S6. Barrier downstream at Coulter Creek. Nice habitat, good complexity, low gradient. Overall Important.

---



Stream/ILP: 5529 Site: 1 Image: 78 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5529 Site: 1 Image: 79 Comment: Upstream, . 9/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5530 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5530 NID Map #: 104B.068 NID #: 55033 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407763.6269632 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 13:23 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gradient %		Mtd	Avg	
Channel Width (m):	MS	0.40	0.50	0.70	0.62	0.50	0.50					0.54	Method I:	3.0	2.0	C	2.50
Wetted Width (m):	MS	0.26	0.32	0.50	0.48	0.39	0.45					0.40	Method II:				
Pool Depth (m):	MS	0.10	0.08									0.09					

Wb Depth:    Avg: 0.03 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	S	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 4 71-90%  
 INSTREAM VEG: N  A  M  V   
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: MF

## WATER

EMS: Temp: 10 Method: T5 Req #: Cond.: 47 Method: S3  
 pH: 7.6 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0080		U	
R: 1 F: 0081		D	

## COMMENTS

Section	Comments
CHANNEL	S6. Poor habitat. Disconnected pools. Barrier downstream at Coulter Creek. Overall Marginal.





Stream/ILP: 5530 Site: 1 Image: 81 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5530 Site: 1 Image: 80 Comment: Upstream, . 9/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5531 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5531 NID Map #: 104B.068 NID #: 55034 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 13:50 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0082		D	
R: 1 F: 0083		U	

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD. No reception/signal therefore no UTM.
CHANNEL	Wetted depression full of skunk cabbage and ferns. No flowing water. NCD



Stream/ILP: 5531 Site: 1 Image: 82 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5531 Site: 1 Image: 83 Comment: Upstream, . 9/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5532 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5532 NID Map #: 104B.068 NID #: 55035 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 16:35 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.90	0.85	1.20	1.30	1.27	1.30					1.14	Method I:	10.0	12.0	C	11.00
Wetted Width (m):	MS	0.47	0.49	0.58	0.79	0.80	3.85					1.16	Method II:				
Pool Depth (m):	MS	0.10	0.12	0.60								0.27					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	N	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

4 71-90%

INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: MF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: MF

## WATER

EMS: Temp: 9 Method: T5 Req #: Cond.: 42 Method: S3  
 pH: 8.0 Method: P3 Method: GE  
 Flood Signs: SWD IN STREAM Method: GE Turb.: T  M  L  C

## MORPHOLOGY

Bed Material: Dominant: G Subdom: C O1 B1 B2 B3 D1 D2 D3  
 D95: 25.0 D (cm): 3.00 Morph: SP DISTURBANCE INDICATORS          
 Pattern: ME C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: CO  
 FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Fair - some large drops ~ 45 cm
OverWinter Habitat	None - no deep pools
Rearing Habitat	Good - lots of pools
Spawning Habitat	Poor - poor gavel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0084		U	
R: 1 F: 0085		D	

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
Reach # 1.0 ILP Map # 104B.068 ILP # 5532 Site 1

COMMENTS	
Section	Comments
CHANNEL	S6. Small stream over angular rock. Substrate lots of SWD in stream. Barrier downstream at Coulter Creek. Stream crossing road again ~ 50 cm upstream. Near end of switchback. Overall - Marginal.





Stream/ILP: 5532 Site: 1 Image: 85 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5532 Site: 1 Image: 84 Comment: Upstream, . 9/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5533 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5533 NID Map #: 104B.068 NID #: 55036 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407934.6268867 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 15:10 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0087		U	
R: 1 F: 0088		D	

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD
CHANNEL	Wetted devil's club area. No flow. NCD



Stream/ILP: 5533 Site: 1 Image: 88 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5533 Site: 1 Image: 87 Comment: Upstream, . 9/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5534 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5534 NID Map #: 104B.068 NID #: 55037 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 15:27 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Gadient %		Mtd	Avg	
Channel Width (m):	MS	0.56	0.62	0.49	0.60	0.55	0.70					0.59	Method I:	4.0	5.0	C	4.50
Wetted Width (m):	MS	0.42	0.46	0.39	0.51	0.45	0.44					0.44	Method II:				
Pool Depth (m):	MS	0.05	0.04	0.02								0.04					

Wb Depth: .1 .1 .0 Avg: 0.07 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	S	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 5 >90%  
 INSTREAM VEG: N  A  M  V   
 RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: MF

LWD: N DIST: NA  
 LB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S  
 STG: MF

## WATER

EMS: Temp: 10 Method: T5 Req #: Cond.: 59 Method: S3  
 pH: 7.4 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

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

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor - little flow
OverWinter Habitat	None
Rearing Habitat	Fair - good cover
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0089		U	
R: 1 F: 0090		D	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5534	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: No satellite reception therefore no UTM
CHANNEL	S6. Small stream, frequently flows under SWD jams. Barrier downstream at Coulter Creek.





Stream/ILP: 5534 Site: 1 Image: 90 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5534 Site: 1 Image: 89 Comment: Upstream, . 9/12/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5535 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5535 NID Map #: 104B.068 NID #: 55038 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 15:57 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0092		U	
R: 1 F: 0093		D	

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD. No satellite reception therefore no UTM
CHANNEL	Water flows upstream. Flow through moss and SWD. NCD



Stream/ILP: 5535 Site: 1 Image: 93 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5535 Site: 1 Image: 92 Comment: Upstream, . 9/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5536 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5536 NID Map #: 104B.068 NID #: 55039 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407628.6268304 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 16:15 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

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

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

COVER Total:

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:							
Loc: P/S/O:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: DIST:  
 LB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

RB SHP: Texture: F  G  C  B  R  A   
 RIP: STG:

## WATER

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

## MORPHOLOGY

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

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0094		U	
R: 1 F: 0095		D	

## COMMENTS

Section	Comments
SITE CARD	Incomplete: Site is a NCD
CHANNEL	S6. Gradient barrier downstream at Coulter Creek. NCD





Stream/ILP: 5536 Site: 1 Image: 95 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5536 Site: 1 Image: 94 Comment: Upstream, . 9/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.068 ILP # 5537 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Coulter Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.068 ILP #: 5537 NID Map #: 104B.068 NID #: 55040 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.407571.6267899 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/12 Time: 16:55 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.73	0.70	0.76	0.63	0.66	0.68					0.69		Method I: 4.0	6.0	C	5.00
Wetted Width (m):	MS	0.65	0.66	0.72	0.59	0.62	0.64					0.65		Method II:			
Pool Depth (m):	MS	0.10	0.12	0.08								0.10					

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

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	S	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE 3 41-70%  
 INSTREAM VEG: N  A  M  V

LWD: A DIST: C  
 LB SHP: V RB SHP: V  
 Texture: F  G  C  B  R  A   
 RIP: S RB RIP: S  
 STG: MF STG: MF

## WATER

EMS: Req #: Temp: 10 Method: T5 Cond.: 79 Method: S3  
 pH: 8.0 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: F Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 8.00 D (cm): 2.00 Morph: SP DISTURBANCE INDICATORS         
 Pattern: SI C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N            
 Coupling: PC Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: CO FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor - frequent SWD and LWD jams
OverWinter Habitat	None
Rearing Habitat	Fair - good cover, pools
Spawning Habitat	Poor - little gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0096		U	
R: 1 F: 0097		D	



# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.068	5537	1

COMMENTS	
Section	Comments
CHANNEL	S6. Gradient barrier downstream at Coulter Creek



Stream/ILP: 5537 Site: 1 Image: 97 Comment: Downstream, . 9/12/2009.



Stream/ILP: 5537 Site: 1 Image: 96 Comment: Upstream, . 9/12/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.059 ILP # 5538 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Mitchell Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.059 ILP #: 5538 NID Map #: 104B.059 NID #: 55041 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.416725.6262799 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/13 Time: 09:45 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	10.00	9.80	7.90	7.80	8.40	8.50					8.73		Method I: 4.0	3.0	C	3.50
Wetted Width (m):	MS	9.80	9.20	7.60	7.80	8.20	8.00					8.43		Method II:			
Pool Depth (m):												0.00					

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

COVER Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	N	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

INSTREAM VEG: N  A  M  V

LWD: F DIST: C

LB SHP: V

Texture: F  G  C  B  R  A

RB SHP: V

Texture: F  G  C  B  R  A

RIP: S

STG: MF

RIP: S

STG: MF

## WATER

EMS: Temp: 3 Method: T5 Req #: Cond.: 114 Method: S3  
 pH: 9.0 Method: P3 Turb.: T  M  L  C  Method: GE  
 Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: G O1 B1 B2 B3 D1 D2 D3  
 D95: 45.0 D (cm): 25.0 Morph: RP DISTURBANCE INDICATORS  
 Pattern: ME Islands: N C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Coupling: PC Confinement: EN FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Good
OverWinter Habitat	Fair - probably deep
Rearing Habitat	Poor
Spawning Habitat	None - too fast

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0100		U	
R: 1 F: 0101		D	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.059	5538	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: Unable to measure depths due to safety concerns therefore no pool or WB depths.
CHANNEL	S5. Barrier downstream. Rapid entrenched section at road crossing. Overall Important.





Stream/ILP: 5538 Site: 1 Image: 101 Comment: Downstream, . 9/13/2009.



Stream/ILP: 5538 Site: 1 Image: 100 Comment: Upstream, . 9/13/2009.







Stream/ILP: 5539 Site: 1 Image: 103 Comment: Downstream, . 9/13/2009.



Stream/ILP: 5539 Site: 1 Image: 102 Comment: Upstream, Showing start of water. 9/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.049 ILP # 5540 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Sulpurets Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.049 ILP #: 5540 NID Map #: 104B.049 NID #: 55043 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): 9.416525.6262827 Method: GP3 Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/13 Time: 10:26 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.46	0.65	0.60	0.65	0.53	0.55					0.57	Method I:	10.0	4.0	C	7.00
Wetted Width (m):	MS	0.42	0.61	0.57	0.63	0.51	0.50					0.54	Method II:				
Pool Depth (m):												0.00					

Wb Depth: .0 .0 .0 Avg: 0.00 Method: GE Stage: L  M  H  No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	S	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

4 71-90%

INSTREAM VEG: N  A  M  V

LWD: F DIST: E

LB SHP: V

Texture: F  G  C  B  R  A

RIP: C

STG: MF

RB SHP: U

Texture: F  G  C  B  R  A

RIP: C

STG: MF

## WATER

EMS: Req #: Method: T5 Cond.: 173 Method: S3  
 Temp: 7 Method: P3 Turb.: T  M  L  C  Method: GE  
 pH: 9.0 Method: Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: G Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 18.0 D (cm): 1.00 Morph: SP DISTURBANCE INDICATORS          
 Pattern: IR C1 C2 C3 C4 C5 S1 S2 S3 S4 S5  
 Islands: N             
 Coupling: CO Bars: N  SIDE  DIAG  MID  SPAN  BR   
 Confinement: FC FSZ:

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - poor, frequent under ground flow
OverWinter Habitat	None - no deep pools
Rearing Habitat	Fair - good cover
Spawning Habitat	Poor - shallow

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0104		U	
R: 1 F: 0105		D	







Stream/ILP: 5540 Site: 1 Image: 105 Comment: Downstream, . 9/13/2009.



Stream/ILP: 5540 Site: 1 Image: 104 Comment: Upstream, . 9/13/2009.



# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104B.049 ILP # 5541 Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name: Local Name: Sulphurets Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.049 ILP #: 5541 NID Map #: 104B.049 NID #: 55044 Reach #: 1.0 Site #: 1  
 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: RF Access: H  
 GIS UTM (Z.E.N): .. Ref. Name:  
 Date: 2009/09/13 Time: 10:40 Agency: C660 Crew: SMTH Fish Crd?:  Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	0.45	0.40	0.32	0.36	0.34	0.40					0.38		Method I: 6.0	5.0	C	5.50
Wetted Width (m):	MS	0.36	0.35	0.27	0.26	0.31	0.35					0.32		Method II:			
Pool Depth (m):	MS	0.03	0.06	0.10	0.08							0.07					

Wb Depth: .0 .0 .0 Avg: 0.00 Method: MS Stage: L  M  H   
 No Vis.Ch.:  Intermittent:   
 Dw:  Tribs.:

COVER Total: A

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	S	N	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE  
 3 41-70%  
 INSTREAM VEG: N  A  M  V

LWD: F DIST: E  
 LB SHP: S RB SHP: S  
 Texture: F  G  C  B  R  A   
 RIP: S RB RIP: S  
 STG: MF STG: MF

## WATER

EMS: Req #: Method: T5 Cond.: 194 Method: S3  
 Temp: 8 Method: P3 Turb.: T  M  L  C  Method: GE  
 pH: 9.2 Method: Flood Signs: Method:

## MORPHOLOGY

Bed Material: Dominant: C Subdom: F O1 B1 B2 B3 D1 D2 D3  
 D95: 10.0 D (cm): 0.50 Morph: SP DISTURBANCE INDICATORS  
 Pattern: ME Islands: N Coupling: PC Confinement: OC FSZ:   
 Bars: N  SIDE  DIAG  MID  SPAN  BR

## HABITAT QUALITY

Name	Comments
Other	Migration Habitat - Poor - SWD blockages
OverWinter Habitat	None
Rearing Habitat	Fair
Spawning Habitat	None

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1 F: 0106		U	
R: 1 F: 0107		D	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.049	5541	1

COMMENTS	
Section	Comments
SITE CARD	Incomplete: No satellite reception therefore no UTM. ~ 20 m downstream of ILP 5540, site 1.
CHANNEL	S6. Small stream flowing through SWD. Overall Marginal.



Stream/ILP: 5541 Site: 1 Image: 107 Comment: Downstream, . 9/13/2009.



Stream/ILP: 5541 Site: 1 Image: 106 Comment: Upstream, . 9/13/2009.

# FDIS Site Card

Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0    ILP Map # 104B.049    ILP # 5542    Site # 1

## PROJECT

Project Name: Kerr Sulphurets  
 Stream Name (gaz.): ALASKA RIVERS    Project Code: 19435  
 Project Watershed Code: 960-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000

## WATERSHED

Gazetted Name:    Local Name: Sulphurets Creek  
 Watershed Code: 000-000000-00000-00000-00000-0000-0000-000-000-000-000-000-000  
 ILP Map#: 104B.049    ILP #: 5542    NID Map #: 104B.049    NID #: 55045    Reach #: 1.0    Site #: 1  
 Field UTM (Z.E.N): 9.416300.6262790    Method: GP3    Site Lg: 100    Method: RF    Access: H  
 GIS UTM (Z.E.N): ..    Ref. Name:  
 Date: 2009/09/13    Time: 11:00    Agency: C660    Crew: SMTH    Fish Crd?:     Incomplete:

## CHANNEL

	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd	Avg	
Channel Width (m):	MS	6.80	14.00	8.00	8.00	7.50						8.86		Method I: 6.0	5.0	C	5.50
Wetted Width (m):	MS	5.00	10.20	6.80	6.50	5.60	7.10					6.87		Method II:			
Pool Depth (m):	MS	0.80	0.06									0.43					

Wb Depth: .4    .3    .5    Avg: 0.40    Method: MS    Stage: L  M  H     No Vis.Ch.:     Intermittent:   
 Dw:     Tribs.:

COVER    Total: M

Type:	SWD	LWD	B	U	DP	OV	IV
Amount:	N	S	N	N	N	D	N
Loc: P/S/O:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CROWN CLOSURE

1    1-20%

INSTREAM VEG: N  A  M  V

LWD: F    DIST: C

LB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: MF

RB SHP: S

Texture: F  G  C  B  R  A

RIP: S

STG: MF

## WATER

EMS:    Req #:    Method: T5    Cond.: 91    Method: S3  
 Temp: 5    Method: P3    Turb.: T  M  L  C     Method: GE  
 pH: 9.2    Method:  
 Flood Signs:

## MORPHOLOGY

Bed Material:    Dominant: B    Subdom: C    O1    B1    B2    B3    D1    D2    D3  
 D95: 80.0    D (cm): 25.00    Morph: CPB    DISTURBANCE INDICATORS  
 Pattern: ME    C1    C2    C3    C4    C5    S1    S2    S3    S4    S5  
 Islands: O  
 Coupling: PC  
 Confinement: FC  
 FSZ:     Bars: N     SIDE     DIAG     MID     SPAN     BR

## HABITAT QUALITY

Name	Comments
Other	Migration - Good
OverWinter Habitat	Fair - few deep pools
Rearing Habitat	Good - cover and nice pools
Spawning Habitat	Poor - little gravel

## PHOTOS

Photo	Foc Lg	Dir	Comments
R: 1    F: 0108		U	
R: 1    F: 0109		D	

# FDIS Site Card

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

Reach #	ILP Map #	ILP #	Site
1.0	104B.049	5542	1

COMMENTS	
Section	Comments
CHANNEL	S5. Nice section, lots of structure and cover. Cascades with in site are possible. Downstream barrier on Sulphurets. Overall Important.

---





Stream/ILP: 5542 Site: 1 Image: 109 Comment: Downstream, . 9/13/2009.



Stream/ILP: 5542 Site: 1 Image: 108 Comment: Upstream, . 9/13/2009.

Appendix 6.1-1. Rearing





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104A.061 ILP # 1005

## WATERBODY

Gazetted Name: Local: Teigen Creek - Rearing  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 Waterbody ID: ILP Map #: 104A.061 ILP #: 1005 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date:

Fish Permit #: Date: 2009/07/18 To: 2009/07/18 Agency: C660 Crew: CB/RD Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/Start(East/North)/End(East/North)/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
1	104A.061		9			441244 6278841 GP3 VO 1	5	278	C	
1	104A.061		9			441244 6278841 GP3 EF 1	5.4	278	C	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/07/18	11:00	2009/07/18	11:27	
1	VO 1	1	2009/07/18	11:00	2009/07/18	11:27	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF	1	1	O	586	200.0	1.4	300	30	SR	LR-24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF	1	1	DV	F	2		R	
1	EF	1	1	DV	J	1		R	
1	EF	1	1	DV	A	2		R	
1	EF	1	1	DV	P	2		R	
1	VO	1	1	DV	NS	4		R	Stage is F, P and A

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	DV	49	.9	U	IM							Fry
1	EF	1	1	DV	69	2.4	U	IM							Parr
1	EF	1	1	DV	76	4.0	U	U							Parr
1	EF	1	1	DV	48	1.0	U	U							Fry
1	EF	1	1	DV	101	8.4	U	U							
1	EF	1	1	DV	134	21.6	U	M	FR	1		TP	1		SC taken for aging as well. TP = adipose fin
1	EF	1	1	DV	129	28.0	U	M	FR	2		TP	2		SC taken for aging as well. TP = adipose fin

## COMMENTS

Section	Comments
WATERBODY	good density site and good rearing habitat. Sampled all fish bearing reaches.











































# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104A.061 ILP # 1028

WATERBODY																
Gazetted Name:										Local: Teigen Creek - Rearing						
Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000																
Waterbody ID:					ILP Map #: 104A.061			ILP #: 1028		Reach #: 1 -						
Project ID: 19435					Lake/Stream: S			Lake From Date:								
Fish Permit #:				Date: 2009/08/05		To: 2009/08/05		Agency: C660		Crew: MS/NM		Resample: <input type="checkbox"/>				
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/Start(East/North)/End(East/North)/Mthd				MTD/NO	Temp	Cond	Turbid	Comment					
1	104A.061	1006	9			443776 6275998	GP3 VO 1	7	114	T	pH = 7.4					
1	104A.061	1006	9			443776 6275998	GP3 EF 1	7	114	T	pH = 7.4					
A. GEAR SETTINGS																
Site#	MTD/NO		H/P	Date In	Time In	Date Out	Time Out	Comment								
1	EF	1	1	2009/08/05	15:00	2009/08/05	15:30									
1	VO	1	1	2009/08/05	15:00	2009/08/05	15:30									
C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/NO		H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
1	EF	1	1	O	392	100.0	2.0	30	60	4	SR	LR-24				
FISH SUMMARY																
Site#	MTD/NO		H/P	Species	Stage	Age	Total #	Lgth (Min/Max)		FishAct	Comment					
1	EF	1	1	DV	J		1	89	89	R						
1	VO	1	1	DV	J		1	90	90	R						
INDIVIDUAL FISH DATA																
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
												Str/Smpl#				
1	EF	1	1	DV	89		U	IM								no scale
COMMENTS																
Section				Comments												
WATERBODY				Highly turbid. Headwater Dry at 443891 6276015												

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104A.061 ILP # 1029

WATERBODY															
Gazetted Name:										Local: Teigen Creek - Rearing					
Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0															
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000															
Waterbody ID:					ILP Map #: 104A.061			ILP #: 1029		Reach #: 1 -					
Project ID: 19435					Lake/Stream: S				Lake From Date:						
Fish Permit #:				Date: 2009/08/07		To: 2009/08/07		Agency: C660		Crew: DF/JS		Resample: <input type="checkbox"/>			
SITE / METHOD															
Site#	NID Map	NID #	UTM:Zone/Start(East/North)/End(East/North)/Mthd			MTD/NO	Temp	Cond	Turbid	Comment					
1	104A.061		9			443597 6276031 GP3	EF 1	3.2	1047	T	pH = 6.68				
A. GEAR SETTINGS															
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment								
1	EF 1	1	2009/08/07	14:00	2009/08/07	15:00									
C. ELECTROFISHER SPECIFICATIONS															
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model				
1	EF 1	1	O	540	1.0	4.0	300	30	4	SR	LR-24				
FISH SUMMARY															
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment						
1	EF 1	1	DV	J		3	119 137	R							
INDIVIDUAL FISH DATA															
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF 1	1	DV	110	14.0	U	U	FR	1						
1	EF 1	1	DV	119	18.0	U	U	FR	2						
1	EF 1	1	DV	137	25.0	U	U	FR	3						
COMMENTS															
Section			Comments												
WATERBODY			Turbent, grey and silty water												









# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000-000  
 Reach #: 2.0      ILP Map #: 104A.061      ILP #: 1082

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: Teigen Creek - Rearing  
 Project Code: 560-000000-00000-00000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061      ILP #: 1082      Reach #: 2 -  
 Project ID: 19435      Lake/Stream: S      Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/07      To: 2009/08/07      Agency: C660      Crew: MS/NM      Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/Start(East/North)/End(East/North)/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
2	104A.061	1009	9			444337   6275895   GP3	VO   1	9	127	C
2	104A.061	1009	9			444337   6275895   GP3	EF   1	9	127	C

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
2	EF   1	1	2009/08/07	10:20	2009/08/07	11:00	
2	VO   1	1	2009/08/07	10:20	2009/08/07	11:00	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
2	EF	1	1	O	181	100.0	325.0	108	60	4	SR      LR-24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
2	EF	1	1	DV	F	1	35      35	R	
2	EF	1	1	DV	J	4	59      126	R	
2	VO	1	1	DV	J	1		R	
2	VO	1	1	DV	F	5		R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
2	EF	1	1	DV	125		U	U	FR	1		TP	1		No scale
2	EF	1	1	DV	59		U	U				TP	2		No scale
2	EF	1	1	DV	104		U	U	FR	3		TP	3		No scale
2	EF	1	1	DV	84		U	U				TP	4		No scale
2	EF	1	1	DV	35		U	IM				5	TP	5	No scale. Whole fish vouchered

## COMMENTS

Section	Comments
WATERBODY	Fair for density

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-000-000-000-000-000-000-000 Reach # 3.0 ILP Map # 104A.061 ILP # 1082

**WATERBODY**

Gazetted Name: \_\_\_\_\_ Local: Teigen Creek - Rearing  
 Project Code: 560-000000-00000-00000-0000-000-000-000-000-000-000-000  
 WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061 ILP #: 1082 Reach #: 3 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/07 To: 2009/08/07 Agency: C660 Crew: MS/NM Resample:

**SITE / METHOD**

Site#	NID Map	NID #	UTM:Zone/Start(East/North)/End(East/North)/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
3	104A.061		9 445040 6275511 GP3 VO 1	12	114	C		
3	104A.061		9 445040 6275511 GP3 EF 1	12	114	C	Ph = 8.4. Shocked to end of channel	

**A. GEAR SETTINGS**

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
3	EF 1	1	2009/08/07	12:10	2009/08/07	12:20	
3	VO 1	1	2009/08/07	12:10	2009/08/07	12:20	

**C. ELECTROFISHER SPECIFICATIONS**

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
3	EF 1	1	O	86	30.0	2.0	450	60	4	SR	LR-24

**FISH SUMMARY**

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
3	EF 1	1	DV	J		11	48 112	R	
3	VO 1	1	DV	NS		4		R	
3	VO 1	1	DV	J		1	160	R	

**INDIVIDUAL FISH DATA**

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
3	EF	1	1	DV	112		U	U	FR	1		TP	1		no scale
3	EF	1	1	DV	83		U	U				TP	2		no scale
3	EF	1	1	DV	81		U	U				TP	3		no scale
3	EF	1	1	DV	75		U	U							no scale
3	EF	1	1	DV	84		U	U							no scale
3	EF	1	1	DV	92		U	U	FR	4		TP	4		no scale
3	EF	1	1	DV	65		U	U				TP	5		no scale
3	EF	1	1	DV	70		U	U				TP	6		no scale
3	EF	1	1	DV	60		U	U				TP	7		no scale
3	EF	1	1	DV	61		U	U				TP	8		no scale
3	EF	1	1	DV	48		U	U							no scale

**COMMENTS**

Section	Comments
WATERBODY	Good for density

Appendix 6.1-1. Density





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 2.0  
 ILP Map #: 104A.061  
 ILP #: 1001

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: \_\_\_\_\_  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061 ILP #: 1001 Reach #: 2 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/09/10 To: 2009/09/10 Agency: C660 Crew: MS VR Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
2	104A.061	9071	9	GPU EF 1	4.4	127	M	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
2	EF 1	1	2009/09/10	09:45	2009/09/10	10:05	
2	EF 1	2	2009/09/10	10:50	2009/09/10	11:15	
2	EF 1	3	2009/09/10	11:30	2009/09/10	11:50	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
2	EF 1	1	C	811	46.0	6.6	260	60	2	SR	LR24
2	EF 1	2	C	737	76.0	6.6	260	60	2	SR	LR24
2	EF 1	3	C	795	46.0	6.6	260	60	2	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
2	EF 1	1	DV	J		10	32 140	R	
2	EF 1	1	DV	A		2	158 160	R	
2	EF 1	2	DV	J		3	58 123	R	
2	EF 1	3	DV	J		1	88 88	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
2	EF 1	1	DV	160	49.7	F	MT	FR	1	4					
2	EF 1	1	DV	158	49.6	F	MT	FR	2	4					
2	EF 1	1	DV	136	29.4	U	IM	FR	3	3					
2	EF 1	1	DV	140	27.8	U	IM	FR	4	3					
2	EF 1	1	DV	90	7.9	U	IM	FR	5	2					
2	EF 1	1	DV	83	8.7	U	IM	FR	6	1					
2	EF 1	1	DV	100	10.3	U	IM	FR	7	1					
2	EF 1	1	DV	86	6.5	U	IM								
2	EF 1	1	DV	74	4.2	U	IM								
2	EF 1	1	DV/BT	92	7.3	U	IM	FR	8	1		TP 1			
2	EF 1	1	DV	66	2.8	U	IM								
2	EF 1	1	DV	32	.3	U	IM								
2	EF 1	2	DV	123	20.9	U	IM	FR	9	3					
2	EF 1	2	DV	100	11.8	U	IM	FR	10	2					
2	EF 1	2	DV	58	1.8	U	IM					TP 2			
2	EF 1	3	DV	88	5.7	U	IM	FR	11	1					



# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 3.5 ILP Map # 104A.061 ILP # 1001

WATERBODY																
Gazetted Name:						Local:										
Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000																
Waterbody ID:						ILP Map #: 104A.061		ILP #: 1001		Reach #: 3.5 -						
Project ID: 19435						Lake/Stream: S				Lake From Date:						
Fish Permit #:				Date: 2009/09/10		To: 2009/09/10		Agency: C660		Crew: MS VR		Resample: <input type="checkbox"/>				
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment					
35	104A.061	9072	9			GPU	EF 1	5.1	112	T	water rising					
A. GEAR SETTINGS																
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment									
35	EF 1	1	2009/09/10	14:55	2009/09/10	15:10										
C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model					
35	EF	1	1	C	501	25.0	2.0	300	40	4	SR LR24					
FISH SUMMARY																
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment							
35	EF	1	DV	J		1	149 149	R								
INDIVIDUAL FISH DATA																
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
								FR	1	3		Str/Smpl#				
35	EF	1	DV	149	32.4	U	IM	FR	1	3						
COMMENTS																
Section			Comments													
WATERBODY			net blew out, only one pass.													





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 5.0      ILP Map #: 104A.061      ILP #: 1001

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: \_\_\_\_\_  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061      ILP #: 1001      Reach #: 5 -  
 Project ID: 19435      Lake/Stream: S      Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/09/13      To: 2009/09/13      Agency: C660      Crew: MS VR      Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
5	104A.061	9076	9			GPU EF 1	3.6	113	T	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
5	EF 1	1	2009/09/13	10:20	2009/09/13	10:40	
5	EF 1	2	2009/09/13	11:20	2009/09/13	11:40	
5	EF 1	3	2009/09/13	11:50	2009/09/13	12:10	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
5	EF 1	1	C	572	27.0	3.4	450	40	4	SR	LR24
5	EF 1	2	C	471	27.0	3.4	450	40	4	SR	LR24
5	EF 1	3	C	453	27.0	3.4	450	40	4	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
5	EF 1	1	DV	J		4	113 162	R	
5	EF 1	1	DV	A		2	164 184	R	
5	EF 1	2	NFC			0			
5	EF 1	3	NFC			0			

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
								Str	Smpl#	Age		Str	Smpl#			
5	EF 1	1	DV	160	49.8	F	MT	FR	1	4		TP	1			
5	EF 1	1	DV	162	47.9	F	MT	FR	2	4		TP	2			
5	EF 1	1	DV	184	87.5	M	MT	FR	3	5		TP	3			
5	EF 1	1	DV	164	52.0	F	MT	FR	4	3		TP	4			
5	EF 1	1	DV	134	23.9	U	IM	FR	5	4		TP	5			
5	EF 1	1	DV	113	17.9	U	IM	FR	6	2						





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 8.0 ILP Map #: 104A.061 ILP #: 1001  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 Waterbody ID: ILP Map #: 104A.061 ILP #: 1001 Reach #: 8 -  
 Project ID: 19435 Lake/Stream: S Lake From Date:

Fish Permit #: Date: 2009/09/14 To: 2009/09/14 Agency: C660 Crew: MS VR Resample:

## WATERBODY

Gazetted Name: Local:  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 Waterbody ID: ILP Map #: 104A.061 ILP #: 1001 Reach #: 8 -  
 Project ID: 19435 Lake/Stream: S Lake From Date:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment	
8	104A.061	9079	9	GPU	EF	1	7	130	L

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
8	EF	1	2009/09/14	14:30	2009/09/14	15:00	
8	EF	1	2009/09/14	15:30	2009/09/14	15:50	
8	EF	1	2009/09/14	16:20	2009/09/14	16:40	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
8	EF	1	1	C	1024	25.0	8.3	325	40	4	SR LR24
8	EF	1	2	C	945	25.0	8.3	325	40	4	SR LR24
8	EF	1	3	C	875	25.0	8.3	325	40	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
8	EF	1	DV	J		14	67	130	R
8	EF	1	DV	A		3	163	178	R
8	EF	1	DV	J		4	97	158	R
8	EF	1	DV	A		1	210	210	R
8	EF	1	DV	A		1	188	188	R

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
8	EF	1	1	DV	178	55.9	F	MT							
8	EF	1	1	DV	166	52.4	F	MT							
8	EF	1	1	DV	163	49.2	F	MT							
8	EF	1	1	DV	120	19.4	U	IM							
8	EF	1	1	DV	126	22.3	U	IM							
8	EF	1	1	DV	130	21.3	U	IM							
8	EF	1	1	DV	120	16.9	U	IM							
8	EF	1	1	DV	122	18.1	U	IM							
8	EF	1	1	DV	98	9.2	U	IM							
8	EF	1	1	DV	95	8.4	U	IM							
8	EF	1	1	DV	102	9.6	U	IM							
8	EF	1	1	DV	94	8.0	U	IM							
8	EF	1	1	DV	92	9.8	U	IM							
8	EF	1	1	DV	90	7.4	U	IM							
8	EF	1	1	DV	74	4.2	U	IM							
8	EF	1	1	DV	84	6.7	U	IM							
8	EF	1	1	DV	67	3.3	U	IM							
8	EF	1	2	DV	210	101.9	M	M							
8	EF	1	2	DV	152	35.9	U	IM							
8	EF	1	2	DV	158	41.5	U	IM							
8	EF	1	2	DV	97	9.9	U	IM							
8	EF	1	2	DV	108	12.9	U	IM							
8	EF	1	3	DV	188	78.6	F	MT							







# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 10.0      ILP Map #: 104A.061      ILP #: 1001

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: \_\_\_\_\_  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061      ILP #: 1001      Reach #: 10 -  
 Project ID: 19435      Lake/Stream: S      Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/09/15      To: 2009/09/15      Agency: C660      Crew: MS VR      Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
10	104A.061	9081	9	GPU	6.7	140	L	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
10	EF 1	1	2009/09/15	14:25	2009/09/15	14:55	
10	EF 1	2	2009/09/15	15:15	2009/09/15	15:45	
10	EF 1	3	2009/09/15	16:05	2009/09/15	16:30	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
10	EF 1	1	C	969	25.0	7.5	250	40	4	SR	LR24
10	EF 1	2	C	896	25.0	7.5	250	40	4	SR	LR24
10	EF 1	3	C	907	25.0	7.5	250	40	4	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
10	EF 1	1	DV	J		7	55 148	R	
10	EF 1	1	DV	A		8	144 180	R	
10	EF 1	2	DV	J		9	32 123	R	
10	EF 1	2	DV	A		1	164 164	R	
10	EF 1	3	DV	J		2	103 123	R	
10	EF 1	3	DV	A		2	168 190	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
10	EF	1	1	DV	180	59.0	F	MT							
10	EF	1	1	DV	179	63.7	M	M							
10	EF	1	1	DV	180	64.3	M	M							
10	EF	1	1	DV	180	54.5	F	MT							
10	EF	1	1	DV	180	64.2	F	MT							
10	EF	1	1	DV	168	49.9	M	M							
10	EF	1	1	DV	144	32.5	F	MT							
10	EF	1	1	DV	154	38.5	F	MT							
10	EF	1	1	DV	135	29.8	U	IM							
10	EF	1	1	DV	148	33.2	U	IM							
10	EF	1	1	DV	123	18.5	U	IM							
10	EF	1	1	DV	108	14.5	U	IM							
10	EF	1	1	DV	109	13.5	U	IM							
10	EF	1	1	DV	71	3.3	U	IM							
10	EF	1	1	DV	55	1.9	U	IM							
10	EF	1	2	DV	164	54.1	M	M							
10	EF	1	2	DV	118	19.9	U	IM							
10	EF	1	2	DV	123	17.7	U	IM							
10	EF	1	2	DV	114	15.2	U	IM							
10	EF	1	2	DV	111	14.5	U	IM							
10	EF	1	2	DV	84	5.9	U	IM							
10	EF	1	2	DV	93	8.3	U	IM							
10	EF	1	2	DV	49	1.2	U	IM							
10	EF	1	2	DV	52	1.5	U	IM							
10	EF	1	2	DV	32	.2	U	IM							
10	EF	1	3	DV	190	74.4	M	M							



# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 11.0      ILP Map #: 104A.061      ILP #: 1001

WATERBODY																
Gazetted Name:										Local:						
Project Code: 560-000000-00000-00000-0000-000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-000-000-000-000-000-000																
Waterbody ID:					ILP Map #: 104A.061				ILP #: 1001		Reach #: 11 -					
Project ID: 19435					Lake/Stream: S				Lake From Date:							
Fish Permit #:			Date: 2009/09/16			To: 2009/09/16			Agency: C660		Crew: MS VR		Resample: <input type="checkbox"/>			
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO		Temp	Cond	Turbid	Comment					
11	101A.061	9081	9			GPU	EF	1	4.9	102	T					
A. GEAR SETTINGS																
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment									
11	EF	1	2009/09/16	11:00	2009/09/16	11:25										
11	EF	1	2	2009/09/16	11:40	2009/09/16	11:55									
C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model					
11	EF	1	1	C	725	45.0	200	40	4	SR	LR24					
11	EF	1	2	C	702	45.0	200	40	4	SR	LR24					
FISH SUMMARY																
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment							
11	EF	1	DV	J		1	108	108	R							
11	EF	1	DV	J		1	151	151	R							
INDIVIDUAL FISH DATA																
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic	Roll #	Frame#	Comment	
								Str/Smpl#	Age	Str/Smpl#		Str/Smpl#				
11	EF	1	1	DV	108	14.3	U	U								
11	EF	1	2	DV	151	40.0	U	U								
COMMENTS																
Section			Comments													
WATERBODY			net broke, no third pass													





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 2.0 ILP Map # 104A.061 ILP # 1010

WATERBODY																
Gazetted Name:							Local:									
Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0																
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000																
Waterbody ID:				ILP Map #: 104A.061				ILP #: 1010		Reach #: 2 -						
Project ID: 19435				Lake/Stream: S				Lake From Date:								
Fish Permit #:			Date: 2009/08/15			To: 2009/08/15			Agency: C660		Crew: MS SM		Resample: <input type="checkbox"/>			
SITE / METHOD																
Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment						
2	104A.061	29	9			GPU	EF	1	7	147	C	pH 9.4 DS net 441446 6278330				
A. GEAR SETTINGS																
Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment									
2	EF	1	2009/08/15	08:30	2009/08/15	08:50										
2	EF	1	2009/08/15	09:40	2009/08/15	10:00										
2	EF	1	2009/08/15	10:30	2009/08/15	10:50										
C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model					
2	EF	1	1	C	697	50.0	3.9	300	60	4	SR	LR24				
2	EF	1	2	C	755	50.0	3.9	300	60	4	SR	LR24				
2	EF	1	3	C	659	50.0	3.9	300	60	4	SR	LR24				
FISH SUMMARY																
Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment							
2	EF	1	1	DV	NS	11	58 155	R								
2	EF	1	2	DV	NS	11	43 138	R								
2	EF	1	3	DV	NS	2	90 145	R								
INDIVIDUAL FISH DATA																
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
								FR	1	3		Str/Smpl#	Str/Smpl#			
2	EF	1	1	DV	155	42.8	U	U	FR	1	3					
2	EF	1	1	DV	145	33.7	U	U	FR	2	4					
2	EF	1	1	DV	94	10.0	U	IM								
2	EF	1	1	DV	89	6.7	U	IM								
2	EF	1	1	DV	81	5.1	U	IM								
2	EF	1	1	DV	76	4.8	U	IM	FR	3	2					
2	EF	1	1	DV	60	25.0	U	IM	FR	4	2					
2	EF	1	1	DV	61	2.6	U	IM								
2	EF	1	1	DV	59	2.3	U	IM								
2	EF	1	1	DV	58	1.9	U	IM								
2	EF	1	1	DV	60	1.8	U	IM								
2	EF	1	2	DV	138	27.6	U	IM								
2	EF	1	2	DV	106	14.4	U	IM	FR	5	2					
2	EF	1	2	DV	91	8.4	U	IM								
2	EF	1	2	DV	75	5.1	U	IM	FR	6	2					
2	EF	1	2	DV	84	6.5	U	IM								
2	EF	1	2	DV	55	1.6	U	IM								
2	EF	1	2	DV	70	3.7	U	IM								
2	EF	1	2	DV	49	1.4	U	IM								
2	EF	1	2	DV	48	1.2	U	IM								
2	EF	1	2	DV	56	1.8	U	IM								
2	EF	1	2	DV	43	.8	U	IM								
2	EF	1	3	DV	145	28.9	U	U								
2	EF	1	3	DV	90	8.1	U	IM								
COMMENTS																
Section				Comments												
WATERBODY				ww 3.4, 4.1, 4.2												





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 1.0 ILP Map #: 104A.061 ILP #: 1016

**WATERBODY**

Gazetted Name: \_\_\_\_\_ Local: \_\_\_\_\_  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061 ILP #: 1016 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/10 To: 2009/08/10 Agency: C660 Crew: DF TS Resample:

**SITE / METHOD**

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
1	104A.061	13	9			GPU EF 1	3.9	105	C	pH 7.36

**A. GEAR SETTINGS**

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/08/10	09:35	2009/08/10	09:50	
1	EF 1	2	2009/08/10	10:05	2009/08/10	10:20	
1	EF 1	3	2009/08/10	10:35	2009/08/10	11:00	

**C. ELECTROFISHER SPECIFICATIONS**

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF 1	1	1	C	594	50.0	2.0	100	30	4	SR LR24
1	EF 1	2	2	C	479	50.0	2.0	350	30	4	SR LR24
1	EF 1	3	3	C	463	50.0	2.0	350	30	4	SR LR24

**FISH SUMMARY**

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF 1	1	NFC			0			
1	EF 1	2	NFC			0			
1	EF 1	3	NFC			0			





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 1.0      ILP Map #: 104A.061      ILP #: 1019

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: \_\_\_\_\_  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061      ILP #: 1019      Reach #: 1 -  
 Project ID: 19435      Lake/Stream: S      Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/08      To: 2009/08/08      Agency: C660      Crew: DF JS      Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
1	104A.061	9	9			GPU EF 1	7.6	59	C	pH 7.01

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/08/08	09:30	2009/08/08	09:50	
1	EF 1	2	2009/08/08	10:00	2009/08/08	10:30	
1	EF 1	3	2009/08/08	10:45	2009/08/08	11:15	
1	EF 1	4	2009/08/08	11:20	2009/08/08	11:50	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF 1	1	1	C	456	50.0	2.4	400	30	4	SR LR24
1	EF 1	2	2	C	512	50.0	2.4	400	30	4	SR LR24
1	EF 1	3	3	C	548	50.0	2.4	400	30	4	SR LR24
1	EF 1	4	4	C	580	50.0	2.4	400	30	4	SR LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF 1	1	1	NFC		0			
1	EF 1	2	2	DV	J	1	168	168	R
1	EF 1	3	3	DV	J	2	133	154	R
1	EF 1	4	4	NFC		0			

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age			Str/Smpl#				
1	EF 1	2	DV	168	39.4	U	U	FR	1	4						
1	EF 1	3	DV	154	35.5	U	U	FR	2	3						
1	EF 1	3	DV	133	21.1	U	U	FR	3	3						





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 1.0      ILP Map #: 104A.061      ILP #: 1023  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 Local:  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: 104A.061      ILP #: 1023      Reach #: 1 -  
 Project ID: 19435      Lake/Stream: S      Lake From Date:

Fish Permit #:      Date: 2009/08/10      To: 2009/08/10      Agency: C660      Crew: DF TS      Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
1	104A.061	15	9			GPU EF 1	6.2	26	C	pH 6.68

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/08/10	14:50	2009/08/10	15:40	
1	EF 1	2	2009/08/10	16:10	2009/08/10	16:45	
1	EF 1	3	2009/08/10	17:00	2009/08/10	17:25	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF 1	1	C	536	50.0	1.0	990	30	4	SR	LR24
1	EF 1	2	C	476	50.0	1.0	900	30	4	SR	LR24
1	EF 1	3	C	450	50.0	1.0	900	30	4	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF 1	1	DV	F		43	24 59	R	
1	EF 1	1	DV	J		4	87 99	R	
1	EF 1	2	DV	F		18	26 35	R	
1	EF 1	3	DV	F		13	24 34	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF	1	1	DV	98		U	IM							
1	EF	1	1	DV	92		U	IM							
1	EF	1	1	DV	87		U	IM							
1	EF	1	1	DV	99		U	IM							
1	EF	1	1	DV	31		U	IM							
1	EF	1	1	DV	31		U	IM							
1	EF	1	1	DV	31		U	IM							
1	EF	1	1	DV	29		U	IM							
1	EF	1	1	DV	29		U	IM							
1	EF	1	1	DV	32		U	IM							
1	EF	1	1	DV	28		U	IM							
1	EF	1	1	DV	24		U	IM							
1	EF	1	1	DV	28		U	IM							
1	EF	1	1	DV	30		U	IM							
1	EF	1	1	DV	29		U	IM							
1	EF	1	1	DV	32		U	IM							
1	EF	1	1	DV	28		U	IM							
1	EF	1	1	DV	31		U	IM							
1	EF	1	1	DV	26		U	IM							
1	EF	1	1	DV	31		U	IM							
1	EF	1	1	DV	29		U	IM							
1	EF	1	1	DV	27		U	IM							
1	EF	1	1	DV	29		U	IM							
1	EF	1	1	DV	32		U	IM							
1	EF	1	1	DV	27		U	IM							
1	EF	1	1	DV	30		U	IM							
1	EF	1	1	DV	32		U	IM							
1	EF	1	1	DV	59		U	IM							

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0 ILP Map # 104A.061 ILP # 1023

INDIVIDUAL FISH DATA																	
Site#	MTD/NO		H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
									Str/Smpl#	Age	Str/Smpl#						
1	EF	1	1	DV	31		U	IM									
1	EF	1	1	DV	30		U	IM									
1	EF	1	1	DV	33		U	IM									
1	EF	1	1	DV	29		U	IM									
1	EF	1	1	DV	29		U	IM									
1	EF	1	1	DV	52		U	IM									
1	EF	1	1	DV	31		U	IM									
1	EF	1	1	DV	31		U	IM									
1	EF	1	1	DV	26		U	IM									
1	EF	1	1	DV	28		U	IM									
1	EF	1	1	DV	31		U	IM									
1	EF	1	1	DV	28		U	IM									
1	EF	1	1	DV	32		U	IM									
1	EF	1	1	DV	28		U	IM									
1	EF	1	1	DV	30		U	IM									
1	EF	1	1	DV	32		U	IM									
1	EF	1	1	DV	30		U	IM									
1	EF	1	1	DV	29		U	IM									
1	EF	1	1	DV	27		U	IM									
1	EF	1	2	DV	27		U	IM									
1	EF	1	2	DV	30		U	IM									
1	EF	1	2	DV	31		U	IM									
1	EF	1	2	DV	30		U	IM									
1	EF	1	2	DV	26		U	IM									
1	EF	1	2	DV	33		U	IM									
1	EF	1	2	DV	29		U	IM									
1	EF	1	2	DV	30		U	IM									
1	EF	1	2	DV	30		U	IM									
1	EF	1	2	DV	27		U	IM									
1	EF	1	2	DV	31		U	IM									
1	EF	1	2	DV	32		U	IM									
1	EF	1	2	DV	31		U	IM									
1	EF	1	2	DV	30		U	IM									
1	EF	1	2	DV	30		U	IM									
1	EF	1	2	DV	31		U	IM									
1	EF	1	2	DV	35		U	IM									
1	EF	1	2	DV	31		U	IM									
1	EF	1	3	DV	32		U	IM									
1	EF	1	3	DV	29		U	IM									
1	EF	1	3	DV	31		U	IM									
1	EF	1	3	DV	30		U	IM									
1	EF	1	3	DV	28		U	IM									
1	EF	1	3	DV	29		U	IM									
1	EF	1	3	DV	34		U	IM									
1	EF	1	3	DV	31		U	IM									
1	EF	1	3	DV	29		U	IM									
1	EF	1	3	DV	31		U	IM									
1	EF	1	3	DV	26		U	IM									
1	EF	1	3	DV	29		U	IM									
1	EF	1	3	DV	24		U	IM									

**COMMENTS**

Section	Comments
WATERBODY	wetted width 0.93, 1.26, 2.21, 0.79, 1.27, 0.92

















# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 1.0      ILP Map # 104A.061      ILP # 1050

INDIVIDUAL FISH DATA																	
Site#	MTD/NO		H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
									Str/Smpl#	Age	Str/Smpl#						
1	EF	1	3	DV	100	9.0	U	U									
1	EF	1	3	DV	96	8.2	U	U									



# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 2.0 ILP Map # 104A.061 ILP # 1050

INDIVIDUAL FISH DATA																	
Site#	MTD/NO		H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
									Str/Smpl#	Age	Str/Smpl#						
2	EF	1	2	DV	108	12.3	U	U									
2	EF	1	2	DV	75	4.1	U	U									
2	EF	1	2	DV	119	17.5	U	U									
2	EF	1	2	DV	98	9.4	U	U									
2	EF	1	2	DV	99	8.3	U	U									
2	EF	1	2	DV	79	4.7	U	U									
2	EF	1	2	DV	78	4.5	U	U									
2	EF	1	2	DV	97	9.1	U	U									
2	EF	1	2	DV	75	4.5	U	U									
2	EF	1	2	DV	76	4.3	U	U									
2	EF	1	2	DV	74	4.2	U	U									
2	EF	1	2	DV	36	.3	U	U									
2	EF	1	3	DV	75	4.6	U	U									
2	EF	1	3	DV	119	15.2	U	U									
2	EF	1	3	DV	95	10.2	U	U									
2	EF	1	3	DV	176	53.3	U	U									
2	EF	1	3	DV	106	11.0	U	U									
2	EF	1	3	DV	125	19.2	U	U									
2	EF	1	3	DV	94	7.5	U	U									
2	EF	1	3	DV	122	17.9	U	U									
2	EF	1	3	DV	106	11.0	U	U									
2	EF	1	3	DV	90	7.4	U	U									
2	EF	1	3	DV	109	12.1	U	U									
2	EF	1	3	DV	74	4.3	U	U									
2	EF	1	3	DV	74	4.7	U	U									
2	EF	1	3	DV	63	2.7	U	U									
2	EF	1	3	DV	75	4.8	U	U									
COMMENTS																	
Section									Comments								
WATERBODY									ww 3.9, 4.1, 4.5								







# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach #: 4.0 ILP Map #: 104A.061 ILP #: 1050  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 Waterbody ID: ILP Map #: 104A.061 ILP #: 1050 Reach #: 4 -  
 Project ID: 19435 Lake/Stream: S Lake From Date:

WATERBODY											
Gazetted Name:						Local:					
Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0											
WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-0											
Waterbody ID:						ILP Map #: 104A.061		ILP #: 1050		Reach #: 4 -	
Project ID: 19435						Lake/Stream: S			Lake From Date:		

Fish Permit #: \_\_\_\_\_ Date: 2009/08/13 To: 2009/08/13 Agency: C660 Crew: DF TS Resample:

### SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
4	104A.061	18	9			GPU EF 1	2.2	131	C	pH 7.33

### A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
4	EF 1	1	2009/08/13	08:50	2009/08/13	09:20	
4	EF 1	2	2009/08/13	09:45	2009/08/13	10:05	
4	EF 1	3	2009/08/13	10:20	2009/08/13	10:45	

### C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
4	EF 1	1	1	C	565	25.0	4.4	335	30	4	SR LR24
4	EF 1	2	2	C	418	25.0	4.4	335	30	4	SR LR24
4	EF 1	3	3	C	401	25.0	4.4	335	30	4	SR LR24

### FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
4	EF 1	1	DV	F		1	28 28	R	
4	EF 1	1	DV	J		6	86 128	R	
4	EF 1	2	DV	F		2	38 41	R	
4	EF 1	2	DV	J		6	100 150	R	
4	EF 1	3	DV	J		3	116 154	R	

### INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
4	EF 1	1	DV	86	5.8	U	IM								
4	EF 1	1	DV	110	15.0	U	IM	FR	1						
4	EF 1	1	DV	128	24.5	U	IM								
4	EF 1	1	DV	104	12.7	U	IM	FR	2						
4	EF 1	1	DV	117	13.8	U	IM								
4	EF 1	1	DV	122	16.7	U	IM	FR	3						
4	EF 1	1	DV	28	.4	U	IM								
4	EF 1	2	DV	150	37.1	U	IM	FR	4						
4	EF 1	2	DV	111	15.6	U	IM								
4	EF 1	2	DV	108	11.6	U	IM	FR	5						
4	EF 1	2	DV	100	8.9	U	IM								
4	EF 1	2	DV	111	13.2	U	IM	FR	6						
4	EF 1	2	DV	100	9.2	U	IM								
4	EF 1	2	DV	41	.6	U	IM								
4	EF 1	2	DV	38	.5	U	IM								
4	EF 1	3	DV	154	41.3	U	IM	FR	7						
4	EF 1	3	DV	136	23.2	U	IM								
4	EF 1	3	DV	116	15.5	U	IM	FR	8						



























# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 1.0 ILP Map # 104A.061 ILP # 1062

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: \_\_\_\_\_  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061 ILP #: 1062 Reach #: 1 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/13 To: 2009/08/13 Agency: C660 Crew: MS NM Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
1	104A.061	25	9	GPU	7	120	C	pH 8.8 DS net 445092 627506

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/08/13	10:00	2009/08/13	10:40	
1	EF 1	2	2009/08/13	11:10	2009/08/13	11:30	
1	EF 1	3	2009/08/13	11:45	2009/08/13	12:00	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF 1	1	C	600	50.0	1.0	300	60	4	SR	LR24
1	EF 1	2	C	515	50.0	1.0	300	60	4	SR	LR24
1	EF 1	3	C	506	50.0	1.0	300	60	4	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF 1	1	DV	J		15	67 138	R	
1	EF 1	2	DV	J		5	74 107	R	
1	EF 1	3	DV	J		1	68 68	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str	Smpl#		Str	Smpl#			
1	EF 1	1	DV	138	33.2	U	U	FR	1	3					
1	EF 1	1	DV	76	4.9	U	IM	FR	2	2					
1	EF 1	1	DV	117	17.3	U	IM	FR	3	2					
1	EF 1	1	DV	126	20.6	U	IM								
1	EF 1	1	DV	114	17.2	U	IM								
1	EF 1	1	DV	93	8.0	U	IM								
1	EF 1	1	DV	96	8.2	U	IM								
1	EF 1	1	DV	83	7.1	U	IM								
1	EF 1	1	DV	71	4.9	U	IM	FR	4	UA					
1	EF 1	1	DV	95	8.7	U	IM								
1	EF 1	1	DV	82	5.8	U	IM	FR	5	2					
1	EF 1	1	DV	74	4.4	U	IM	FR	6	2					
1	EF 1	1	DV	80	4.9	U	IM								
1	EF 1	1	DV	80	5.4	U	IM								
1	EF 1	1	DV	67	3.2	U	IM								
1	EF 1	2	DV	106	11.9	U	IM								
1	EF 1	2	DV	107	12.9	U	IM								
1	EF 1	2	DV	93	9.1	U	IM								
1	EF 1	2	DV	76	4.7	U	IM								
1	EF 1	2	DV	74	4.6	U	IM								
1	EF 1	3	DV	68	3.8	U	IM								

## COMMENTS

Section	Comments
WATERBODY	wetted width not available. Entered 1m.











# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Reach # 3.0      ILP Map # 104A.061      ILP # 1082

INDIVIDUAL FISH DATA																	
Site#	MTD/NO		H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
									Str/Smpl#	Age	Str/Smpl#						
3	EF	1	4	DV	64	2.7	U	IM									
3	EF	1	4	DV	63	2.4	U	IM									
3	EF	1	4	DV	56	1.7	U	IM									
3	EF	1	4	DV	62	1.9	U	IM									
3	EF	1	4	DV	49	1.1	U	IM									
COMMENTS																	
Section				Comments													
WATERBODY				ww 2.0, 1.8, 2.1													







# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000-000  
 Reach #: 1.0      ILP Map #: 104A.061      ILP #: 1150

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: \_\_\_\_\_  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-0  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061      ILP #: 1150      Reach #: 1 -  
 Project ID: 19435      Lake/Stream: S      Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/08      To: 2009/08/08      Agency: C660      Crew: CB JW      Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
1	104A.061	40021	9	GPU EF 1	11.4	70	C	

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
1	EF 1	1	2009/08/08	11:00	2009/08/08	11:40	
1	EF 1	2	2009/08/08	12:00	2009/08/08	12:45	
1	EF 1	3	2009/08/08	13:00	2009/08/08	13:30	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
1	EF 1	1	C	500	50.0	1.3	435	30	4	SR	LR24
1	EF 1	2	C	400	50.0	1.3	435	30	4	SR	LR24
1	EF 1	3	C	400	50.0	1.3	435	30	4	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
1	EF 1	1	DV	J		5	93 122	R	
1	EF 1	2	DV	J		3	94 116	R	
1	EF 1	3	DV	J		1	116 116	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
1	EF 1	1	DV	107	13.4	U	U	FR	1	3					
1	EF 1	1	DV	122	19.7	U	U	FR	2	4					
1	EF 1	1	DV	94	7.4	U	U								
1	EF 1	1	DV	105	11.7	U	U	FR	3	3					
1	EF 1	1	DV	93	8.4	U	U								
1	EF 1	2	DV	115	16.2	U	U	FR	4	2					
1	EF 1	2	DV	116	15.0	U	U	FR	5	2					
1	EF 1	2	DV	94	7.8	U	U								
1	EF 1	3	DV	116	16.2	U	U	FR	6	3					

# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 2.0 ILP Map # 104A.061 ILP # 1150

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: \_\_\_\_\_  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104A.061 ILP #: 1150 Reach #: 2 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/10 To: 2009/08/10 Agency: C660 Crew: MS NM Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turbid	Comment
2	104A.061	21	9			GPU EF 1	10	87	C	pH 8.8 US net 443123 6276545

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
2	EF 1	1	2009/08/10	14:20	2009/08/10	14:45	
2	EF 1	2	2009/08/10	15:20	2009/08/10	15:45	
2	EF 1	3	2009/08/10	16:00	2009/08/10	16:25	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
2	EF 1	1	C	548	50.0	1.2	250	60	4	SR	LR24
2	EF 1	2	C	574	50.0	1.2	250	60	4	SR	LR24
2	EF 1	3	C	522	50.0	1.2	250	60	4	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
2	EF 1	1	DV	J		10	73 123	R	
2	EF 1	2	DV	J		8	76 100	R	
2	EF 1	3	DV	J		2	80 85	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								FR	Str/Smpl#		Str/Smpl#	Age			
2	EF 1	1	DV	123	18.7	U	IM	FR	1	4					
2	EF 1	1	DV	110	14.1	U	IM	FR	2	2					
2	EF 1	1	DV	86	6.1	U	IM								
2	EF 1	1	DV	86	5.9	U	IM								
2	EF 1	1	DV	79	5.6	U	IM								
2	EF 1	1	DV	84	5.5	U	IM								
2	EF 1	1	DV	73	4.3	U	IM								
2	EF 1	1	DV	76	5.2	U	IM								
2	EF 1	1	DV	84	5.4	U	IM								
2	EF 1	1	DV	76	4.3	U	IM								
2	EF 1	2	DV	100	11.4	U	IM								
2	EF 1	2	DV	77	5.1	U	IM								
2	EF 1	2	DV	82	4.9	U	IM								
2	EF 1	2	DV	80	4.9	U	IM								
2	EF 1	2	DV	89	6.3	U	IM								
2	EF 1	2	DV	89	6.4	U	IM								
2	EF 1	2	DV	90	7.3	U	IM								
2	EF 1	2	DV	76	4.5	U	IM								
2	EF 1	3	DV	85	5.6	U	IM								
2	EF 1	3	DV	80	4.7	U	IM								

## COMMENTS

Section	Comments
WATERBODY	WW 1.7, 1.0, 0.8, 1.4





# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 2.0 ILP Map # 104B.070 ILP # 5001

## WATERBODY

Gazetted Name: \_\_\_\_\_ Local: \_\_\_\_\_  
 Project Code: 560-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 WS Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000  
 Waterbody ID: \_\_\_\_\_ ILP Map #: 104B.070 ILP #: 5001 Reach #: 2 -  
 Project ID: 19435 Lake/Stream: S Lake From Date: \_\_\_\_\_

Fish Permit #: \_\_\_\_\_ Date: 2009/08/14 To: 2009/08/14 Agency: C660 Crew: DF TS Resample:

## SITE / METHOD

Site#	NID Map	NID #	UTM:Zone/East/North/Mthd	MTD/NO	Temp	Cond	Turbid	Comment
2	104B.070	21	9	GPU EF 1	11	172	C	pH 8.35

## A. GEAR SETTINGS

Site#	MTD/NO	H/P	Date In	Time In	Date Out	Time Out	Comment
2	EF 1	1	2009/08/14	13:30	2009/08/14	14:05	
2	EF 1	2	2009/08/14	15:00	2009/08/14	15:30	
2	EF 1	3	2009/08/14	16:00	2009/08/14	16:45	

## C. ELECTROFISHER SPECIFICATIONS

Site#	MTD/NO	H/P	Encl	Sec	Length	Width	Voltage	Frequency	Pulse	Make	Model
2	EF 1	1	C	812	100.0	4.1	350	30	4	SR	LR24
2	EF 1	2	C	748	100.0	4.1	400	30	4	SR	LR24
2	EF 1	3	C	782	100.0	4.1	400	30	4	SR	LR24

## FISH SUMMARY

Site#	MTD/NO	H/P	Species	Stage	Age	Total #	Lgth (Min/Max)	FishAct	Comment
2	EF 1	1	DV	J		12	91 199	R	
2	EF 1	2	DV	J		15	104 199	R	
2	EF 1	3	DV	J		18	89 182	R	

## INDIVIDUAL FISH DATA

Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	Age		Vch#	Genetic		Roll #	Frame#	Comment
								Str/Smpl#	Age		Str/Smpl#				
2	EF 1	1	DV	122	18.1	U	U	FR	1		TP	1			
2	EF 1	1	DV	175	61.2	U	U	FR	2		TP	2			
2	EF 1	1	DV	191	79.8	U	U	FR	3		TP	3			
2	EF 1	1	DV	181	52.4	U	U	FR	4		TP	4			
2	EF 1	1	DV	186	58.4	U	U	FR	5		TP	5			
2	EF 1	1	DV	198	78.8	U	U	FR	6		TP	6			
2	EF 1	1	DV	182	70.0	U	U	FR	7		TP	7			
2	EF 1	1	DV	199	79.6	U	U	FR	8		TP	8			
2	EF 1	1	DV	113	14.2	U	U	FR	9		TP	9			
2	EF 1	1	DV	124	19.3	U	U	FR	10		TP	10			
2	EF 1	1	DV	91	6.9	U	U								
2	EF 1	1	DV	106	14.2	U	U	FR	11		TP	11			
2	EF 1	2	DV	138	25.0	U	U	FR	12		TP	12			
2	EF 1	2	DV	117	13.2	U	U	FR	13		TP	13			
2	EF 1	2	DV	161	39.3	U	U	FR	14		TP	14			
2	EF 1	2	DV	199	79.2	U	U	FR	15		TP	15			
2	EF 1	2	DV	186	59.6	U	U	FR	16		TP	16			
2	EF 1	2	DV	104	10.9	U	U	FR	17		TP	17			
2	EF 1	2	DV	189	68.1	U	U	FR	18		TP	18			
2	EF 1	2	DV	179	54.5	U	U	FR	19		TP	19			
2	EF 1	2	DV	150	28.8	U	U	FR	20		TP	20			
2	EF 1	2	DV	185	59.8	U	U	FR	21		TP	21			
2	EF 1	2	DV	157	35.8	U	U	FR	22		TP	22			
2	EF 1	2	DV	104	9.8	U	U								
2	EF 1	2	DV	197	74.5	U	U	FR	23		TP	23			
2	EF 1	2	DV	146	30.4	U	U	FR	24		TP	24			
2	EF 1	2	DV	191	69.0	U	U	FR	25		TP	25			
2	EF 1	3	DV	166	38.8	U	U				TP	26			
2	EF 1	3	DV	139	29.9	U	U				TP	27			



# FDIS Fish Card

Watershed Code: 000-000000-00000-00000-0000-0000-000-000-000-000-000-000 Reach # 2.0 ILP Map # 104B.070 ILP # 5001

INDIVIDUAL FISH DATA																	
Site#	MTD/NO		H/P	Species	Length	Weight	Sex	Mat	Age			Vch#	Genetic		Roll #	Frame#	Comment
									Str/Smpl#	Age	Str/Smpl#						
2	EF	1	3	DV	169	47.3	U	U					TP	28			
2	EF	1	3	DV	205	85.9	U	U					TP	29			
2	EF	1	3	DV	132	19.4	U	U					TP	30			
2	EF	1	3	DV	131	23.1	U	U									
2	EF	1	3	DV	112	15.9	U	U									
2	EF	1	3	DV	123	19.2	U	U									
2	EF	1	3	DV	137	30.7	U	U									
2	EF	1	3	DV	134	24.6	U	U									
2	EF	1	3	DV	128	16.6	U	U									
2	EF	1	3	DV	182	39.8	U	U									
2	EF	1	3	DV	89	5.7	U	U									
2	EF	1	3	DV	99	8.2	U	U									
2	EF	1	3	DV	125	17.4	U	U									
2	EF	1	3	DV	115	12.0	U	U									
2	EF	1	3	DV	122	17.6	U	U									
2	EF	1	3	DV	110	7.8	U	U									
COMMENTS																	
Section					Comments												
WATERBODY					ww 3.1, 2.9, 3.5, 3.4, 5.95, 6.8, 2.8												

## **Appendix 6.1-2**

### Biological Fish Data From Stream Sites

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Compensation	TEC-W6	5546	DV	54	0.75	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	CO	49	0.99	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	52	1.44	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	52	1.3	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	CO	53	1.44	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	77	4.58	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	41	0.73	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	42	0.97	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	36	1.21	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	49	1.5	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	CO	51	2.04	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	48	1.47	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	44	1.45	U	Juv.	-	-	-	-	-
Compensation	TEC-W6	5546	DV	47	1.7	U	Juv.	-	-	-	-	-
Compensation	TEC-W7	5552	CH	57	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	CH	55	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	CH	60	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	CH	57	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	DV	62	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	CO	41	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	CO	50	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	CO	37	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	CH	50	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	DV	53	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	DV	110	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5552	DV	100	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5551	CO	43	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5551	CH	63	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5551	CH	70	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5551	CH	52	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5551	CH	55	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5551	CH	54	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5551	CO	38	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5551	CH	59	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	48	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	56	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	39	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	DV	52	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	DV	55	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	45	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	41	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	58	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	38	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	35	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	52	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	DV	50	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	36	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	42	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	DV	54	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	36	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	50	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	40	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	DV	55	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	50	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	36	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	47	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	35	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	53	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	35	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	35	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	42	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	45	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	50	-	U	U	-	-	-	-	-
Compensation	TEC-W7	5550	CO	44	-	U	U	-	-	-	-	-
Compensation	TEC-W6	5553	CO	38	0.56	U	U	-	-	-	-	-
Compensation	TEC-W6	5553	CO	55	1.76	U	U	-	-	-	-	-
Compensation	TEC-W6	5553	CO	40	0.77	U	U	-	-	-	-	-
Compensation	TRC-W3	9061	DV	99	8.93	U	U	-	-	-	-	-
Compensation	TRC-W3	9061	DV	55	1.42	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Compensation	TRC-W3	9061	DV	60	1.93	U	U	-	-	-	-	-
Compensation	TRC-W3	9061	DV	62	2.19	U	U	-	-	-	-	-
Compensation	TRC-W3	9061	DV	55	1.38	U	U	-	-	-	-	-
Compensation	TRC-W3	9061	DV	125	19.72	U	U	-	-	-	-	-
Compensation	TRC-W2	WL10	DV	88	6.39	U	Juv.	-	-	-	-	-
Compensation	TRC-W2	WL10	DV	39	0.59	U	Fry	-	-	-	-	-
Wetland	TEC-W5	5546	CO	49	0.99	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	CO	53	1.44	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	CO	51	2.04	U	Juv.	-	-	-	-	-
Wetland	TEC-W4	5548	CO	42	0.77	U	Juv.	-	-	-	-	-
Wetland	TEC-W4	5548	CO	55	1.69	U	Juv.	-	-	-	-	-
Wetland	TEC-W4	5548	CO	44	1.1	U	Juv.	-	-	-	-	-
Wetland	TEC-W4	5548	CO	59	1.8	U	Juv.	-	-	-	-	-
Wetland	TEC-W4	5548	CO	47	1.15	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5545	CO	55	1.77	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	102	11.33	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	60	2.57	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	71	3.58	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	56	2.14	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	56	2.35	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	69	4.98	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	63	4.29	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	50	3.12	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	71	6.49	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	53	4.49	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	48	3.89	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	65	3.94	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	69	6.25	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	65	6.1	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	72	6.71	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	CO	66	5.31	-	-	-	-	-	-	-
Wetland	TEC-W5	5546	DV	54	0.75	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	52	1.44	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	52	1.3	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	77	4.58	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	41	0.73	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	42	0.97	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	36	1.21	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	49	1.5	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	48	1.47	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	44	1.45	U	Juv.	-	-	-	-	-
Wetland	TEC-W5	5546	DV	47	1.7	U	Juv.	-	-	-	-	-
Wetland	TEC-W4	5548	DV	50	1.17	U	Juv.	-	-	-	-	-
Wetland	TEC-W4	5548	DV	50	1.29	U	Juv.	-	-	-	-	-
Wetland	TEC-W4	5548	DV	131	22.11	U	Juv.	FR/SC	8	3	-	-
Wetland	TEC-W5	5545	DV	104	12.21	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	96	8.22	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	45	0.77	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	52	1.96	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	50	1.4	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	170	51.29	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	61	3.01	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	167	45.09	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	179	59.05	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	78	7.9	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	46	3.74	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	43	3.58	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	DV	53	4.28	-	-	-	-	-	-	-
Wetland	TEC-W5	5545	RB	81	8.74	-	-	-	-	-	-	-
Sample Site	1	5544	DV	140	8	U	IM	FR	1	4	FR	1
Sample Site	1	5544	DV	155	32.3	U	IM	FR	2	3	-	-
Sample Site	1	5544	DV	143	24.6	U	IM	FR	3	3	-	-
Sample Site	1	5544	DV	135	23.6	U	IM	FR	4	3	-	-
Sample Site	1	5544	DV	141	25	U	IM	FR	5	3	-	-
Sample Site	1	5544	DV	133	26.2	U	IM	FR	6	3	-	-
Sample Site	1	5544	DV	124	-	U	IM	FR	7	UA	-	-
Sample Site	1	5544	DV	143	24.1	U	IM	FR	8	UA	-	-
Sample Site	1	5544	DV	140	29.2	U	IM	FR	9	UA	-	-
Sample Site	1	5544	DV	154	38.3	U	IM	FR	10	3	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	5544	DV	103	11	U	IM	FR	11	2	-	-
Sample Site	1	5544	DV	133	20.6	U	IM	FR	12	3	-	-
Sample Site	1	5544	DV	89	7.2	U	IM	-	-	-	-	-
Sample Site	1	5544	DV	141	26.1	U	IM	FR	14	3	-	-
Sample Site	1	5544	DV	146	28.3	U	IM	FR	15	3	-	-
Sample Site	1	5544	DV	122	15.4	U	IM	FR	16	3	-	-
Sample Site	1	5544	DV	134	22.7	U	IM	FR	17	3	-	-
Sample Site	25	6008	BT	350	-	U	U	-	-	-	-	-
Sample Site	25	6008	RB	154	34.6	U	U	FR	1	3	-	-
Sample Site	25	6008	RB	142	33.9	U	U	FR	2	2	-	-
Sample Site	25	6008	RB	149	28.5	U	U	FR	3	5	-	-
Sample Site	25	6008	RB	149	28.7	U	U	FR	4	4	-	-
Sample Site	25	6008	RB	141	26.7	U	U	FR	5	3	-	-
Sample Site	25	6008	RB	109	13	U	U	FR	6	2	-	-
Sample Site	25	6008	DV	112	11.9	U	U	FR	7	3	-	-
Sample Site	25	6008	BT	161	35.4	U	U	FR	8	3	-	-
Sample Site	25	6008	RB	122	17.4	U	U	FR	9	3	-	-
Sample Site	25	6008	RB	104	12.8	U	U	FR	10	3	-	-
Sample Site	25	6008	BT	139	24	U	U	FR	11	3	-	-
Sample Site	25	6008	RB	111	16	U	U	FR	12	3	-	-
Sample Site	25	6008	MW	111	12.9	U	U	FR	13	2	-	-
Sample Site	25	6008	MW	100	16.7	U	U	FR	14	2	-	-
Sample Site	25	6008	RB	89	6.2	U	U	-	-	-	-	-
Sample Site	1	5543	MW	150	37.9	U	U	FR	1	3	-	-
Sample Site	1	5543	DV	120	17	U	U	FR	2	3	FR	2
Sample Site	1	5543	MW	131	22.9	U	U	FR	3	2	-	-
Sample Site	1	5543	MW	145	31.1	U	U	FR	4	3	-	-
Sample Site	1	5543	MW	94	7.6	U	U	FR	5	NS	-	-
Sample Site	1	5543	RB	140	29.9	U	U	FR	6	3	FR	6
Sample Site	1	5543	RB	144	31.9	U	U	FR	7	3	FR	7
Sample Site	1	5543	DV	125	17	U	U	FR	8	3	FR	8
Sample Site	1	5543	DV	82	5.4	U	U	-	-	-	FR	9
Sample Site	1	5543	MW	89	6.3	U	U	-	-	-	-	-
Sample Site	1	5001	DV	122	9	U	U	FR	1	1	TP	1
Sample Site	1	5001	DV	172	45	U	U	FR	2	UA	TP	2
Sample Site	1	5001	DV	182	37	U	U	FR	3	3	TP	3
Sample Site	1	5001	DV	140	18	U	U	FR	4	3	TP	4
Sample Site	1	5001	DV	154	38	U	U	FR	5	4	TP	5
Sample Site	1	5001	DV	183	37	U	U	FR	6	4	TP	6
Sample Site	1	5001	DV	179	45	U	U	FR	7	5	TP	7
Sample Site	1	5001	DV	200	58	U	U	FR	8	4	TP	8
Sample Site	1	5001	DV	152	20	U	U	FR	9	-	TP	9
Sample Site	1	5001	DV	161	32	U	U	FR	10	4	TP	10
Sample Site	1	5001	DV	112	12	U	U	FR	11	3	TP	11
Sample Site	1	5001	DV	101	9	U	U	FR	12	3	TP	12
Sample Site	1	6800	RB	182	71.7	U	U	FR	1	3	-	-
Sample Site	1	6800	RB	146	33.9	U	U	FR	2	3	-	-
Sample Site	1	6800	RB	139	27.9	U	U	FR	3	3	-	-
Sample Site	1	6800	RB	141	26.5	U	U	FR	4	3	-	-
Sample Site	1	6800	RB	96	9.1	U	U	FR	5	2	-	-
Sample Site	1	6800	DV	119	12.8	U	U	FR	6	3	TP	1
Sample Site	1	6800	RB	99	12.6	U	U	FR	7	3	-	-
Sample Site	1	6800	CH	77	4.5	U	U	-	-	-	-	-
Sample Site	1	6800	CH	81	8.1	U	U	-	-	-	-	-
Sample Site	1	6800	CH	79	5.4	U	U	-	-	-	-	-
Sample Site	1	6800	RB	101	11.5	U	U	FR	8	3	-	-
Sample Site	1	6800	RB	101	11.4	U	U	FR	9	2	-	-
Sample Site	1	6800	DV	96	7.4	U	U	FR	10	2	-	-
Sample Site	1	6800	CH	71	4.2	U	U	-	-	-	-	-
Sample Site	1	6800	CH	81	6.6	U	U	-	-	-	-	-
Sample Site	1	6800	RB	52	1.9	U	U	-	-	-	-	-
Sample Site	1	6800	RB	47	1.9	U	U	-	-	-	-	-
Sample Site	1	6800	RB	46	1.2	U	U	-	-	-	-	-
Sample Site	1	6800	RB	53	1.4	U	U	-	-	-	-	-
Sample Site	1	6800	RB	49	1.5	U	U	-	-	-	-	-
Sample Site	1	6800	RB	46	0.8	U	U	-	-	-	-	-
Sample Site	1	6800	RB	44	0.8	U	U	-	-	-	-	-
Sample Site	1	6800	RB	36	0.5	U	U	-	-	-	-	-
Sample Site	1	6800	RB	37	0.6	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	6800	RB	36	0.5	U	U	-	-	-	-	-
Sample Site	1	6800	RB	37	0.4	U	U	-	-	-	-	-
Sample Site	1	6800	RB	50	0.4	U	U	-	-	-	-	-
Sample Site	1	6800	RB	46	1.2	U	U	-	-	-	-	-
Sample Site	1	6800	RB	39	0.5	U	U	-	-	-	-	-
Sample Site	1	6800	RB	50	1.3	U	U	-	-	-	-	-
Sample Site	1	6800	RB	40	0.7	U	U	-	-	-	-	-
Sample Site	1	6800	RB	39	0.6	U	U	-	-	-	-	-
Sample Site	1	6800	RB	33	0.4	U	U	-	-	-	-	-
Sample Site	1	6004	DV	194	93.2	U	M	FR	1	5	-	-
Sample Site	1	6004	DV	194	95.5	U	M	FR	2	4	-	-
Sample Site	1	6004	DV	161	46.1	U	M	FR	3	3	-	-
Sample Site	1	6004	DV	134	28.8	U	M	FR	4	3	-	-
Sample Site	1	6004	DV	92	8.3	U	IM	FR	5	2	-	-
Sample Site	1	6004	DV	105	10.9	U	IM	FR	6	2	-	-
Sample Site	1	6004	DV	92	8.1	U	IM	FR	7	2	-	-
Sample Site	1	6004	DV	80	5.2	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	81	5.1	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	83	5.7	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	87	8.8	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	86	6.1	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	85	5.8	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	44	0.7	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	47	0.8	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	41	0.6	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	47	1.2	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	44	0.8	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	41	0.6	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	49	1.1	U	IM	-	-	-	-	-
Sample Site	1	6004	DV	43	0.7	U	IM	-	-	-	-	-
Sample Site	1	6005	DV	107	13.9	U	IM	FR	1	2	-	-
Sample Site	1	6005	DV	129	19.3	U	IM	FR	2	3	-	-
Sample Site	1	6005	DV	131	21.3	U	IM	FR	3	3	-	-
Sample Site	1	6005	CO	52	1.4	U	IM	-	-	-	-	-
Sample Site	1	6005	DV	66	3	U	IM	-	-	-	-	-
Sample Site	1	6005	DV	39	0.4	U	IM	-	-	-	-	-
Sample Site	1	6005	DV	107	13.9	U	IM	FR	4	2	-	-
Sample Site	1	6005	DV	95	9.1	U	IM	FR	5	UA	-	-
Sample Site	1	6005	DV	98	9.3	U	IM	FR	6	2	-	-
Sample Site	1	6005	DV	114	15.2	U	IM	FR	7	3	-	-
Sample Site	1	6005	DV	73	3.8	U	IM	-	-	-	-	-
Sample Site	1	6005	DV	76	4.3	U	IM	-	-	-	-	-
Sample Site	1	6005	DV	79	5.4	U	IM	-	-	-	-	-
Sample Site	1	6005	DV	68	3.1	U	IM	-	-	-	-	-
Sample Site	1	6005	DV	74	4.2	U	IM	-	-	-	-	-
Sample Site	1	6005	DV	37	0.4	U	IM	-	-	-	-	-
Sample Site	1	6001	MW	112	15.4	U	IM	-	-	-	-	-
Sample Site	1	6001	DV	101	12.1	U	IM	FR	1	UA	TP	1
Sample Site	1	6001	DV	72	5.4	U	IM	-	-	-	-	-
Sample Site	1	6001	DV	53	1.6	U	IM	-	-	-	-	-
Sample Site	2	6001	DV	142	27.9	U	IM	FR	1	UA	TP	1
Sample Site	1	6002	CO	51	1.5	U	U	-	-	-	-	-
Sample Site	1	6002	CO	91	7.7	U	U	-	-	-	-	-
Sample Site	1	6002	CO	79	4.6	U	U	-	-	-	-	-
Sample Site	1	6002	CO	41	0.7	U	U	-	-	-	-	-
Sample Site	1	6002	CO	36	0.5	U	U	-	-	-	-	-
Sample Site	1	6002	CO	34	0.9	U	U	-	-	-	-	-
Sample Site	1	6002	CO	36	0.5	U	U	-	-	-	-	-
Sample Site	1	6002	CO	71	3.6	U	U	-	-	-	-	-
Sample Site	1	6002	CO	77	4	U	U	-	-	-	-	-
Sample Site	1	6002	CO	96	8.9	U	U	-	-	-	-	-
Sample Site	1	6002	CO	26	4.9	U	U	-	-	-	-	-
Sample Site	1	6002	CO	49	1.2	U	U	-	-	-	-	-
Sample Site	1	6002	CO	47	1.1	U	U	-	-	-	-	-
Sample Site	1	6002	DV	59	2.1	U	U	-	-	-	-	-
Sample Site	1	6002	DV	59	3	U	U	-	-	-	-	-
Sample Site	1	6002	DV	67	3.1	U	U	-	-	-	-	-
Sample Site	1	6002	CO	35	0.5	U	U	-	-	-	-	-
Sample Site	1	6002	DV	34	0.4	U	U	-	-	-	-	-



**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	6002	DV	49	1.1	U	U	-	-	-	-	-
Sample Site	1	6002	CO	21	0.8	U	U	-	-	-	-	-
Sample Site	1	6002	CO	36	0.6	U	U	-	-	-	-	-
Sample Site	1	6002	CO	21	0.6	U	U	-	-	-	-	-
Sample Site	1	6002	DV	54	1.4	U	U	-	-	-	-	-
Sample Site	1	6002	CO	44	0.7	U	U	-	-	-	-	-
Sample Site	1	6002	CO	39	0.5	U	U	-	-	-	-	-
Sample Site	1	6002	DV	49	1.2	U	U	-	-	-	-	-
Sample Site	1	6002	DV	62	0.4	U	U	-	-	-	-	-
Sample Site	1	6002	CO	44	1.1	U	U	-	-	-	-	-
Sample Site	1	6002	CO	42	0.6	U	U	-	-	-	-	-
Sample Site	1	6002	CO	22	0.3	U	U	-	-	-	-	-
Sample Site	1	6003	DV	117	17.5	U	U	FR	1	3	-	-
Sample Site	1	6003	DV	84	7.3	U	U	-	-	-	-	-
Sample Site	1	6003	CT	73	3.8	U	U	-	-	-	-	-
Sample Site	1	6003	DV	78	5.3	U	U	-	-	-	-	-
Sample Site	1	6003	CT	76	4.5	U	U	-	-	-	-	-
Sample Site	1	6003	DV	67	3.6	U	U	-	-	-	-	-
Sample Site	1	6003	DV	68	2.7	U	U	-	-	-	-	-
Sample Site	1	6003	DV	105	12.7	U	U	FR	2	3	-	-
Sample Site	1	6003	CT	92	9.1	U	U	FR	3	2	-	-
Sample Site	1	6003	CT	94	8.4	U	U	FR	4	3	-	-
Sample Site	1	6003	DV	100	9	U	U	FR	5	3	-	-
Sample Site	1	6003	DV	89	5.8	U	U	-	-	-	-	-
Sample Site	1	6003	CO	79	4.9	U	U	-	-	-	-	-
Sample Site	1	6003	DV	69	3.3	U	U	-	-	-	-	-
Sample Site	1	6003	CT	64	3.5	U	U	-	-	-	-	-
Sample Site	1	6003	CT	75	4	U	U	-	-	-	-	-
Sample Site	1	6003	DV	68	3.2	U	U	-	-	-	-	-
Sample Site	1	6003	CO	42	0.8	U	U	-	-	-	-	-
Sample Site	1	6003	CO	43	0.8	U	U	-	-	-	-	-
Sample Site	1	6003	CO	41	0.8	U	U	-	-	-	-	-
Sample Site	1	6003	DV	37	0.5	U	U	-	-	-	-	-
Sample Site	1	6009	DV	144	28.6	U	IM	FR	1	2	-	-
Sample Site	1	6009	DV	107	13.4	U	IM	FR	2	2	-	-
Sample Site	1	6009	DV	97	9.9	U	IM	FR	3	2	-	-
Sample Site	1	6009	DV	106	11.4	U	IM	FR	4	2	-	-
Sample Site	1	6009	DV	92	7.3	U	IM	FR	5	2	-	-
Sample Site	1	6009	DV	85	6.2	U	IM	FR	6	2	-	-
Sample Site	1	6009	DV	64	3.4	U	IM	-	-	-	-	-
Sample Site	1	6009	DV	88	6.4	U	IM	FR	7	2	-	-
Sample Site	1	6009	DV	35	0.5	U	IM	-	-	-	-	-
Sample Site	1	6006	DV	186	-	U	U	-	-	-	-	-
Sample Site	1	6006	CT/RB	190	-	U	U	-	-	-	-	-
Sample Site	1	6006	DV	95	8.6	U	U	FR	1	2	-	-
Sample Site	1	6006	DV	81	5.3	U	U	-	-	-	-	-
Sample Site	1	6006	DV	86	7.2	U	U	-	-	-	-	-
Sample Site	1	6006	DV	108	15.9	U	U	FR	2	2	-	-
Sample Site	1	6006	DV	94	9.1	U	U	FR	3	2	-	-
Sample Site	1	6006	DV	128	24.4	U	U	FR	4	3	-	-
Sample Site	1	6006	DV	80	7.1	U	U	-	-	-	-	-
Sample Site	1	6006	DV	75	5	U	U	-	-	-	-	-
Sample Site	1	6006	DV	70	3.3	U	U	-	-	-	-	-
Sample Site	1	6006	CAL	105	14.1	U	U	-	-	-	-	-
Sample Site	1	6006	CAL	105	14	U	U	-	-	-	-	-
Sample Site	1	6006	CAL	95	9.4	U	U	-	-	-	-	-
Sample Site	1	6006	CAL	96	11.7	U	U	-	-	-	-	-
Sample Site	1	6006	DV	111	16.7	U	U	FR	5	3	-	-
Sample Site	1	6006	DV	108	14.1	U	U	FR	6	2	-	-
Sample Site	1	6006	DV	87	8.2	U	U	-	-	-	-	-
Sample Site	1	6006	DV	93	9.1	U	U	FR	7	UA	-	-
Sample Site	1	6006	DV	89	7	U	U	-	-	-	-	-
Sample Site	1	6006	DV	85	6.6	U	U	-	-	-	-	-
Sample Site	1	6006	CH	82	8.4	U	U	-	-	-	-	-
Sample Site	1	6006	CH	77	8.4	U	U	-	-	-	-	-
Sample Site	1	6006	DV	91	6.8	U	U	-	-	-	-	-
Sample Site	1	6006	DV	81	3.9	U	U	-	-	-	-	-
Sample Site	1	6006	CO	81	4.7	U	U	-	-	-	-	-
Sample Site	1	6006	CH	90	8.7	U	U	FR	8	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	6006	CH	70	3.1	U	U	-	-	-	-	-
Sample Site	1	6006	CO	91	7.6	U	U	-	-	-	-	-
Sample Site	1	6006	CO	74	4.7	U	U	-	-	-	-	-
Sample Site	1	6006	CH	63	2.4	U	U	-	-	-	-	-
Sample Site	1	6006	CH	65	3.2	U	U	-	-	-	-	-
Sample Site	1	6006	DV	55	1.9	U	U	-	-	-	-	-
Sample Site	1	6006	CH	58	1.8	U	U	-	-	-	-	-
Sample Site	1	6006	CH	61	1.6	U	U	-	-	-	-	-
Sample Site	1	6006	CO	77	4.7	U	U	-	-	-	-	-
Sample Site	1	6006	CH	59	2.5	U	U	-	-	-	-	-
Sample Site	1	6006	DV	72	3.9	U	U	-	-	-	-	-
Sample Site	1	6006	CO	71	3.7	U	U	-	-	-	-	-
Sample Site	1	6006	CO	66	3.3	U	U	-	-	-	-	-
Sample Site	1	6006	DV	81	5.4	U	U	-	-	-	-	-
Sample Site	1	6006	CO	69	3.2	U	U	-	-	-	-	-
Sample Site	1	6006	DV	68	3.2	U	U	-	-	-	-	-
Sample Site	1	6006	CH	60	2.8	U	U	-	-	-	-	-
Sample Site	1	6006	DV	54	1.9	U	U	-	-	-	-	-
Sample Site	1	6006	DV	70	5.1	U	U	-	-	-	-	-
Sample Site	1	6006	CH	57	2.8	U	U	-	-	-	-	-
Sample Site	1	6006	CH	52	2.9	U	U	-	-	-	-	-
Sample Site	1	6006	DV	52	1.6	U	U	-	-	-	-	-
Sample Site	1	6006	DV	74	3.4	U	U	-	-	-	-	-
Sample Site	1	6006	DV	59	1.9	U	U	-	-	-	-	-
Sample Site	1	6006	DV	53	1.3	U	U	-	-	-	-	-
Sample Site	1	6006	DV	69	3.6	U	U	-	-	-	-	-
Sample Site	1	6006	CH	59	2.6	U	U	-	-	-	-	-
Sample Site	1	6006	DV	50	1.5	U	U	-	-	-	-	-
Sample Site	1	6006	DV	45	0.9	U	U	-	-	-	-	-
Sample Site	1	6006	CAL	65	2.5	U	U	-	-	-	-	-
Sample Site	1	6006	DV	39	0.9	U	U	-	-	-	-	-
Sample Site	1	6007	CO	400	-	U	U	-	-	-	-	-
Sample Site	1	6007	DV	215	101.4	U	U	FR	1	5	-	-
Sample Site	1	6007	CT	206	83.9	U	U	FR	2	4	-	-
Sample Site	1	6007	CO	88	7.4	U	U	-	-	-	-	-
Sample Site	1	6007	DV	105	10.5	U	U	FR	3	2	-	-
Sample Site	1	6007	DV	100	9.3	U	U	FR	4	2	-	-
Sample Site	1	6007	DV	117	14.7	U	U	FR	5	2	-	-
Sample Site	1	6007	DV	123	16.6	U	U	FR	6	3	-	-
Sample Site	1	6007	DV	115	14.4	U	U	FR	7	2	-	-
Sample Site	1	6007	DV	112	14.4	U	U	FR	8	4	-	-
Sample Site	1	6007	DV	103	10.1	U	U	FR	9	2	-	-
Sample Site	1	6007	DV	92	7.3	U	U	FR	10	UA	-	-
Sample Site	1	6007	DV	115	13.1	U	U	FR	11	3	-	-
Sample Site	1	6007	DV	104	10.3	U	U	FR	12	3	-	-
Sample Site	1	6007	DV	93	7.5	U	U	FR	13	2	-	-
Sample Site	1	6007	DV	91	6.4	U	U	FR	14	2	-	-
Sample Site	1	6007	DV	85	6.5	U	U	-	-	-	-	-
Sample Site	1	6007	DV	92	6.7	U	U	FR	15	UA	-	-
Sample Site	1	6007	DV	93	7.9	U	U	FR	16	3	-	-
Sample Site	1	6007	DV	87	6.3	U	U	-	-	-	-	-
Sample Site	1	6007	DV	86	6.9	U	U	-	-	-	-	-
Sample Site	1	6007	CO	80	6	U	U	-	-	-	-	-
Sample Site	1	6007	DV	80	4.8	U	U	-	-	-	-	-
Sample Site	1	6007	DV	79	4.6	U	U	-	-	-	-	-
Sample Site	1	6007	DV	86	5.5	U	U	-	-	-	-	-
Sample Site	1	6007	DV	73	3.7	U	U	-	-	-	-	-
Sample Site	1	6007	DV	74	3.7	U	U	-	-	-	-	-
Sample Site	1	6007	CO	71	4.6	U	U	-	-	-	-	-
Sample Site	1	6007	DV	82	5.5	U	U	-	-	-	-	-
Sample Site	1	6007	DV	77	4.5	U	U	-	-	-	-	-
Sample Site	1	6007	DV	73	3.6	U	U	-	-	-	-	-
Sample Site	1	6007	CO	61	2.2	U	U	-	-	-	-	-
Sample Site	1	6007	DV	72	3.8	U	U	-	-	-	-	-
Sample Site	1	6007	SK	75	3.7	U	U	-	-	-	-	-
Sample Site	1	6007	CO	79	5.3	U	U	-	-	-	-	-
Sample Site	1	6007	DV	71	3.5	U	U	-	-	-	-	-
Sample Site	1	6007	DV	71	4.9	U	U	-	-	-	-	-
Sample Site	1	6007	CH	63	2.7	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	6007	DV	71	3.5	U	U	-	-	-	-	-
Sample Site	1	6007	CO	69	3.3	U	U	-	-	-	-	-
Sample Site	1	6007	DV	68	3.5	U	U	-	-	-	-	-
Sample Site	1	6007	DV	78	4.7	U	U	-	-	-	-	-
Sample Site	1	6007	DV	81	4.9	U	U	-	-	-	-	-
Sample Site	1	6007	DV	74	4.2	U	U	-	-	-	-	-
Sample Site	1	6007	CO	63	2.9	U	U	-	-	-	-	-
Sample Site	1	6007	CO	56	1.9	U	U	-	-	-	-	-
Sample Site	1	6007	CO	63	2.4	U	U	-	-	-	-	-
Sample Site	1	6007	DV	59	1.9	U	U	-	-	-	-	-
Sample Site	1	6007	DV	74	4	U	U	-	-	-	-	-
Sample Site	1	6007	DV	75	3.9	U	U	-	-	-	-	-
Sample Site	1	6007	DV	68	3.6	U	U	-	-	-	-	-
Sample Site	1	6007	DV	70	3.1	U	U	-	-	-	-	-
Sample Site	1	6007	CO	66	3.2	U	U	-	-	-	-	-
Sample Site	1	6007	DV	73	4.1	U	U	-	-	-	-	-
Sample Site	1	6007	DV	72	3.5	U	U	-	-	-	-	-
Sample Site	1	6007	DV	79	1.7	U	U	-	-	-	-	-
Sample Site	1	6007	DV	50	1.3	U	U	-	-	-	-	-
Sample Site	1	6007	DV	43	1.2	U	U	-	-	-	-	-
Sample Site	1	6007	DV	30	0.2	U	U	-	-	-	-	-
Sample Site	1	9060	DV	158	33.7	U	U	FR	1	3	-	-
Sample Site	1	9060	DV	155	35.5	U	U	FR	2	UA	-	-
Sample Site	1	9060	DV	115	12.9	U	U	FR	3	2	-	-
Sample Site	1	9060	DV	120	15.7	U	U	FR	4	3	-	-
Sample Site	1	9060	DV	147	30	U	U	FR	5	3	-	-
Sample Site	1	9060	DV	127	20.6	U	U	FR	6	3	-	-
Sample Site	1	9060	DV	161	35.6	U	U	FR	7	2	-	-
Sample Site	1	9060	DV	108	12	U	U	FR	8	2	-	-
Sample Site	1	9060	DV	142	22.6	U	U	-	-	-	-	-
Sample Site	1	9060	DV	113	13.8	U	U	-	-	-	-	-
Sample Site	1	9060	DV	143	23.1	U	U	-	-	-	-	-
Sample Site	1	9060	DV	119	14.8	U	U	-	-	-	-	-
Sample Site	1	9060	DV	121	16.5	U	U	-	-	-	-	-
Sample Site	1	9060	DV	102	9.2	U	U	-	-	-	-	-
Sample Site	1	9060	DV	102	10.9	U	U	-	-	-	-	-
Sample Site	1	9060	DV	121	15.8	U	U	-	-	-	-	-
Sample Site	1	5524	DV	132	26.4	U	IM	FR	1	2	-	-
Sample Site	1	8001	RB	85	6.5	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	84	6.2	U	IM	-	-	-	-	-
Sample Site	1	8001	DV	95	8.2	U	IM	FR	1	-	TP	1
Sample Site	1	8001	CH	64	2.9	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	52	1.6	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	55	1.7	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	59	1.9	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	54	1.9	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	59	2	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	51	1.5	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	56	2.1	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	54	1.4	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	56	2.3	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	55	2.1	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	55	1.7	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	51	1.4	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	57	2.7	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	58	2.1	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	62	2.3	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	35	0.4	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	40	0.7	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	55	1.6	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	40	0.6	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	40	0.7	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	42	0.8	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	40	0.7	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	45	0.9	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	45	1.3	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	45	0.8	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	40	0.6	U	IM	-	-	-	-	-
Sample Site	1	8001	CH	50	1.3	U	IM	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	8001	CH	43	0.8	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	37	0.5	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	39	0.5	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	30	0.2	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	39	0.5	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	39	0.5	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	38	0.5	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	38	0.5	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	34	0.3	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	39	0.8	U	IM	-	-	-	-	-
Sample Site	1	8001	RB	34	0.7	U	IM	-	-	-	-	-
Sample Site	1	9057	RB	13	20.4	U	U	-	-	-	-	-
Sample Site	1	9057	RB	84	8.7	U	U	-	-	-	-	-
Sample Site	1	9057	RB	98	8.9	U	U	-	-	-	-	-
Sample Site	1	9057	RB	66	2.8	U	U	-	-	-	-	-
Sample Site	1	9057	RB	74	3.8	U	U	-	-	-	-	-
Sample Site	1	9057	RB	95	9.2	U	U	-	-	-	-	-
Sample Site	1	9057	RB	71	3.2	U	U	-	-	-	-	-
Sample Site	1	9057	MW	31	1.2	U	U	-	-	-	-	-
Sample Site	1	9057	RB	46	1	U	U	-	-	-	-	-
Sample Site	1	9057	RB	50	1.4	U	U	-	-	-	-	-
Sample Site	1	9057	RB	61	2.1	U	U	-	-	-	-	-
Sample Site	1	-	CO	48	1.2	U	U	-	-	-	-	-
Sample Site	1	-	CO	56	2.3	U	U	-	-	-	-	-
Sample Site	1	-	CO	48	1.1	U	U	-	-	-	-	-
Sample Site	1	-	CO	53	2.1	U	U	-	-	-	-	-
Sample Site	1	-	CO	55	2.6	U	U	-	-	-	-	-
Sample Site	1	-	RB	75	4.9	U	U	-	-	-	-	-
Sample Site	1	-	CO	59	2	U	U	-	-	-	-	-
Sample Site	1	-	RB	79	5.1	U	U	-	-	-	-	-
Sample Site	1	-	CO	49	1.1	U	U	-	-	-	-	-
Sample Site	1	-	CO	55	2.1	U	U	-	-	-	-	-
Sample Site	1	-	CO	52	1.8	U	U	-	-	-	-	-
Sample Site	1	-	CO	47	1	U	U	-	-	-	-	-
Sample Site	1	-	CO	59	2.1	U	U	-	-	-	-	-
Sample Site	1	-	CH	63	2.8	U	U	-	-	-	-	-
Sample Site	1	-	CO	60	2.5	U	U	-	-	-	-	-
Sample Site	1	-	CO	47	0	U	U	-	-	-	-	-
Sample Site	1	-	CO	52	1.5	U	U	-	-	-	-	-
Sample Site	1	-	CH	50	1.2	U	U	-	-	-	-	-
Sample Site	1	-	CO	50	1.2	U	U	-	-	-	-	-
Sample Site	1	-	RB	101	12.2	U	U	FR	1	2	-	-
Sample Site	1	-	CO	44	1.7	U	U	-	-	-	-	-
Sample Site	1	-	CO	47	1	U	U	-	-	-	-	-
Sample Site	1	-	CO	46	1.9	U	U	-	-	-	-	-
Sample Site	1	-	CO	49	1.2	U	U	-	-	-	-	-
Sample Site	1	-	CO	45	1.1	U	U	-	-	-	-	-
Sample Site	1	-	CO	32	0.3	U	U	-	-	-	-	-
Sample Site	1	-	CO	49	1.3	U	U	-	-	-	-	-
Sample Site	1	-	CO	49	1.2	U	U	-	-	-	-	-
Sample Site	1	-	CO	46	1.2	U	U	-	-	-	-	-
Sample Site	2	-	CO	54	1.6	U	U	-	-	-	-	-
Sample Site	2	-	CO	56	2.1	U	U	-	-	-	-	-
Sample Site	2	-	CO	51	1.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	50	1.5	U	U	-	-	-	-	-
Sample Site	2	-	CO	58	2.5	U	U	-	-	-	-	-
Sample Site	2	-	CO	54	2.1	U	U	-	-	-	-	-
Sample Site	2	-	CO	58	1.8	U	U	-	-	-	-	-
Sample Site	2	-	CO	57	1.3	U	U	-	-	-	-	-
Sample Site	2	-	CO	56	2.7	U	U	-	-	-	-	-
Sample Site	2	-	CO	61	2.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	59	2.2	U	U	-	-	-	-	-
Sample Site	2	-	RB	114	15.4	U	U	FR	1	3	-	-
Sample Site	2	-	CO	55	1.7	U	U	-	-	-	-	-
Sample Site	2	-	CO	52	1.4	U	U	-	-	-	-	-
Sample Site	2	-	CO	54	1.5	U	U	-	-	-	-	-
Sample Site	2	-	CO	57	1.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	56	1.7	U	U	-	-	-	-	-
Sample Site	2	-	CO	54	1.7	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	2	-	CO	47	-	U	U	-	-	-	-	-
Sample Site	2	-	CO	57	1.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	66	2.5	U	U	-	-	-	-	-
Sample Site	2	-	CO	46	0.8	U	U	-	-	-	-	-
Sample Site	2	-	MW	97	10.4	U	U	-	-	-	-	-
Sample Site	2	-	MW	94	7.4	U	U	-	-	-	-	-
Sample Site	2	-	CO	55	1.7	U	U	-	-	-	-	-
Sample Site	2	-	RB	104	13.6	U	U	FR	2	3	-	-
Sample Site	2	-	RB	119	17.2	U	U	FR	3	3	-	-
Sample Site	2	-	RB	121	20.6	U	U	FR	4	4	-	-
Sample Site	2	-	RB	75	3.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	47	1.1	U	U	-	-	-	-	-
Sample Site	2	-	CO	49	1.3	U	U	-	-	-	-	-
Sample Site	2	-	CO	56	2.1	U	U	-	-	-	-	-
Sample Site	2	-	CO	42	0.8	U	U	-	-	-	-	-
Sample Site	2	-	CO	54	2.3	U	U	-	-	-	-	-
Sample Site	2	-	CO	39	0.7	U	U	-	-	-	-	-
Sample Site	2	-	CO	47	1.2	U	U	-	-	-	-	-
Sample Site	2	-	CO	81	6	U	U	-	-	-	-	-
Sample Site	2	-	CO	57	2.3	U	U	-	-	-	-	-
Sample Site	2	-	RB	82	5.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	57	1.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	54	1.6	U	U	-	-	-	-	-
Sample Site	2	-	CO	47	1.1	U	U	-	-	-	-	-
Sample Site	2	-	CO	49	1.5	U	U	-	-	-	-	-
Sample Site	2	-	CO	52	1.4	U	U	-	-	-	-	-
Sample Site	2	-	CO	57	2.1	U	U	-	-	-	-	-
Sample Site	2	-	CO	42	0.8	U	U	-	-	-	-	-
Sample Site	2	-	CO	46	0.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	49	0.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	50	0.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	51	1.5	U	U	-	-	-	-	-
Sample Site	2	-	CO	54	2	U	U	-	-	-	-	-
Sample Site	2	-	CO	49	1.2	U	U	-	-	-	-	-
Sample Site	2	-	CO	38	0.6	U	U	-	-	-	-	-
Sample Site	2	-	CO	41	0.7	U	U	-	-	-	-	-
Sample Site	2	-	CO	39	0.7	U	U	-	-	-	-	-
Sample Site	2	-	CO	39	0.7	U	U	-	-	-	-	-
Sample Site	2	-	CO	42	-	U	U	-	-	-	-	-
Sample Site	2	-	CO	36	0.8	U	U	-	-	-	-	-
Sample Site	2	-	CO	40	0.7	U	U	-	-	-	-	-
Sample Site	2	-	CO	40	0.9	U	U	-	-	-	-	-
Sample Site	2	-	CO	39	0.6	U	U	-	-	-	-	-
Sample Site	2	-	MW	40	0.6	U	U	-	-	-	-	-
Sample Site	2	-	CO	47	1.1	U	U	-	-	-	-	-
Sample Site	1	8002	RB	97	11.8	U	IM	FR	1	3	-	-
Sample Site	1	8002	RB	76	5.7	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	80	6.1	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	76	4.9	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	66	3.1	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	60	2.3	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	58	2.3	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	55	2.3	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	58	2.3	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	62	2.4	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	62	2.5	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	52	1.4	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	59	2.3	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	52	1.7	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	55	1.6	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	56	2.2	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	50	1.5	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	62	2.5	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	52	1.5	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	53	1.6	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	51	1.5	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	52	1.5	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	56	1.7	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	54	1.6	U	IM	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	8002	CH	46	1	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	50	1.5	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	49	1.2	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	51	1.8	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	49	1.1	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	53	1.6	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	56	1.9	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	54	1.6	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	51	1.3	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	44	0.8	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	37	0.4	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	32	0.4	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	37	0.6	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	42	0.9	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	38	1	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	35	0.5	U	IM	-	-	-	-	-
Sample Site	1	8002	CH	42	0.5	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	42	0.2	U	IM	-	-	-	-	-
Sample Site	1	8002	DV	39	0.6	U	IM	-	-	-	TP	1
Sample Site	1	8002	RB	33	0.4	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	30	0.2	U	IM	-	-	-	-	-
Sample Site	1	8002	RB	28	0.1	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	63	2.5	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	61	2.3	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	65	1.8	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	61	2.2	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	60	2.2	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	48	1	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	54	1.7	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	54	1.7	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	46	0.9	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	53	1.2	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	57	1.8	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	72	4.4	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	73	4	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	72	3.7	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	65	3	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	61	2.2	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	57	2	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	58	2.5	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	56	2.2	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	53	1.8	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	51	1.3	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	54	1.7	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	58	2.3	U	IM	-	-	-	-	-
Sample Site	1	9058	CH	49	1.2	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	149	35.8	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	79	4.5	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	40	0.5	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	35	0.4	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	38	0.6	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	38	0.4	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	35	0.4	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	36	0.5	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	36	0.4	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	35	0.9	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	36	0.4	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	40	0.7	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	36	0.6	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	41	0.6	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	39	-	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	40	-	U	IM	-	-	-	-	-
Sample Site	1	9058	RB	42	-	U	IM	-	-	-	-	-
Sample Site	1	5545	CO	55	1.8	U	U	-	-	-	-	-
Sample Site	1	5545	CO	102	11.3	U	U	FR	2	2	-	-
Sample Site	1	5545	CO	60	2.6	U	U	-	-	-	-	-
Sample Site	1	5545	DV	104	12.2	U	U	FR	4	2	-	-
Sample Site	1	5545	DV	96	8.2	U	U	FR	5	2	-	-
Sample Site	1	5545	CO	71	3.6	U	U	-	-	-	-	-



**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	5545	DV	45	0.8	U	U	-	-	-	-	-
Sample Site	1	5545	DV	52	1.9	U	U	-	-	-	-	-
Sample Site	1	5545	DV	50	1.4	U	U	-	-	-	-	-
Sample Site	1	5545	CO	56	2.1	U	U	-	-	-	-	-
Sample Site	1	5545	CO	56	2.4	U	U	-	-	-	-	-
Sample Site	1	5545	DV	170	51.3	U	U	FR	12	3	-	-
Sample Site	1	5545	DV	61	3	U	U	-	-	-	-	-
Sample Site	1	5545	DV	167	45.1	U	U	FR	14	4	-	-
Sample Site	1	5545	DV	179	59.1	U	U	FR	15	UA	-	-
Sample Site	1	5545	CO	69	4.9	U	U	-	-	-	-	-
Sample Site	1	5545	CO	63	4.3	U	U	-	-	-	-	-
Sample Site	1	5545	CO	50	3.1	U	U	-	-	-	-	-
Sample Site	1	5545	CO	71	6.5	U	U	-	-	-	-	-
Sample Site	1	5545	CO	53	4.5	U	U	-	-	-	-	-
Sample Site	1	5545	RB	81	8.7	U	U	-	-	-	-	-
Sample Site	1	5545	CO	48	3.9	U	U	-	-	-	-	-
Sample Site	1	5545	CO	65	3.9	U	U	-	-	-	-	-
Sample Site	1	5545	CO	69	6.3	U	U	-	-	-	-	-
Sample Site	1	5545	CO	65	6.1	U	U	-	-	-	-	-
Sample Site	1	5545	CO	72	6.7	U	U	-	-	-	-	-
Sample Site	1	5545	CO	66	5.3	U	U	-	-	-	-	-
Sample Site	1	5545	DV	78	7.9	U	U	-	-	-	-	-
Sample Site	1	5545	DV	46	3.7	U	U	-	-	-	-	-
Sample Site	1	5545	DV	43	3.6	U	U	-	-	-	-	-
Sample Site	1	5545	DV	53	4.3	U	U	-	-	-	-	-
Sample Site	1	8003	CH	74	4.3	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	56	2	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	56	2.2	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	49	1.4	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	69	3.5	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	64	2.9	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	61	2.7	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	62	2.4	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	57	2.2	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	56	2.1	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	59	2.5	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	60	2.2	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	56	2.2	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	55	1.9	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	61	2.5	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	56	1.9	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	57	2.3	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	56	1.9	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	58	2.3	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	65	3	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	57	2	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	61	2.6	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	54	2	U	IM	-	-	-	-	-
Sample Site	1	8003	DV	57	1.8	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	56	1.9	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	55	1.8	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	59	2.4	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	59	2.2	U	IM	-	-	-	-	-
Sample Site	1	8003	DV	69	3.1	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	55	1.7	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	59	2	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	51	1.4	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	58	1.6	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	55	1.7	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	49	1.6	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	53	1.9	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	60	1.8	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	51	1.5	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	49	1.2	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	46	1.1	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	36	0.3	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	37	0.4	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	32	0.4	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	45	1.1	U	IM	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	8003	RB	37	0.5	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	32	0.3	U	IM	-	-	-	-	-
Sample Site	1	8003	CH	50	1.3	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	38	0.6	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	30	0.4	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	39	0.6	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	38	0.4	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	36	0.4	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	32	0.2	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	30	0.2	U	IM	-	-	-	-	-
Sample Site	1	8003	RB	31	0.3	U	IM	-	-	-	-	-
Sample Site	1	9082	MW	342	-	U	U	FR	1	9	-	-
Sample Site	1	9082	MW	270	-	U	U	-	-	-	-	-
Sample Site	1	9082	MW	260	-	U	U	-	-	-	-	-
Sample Site	1	9082	MW	215	-	U	U	-	-	-	-	-
Sample Site	1	9082	MW	214	-	U	U	-	-	-	-	-
Sample Site	1	9082	BT	272	-	U	U	FR	2	4	-	-
Sample Site	1	9082	BT	152	40.2	U	U	FR	3	3	-	-
Sample Site	1	9082	BT	211	88.3	U	U	FR	4	4	-	-
Sample Site	1	9082	MW	116	15.8	U	U	-	-	-	-	-
Sample Site	1	9082	MW	145	31.5	U	U	-	-	-	-	-
Sample Site	1	9082	MW	112	12.7	U	U	-	-	-	-	-
Sample Site	1	9082	MW	117	16.9	U	U	-	-	-	-	-
Sample Site	1	9082	MW	117	16.9	U	U	-	-	-	-	-
Sample Site	1	9082	BT	109	12.9	U	U	FR	5	2	-	-
Sample Site	1	9082	CH	73	4.6	U	U	-	-	-	-	-
Sample Site	1	9082	CH	55	1.6	U	U	-	-	-	-	-
Sample Site	1	9082	CH	49	1.3	U	U	-	-	-	-	-
Sample Site	1	9082	CH	59	1.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	58	2.2	U	U	-	-	-	-	-
Sample Site	1	9082	CH	57	2.6	U	U	-	-	-	-	-
Sample Site	1	9082	CH	58	1.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	62	3.1	U	U	-	-	-	-	-
Sample Site	1	9082	CH	56	1.8	U	U	-	-	-	-	-
Sample Site	1	9082	CH	55	1.9	U	U	-	-	-	-	-
Sample Site	1	9082	RB	76	4.8	U	U	-	-	-	-	-
Sample Site	1	9082	CH	64	3.2	U	U	-	-	-	-	-
Sample Site	1	9082	CH	60	1.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	52	1.5	U	U	-	-	-	-	-
Sample Site	1	9082	CH	58	1.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	59	2.1	U	U	-	-	-	-	-
Sample Site	1	9082	CH	56	1.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	69	3.1	U	U	-	-	-	-	-
Sample Site	1	9082	BT	110	12.2	U	U	-	-	-	-	-
Sample Site	1	9082	CH	59	2.5	U	U	-	-	-	-	-
Sample Site	1	9082	MW	104	-	U	U	-	-	-	-	-
Sample Site	1	9082	CH	66	3.3	U	U	-	-	-	-	-
Sample Site	1	9082	CH	51	1.5	U	U	-	-	-	-	-
Sample Site	1	9082	MW	109	-	U	U	-	-	-	-	-
Sample Site	1	9082	CH	56	2.4	U	U	-	-	-	-	-
Sample Site	1	9082	CH	66	4.3	U	U	-	-	-	-	-
Sample Site	1	9082	CH	52	1.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	58	2.1	U	U	-	-	-	-	-
Sample Site	1	9082	CH	56	2.6	U	U	-	-	-	-	-
Sample Site	1	9082	CH	54	1.5	U	U	-	-	-	-	-
Sample Site	1	9082	CH	58	2.2	U	U	-	-	-	-	-
Sample Site	1	9082	CH	57	1.7	U	U	-	-	-	-	-
Sample Site	1	9082	CH	66	3.1	U	U	-	-	-	-	-
Sample Site	1	9082	CH	59	2.7	U	U	-	-	-	-	-
Sample Site	1	9082	CH	54	1.8	U	U	-	-	-	-	-
Sample Site	1	9082	CH	50	2.1	U	U	-	-	-	-	-
Sample Site	1	9082	CH	66	3.4	U	U	-	-	-	-	-
Sample Site	1	9082	MW	104	-	U	U	-	-	-	-	-
Sample Site	1	9082	CH	59	1.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	55	2.4	U	U	-	-	-	-	-
Sample Site	1	9082	RB	79	5.1	U	U	-	-	-	-	-
Sample Site	1	9082	CH	61	3	U	U	-	-	-	-	-
Sample Site	1	9082	CH	60	2.4	U	U	-	-	-	-	-
Sample Site	1	9082	CH	60	2.9	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	9082	CH	68	3.5	U	U	-	-	-	-	-
Sample Site	1	9082	CH	64	2.7	U	U	-	-	-	-	-
Sample Site	1	9082	CH	65	2.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	55	1.6	U	U	-	-	-	-	-
Sample Site	1	9082	MW	50	-	U	U	-	-	-	-	-
Sample Site	1	9082	CH	52	1.6	U	U	-	-	-	-	-
Sample Site	1	9082	CH	54	1.6	U	U	-	-	-	-	-
Sample Site	1	9082	CH	58	2.4	U	U	-	-	-	-	-
Sample Site	1	9082	CH	70	3.4	U	U	-	-	-	-	-
Sample Site	1	9082	CH	69	3.6	U	U	-	-	-	-	-
Sample Site	1	9082	CH	62	3.1	U	U	-	-	-	-	-
Sample Site	1	9082	CH	60	2.5	U	U	-	-	-	-	-
Sample Site	1	9082	CH	55	2.1	U	U	-	-	-	-	-
Sample Site	1	9082	MW	49	-	U	U	-	-	-	-	-
Sample Site	1	9082	BT	55	1.7	U	U	-	-	-	-	-
Sample Site	1	9082	CH	68	3.2	U	U	-	-	-	-	-
Sample Site	1	9082	CH	49	1.3	U	U	-	-	-	-	-
Sample Site	1	9082	BT	54	1.4	U	U	-	-	-	-	-
Sample Site	1	9082	CH	59	2.5	U	U	-	-	-	-	-
Sample Site	1	9082	CH	61	2.5	U	U	-	-	-	-	-
Sample Site	1	9082	CH	51	1.6	U	U	-	-	-	-	-
Sample Site	1	9082	MW	49	-	U	MW	-	-	-	-	-
Sample Site	1	9082	CH	61	3.1	U	U	-	-	-	-	-
Sample Site	1	9082	CH	50	1.5	U	U	-	-	-	-	-
Sample Site	1	9082	CH	49	1.6	U	U	-	-	-	-	-
Sample Site	1	9082	CH	45	0.9	U	U	-	-	-	-	-
Sample Site	1	9082	RB	42	0.9	U	U	-	-	-	-	-
Sample Site	1	9082	BT	121	11.3	U	U	-	-	-	-	-
Sample Site	1	9082	RB	74	4.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	50	1.3	U	U	-	-	-	-	-
Sample Site	1	9082	BT	90	5.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	60	2.2	U	U	-	-	-	-	-
Sample Site	1	9082	CH	66	2.9	U	U	-	-	-	-	-
Sample Site	1	9082	CH	56	2.4	U	U	-	-	-	-	-
Sample Site	2	4001	DV	104	14.3	U	U	FR	1	2	TP	1
Sample Site	2	4001	DV	74	4	U	U	-	-	-	TP	2
Sample Site	2	4001	DV	104	11.9	U	U	FR	2	2	TP	3
Sample Site	1	4001	RB	160	53.4	U	U	FR	1	4	-	-
Sample Site	1	4001	DV	90	8.5	U	U	FR	2	2	TP	1
Sample Site	1	4001	BT	160	48.9	U	U	FR	3	3	TP	2
Sample Site	1	4001	DV	103	12.6	U	U	FR	4	2	TP	3
Sample Site	1	4001	DV	35	0.3	U	U	-	-	-	-	-
Sample Site	1	4001	DV	144	33.7	U	U	FR	5	3	TP	4
Sample Site	1	4001	DV	149	33.8	U	U	FR	6	3	TP	5
Sample Site	2	-	DV	97	10.7	U	IM	FR	27	2	TP	27
Sample Site	2	-	DV	97	9.9	U	IM	FR	29	2	TP	29
Sample Site	2	-	DV	129	23.6	U	IM	FR	28	2	TP	28
Sample Site	2	-	DV	154	37.9	U	M	-	-	-	-	-
Sample Site	2	-	DV	128	25.9	U	IM	FR	30	3	TP	30
Sample Site	2	-	DV	64	2.5	U	IM	-	-	-	-	-
Sample Site	2	-	DV	114	16.1	U	IM	-	-	-	-	-
Sample Site	2	-	DV	147	34.9	U	M	FR	31	3	TP	31
Sample Site	2	-	DV	69	4.2	U	IM	-	-	-	-	-
Sample Site	2	-	DV	130	23.7	U	IM	-	-	-	-	-
Sample Site	2	-	DV	113	16.1	U	IM	-	-	-	-	-
Sample Site	3	-	DV	112	15.9	U	IM	FR	32	3	TP	32
Sample Site	3	-	MW	138	30.9	U	IM	SC	33	NS	-	-
Sample Site	3	-	DV	179	60.3	U	M	FR	34	4	TP	34
Sample Site	3	-	MW	70	3.1	U	IM	-	-	-	-	-
Sample Site	3	-	MW	139	28.1	U	IM	-	-	-	-	-
Sample Site	3	-	DV	113	16.3	U	IM	-	-	-	-	-
Sample Site	3	-	RB	103	11.7	U	IM	FR	35	2	-	-
Sample Site	3	-	DV	126	24.3	U	IM	FR	36	2	TP	36
Sample Site	3	-	RB	128	22.8	U	IM	FR	37	3	-	-
Sample Site	3	-	DV	130	22.1	U	IM	FR	38	3	TP	38
Sample Site	3	-	MW	129	23.2	U	IM	-	-	-	-	-
Sample Site	3	-	RB	133	29.4	U	IM	FR	39	2	-	-
Sample Site	3	-	DV	75	4.8	U	IM	-	-	-	-	-
Sample Site	3	-	MW	125	21	U	IM	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	3	-	DV	195	79.6	U	M	FR	40	5	TP	40
Sample Site	3	-	MW	137	29.1	U	IM	-	-	-	-	-
Sample Site	3	-	DV	79	5.1	U	IM	-	-	-	-	-
Sample Site	3	-	MW	148	36.5	U	IM	-	-	-	-	-
Sample Site	3	-	RB	121	19.2	U	IM	-	-	-	-	-
Sample Site	3	-	DV	150	39.9	U	IM	FR	41	4	TP	41
Sample Site	3	-	MW	79	5.2	U	IM	-	-	-	-	-
Sample Site	3	-	RB	122	21.3	U	IM	FR	42	3	-	-
Sample Site	3	-	DV	165	55.4	U	M	FR	43	4	TP	43
Sample Site	3	-	RB	118	19.7	U	IM	FR	44	2	-	-
Sample Site	3	-	RB	119	20.6	U	IM	-	-	-	-	-
Sample Site	3	-	DV	21	21.3	U	IM	-	-	-	-	-
Sample Site	3	-	DV	81	5.1	U	IM	-	-	-	-	-
Sample Site	3	-	DV	85	70.3	U	IM	-	-	-	-	-
Sample Site	3	-	DV	137	29.2	U	IM	-	-	-	-	-
Sample Site	3	-	RB	82	5.6	U	IM	-	-	-	-	-
Sample Site	3	-	DV	141	38.8	U	IM	-	-	-	-	-
Sample Site	3	-	RB	82	5.6	U	IM	-	-	-	-	-
Sample Site	3	-	DV	141	38.8	U	IM	-	-	-	-	-
Sample Site	3	-	DV	123	20.7	U	IM	-	-	-	-	-
Sample Site	3	-	DV	124	21	U	IM	-	-	-	-	-
Sample Site	3	-	DV	127	23.1	U	IM	-	-	-	-	-
Sample Site	3	-	RB	88	8.2	U	IM	-	-	-	-	-
Sample Site	3	-	RB	102	11.7	U	IM	-	-	-	-	-
Sample Site	5	-	DV	136	23.9	U	U	FR	45	3	TP	45
Sample Site	5	-	DV	132	23.6	U	U	FR	47	2	TP	47
Sample Site	5	-	DV	80	4.7	U	U	-	-	-	-	-
Sample Site	5	-	DV	95	8.4	U	U	-	-	-	-	-
Sample Site	5	-	DV	95	8.4	U	U	-	-	-	-	-
Sample Site	5	-	DV	100	9.4	U	U	FR	48	4	TP	48
Sample Site	5	-	DV	133	22.4	U	U	FR	49	2	TP	49
Sample Site	5	-	DV	128	21.9	U	U	-	-	-	-	-
Sample Site	5	-	DV	101	9.2	U	U	-	-	-	-	-
Sample Site	5	-	DV	137	23.9	U	U	FR	50	3	TP	50
Sample Site	5	-	DV	117	14.1	U	U	FR	46	3	TP	46
Sample Site	5	-	DV	118	16.3	U	U	-	-	-	-	-
Sample Site	5	-	DV	142	26.8	U	U	-	-	-	-	-
Sample Site	5	-	DV	133	24.4	U	U	-	-	-	-	-
Sample Site	8	-	DV	119	19.6	U	IM	FR	17	3	-	-
Sample Site	8	-	DV	149	39.3	U	IM	FR	18	4	-	-
Sample Site	8	-	DV	67	3.5	U	IM	-	-	-	-	-
Sample Site	8	-	DV	173	50.9	U	M	FR	19	5	-	-
Sample Site	8	-	DV	160	38.8	U	M	FR	20	4	-	-
Sample Site	8	-	DV	161	41.6	U	M	FR	21	5	-	-
Sample Site	8	-	DV	152	35.4	U	M	FR	22	4	-	-
Sample Site	8	-	DV	172	51.4	U	M	FR	23	4	-	-
Sample Site	8	-	DV	112	15.3	U	IM	FR	24	4	-	-
Sample Site	8	-	DV	120	17.2	U	IM	FR	25	4	-	-
Sample Site	8	-	DV	135	29.7	U	IM	FR	26	4	-	-
Sample Site	8	-	DV	75	4.6	U	IM	-	-	-	-	-
Sample Site	8	-	DV	102	10.9	U	IM	-	-	-	-	-
Sample Site	1	3049	DV	165	50.2	U	IM	FR	1	5	-	-
Sample Site	1	4025	CO	48	-	U	U	-	-	-	-	-
Sample Site	1	4025	CO	57	-	U	U	-	-	-	-	-
Sample Site	1	4025	CO	45	-	U	U	-	-	-	-	-
Sample Site	1	4025	CO	44	-	U	U	-	-	-	-	-
Sample Site	1	4025	CO	47	-	U	U	-	-	-	-	-
Sample Site	1	4025	CO	39	-	U	U	-	-	-	-	-
Sample Site	1	4025	CO	44	-	U	U	-	-	-	-	-
Sample Site	1	4025	CO	48	-	U	U	-	-	-	-	-
Sample Site	1	4025	SP	29	-	U	U	-	-	-	-	-
Sample Site	1	4025	RB	73	4	U	U	-	-	-	-	-
Sample Site	1	4025	CO	44	-	U	U	-	-	-	-	-
Sample Site	1	4025	CO	45	-	U	U	-	-	-	-	-
Sample Site	1	4025	CO	46	-	U	U	-	-	-	-	-
Sample Site	1	4025	BT	69	3	U	U	-	-	-	TP	1
Sample Site	2	4025	RB	134	26	U	U	-	-	-	-	-
Sample Site	2	4025	RB	142	32	U	U	-	-	-	-	-
Sample Site	2	4025	RB	110	16	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	2	4025	RB	65	3	U	U	-	-	-	-	-
Sample Site	2	4025	DV	83	6	U	U	-	-	-	TP	1
Sample Site	2	4025	RB	76	4	U	U	-	-	-	-	-
Sample Site	2	4025	BT	87	7	U	U	-	-	-	-	-
Sample Site	2	4025	BT	103	10	U	U	-	-	-	TP	2
Sample Site	2	4025	BT	93	7	U	U	-	-	-	-	-
Sample Site	2	4025	RB	72	4	U	U	-	-	-	-	-
Sample Site	2	4025	RB	74	4	U	U	-	-	-	-	-
Sample Site	2	4025	CO	60	2	U	U	-	-	-	-	-
Sample Site	2	4025	CO	70	4	U	U	-	-	-	-	-
Sample Site	2	4025	CO	62	3	U	U	-	-	-	-	-
Sample Site	2	4025	CO	55	2	U	U	-	-	-	-	-
Sample Site	2	4025	CO	57	2	U	U	-	-	-	-	-
Sample Site	2	4025	CO	60	2	U	U	-	-	-	-	-
Sample Site	2	4025	CO	50	1	U	U	-	-	-	-	-
Sample Site	2	4025	CO	48	1	U	U	-	-	-	-	-
Sample Site	2	4025	CO	49	1	U	U	-	-	-	-	-
Sample Site	2	4025	CO	48	1	U	U	-	-	-	-	-
Sample Site	2	4025	CO	46	1	U	U	-	-	-	-	-
Sample Site	2	4025	CH	65	3	U	U	-	-	-	-	-
Sample Site	2	4025	MW	40	1	U	U	-	-	-	-	-
Sample Site	2	4025	CH	48	1	U	U	-	-	-	-	-
Sample Site	2	4025	CH	50	1	U	U	-	-	-	-	-
Sample Site	2	4025	BT	52	1	U	U	-	-	-	TP	3
Sample Site	2	4025	MW	40	1	U	U	-	-	-	-	-
Sample Site	2	4025	RB	51	1	U	U	-	-	-	-	-
Sample Site	1	4021	MW	254	192	U	U	-	-	-	-	-
Sample Site	1	4021	MW	222	139	U	U	-	-	-	-	-
Sample Site	1	4021	DV	61	1	U	U	-	-	-	TP	1
Sample Site	1	4021	MW	112	14	U	U	-	-	-	-	-
Sample Site	1	4021	CO	102	14	U	U	-	-	-	-	-
Sample Site	1	4021	CO	52	-	U	U	-	-	-	-	-
Sample Site	1	4021	CO	44	-	U	U	-	-	-	-	-
Sample Site	1	4021	CO	49	-	U	U	-	-	-	-	-
Sample Site	1	4021	CO	52	-	U	U	-	-	-	-	-
Sample Site	1	4021	CH	42	-	U	U	-	-	-	-	-
Sample Site	1	4021	CO	46	-	U	U	-	-	-	-	-
Sample Site	1	4021	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	82	8	U	U	-	-	-	-	-
Sample Site	1	4020	CO	84	7	U	U	-	-	-	-	-
Sample Site	1	4020	RB	133	25	U	U	-	-	-	-	-
Sample Site	1	4020	RB	124	23	U	U	-	-	-	-	-
Sample Site	1	4020	RB	123	23	U	U	-	-	-	-	-
Sample Site	1	4020	SP	29	-	U	U	-	-	-	-	-
Sample Site	1	4020	DV	95	8	U	U	-	-	-	TP	1
Sample Site	1	4020	RB	157	38	U	U	-	-	-	-	-
Sample Site	1	4020	DV	102	10	U	U	-	-	-	TP	2
Sample Site	1	4020	DV	115	15	U	U	-	-	-	TP	3
Sample Site	1	4020	DV	70	4	U	U	-	-	-	TP	4
Sample Site	1	4020	RB	64	3	U	U	-	-	-	-	-
Sample Site	1	4020	CO	81	6	U	U	-	-	-	-	-
Sample Site	1	4020	CO	97	11	U	U	-	-	-	-	-
Sample Site	1	4020	CO	94	10	U	U	-	-	-	-	-
Sample Site	1	4020	DV	59	2	U	U	-	-	-	TP	5
Sample Site	1	4020	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	40	-	U	U	-	-	-	-	-
Sample Site	1	4020	CO	54	2	U	U	-	-	-	-	-
Sample Site	1	4002	DV	52	1.4	U	IM	-	-	-	-	-
Sample Site	1	4002	DV	49	1.1	U	IM	-	-	-	-	-
Sample Site	1	4002	DV	55	1.5	U	IM	-	-	-	-	-
Sample Site	1	4002	DV	30	0.2	U	IM	-	-	-	-	-
Sample Site	1	4002	DV	58	1.9	U	IM	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Sample Site	1	4002	DV	51	1.4	U	IM	-	-	-	-	-
Sample Site	1	4002	DV	79	4.9	U	IM	-	-	-	-	-
Sample Site	1	4002	DV	86	6.2	U	IM	-	-	-	-	-
Sample Site	1	4002	DV	109	12.2	M	IM	FR	9	2	TP	9
Sample Site	1	4002	DV	113	13.1	U	IM	FR	10	2	TP	10
Sample Site	1	4002	DV	108	12.7	F	IM	FR	11	3	TP	11
Sample Site	1	4002	DV	136	23.2	F	MT	FR	12	2	TP	12
Sample Site	1	4002	DV	125	18.8	F	MT	FR	13	3	TP	13
Sample Site	1	4002	DV	132	26.1	M	M	FR	14	3	TP	14
Sample Site	1	4002	DV	151	36.8	M	M	FR	15	4	TP	15
Sample Site	1	4002	DV	175	47.7	F	M	FR	16	5	TP	16
Sample Site	1	4003	MW	330	-	M	U	FR	1	11	-	-
Sample Site	1	4003	DV	144	32.6	M	M	FR	2	3	TP	2
Sample Site	1	4003	DV	112	14.6	M	M	FR	3	UA	TP	3
Sample Site	1	4003	DV	63	2.7	U	IM	-	-	-	TP	4
Sample Site	1	4003	DV	183	61.8	M	M	FR	5	4	TP	5
Sample Site	1	4003	DV	136	28.9	M	M	FR	6	3	TP	6
Sample Site	1	4003	DV	176	62.7	M	M	FR	7	4	TP	7
Sample Site	1	4003	DV	77	4.1	U	IM	-	-	-	TP	8
Sample Site	1	4005	DV	123	20.9	M	M	FR	1	UA	-	-
Sample Site	1	4005	DV	101	11.4	M	MT	FR	2	3	-	-
Sample Site	1	4005	DV	136	27.8	M	M	FR	3	3	-	-
Sample Site	1	4004	DV	63	2.2	U	U	-	-	-	-	-
Sample Site	1	4004	DV	91	7	U	U	FR	2	2	-	-
Sample Site	1	4004	DV	100	9.4	U	U	FR	3	3	-	-
Sample Site	1	4004	DV	60	2.2	U	U	-	-	-	-	-
Sample Site	1	4004	DV	95	7.7	U	U	FR	5	2	-	-
Sample Site	1	4004	DV	109	13.8	U	U	FR	6	3	-	-
Sample Site	1	4004	DV	74	4.4	U	U	-	-	-	-	-
Sample Site	1	4004	DV	80	5.7	U	U	-	-	-	-	-
Sample Site	1	4004	DV	54	1.9	U	U	-	-	-	-	-
Sample Site	1	4004	DV	68	2.8	U	U	-	-	-	-	-
Sample Site	1	4004	DV	72	3.3	U	U	-	-	-	-	-
Sample Site	1	4004	DV	113	13.1	F	MT	FR	12	3	TP	12
Sample Site	1	4004	DV	121	16.6	M	M	FR	13	3	TP	13
Sample Site	1	4004	DV	135	27.5	M	M	FR	14	3	TP	14
Sample Site	1	4004	DV	148	34.8	M	M	FR	15	3	TP	15
Sample Site	1	4004	DV	109	10.8	F	IM	FR	16	3	TP	16
Sample Site	1	4004	DV	115	13.3	F	IM	FR	17	3	TP	17
Sample Site	1	4004	DV	141	23.7	F	MT	FR	18	2	TP	18
Sample Site	1	4004	DV	117	15.5	M	MT	FR	19	2	TP	19
Sample Site	1	4004	BT	109	10.8	M	MT	-	-	-	-	-
Sample Site	1	3008	DV	54	-	U	U	-	-	-	-	-
Sample Site	1	3008	DV	56	-	U	U	-	-	-	-	-
Sample Site	1	3008	DV	96	-	U	U	FR	3	UA	-	-
Sample Site	1	3008	DV	120	-	U	U	FR	4	2	-	-
Sample Site	1	3008	RB	123	-	U	U	FR	5	3	-	-
Sample Site	1	3008	RB	93	-	U	U	FR	6	1	-	-
Sample Site	1	3008	RB	102	-	U	U	FR	7	2	-	-
Sample Site	1	3008	RB	84	-	U	U	-	-	-	-	-
Sample Site	1	3008	RB	94	-	U	U	FR	9	UA	-	-
Sample Site	1	3008	RB	62	-	U	U	-	-	-	-	-
Sample Site	1	3008	RB	65	-	U	U	-	-	-	-	-
Sample Site	1	3006	DV	130	23.1	U	IM	FR	1	-	-	-
Sample Site	1	3007	DV	165	53.1	U	IM	FR	1	-	-	-
Sample Site	1	3007	DV	183	73.6	U	IM	FR	2	-	-	-
Sample Site	1	3007	DV	132	43.2	U	IM	FR	3	-	-	-
Sample Site	1	3007	DV	65	2.8	U	IM	FR	4	-	-	-
Sample Site	1	3007	DV	64	3.1	U	IM	FR	5	-	-	-
Sample Site	1	3007	DV	34	0.5	U	IM	FR	6	-	-	-
Sample Site	1	3007	DV	33	0.4	U	IM	FR	7	-	-	-
Sample Site	1	3007	DV	30	0.3	U	IM	-	-	-	-	-
Density	2	1150	DV	123	18.7	U	IM	FR	1	4	-	-
Density	2	1150	DV	110	14.1	U	IM	FR	2	2	-	-
Density	2	1150	DV	86	6.1	U	IM	-	-	-	-	-
Density	2	1150	DV	86	5.9	U	IM	-	-	-	-	-
Density	2	1150	DV	79	5.6	U	IM	-	-	-	-	-
Density	2	1150	DV	84	5.5	U	IM	-	-	-	-	-
Density	2	1150	DV	73	4.3	U	IM	-	-	-	-	-



**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	2	1150	DV	76	5.2	U	IM	-	-	-	-	-
Density	2	1150	DV	84	5.4	U	IM	-	-	-	-	-
Density	2	1150	DV	76	4.3	U	IM	-	-	-	-	-
Density	2	1150	DV	100	11.4	U	IM	-	-	-	-	-
Density	2	1150	DV	77	5.1	U	IM	-	-	-	-	-
Density	2	1150	DV	82	4.9	U	IM	-	-	-	-	-
Density	2	1150	DV	80	4.9	U	IM	-	-	-	-	-
Density	2	1150	DV	89	6.3	U	IM	-	-	-	-	-
Density	2	1150	DV	89	6.4	U	IM	-	-	-	-	-
Density	2	1150	DV	90	7.3	U	IM	-	-	-	-	-
Density	2	1150	DV	76	4.5	U	IM	-	-	-	-	-
Density	2	1150	DV	85	5.6	U	IM	-	-	-	-	-
Density	2	1150	DV	80	4.7	U	IM	-	-	-	-	-
Density	1	1023	DV	98	-	U	IM	-	-	-	-	-
Density	1	1023	DV	92	-	U	IM	-	-	-	-	-
Density	1	1023	DV	87	-	U	IM	-	-	-	-	-
Density	1	1023	DV	99	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	32	-	U	IM	-	-	-	-	-
Density	1	1023	DV	28	-	U	IM	-	-	-	-	-
Density	1	1023	DV	24	-	U	IM	-	-	-	-	-
Density	1	1023	DV	28	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	32	-	U	IM	-	-	-	-	-
Density	1	1023	DV	28	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	26	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	27	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	32	-	U	IM	-	-	-	-	-
Density	1	1023	DV	27	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	32	-	U	IM	-	-	-	-	-
Density	1	1023	DV	59	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	33	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	52	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	26	-	U	IM	-	-	-	-	-
Density	1	1023	DV	28	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	28	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	32	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	27	-	U	IM	-	-	-	-	-
Density	1	1023	DV	27	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	26	-	U	IM	-	-	-	-	-
Density	1	1023	DV	33	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	1	1023	DV	27	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	32	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	35	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	32	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	30	-	U	IM	-	-	-	-	-
Density	1	1023	DV	28	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	34	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	31	-	U	IM	-	-	-	-	-
Density	1	1023	DV	26	-	U	IM	-	-	-	-	-
Density	1	1023	DV	29	-	U	IM	-	-	-	-	-
Density	1	1023	DV	24	-	U	IM	-	-	-	-	-
Density	2	1030	DV	158	49.2	U	U	-	-	-	-	-
Density	2	1030	DV	133	26.4	U	U	FR	1	4	-	-
Density	2	1030	DV	149	36.5	U	U	FR	2	4	-	-
Density	2	1030	DV	145	37.3	U	U	FR	3	4	-	-
Density	2	1030	DV	143	34.2	U	U	FR	4	3	-	-
Density	2	1030	DV	137	27.5	U	U	FR	5	3	-	-
Density	2	1030	DV	100	12.1	U	U	-	-	-	-	-
Density	2	1030	DV	125	24.4	U	U	-	-	-	-	-
Density	2	1030	DV	107	14.2	U	U	-	-	-	-	-
Density	2	1030	DV	91	8.7	U	U	-	-	-	-	-
Density	2	1030	DV	97	10.4	U	U	-	-	-	-	-
Density	2	1030	DV	100	12.7	U	U	-	-	-	-	-
Density	3	1082	DV	135	27.4	U	U	-	-	-	-	-
Density	3	1082	DV	161	44.9	U	U	-	-	-	-	-
Density	3	1082	DV	141	27.5	U	U	-	-	-	-	-
Density	3	1082	DV	116	14.6	U	IM	-	-	-	-	-
Density	3	1082	DV	80	5.5	U	IM	-	-	-	-	-
Density	3	1082	DV	110	12.2	U	IM	-	-	-	-	-
Density	3	1082	DV	79	4.5	U	IM	-	-	-	-	-
Density	3	1082	DV	81	4.9	U	IM	-	-	-	-	-
Density	3	1082	DV	77	5.3	U	IM	-	-	-	-	-
Density	3	1082	DV	84	6.5	U	IM	-	-	-	-	-
Density	3	1082	DV	89	7.1	U	IM	-	-	-	-	-
Density	3	1082	DV	74	4.3	U	IM	-	-	-	-	-
Density	3	1082	DV	105	11.8	U	IM	-	-	-	-	-
Density	3	1082	DV	73	3.6	U	IM	-	-	-	-	-
Density	3	1082	DV	88	6.4	U	IM	-	-	-	-	-
Density	3	1082	DV	84	7.4	U	IM	-	-	-	-	-
Density	3	1082	DV	76	3.5	U	IM	-	-	-	-	-
Density	3	1082	DV	55	1.6	U	IM	-	-	-	-	-
Density	3	1082	DV	62	2.5	U	IM	-	-	-	-	-
Density	3	1082	DV	86	6	U	IM	-	-	-	-	-
Density	3	1082	DV	72	3	U	IM	-	-	-	-	-
Density	3	1082	DV	96	8.9	U	IM	-	-	-	-	-
Density	3	1082	DV	77	5.6	U	IM	-	-	-	-	-
Density	3	1082	DV	63	2.7	U	IM	-	-	-	-	-
Density	3	1082	DV	75	3.8	U	IM	-	-	-	-	-
Density	3	1082	DV	63	2.6	U	IM	-	-	-	-	-
Density	3	1082	DV	58	1.9	U	IM	-	-	-	-	-
Density	3	1082	DV	62	2.3	U	IM	-	-	-	-	-
Density	3	1082	DV	82	5.2	U	IM	-	-	-	-	-
Density	3	1082	DV	66	2.8	U	IM	-	-	-	-	-
Density	3	1082	DV	64	2.5	U	IM	-	-	-	-	-
Density	3	1082	DV	74	3.7	U	IM	-	-	-	-	-
Density	3	1082	DV	80	5.1	U	IM	-	-	-	-	-
Density	3	1082	DV	73	3.5	U	IM	-	-	-	-	-
Density	3	1082	DV	78	4.4	U	IM	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	3	1082	DV	55	1.7	U	IM	-	-	-	-	-
Density	3	1082	DV	54	1.4	U	IM	-	-	-	-	-
Density	3	1082	DV	57	1.7	U	IM	-	-	-	-	-
Density	3	1082	DV	71	3.3	U	IM	-	-	-	-	-
Density	3	1082	DV	112	12.2	U	IM	-	-	-	-	-
Density	3	1082	DV	119	15.4	U	IM	-	-	-	-	-
Density	3	1082	DV	124	18.3	U	IM	-	-	-	-	-
Density	3	1082	DV	106	12.9	U	IM	-	-	-	-	-
Density	3	1082	DV	100	9.9	U	IM	-	-	-	-	-
Density	3	1082	DV	78	5.1	U	IM	-	-	-	-	-
Density	3	1082	DV	79	4.5	U	IM	-	-	-	-	-
Density	3	1082	DV	91	7.9	U	IM	-	-	-	-	-
Density	3	1082	DV	88	6	U	IM	-	-	-	-	-
Density	3	1082	DV	68	2.2	U	IM	-	-	-	-	-
Density	3	1082	DV	80	4.9	U	IM	-	-	-	-	-
Density	3	1082	DV	74	3.5	U	IM	-	-	-	-	-
Density	3	1082	DV	80	4.4	U	IM	-	-	-	-	-
Density	3	1082	DV	63	2.5	U	IM	-	-	-	-	-
Density	3	1082	DV	76	4.2	U	IM	-	-	-	-	-
Density	3	1082	DV	71	3.6	U	IM	-	-	-	-	-
Density	3	1082	DV	58	2.1	U	IM	-	-	-	-	-
Density	3	1082	DV	61	2.2	U	IM	-	-	-	-	-
Density	3	1082	DV	63	2.8	U	IM	-	-	-	-	-
Density	3	1082	DV	74	4.1	U	IM	-	-	-	-	-
Density	3	1082	DV	63	2.4	U	IM	-	-	-	-	-
Density	3	1082	DV	53	1.6	U	IM	-	-	-	-	-
Density	3	1082	DV	25	0.4	U	IM	-	-	-	-	-
Density	3	1082	DV	69	2.9	U	IM	-	-	-	-	-
Density	3	1082	DV	114	18.1	U	IM	-	-	-	-	-
Density	3	1082	DV	89	6.2	U	IM	-	-	-	-	-
Density	3	1082	DV	68	2.9	U	IM	-	-	-	-	-
Density	3	1082	DV	78	4.1	U	IM	-	-	-	-	-
Density	3	1082	DV	74	4	U	IM	-	-	-	-	-
Density	3	1082	DV	75	4.3	U	IM	-	-	-	-	-
Density	3	1082	DV	78	5.3	U	IM	-	-	-	-	-
Density	3	1082	DV	58	1.9	U	IM	-	-	-	-	-
Density	3	1082	DV	57	1.9	U	IM	-	-	-	-	-
Density	3	1082	DV	55	1.8	U	IM	-	-	-	-	-
Density	3	1082	DV	62	2	U	IM	-	-	-	-	-
Density	3	1082	DV	64	2	U	IM	-	-	-	-	-
Density	3	1082	DV	30	0.3	U	IM	-	-	-	-	-
Density	3	1082	DV	50	1.2	U	IM	-	-	-	-	-
Density	3	1082	DV	52	1.7	U	IM	-	-	-	-	-
Density	3	1082	DV	119	15.6	U	IM	-	-	-	-	-
Density	3	1082	DV	90	8.3	U	IM	-	-	-	-	-
Density	3	1082	DV	82	4.8	U	IM	-	-	-	-	-
Density	3	1082	DV	78	4.1	U	IM	-	-	-	-	-
Density	3	1082	DV	65	2.7	U	IM	-	-	-	-	-
Density	3	1082	DV	64	2.7	U	IM	-	-	-	-	-
Density	3	1082	DV	63	2.4	U	IM	-	-	-	-	-
Density	3	1082	DV	56	1.7	U	IM	-	-	-	-	-
Density	3	1082	DV	62	1.9	U	IM	-	-	-	-	-
Density	3	1082	DV	49	1.1	U	IM	-	-	-	-	-
Density	2	1059	DV	57	2.1	U	IM	-	-	-	-	-
Density	2	1059	DV	57	2.3	U	IM	-	-	-	-	-
Density	2	1059	DV	61	3.1	U	IM	-	-	-	-	-
Density	2	1059	DV	180	59.6	U	M	FR	1	3	-	-
Density	2	1059	DV	84	6.3	U	IM	-	-	-	-	-
Density	2	1059	DV	116	16.5	U	IM	FR	2	3	-	-
Density	2	1059	DV	58	2.3	U	IM	-	-	-	-	-
Density	2	1059	DV	59	2.4	U	IM	-	-	-	-	-
Density	2	1059	DV	62	2.9	U	IM	-	-	-	-	-
Density	2	1059	DV	59	2.1	U	IM	-	-	-	-	-
Density	2	1059	DV	53	1.9	U	IM	-	-	-	-	-
Density	2	1059	DV	56	1.9	U	IM	-	-	-	-	-
Density	2	1059	DV	58	2.2	U	IM	-	-	-	-	-
Density	2	1059	DV	64	2.8	U	IM	-	-	-	-	-
Density	2	1059	DV	57	1.9	U	IM	-	-	-	-	-
Density	2	1059	DV	54	1.8	U	IM	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	2	1059	DV	56	1.9	U	IM	-	-	-	-	-
Density	2	1059	DV	92	8.2	U	IM	FR	3	3	-	-
Density	2	1059	DV	59	2.4	U	IM	-	-	-	-	-
Density	2	1059	DV	54	1.7	U	IM	-	-	-	-	-
Density	2	1059	DV	66	3.5	U	IM	-	-	-	-	-
Density	2	1059	DV	58	2.1	U	IM	-	-	-	-	-
Density	2	1059	DV	54	1.9	U	IM	-	-	-	-	-
Density	2	1059	DV	57	2.3	U	IM	-	-	-	-	-
Density	2	1059	DV	36	0.4	U	IM	-	-	-	-	-
Density	2	1059	DV	94	9.8	U	IM	FR	4	2	-	-
Density	2	1059	DV	54	2.3	U	IM	-	-	-	-	-
Density	2	1059	DV	60	2.2	U	IM	-	-	-	-	-
Density	2	1059	DV	58	2.5	U	IM	-	-	-	-	-
Density	2	1059	DV	27	0.2	U	IM	-	-	-	-	-
Density	2	1059	DV	33	0.5	U	IM	-	-	-	-	-
Density	2	1059	DV	63	2.8	U	IM	-	-	-	-	-
Density	2	1059	DV	64	3.4	U	IM	-	-	-	-	-
Density	2	1059	DV	60	2.5	U	IM	-	-	-	-	-
Density	2	1059	DV	55	2.3	U	IM	-	-	-	-	-
Density	2	1059	DV	59	2.6	U	IM	-	-	-	-	-
Density	2	1059	DV	39	0.6	U	IM	-	-	-	-	-
Density	3	1050	DV	145	28.7	U	U	-	-	-	-	-
Density	3	1050	DV	50	1.4	U	IM	-	-	-	-	-
Density	3	1050	DV	62	3	U	IM	-	-	-	-	-
Density	3	1050	DV	60	2.6	U	IM	-	-	-	-	-
Density	3	1050	DV	73	4.4	U	IM	-	-	-	-	-
Density	3	1050	DV	64	2.3	U	IM	-	-	-	-	-
Density	3	1050	DV	39	0.7	U	IM	-	-	-	-	-
Density	3	1050	DV	35	0.6	U	IM	-	-	-	-	-
Density	3	1050	DV	65	2.9	U	IM	-	-	-	-	-
Density	3	1050	DV	89	6.7	U	IM	-	-	-	-	-
Density	3	1050	DV	59	2.1	U	IM	-	-	-	-	-
Density	3	1050	DV	36	0.6	U	IM	-	-	-	-	-
Density	3	1050	DV	63	2.4	U	IM	-	-	-	-	-
Density	3	1050	DV	42	0.7	U	IM	-	-	-	-	-
Density	3	1050	DV	32	0.3	U	IM	-	-	-	-	-
Density	3	1050	DV	91	8.8	U	IM	-	-	-	-	-
Density	3	1050	DV	66	2.6	U	IM	-	-	-	-	-
Density	3	1050	DV	51	1.5	U	IM	-	-	-	-	-
Density	3	1050	DV	80	6.2	U	IM	-	-	-	-	-
Density	3	1050	DV	85	6.1	U	IM	-	-	-	-	-
Density	3	1050	DV	54	2.3	U	IM	-	-	-	-	-
Density	3	1050	DV	62	2.4	U	IM	-	-	-	-	-
Density	3	1050	DV	36	0.6	U	IM	-	-	-	-	-
Density	3	1050	DV	39	0.6	U	IM	-	-	-	-	-
Density	3	1050	DV	32	0.3	U	IM	-	-	-	-	-
Density	3	1050	DV	37	0.6	U	IM	-	-	-	-	-
Density	3	1050	DV	66	3.4	U	IM	-	-	-	-	-
Density	3	1050	DV	71	3.4	U	IM	-	-	-	-	-
Density	3	1050	DV	31	0.4	U	IM	-	-	-	-	-
Density	3	1050	DV	38	0.5	U	IM	-	-	-	-	-
Density	3	1050	DV	37	0.5	U	IM	-	-	-	-	-
Density	3	1050	DV	31	0.3	U	IM	-	-	-	-	-
Density	3	1050	DV	34	0.4	U	IM	-	-	-	-	-
Density	1	1060	DV	112	17.5	U	U	-	-	-	-	-
Density	1	1062	DV	138	33.2	U	U	FR	1	3	-	-
Density	1	1062	DV	76	4.9	U	IM	FR	2	2	-	-
Density	1	1062	DV	117	17.3	U	IM	FR	3	2	-	-
Density	1	1062	DV	126	20.6	U	IM	-	-	-	-	-
Density	1	1062	DV	114	17.2	U	IM	-	-	-	-	-
Density	1	1062	DV	93	8	U	IM	-	-	-	-	-
Density	1	1062	DV	96	8.2	U	IM	-	-	-	-	-
Density	1	1062	DV	83	7.1	U	IM	-	-	-	-	-
Density	6	1050	DV	113	15.5	U	U	-	-	-	-	-
Density	6	1050	DV	92	8.4	U	U	-	-	-	-	-
Density	6	1050	DV	105	12.5	U	U	-	-	-	-	-
Density	6	1050	DV	110	14.4	U	U	-	-	-	-	-
Density	6	1050	DV	98	10.8	U	U	-	-	-	-	-
Density	6	1050	DV	95	7.3	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	6	1050	DV	104	12.8	U	U	-	-	-	-	-
Density	6	1050	DV	90	8.9	U	U	-	-	-	-	-
Density	6	1050	DV	100	9.8	U	U	-	-	-	-	-
Density	6	1050	DV	111	14.7	U	U	-	-	-	-	-
Density	6	1050	DV	95	8.3	U	U	-	-	-	-	-
Density	6	1050	DV	73	3.7	U	U	-	-	-	-	-
Density	6	1050	DV	185	66.5	U	U	-	-	-	-	-
Density	6	1050	DV	159	39.7	U	U	-	-	-	-	-
Density	6	1050	DV	149	39.3	U	U	-	-	-	-	-
Density	6	1050	DV	139	26.8	U	U	-	-	-	-	-
Density	6	1050	DV	112	15.8	U	U	-	-	-	-	-
Density	6	1050	DV	123	16.4	U	U	-	-	-	-	-
Density	6	1050	DV	102	12.2	U	U	-	-	-	-	-
Density	6	1050	DV	108	15	U	U	-	-	-	-	-
Density	6	1050	DV	100	10.1	U	U	-	-	-	-	-
Density	6	1050	DV	99	13	U	U	-	-	-	-	-
Density	6	1050	DV	79	6.4	U	U	-	-	-	-	-
Density	6	1050	DV	95	8.8	U	U	-	-	-	-	-
Density	6	1050	DV	105	15.7	U	U	-	-	-	-	-
Density	6	1050	DV	104	15.1	U	U	-	-	-	-	-
Density	6	1050	DV	105	15.1	U	U	-	-	-	-	-
Density	6	1050	DV	93	9.6	U	U	-	-	-	-	-
Density	6	1050	DV	107	12.6	U	U	-	-	-	-	-
Density	6	1050	DV	100	11.6	U	U	-	-	-	-	-
Density	6	1050	DV	103	10.9	U	U	-	-	-	-	-
Density	6	1050	DV	82	5.1	U	U	-	-	-	-	-
Density	7	1050	DV	124	21.4	U	U	FR	1	3	-	-
Density	7	1050	DV	136	22.7	U	U	FR	2	3	-	-
Density	7	1050	DV	111	19.7	U	U	FR	3	3	-	-
Density	7	1050	DV	77	5.3	U	IM	-	-	-	-	-
Density	7	1050	DV	79	5.9	U	IM	-	-	-	-	-
Density	7	1050	DV	69	4	U	IM	-	-	-	-	-
Density	7	1050	DV	69	3.9	U	IM	-	-	-	-	-
Density	7	1050	DV	62	3.6	U	IM	-	-	-	-	-
Density	7	1050	DV	91	9.3	U	IM	-	-	-	-	-
Density	7	1050	DV	38	0.8	U	IM	-	-	-	-	-
Density	7	1050	DV	51	1.3	U	IM	-	-	-	-	-
Density	7	1050	DV	39	0.9	U	IM	-	-	-	-	-
Density	7	1050	DV	29	0.2	U	IM	-	-	-	-	-
Density	7	1050	DV	154	42.2	U	M	FR	4	4	-	-
Density	7	1050	DV	169	52.7	U	M	FR	5	3	-	-
Density	7	1050	DV	128	24.6	U	M	FR	6	3	-	-
Density	7	1050	DV	141	26.6	U	IM	-	-	-	-	-
Density	7	1050	DV	108	11.1	U	IM	-	-	-	-	-
Density	7	1050	DV	95	9.6	U	IM	-	-	-	-	-
Density	7	1050	DV	110	12.6	U	IM	-	-	-	-	-
Density	7	1050	DV	87	6.6	U	IM	-	-	-	-	-
Density	7	1050	DV	94	7.9	U	IM	-	-	-	-	-
Density	7	1050	DV	57	2.2	U	IM	-	-	-	-	-
Density	7	1050	DV	62	2.9	U	IM	-	-	-	-	-
Density	7	1050	DV	81	5.6	U	IM	-	-	-	-	-
Density	7	1050	DV	32	0.3	U	IM	-	-	-	-	-
Density	7	1050	DV	36	0.5	U	IM	-	-	-	-	-
Density	7	1050	DV	29	0.3	U	IM	-	-	-	-	-
Density	7	1050	DV	33	0.4	U	IM	-	-	-	-	-
Density	1	1062	DV	71	4.9	U	IM	FR	4	UA	-	-
Density	1	1062	DV	95	8.7	U	IM	-	-	-	-	-
Density	1	1062	DV	82	5.8	U	IM	FR	5	2	-	-
Density	1	1062	DV	74	4.4	U	IM	FR	6	2	-	-
Density	1	1062	DV	80	4.9	U	IM	-	-	-	-	-
Density	1	1062	DV	80	5.4	U	IM	-	-	-	-	-
Density	1	1062	DV	67	3.2	U	IM	-	-	-	-	-
Density	1	1062	DV	106	11.9	U	IM	-	-	-	-	-
Density	1	1062	DV	107	12.9	U	IM	-	-	-	-	-
Density	1	1062	DV	93	9.1	U	IM	-	-	-	-	-
Density	1	1062	DV	76	4.7	U	IM	-	-	-	-	-
Density	1	1062	DV	74	4.6	U	IM	-	-	-	-	-
Density	1	1062	DV	68	3.8	U	IM	-	-	-	-	-
Density	6	1050	DV	170	54.9	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	6	1050	DV	133	25.4	U	U	-	-	-	-	-
Density	6	1050	DV	130	25.5	U	U	-	-	-	-	-
Density	6	1050	DV	147	30.1	U	U	-	-	-	-	-
Density	6	1050	DV	149	34.6	U	U	-	-	-	-	-
Density	6	1050	DV	117	20.4	U	U	-	-	-	-	-
Density	6	1050	DV	150	36	U	U	-	-	-	-	-
Density	6	1050	DV	109	12.6	U	U	-	-	-	-	-
Density	6	1050	DV	159	46.6	U	U	-	-	-	-	-
Density	6	1050	DV	155	40.5	U	U	-	-	-	-	-
Density	6	1050	DV	130	25.4	U	U	-	-	-	-	-
Density	6	1050	DV	156	39.7	U	U	-	-	-	-	-
Density	6	1050	DV	120	17.9	U	U	-	-	-	-	-
Density	6	1050	DV	139	27.5	U	U	-	-	-	-	-
Density	6	1050	DV	123	17.5	U	U	-	-	-	-	-
Density	6	1050	DV	111	13.9	U	U	-	-	-	-	-
Density	6	1050	DV	90	9	U	U	-	-	-	-	-
Density	6	1050	DV	116	18.9	U	U	-	-	-	-	-
Density	7	1050	DV	104	13.6	U	IM	-	-	-	-	-
Density	7	1050	DV	110	12.6	U	IM	-	-	-	-	-
Density	7	1050	DV	92	9.3	U	IM	-	-	-	-	-
Density	7	1050	DV	86	7.1	U	IM	-	-	-	-	-
Density	7	1050	DV	68	3.7	U	IM	-	-	-	-	-
Density	7	1050	DV	54	2.1	U	IM	-	-	-	-	-
Density	2	1010	DV	155	42.8	U	U	FR	1	3	-	-
Density	2	1010	DV	145	33.7	U	U	FR	2	4	-	-
Density	2	1010	DV	94	10	U	IM	-	-	-	-	-
Density	2	1010	DV	89	6.7	U	IM	-	-	-	-	-
Density	2	1010	DV	81	5.1	U	IM	-	-	-	-	-
Density	2	1010	DV	76	4.8	U	IM	FR	3	2	-	-
Density	2	1010	DV	60	2.5	U	IM	FR	4	2	-	-
Density	2	1010	DV	61	2.6	U	IM	-	-	-	-	-
Density	2	1010	DV	59	2.3	U	IM	-	-	-	-	-
Density	2	1010	DV	58	1.9	U	IM	-	-	-	-	-
Density	2	1010	DV	60	1.8	U	IM	-	-	-	-	-
Density	2	1010	DV	138	27.6	U	IM	-	-	-	-	-
Density	2	1010	DV	106	14.4	U	IM	FR	5	2	-	-
Density	2	1010	DV	91	8.4	U	IM	-	-	-	-	-
Density	2	1010	DV	75	5.1	U	IM	FR	6	2	-	-
Density	2	1010	DV	84	6.5	U	IM	-	-	-	-	-
Density	2	1010	DV	55	1.6	U	IM	-	-	-	-	-
Density	2	1010	DV	70	3.7	U	IM	-	-	-	-	-
Density	2	1010	DV	49	1.4	U	IM	-	-	-	-	-
Density	2	1010	DV	48	1.2	U	IM	-	-	-	-	-
Density	2	1010	DV	56	1.8	U	IM	-	-	-	-	-
Density	2	1010	DV	43	0.8	U	IM	-	-	-	-	-
Density	2	1010	DV	145	28.9	U	U	-	-	-	-	-
Density	2	1010	DV	90	8.1	U	IM	-	-	-	-	-
Density	2	5001	DV	166	38.8	U	U	-	-	-	TP	26
Density	2	5001	DV	139	29.9	U	U	-	-	-	TP	27
Density	2	5001	DV	169	47.3	U	U	-	-	-	TP	28
Density	2	5001	DV	205	85.9	U	U	-	-	-	TP	29
Density	2	5001	DV	132	19.4	U	U	-	-	-	TP	30
Density	2	5001	DV	131	23.1	U	U	-	-	-	-	-
Density	2	5001	DV	112	15.9	U	U	-	-	-	-	-
Density	2	5001	DV	123	19.2	U	U	-	-	-	-	-
Density	2	5001	DV	137	30.7	U	U	-	-	-	-	-
Density	2	5001	DV	134	24.6	U	U	-	-	-	-	-
Density	2	5001	DV	128	16.6	U	U	-	-	-	-	-
Density	2	5001	DV	182	39.8	U	U	-	-	-	-	-
Density	2	5001	DV	89	5.7	U	U	-	-	-	-	-
Density	2	5001	DV	99	8.2	U	U	-	-	-	-	-
Density	2	5001	DV	125	17.4	U	U	-	-	-	-	-
Density	2	5001	DV	115	12	U	U	-	-	-	-	-
Density	2	5001	DV	122	17.6	U	U	-	-	-	-	-
Density	2	5001	DV	110	7.8	U	U	-	-	-	-	-
Density	2	1050	DV	104	10.7	U	U	-	-	-	-	-
Density	2	1050	DV	115	14.7	U	U	-	-	-	-	-
Density	2	1050	DV	133	24.8	U	U	-	-	-	-	-
Density	2	1050	DV	159	36.4	U	U	-	-	-	-	-



**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	2	1050	DV	108	12.1	U	U	-	-	-	-	-
Density	2	1050	DV	125	19.1	U	U	-	-	-	-	-
Density	2	1050	DV	68	3.7	U	U	-	-	-	-	-
Density	2	1050	DV	115	16.4	U	U	-	-	-	-	-
Density	2	1050	DV	93	8.2	U	U	-	-	-	-	-
Density	2	1050	DV	112	13.4	U	U	-	-	-	-	-
Density	2	1050	DV	90	7.3	U	U	-	-	-	-	-
Density	2	1050	DV	112	14.1	U	U	-	-	-	-	-
Density	2	1050	DV	109	12.6	U	U	-	-	-	-	-
Density	2	1050	DV	95	10.4	U	U	-	-	-	-	-
Density	2	1050	DV	73	4.2	U	U	-	-	-	-	-
Density	2	1050	DV	100	9.4	U	U	-	-	-	-	-
Density	2	1050	DV	98	8.5	U	U	-	-	-	-	-
Density	2	1050	DV	100	9.3	U	U	-	-	-	-	-
Density	2	1050	DV	105	10.6	U	U	-	-	-	-	-
Density	2	1050	DV	120	18.5	U	U	-	-	-	-	-
Density	2	1050	DV	103	10.4	U	U	-	-	-	-	-
Density	2	1050	DV	105	10.4	U	U	-	-	-	-	-
Density	2	1050	DV	101	9.3	U	U	-	-	-	-	-
Density	2	1050	DV	104	10.9	U	U	-	-	-	-	-
Density	2	1050	DV	99	9	U	U	-	-	-	-	-
Density	2	1050	DV	35	0.6	U	U	-	-	-	-	-
Density	2	1050	DV	104	11.3	U	U	-	-	-	-	-
Density	2	1050	DV	98	8.8	U	U	-	-	-	-	-
Density	2	1050	DV	110	12.6	U	U	-	-	-	-	-
Density	2	1050	DV	108	12.3	U	U	-	-	-	-	-
Density	2	1050	DV	75	4.1	U	U	-	-	-	-	-
Density	2	1050	DV	119	17.5	U	U	-	-	-	-	-
Density	2	1050	DV	98	9.4	U	U	-	-	-	-	-
Density	2	1050	DV	99	8.3	U	U	-	-	-	-	-
Density	2	1050	DV	79	4.7	U	U	-	-	-	-	-
Density	2	1050	DV	78	4.5	U	U	-	-	-	-	-
Density	2	1050	DV	97	9.1	U	U	-	-	-	-	-
Density	2	1050	DV	75	4.5	U	U	-	-	-	-	-
Density	2	1050	DV	76	4.3	U	U	-	-	-	-	-
Density	2	1050	DV	74	4.2	U	U	-	-	-	-	-
Density	2	1050	DV	36	0.3	U	U	-	-	-	-	-
Density	2	1050	DV	75	4.6	U	U	-	-	-	-	-
Density	2	1050	DV	119	15.2	U	U	-	-	-	-	-
Density	2	1050	DV	95	10.2	U	U	-	-	-	-	-
Density	2	1050	DV	176	53.3	U	U	-	-	-	-	-
Density	2	1050	DV	106	11	U	U	-	-	-	-	-
Density	2	1050	DV	125	19.2	U	U	-	-	-	-	-
Density	2	1050	DV	94	7.5	U	U	-	-	-	-	-
Density	2	1050	DV	122	17.9	U	U	-	-	-	-	-
Density	2	1050	DV	106	11	U	U	-	-	-	-	-
Density	2	1050	DV	90	7.4	U	U	-	-	-	-	-
Density	2	1050	DV	109	12.1	U	U	-	-	-	-	-
Density	2	1050	DV	74	4.3	U	U	-	-	-	-	-
Density	2	1050	DV	74	4.7	U	U	-	-	-	-	-
Density	2	1050	DV	63	2.7	U	U	-	-	-	-	-
Density	2	1050	DV	75	4.8	U	U	-	-	-	-	-
Density	1	1050	DV	96	10	U	U	FR	1	2	TP	1
Density	1	1050	DV	102	11.6	U	U	FR	2	2	TP	2
Density	1	1050	DV	102	10.3	U	U	FR	3	2	TP	3
Density	1	1050	DV	129	18.2	U	U	FR	4	3	TP	4
Density	1	1050	DV	118	14.3	U	U	FR	5	3	TP	5
Density	1	1050	DV	124	17.7	U	U	FR	6	3	TP	6
Density	1	1050	DV	109	12.4	U	U	-	-	-	-	-
Density	1	1050	DV	155	40.7	U	U	-	-	-	-	-
Density	1	1050	DV	105	11	U	U	-	-	-	-	-
Density	1	1050	DV	100	9.3	U	U	-	-	-	-	-
Density	1	1050	DV	162	43.1	U	U	FR	7	4	TP	7
Density	1	1050	DV	158	42.3	U	U	FR	8	5	TP	8
Density	1	1050	DV	136	24.9	U	U	FR	9	3	TP	9
Density	1	1050	DV	112	12.3	U	U	-	-	-	-	-
Density	1	1050	DV	110	12.8	U	U	FR	10	3	TP	10
Density	1	1050	DV	95	8.8	U	U	-	-	-	-	-
Density	1	1050	DV	99	8.9	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	1	1050	DV	74	3.6	U	U	-	-	-	-	-
Density	3	5000	DV	53	2.1	U	U	-	-	-	-	-
Density	2	5001	DV	122	18.1	U	U	FR	1	-	TP	1
Density	2	5001	DV	175	61.2	U	U	FR	2	-	TP	2
Density	2	5001	DV	191	79.8	U	U	FR	3	-	TP	3
Density	2	5001	DV	181	52.4	U	U	FR	4	-	TP	4
Density	2	5001	DV	186	58.4	U	U	FR	5	-	TP	5
Density	2	5001	DV	198	78.8	U	U	FR	6	-	TP	6
Density	2	5001	DV	182	70	U	U	FR	7	-	TP	7
Density	2	5001	DV	199	79.6	U	U	FR	8	-	TP	8
Density	2	5001	DV	113	14.2	U	U	FR	9	-	TP	9
Density	2	5001	DV	124	19.3	U	U	FR	10	-	TP	10
Density	2	5001	DV	91	6.9	U	U	-	-	-	-	-
Density	2	5001	DV	106	14.2	U	U	FR	11	-	TP	11
Density	2	5001	DV	138	25	U	U	FR	12	-	TP	12
Density	2	5001	DV	117	13.2	U	U	FR	13	-	TP	13
Density	2	5001	DV	161	39.3	U	U	FR	14	-	TP	14
Density	2	5001	DV	199	79.2	U	U	FR	15	-	TP	15
Density	2	5001	DV	186	59.6	U	U	FR	16	-	TP	16
Density	2	5001	DV	104	10.9	U	U	FR	17	-	TP	17
Density	2	5001	DV	189	68.1	U	U	FR	18	-	TP	18
Density	2	5001	DV	179	54.5	U	U	FR	19	-	TP	19
Density	2	5001	DV	150	28.8	U	U	FR	20	-	TP	20
Density	2	5001	DV	185	59.8	U	U	FR	21	-	TP	21
Density	2	5001	DV	157	35.8	U	U	FR	22	-	TP	22
Density	2	5001	DV	104	9.8	U	U	-	-	-	-	-
Density	2	5001	DV	197	74.5	U	U	FR	23	-	TP	23
Density	2	5001	DV	146	30.4	U	U	FR	24	-	TP	24
Density	2	5001	DV	191	69	U	U	FR	25	-	TP	25
Density	1	1050	DV	115	14.8	U	U	-	-	-	-	-
Density	1	1050	DV	114	13.8	U	U	-	-	-	-	-
Density	1	1050	DV	64	2.1	U	U	-	-	-	-	-
Density	1	1050	DV	109	11.3	U	U	-	-	-	-	-
Density	1	1050	DV	99	9.3	U	U	-	-	-	-	-
Density	1	1050	DV	98	8.9	U	U	-	-	-	-	-
Density	1	1050	DV	106	12	U	U	-	-	-	-	-
Density	1	1050	DV	114	13.2	U	U	-	-	-	-	-
Density	1	1050	DV	153	38.5	U	U	-	-	-	-	-
Density	1	1050	DV	97	8.2	U	U	-	-	-	-	-
Density	1	1050	DV	71	3.3	U	U	-	-	-	-	-
Density	1	1050	DV	100	9	U	U	-	-	-	-	-
Density	1	1050	DV	96	8.2	U	U	-	-	-	-	-
Density	1	1005	DV	67	3	U	U	-	-	-	-	-
Density	1	1005	DV	52	2	U	U	-	-	-	-	-
Density	1	1005	DV	81	6	U	U	-	-	-	TP	1
Density	1	1005	DV	51	2	U	U	-	-	-	-	-
Density	1	1005	DV	83	5	U	U	-	-	-	TP	2
Density	1	1005	DV	30	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	28	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	43	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	29	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	27	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	66	3	U	U	-	-	-	-	-
Density	1	1005	DV	26	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	133	27	U	U	FR	1	3	TP	3
Density	1	1005	DV	50	2	U	U	-	-	-	-	-
Density	1	1005	DV	28	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	52	2	U	U	-	-	-	-	-
Density	1	1005	DV	30	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	29	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	55	2	U	U	-	-	-	-	-
Density	1	1005	DV	29	0.5	U	U	-	-	-	-	-
Density	1	1005	DV	128	26	U	U	-	-	-	-	-
Density	1	1005	DV	92	8	U	U	-	-	-	-	-
Density	1	1005	DV	68	3	U	U	-	-	-	-	-
Density	1	1005	DV	74	4	U	U	-	-	-	-	-
Density	1	1005	DV	55	5	U	U	-	-	-	-	-
Density	1	1005	DV	55	5	U	U	-	-	-	-	-
Density	1	1005	DV	27	0.5	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	2	1030	DV	105	12.4	U	U	FR	1	2	-	-
Density	2	1030	DV	126	18.6	U	U	FR	2	2	-	-
Density	2	1030	DV	80	4.6	U	U	-	-	-	-	-
Density	2	1030	DV	169	61	U	U	FR	3	UA	-	-
Density	2	1030	DV	134	25.1	U	U	FR	4	2	-	-
Density	2	1030	DV	141	31.9	U	U	FR	5	3	-	-
Density	2	1030	DV	119	19.2	U	U	FR	6	3	-	-
Density	2	1030	DV	110	12.2	U	U	FR	7	2	-	-
Density	2	1030	DV	138	26.2	U	U	-	-	-	-	-
Density	2	1030	DV	76	4.4	U	U	-	-	-	-	-
Density	2	1030	DV	120	17.8	U	U	-	-	-	-	-
Density	2	1030	DV	115	15.6	U	U	-	-	-	-	-
Density	2	1030	DV	116	13.3	U	U	-	-	-	-	-
Density	2	1030	DV	152	37.4	U	U	-	-	-	-	-
Density	2	1030	DV	83	5.5	U	U	-	-	-	-	-
Density	2	1030	DV	103	11.9	U	U	-	-	-	-	-
Density	2	1030	DV	74	3.6	U	U	-	-	-	-	-
Density	2	1030	DV	110	14.5	U	U	-	-	-	-	-
Density	2	1030	DV	170	54.3	U	U	-	-	-	-	-
Density	2	1030	DV	89	6.7	U	U	-	-	-	-	-
Density	2	1030	DV	92	7.5	U	U	-	-	-	-	-
Density	2	1030	DV	83	6.4	U	U	-	-	-	-	-
Density	2	1030	DV	70	3.4	U	U	-	-	-	-	-
Density	2	1030	DV	69	3.9	U	U	-	-	-	-	-
Density	1	1150	DV	107	13.4	U	U	FR	1	3	-	-
Density	1	1150	DV	122	19.7	U	U	FR	2	4	-	-
Density	1	1150	DV	94	7.4	U	U	-	-	-	-	-
Density	1	1150	DV	105	11.7	U	U	FR	3	3	-	-
Density	1	1150	DV	93	8.4	U	U	-	-	-	-	-
Density	1	1150	DV	115	16.2	U	U	FR	4	2	-	-
Density	1	1150	DV	116	15	U	U	FR	5	2	-	-
Density	1	1150	DV	94	7.8	U	U	-	-	-	-	-
Density	1	1150	DV	116	16.2	U	U	FR	6	3	-	-
Density	1	1030	DV	70	3.8	U	U	-	-	-	-	-
Density	1	1030	DV	112	14.6	U	U	-	-	-	-	-
Density	1	1030	DV	89	6.9	U	U	-	-	-	-	-
Density	1	1030	DV	130	21.5	U	U	-	-	-	-	-
Density	1	1022	DV	30	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	33	0.5	U	IM	-	-	-	-	-
Density	1	1022	DV	32	0.5	U	IM	-	-	-	-	-
Density	1	1022	DV	31	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	33	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	55	1.6	U	IM	-	-	-	-	-
Density	1	1022	DV	32	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	26	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	27	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	32	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	62	2.3	U	IM	-	-	-	-	-
Density	1	1022	DV	86	6.1	U	IM	-	-	-	-	-
Density	1	1022	DV	92	8.1	U	IM	FR	1	UA	-	-
Density	1	1022	DV	34	0.4	U	IM	-	-	-	-	-
Density	1	1022	DV	88	8.7	U	IM	-	-	-	-	-
Density	1	1022	DV	112	10.6	U	IM	FR	2	UA	-	-
Density	1	1022	DV	33	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	29	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	25	0.1	U	IM	-	-	-	-	-
Density	1	1022	DV	30	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	26	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	23	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	35	0.5	U	IM	-	-	-	-	-
Density	1	1022	DV	31	0.5	U	IM	-	-	-	-	-
Density	1	1022	DV	33	0.4	U	IM	-	-	-	-	-
Density	1	1022	DV	23	0.1	U	IM	-	-	-	-	-
Density	1	1022	DV	27	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	28	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	34	0.4	U	IM	-	-	-	-	-
Density	1	1022	DV	24	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	32	0.4	U	IM	-	-	-	-	-
Density	1	1022	DV	28	0.2	U	IM	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	1	1022	DV	26	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	32	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	29	0.4	U	IM	-	-	-	-	-
Density	1	1022	DV	31	0.4	U	IM	-	-	-	-	-
Density	1	1022	DV	33	0.4	U	IM	-	-	-	-	-
Density	1	1022	DV	29	0.4	U	IM	-	-	-	-	-
Density	1	1022	DV	30	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	32	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	25	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	28	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	29	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	33	0.4	U	IM	-	-	-	-	-
Density	1	1022	DV	28	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	27	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	32	0.3	U	IM	-	-	-	-	-
Density	1	1022	DV	28	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	29	0.2	U	IM	-	-	-	-	-
Density	1	1022	DV	27	0.2	U	IM	-	-	-	-	-
Density	1	1019	DV	168	39.4	U	U	FR	1	4	-	-
Density	1	1019	DV	154	35.5	U	U	FR	2	3	-	-
Density	1	1019	DV	133	21.1	U	U	FR	3	3	-	-
Density	1	1025	DV	71	3.2	U	IM	-	-	-	-	-
Density	1	1025	DV	51	1.3	U	IM	-	-	-	-	-
Density	1	1025	DV	80	5.2	U	IM	-	-	-	-	-
Density	1	1025	DV	108	12.7	U	IM	FR	1	2	-	-
Density	1	1025	DV	72	4.2	U	IM	-	-	-	-	-
Density	1	1025	DV	92	8.5	U	IM	-	-	-	-	-
Density	1	1029	DV	95	-	U	M	-	-	-	-	-
Density	1	1029	DV	115	-	U	M	-	-	-	-	-
Density	1	1029	DV	114	-	U	M	-	-	-	-	-
Density	1	1029	DV	94	-	U	M	-	-	-	-	-
Density	1	1029	DV	109	-	U	M	-	-	-	-	-
Density	1	1029	DV	137	-	U	M	-	-	-	-	-
Density	1	1029	DV	133	-	U	M	-	-	-	-	-
Density	2	1016	DV	89	7.8	U	IM	-	-	-	-	-
Density	1	1072	DV	57	2	U	U	-	-	-	-	-
Density	1	1072	DV	61	2	U	U	-	-	-	-	-
Density	1	1072	DV	91	8	U	U	FR	1	2	-	-
Density	1	1072	DV	29	-	U	U	-	-	-	-	-
Density	1	1072	DV	82	6	U	U	-	-	-	-	-
Density	1	1072	DV	59	2	U	U	-	-	-	-	-
Density	1	1072	DV	32	-	U	U	-	-	-	-	-
Density	1	1072	DV	141	27	U	U	FR	2	3	-	-
Density	1	1072	DV	85	5	U	U	-	-	-	-	-
Density	1	1072	DV	90	9	U	U	-	-	-	-	-
Density	1	1072	DV	87	6	U	U	-	-	-	-	-
Density	1	1072	DV	56	2	U	U	-	-	-	-	-
Density	1	1059	DV	41	1.1	U	U	-	-	-	-	-
Density	1	1059	DV	59	1.8	U	U	-	-	-	-	-
Density	1	1059	DV	36	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	42	0.7	U	U	-	-	-	-	-
Density	1	1059	DV	85	5.4	U	U	-	-	-	-	-
Density	1	1059	DV	41	0.7	U	U	-	-	-	-	-
Density	1	1059	DV	42	0.8	U	U	-	-	-	-	-
Density	1	1059	DV	42	0.8	U	U	-	-	-	-	-
Density	1	1059	DV	42	0.6	U	U	-	-	-	-	-
Density	1	1059	DV	38	0.6	U	U	-	-	-	-	-
Density	1	1059	DV	36	0.4	U	U	-	-	-	-	-
Density	1	1059	DV	41	0.6	U	U	-	-	-	-	-
Density	1	1059	DV	40	0.6	U	U	-	-	-	-	-
Density	1	1059	DV	58	1.8	U	U	-	-	-	-	-
Density	1	1059	DV	61	1.9	U	U	-	-	-	-	-
Density	1	1059	DV	22	-	U	U	-	-	-	-	-
Density	1	1059	DV	44	0.8	U	U	-	-	-	-	-
Density	1	1059	DV	38	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	55	1.8	U	U	-	-	-	-	-
Density	1	1059	DV	25	0.2	U	U	-	-	-	-	-
Density	1	1059	DV	37	0.4	U	U	-	-	-	-	-
Density	1	1059	DV	84	5.4	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	1	1059	DV	81	5.7	U	U	-	-	-	-	-
Density	1	1059	DV	32	0.3	U	U	-	-	-	-	-
Density	1	1059	DV	44	0.9	U	U	-	-	-	-	-
Density	1	1059	DV	44	0.7	U	U	-	-	-	-	-
Density	1	1059	DV	36	0.4	U	U	-	-	-	-	-
Density	1	1059	DV	34	0.3	U	U	-	-	-	-	-
Density	1	1059	DV	45	0.8	U	U	-	-	-	-	-
Density	5	1050	DV	120	17.3	U	IM	FR	5	-	-	-
Density	5	1050	DV	108	12.4	U	IM	-	-	-	-	-
Density	5	1050	DV	108	11.2	U	IM	-	-	-	-	-
Density	5	1050	DV	105	11.5	U	IM	-	-	-	-	-
Density	5	1050	DV	42	0.7	U	IM	-	-	-	-	-
Density	5	1050	DV	41	0.6	U	IM	-	-	-	-	-
Density	5	1050	DV	115	14.9	U	IM	-	-	-	-	-
Density	5	1050	DV	160	42.9	U	IM	FR	6	-	-	-
Density	5	1050	DV	114	10.9	U	IM	-	-	-	-	-
Density	5	1050	DV	125	17.5	U	IM	FR	7	-	-	-
Density	5	1050	DV	169	51.2	U	IM	-	-	-	-	-
Density	5	1050	DV	180	59.9	U	IM	FR	8	-	-	-
Density	5	1050	DV	115	15.8	U	IM	-	-	-	-	-
Density	5	1050	DV	119	15.2	U	IM	FR	9	-	-	-
Density	5	1050	DV	110	12.8	U	IM	-	-	-	-	-
Density	5	1050	DV	85	5.9	U	IM	-	-	-	-	-
Density	5	1050	DV	98	10.1	U	IM	-	-	-	-	-
Density	5	1050	DV	75	4.2	U	IM	-	-	-	-	-
Density	5	1050	DV	35	0.8	U	IM	-	-	-	-	-
Density	5	1050	DV	43	1.2	U	IM	-	-	-	-	-
Density	5	1050	DV	108	11.2	U	IM	-	-	-	-	-
Density	5	1050	DV	121	18.3	U	IM	-	-	-	-	-
Density	5	1050	DV	127	20.5	U	IM	-	-	-	-	-
Density	5	1050	DV	119	15.8	U	IM	-	-	-	-	-
Density	5	1050	DV	78	4.9	U	IM	-	-	-	-	-
Density	5	1050	DV	76	3.9	U	IM	-	-	-	-	-
Density	5	1050	DV	83	5.7	U	IM	-	-	-	-	-
Density	5	1050	DV	68	2.9	U	IM	-	-	-	-	-
Density	5	1050	DV	38	0.6	U	IM	-	-	-	-	-
Density	1	1011	DV	54	1.9	U	IM	-	-	-	-	-
Density	1	1011	DV	55	1.7	U	IM	-	-	-	-	-
Density	1	1011	DV	72	3.6	U	IM	-	-	-	-	-
Density	1	1011	DV	105	14.4	U	IM	-	-	-	-	-
Density	1	1012	DV	111	14.6	U	IM	-	-	-	-	-
Density	1	1012	DV	126	12.4	U	IM	-	-	-	-	-
Density	1	1012	DV	80	4.6	U	IM	-	-	-	-	-
Density	1	1012	DV	74	2.5	U	IM	-	-	-	-	-
Density	1	1012	DV	51	1.1	U	IM	-	-	-	-	-
Density	1	1012	DV	76	4.2	U	IM	-	-	-	-	-
Density	1	1012	DV	53	1.3	U	IM	-	-	-	-	-
Density	1	1012	DV	46	1.2	U	IM	-	-	-	-	-
Density	1	1012	DV	37	1.1	U	IM	-	-	-	-	-
Density	1	1012	DV	71	3.1	U	IM	-	-	-	-	-
Density	1	1012	DV	45	1.1	U	IM	-	-	-	-	-
Density	1	1012	DV	49	1.2	U	IM	-	-	-	-	-
Density	1	1012	DV	49	1.2	U	IM	-	-	-	-	-
Density	1	1012	DV	30	0.5	U	IM	-	-	-	-	-
Density	1	1012	DV	25	0.2	U	IM	-	-	-	-	-
Density	1	1012	DV	136	23.1	U	IM	-	-	-	-	-
Density	1	1012	DV	111	12.9	U	IM	-	-	-	-	-
Density	1	1012	DV	77	4	U	IM	-	-	-	-	-
Density	1	1012	DV	78	4.2	U	IM	-	-	-	-	-
Density	1	1012	DV	79	4.5	U	IM	-	-	-	-	-
Density	1	1012	DV	70	-	U	IM	-	-	-	-	-
Density	1	1012	DV	30	-	U	IM	-	-	-	-	-
Density	1	1012	DV	49	1.2	U	IM	-	-	-	-	-
Density	1	1012	DV	49	1.4	U	IM	-	-	-	-	-
Density	1	1012	DV	26	0.1	U	IM	-	-	-	-	-
Density	1	1012	DV	26	0.2	U	IM	-	-	-	-	-
Density	1	1059	DV	26	0.4	U	U	-	-	-	-	-
Density	1	1059	DV	34	-	U	U	-	-	-	-	-
Density	1	1059	DV	36	2.9	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	1	1059	DV	44	0.8	U	U	-	-	-	-	-
Density	1	1059	DV	34	-	U	U	-	-	-	-	-
Density	1	1059	DV	37	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	34	0.3	U	U	-	-	-	-	-
Density	1	1059	DV	39	0.6	U	U	-	-	-	-	-
Density	1	1059	DV	42	0.7	U	U	-	-	-	-	-
Density	1	1059	DV	34	0.3	U	U	-	-	-	-	-
Density	1	1059	DV	42	0.6	U	U	-	-	-	-	-
Density	1	1059	DV	42	0.8	U	U	-	-	-	-	-
Density	1	1059	DV	39	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	41	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	37	0.4	U	U	-	-	-	-	-
Density	1	1059	DV	41	0.7	U	U	-	-	-	-	-
Density	1	1059	DV	39	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	40	0.6	U	U	-	-	-	-	-
Density	1	1059	DV	44	0.9	U	U	-	-	-	-	-
Density	1	1059	DV	38	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	39	0.6	U	U	-	-	-	-	-
Density	1	1059	DV	60	1.8	U	U	-	-	-	-	-
Density	1	1059	DV	42	0.7	U	U	-	-	-	-	-
Density	1	1059	DV	31	0.3	U	U	-	-	-	-	-
Density	1	1059	DV	38	0.6	U	U	-	-	-	-	-
Density	1	1059	DV	38	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	39	0.7	U	U	-	-	-	-	-
Density	1	1059	DV	48	0.9	U	U	-	-	-	-	-
Density	1	1059	DV	34	0.4	U	U	-	-	-	-	-
Density	1	1059	DV	34	0.4	U	U	-	-	-	-	-
Density	1	1059	DV	39	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	38	0.5	U	U	-	-	-	-	-
Density	1	1059	DV	36	0.4	U	U	-	-	-	-	-
Density	1	1059	DV	28	0.2	U	U	-	-	-	-	-
Density	4	1082	DV	109	12.8	U	IM	-	-	-	-	-
Density	4	1082	DV	98	10.4	U	IM	-	-	-	-	-
Density	4	1082	DV	116	16.6	U	IM	-	-	-	-	-
Density	4	1082	DV	75	4.5	U	IM	-	-	-	-	-
Density	4	1082	DV	63	2.3	U	IM	-	-	-	-	-
Density	4	1082	DV	72	3.1	U	IM	-	-	-	-	-
Density	4	1082	DV	84	5.2	U	IM	-	-	-	-	-
Density	4	1082	DV	85	5.2	U	IM	-	-	-	-	-
Density	4	1082	DV	59	2.4	U	IM	-	-	-	-	-
Density	4	1082	DV	58	1.6	U	IM	-	-	-	-	-
Density	4	1082	DV	58	2.1	U	IM	-	-	-	-	-
Density	4	1082	DV	58	1.9	U	IM	-	-	-	-	-
Density	4	1082	DV	59	2.7	U	IM	-	-	-	-	-
Density	4	1082	DV	66	2.7	U	IM	-	-	-	-	-
Density	4	1082	DV	62	2.4	U	IM	-	-	-	-	-
Density	4	1082	DV	59	2.9	U	IM	-	-	-	-	-
Density	4	1082	DV	65	2.6	U	IM	-	-	-	-	-
Density	4	1082	DV	32	0.4	U	IM	-	-	-	-	-
Density	4	1082	DV	32	0.5	U	IM	-	-	-	-	-
Density	4	1082	DV	33	0.6	U	IM	-	-	-	-	-
Density	4	1082	DV	36	0.8	U	IM	-	-	-	-	-
Density	4	1082	DV	30	0.5	U	IM	-	-	-	-	-
Density	4	1082	DV	34	0.3	U	IM	-	-	-	-	-
Density	4	1082	DV	26	0.3	U	IM	-	-	-	-	-
Density	4	1082	DV	33	0.3	U	IM	-	-	-	-	-
Density	4	1082	DV	119	18.7	U	IM	-	-	-	-	-
Density	4	1082	DV	143	28.4	U	IM	-	-	-	-	-
Density	4	1082	DV	78	4.2	U	IM	-	-	-	-	-
Density	4	1082	DV	73	3.7	U	IM	-	-	-	-	-
Density	4	1082	DV	55	1.8	U	IM	-	-	-	-	-
Density	4	1082	DV	63	2.3	U	IM	-	-	-	-	-
Density	4	1082	DV	29	0.3	U	IM	-	-	-	-	-
Density	4	1082	DV	64	2.3	U	IM	-	-	-	-	-
Density	4	1082	DV	30	0.6	U	IM	-	-	-	-	-
Density	4	1082	DV	32	0.3	U	IM	-	-	-	-	-
Density	4	1082	DV	143	28.5	U	IM	-	-	-	-	-
Density	4	1082	DV	96	7.6	U	IM	-	-	-	-	-
Density	4	1082	DV	137	25	U	IM	-	-	-	-	-



**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	4	1082	DV	63	2.8	U	IM	-	-	-	-	-
Density	4	1082	DV	86	5.6	U	IM	-	-	-	-	-
Density	4	1082	DV	82	4.8	U	IM	-	-	-	-	-
Density	4	1050	DV	86	5.8	U	IM	-	-	-	-	-
Density	4	1050	DV	110	15	U	IM	FR	1	-	-	-
Density	4	1050	DV	128	24.5	U	IM	-	-	-	-	-
Density	4	1050	DV	104	12.7	U	IM	FR	2	-	-	-
Density	4	1050	DV	117	13.8	U	IM	-	-	-	-	-
Density	4	1050	DV	122	16.7	U	IM	FR	3	-	-	-
Density	4	1050	DV	28	0.4	U	IM	-	-	-	-	-
Density	4	1050	DV	150	37.1	U	IM	FR	4	-	-	-
Density	4	1050	DV	111	15.6	U	IM	-	-	-	-	-
Density	4	1050	DV	108	11.6	U	IM	FR	5	-	-	-
Density	4	1050	DV	100	8.9	U	IM	-	-	-	-	-
Density	4	1050	DV	111	13.2	U	IM	FR	6	-	-	-
Density	4	1050	DV	100	9.2	U	IM	-	-	-	-	-
Density	4	1050	DV	41	0.6	U	IM	-	-	-	-	-
Density	4	1050	DV	38	0.5	U	IM	-	-	-	-	-
Density	4	1050	DV	154	41.3	U	IM	FR	7	-	-	-
Density	4	1050	DV	136	23.2	U	IM	-	-	-	-	-
Density	4	1050	DV	116	15.5	U	IM	FR	8	-	-	-
Density	5	1050	DV	162	40.8	U	IM	-	-	-	-	-
Density	5	1050	DV	112	13.4	U	IM	FR	1	-	-	-
Density	5	1050	DV	109	11.9	U	IM	-	-	-	-	-
Density	5	1050	DV	145	30.6	U	IM	FR	2	-	-	-
Density	5	1050	DV	112	13.5	U	IM	-	-	-	-	-
Density	5	1050	DV	178	61.7	U	IM	FR	3	-	-	-
Density	5	1050	DV	86	6.2	U	IM	-	-	-	-	-
Density	5	1050	DV	134	24.8	U	IM	FR	4	-	-	-
Density	5	1050	DV	120	15.9	U	IM	-	-	-	-	-
Density	1	5000	DV	129	26.7	U	U	FR	1	-	TP	1
Density	1	5000	DV	51	1.2	U	U	-	-	-	-	-
Density	1	1012	DV	128	16.9	U	IM	-	-	-	-	-
Density	1	1012	DV	25	0.1	U	IM	-	-	-	-	-
Density	1	1001	DV	188	73.4	M	MT	FR	1	5	-	-
Density	1	1001	DV	201	84.7	M	MT	FR	2	4	-	-
Density	1	1001	DV	188	63.7	F	MT	FR	3	5	-	-
Density	1	1001	DV	198	82.4	F	MT	FR	4	5	-	-
Density	2	1001	DV	160	49.7	F	MT	FR	1	4	-	-
Density	2	1001	DV	158	49.6	F	MT	FR	2	4	-	-
Density	2	1001	DV	136	29.4	U	IM	FR	3	3	-	-
Density	2	1001	DV	140	27.8	U	IM	FR	4	3	-	-
Density	2	1001	DV	90	7.9	U	IM	FR	5	2	-	-
Density	2	1001	DV	83	8.7	U	IM	FR	6	1	-	-
Density	2	1001	DV	100	10.3	U	IM	FR	7	1	-	-
Density	2	1001	DV	86	6.5	U	IM	-	-	-	-	-
Density	2	1001	DV	74	4.2	U	IM	-	-	-	-	-
Density	2	1001	DV/BT	92	7.3	U	IM	FR	8	1	TP	1
Density	2	1001	DV	66	2.8	U	IM	-	-	-	-	-
Density	2	1001	DV	32	0.3	U	IM	-	-	-	-	-
Density	2	1001	DV	123	20.9	U	IM	FR	9	3	-	-
Density	2	1001	DV	100	11.8	U	IM	FR	10	2	-	-
Density	2	1001	DV	58	1.8	U	IM	-	-	-	TP	2
Density	2	1001	DV	88	5.7	U	IM	FR	11	1	-	-
Density	3	1001	DV	127	21.9	F	MT	FR	1	3	-	-
Density	3	1001	DV	34	0.3	U	IM	-	-	-	-	-
Density	3	1001	DV	31	0.3	U	IM	-	-	-	-	-
Density	3	1001	DV	25	0.2	U	IM	-	-	-	-	-
Density	35	1001	DV	149	32.4	U	IM	FR	1	3	-	-
Density	4	1001	DV	164	50.5	M	M	FR	1	5	-	-
Density	4	1001	DV	145	32.5	U	IM	FR	2	4	-	-
Density	4	1001	DV	176	59.3	F	MT	FR	3	4	-	-
Density	4	1001	DV	152	36.3	U	IM	FR	4	3	-	-
Density	4	1001	DV	150	40.3	U	IM	FR	5	4	-	-
Density	4	1001	DV	118	15.8	U	IM	FR	6	2	-	-
Density	4	1001	DV	105	14.1	U	IM	FR	7	2	-	-
Density	4	1001	DV	111	12.6	U	IM	FR	8	2	-	-
Density	4	1001	DV	92	7.5	U	IM	FR	9	2	-	-
Density	4	1001	DV	116	17.4	F	IM	FR	10	3	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	4	1001	DV	163	52.7	F	M	FR	11	4	-	-
Density	4	1001	DV	101	9.9	U	IM	FR	12	2	-	-
Density	4	1001	DV	179	54.8	U	M	FR	13	5	-	-
Density	4	1001	DV	65	2.9	U	IM	-	-	-	-	-
Density	5	1001	DV	160	49.8	F	MT	FR	1	4	TP	1
Density	5	1001	DV	162	47.9	F	MT	FR	2	4	TP	2
Density	5	1001	DV	184	87.5	M	MT	FR	3	5	TP	3
Density	5	1001	DV	164	52	F	MT	FR	4	3	TP	4
Density	5	1001	DV	134	23.9	U	IM	FR	5	4	TP	5
Density	5	1001	DV	113	17.9	U	IM	FR	6	2	-	-
Density	6	1001	DV	148	36.7	F	MT	FR	3	-	-	-
Density	6	1001	DV	145	31.9	U	IM	FR	3	-	-	-
Density	6	1001	DV	123	18.2	U	IM	FR	3	-	-	-
Density	6	1001	DV	105	13.3	U	IM	FR	2	-	-	-
Density	6	1001	DV	104	10.9	U	IM	FR	2	-	-	-
Density	6	1001	DV	110	12.8	U	IM	FR	2	-	-	-
Density	6	1001	DV	95	3.1	U	IM	-	-	-	-	-
Density	6	1001	DV	95	9.9	U	IM	-	-	-	-	-
Density	6	1001	DV	88	8.2	U	IM	-	-	-	-	-
Density	6	1001	DV	156	38.6	U	IM	-	-	-	-	-
Density	6	1001	DV	115	17.6	U	IM	-	-	-	-	-
Density	7	1001	DV	176	58.9	F	MT	-	-	-	-	-
Density	7	1001	DV	197	83.8	M	MT	-	-	-	-	-
Density	7	1001	DV	165	47.7	F	MT	-	-	-	-	-
Density	7	1001	DV	129	23.1	U	IM	-	-	-	-	-
Density	7	1001	DV	126	23.7	U	IM	-	-	-	-	-
Density	7	1001	DV	126	19.2	U	IM	-	-	-	-	-
Density	7	1001	DV	121	13.9	U	IM	-	-	-	-	-
Density	7	1001	DV	104	10.5	U	IM	-	-	-	-	-
Density	7	1001	DV	83	4.9	U	IM	-	-	-	-	-
Density	7	1001	DV	84	5.7	U	IM	-	-	-	-	-
Density	7	1001	DV	65	2.6	U	IM	-	-	-	-	-
Density	7	1001	DV	135	27.5	U	IM	-	-	-	-	-
Density	7	1001	DV	134	25.7	U	IM	-	-	-	-	-
Density	7	1001	DV	114	17.7	U	IM	-	-	-	-	-
Density	7	1001	DV	102	10.3	U	IM	-	-	-	-	-
Density	7	1001	DV	91	6.8	U	IM	-	-	-	-	-
Density	7	1001	DV	84	6.2	U	IM	-	-	-	-	-
Density	7	1001	DV	67	2.8	U	IM	-	-	-	-	-
Density	7	1001	DV	63	2.4	U	IM	-	-	-	-	-
Density	7	1001	DV	62	2.5	U	IM	-	-	-	-	-
Density	7	1001	DV	73	3.6	U	IM	-	-	-	-	-
Density	7	1001	DV	60	1.9	U	IM	-	-	-	-	-
Density	8	1001	DV	178	55.9	F	MT	-	-	-	-	-
Density	8	1001	DV	166	52.4	F	MT	-	-	-	-	-
Density	8	1001	DV	163	49.2	F	MT	-	-	-	-	-
Density	8	1001	DV	120	19.4	U	IM	-	-	-	-	-
Density	8	1001	DV	126	22.3	U	IM	-	-	-	-	-
Density	8	1001	DV	130	21.3	U	IM	-	-	-	-	-
Density	8	1001	DV	120	16.9	U	IM	-	-	-	-	-
Density	8	1001	DV	122	18.1	U	IM	-	-	-	-	-
Density	8	1001	DV	98	9.2	U	IM	-	-	-	-	-
Density	8	1001	DV	95	8.4	U	IM	-	-	-	-	-
Density	8	1001	DV	102	9.6	U	IM	-	-	-	-	-
Density	8	1001	DV	94	8	U	IM	-	-	-	-	-
Density	8	1001	DV	92	9.8	U	IM	-	-	-	-	-
Density	8	1001	DV	90	7.4	U	IM	-	-	-	-	-
Density	8	1001	DV	74	4.2	U	IM	-	-	-	-	-
Density	8	1001	DV	84	6.7	U	IM	-	-	-	-	-
Density	8	1001	DV	67	3.3	U	IM	-	-	-	-	-
Density	8	1001	DV	210	101.9	M	M	-	-	-	-	-
Density	8	1001	DV	152	35.9	U	IM	-	-	-	-	-
Density	8	1001	DV	158	41.5	U	IM	-	-	-	-	-
Density	8	1001	DV	97	9.9	U	IM	-	-	-	-	-
Density	8	1001	DV	108	12.9	U	IM	-	-	-	-	-
Density	8	1001	DV	188	78.6	F	MT	-	-	-	-	-
Density	9	1001	DV	175	55.5	F	MT	-	-	-	-	-
Density	9	1001	DV	180	59.9	M	M	-	-	-	-	-
Density	9	1001	DV	164	46.2	M	M	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Density	9	1001	DV	170	60.5	F	MT	-	-	-	-	-
Density	9	1001	DV	177	60.9	F	MT	-	-	-	-	-
Density	9	1001	DV	152	36.3	F	MT	-	-	-	-	-
Density	9	1001	DV	172	53.4	F	MT	-	-	-	-	-
Density	9	1001	DV	138	25.7	U	IM	-	-	-	-	-
Density	9	1001	DV	174	51.9	F	MT	-	-	-	-	-
Density	9	1001	DV	159	46.9	F	MT	-	-	-	-	-
Density	9	1001	DV	140	28.9	U	IM	-	-	-	-	-
Density	9	1001	DV	138	28.7	U	IM	-	-	-	-	-
Density	9	1001	DV	148	30.2	U	IM	-	-	-	-	-
Density	9	1001	DV	119	18.7	U	IM	-	-	-	-	-
Density	9	1001	DV	128	21.6	U	IM	-	-	-	-	-
Density	9	1001	DV	121	17.2	U	IM	-	-	-	-	-
Density	9	1001	DV	116	16.6	U	IM	-	-	-	-	-
Density	9	1001	DV	121	17.1	U	IM	-	-	-	-	-
Density	9	1001	DV	122	20.4	U	IM	-	-	-	-	-
Density	9	1001	DV	116	16.3	U	IM	-	-	-	-	-
Density	9	1001	DV	110	15.4	U	IM	-	-	-	-	-
Density	9	1001	DV	100	9.7	U	IM	-	-	-	-	-
Density	9	1001	DV	89	7.7	U	IM	-	-	-	-	-
Density	9	1001	DV	93	8.6	U	IM	-	-	-	-	-
Density	9	1001	DV	89	7.6	U	IM	-	-	-	-	-
Density	9	1001	DV	63	2.4	U	IM	-	-	-	-	-
Density	9	1001	DV	73	4.1	U	IM	-	-	-	-	-
Density	9	1001	DV	71	3.5	U	IM	-	-	-	-	-
Density	9	1001	DV	67	3.4	U	IM	-	-	-	-	-
Density	9	1001	DV	56	1.4	U	IM	-	-	-	-	-
Density	9	1001	DV	64	3.1	U	IM	-	-	-	-	-
Density	9	1001	DV	57	1.7	U	IM	-	-	-	-	-
Density	9	1001	DV	150	36.4	F	MT	-	-	-	-	-
Density	9	1001	DV	152	39.8	F	MT	-	-	-	-	-
Density	9	1001	DV	126	20	U	IM	-	-	-	-	-
Density	9	1001	DV	91	9	U	IM	-	-	-	-	-
Density	9	1001	DV	56	1.6	U	IM	-	-	-	-	-
Density	9	1001	DV	195	80.8	F	M	-	-	-	-	-
Density	9	1001	DV	66	2.7	U	IM	-	-	-	-	-
Density	10	1001	DV	180	59	F	MT	-	-	-	-	-
Density	10	1001	DV	179	63.7	M	M	-	-	-	-	-
Density	10	1001	DV	180	64.3	M	M	-	-	-	-	-
Density	10	1001	DV	180	54.5	F	MT	-	-	-	-	-
Density	10	1001	DV	180	64.2	F	MT	-	-	-	-	-
Density	10	1001	DV	168	49.9	M	M	-	-	-	-	-
Density	10	1001	DV	144	32.5	F	MT	-	-	-	-	-
Density	10	1001	DV	154	38.5	F	MT	-	-	-	-	-
Density	10	1001	DV	135	29.8	U	IM	-	-	-	-	-
Density	10	1001	DV	148	33.2	U	IM	-	-	-	-	-
Density	10	1001	DV	123	18.5	U	IM	-	-	-	-	-
Density	10	1001	DV	108	14.5	U	IM	-	-	-	-	-
Density	10	1001	DV	109	13.5	U	IM	-	-	-	-	-
Density	10	1001	DV	71	3.3	U	IM	-	-	-	-	-
Density	10	1001	DV	55	1.9	U	IM	-	-	-	-	-
Density	10	1001	DV	164	54.1	M	M	-	-	-	-	-
Density	10	1001	DV	118	19.9	U	IM	-	-	-	-	-
Density	10	1001	DV	123	17.7	U	IM	-	-	-	-	-
Density	10	1001	DV	114	15.2	U	IM	-	-	-	-	-
Density	10	1001	DV	111	14.5	U	IM	-	-	-	-	-
Density	10	1001	DV	84	5.9	U	IM	-	-	-	-	-
Density	10	1001	DV	93	8.3	U	IM	-	-	-	-	-
Density	10	1001	DV	49	1.2	U	IM	-	-	-	-	-
Density	10	1001	DV	52	1.5	U	IM	-	-	-	-	-
Density	10	1001	DV	32	0.2	U	IM	-	-	-	-	-
Density	10	1001	DV	190	74.4	M	M	-	-	-	-	-
Density	10	1001	DV	168	51.6	M	M	-	-	-	-	-
Density	10	1001	DV	123	21.1	U	IM	-	-	-	-	-
Density	10	1001	DV	103	10.4	U	IM	-	-	-	-	-
Density	11	1001	DV	108	14.3	U	U	-	-	-	-	-
Density	11	1001	DV	151	40	U	U	-	-	-	-	-
Rearing	1	1012	DV	143	27.1	U	U	FR	1	-	TP	1
Rearing	1	1012	DV	129	23	U	U	FR	2	-	TP	2

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Rearing	1	1012	DV	129	23.9	U	U	FR	3	-	TP	3
Rearing	1	1012	DV	82	4.8	U	U	FR	4	-	TP	4
Rearing	1	1012	DV	69	3.4	U	U	FR	5	-	TP	5
Rearing	1	1012	DV	52	1.6	U	U	-	-	-	-	-
Rearing	1	1012	DV	79	4.6	U	U	-	-	-	-	-
Rearing	1	1012	DV	86	6.4	U	U	-	-	-	-	-
Rearing	1	1012	DV	69	3.4	U	U	-	-	-	-	-
Rearing	1	1012	DV	88	-	U	U	-	-	-	-	-
Rearing	1	1012	DV	51	1.5	U	U	-	-	-	-	-
Rearing	1	1012	DV	75	5.1	U	U	-	-	-	-	-
Rearing	1	1012	DV	77	5.2	U	U	-	-	-	-	-
Rearing	1	1012	DV	63	2.9	U	U	-	-	-	-	-
Rearing	1	1012	DV	52	1.3	U	U	-	-	-	-	-
Rearing	1	1012	DV	50	1.2	U	U	-	-	-	-	-
Rearing	1	1012	DV	51	1.3	U	U	-	-	-	-	-
Rearing	1	1012	DV	74	3.6	U	U	-	-	-	-	-
Rearing	1	1012	DV	61	2.5	U	U	-	-	-	-	-
Rearing	1	1012	DV	48	1.1	U	U	-	-	-	-	-
Rearing	1	1012	DV	26	0.2	U	U	-	-	-	-	-
Rearing	1	1012	DV	49	1.1	U	U	-	-	-	-	-
Rearing	1	1012	DV	56	1.6	U	U	-	-	-	-	-
Rearing	1	1012	DV	45	0.8	U	U	-	-	-	-	-
Rearing	1	1011	DV	49	0.9	U	U	-	-	-	TP	1
Rearing	1	1011	DV	119	19.5	U	U	FR	2	-	TP	2
Rearing	1	1011	DV	128	22.4	U	U	FR	3	-	TP	3
Rearing	1	1011	DV	131	23	U	U	FR	4	-	TP	4
Rearing	1	1011	DV	110	13.7	U	U	FR	5	-	TP	5
Rearing	1	1011	DV	114	15.3	U	U	FR	6	-	TP	6
Rearing	1	1011	DV	112	15.2	U	U	FR	7	-	TP	7
Rearing	1	1011	DV	102	11.8	U	U	FR	8	-	TP	8
Rearing	1	1011	DV	88	7	U	U	-	-	-	-	-
Rearing	1	1011	DV	73	4.1	U	U	-	-	-	-	-
Rearing	1	1011	DV	75	5	U	U	-	-	-	-	-
Rearing	1	1011	DV	80	5.1	U	U	-	-	-	-	-
Rearing	1	1011	DV	67	3.2	U	U	-	-	-	-	-
Rearing	1	1011	DV	70	4.8	U	U	-	-	-	-	-
Rearing	1	1011	DV	54	1.4	U	U	-	-	-	-	-
Rearing	1	1011	DV	44	0.7	U	U	-	-	-	TP	9
Rearing	1	1013	DV	144	22	U	U	FR	1	-	TP	1
Rearing	1	1013	DV	163	42	U	U	FR	2	-	TP	2
Rearing	1	1013	DV	121	9	U	U	FR	3	-	TP	3
Rearing	1	1013	DV	179	49	U	U	FR	4	-	TP	4
Rearing	1	1082	DV	28	-	U	IM	-	-	-	TP	1
Rearing	1	1082	DV	88	-	U	U	-	-	-	TP	2
Rearing	1	1082	DV	112	-	U	U	FR	3	-	TP	3
Rearing	1	1082	DV	26	-	U	U	-	-	-	TP	4
Rearing	2	1082	DV	125	-	U	U	FR	1	-	TP	1
Rearing	2	1082	DV	59	-	U	U	-	-	-	TP	2
Rearing	2	1082	DV	104	-	U	U	FR	3	-	TP	3
Rearing	2	1082	DV	84	-	U	U	-	-	-	TP	4
Rearing	2	1082	DV	35	-	U	IM	-	-	-	TP	5
Rearing	3	1082	DV	112	-	U	U	FR	1	-	TP	1
Rearing	3	1082	DV	83	-	U	U	-	-	-	TP	2
Rearing	3	1082	DV	81	-	U	U	-	-	-	TP	3
Rearing	3	1082	DV	75	-	U	U	-	-	-	-	-
Rearing	3	1082	DV	84	-	U	U	-	-	-	-	-
Rearing	3	1082	DV	92	-	U	U	FR	4	-	TP	4
Rearing	3	1082	DV	65	-	U	U	-	-	-	TP	5
Rearing	3	1082	DV	70	-	U	U	-	-	-	TP	6
Rearing	3	1082	DV	60	-	U	U	-	-	-	TP	7
Rearing	3	1082	DV	61	-	U	U	-	-	-	TP	8
Rearing	3	1082	DV	48	-	U	U	-	-	-	-	-
Rearing	1	1068	DV	135	-	U	U	FR	1	-	TP	1
Rearing	1	1068	DV	105	-	U	U	FR	2	-	TP	2
Rearing	1	1068	DV	76	-	U	U	-	-	-	TP	3
Rearing	1	1068	DV	72	-	U	U	-	-	-	TP	4
Rearing	1	1068	DV	72	-	U	U	-	-	-	TP	5
Rearing	1	1068	DV	77	-	U	U	-	-	-	TP	6
Rearing	1	1068	DV	59	-	U	U	-	-	-	-	-

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Rearing	1	1068	DV	70	-	U	U	-	-	-	TP	7
Rearing	1	1068	DV	62	-	U	U	-	-	-	-	-
Rearing	1	1068	DV	62	-	U	U	-	-	-	-	-
Rearing	1	1068	DV	58	-	U	U	-	-	-	-	-
Rearing	1	1068	DV	54	-	U	U	-	-	-	-	-
Rearing	1	1068	DV	127	-	U	U	FR	8	-	TP	8
Rearing	1	1068	DV	79	-	U	U	-	-	-	TP	9
Rearing	1	1068	DV	117	-	U	U	FR	10	-	TP	10
Rearing	1	1068	DV	92	-	U	U	FR	11	-	TP	11
Rearing	1	1068	DV	79	-	U	U	-	-	-	-	-
Rearing	1	1068	DV	80	-	U	U	-	-	-	-	-
Rearing	1	1060	DV	116	-	U	U	FR	1	-	TP	1
Rearing	1	1060	DV	144	-	U	U	FR	2	-	TP	2
Rearing	1	1029	DV	110	14	U	U	FR	1	-	-	-
Rearing	1	1002	DV	138	30.7	U	M	FR	1	-	TP	1
Rearing	1	1023	DV	117	15	U	IM	FR	1	-	TP	1
Rearing	1	1023	DV	86	6	U	IM	-	-	-	-	-
Rearing	1	1023	DV	85	6	U	IM	-	-	-	-	-
Rearing	1	1023	DV	55	1	U	IM	-	-	-	-	-
Rearing	1	1023	DV	47	1	U	IM	-	-	-	-	-
Rearing	1	1023	DV	56	1	U	IM	-	-	-	-	-
Rearing	1	1023	DV	29	-	U	IM	-	-	-	-	-
Rearing	1	1023	DV	29	-	U	IM	-	-	-	-	-
Rearing	1	1023	DV	150	37	U	IM	-	-	-	-	-
Rearing	1	1025	DV	79	5	U	IM	-	-	-	-	-
Rearing	1	1025	DV	76	5	U	IM	-	-	-	-	-
Rearing	1	1025	DV	68	4	U	IM	-	-	-	-	-
Rearing	1	1025	DV	74	4	U	IM	-	-	-	-	-
Rearing	1	1025	DV	72	3	U	IM	-	-	-	-	-
Rearing	1	1025	DV	110	12	U	IM	-	-	-	-	-
Rearing	1	1025	DV	162	46	U	IM	-	-	-	-	-
Rearing	1	1025	DV	107	12	U	IM	-	-	-	-	-
Rearing	1	1025	DV	76	4	U	IM	-	-	-	-	-
Rearing	1	1025	DV	74	4	U	IM	-	-	-	-	-
Rearing	1	1025	DV	100	9	U	IM	-	-	-	-	-
Rearing	1	1025	DV	92	7	U	IM	-	-	-	-	-
Rearing	1	1012	DV	142	28.5	U	U	-	-	-	-	-
Rearing	1	1012	DV	146	33.3	U	U	-	-	-	-	-
Rearing	1	1029	DV	119	18	U	U	FR	2	-	-	-
Rearing	1	1029	DV	137	25	U	U	FR	3	-	-	-
Rearing	1	1028	DV	89	-	U	IM	-	-	-	-	-
Rearing	1	1019	DV	169	40	U	U	FR	1	-	TP	1
Rearing	1	1022	DV	109	-	U	U	FR	1	-	-	-
Rearing	1	1019	DV	156	36	U	U	FR	2	-	TP	2
Rearing	1	1019	DV	144	28	U	U	FR	3	-	TP	3
Rearing	1	1019	DV	171	51	U	U	FR	4	-	TP	4
Rearing	1	1019	DV	136	26	U	U	FR	5	-	TP	5
Rearing	1	1019	DV	174	51	U	U	FR	6	-	TP	6
Rearing	1	1019	DV	133	21	U	U	FR	7	-	TP	7
Rearing	1	1019	DV	141	26	U	U	FR	8	-	TP	8
Rearing	1	1016	DV	175	-	U	U	FR	1	-	TP	1
Rearing	1	1016	DV	147	-	U	U	FR	2	-	TP	2
Rearing	1	1016	DV	90	-	U	U	FR	3	-	TP	3
Rearing	1	1016	DV	99	-	U	U	FR	4	-	TP	4
Rearing	1	1016	DV	104	-	U	U	FR	5	-	TP	5
Rearing	1	1016	DV	71	-	U	U	-	-	-	-	-
Rearing	1	1016	DV	69	-	U	U	-	-	-	-	-
Rearing	1	1016	DV	73	-	U	U	-	-	-	-	-
Rearing	1	1022	DV	69	-	U	U	-	-	-	-	-
Rearing	1	1022	DV	26	-	U	U	-	-	-	-	-
Rearing	1	1022	DV	26	-	U	U	-	-	-	-	-
Rearing	1	1022	DV	29	-	U	U	-	-	-	-	-
Rearing	1	1022	DV	30	-	U	U	-	-	-	-	-
Rearing	1	1005	DV	49	0.9	U	IM	-	-	-	-	-
Rearing	1	1005	DV	69	2.4	U	IM	-	-	-	-	-
Rearing	1	1005	DV	76	4	U	U	-	-	-	-	-
Rearing	1	1005	DV	48	1	U	U	-	-	-	-	-
Rearing	1	1005	DV	101	8.4	U	U	-	-	-	-	-
Rearing	1	1005	DV	134	21.6	U	M	FR	1	-	TP	1

**Appendix 6.1-2. Biological Fish Data From Stream Sites**

Dataset	Site Name	ILP	Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample Number	Age	Genetic Structure	Sample Number
Rearing	1	1005	DV	129	28	U	M	FR	2	-	TP	2
Road Routes	1	3052	DV	40	0.6	U	IM	-	-	-	-	-
Road Routes	1	3052	DV	160	-	U	IM	-	-	-	-	-
Road Routes	1	2008	RB	115	-	U	IM	FR	1	-	-	-
Road Routes	1	2008	DV	124	-	U	IM	FR	2	-	-	-
Road Routes	1	2026	DV	82	-	U	U	FR	3	-	-	-
Road Routes	1	2026	DV	85	-	U	U	FR	4	-	-	-
Road Routes	1	2045	DV/BT	56	-	U	IM	-	-	-	-	-
Road Routes	1	2045	DV/BT	125	-	U	IM	FR	5	-	-	-
Road Routes	1	2045	DV/BT	26	-	U	IM	-	-	-	-	-
Road Routes	1	2045	DV/BT	136	-	U	IM	-	-	-	-	-
Road Routes	1	2045	DV/BT	94	-	U	IM	FR	6	-	-	-
Road Routes	1	2045	DV/BT	150	-	U	M	FR	7	-	-	-
Road Routes	1	2045	DV/BT	177	-	U	M	FR	8	-	-	-
Road Routes	1	2045	DV/BT	110	-	U	IM	FR	9	-	-	-
Road Routes	1	2045	DV/BT	84	-	U	IM	FR	10	-	-	-
Road Routes	1	2045	DV/BT	112	-	U	IM	FR	11	-	-	-
Road Routes	1	2045	DV/BT	111	-	U	IM	FR	12	-	-	-
Road Routes	1	2045	DV/BT	111	-	U	IM	FR	13	-	-	-
Road Routes	1	2045	DV/BT	130	-	U	IM	FR	14	-	-	-
Road Routes	1	2045	DV/BT	105	-	U	IM	FR	15	-	-	-
Road Routes	1	2045	DV/BT	150	-	U	M	FR	16	-	-	-

DV = Dolly Varden, BT = bull trout, RB = rainbow trout, CO = coho salmon, CH = Chinook salmon, MW = mountain whitefish, CCT = coastal cutthroat trout, CAL = coastrange sculpin

Sex: M = male, F = female, U = undetermined; Maturity: IM = immature, M = mature, U = undetermined; FR = fin ray, AD = adipose



## **Appendix 6.1-3**

### Stream Electrofishing Effort and Catch Data

**Appendix 6.1-3. Stream Electrofishing Effort and Catch Data**

Dataset	ILP	Reach	Site	EF Effort (sec)	Species												
					NFC	DV	BT	DV/BT	RB	CCT	CT/RB	CO	CH	SK	MW	CAL	SP
Roads	2006	1	1	157	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	2008	1	1	495	-	1	-	-	1	-	-	-	-	-	-	-	-
Roads	2008	2	1	503	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	2026	1	1	295	-	2	-	-	-	-	-	-	-	-	-	-	-
Roads	2030	1	1	112	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	2045	1	1	450	-	-	-	11	-	-	-	-	-	-	-	-	-
Roads	2045	1	1	694	-	-	-	4	-	-	-	-	-	-	-	-	-
Roads	2067	1	1	389	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3000	1	1	1006	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3001	1	2	1036	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3002	1	3	1004	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3003	1	1	1004	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3004	1	1	1014	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3005	1	1	1038	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3009	1	1	502	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3031	1	1	122	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3048	1	1	583	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3051	1	1	1034	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3052	1	1	1023	-	1	-	-	-	-	-	-	-	-	-	-	-
Roads	3052	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roads	3053	1	1	1056	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1002	1	1	135	-	1	-	-	-	-	-	-	-	-	-	-	-
Rearing	1003	1	1	167	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1005	1	1	586	-	7	-	-	-	-	-	-	-	-	-	-	-
Rearing	1006	1	1	179	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1007	1	1	201	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1008	1	1	175	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1011	1	1	716	-	17	-	-	-	-	-	-	-	-	-	-	-
Rearing	1012	1	1	487	-	28	-	-	-	-	-	-	-	-	-	-	-
Rearing	1013	1	1	383	-	4	-	-	-	-	-	-	-	-	-	-	-
Rearing	1015	1	1	117	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1016	1	1	825	-	8	-	-	-	-	-	-	-	-	-	-	-
Rearing	1017	1	1	54	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1018	1	1	119	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1019	1	1	1970	-	8	-	-	-	-	-	-	-	-	-	-	-
Rearing	1021	1	1	141	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1022	1	1	389	-	6	-	-	-	-	-	-	-	-	-	-	-
Rearing	1023	1	1	290	-	8	-	-	-	-	-	-	-	-	-	-	-
Rearing	1025	1	1	528	-	12	-	-	-	-	-	-	-	-	-	-	-
Rearing	1026	1	1	54	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1027	1	1	105	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Rearing	1028	1	1	392	-	1	-	-	-	-	-	-	-	-	-	-	-
Rearing	1029	1	1	540	-	3	-	-	-	-	-	-	-	-	-	-	-
Rearing	1060	1	1	389	-	2	-	-	-	-	-	-	-	-	-	-	-
Rearing	1068	1	1	246	-	24	-	-	-	-	-	-	-	-	-	-	-
Rearing	1082	1	1	270	-	4	-	-	-	-	-	-	-	-	-	-	-
Rearing	1082	2	2	181	-	5	-	-	-	-	-	-	-	-	-	-	-
Rearing	1082	3	3	86	-	11	-	-	-	-	-	-	-	-	-	-	-
Density	1001	1	1	406	-	4	-	-	-	-	-	-	-	-	-	-	-
Density	1001	1	1	363	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	1	1	409	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	2	2	811	-	12	-	-	-	-	-	-	-	-	-	-	-
Density	1001	2	2	737	-	3	-	-	-	-	-	-	-	-	-	-	-
Density	1001	2	2	795	-	1	-	-	-	-	-	-	-	-	-	-	-
Density	1001	3	3	707	-	3	-	-	-	-	-	-	-	-	-	-	-
Density	1001	3	3	566	-	1	-	-	-	-	-	-	-	-	-	-	-
Density	1001	3	3	541	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	3.5	35	501	-	1	-	-	-	-	-	-	-	-	-	-	-
Density	1001	4	4	853	-	10	-	-	-	-	-	-	-	-	-	-	-
Density	1001	4	4	823	-	2	-	-	-	-	-	-	-	-	-	-	-
Density	1001	4	4	796	-	2	-	-	-	-	-	-	-	-	-	-	-
Density	1001	5	5	572	-	6	-	-	-	-	-	-	-	-	-	-	-
Density	1001	5	5	471	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	5	5	453	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	6	6	866	-	7	-	-	-	-	-	-	-	-	-	-	-
Density	1001	6	6	764	-	2	-	-	-	-	-	-	-	-	-	-	-
Density	1001	6	6	813	-	2	-	-	-	-	-	-	-	-	-	-	-
Density	1001	7	7	786	-	11	-	-	-	-	-	-	-	-	-	-	-
Density	1001	7	7	763	-	8	-	-	-	-	-	-	-	-	-	-	-

Roads	3001	1	2	1036	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	7	7	774	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	8	8	1024	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	8	8	945	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	8	8	875	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	9	9	1363	-	34	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	9	9	925	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	9	9	715	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	10	10	969	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	10	10	896	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	10	10	907	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	11	11	725	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1001	11	11	702	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1005	1	1	675	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1005	1	1	678	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1005	1	1	685	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1010	2	2	697	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1010	2	2	755	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1010	2	2	659	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1011	1	1	543	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1011	1	1	532	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1011	1	1	545	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1012	1	1	543	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1012	1	1	560	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1012	1	1	550	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1016	1	1	594	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1016	1	1	479	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1016	1	1	463	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1016	2	2	634	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1016	2	2	548	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1016	2	2	588	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1019	1	1	580	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1019	1	1	456	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1019	1	1	512	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1019	1	1	548	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1022	1	1	454	-	27	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1022	1	1	341	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1022	1	1	346	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1023	1	1	536	-	47	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1023	1	1	476	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1023	1	1	450	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1025	1	1	596	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1025	1	1	566	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1025	1	1	601	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1029	1	1	723	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1029	1	1	538	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1029	1	1	531	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1030	1	1	361	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1030	1	1	310	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1030	1	1	322	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1030	2	2	491	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1030	2	2	465	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1030	2	2	496	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1030	2	2	566	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1030	2	2	575	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1030	2	2	570	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	1	1	680	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	1	1	656	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	1	1	650	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	2	2	600	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	2	2	617	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	2	2	590	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	3	3	608	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	3	3	802	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	3	3	758	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	4	4	565	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	4	4	418	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	4	4	401	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	5	5	708	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	5	5	654	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	5	5	715	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	6	6	480	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-

Roads	3001	1	2	1036	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	6	6	481	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	6	6	495	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	7	7	641	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	7	7	728	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1050	7	7	669	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1059	1	1	1006	-	39	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1059	1	1	831	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1059	1	1	775	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1059	2	2	758	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1059	2	2	731	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1059	2	2	672	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1060	1	1	500	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1060	1	1	475	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1060	1	1	438	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1062	1	1	600	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1062	1	1	515	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1062	1	1	506	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1070	1	1	335	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1070	1	1	414	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1070	1	1	401	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1072	1	1	823	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1072	1	1	667	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1072	1	1	615	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1082	3	3	600	-	39	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1082	3	3	515	-	24	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1082	3	3	501	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1082	3	3	535	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1082	4	4	1012	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1082	4	4	663	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1082	4	4	617	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1150	1	1	500	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1150	1	1	400	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1150	1	1	400	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1150	2	2	548	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1150	2	2	574	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	1150	2	2	522	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5000	1	1	851	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5000	1	1	794	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5000	1	1	752	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5000	1	1	847	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5000	3	3	408	-	53	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5000	3	3	411	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5000	3	3	437	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5001	2	2	812	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5001	2	2	748	-	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Density	5001	2	2	782	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	BIR1	1	1	1051	-	-	-	-	3	-	-	24	2	-	-	-	-	-	-
Sample Site	BIR2	2	2	1024	-	-	-	-	6	-	-	54	-	-	3	-	-	-	-
Sample Site	3006 BR1	1	1	1046	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	6002 CC1	1	1	1012	-	8	-	-	-	-	-	22	-	-	-	-	-	-	-
Sample Site	9057	1	1	1115	-	-	-	-	10	-	-	-	-	-	1	-	-	-	-
Sample Site	4020 SNO1	1	1	1017	-	5	-	-	5	-	-	15	-	-	-	-	-	1	-
Sample Site	3007 SUNR	1	1	1001	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	9058	1	1	1013	-	-	-	-	17	-	-	24	-	-	-	-	-	-	-
Sample Site	4021 SNO2	1	1	1040	-	1	-	-	-	-	-	7	1	-	3	-	-	-	-
Sample Site	4025 TEC1	1	1	1016	-	-	1	-	1	-	-	11	-	-	-	-	-	1	-
Sample Site	4025 TEC2	2	2	866	-	1	4	-	8	-	-	11	3	-	2	-	-	-	-
Sample Site	6800 TR4	1	1	1016	-	2	-	-	26	-	-	5	-	-	-	-	-	-	-
Sample Site	8001 M1	1	1	1043	-	1	-	-	22	-	-	19	-	-	-	-	-	-	-
Sample Site	8002 M2	1	1	1012	-	1	-	-	14	-	-	31	-	-	-	-	-	-	-
Sample Site	8003 M3	1	1	1043	-	2	-	-	13	-	-	40	-	-	-	-	-	-	-
Sample Site	9082 M4	1	1	975	-	-	9	-	4	-	-	63	-	16	-	-	-	-	-
Sample Site	5001	1	1	931	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	5543	1	1	1006	-	3	-	-	2	-	-	-	-	-	5	-	-	-	-
Sample Site	5544	1	1	1002	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	9060	1	1	966	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	3050 TRC1	1	1	1063	NFC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	6008 TR2.5	1	25	1013	-	1	3	-	10	-	-	-	-	-	2	-	-	-	-
Sample Site	6009 TR3.5	1	1	1016	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	TRC2	2	2	1093	-	11	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	TRC3	3	3	1031	-	19	-	-	11	-	-	-	-	-	8	-	-	-	-

Roads	3001	1	2	1036	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Sample Site	3008 UR1	1	1	1008	-	4	-	-	7	-	-	-	-	-	-	-	-
Sample Site	3049 EUR2	1	1	850	-	1	-	-	-	-	-	-	-	-	-	-	-
Sample Site	6004 ECM9	1	1	1015	-	21	-	-	-	-	-	-	-	-	-	-	-
Sample Site	6005 UR1	1	1	507	-	15	-	-	-	-	-	1	-	-	-	-	-
Sample Site	6006 UR2	1	1	1045	-	32	-	-	-	-	1	7	13	-	-	5	-
Sample Site	6007 UR3	1	1	1032	-	45	-	-	-	1	-	11	1	1	-	-	-
Sample Site	ECM8	8	8	1015	-	13	-	-	-	-	-	-	-	-	-	-	-
Compensation Wetlands	5546	NA	TEC-W6	483	-	11	-	-	-	-	-	3	-	-	-	-	-
Compensation Wetlands	5552	NA	TEC-W7	446	-	4	-	-	-	-	-	3	5	-	-	-	-
Compensation Wetlands	5551	NA	TEC-W7	265	-	-	-	-	-	-	-	2	6	-	-	-	-
Compensation Wetlands	5550	NA	TEC-W7	276	-	5	-	-	-	-	-	25	-	-	-	-	-
Compensation Wetlands	5553	NA	TEC-W6	264	-	-	-	-	-	-	-	3	-	-	-	-	-
Compensation Wetlands	9061	NA	TRC-W3	330	-	6	-	-	-	-	-	-	-	-	-	-	-
Compensation Wetlands	WL10	NA	TRC-W2	500	-	2	-	-	-	-	-	-	-	-	-	-	-
Wetlands	5546	NA	TEC-W5	483	-	11	-	-	-	-	-	3	-	-	-	-	-
Wetlands	5547	NA	TEC-W4	279	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Wetlands	5548	NA	TEC-W4	600	-	3	-	-	-	-	-	5	-	-	-	-	-
Wetlands	WL6 (channel)	NA	TRC-W1	509	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Wetlands	WL3	NA	TEC-W3	504	NFC	-	-	-	-	-	-	-	-	-	-	-	-
Wetlands	5545	NA	TEC-W5	465	-	13	-	-	1	-	-	17	-	-	-	-	-

EF = electrofishing, DV = Dolly Varden, BT = bull trout, DV/BT = either Dolly Varden or bull trout, RB = rainbow trout, RB/CT = either rainbow trout or cutthroat trout, CO = coho salmon, CH = Chinook salmon, MW = mountain whitefish, CCT = coastal cutthroat trout, CAL = coastrange sculpin, SK = sockeye salmon, SP = unknown species, NFC = no fish caught

## **Appendix 6.2-1**

KSM SHIM Data



**Appendix 6.2-1. KSM SHIM Data**

CHANNEL CHARACTERISTICS											
SEGMENT ID	STREAM NAME	ILP NO.	REACH NO.	SEGMENT NO.	STREAM LENGTH (m)	WATER CREW	WATER HEIGHT STAGE	SECONDARY CHANNEL	CHANNEL MORPHOLOGY	BARS	GRADIENT (%)
39	South Teigen	1001	5	1.0	2964	CB RD	high		Riffle Pool		1.0
40	South Teigen	1001	4	20.0	129	CB RD	high		Riffle Pool	None	1.0
41	South Teigen	1001	4	19.0	58	CB RD	high		Cascade Pool	None	1.0
42	South Teigen	1001	4	18.0	275	CB RD	high		Cascade Pool	None	1.0
43	South Teigen	1001	4	17.0	109	CB RD	high		Riffle Pool	Point/Lateral	3.0
44	South Teigen	1001	4	16.0	24	CB RD	high		Riffle Pool	Point/Lateral	3.0
45	South Teigen	1001	4	15.0	88	CB RD	high		Riffle Pool	Point/Lateral	3.0
46	South Teigen	1001	4	14.0	224	CB RD	high		Cascade Pool	None	3.0
47	South Teigen	1001	4	13.0	245	CB RD	high		Cascade Pool	None	2.0
48	South Teigen	1001	4	12.0	698	CB RD	high		Cascade Pool	None	0.0
49	South Teigen	1001	4	11.0	54	CB RD	high		Cascade Pool	None	4.0
50	South Teigen	1001	4	10.0	98	CB RD	high		Cascade Pool	None	6.0
62	South Teigen	1001	8	1.0	118	CB RD	high		Cascade Pool	None	5.0
63	South Teigen	1001	8	2.0	690	CB RD	high		Cascade Pool	Point/Lateral	7.0
84	South Teigen	1001	7	1.0	261	CB RD	flood		Riffle Pool	None	0.0
133	South Teigen	1001	4	9.0	374	CB RD	high		Cascade Pool		6.0
136	South Teigen	1001	4	8.0	28	CB RD	high		Cascade Pool		3.0
137	South Teigen	1001	4	7.0	158	CB RD	high		Cascade Pool		3.0
138	South Teigen	1001	4	6.0	46	CB RD	high		Cascade Pool		3.0
139	South Teigen	1001	4	4.0	104	CB RD	high		Cascade Pool		4.0
140	South Teigen	1001	4	3.0	363	CB RD	high		Cascade Pool		5.0
141	South Teigen	1001	4	2.0	520	CB RD	high		Cascade Pool		5.0
142	South Teigen	1001	4	1.0	94	CB RD	high		Cascade Pool		5.0
154	South Teigen	1001	4	5.0	205	CB RD	high		Cascade Pool		4.0
155	South Teigen	1001	6	1.0	1220	CB RD	high		Cascade Pool		5.0
156	South Teigen	1001	1	1.0	1340	CB RD			Cascade Pool		0.0
160	South Teigen	1001	2	1.0	760	CB RD			Cascade Pool		0.0
161	South Teigen	1001	3	1.0	1407	CB RD	high		Cascade Pool		5.0
38	NA	1002	1	1.0	42	CB RD	high		Riffle Pool	None	1.0
36	NA	1003	1	1.0	25	CB RD	high		Riffle Pool	None	2.0
37	NA	1003	1	2.0	62	CB RD	high		Riffle Pool	None	2.0
83	NA	1004	2	1.0	152	CB RD	high		Cascade Pool	None	5.0
175	NA	1004	1	1.0	303	CB RD	moderate		Riffle Pool	None	2.0
34	NA	1005	1	1.0	96	CB RD	high		Riffle Pool	None	1.0
35	NA	1005	1	2.0	9	CB RD	high		Riffle Pool	None	1.0
31	NA	1006	1	1.0	21	CB RD	high		Cascade Pool	None	2.0
32	NA	1006	2	1.0	76	CB RD	high		Cascade Pool	None	17.0
33	NA	1006	2	2.0	64	CB RD	high		Step Pool	None	23.0
29	NA	1007	1	1.0	27	CB RD	high		Cascade Pool	None	9.0
30	NA	1007	1	2.0	142	CB RD	high		Step Pool	None	25.0
28	NA	1008	1	1.0	176	CB RD	high		Step Pool	None	18.0
24	NA	1009	1	1.0	24	CB RD	high		Riffle Pool	None	1.0
25	NA	1009	1	2.0	15	CB RD	high		Riffle Pool	None	1.0
26	NA	1010	1	1.0	230	CB RD	high		Cascade Pool	None	10.0
27	NA	1010	2	1.0	141	CB RD	high		Step Pool	None	10.0
21	NA	1011	2	1.0	47	CB RD	high		Step Pool	None	22.0
22	NA	1011	1	2.0	75	CB RD	high		Cascade Pool	None	4.0
23	NA	1011	1	1.0	60	CB RD	high		Cascade Pool	None	10.0
17	NA	1012	2	2.0	20	CB RD	high		Step Pool	None	17.0
18	NA	1012	2	1.0	148	CB RD	high		Step Pool	None	16.0
19	NA	1012	1	1.0	68	CB RD	high		Cascade Pool	None	7.0

**Appendix 6.2-1. KSM SHIM Data**

CHANNEL CHARACTERISTICS												
SEGMENT ID	STREAM NAME	ILP NO.	REACH NO.	SEGMENT NO.	STREAM		WATER HEIGHT	STAGE	SECONDARY CHANNEL	CHANNEL		
					LENGTH (m)	CREW				MORPHOLOGY	BARS	GRADIENT (%)
20	NA	1012	1	1.0	43	CB RD	high			Cascade Pool	None	7.0
157	NA	1013	1	1.0	14	CB RD	high			Large Channel	None	1.0
16	NA	1014	1	1.0	55	CB RD	high			Large Channel	None	1.0
15	NA	1015	1	1.0	75	CB RD	high	Intermittent		Riffle Pool	None	3.0
12	NA	1016	2	1.0	220	CB RD	high			Step Pool	None	23.0
13	NA	1016	1	1.0	300	CB RD	high			Cascade Pool	None	8.0
14	NA	1017	1	1.0	70	CB RD	high			Large Channel	None	2.0
51	NA	1018	1	1.0	24	CB RD	high	Off channel		Large Channel	None	0.0
8	NA	1019	3	1.0	75	CB RD	high			Step Pool		22.0
9	NA	1019	2	2.0	214	CB RD	high			Step Pool		15.0
10	NA	1019	2	1.0	161	CB RD	high			Cascade Pool		4.0
11	NA	1019	1	1.0	100	CB RD	high	Braided		Riffle Pool		2.0
2	NA	1021	2	2.0	40	CB RD	high			Step Pool		7.0
3	NA	1021	2	1.0	62	CB RD	high			Step Pool		15.0
4	NA	1021	1	2.0	44	CB RD	high			Riffle Pool		3.0
5	NA	1021	1	1.0	22	CB RD	high			Riffle Pool		2.0
1	NA	1022	1	2.0	146	CB RD	high			Step Pool		18.0
158	NA	1022	1	1.0	143	CB RD	high			Step Pool		18.0
6	NA	1023	2	1.0	138	CB RD	high			Step Pool		23.0
7	NA	1023	1	1.0	35	CB RD	high			Riffle Pool		3.0
52	NA	1025	2	2.0	140	CB RD	high			Step Pool		18.0
53	NA	1025	2	1.0	110	CB RD	high			Step Pool		13.0
54	NA	1025	1	2.0	76	CB RD	high			Cascade Pool		8.0
55	NA	1025	1	1.0	26	CB RD	high			Riffle Pool		0.0
56	NA	1026	1	2.0	17	CB RD	high			Cascade Pool	None	6.0
57	NA	1026	1	1.0	83	CB RD	high			Riffle Pool	None	2.0
58	NA	1027	2	1.0	75	CB RD	high			Step Pool	None	24.0
59	NA	1027	1	1.0	37	CB RD	high			Cascade Pool	None	10.0
60	NA	1028	1	1.0	79	CB RD	high			Riffle Pool	None	1.0
61	NA	1028	1	1.0	26	CB RD	high			Riffle Pool	None	3.0
159	NA	1029	1	0.0	448	CB RD	high			Riffle Pool	None	1.0
82	NA	1030	2	2.0	309	CB RD	high			Cascade Pool	Point/Lateral	7.0
176	NA	1030	1	2.0	259	CB RD	moderate			Riffle Pool	None	3.0
177	NA	1030	2	1.0	244	CB RD	moderate			Riffle Pool	None	3.0
178	NA	1030	1	1.0	931	CB RD	moderate			Riffle Pool	None	2.0
64	North Treaty	1050	1	8.0	165	CB RD	high			Step Pool	None	10.0
69	North Treaty	1050	2	1.0	536	CB RD	high			Riffle Pool		2.0
70	North Treaty	1050	2	2.0	421	CB RD	high			Riffle Pool		2.0
71	North Treaty	1050	2	3.0	63	CB RD	high			Riffle Pool		2.0
72	North Treaty	1050	2	4.0	78	CB RD	high	Side channel		Riffle Pool		2.0
73	North Treaty	1050	2	4.0	420	CB RD	high			Riffle Pool		2.0
79	North Treaty	1050	2	5.0	569	CB RD	high			Riffle Pool		2.0
81	North Treaty	1050	2	6.0	63	CB RD	high			Riffle Pool		2.0
144	North Treaty	1050	1	7.0	201	CB RD	high			Step Pool	None	5.0
145	North Treaty	1050	1	6.0	91	CB RD	high			Cascade Pool	None	5.0
146	North Treaty	1050	1	5.0	203	CB RD	high			Riffle Pool	None	3.0
148	North Treaty	1050	1	4.0	180	CB RD	high			Cascade Pool	None	5.0
149	North Treaty	1050	1	3.0	285	CB RD	high			Cascade Pool	None	5.0
150	North Treaty	1050	1	2.0	90	CB RD	high			Cascade Pool	None	5.0
151	North Treaty	1050	1	1.0	675	CB RD	high			Cascade Pool	None	4.0
65	NA	1051	1	1.0	40	CB RD	high			Riffle Pool	None	2.0
66	NA	1051	2	1.0	31	CB RD	high			Cascade Pool	None	6.0

**Appendix 6.2-1. KSM SHIM Data**

CHANNEL CHARACTERISTICS											
SEGMENT ID	STREAM NAME	ILP NO.	REACH NO.	SEGMENT NO.	STREAM LENGTH (m)	WATER CREW	WATER HEIGHT STAGE	SECONDARY CHANNEL	CHANNEL MORPHOLOGY	BARS	GRADIENT (%)
67	NA	1052	1	1.0	23	CB RD	high		Cascade Pool	None	13.0
68	NA	1053	1	1.0	90	CB RD	high		Riffle Pool		2.0
75	NA	1054	1	1.0	65	CB RD	high		Riffle Pool		2.0
76	NA	1054	1	2.0	29	CB RD	high		Riffle Pool		2.0
77	NA	1054	2	1.0	42	CB RD	high		Cascade Pool		6.0
78	NA	1055	1	1.0	135	CB RD	high		Riffle Pool		2.0
74	NA	1056	1	1.0	45	CB RD	high		Cascade Pool		4.0
80	NA	1057	1	1.0	29	CB RD	high		Riffle Pool		2.0
85	NA	1059	1	8.0	119	CB RD	high		Riffle Pool		2.0
86	NA	1059	1	7.0	81	CB RD	high		Riffle Pool		2.0
87	NA	1059	1	6.0	123	CB RD	high		Riffle Pool		2.0
92	NA	1059	1	5.0	25	CB RD	high		Riffle Pool		2.0
93	NA	1059	1	4.0	84	CB RD	high		Riffle Pool		2.0
94	NA	1059	1	3.0	409	CB RD	high		Riffle Pool		2.0
95	NA	1059	1	2.0	65	CB RD	high		Riffle Pool		2.0
96	NA	1059	1	1.0	51	CB RD	high		Riffle Pool		2.0
107	NA	1060	1	1.0	15	CB RD	high		Riffle Pool	None	2.0
108	NA	1060	1	2.0	181	CB RD	high	Braided	Riffle Pool	None	2.0
109	NA	1060	1	3.0	49	CB RD	high	Braided	Riffle Pool	None	7.0
110	NA	1060	2	1.0	84	CB RD	high		Cascade Pool	None	10.0
111	NA	1060	2	2.0	88	CB RD	high		Cascade Pool	None	14.0
112	NA	1060	2	3.0	290	CB RD	high		Cascade Pool	None	20.0
97	NA	1061	1	1.0	31	CB RD	high		Riffle Pool	None	2.0
98	NA	1062	1	1.0	210	CB RD	high		Riffle Pool	None	2.0
100	NA	1062	1	2.0	35	CB RD	high		Riffle Pool	None	2.0
101	NA	1063	1	1.0	15	CB RD	high		Riffle Pool	None	2.0
99	NA	1064	1	1.0	29	CB RD	high		Riffle Pool	None	2.0
103	NA	1065	1	1.0	39	CB RD	high		Riffle Pool	None	2.0
104	NA	1066	1	1.0	15	CB RD	high		Riffle Pool	None	2.0
102	NA	1067	1	1.0	81	CB RD	high		Riffle Pool	None	2.0
105	NA	1068	1	1.0	70	CB RD	high		Riffle Pool	None	2.0
106	NA	1069	1	1.0	12	CB RD	high		Riffle Pool	None	2.0
90	NA	1070	1	1.0	61	CB RD	high		Riffle Pool		2.0
91	NA	1071	1	1.0	16	CB RD	high		Riffle Pool		2.0
88	NA	1072	1	1.0	408	CB RD	high		Riffle Pool		2.0
89	NA	1072	1	2.0	59	CB RD	high		Riffle Pool		2.0
114	NA	1081	1	1.0	64	CB RD	high		Riffle Pool		2.0
115	NA	1082	1	1.0	139	CB RD	high		Riffle Pool		2.0
116	NA	1082	1	2.0	403	CB RD	high		Riffle Pool		2.0
117	NA	1082	1	3.0	101	CB RD	high		Riffle Pool		2.0
118	NA	1082	1	4.0	217	CB RD	high		Riffle Pool		2.0
119	NA	1082	1	5.0	102	CB RD	high		Riffle Pool		3.0
120	NA	1082	1	6.0	71	CB RD	high		Riffle Pool		3.0
121	NA	1082	1	7.0	90	CB RD	high		Riffle Pool		3.0
122	NA	1082	1	8.0	62	CB RD	high		Riffle Pool		3.0
123	NA	1082	1	9.0	27	CB RD	high		Riffle Pool		3.0
124	NA	1083	1	1.0	66	CB RD	high		Riffle Pool		3.0
127	NA	1084	1	1.0	113	CB RD	high		Riffle Pool		1.0
128	NA	1084	1	2.0	15	CB RD	high		Riffle Pool		1.0
126	NA	1085	1	1.0	89	CB RD	high		Riffle Pool		2.0
125	NA	1086	1	1.0	53	CB RD	high		Riffle Pool		2.0
129	NA	1087	1	2.0	90	CB RD	high		Riffle Pool		3.0

**Appendix 6.2-1. KSM SHIM Data**

SEGMENT ID	STREAM NAME	ILP NO.	REACH NO.	SEGMENT NO.	CHANNEL CHARACTERISTICS						
					STREAM LENGTH (m)	CREW	WATER HEIGHT	STAGE	SECONDARY CHANNEL	CHANNEL MORPHOLOGY	BARS
130	NA	1087	2	1.0	88	CB RD	high		Cascade Pool		25.0
162	NA	1087	1	1.0	54	CB RD	high		Riffle Pool		2.0
113	NA	1088	1	1.0	40	CB RD	high		Large Channel		1.0
131	NA	1089	1	1.0	40	CB RD	high				0.0
132	NA	1089	1	1.0	32	CB RD	high				0.0
134	NA	1090	1	1.0	28	CB RD	high		Riffle Pool		2.0
135	NA	1091	1	1.0	40	CB RD	moderate		Riffle Pool		10.0
143	NA	1093	1	1.0	144	CB RD	high		Step Pool		25.0
147	NA	1101	1	1.0	14	CB RD	low		Cascade Pool	None	5.0
152	NA	1110	1	2.0	57	CB RD	dry		Riffle Pool		2.0
153	NA	1110	1	1.0	68	CB RD	low		Riffle Pool		2.0
165	NA	1150	1	1.0	81	CB RD	high		Riffle Pool	None	1.0
166	NA	1150	2	4.0	194	CB RD	moderate		Riffle Pool	None	2.0
167	NA	1150	2	5.0	62	CB RD	moderate		Riffle Pool	None	2.0
168	NA	1150	2	6.0	67	CB RD	moderate		Cascade Pool	None	4.0
169	NA	1150	2	3.0	66	CB RD	high		Cascade Pool	None	4.0
170	NA	1150	2	2.0	29	CB RD	high		Riffle Pool	None	2.0
171	NA	1150	2	1.0	76	CB RD	high		Cascade Pool	None	4.0
179	NA	1151	1	1.0	51	CB RD	moderate		Riffle Pool	None	2.0
174	NA	1152	1	1.0	24	CB RD	moderate		Riffle Pool	None	2.0
172	NA	1205	1	1.0	41	CB RD	moderate		Large Channel	None	1.0
173	NA	1205	1	2.0	21	CB RD	low		Riffle Pool	None	0.0
164	NA	1206	1	1.0	39	CB RD	moderate		Riffle Pool	None	2.0
163	NA	1207	1	1.0	24	CB RD	moderate		Cascade Pool	None	30.0

**Appendix 6.2-1. KSM SHIM Data**

SEGMENT ID	STREAM NAME	HABITAT SUITABILITY AND QUALITY				CHANNEL MEASUREMENTS (m)			
		SPAWNING HABITAT SUITABILITY	OVER-WINTERING HABITAT SUITABILITY	REARING HABITAT SUITABILITY	OVERALL HABITAT QUALITY	POTENTIAL SPAWNING HABITAT	BANKFULL WIDTH	WETTED DEPTH	BANKFULL DEPTH
39	South Teigen	Poor	Good	Good	Important	Abundant	4.00	0.00	0.00
40	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
41	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
42	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
43	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
44	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
45	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
46	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
47	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
48	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
49	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
50	South Teigen	Fair	Good	Good	Important		0.00	0.00	0.00
62	South Teigen	Poor	Good	Good	Important	None	6.00	0.50	0.00
63	South Teigen	Poor	Good	Good	Important	None	6.00	0.50	0.00
84	South Teigen	Poor	None	Poor	Marginal	None	0.00	0.00	0.00
133	South Teigen	Fair	Good	Good	Important		11.00	0.00	0.00
136	South Teigen	Fair	Good	Good	Important	None	6.00	0.00	0.00
137	South Teigen	Fair	Good	Good	Important	None	8.00	0.00	0.00
138	South Teigen	Fair	Good	Good	Important	None	8.00	0.00	0.00
139	South Teigen	Fair	Good	Good	Important	None	11.00	0.00	0.00
140	South Teigen	Fair	Good	Good	Important		8.00	0.00	0.00
141	South Teigen	Fair	Good	Good	Important		7.00	0.00	0.00
142	South Teigen	Fair	Good	Good	Important		7.00	0.00	0.00
154	South Teigen	Fair	Good	Good	Important	None	11.00	0.00	0.00
155	South Teigen	Poor	Good	Good	Important		3.00	0.00	0.00
156	South Teigen	Poor	Good	Good	Important		0.00	0.00	0.00
160	South Teigen	Poor	Good	Good	Important		0.00	0.00	0.00
161	South Teigen	Poor	Good	Good	Important		14.00	0.00	0.00
38	NA	Poor	Poor	Poor	Marginal	Micropatches	1.38	0.18	0.00
36	NA	Fair	Poor	Poor	Marginal	Micropatches	1.10	0.16	0.00
37	NA	Poor	Poor	Poor	Marginal	Micropatches	1.10	0.16	0.00
83	NA	Poor	Poor	Poor	Marginal	None	1.60	0.35	0.00
175	NA	Poor	Poor	Poor	Marginal	Micropatches	0.00	0.00	0.00
34	NA	Good	Poor	Good	Important	Micropatches	1.61	0.20	0.00
35	NA	Fair	Poor	Good	Important	Micropatches	1.61	0.20	0.00
31	NA	Good	Poor	Poor	Important	Abundant	0.00	0.00	0.00
32	NA	Fair	Poor	Poor	Marginal	Moderate	0.00	0.00	0.00
33	NA	Poor	Poor	Poor	Marginal	Moderate	0.00	0.00	0.00
29	NA	Good	Poor	Poor	Important	Micropatches	0.00	0.00	0.00
30	NA	Poor	Poor	Poor	Marginal	Micropatches	0.00	0.00	0.00
28	NA	Poor	Poor	Poor	Marginal	Micropatches	0.00	0.00	0.00
24	NA	Fair	Poor	Poor	Marginal	Moderate	0.00	0.00	0.00
25	NA	None	None	Poor	Marginal	None	0.00	0.00	0.00
26	NA	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
27	NA	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
21	NA	Poor	Poor	Poor	Marginal	Micropatches	0.00	0.00	0.00
22	NA	Poor	Poor	Good	Important	Micropatches	0.00	0.00	0.00
23	NA	Good	Poor	Good	Important	Moderate	0.00	0.00	0.00
17	NA	None	Fair	Fair	Important	None	0.00	0.00	0.00
18	NA	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
19	NA	Good	Fair	Good	Important	Abundant	0.00	0.00	0.00

**Appendix 6.2-1. KSM SHIM Data**

SEGMENT ID	STREAM NAME	HABITAT SUITABILITY AND QUALITY				CHANNEL MEASUREMENTS (m)			
		SPAWNING HABITAT SUITABILITY	OVER-WINTERING HABITAT SUITABILITY	REARING HABITAT SUITABILITY	OVERALL HABITAT QUALITY	POTENTIAL SPAWNING HABITAT	BANKFULL WIDTH	WETTED DEPTH	BANKFULL DEPTH
20	NA	Good	Fair	Good	Important	Abundant	0.00	0.00	0.00
157	NA	None	Poor	Fair	Marginal	None	2.00	1.00	0.00
16	NA	None	None	Poor	Marginal	None	0.00	0.00	0.00
15	NA	None	None	Poor	Marginal	Micropatches	0.90	0.09	0.00
12	NA	Fair	Fair	Good	Important	Moderate	5.00	0.15	0.00
13	NA	Good	Fair	Good	Important	Abundant	0.00	0.00	0.00
14	NA	None	None	Poor	Marginal	None	3.50	0.20	0.00
51	NA	None	Poor	Poor	Marginal	None	1.00	0.55	0.00
8	NA	None	Good	Fair	Important	Micropatches	3.00	0.30	0.00
9	NA	Good	Good	Good	Important	Abundant	3.00	0.20	0.00
10	NA	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
11	NA	Fair	None	Poor	Marginal	None	0.00	0.00	0.00
2	NA	Poor	Poor	Poor	Marginal	Micropatches	1.37	0.23	0.00
3	NA	Fair	Poor	Poor	Marginal	Micropatches	1.37	0.23	0.00
4	NA	Fair	Poor	Poor	Important	Moderate	1.00	0.15	0.00
5	NA	Good	Poor	Poor	Important	Abundant	0.00	0.00	0.00
1	NA	Poor	Poor	Poor	Marginal	Micropatches	0.87	0.04	0.00
158	NA	Fair	Poor	Good	Important	Micropatches	1.35	0.11	0.00
6	NA	Poor	Fair	Fair	Marginal	Micropatches	2.50	0.15	0.00
7	NA	Fair	Poor	Fair	Important	Micropatches	1.52	0.17	0.00
52	NA	Poor	Poor	Fair	Marginal	Micropatches	1.61	0.15	0.00
53	NA	Good	Good	Good	Important	Moderate	2.00	0.15	0.00
54	NA	Good	Good	Good	Important	Moderate	0.00	0.00	0.00
55	NA	Good	Poor	Good	Important	Moderate	2.00	0.15	0.00
56	NA	Poor	Poor	Poor	Marginal	Moderate	0.00	0.00	0.00
57	NA	Poor	Poor	Poor	Marginal	Moderate	1.50	0.08	0.00
58	NA	None	Poor	Poor	Marginal	Micropatches	1.42	0.15	0.00
59	NA	Fair	Poor	Poor	Marginal	Moderate	0.00	0.00	0.00
60	NA	Fair	Fair	Fair	Important	None	3.00	0.30	0.00
61	NA	Good	Poor	Fair	Important	Moderate	0.00	0.00	0.00
159	NA	Fair	Fair	Good	Important	None	3.00	0.30	0.00
82	NA	Poor	Fair	Poor	Important	None	1.60	0.35	0.00
176	NA	Good	Fair	Good	Important	Abundant	0.00	0.00	0.00
177	NA	Poor	Fair	Good	Important	Moderate	0.00	0.00	0.00
178	NA	Poor	Fair	Fair	Important	Moderate	0.00	0.00	0.00
64	North Treaty	Good	Good	Good	Important	Moderate	6.00	0.35	0.00
69	North Treaty	Good	Good	Good	Important	Moderate	0.00	0.00	0.00
70	North Treaty	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
71	North Treaty	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
72	North Treaty	Poor	Poor	Good	Important	Micropatches	1.00	0.15	0.00
73	North Treaty	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
79	North Treaty	Fair	Good	Good	Important	Abundant	4.50	0.40	0.00
81	North Treaty	Fair	Good	Good	Important	Moderate	0.00	0.00	0.00
144	North Treaty	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
145	North Treaty	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
146	North Treaty	Good	Good	Good	Important	Abundant	5.00	0.25	0.00
148	North Treaty	Good	Good	Good	Important	Abundant	7.00	0.20	0.00
149	North Treaty	Good	Good	Good	Important	Abundant	5.50	0.50	0.00
150	North Treaty	Good	Good	Good	Important	Abundant	5.50	0.50	0.00
151	North Treaty	Good	Good	Good	Important	Moderate	6.30	0.35	0.00
65	NA	Fair	Poor	Poor	Important	Abundant	0.00	0.00	0.00
66	NA	Fair	Poor	Poor	Important	Moderate	0.00	0.00	0.00



**Appendix 6.2-1. KSM SHIM Data**

SEGMENT ID	STREAM NAME	HABITAT SUITABILITY AND QUALITY				CHANNEL MEASUREMENTS (m)			
		SPAWNING HABITAT SUITABILITY	OVER-WINTERING HABITAT SUITABILITY	REARING HABITAT SUITABILITY	OVERALL HABITAT QUALITY	POTENTIAL SPAWNING HABITAT	BANKFULL WIDTH	WETTED DEPTH	BANKFULL DEPTH
67	NA	Poor	Poor	Poor	Marginal	Micropatches	0.00	0.00	0.00
68	NA	Fair	Poor	Poor	Marginal	Moderate	0.00	0.00	0.00
75	NA	Poor	Poor	Fair	Marginal	Micropatches	0.00	0.00	0.00
76	NA	Good	Poor	Fair	Important	Abundant	1.71	0.07	0.00
77	NA	Fair	Poor	Poor	Marginal	Abundant	1.71	0.07	0.00
78	NA	Fair	Poor	Poor	Marginal	Abundant	0.00	0.00	0.00
74	NA	Poor	Poor	Poor	Marginal	Micropatches	0.00	0.00	0.00
80	NA	Poor	Poor	Poor	Marginal	None	0.00	0.00	0.00
85	NA	Good	Poor	Good	Important	Abundant	1.10	0.05	0.00
86	NA	Fair	Good	Good	Important	Moderate	1.60	0.15	0.00
87	NA	Fair	Good	Good	Important	Moderate	0.00	0.00	0.00
92	NA	Fair	Good	Good	Important	Moderate	0.00	0.00	0.00
93	NA	Fair	Good	Good	Important	Moderate	0.00	0.00	0.00
94	NA	Poor	Good	Good	Important	Micropatches	2.00	0.14	0.00
95	NA	Poor	Good	Good	Important	Micropatches	2.50	0.25	0.00
96	NA	None	Poor	Fair	Marginal	None	0.00	0.00	0.00
107	NA	None	None	Poor	Marginal	None	5.00	0.10	0.00
108	NA	None	None	Poor	Marginal	None	5.00	0.10	0.00
109	NA	Fair	Poor	Poor	Marginal	Abundant	5.00	0.10	0.00
110	NA	Poor	Poor	Fair	Marginal	None	1.70	0.17	0.00
111	NA	None	Poor	Poor	Marginal	None	2.30	0.17	0.00
112	NA	None	Poor	Poor	Marginal	None	0.00	0.00	0.00
97	NA	Poor	Poor	Poor	Marginal	Micropatches	0.00	0.00	0.00
98	NA	Good	Good	Good	Important	Abundant	0.00	0.00	0.00
100	NA	Good	Good	Good	Important	Abundant	0.75	0.27	0.00
101	NA	Good	Good	Good	Important	Abundant	0.70	0.17	0.00
99	NA	Good	Good	Good	Important	Abundant	0.69	0.09	0.00
103	NA	None	Good	Good	Important	None	1.15	0.45	0.00
104	NA	None	Good	Good	Important	Micropatches	0.99	0.27	0.00
102	NA	None	Good	Good	Important	None	0.00	0.00	0.00
105	NA	None	Poor	Poor	Marginal	None	1.00	0.10	0.00
106	NA	None	Poor	Poor	Marginal	None	0.40	0.15	0.00
90	NA	None	None	Poor	Marginal	None	0.81	0.11	0.00
91	NA	None	None	Poor	Marginal	None	0.81	0.11	0.00
88	NA	Poor	Poor	Good	Important	Micropatches	1.17	0.10	0.00
89	NA	Poor	Poor	Good	Important	Micropatches	0.70	0.10	0.00
114	NA	None	Poor	Good	Important	None	1.67	0.11	0.00
115	NA	Fair	Good	Good	Important	Moderate	2.20	0.27	0.00
116	NA	None	Poor	Good	Important	None	2.00	0.10	0.00
117	NA	Fair	Poor	Good	Important	Moderate	1.90	0.07	0.00
118	NA	Fair	Poor	Good	Important	Moderate	1.90	0.07	0.00
119	NA	Poor	Poor	Good	Important	Micropatches	2.10	0.13	0.00
120	NA	None	Poor	Good	Important	None	1.82	0.13	0.00
121	NA	None	Poor	Good	Important	None	1.82	0.13	0.00
122	NA	None	Poor	Good	Important	Micropatches	1.00	0.15	0.00
123	NA	None	Poor	Good	Important	Micropatches	1.00	0.15	0.00
124	NA	None	Poor	Poor	Marginal	None	0.83	0.12	0.00
127	NA	Poor	Poor	Poor	Marginal	Micropatches	1.30	0.20	0.00
128	NA	Poor	Poor	Poor	Marginal	Micropatches	1.30	0.20	0.00
126	NA	Good	Poor	Poor	Marginal	Abundant	0.65	0.10	0.00
125	NA	Good	Fair	Good	Marginal	Moderate	1.80	0.30	0.00
129	NA	Poor	Poor	Poor	Marginal	Micropatches	1.00	0.09	0.00

**Appendix 6.2-1. KSM SHIM Data**

SEGMENT ID	STREAM NAME	HABITAT SUITABILITY AND QUALITY				CHANNEL MEASUREMENTS (m)			
		SPAWNING HABITAT SUITABILITY	OVER-WINTERING HABITAT SUITABILITY	REARING HABITAT SUITABILITY	OVERALL HABITAT QUALITY	POTENTIAL SPAWNING HABITAT	BANKFULL WIDTH	WETTED DEPTH	BANKFULL DEPTH
130	NA	Poor	Poor	Poor	Marginal	Micropatches	1.00	0.09	0.00
162	NA	Good	Poor	Fair	Marginal	Abundant	1.19	0.09	0.00
113	NA	None	None	Poor	Marginal	None	1.00	0.50	0.00
131	NA	Poor	Poor	Fair	Marginal		0.00	0.00	0.00
132	NA	Poor	Poor	Fair	Marginal		0.00	0.00	0.00
134	NA	Good	Poor	Poor	Important	Abundant	0.50	0.12	0.00
135	NA	Good	Poor	Poor	Important	Moderate	0.82	0.06	0.00
143	NA	Poor	Poor	Poor	Marginal	Micropatches	6.00	0.00	0.00
147	NA	Poor	None	None	Marginal	Micropatches	0.50	0.05	0.00
152	NA	Poor	Poor	Fair	Important	None	5.00	0.00	0.00
153	NA	Fair	Poor	Fair	Important	Moderate	5.50	0.15	0.00
165	NA	Poor	Poor	Good	Important	Micropatches	1.30	0.14	0.00
166	NA	Good	Poor	Poor	Important	Micropatches	0.00	0.00	0.00
167	NA	Good	Poor	Good	Important	Moderate	0.88	0.07	0.00
168	NA	Fair	Poor	Poor	Marginal	Micropatches	1.20	0.15	0.00
169	NA	Fair	Poor	Good	Important	Moderate	1.14	0.09	0.00
170	NA	Good	Poor	Good	Important	Abundant	1.22	0.11	0.00
171	NA	Poor	Poor	Good	Important	Micropatches	0.00	0.00	0.00
179	NA	None	None	Poor	Marginal	None	0.00	0.00	0.00
174	NA	Fair	Poor	Poor	Marginal	Moderate	0.00	0.00	0.00
172	NA	None	Poor	Fair	Marginal	None	2.30	0.50	0.00
173	NA	Fair	None	Poor	Marginal	Moderate	0.00	0.00	0.00
164	NA	Poor	None	Poor	Marginal	Moderate	0.00	0.00	0.00
163	NA	Poor	None	Poor	Marginal	Micropatches	0.00	0.00	0.00

**Appendix 6.2-1. KSM SHIM Data**

BED SUBSTRATE COMPOSITION (%)								RIPARIAN AND BANK CHARACTERISTICS							
SEGMENT ID	STREAM NAME	ORGANICS	FINES	GRAVEL	COBBLE	BOULDER	BEDROCK	RIPARIAN CLASS	RIPARIAN STAGE	CROWN		BANK STABILITY	BANK MATERIALS	DATE	PHOTO NO.
										CLOSURE					
39	South Teigen	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - undercut	Fines	7/9/2009	76
40	South Teigen	0	30	70	0	0	0	Coniferous forest	young forest	0		Stable - undercut	Fines	7/8/2009	
41	South Teigen	0	30	70	0	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - no undercut	Cobble	7/8/2009	34
42	South Teigen	0	30	70	0	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - no undercut	Cobble	7/8/2009	34
43	South Teigen	0	0	30	70	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - no undercut	Cobble	7/8/2009	
44	South Teigen	0	0	30	70	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - no undercut	Bed_Rock	7/8/2009	
45	South Teigen	0	0	30	70	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - no undercut	Cobble	7/8/2009	
46	South Teigen	0	0	0	30	70	0	Coniferous forest	young forest	1-20%		Stable - undercut	Cobble	7/8/2009	0019
47	South Teigen	0	0	0	70	30	0	Coniferous forest	young forest	1-20%		Stable - undercut	Fines	7/8/2009	18
48	South Teigen	0	0	0	0	0	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Cobble	7/7/2009	100 010
49	South Teigen	0	0	0	0	0	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Cobble	7/7/2009	
50	South Teigen	0	0	0	0	0	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Bed_Rock	7/7/2009	
62	South Teigen	0	0	30	70	0	0	Mixed forest	mature forest	21-40%		Aggrading	Fines	7/10/2009	99
63	South Teigen	0	0	0	70	30	0	Mixed forest	mature forest	1-20%		Eroding	Fines	7/10/2009	100
84	South Teigen	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0		Eroding	Fines	7/17/2009	2-40
133	South Teigen	0	0	0	70	30	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/14/2009	161
136	South Teigen	0	0	0	70	30	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Bed_Rock	7/14/2009	165
137	South Teigen	0	0	0	70	30	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Cobble	7/14/2009	166
138	South Teigen	0	0	0	70	30	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Bed_Rock	7/14/2009	
139	South Teigen	0	0	30	70	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - no undercut	Cobble	7/14/2009	
140	South Teigen	0	0	0	70	30	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/14/2009	170
141	South Teigen	0	0	0	70	30	0	Shrubs	tall shrubs 2-10m	0		Stable - no undercut	Cobble	7/14/2009	171
142	South Teigen	0	0	0	70	30	0	Coniferous forest	mature forest	0		Stable - no undercut	Cobble	7/14/2009	
154	South Teigen	0	0	30	70	0	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Cobble	7/14/2009	168
155	South Teigen	0	0	30	70	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - undercut	Fines	7/9/2009	83
156	South Teigen	0	0	0	0	0	0								
160	South Teigen	0	0	0	0	0	0								
161	South Teigen	0	0	0	70	30	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Cobble	7/14/2009	173
38	NA	0	0	0	0	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - no undercut	Fines	7/7/2009	2
36	NA	0	70	30	0	0	0	Coniferous forest	young forest	1-20%		Stable - undercut	Fines	7/7/2009	7
37	NA	0	70	30	0	0	0	Coniferous forest	young forest	1-20%		Stable - undercut	Fines	7/7/2009	7
83	NA	0	0	30	70	0	0	Mixed forest	mature forest	21-40%		Aggrading	Fines	7/10/2009	
175	NA	0	0	30	70	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - no undercut	Cobble	7/17/2009	2-39
34	NA	0	0	0	0	0	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Fines	7/7/2009	11 12
35	NA	0	0	0	0	0	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Fines	7/7/2009	
31	NA	0	30	70	0	0	0	Coniferous forest	young forest	21-40%		Stable - undercut	Fines	7/8/2009	14
32	NA	0	50	50	0	0	0	Coniferous forest	young forest	21-40%		Stable - undercut	Fines	7/8/2009	15
33	NA	0	0	70	30	0	0	Coniferous forest	young forest	21-40%		Stable - no undercut	Fines	7/8/2009	16 17
29	NA	0	0	100	0	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - no undercut	Fines	7/8/2009	29
30	NA	0	0	70	30	0	0	Coniferous forest	mature forest	21-40%		Stable - no undercut	Cobble	7/8/2009	30 31
28	NA	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/8/2009	32
24	NA	0	30	70	0	0	0	Shrubs	tall shrubs 2-10m	0		Stable - no undercut	Fines	7/8/2009	35
25	NA	0	100	0	0	0	0	Shrubs	tall shrubs 2-10m	0		Stable - no undercut	Fines	7/8/2009	35
26	NA	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/8/2009	43
27	NA	0	0	70	30	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/8/2009	36 to 41
21	NA	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%		Eroding	Cobble	7/8/2009	47
22	NA	0	0	100	0	0	0	Coniferous forest	mature forest	1-20%		Eroding	Gravel	7/8/2009	45
23	NA	0	0	100	0	0	0	Coniferous forest	mature forest	21-40%		Stable - no undercut	Gravel	7/8/2009	
17	NA	0	0	0	70	30	0	Coniferous forest	mature forest	1-20%		Stable - undercut	Boulder	7/8/2009	
18	NA	0	0	70	0	30	0	Coniferous forest	mature forest	1-20%		Stable - undercut	Boulder	7/8/2009	49
19	NA	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%		Stable - undercut	Fines	7/8/2009	48

**Appendix 6.2-1. KSM SHIM Data**

BED SUBSTRATE COMPOSITION (%)								RIPARIAN AND BANK CHARACTERISTICS							
SEGMENT ID	STREAM NAME	ORGANICS	FINES	GRAVEL	COBBLE	BOULDER	BEDROCK	RIPARIAN CLASS	RIPARIAN STAGE	CROWN		BANK STABILITY	BANK MATERIALS	DATE	PHOTO NO.
										CLOSURE					
20	NA	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%		Stable - undercut	Fines	7/8/2009	48
157	NA	0	100	0	100	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - undercut	Fines	7/8/2009	
16	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - undercut	Fines	7/9/2009	60
15	NA	0	70	30	0	0	0	Coniferous forest	young forest	1-20%		Stable - no undercut	Fines	7/9/2009	62
12	NA	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%		Eroding	Cobble	7/9/2009	64
13	NA	0	0	70	30	0	0	Coniferous forest	mature forest	1-20%		Aggrading	Fines	7/9/2009	66
14	NA	0	70	30	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/9/2009	67
51	NA	0	100	0	0	0	0	Natural wetland	low shrubs <2m	0		Stable - no undercut	Fines	7/9/2009	none
8	NA	0	0	0	70	30	0	Coniferous forest	mature forest	1-20%		Stable - undercut	Cobble	7/9/2009	74
9	NA	0	0	70	30	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/9/2009	72
10	NA	0	0	100	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/9/2009	71
11	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0		Aggrading	Fines	7/9/2009	70
2	NA	0	70	30	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/9/2009	
3	NA	0	70	30	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/9/2009	79
4	NA	0	30	70	0	0	0	Coniferous forest	mature forest	0		Stable - no undercut	Fines	7/9/2009	78
5	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - no undercut	Fines	7/9/2009	77
1	NA	0	70	0	30	0	0	Coniferous forest	mature forest	21-40%		Stable - no undercut	Fines	7/9/2009	
158	NA	0	70	30	0	0	0	Coniferous forest	mature forest	21-40%		Stable - no undercut	Fines	7/9/2009	82
6	NA	0	0	30	70	0	0	Coniferous forest	mature forest	0		Stable - no undercut	Fines	7/9/2009	85
7	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - no undercut	Fines	7/9/2009	84
52	NA	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/10/2009	88
53	NA	0	0	70	30	0	0	Coniferous forest	mature forest	1-20%		Stable - undercut	Fines	7/10/2009	
54	NA	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%		Stable - undercut	Gravel	7/10/2009	87
55	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	0		Aggrading	Gravel	7/10/2009	86
56	NA	0	0	70	30	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/10/2009	90
57	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	0		Aggrading	Gravel	7/10/2009	92
58	NA	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%		Stable - undercut	Fines	7/10/2009	95
59	NA	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%		Aggrading	Gravel	7/10/2009	94
60	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - no undercut	Fines	7/10/2009	
61	NA	0	0	100	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/10/2009	98
159	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - no undercut	Fines	7/10/2009	97
82	NA	0	0	0	70	30	0	Mixed forest	mature forest	1-20%		Eroding	Fines	7/10/2009	
176	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - no undercut	Gravel	7/17/2009	2-35
177	NA	0	0	30	70	0	0	Mixed Forest	young forest	0		Stable - no undercut	Gravel		2-38
178	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0		Stable - undercut	Fines	7/17/2009	2-33
64	North Treaty	0	0	0	70	30	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Bed_Rock	7/11/2009	105
69	North Treaty	0	30	70	0	0	0	Shrubs	tall shrubs 2-10m	0		Stable - undercut	Fines	7/11/2009	
70	North Treaty	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/11/2009	
71	North Treaty	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/11/2009	
72	North Treaty	0	70	30	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/11/2009	119
73	North Treaty	0	30	70	0	0	0	Shrubs	tall shrubs 2-10m	1-20%		Stable - no undercut	Fines	7/11/2009	
79	North Treaty	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/11/2009	124
81	North Treaty	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Fines	7/11/2009	127
144	North Treaty	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/15/2009	202
145	North Treaty	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%		Stable - no undercut	Cobble	7/15/2009	
146	North Treaty	0	0	70	30	0	0	Shrubs	tall shrubs 2-10m	0		Stable - no undercut	Gravel	7/15/2009	205
148	North Treaty	0	0	70	30	0	0	Shrubs	tall shrubs 2-10m	0		Stable - no undercut	Gravel	7/15/2009	
149	North Treaty	0	0	70	30	0	0	Mixed forest	tall shrubs 2-10m	0		Stable - no undercut	Gravel	7/15/2009	207
150	North Treaty	0	0	0	70	30	0	Mixed forest	mature forest	0		Stable - no undercut	Gravel	7/15/2009	
151	North Treaty	0	0	70	30	30	0	Mixed forest	mature forest	0		Stable - undercut	Gravel	7/15/2009	208
65	NA	0	30	70	0	0	0	Shrubs	tall shrubs 2-10m	0		Stable - no undercut	Fines	7/11/2009	109
66	NA	0	70	30	0	0	0	Shrubs	tall shrubs 2-10m	0		Stable - no undercut	Fines	7/11/2009	110

**Appendix 6.2-1. KSM SHIM Data**

SEGMENT ID	STREAM NAME	BED SUBSTRATE COMPOSITION (%)						RIPARIAN AND BANK CHARACTERISTICS						
		ORGANICS	FINES	GRAVEL	COBBLE	BOULDER	BEDROCK	RIPARIAN CLASS	RIPARIAN STAGE	CROWN CLOSURE	BANK STABILITY	BANK MATERIALS	DATE	PHOTO NO.
67	NA	0	70	30	0	0	0	Shrubs	tall shrubs 2-10m	0	Stable - undercut	Fines	7/11/2009	111
68	NA	0	30	70	0	0	0	Shrubs	tall shrubs 2-10m	0	Stable - undercut	Fines	7/11/2009	
75	NA	0	70	30	0	0	0	Shrubs	tall shrubs 2-10m	1-20%	Stable - no undercut	Fines	7/11/2009	120
76	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - no undercut	Fines	7/11/2009	121
77	NA	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%	Stable - no undercut	Fines	7/11/2009	122
78	NA	0	30	70	0	0	0	Coniferous forest	mature forest	21-40%	Stable - no undercut	Fines	7/11/2009	123
74	NA	0	70	30	0	0	0	Coniferous forest	mature forest	1-20%	Stable - no undercut	Fines	7/11/2009	125
80	NA	0	70	30	0	0	0	Coniferous forest	young forest	1-20%	Stable - no undercut	Fines	7/11/2009	126
85	NA	0	30	70	0	0	0	Shrubs	tall shrubs 2-10m	0	Stable - undercut	Fines	7/12/2009	
86	NA	0	30	70	0	0	0	Coniferous forest	young forest	1-20%	Stable - undercut	Fines	7/12/2009	
87	NA	0	30	70	0	0	0	Coniferous forest	young forest	1-20%	Stable - undercut	Fines	7/12/2009	
92	NA	0	30	70	0	0	0	Coniferous forest	young forest	1-20%	Stable - undercut	Fines	7/12/2009	
93	NA	0	30	70	0	0	0	Coniferous forest	young forest	1-20%	Stable - undercut	Fines	7/12/2009	138
94	NA	0	70	30	0	0	0	Coniferous forest	young forest	1-20%	Stable - undercut	Fines	7/12/2009	
95	NA	0	70	30	0	0	0	Coniferous forest	young forest	1-20%	Stable - undercut	Fines	7/12/2009	137
96	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - no undercut	Fines	7/11/2009	128
107	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - undercut	Fines	7/12/2009	
108	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - undercut	Fines	7/12/2009	133
109	NA	0	30	70	0	0	0	Mixed forest	mature forest	21-40%	Stable - no undercut	Fines	7/12/2009	132
110	NA	0	30	70	0	0	0	Mixed forest	mature forest	21-40%	Stable - no undercut	Fines	7/12/2009	131
111	NA	0	0	30	70	0	0	Mixed forest	mature forest	21-40%	Eroding	Cobble	7/12/2009	
112	NA	0	0	30	70	0	0	Mixed forest	mature forest	1-20%	Eroding	Cobble	7/12/2009	130
97	NA	0	70	30	0	0	0	Coniferous forest	mature forest	1-20%	Stable - no undercut	Fines	7/12/2009	134
98	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/12/2009	135
100	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/12/2009	
101	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/12/2009	
99	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/12/2009	
103	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/12/2009	
104	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/12/2009	
102	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/12/2009	136
105	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/12/2009	
106	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/12/2009	
90	NA	0	100	0	0	0	0	Coniferous forest	tall shrubs 2-10m	21-40%	Stable - undercut	Fines	7/12/2009	139
91	NA	0	100	0	0	0	0	Coniferous forest	tall shrubs 2-10m	21-40%	Stable - undercut	Fines	7/12/2009	
88	NA	0	70	30	0	0	0	Coniferous forest	mature forest	21-40%	Stable - no undercut	Fines	7/12/2009	140
89	NA	0	70	30	0	0	0	Coniferous forest	mature forest	21-40%	Stable - no undercut	Fines	7/12/2009	
114	NA	0	100	0	0	0	0	Coniferous forest	mature forest	1-20%	Stable - no undercut	Fines	7/13/2009	142
115	NA	0	70	30	0	0	0	Coniferous forest	mature forest	21-40%	Stable - undercut	Fines	7/13/2009	141
116	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - no undercut	Fines	7/13/2009	143
117	NA	0	30	70	0	0	0	Mixed forest	young forest	21-40%	Stable - no undercut	Fines	7/13/2009	
118	NA	0	30	70	0	0	0	Mixed forest	young forest	21-40%	Stable - no undercut	Fines	7/13/2009	144
119	NA	0	30	70	0	0	0	Coniferous forest	young forest	21-40%	Stable - no undercut	Fines	7/13/2009	145
120	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - no undercut	Fines	7/13/2009	
121	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - no undercut	Fines	7/13/2009	
122	NA	0	70	30	0	0	0	Natural wetland	low shrubs <2m	0	Stable - no undercut	Fines	7/13/2009	
123	NA	0	70	30	0	0	0	Coniferous forest	young forest	0	Stable - no undercut	Fines	7/13/2009	
124	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/13/2009	none
127	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - undercut	Fines	7/13/2009	146
128	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - undercut	Fines	7/13/2009	
126	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - no undercut	Fines	7/13/2009	156
125	NA	0	30	70	0	0	0	Coniferous forest	young forest	1-20%	Stable - undercut	Fines	7/13/2009	157
129	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - undercut	Fines	7/13/2009	

**Appendix 6.2-1. KSM SHIM Data**

SEGMENT ID	STREAM NAME	BED SUBSTRATE COMPOSITION (%)						RIPARIAN AND BANK CHARACTERISTICS						
		ORGANICS	FINES	GRAVEL	COBBLE	BOULDER	BEDROCK	RIPARIAN CLASS	RIPARIAN STAGE	CROWN CLOSURE	BANK STABILITY	BANK MATERIALS	DATE	PHOTO NO.
130	NA	0	0	100	0	0	0	Shrubs	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/13/2009	
162	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - undercut	Fines	7/13/2009	159
113	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/13/2009	
131	NA	0	0	0	0	0	0							
132	NA	0	0	0	0	0	0							
134	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - undercut	Fines	7/14/2009	162
135	NA	0	30	70	0	0	0	Coniferous forest	mature forest	1-20%	Stable - no undercut	Fines	7/14/2009	164
143	NA	0	0	0	70	30	0	Shrubs	tall shrubs 2-10m	0	Stable - no undercut	Cobble	7/14/2009	172
147	NA	0	30	70	0	0	0	Shrubs	tall shrubs 2-10m	0	Stable - no undercut	Gravel	7/15/2009	206
152	NA	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%	Stable - no undercut	Fines	7/14/2009	
153	NA	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%	Stable - no undercut	Fines	7/14/2009	163
165	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - undercut	Fines	7/17/2009	2-28
166	NA	0	30	70	0	0	0	Coniferous forest	young forest	1-20%	Stable - no undercut	Fines	7/17/2009	2-31
167	NA	0	30	70	0	0	0	Coniferous forest	young forest	1-20%	Stable - no undercut	Fines	7/17/2009	
168	NA	0	0	100	0	0	0	Coniferous forest	young forest	1-20%	Stable - no undercut	Fines	7/17/2009	
169	NA	0	0	70	30	0	0	Coniferous forest	young forest	1-20%	Stable - no undercut	Fines	7/17/2009	
170	NA	0	30	70	0	0	0	Coniferous forest	young forest	1-20%	Stable - no undercut	Fines	7/17/2009	2-30
171	NA	0	0	30	70	0	0	Coniferous forest	mature forest	1-20%	Stable - no undercut	Fines	7/17/2009	2-29
179	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/17/2009	2-34
174	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Gravel	7/17/2009	none
172	NA	0	100	0	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - undercut	Fines	7/17/2009	2-41
173	NA	0	30	70	0	0	0	Natural wetland	tall shrubs 2-10m	0	Stable - no undercut	Fines	7/17/2009	2-42
164	NA	0	70	30	0	0	0	Natural wetland	tall shrubs 2-10m	1-20%	Stable - undercut	Fines	7/17/2009	2-43
163	NA	0	0	30	70	0	0	Coniferous forest	mature forest	21-40%	Stable - no undercut	Fines	7/17/2009	2-44



## **Appendix 6.2-2**

Detailed Fish Habitat Assessment of Streams in South Teigen  
and North Treaty Watersheds

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Site #	Site Name	Date	Site Distance (m)	Habitat Unit Composition (%)				Habitat Number	Habitat Type
						Riffle	Cascade	Pool	Glide		
South Teigen	1001	1		9-Aug-09	100	60	40			1	R
South Teigen	1001	1		9-Aug-09	100	60	40			2	C
South Teigen	1001	2		9-Aug-09	100	60		20	20	1	G
South Teigen	1001	2		9-Aug-09	100	60		20	20	2	R
South Teigen	1001	2		9-Aug-09	100	60		20	20	3	P
South Teigen	1001	3		9-Aug-09	100	60	10	30		1	R
South Teigen	1001	3		9-Aug-09	100	60	10	30		2	P
South Teigen	1001	3		9-Aug-09	100	60	10	30		3	C
South Teigen	1001	4		9-Aug-09	100	10		40	50	1	G
South Teigen	1001	4		9-Aug-09	100	10		40	50	2	P
South Teigen	1001	4		9-Aug-09	100	10		40	50	3	R
South Teigen	1001	5		9-Aug-09	100	60		10	30	1	R
South Teigen	1001	5		9-Aug-09	100	60		10	30	2	P
South Teigen	1001	5		9-Aug-09	100	60		10	30	3	G
South Teigen	1001	6		9-Aug-09	100	90	10			1	R
South Teigen	1001	6		9-Aug-09	100	90	10			2	C
South Teigen	1001	7	ILP1001R8S1	10-Jul-09	100			100		1	C
South Teigen	1001	8	ILP1001F1	17-Jul-09	100	100				1	R
South Teigen	1002	1		7-Jul-09	50		100			1	C
South Teigen	1003	1		7-Jul-09	50		100			1	C
South Teigen	1004	1	ILP1004F1	17-Jul-09	50	100				1	R
South Teigen	1005	1	ILP1005R1S1	7-Jul-09	50	40	50	10		1	P
South Teigen	1005	1	ILP1005R1S1	7-Jul-09	50	40	50	10		2	C
South Teigen	1005	1	ILP1005R1S1	7-Jul-09	50	40	50	10		3	R
South Teigen	1005	1	ILP1005R1S1	7-Jul-09	50	40	50	10		4	R
South Teigen	1006	1	ILP1006R1S1	8-Jul-09	50	75	20	5		1	R
South Teigen	1006	1	ILP1006R1S1	8-Jul-09	50	75	20	5		2	P
South Teigen	1006	1	ILP1006R1S1	8-Jul-09	50	75	20	5		3	C
South Teigen	1006	2	ILP1006R2S3	8-Jul-09	50		90	10		1	C
South Teigen	1006	2	ILP1006R2S3	8-Jul-09	50		90	10		2	P
South Teigen	1006	2	ILP1006R2S3	8-Jul-09	50		90	10		3	P
South Teigen	1007	1	ILP1007R1S1	7-Jul-09	50	30	70			1	C
South Teigen	1007	1	ILP1007R1S1	7-Jul-09	50	30	70			2	R
South Teigen	1008	1	ILP1008R1S1	8-Jul-09	50	25	70	5		1	C
South Teigen	1008	1	ILP1008R1S1	8-Jul-09	50	25	70	5		2	P
South Teigen	1008	1	ILP1008R1S1	8-Jul-09	50	25	70	5		3	R
South Teigen	1009	1	ILP1009R1S1	8-Jul-09	50	100				1	R
South Teigen	1010	1	ILP1010R2S1	8-Jul-09	50	10	70	20		1	C
South Teigen	1010	1	ILP1010R2S1	8-Jul-09	50	10	70	20		2	P
South Teigen	1010	1	ILP1010R2S1	8-Jul-09	50	10	70	20		3	P
South Teigen	1010	1	ILP1010R2S1	8-Jul-09	50	10	70	20		4	R
South Teigen	1010	2	ILP1010R1S1	8-Jul-09	50	10	40	50		1	P
South Teigen	1010	2	ILP1010R1S1	8-Jul-09	50	10	40	50		2	P
South Teigen	1010	2	ILP1010R1S1	8-Jul-09	50	10	40	50		3	P
South Teigen	1010	2	ILP1010R1S1	8-Jul-09	50	10	40	50		5	C
South Teigen	1010	2	ILP1010R1S1	8-Jul-09	50	10	40	50		4	R
South Teigen	1011	1	ILP1011R1S1	8-Jul-09	50	50	30	20		1	P
South Teigen	1011	1	ILP1011R1S1	8-Jul-09	50	50	30	20		2	P

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Site #	Site Name	Date	Site Distance (m)	Habitat Unit Composition (%)				Habitat Number	Habitat Type
						Riffle	Cascade	Pool	Glide		
South Teigen	1011	1	ILP1011R1S1	8-Jul-09	50	50	30	20		3	C
South Teigen	1011	1	ILP1011R1S1	8-Jul-09	50	50	30	20		4	R
South Teigen	1012	1	ILP1012R1S1	8-Jul-09	50	10	60	30		1	R
South Teigen	1012	1	ILP1012R1S1	8-Jul-09	50	10	60	30		2	P
South Teigen	1012	1	ILP1012R1S1	8-Jul-09	50	10	60	30		3	C
South Teigen	1013	1	ILP1013R1S1	8-Jul-09	50				100	1	G
South Teigen	1014	1	ILP1014R1S1	9-Jul-09	50				100	1	G
South Teigen	1015	1	ILP1015R1S1	7-Jul-09	50	100				1	R
South Teigen	1016	1	ILP1016R1S1	9-Jul-09	50	40	50	10		1	R
South Teigen	1016	1	ILP1016R1S1	9-Jul-09	50	40	50	10		2	C
South Teigen	1016	1	ILP1016R1S1	9-Jul-09	50	40	50	10		3	P
South Teigen	1019	1	ILP1019R1S1	7-Jul-09	50	100				1	R
South Teigen	1019	2	ILP1019R2S1	9-Jul-09	50	50	30	20		1	R
South Teigen	1019	2	ILP1019R2S1	9-Jul-09	50	50	30	20		2	C
South Teigen	1019	2	ILP1019R2S1	9-Jul-09	50	50	30	20		3	P
South Teigen	1021	1	ILP1021R1S1	9-Jul-09	50	100				1	R
South Teigen	1022	1	ILP1022R1S1	9-Jul-09	50		90	10		1	C
South Teigen	1022	1	ILP1022R1S1	9-Jul-09	50		90	10		2	P
South Teigen	1023	1	ILP1023R2S1	9-Jul-09	50	20	70	10		1	C
South Teigen	1023	1	ILP1023R2S1	9-Jul-09	50	20	70	10		2	R
South Teigen	1023	1	ILP1023R2S1	9-Jul-09	50	20	70	10		3	P
South Teigen	1023	2	ILP1023R1S1	9-Jul-09	50	100				1	R
South Teigen	1025	1	ILP1025R1S1	10-Jul-09	50	45	50	5		1	R
South Teigen	1025	1	ILP1025R1S1	10-Jul-09	50	45	50	5		2	C
South Teigen	1025	1	ILP1025R1S1	10-Jul-09	50	45	50	5		3	P
South Teigen	1026	1	ILP1026R1S1	9-Jul-09	50	60	40			1	R
South Teigen	1026	1	ILP1026R1S1	9-Jul-09	50	60	40			2	C
South Teigen	1027	1	ILP1027R1S1	9-Jul-09	50	70	30			1	R
South Teigen	1027	1	ILP1027R1S1	9-Jul-09	50	70	30			2	C
South Teigen	1028	1	ILP1028R1S1	10-Jul-09	50	100				1	R
South Teigen	1029	1	ILP1029R1S1	10-Jul-09	50	100				1	R
South Teigen	1030	1	1030F1	17-Jul-09	50	95		5		1	R
South Teigen	1030	1	1030F1	17-Jul-09	50	95		5		2	P
South Teigen	1030	1	ILP1030F2	17-Jul-09	50	50		50		1	G
South Teigen	1030	1	ILP1030F2	17-Jul-09	50	50		50		2	R
South Teigen	1030	1	ILP1030R1S1	11-Jul-09	50	100				1	R
South Teigen	1030	1	ILP1030F3	17-Jul-09	50	100				1	R
North Treaty	1050	1	1050R1S7	15-Jul-09	100		60	40		1	C
North Treaty	1050	1	1050R1S7	15-Jul-09	100		60	40		2	P
North Treaty	1050	2	1050R1S3	15-Jul-09	100		80	20		1	C
North Treaty	1050	2	1050R1S3	15-Jul-09	100		80	20		2	R
North Treaty	1050	2	ILP1050R2S2	11-Jul-09	100	60		40		1	P
North Treaty	1050	2	ILP1050R2S2	11-Jul-09	100	60		40		2	R
North Treaty	1050	3	1050R1S1	15-Jul-09	100	50	40	10		1	R
North Treaty	1050	3	1050R1S1	15-Jul-09	100	50	40	10		2	C
North Treaty	1050	3	1050R1S1	15-Jul-09	100	50	40	10		3	P
North Treaty	1050	4	ILP1050R2S1	11-Jul-09	100	50	25	25		1	R
North Treaty	1050	4	ILP1050R2S1	11-Jul-09	100	50	25	25		2	P

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Site #	Site Name	Date	Site Distance (m)	Habitat Unit Composition (%)				Habitat Number	Habitat Type
						Riffle	Cascade	Pool	Glide		
North Treaty	1050	4	ILP1050R2S1	11-Jul-09	100	50	25	25		3	C
North Treaty	1050	5	ILP1050R2S6	11-Jul-09	100	70		30		1	R
North Treaty	1050	5	ILP1050R2S6	11-Jul-09	100	70		30		2	P
North Treaty	1050	6	ILP105R2S4	11-Jul-09	100	60		40		1	R
North Treaty	1050	6	ILP105R2S4	11-Jul-09	100	60		40		2	P
North Treaty	1051	1	ILP1051R1S1	11-Jul-09	50	100				1	R
North Treaty	1051	2	ILP1051R2S1	11-Jul-09	50	80	20			1	R
North Treaty	1051	2	ILP1051R2S1	11-Jul-09	50	80	20			2	C
North Treaty	1052	1	ILP1052R1S1	11-Jul-09	50	75	25			1	R
North Treaty	1052	1	ILP1052R1S1	11-Jul-09	50	75	25			2	C
North Treaty	1053	1	ILP1053R1S1	11-Jul-09	50	100				1	R
North Treaty	1054	1	ILP1054R1S1	11-Jul-09	50	100				1	R
North Treaty	1055	1	ILP1055R1S1	11-Jul-09	50	100				1	R
North Treaty	1056	1	ILP1056R1S1	11-Jul-09	50		100			1	C
North Treaty	1057	1	ILP1057R1S1	11-Jul-09	50	100				1	R
North Treaty	1059	1	ILP1059R1S3	11-Jul-09	50	100				1	R
North Treaty	1059	2	ILP1059R1S4	12-Jul-09	50	100				1	R
North Treaty	1060	1	ILP1060R2S3	12-Jul-04	50		100			1	C
North Treaty	1061	1	ILP1061R1S1	12-Jul-09	50	100				1	R
North Treaty	1062	1	ILP1062R1S1	12-Jul-09	50	60		40		1	R
North Treaty	1062	1	ILP1062R1S1	12-Jul-09	50	60		40		2	P
North Treaty	1063	1	1063R1S1	12-Jul-09	50	100				1	R
North Treaty	1064	1	1064R1S1	12-Jul-09	50	100				1	R
North Treaty	1065	1	1065R1S1	12-Jul-09	50				100	1	G
North Treaty	1066	1	1066R1S1	12-Jul-09	50				100	1	G
North Treaty	1067	1	ILP1067R1S1	12-Jul-09	50	100				1	R
North Treaty	1068	1	1068R1S1	12-Jul-09	50	100				1	R
North Treaty	1069	1	1069R1S1	12-Jul-09	50	100				1	R
North Treaty	1070	1	1070R1S1	12-Jul-09	50	100				1	R
North Treaty	1071	1	1071R1S1	12-Jul-09	50	100				1	R
North Treaty	1072	1	1072R1S1	12-Jul-09	50	100				1	R
North Treaty	1081	1	1081R1S1	13-Jul-09	50	100				1	R
North Treaty	1082	1	1082R1S7	13-Jul-09	50	100				1	R
North Treaty	1082	1	ILP1082R1S1	13-Jul-09	50	90		10		1	R
North Treaty	1082	1	ILP1082R1S1	13-Jul-09	50	90		10		2	P
North Treaty	1082	2	ILP1082R1S5	13-Jul-09	50	100				1	R
North Treaty	1083	1	1083R1S1	13-Jul-09	50	100				1	R
North Treaty	1084	1	1084R1S1	13-Jul-09	50	100				1	R
North Treaty	1085	1	1085R1S1	13-Jul-09	50	100				1	R
North Treaty	1086	1	ILP1086R1S1	13-Jul-09	50	90		10		1	R
North Treaty	1086	1	ILP1086R1S1	13-Jul-09	50	90		10		2	P
North Treaty	1087	1	1087R1S1	13-Jul-09	50	100				1	R
North Treaty	1090	1	1090R1S1	14-Jul-09	50	100				1	R
North Treaty	1091	1	1091R1S1	14-Jul-09	50	100				1	R
North Treaty	1101	1	1101R1S1	15-Jul-09	50	100				1	R
South Teigen	1150	1	1150F3	17-Jul-09	50	95		5		1	R
South Teigen	1150	1	1150F3	17-Jul-09	50	95		5		2	P
South Teigen	1150	2	ILP1150F2	17-Jul-09	50		90	10		1	C

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Site #	Site Name	Date	Site Distance (m)	Habitat Unit Composition (%)				Habitat Number	Habitat Type
						Riffle	Cascade	Pool	Glide		
South Teigen	1150	2	ILP1150F2	17-Jul-09	50		90	10		2	P
South Teigen	1150	3	ILP1150F1	17-Jul-09	50	30			70	1	R
South Teigen	1150	3	ILP1150F1	17-Jul-09	50	30			70	2	G
South Teigen	1151	1	1151F1	17-Jul-09	50				100	1	G
South Teigen	1152	1	ILP1152F1	17-Jul-09	50	100				1	R
South Teigen	1205	1	ILP1205F1	17-Jul-09	50	100				1	R
South Teigen	1206	1	ILP1206F1	17-Jul-09	50	100				1	R
South Teigen	1207	1	1207F1	12-Jul-09	50		100			1	C

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Wetted Depth (m)			Bankfull Depth (m)		Wetted Width (m)	Bankfull Width (m)
		Wetted 1	Wetted 2	Wetted 3	Bankfull 1			
South Teigen	1001	0.34	0.48	0.52	0.68	6.96	7	
South Teigen	1001	0.29	0.4	0.28	0.84	8	8	
South Teigen	1001	0.33	0.53	0.77	1.03	5.45	7	
South Teigen	1001	0.42	0.55	0.45	0.88	5	5	
South Teigen	1001	0.95	1.35	1.5	2	7	7	
South Teigen	1001	0.31	0.28	0.42	0.55	6	6	
South Teigen	1001	0.44	0.68	0.73	1	7	8.61	
South Teigen	1001	0.38	0.5	0.45	0.79	4.83	5	
South Teigen	1001	0.27	0.37	0.45	0.61	7.33	8	
South Teigen	1001	0.26	0.91	1.22	1.4	6.5	7	
South Teigen	1001	0.19	0.09	0.24	0.38	9	9	
South Teigen	1001	0.43	0.61	0.66	0.77	4	4	
South Teigen	1001	0.49	0.81	0.71	0.99	5	5	
South Teigen	1001	0.28	0.52	0.67	0.9	5	5.61	
South Teigen	1001	0.25	0.28	0.27	0.42	4.69	4.79	
South Teigen	1001	0.4	0.29	0.2	0.67	4.52	5.32	
South Teigen	1001	0.5	0.5	0.5	0.7	7.8	8	
South Teigen	1001	0.3	0.3	0.3	0.3	6	6	
South Teigen	1002	0.18			0.3	1.38	1.38	
South Teigen	1003	0.16			0.3	1.1	1.1	
South Teigen	1004	0.1	0.1	0.1	0.3	2.6	2.73	
South Teigen	1005	0.18	0.22	0.26	0.4	2.1	2.1	
South Teigen	1005	0.15	0.1	0.16	0.17	2	2	
South Teigen	1005	0.15	0.15	0.14	0.2	1.23	1.61	
South Teigen	1005	0.15	0.12	0.14	0.2	1.23	1.61	
South Teigen	1006	0.06	0.19	0.09	0.21	0.7	1.06	
South Teigen	1006	0.09	0.21	0.15	0.25	0.81	0.9	
South Teigen	1006	0.1	0.09	0.11	0.15	0.7	0.8	
South Teigen	1006	0.04	0.13	0.28	0.14	1.1	1.2	
South Teigen	1006	0.23	0.18	0.12	0.24	1.46	1.5	
South Teigen	1006	0.15	0.2	0.25		1.21	1.3	
South Teigen	1007	0.14	0.15	0.14	0.21	0.86	0.9	
South Teigen	1007	0.09	0.06	0.05	0.15	1.65	1.7	
South Teigen	1008	0.08	0.1	0.14	0.3	0.83	1.2	
South Teigen	1008	0.13	0.12	0.15	0.26	1.21	1.44	
South Teigen	1008	0.05	0.1	0.1	0.3	0.9	1.1	
South Teigen	1009	0.05	0.05	0.04	0.24	0.46	0.5	
South Teigen	1010	0.41	0.24	0.31	0.45	6	6	
South Teigen	1010	0.22	0.37	0.1	0.4	7	7	
South Teigen	1010	0.6	0.6	0.7	0.71	5.9	5.9	
South Teigen	1010	0.3	0.4	0.2	0.46	6	6	
South Teigen	1010	0.6	0.3	0.5	0.7	6	6	
South Teigen	1010	0.5	0.6	0.5	0.7	6	6	
South Teigen	1010	0.8	0.3	0.5	0.67	5.5	5.5	
South Teigen	1010	0.15	0.2	0.2	0.3	7	7	
South Teigen	1010	0.1	0.12	0.13	0.25	6.5	6.5	
South Teigen	1011	0.75	0.8	0.6	0.8	1.7	1.75	
South Teigen	1011	0.5	0.45	0.5	0.6	1.1	1.15	



**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Wetted Depth (m)			Bankfull Depth (m)		Wetted Width (m)	Bankfull Width (m)
		Wetted 1	Wetted 2	Wetted 3	Bankfull 1	Bankfull 2		
South Teigen	1011	0.25	0.24	0.2	0.25		2.3	2.3
South Teigen	1011	0.2	0.2	0.15	0.25		2.5	2.5
South Teigen	1012	0.18	0.17	0.15	0.25		3.5	3.5
South Teigen	1012	0.4	0.45	0.3	0.5		3.6	3.7
South Teigen	1012	0.2	0.3	0.2	0.3		3.1	3.6
South Teigen	1013	0.2	0.3				1.1	1.1
South Teigen	1014	0.15	0.14	0.1	0.17		0.63	0.65
South Teigen	1015	0.07	0.09	0.07	0.7		0.7	0.9
South Teigen	1016	0.2	0.24	0.23	0.27		2.77	2.9
South Teigen	1016	0.12	0.25	0.3	0.35		2.5	2.6
South Teigen	1016	0.45	0.24	0.3	0.6		2.8	2.8
South Teigen	1019	0.1	0.1	0.15	0.2		2	2
South Teigen	1019	0.09	0.27	0.12	0.4		4.1	4.2
South Teigen	1019	0.24	0.25	0.2	0.3		3.9	3.9
South Teigen	1019	0.6	0.8	0.7	0.9		5	5
South Teigen	1021	0.15	0.1				1.23	1.25
South Teigen	1022	0.04	0.05	0.05	0.1		1.4	1.91
South Teigen	1022	0.12	0.12	0.13	0.15		1.45	1.95
South Teigen	1023	0.16	0.12	0.15	0.2		2.38	2.38
South Teigen	1023	0.13	0.13	0.1	0.15		1.35	1.35
South Teigen	1023	0.35	0.3	0.32	0.39		2.3	2.3
South Teigen	1023	0.1	0.12	0.1	0.15		1.5	1.5
South Teigen	1025	0.12	0.1	1.15	0.19		1.53	1.54
South Teigen	1025	0.25	0.25	0.27	0.44		1.3	1.32
South Teigen	1025	0.44	0.31	0.2	0.77		1.38	1.55
South Teigen	1026	0.13	0.12	0.14	0.17		1.85	1.85
South Teigen	1026	0.2	0.17	0.18	0.25		1.9	1.9
South Teigen	1027	0.12	0.12	0.12	0.18		0.83	0.85
South Teigen	1027	0.15	0.15	0.15	0.2		0.45	0.45
South Teigen	1028	0.14	0.14	0.15	0.2		3.2	3.2
South Teigen	1029	0.3	0.25	0.31	0.4		3	3
South Teigen	1030	0.2	0.25	0.15	0.4		2.71	2.71
South Teigen	1030	0.8	0.9	0.9	1.1		3.5	3.5
South Teigen	1030	0.16	0.25	0.2	0.4		4	4.3
South Teigen	1030						3.7	5
South Teigen	1030	0.3	0.35	0.3	0.37		1.6	1.6
South Teigen	1030	0.17	0.17	0.17	0.35		2.75	2.78
North Treaty	1050	0.25	0.3	0.25	0.4		5	5
North Treaty	1050						6	6
North Treaty	1050	0.5	0.35	0.4	0.8		5.5	5.8
North Treaty	1050	0.38	0.2	0.35	0.5		4.2	4.7
North Treaty	1050	0.55	0.6	0.3	0.8		4.7	4.7
North Treaty	1050	0.25	0.2	0.3	0.3		6	6
North Treaty	1050	0.35	0.35	0.35	0.7		6.5	6.5
North Treaty	1050	0.4	0.4	0.4	0.4		6.5	6.8
North Treaty	1050	0.5	0.5	0.4	0.8		6.8	6.8
North Treaty	1050	0.3	0.3	0.47	0.67		7	9
North Treaty	1050	1.2	0.8	0.9	1.4		7	8

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Wetted Depth (m)			Bankfull Depth (m)		Wetted Width (m)	Bankfull Width (m)
		Wetted 1	Wetted 2	Wetted 3	Bankfull 1	Bankfull 2		
North Treaty	1050	0.4	0.4	0.5	0.7	5	5	
North Treaty	1050	0.2	0.25	0.2	0.3	4.3	4.7	
North Treaty	1050	0.3	0.35	0.4	0.5	4.5	4.5	
North Treaty	1050	0.15	0.3	0.15	0.35	6.2	6.2	
North Treaty	1050	0.5	0.5	0.6	0.8	6.5	6.5	
North Treaty	1051	0.1	0.15	0.12	0.15	1.47	1.47	
North Treaty	1051	0.23	0.2	0.25	0.3	2.3	2.3	
North Treaty	1051	0.25	0.25	0.25	0.3	1.5	1.5	
North Treaty	1052	0.15	0.14	0.11	0.2	1.44	1.44	
North Treaty	1052	0.15	0.18	0.14	0.22	1.4	1.4	
North Treaty	1053	0.05	0.04	0.05	0.2	1.8	1.8	
North Treaty	1054	0.2	0.22	0.2	0.27	1.37	1.37	
North Treaty	1055	0.1	0.1	0.12	0.158	1.65	1.65	
North Treaty	1056	0.1	0.05			1.46	1.46	
North Treaty	1057	0.05	0.1	0.05	0.2	0.4	0.4	
North Treaty	1059	0.4	0.4	0.4	0.5	2.3	2.4	
North Treaty	1059	0.08	0.08	0.08	0.15	1.4	1.4	
North Treaty	1060	0.2	0.15	0.15	0.6	3.3	3.8	
North Treaty	1061	0.04	0.04	0.04	0.06	0.73	0.73	
North Treaty	1062	0.17	0.14	0.15	0.4	1.44	1.44	
North Treaty	1062	0.65	0.17	0.5	0.9	1.4	1.4	
North Treaty	1063							
North Treaty	1064							
North Treaty	1065							
North Treaty	1066							
North Treaty	1067	0.1	0.1	0.1	0.2	1.7	1.75	
North Treaty	1068							
North Treaty	1069							
North Treaty	1070							
North Treaty	1071							
North Treaty	1072							
North Treaty	1081						1.67	
North Treaty	1082						1.82	
North Treaty	1082	0.3	0.15	0.2	0.5	2.2	2.2	
North Treaty	1082	0.3	0.3	0.3	0.5	2.2	2.2	
North Treaty	1082	0.13	0.13	0.13	0.25	2.1	2.1	
North Treaty	1083						0.83	
North Treaty	1084						1.3	
North Treaty	1085						0.65	
North Treaty	1086	0.3	0.2	0.3	0.4	1.8	1.81	
North Treaty	1086	0.3	0.2	0.3	0.5	1.9	1.9	
North Treaty	1087							
North Treaty	1090	0.12	0.12	0.12	0.15	0.5	0.5	
North Treaty	1091							
North Treaty	1101	0.02	0.03	0.05	0.05	0.5	0.5	
South Teigen	1150	0.08	0.1	0.15	0.18	1.56	1.46	
South Teigen	1150	0.4	0.4	0.3	0.5	1.5	1.5	
South Teigen	1150	0.14	0.14	0.14	0.25	1.45	1.45	

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Wetted Depth (m)			Bankfull Depth (m)		Wetted Width (m)	Bankfull Width (m)
		Wetted 1	Wetted 2	Wetted 3	Bankfull 1			
South Teigen	1150	0.3	0.35	0.45	0.45	1.33	1.33	
South Teigen	1150	0.14	0.14	0.14	0.25	1.3	1.3	
South Teigen	1150	0.15	0.15	0.15	0.25	1.4	1.4	
South Teigen	1151	0.15	0.1	0.15	0.17	1.03	1.23	
South Teigen	1152	0.05	0.05	0.05	0.15	1.22	1.22	
South Teigen	1205	0.05	0.05	0.05	0.1	0.5	0.5	
South Teigen	1206	0.05	0.06	0.07	0.3	1.39	1.52	
South Teigen	1207	0.08				1.25	1.25	

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Bed Material Composition (%)				Bedrock	Spawning Gravel			Instream Cover Composition (%)				LWD	
		Sand	Gravel	Cobble	Boulder		Type	Amount	Pool	Boulder	ream	Vegeta	ang		Vege
South Teigen	1001		5	90	5		N				5		5		
South Teigen	1001		10	80	10		N				10		5		
South Teigen	1001	30	70				N						5	5	
South Teigen	1001	10	70	20			N						5	5	
South Teigen	1001	40	60				R	L	100				5	5	
South Teigen	1001		30	65	5		N				5		10	5	
South Teigen	1001		30	60	10		N						5	5	5
South Teigen	1001		30	70			N						10		
South Teigen	1001	20	80				R	L					5	10	
South Teigen	1001	60	40				N		50				5	5	
South Teigen	1001	20	80				R	L					5	5	
South Teigen	1001		30	50	20		N						5	5	
South Teigen	1001	10	60	20	10		N			80	10		5	5	
South Teigen	1001	30	70				N						5	5	
South Teigen	1001	10	90				R	H					20	5	
South Teigen	1001	90	10				N						5	5	
South Teigen	1001			80	20		N			10	20				
South Teigen	1001	100					N						100		
South Teigen	1002		30	70									70		5
South Teigen	1003	70	30										70		5
South Teigen	1004		30	70									80		
South Teigen	1005	90	10				R	L	100						
South Teigen	1005		70	30			R	L					5		20
South Teigen	1005	60	40				R	L					5		5
South Teigen	1005	80	15	5			R	L					5		5
South Teigen	1006	30	70				R	H						5	
South Teigen	1006	10	90				R	H	100					5	
South Teigen	1006	30	70				R	H						5	
South Teigen	1006		30	70			R	L							5
South Teigen	1006	30	70				R	H	100						
South Teigen	1006	30	70				R	H	90						10
South Teigen	1007	10	90				R	H	5				60		
South Teigen	1007		100				R	L					10		
South Teigen	1008	10	85	5			R	L	10				5		5
South Teigen	1008		50	50			R	N	70						20
South Teigen	1008	10	85	5			R	L					5		5
South Teigen	1009	20	80				R	H					80	20	
South Teigen	1010		50	30	20		R	H			10				5
South Teigen	1010	10	50	40			R	H	50	5					25
South Teigen	1010	10	50	40			R	H	70	5			5		20
South Teigen	1010		60	40			R	H					5		10
South Teigen	1010		30	70			R	H	50						10
South Teigen	1010		30	70			R	H	70				10		
South Teigen	1010		40	60			R	H	60	5			5		10
South Teigen	1010		25	70	5		R	H							10
South Teigen	1010		40	60			R	H			20				10
South Teigen	1011		100				R	H	90				5		20
South Teigen	1011		100				R	H	80						10

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Bed Material Composition (%)				Spawning Gravel		Instream Cover Composition (%)					LWD			
		Sand	Gravel	Cobble	Boulder	Bedrock	Type	Amount	Pool	Boulder	ream	Vegeta		ang	Vege	ndercut
South Teigen	1011		95	5			R	H						5		5
South Teigen	1011		95	5			R	H						5		20
South Teigen	1012	10	90				R	H						5		20
South Teigen	1012	10	80	10			R	H	90							20
South Teigen	1012		40	40	20		R	H			20					10
South Teigen	1013				100		N				50					
South Teigen	1014	100					N					25	90			
South Teigen	1015	75	25				R	L						25		
South Teigen	1016		80	20			R	H						5		5
South Teigen	1016		80	20			R	H						5		10
South Teigen	1016		90	10			R	H	70							5
South Teigen	1019	40	60				R	H						100		
South Teigen	1019		100				R							20		
South Teigen	1019		100				R							20	5	20
South Teigen	1019		100				R		80							40
South Teigen	1021		100				R	H						90		
South Teigen	1022		30	70			R	L	10					20		20
South Teigen	1022	20	50	30			R	L	70			10				25
South Teigen	1023		25	75			R	L			5			5		10
South Teigen	1023		75	25			R	L					5			
South Teigen	1023	25	75				R	L	50							20
South Teigen	1023	10	90				R	H						40		20
South Teigen	1025		100				R	H						5		10
South Teigen	1025		100													10
South Teigen	1025	25	75				R	H								10
South Teigen	1026		75	25			R	H								10
South Teigen	1026		60	40			R	L						5		20
South Teigen	1027		100											5		
South Teigen	1027		100											5		
South Teigen	1028	50	50				N							100		
South Teigen	1029	60	40				R	L						100		
South Teigen	1030	10	90				R	L						50		
South Teigen	1030	30	70				R	L	90					40		
South Teigen	1030	30	70				R	H						10		
South Teigen	1030	10	90				R	H						10		
South Teigen	1030	20	80				R	H						50		
South Teigen	1030		40	60			R	H						20		
North Treaty	1050	5	50	25	20		R	L	5	25				10		10
North Treaty	1050	10	60	30			R	L	100					10		10
North Treaty	1050		10	60	30		R	L			30			70		10
North Treaty	1050		45	50	5		R	H						40		5
North Treaty	1050	10	90				R	H	75					80		10
North Treaty	1050	10	90				R	H						70		5
North Treaty	1050		40	60			R	L						10	5	
North Treaty	1050		20	60	20		R	L			20			40		10
North Treaty	1050		40	60			R	L	90					20		20
North Treaty	1050		40	60			R	H						10		
North Treaty	1050		30	65	5				75	5						10

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Bed Material Composition (%)				Spawning Gravel		Instream Cover Composition (%)				LWD	
		Sand	Gravel	Cobble	Boulder	Bedrock	Type	Amount	Pool	Boulder	ream Vegeta		angng Vege
North Treaty	1050		10	70	20		R	L		10		5	
North Treaty	1050	45	55				R	L				5	10
North Treaty	1050	30	70						100				20
North Treaty	1050	5	95				R	H				40	10
North Treaty	1050	10	90						40			60	10
North Treaty	1051	10	90				R	H				100	
North Treaty	1051	60	40				R	L				100	10
North Treaty	1051	70	30				R	L				50	40
North Treaty	1052	90	10									70	40
North Treaty	1052	60	40									70	25
North Treaty	1053	20	80									100	
North Treaty	1054	90	10				R	L			60		10
North Treaty	1055	20	80				R	H				10	10
North Treaty	1056	75	25				R	L				40	10
North Treaty	1057	80	20									5	
North Treaty	1059	100					N					80	
North Treaty	1059	30	70				R	L				5	5
North Treaty	1060		10	90			N			5			
North Treaty	1061	80	20				R	L				5	5
North Treaty	1062	20	80				R	H				80	5
North Treaty	1062	20	80						60			80	5
North Treaty	1063	100										100	
North Treaty	1064	60	40									100	
North Treaty	1065	100										50	
North Treaty	1066	100										100	
North Treaty	1067	100					N					40	
North Treaty	1068	100										100	
North Treaty	1069	100										100	
North Treaty	1070	100										10	50
North Treaty	1071	100										10	50
North Treaty	1072	90	10									10	50
North Treaty	1081	100										100	
North Treaty	1082	100										100	
North Treaty	1082	40	60				R	L				50	5
North Treaty	1082	50	50				R	L				50	5
North Treaty	1082	20	80				R	L				70	10
North Treaty	1083	100										100	
North Treaty	1084	90	10									100	
North Treaty	1085	10	90									50	
North Treaty	1086	30	70				R	H				10	20
North Treaty	1086	40	60				R	L				10	10
North Treaty	1087	30	70									100	
North Treaty	1090	10	90				R	H				80	5
North Treaty	1091	10	90									80	
North Treaty	1101	10	90				R	L				10	
South Teigen	1150	30	70				R	L				30	10
South Teigen	1150	60	40				R	L	80			50	10
South Teigen	1150		20	70	10		R	L		10		40	10



**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Bed Material Composition (%)					Spawning Gravel		Instream Cover Composition (%)					LWD	
		Sand	Gravel	Cobble	Boulder	Bedrock	Type	Amount	Pool	Boulder	ream	Vegeta	ang		Vege
South Teigen	1150	40	40	20			N	L	60				10	5	10
South Teigen	1150	80	20				R	L					80	5	
South Teigen	1150	80	20										80	5	
South Teigen	1151	100					N					30	95		
South Teigen	1152	10	90				R	H					90		
South Teigen	1205	30	70				R	H					100		
South Teigen	1206	40	60				R	L				80			
South Teigen	1207		20	80									60		

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Type	Offchannel Habitat		Functional LWD Presence			Pool	
			Access	Length (m)	10-20	20-50	>50	Type	Resid.
South Teigen	1001	N					1		
South Teigen	1001	N							
South Teigen	1001	N							
South Teigen	1001	N							
South Teigen	1001	N						S	1.4
South Teigen	1001	N							
South Teigen	1001	N			1	1		S	0.53
South Teigen	1001	N							
South Teigen	1001	N						S	1.1
South Teigen	1001	N							
South Teigen	1001	N						S	0.75
South Teigen	1001	N							
South Teigen	1001	N			1				
South Teigen	1001	N							
South Teigen	1001	N							
South Teigen	1001	N							
South Teigen	1002	N							
South Teigen	1003	N							
South Teigen	1004	N							
South Teigen	1005	N						D	0.13
South Teigen	1005	N							
South Teigen	1005	N			1				
South Teigen	1005	N			1				
South Teigen	1006	N							
South Teigen	1006	N						S	0.04
South Teigen	1006	N							
South Teigen	1006	N			1	1			
South Teigen	1006	N						D	0.11
South Teigen	1006	N			1			D	0.13
South Teigen	1007	N							
South Teigen	1007	N							
South Teigen	1008	N			1	1			
South Teigen	1008	N			1			D	0.08
South Teigen	1008	N			1	1			
South Teigen	1009	N							
South Teigen	1010	N					1		
South Teigen	1010	N					1	D	0.31
South Teigen	1010	N			1	1		D	0.4
South Teigen	1010	N							
South Teigen	1010	N				1		D	0.5
South Teigen	1010	N						D	0.3
South Teigen	1010	N				1		D	
South Teigen	1010	N			1	1			
South Teigen	1010	N				1	1		
South Teigen	1011	N			1			D	0.5
South Teigen	1011	N			1			D	0.35

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Type	Offchannel Habitat		Functional LWD Presence			Pool	
			Access	Length (m)	10-20	20-50	>50	Type	Resid.
South Teigen	1011	N			1				
South Teigen	1011	N			1	1			
South Teigen	1012	N			1	1	1		
South Teigen	1012	N				1	1	D	0.3
South Teigen	1012	N			1	1	1		
South Teigen	1013	N							
South Teigen	1014	N							
South Teigen	1015	N							
South Teigen	1016	N			1				
South Teigen	1016	N			1	1			
South Teigen	1016	N			1			D	0.3
South Teigen	1019	N							
South Teigen	1019	N							
South Teigen	1019	N				1	1		
South Teigen	1019	N			1	1	1	D	0.65
South Teigen	1021	N							
South Teigen	1022	N			1	1			
South Teigen	1022	N			1			D	0.1
South Teigen	1023	N				1			
South Teigen	1023	N							
South Teigen	1023	N			1			D	0.2
South Teigen	1023	N			1				
South Teigen	1025	N			1				
South Teigen	1025	N			1			D	0.27
South Teigen	1026	N				1			
South Teigen	1026	N			1	1			
South Teigen	1027	N							
South Teigen	1027	N							
South Teigen	1028	N							
South Teigen	1029	N							
South Teigen	1030	N							
South Teigen	1030	N						S	0.7
South Teigen	1030	N							
South Teigen	1030	N							
South Teigen	1030	Y	11	5					
South Teigen	1030	N							
South Teigen	1030	N							
North Treaty	1050	N			1	1			
North Treaty	1050	N				1		S	0.5
North Treaty	1050	N			1	1			
North Treaty	1050	N				1		S	0.3
North Treaty	1050	N			1	1			
North Treaty	1050	N			1				
North Treaty	1050	N			1	1			
North Treaty	1050	N			1	1		S	0.3
North Treaty	1050	N			1				
North Treaty	1050	N			1	1		D	0.9

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Offchannel Habitat			Functional LWD Presence			Pool	
		Type	Access	Length (m)	10-20	20-50	>50	Type	Resid.
North Treaty	1050				1				
North Treaty	1050	N			1	1			
North Treaty	1050	N			1			D	0.25
North Treaty	1050	N			1				
North Treaty	1050	N				1		S	0.35
North Treaty	1051	N							
North Treaty	1051	N				1			
North Treaty	1051	N				1	1		
North Treaty	1052	N			1				
North Treaty	1052	N			1				
North Treaty	1053	N							
North Treaty	1054	N			1				
North Treaty	1055	N			1	1			
North Treaty	1056	N			1				
North Treaty	1057	N							
North Treaty	1059	N							
North Treaty	1059	N			1				
North Treaty	1060	N							
North Treaty	1061	N				1			
North Treaty	1062	N							
North Treaty	1062	N						S	0.5
North Treaty	1063								
North Treaty	1064								
North Treaty	1065								
North Treaty	1066								
North Treaty	1067	N							
North Treaty	1068								
North Treaty	1069								
North Treaty	1070								
North Treaty	1071								
North Treaty	1072								
North Treaty	1081								
North Treaty	1082								
North Treaty	1082	N			1				
North Treaty	1082	N			1			S	0.1
North Treaty	1082				1				
North Treaty	1083								
North Treaty	1084								
North Treaty	1085								
North Treaty	1086	N			1	1			
North Treaty	1086	N			1			S	0.2
North Treaty	1087								
North Treaty	1090	N							
North Treaty	1091								
North Treaty	1101	N							
South Teigen	1150	N			1	1			
South Teigen	1150	N				1		S	0.31
South Teigen	1150	N			1				

**Appendix 6.2-2. Detailed Fish Habitat Assessment of Streams in South Teigen and North Treaty Watersheds**

Watershed	ILP	Type	Offchannel Habitat		Functional LWD Presence			Pool	
			Access	Length (m)	10-20	20-50	>50	Type	Resid.
South Teigen	1150	N			1			S	0.15, 0.35
South Teigen	1150	N							
South Teigen	1150	N							
South Teigen	1151	N							
South Teigen	1152	N							
South Teigen	1205	N							
South Teigen	1206	N							
South Teigen	1207								

## **Appendix 6.2-3**

South Teigen and North Treaty Watersheds Dolly Varden  
Spawning Survey Data



**Appendix 6.2-3. South Teigen and North Treaty Watersheds Dolly Varden Spawning Survey Data**

ILP	Segment		Survey Crew	Watershed	Survey	Survey End	Start UTM		End UTM	
	No.	Survey Date (m/d//y)			Start Time	Time	Easting	Northing	Easting	Northing
1008	1	September 18. 2009	SM, TH	-	9:36	9:48	441695	6278396	441573	6278429
1012	1	September 18. 2009	SM, TH	-	11:15	11:45	-	-	441448	6277841
1012	2	September 18. 2009	SM, TH	-	11:15	11:45	-	-	441448	6277841
1012	3	September 18. 2009	SM, TH	-	11:15	11:45	-	-	441448	6277841
1012	4	September 18. 2009	SM, TH	-	11:15	11:45	-	-	441448	6277841
1018	1	September 18. 2009	SM, TH	Teigen	14:03	14:08	441949	6277567	441959	6277558
1011	1	September 18. 2009	SM, TH	Teigen	10:50	11:10	441560	6278110	441462	6278008
1011	2	September 18. 2009	SM, TH	Teigen	10:50	11:10	441560	6278110	441462	6278008
1011	3	September 18. 2009	SM, TH	Teigen	10:50	11:10	441560	6278110	441462	6278008
1014	1	September 18. 2009	SM, TH	Teigen	12:27	12:41	441792	62779012	441778	6277862
1088	1	September 18. 2009	SM, TH	Teigen	14:18	14:25	441955	6277660	441962	6277633
1009	1	September 18. 2009	SM, TH	-	10:12	10:25	441621	6278211	441549	6278172
1207	1	September 18. 2009	SM, TH	Teigen	14:30	14:38	442038	6277605	442042	6277603
1007	1	September 18. 2009	SM, TH	Teigen	8:55	9:18	441524	6278421	441697	6278481
1007	2	September 18. 2009	SM, TH	Teigen	8:55	9:18	441524	6278421	441697	6278481
1206	1	September 18. 2009	SM, TH	Teigen	15:10	15:22	442093	6277460	442099	6277466
1017	1	September 18. 2009	SM, TH	-	13:50	14:00	441931	6277529	441925	6277546
1015	1	September 18. 2009	SM, TH	-	13:32	13:38	441808	6277683	441792	6277654
1016	1	September 18. 2009	SM, TH	Teigen	12:35	13:20	441609	6277379	441832	6277693
1016	2	September 18. 2009	SM, TH	Teigen	12:35	13:20	441609	6277379	441832	6277693
1001	1	September 18. 2009	MS/VR	South Teigen, tailings area	9:00	9:30	442713	6276340	442627	6276438
1022	1	September 18. 2009	MS/VR	South Teigen, tributary	9:35	10:15	442633	6276443	442422	6276118
1001	1	September 18. 2009	MS/VR	South Teigen	10:40	10:50	442629	6276443	442589	6276530
1021	1	September 18. 2009	MS/VR	South Teigen, tributary	10:55	11:15	442592	6276524	442505	6276409
1150	1	September 18. 2009	MS/VR	Tributary of ILP 1030	16:00	16:30	443194	6276323	443186	6276491
1030	1	September 18. 2009	MS/VR	South Teigen Fork	15:00	16:00	442587	6276670	443160	6276254
?	1	September 18. 2009	MS/VR	Unknown tributary of South Teigen	12:30	13:30	442582	6276604	442008	6276224
1072	1	September 19. 2009	SM, TH	Treaty	8:42	10:40	444470	6275956	-	No signal
1072	2	September 19. 2009	SM, TH	Treaty	8:42	10:40	444470	6275956	-	No signal
1072	3	September 19. 2009	SM, TH	Treaty	8:42	10:40	444470	6275956	-	No signal
1059	1	September 19. 2009	SM, TH	-	10:45	12:50	444740	6276112	445031	6275468
1059	2	September 19. 2009	SM, TH	-	10:45	12:50	444740	6276112	445031	6275468
1010	2	September 17. 2009	SM, TH	-	15:20	16:52	441209	6278297	-	-
1010	1	September 17. 2009	SM, TH	-	15:20	16:52	441209	6278297	-	-
1010	1	September 17. 2009	SM, TH	-	15:20	16:52	441209	6278297	-	-
1062	1	September 19. 2009	SM, TH	Treaty	13:20	13:48	-	-	-	-
1068	-	September 19. 2009	SM, TH	Treaty	13:48	14:25	-	-	-	-
1067	-	September 19. 2009	SM, TH	Treaty	13:48	14:25	-	-	-	-
1066	-	September 19. 2009	SM, TH	Treaty	13:48	14:25	-	-	-	-
1065	-	September 19. 2009	SM, TH	Treaty	13:48	14:25	-	-	-	-
1064	-	September 19. 2009	SM, TH	Treaty	13:48	14:25	-	-	-	-
1063	-	September 19. 2009	SM, TH	Treaty	13:48	14:25	-	-	-	-
1050	-	September 19. 2009	SM, TH	North Treaty Creek	14:00	14:20	445070	6275460	445180	6275325
1060	-	September 19. 2009	MS/VR	North Treaty Creek	14:00	14:15	445172	6275317	445191	6275419
1082	5	September 19. 2009	MS/VR	North Treaty Creek	8:35	13:00	444120	6275928	-	-
1082	9	September 19. 2009	MS/VR	North Treaty Creek	8:35	13:00	444120	6275928	-	-
1083	-	September 19. 2009	MS/VR	North Treaty Creek	-	-	-	-	-	-

Water level: H = High, M = Medium, L = Low

**Appendix 6.2-3. South Teigen and North Treaty Watersheds Dolly Varden Spawning Survey Data**

ILP	Segment		Water		Water Clarity	Water Level	Weather
	No.	Start Location	End Location	Temperature (oC)			
1008	1	U/S end	Mainstem	6	Clear	M	Overcast
1012	1	Branch/Fork	Cascade	6	Clear	M	Rain
1012	2	Branch/Fork	Cascade	6	Clear	M	Rain
1012	3	Branch/Fork	Cascade	6	Clear	M	Rain
1012	4	Branch/Fork	Cascade	6	Clear	M	Rain
1018	1	Mainstem	End of channel	8	Clear	M	Overcast, light rain
1011	1	Mainstem	Debris jam	6	Clear	M	Light rain
1011	2	Mainstem	Debris jam	6	Clear	M	Light rain
1011	3	Mainstem	Debris jam	6	Clear	M	Light rain
1014	1	Mainstem	FSB	8	Clear	M	Cloudy, light rain
1088	1	Pond	Mainstem	0	Moderate	M	Overcast
1009	1	U/S end	Mainstem	8	Clear	M	Light rain
1207	1	Mainstem	End of habitat, steep occasional FSB	8	Clear	M	Overcast, misty
1007	1	Mainstem	U/S end	5	Clear	M	Cloudy, misty
1007	2	Mainstem	U/S end	5	Clear	M	Cloudy, misty
1206	1	Mainstem	Cascade	7	Clear	M	Rain
1017	1	FSB	Mainstem	9	Clear	M	Overcast
1015	1	Mainstem	FSB	7	Clear	M	Overcast
1016	1	Cascade	Mainstem	6.5	Clear	M	Overcast, light rain
1016	2	Cascade	Mainstem	6.5	Clear	M	Overcast, light rain
1001	1	Pad 4	Confluence (ILP 1022)	4	Moderate	M	Overcast, periods of broken clouds
1022	1	Confluence with S. Teigen	U/S	4	Clear	M	Overcast, light rain
1001	1	Confluence with ILP 1022	Confluence with ILP 1021	4	Moderate	M	Overcast, light rain
1021	1	Confluence with S. Teigen	U/S in tributary	7	Clear	M	Overcast, light rain
1150	1	Confluence with ILP 1030	U/S	7	Clear	M	Overcast, rain
1030	1	Confluence with ILP 1001	Pad 7	6	Turbid	M	Overcast, light rain
?	1	Confluence with S. Teigen	U/S of step pools	7	Clear	M	Overcast, light rain
1072	1	FSB	Fork with 1059	5.5	Clear	M	Cloudy
1072	2	FSB	Fork with 1059	5.5	Clear	M	Cloudy
1072	3	FSB	Fork with 1059	5.5	Clear	M	Cloudy
1059	1	Debris jam	Confluence with 1082	6.7	Clear	M	Overcast
1059	2	Debris jam	Confluence with 1082	6.7	Clear	M	Overcast
1010	2	Falls	Mainstem	6	Clear	M	Overcast
1010	1	Falls	Mainstem	6	Clear	M	Overcast
1010	1	Falls	Mainstem	6	Clear	M	Overcast
1062	1	-	-	7	Moderate	-	-
1068	-	-	-	-	-	-	-
1067	-	-	-	-	Moderate/Clear	-	-
1066	-	-	-	-	Moderate/Clear	-	-
1065	-	-	-	-	Moderate/Clear	-	-
1064	-	-	-	-	Moderate/Clear	-	-
1063	-	-	-	-	Moderate/Clear	-	-
1050	-	1082 Confluence	D/S of ILP 1060	6	Clear	M	Overcast, light rain
1060	-	Confluence with ILP 1050		7	-	-	-
1082	5	U/S from wetland (forest)	Confluence with ILP 1050	6	Clear	M	Calm, broken cloud
1082	9	U/S from wetland (forest)	Confluence with ILP 1050	6	Clear	M	Calm, broken cloud
1083	-	-	-	-	-	-	-

Water level: H = High, M = Medium, L = Low

**Appendix 6.2-3. South Teigen and North Treaty Watersheds Dolly Varden Spawning Survey Data**

ILP	Segment	Spawning Fish		Number of Fish	UTM		Redd Observed		
	No.	Observed (Y/N)	Species		Easting	Northing	(Y/N)	Species	Species
1008	1	N	NFO	0	-	-	N	-	-
1012	1	N	NFO	0	-	-	N	-	-
1012	2	Y	DV	1	441500	6277985	N	-	-
1012	3	N	NFO	0	-	-	N	-	-
1012	4	N	NFO	0	-	-	N	-	-
1018	1	N	NFO	0	-	-	N	-	-
1011	1	N	NFO	0	-	-	N	-	-
1011	2	N	NFO	0	-	-	N	-	-
1011	3	N	NFO	0	-	-	N	-	-
1014	1	N	NFO	0	-	-	N	-	-
1088	1	N	NFO	0	-	-	N	-	-
1009	1	N	NFO	0	-	-	N	-	-
1207	1	N	NFO	0	-	-	N	-	-
1007	1	N	NFO	0	-	-	N	-	-
1007	2	N	NFO	0	-	-	N	-	-
1206	1	N	NFO	0	-	-	N	-	-
1017	1	N	NFO	0	-	-	N	-	-
1015	1	N	NFO	0	-	-	N	-	-
1016	1	N	NFO	0	-	-	N	-	-
1016	2	N	NFO	0	-	-	N	-	-
1001	1	N	NFO	0	-	-	N	-	-
1022	1	N	NFO	0	-	-	N	-	-
1001	1	N	NFO	0	-	-	N	-	-
1021	1	N	NFO	0	-	-	N	-	-
1150	1	N	NFO	0	-	-	N	-	-
1030	1	Y	DV	5	442880	6276349	N	-	-
?	1	N	DV	0	-	-	N	-	-
1072	1	Y	DV	2	444676	6275895	N	-	-
1072	2	Y	DV	1	444711	6275871	N	-	-
1072	3	Y	DV	1	-	-	Y	DV	-
1059	1	Y	DV	1	444794	6275789	N	-	-
1059	2	Y	DV	5	-	-	Y	DV	-
1010	2	N	NFO	0	-	-	N	-	-
1010	1	Y	DV	1	441435	6278337	N	-	-
1010	1	Y	DV	1	441461	6278343	N	-	-
1062	1	N	NFO	0	-	-	N	-	-
1068	-	N	NFO	0	-	-	-	-	-
1067	-	N	NFO	0	-	-	N	-	-
1066	-	N	NFO	0	-	-	N	-	-
1065	-	N	NFO	0	-	-	N	-	-
1064	-	N	NFO	0	-	-	N	-	-
1063	-	N	NFO	0	-	-	N	-	-
1050	-	N	NFO	0	-	-	N	-	-
1060	-	N	NFO	0	-	-	N	-	-
1082	5	Y	DV	1	444374	6275884	N	-	-
1082	9	Y	DV	9	444868	6275524	N	-	-
1083	-	-	-	-	-	-	-	-	-

Water level: H = High, M = Medium, L = Low

**Appendix 6.2-3. South Teigen and North Treaty Watersheds Dolly Varden Spawning Survey Data**

ILP	Segment		UTM		Comments
	No.	Number of Fish	Easting	Northing	
1008	1	0	-	-	85 m accuracy for Survey End UTM
1012	1	0	-	-	
1012	2	0	-	-	
1012	3	0	-	-	
1012	4	0	-	-	
1018	1	0	-	-	
1011	1	0	-	-	
1011	2	0	-	-	
1011	3	0	-	-	
1014	1	0	-	-	
1088	1	0	-	-	
1009	1	0	-	-	
1207	1	0	-	-	Lots of plant material in stream, falling over and decomposing for fall.
1007	1	0	-	-	
1007	2	0	-	-	
1206	1	0	-	-	
1017	1	0	-	-	
1015	1	0	-	-	
1016	1	0	-	-	106 m accuracy for Survey Start UTM
1016	2	0	-	-	106 m accuracy for Survey Start UTM
1001	1	0	-	-	No spawners observed nor fish, but visibility restricted to stream margins. Abundant pea gravel associated with pools = possible spawning (location 442653, 6276412). No redds observed.
1022	1	0	-	-	No fish observed. Good visibility but abundant cover and places to hide in small pools. Abundant spawning gravel. Good habitat upstream of survey termination. No redds observed.
1001	1	0	-	-	Possible spawning location - complex flow pool and abundant gravel (442598, 6276467, PIC 550U). No fish or redds observed.
1021	1	0	-	-	No signs of spawning. No fish or redds observed. Abundant spawning potential (nice pools and riffles with pea gravel) in lower reaches.
1150	1	0	-	-	No spawners or redds observed. Mature Dolly Varden observed near mouth in ILP1030
1030	1	0	-	-	Mature fish observed in shallow water, possible associated with small tributary ILP 1150 (homing) no fish observed upstream of ILP1150. Impression is its still early, spawning migration just starting?
?	1	0	-	-	Observed fry and juvenile DV in pools. No barriers observed. No adults or redds observed. Abundant gravel Deposits PIC #564
1072	1	0	-	-	~150-200M, caught one ripe male
1072	2	0	-	-	
1072	3	0	-	-	no signal, ~30m de from last, ~20m US from fork. One redd, gravel clean in one spot by fish.
1059	1	0	-	-	At fork
1059	2	0	-	-	No signal, ~40m DS from fork
1010	2	0	-	-	
1010	1	0	-	-	Pic 225
1010	1	0	-	-	PIC 227-238
1062	1	0	-	-	Whole segment
1068	-	-	-	-	Dry
1067	-	0	-	-	
1066	-	0	-	-	
1065	-	0	-	-	Walked around whole area and followed all side channels. No fish were observed.
1064	-	0	-	-	
1063	-	0	-	-	
1050	-	0	-	-	No fish or redds observed.
1060	-	0	-	-	No evidence of spawning fish. Abundant fry rearing
1082	5	0	-	-	Start Location - PIC 568U and 569D. Upstream of section probably resident fish. Upstream No redds, potential spawning location judging from gravel in sections
1082	9	0	-	-	Aggregation of fish observed in plunge pool at the base of migration restrictions - suggest spawning migration = fish coloured up. See pics 584
1083	-	-	-	-	Low flow - insufficient for spawning or rearing except at confluence with ILP 1082. Seasonal migration barrier in (444275, 6275949) - Pic 571 U

Water level: H = High, M = Medium, L = Low

## **Appendix 6.2-4**

South Teigen, North Treaty, and West Teigen Watersheds  
Dolly Varden Population Density Assessment Data

**Appendix 6.2-4. South Teigen, North Treaty, and West Teigen Watersheds Dolly Varden Population**

System	Reach	Code	Site No.	Date	Time	Area(m <sup>2</sup> )	Pass 1 Catch
North Treaty*	1	1050	1	1/5/2010	16:21	155	10
North Treaty	2	1050	2	1/5/2010	16:22	210	26
North Treaty	3	1050	3	1/5/2010	16:24	112	15
North Treaty*	4	1050	4	1/5/2010	16:27	110	7
North Treaty	5	1050	5	1/5/2010	16:29	25	15
North Treaty	6	1050	6	1/5/2010	16:30	87.5	30
North Treaty*	7	1050	7	1/5/2010	16:31	25	13
North Treaty Trib	1	1059	1	1/5/2010	15:57	50	39
North Treaty Trib	2	1059	2	1/5/2010	15:58	105	25
North Treaty Trib	1	1060	1	1/5/2010	16:00	90	0
North Treaty Trib	1	1062	1	1/5/2010	16:01	50	15
North Treaty Trib	1	1070	1	1/5/2010	16:02	35	0
North Treaty Trib	1	1072	1	1/5/2010	16:09	65	4
North Treaty Trib	3	1082	3	1/5/2010	16:10	100	39
North Treaty Trib	4	1082	4	1/5/2010	16:11	75	25
South Teigen	1	1001	1	1/5/2010	16:37	90	4
South Teigen	2	1001	2	1/5/2010	16:38	303.6	12
South Teigen	3	1001	3	1/5/2010	16:39	270	3
South Teigen	4	1001	4	1/5/2010	16:44	177.5	10
South Teigen	5	1001	5	1/5/2010	16:45	91.8	6
South Teigen	6	1001	6	1/5/2010	16:46	131.1	9
South Teigen	7	1001	7	1/5/2010	16:47	165.75	11
South Teigen	8	1001	8	1/5/2010	16:47	207.5	17
South Teigen	9	1001	9	1/5/2010	16:48	239.2	34
South Teigen	10	1001	10	1/5/2010	16:51	187.5	15
South Teigen	11	1001	11	1/5/2010	16:52	265.5	1
South Teigen Trib	1	1005	1	1/5/2010	15:17	55	13
South Teigen Trib	2	1010	2	1/5/2010	15:30	195	11
South Teigen Trib	1	1011	1	1/5/2010	15:32	55	2
South Teigen Trib	1	1012	1	1/5/2010	15:33	95	15
South Teigen Trib	1	1016	1	1/5/2010	15:35	100	0
South Teigen Trib	2	1016	2	1/5/2010	15:36	50	1
South Teigen Trib	1	1019	1	1/5/2010	15:38	120	0
South Teigen Trib*	1	1022	1	1/5/2010	15:39	55	27
South Teigen Trib	1	1023	1	1/5/2010	15:40	50	47
South Teigen Trib	1	1025	1	1/5/2010	15:41	81	4
South Teigen Trib*	1	1029	1	1/5/2010	15:43	121	2
South Teigen Trib*	1	1030	1	1/5/2010	15:46	65	1
South Teigen Trib*	2	1030	2	1/5/2010	15:55	120	13
South Teigen Trib	2	1030	3	1/5/2010	15:56	100	10
South Teigen Trib	1	1150	1	1/5/2010	16:13	65	5
South Teigen Trib	2	1150	2	1/5/2010	16:13	60	10
West Teigen	1	5000	1	1/5/2010	16:15	250	0
West Teigen	3	5000	3	1/5/2010	16:16	385	53
West Teigen*	2	5001	2	1/5/2010	16:17	410	12

\*indicates was removed from analysis because did not meet equal catchability criteric



**Appendix 6.2-4. South Teigen, North Treaty, and West Teigen Watersheds Dolly Varden Population**

System	Pass 2 Catch	Pass 3 Catch	Pass 4 Catch	EF Effort Pass 1	EF Effort Pass 2
North Treaty*	8	13		680	656
North Treaty	15	15		600	617
North Treaty	12	7		608	802
North Treaty*	8	3		565	418
North Treaty	14	9		708	654
North Treaty	12	8		480	481
North Treaty*	16	6		641	728
North Treaty Trib	14	10		1006	831
North Treaty Trib	6	6		758	731
North Treaty Trib	1	0		500	475
North Treaty Trib	5	1		600	515
North Treaty Trib	0	0		335	414
North Treaty Trib	4	4		823	667
North Treaty Trib	24	15	10	600	515
North Treaty Trib	10	6		1012	663
South Teigen	0	0		406	363
South Teigen	3	1		811	737
South Teigen	1	0		707	566
South Teigen	2	2		853	823
South Teigen	0	0		572	471
South Teigen	2	2		866	764
South Teigen	8	3		786	763
South Teigen	5	1		1024	945
South Teigen	5	2		1363	925
South Teigen	10	4		969	896
South Teigen	1			725	702
South Teigen Trib	11	3		675	678
South Teigen Trib	11	2		697	755
South Teigen Trib	1	3		543	532
South Teigen Trib	11	2		543	560
South Teigen Trib	0	0		594	479
South Teigen Trib	0	0		634	548
South Teigen Trib	1	2	0	456	512
South Teigen Trib*	10	13		454	341
South Teigen Trib	18	13		536	476
South Teigen Trib	1	1		596	566
South Teigen Trib*	3	2		723	538
South Teigen Trib*	2	3		361	310
South Teigen Trib*	5	6		566	575
South Teigen Trib	2	0		491	465
South Teigen Trib	3	1		500	400
South Teigen Trib	8	2		548	574
West Teigen	1	1	0	851	794
West Teigen	0	0		408	411
West Teigen*	15	18		812	748

\*indicates was removed from analysis because did not meet equal catchability criteric

**Appendix 6.2-4. South Teigen, North Treaty, and West Teigen Watersheds Dolly Varden Population**

System	EF Effort Pass 3	EF Effort Pass 4	ML Exact	ML Bayes	PCap	VarCap	Species
North Treaty*	650		No	Yes	0.5	0.08333334	Dolly Varden
North Treaty	590		Yes	No	0	0	Dolly Varden
North Treaty	758		Yes	No	0	0	Dolly Varden
North Treaty*	401		No	Yes	0.5	0.08333334	Dolly Varden
North Treaty	715		Yes	No	0	0	Dolly Varden
North Treaty	495		Yes	No	0	0	Dolly Varden
North Treaty*	669		No	Yes	0.5	0.08333334	Dolly Varden
North Treaty Trib	775		Yes	No	0	0	Dolly Varden
North Treaty Trib	672		Yes	No	0	0	Dolly Varden
North Treaty Trib	438		No	Yes	0.5	0.08333334	Dolly Varden
North Treaty Trib	506		Yes	No	0	0	Dolly Varden
North Treaty Trib	401		Yes	No	0	0	Dolly Varden
North Treaty Trib	615		No	Yes	0.5	0.08333334	Dolly Varden
North Treaty Trib	501	535	Yes	No	0	0	Dolly Varden
North Treaty Trib	617		Yes	No	0	0	Dolly Varden
South Teigen	409		Yes	No	0	0	Dolly Varden
South Teigen	795		Yes	No	0	0	Dolly Varden
South Teigen	541		Yes	No	0	0	Dolly Varden
South Teigen	796		Yes	No	0	0	Dolly Varden
South Teigen	453		Yes	No	0	0	Dolly Varden
South Teigen	813		Yes	No	0	0	Dolly Varden
South Teigen	774		Yes	No	0	0	Dolly Varden
South Teigen	875		Yes	No	0	0	Dolly Varden
South Teigen	715		Yes	No	0	0	Dolly Varden
South Teigen	907		Yes	No	0	0	Dolly Varden
South Teigen			Yes	No	0	0	Dolly Varden
South Teigen Trib	685		Yes	No	0	0	Dolly Varden
South Teigen Trib	659		Yes	No	0	0	Dolly Varden
South Teigen Trib	545		No	Yes	0.5	0.08333334	Dolly Varden
South Teigen Trib	550		Yes	No	0	0	Dolly Varden
South Teigen Trib	463		Yes	No	0	0	Dolly Varden
South Teigen Trib	588		Yes	No	0	0	Dolly Varden
South Teigen Trib	548	580	No	Yes	0.5	0.08333334	Dolly Varden
South Teigen Trib*	346		No	Yes	0.5	0.08333334	Dolly Varden
South Teigen Trib	450		Yes	No	0	0	Dolly Varden
South Teigen Trib	601		Yes	No	0	0	Dolly Varden
South Teigen Trib*	531		No	Yes	0.5	0.08333334	Dolly Varden
South Teigen Trib*	322		No	Yes	0.5	0.08333334	Dolly Varden
South Teigen Trib*	570		No	Yes	0.5	0.08333334	Dolly Varden
South Teigen Trib	496		Yes	No	0	0	Dolly Varden
South Teigen Trib	400		Yes	No	0	0	Dolly Varden
South Teigen Trib	522		Yes	No	0	0	Dolly Varden
West Teigen	752	847	No	Yes	0.5	0.08333334	Dolly Varden
West Teigen	437		Yes	No	0	0	Dolly Varden
West Teigen*	782		No	Yes	0.5	0.08333334	Dolly Varden

\*indicates was removed from analysis because did not meet equal catchability criteric

**Appendix 6.2-4. South Teigen, North Treaty, and West Teigen Watersheds Dolly Varden Population**

System	PopEst	Pop Est Density (fish/100m2)	PopVar	PopSE	PopCV	POPCV
North Treaty*	40	25.80645161	156.610947	12.5144291	0.31286073	CV >0.25
North Treaty	87	41.42857143	663.435242	25.7572365	0.29606017	CV >0.25
North Treaty	46	41.07142857	143.838562	11.9932718	0.26072329	CV >0.25
North Treaty*	20	18.18181818	14.6274338	3.82458282	0.19122913	
North Treaty	63	252	713.990662	26.7206039	0.42413658	CV >0.25
North Treaty	55	62.85714286	19.1420574	4.37516356	0.07954843	
North Treaty*	42	168	60.3473358	7.76835489	0.18496083	
North Treaty Trib	69	138	21.3325386	4.61871624	0.06693792	
North Treaty Trib	39	37.14285714	6.03944016	2.45752716	0.06301352	
North Treaty Trib	1	1.111111111	0.53846157	0.7337994	0.7337994	CV >0.25
North Treaty Trib	21	42	0.49494949	0.70352644	0.03350126	
North Treaty Trib	0	0	0	0	0	
North Treaty Trib	14	21.53846154	24.630352	4.96289778	0.35449269	CV >0.25
North Treaty Trib	102	102	67.5749588	8.2203989	0.08059215	
North Treaty Trib	44	58.66666667	10.5700035	3.25115418	0.07388987	
South Teigen	4	4.444444444	0	0	0	
South Teigen	16	5.270092227	0.31468233	0.56096554	0.03506035	
South Teigen	4	1.481481481	0.04211956	0.2052305	0.05130763	
South Teigen	14	7.887323944	0.66892439	0.81787801	0.05841986	
South Teigen	6	6.535947712	0	0	0	
South Teigen	13	9.916094584	0.76566511	0.87502295	0.06730945	
South Teigen	25	15.08295626	15.315937	3.91355801	0.15654232	
South Teigen	23	11.08433735	0.42006031	0.64812058	0.02817916	
South Teigen	41	17.14046823	0.30003545	0.54775494	0.01335988	
South Teigen	33	17.6	19.6068115	4.42795801	0.13418055	
South Teigen	2	0.753295669	0.99999976	0.99999988	0.49999994	CV >0.25
South Teigen Trib	30	54.54545455	14.4795961	3.80520654	0.12684022	
South Teigen Trib	27	13.84615385	14.5384617	3.81293344	0.14121975	
South Teigen Trib	6	10.90909091	5.05856705	2.24912596	0.37485433	CV >0.25
South Teigen Trib	30	31.57894737	7.041152	2.65351701	0.08845057	
South Teigen Trib	0	0	0	0	0	
South Teigen Trib	1	2	0	0	0	
South Teigen Trib	3	2.5	2.29819584	1.51598012	0.50532669	CV >0.25
South Teigen Trib*	59	107.2727273	62.273941	7.89138412	0.13375227	
South Teigen Trib	87	174	35.6776543	5.9730773	0.06865606	
South Teigen Trib	6	7.407407407	0.44318169	0.66571891	0.11095315	
South Teigen Trib*	8	6.611570248	12.1963358	3.49232531	0.43654066	CV >0.25
South Teigen Trib*	7	10.76923077	22.2376537	4.71568155	0.6736688	CV >0.25
South Teigen Trib*	27	22.5	18.3443851	4.2830348	0.15863092	
South Teigen Trib	12	12	0.04059828	0.20149015	0.01679085	
South Teigen Trib	9	13.84615385	0.89635557	0.94676059	0.10519562	
South Teigen Trib	22	36.66666667	8.73116493	2.95485449	0.13431157	
West Teigen	2	0.8	1.1024828	1.04999185	0.52499592	CV >0.25
West Teigen	53	13.76623377	0	0	0	
West Teigen*	62	15.12195122	368.962891	19.2084064	0.30981299	CV >0.25

\* indicates was removed from analysis because did not meet equal catchability criteric

**Appendix 6.2-4. South Teigen, North Treaty, and West Teigen Watersheds Dolly Varden Population**

System	PopLO	PopUP	CapEst	CapVar	CapSE	CapCV	CapLO	CapUP
North Treaty*	31	64.5282822	0.33695653	0.02527935	0.47185549	0.15899479	0.02532673	0.64858633
North Treaty	56	137.484177	0.28865978	0.01443371	0.41620055	0.12014036	0.05318468	0.52413487
North Treaty	34	69.506813	0.35416666	0.0204425	0.40370053	0.14297727	0.07393121	0.6344021
North Treaty*	18	27.4961815	0.47368422	0.02962055	0.36333534	0.17210622	0.13635603	0.81101239
North Treaty	38	115.372383	0.26206896	0.02268878	0.57476455	0.15062794	0	0.55729973
North Treaty	50	63.5753212	0.53763443	0.00855591	0.17204662	0.09249818	0.35633799	0.7189309
North Treaty*	35	57.225975	0.41666666	0.01745434	0.31707567	0.13211486	0.15772153	0.67561179
North Treaty Trib	63	78.052681	0.54782611	0.00657686	0.14803579	0.08109787	0.38887429	0.70677793
North Treaty Trib	37	43.8167534	0.60655737	0.00943731	0.16015935	0.09714583	0.41615152	0.79696321
North Treaty Trib	1	2.43824673	0.5	0.53846157	1.4675988	0.7337994	0	1.93824685
North Treaty Trib	21	22.378912	0.75	0.01010101	0.13400505	0.10050379	0.55301255	0.94698745
North Treaty Trib	0	0	65535	0	0	0	0	0
North Treaty Trib	12	23.7272797	0.40000001	0.05585114	0.59082115	0.23632845	0	0.86320376
North Treaty Trib	88	118.111984	0.3859649	0.00417928	0.1674954	0.06464735	0.25925609	0.51267368
North Treaty Trib	41	50.372261	0.56944442	0.00955023	0.17161515	0.09772529	0.37790284	0.76098597
South Teigen	4	4	1	0	0	0	1	1
South Teigen	16	17.099493	0.76190478	0.01258729	0.14725345	0.11219312	0.54200625	0.9818033
South Teigen	4	4.40225172	0.80000001	0.04211957	0.25653815	0.20523052	0.3977482	1.20225179
South Teigen	14	15.6030407	0.69999999	0.01858123	0.19473284	0.13631299	0.43282652	0.96717346
South Teigen	6	6	1	0	0	0	1	1
South Teigen	13	14.715045	0.68421054	0.02126848	0.21314661	0.14583716	0.3983697	0.97005135
South Teigen	22	32.6705742	0.48888889	0.02242091	0.30627844	0.14973612	0.19540609	0.7823717
South Teigen	23	24.2703171	0.76666665	0.00857266	0.1207678	0.09258865	0.58519292	0.94814038
South Teigen	41	42.0736008	0.81999999	0.00370414	0.07422153	0.06086165	0.70071113	0.93928885
South Teigen	29	41.6787987	0.49152541	0.01682413	0.26388839	0.12970784	0.23729804	0.74575281
South Teigen	2	3.9599998	0.66666669	0.33333328	0.86602527	0.5773502	0	1.79827309
South Teigen Trib	27	37.4582062	0.50943398	0.01734981	0.2585589	0.1317187	0.25126535	0.76760262
South Teigen Trib	24	34.4733505	0.5	0.01994302	0.28243953	0.14121976	0.22320926	0.77679074
South Teigen Trib	6	10.408287	0.46153846	0.10323606	0.69615799	0.3213037	0	1.09129369
South Teigen Trib	28	35.2008934	0.5714286	0.01390845	0.20638467	0.1179341	0.34027776	0.80257946
South Teigen Trib	0	0	65535	0	0	0	0	0
South Teigen Trib	1	1	1	0	0	0	1	1
South Teigen Trib	3	5.97132111	0.375	0.14708453	1.02270937	0.38351601	0	1.12669134
South Teigen Trib*	50	74.4671097	0.44247788	0.01126837	0.23990487	0.10615259	0.23441879	0.65053695
South Teigen Trib	78	98.7072296	0.52348995	0.00568893	0.14408104	0.07542498	0.37565699	0.67132288
South Teigen Trib	6	7.30480909	0.66666669	0.04924242	0.33285949	0.22190633	0.23173027	1.10160315
South Teigen Trib*	7	14.8449574	0.41176471	0.09337821	0.74211913	0.30557847	0	1.01069856
South Teigen Trib*	6	16.2427349	0.35294119	0.1350237	1.04112446	0.36745572	0	1.07315445
South Teigen Trib*	24	35.3947487	0.47999999	0.02144132	0.30505946	0.14642854	0.19300005	0.7669999
South Teigen Trib	12	12.3949203	0.85714287	0.01014957	0.11753593	0.10074508	0.65968251	1.05460322
South Teigen Trib	9	10.8556509	0.64285713	0.03585422	0.29454771	0.1893521	0.27172703	1.01398718
South Teigen Trib	20	27.7915154	0.52631581	0.02227111	0.28354666	0.14923508	0.23381504	0.8188166
West Teigen	2	4.05798388	0.40000001	0.20416346	1.12961125	0.45184451	0	1.28561521
West Teigen	53	53	1	0	0	0	1	1
West Teigen*	45	99.6484756	0.30612245	0.01868203	0.44649523	0.13668221	0.03822532	0.57401961

\*indicates was removed from analysis because did not meet equal catchability criteric

## **Appendix 6.2-5**

### Dolly Varden Microsatellite Genetic Study

**Genetic variation within and between Dolly Varden char (*Salvelinus malma*)  
sampled from two localities within the Bell-Irving River, British Columbia  
assessed using microsatellite DNA**

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## **Introduction**

Genetic assessments of the phylogenetic and population genetic distinctiveness of populations are becoming routine in pre- and post-impact monitoring of populations subject to actual or potential habitat alteration from industrial or commercial land use (e.g. Schwartz et al. 2007).

This brief report presents results of an investigation of the genetic distinctiveness of Dolly Varden char (*Salvelinus malma*) sampled from two localities within the Bell-Irving River system (Nass River drainage) in north coastal British Columbia. A standard nine locus microsatellite DNA assay was used to assess: (i) the distinctiveness of Dolly Varden sampled from the two localities, and (ii) to test for genetic differentiation within each of the sample localities.

## **Samples and general methods**

Samples consisted of 164 Dolly Varden char collected from two tributaries of the Bell-Irving River: Treaty Creek (N = 81) and Teigen Creek (N = 83). The headwaters of the two creeks are adjacent to each other (less than 200 m apart from each other), but they are separated by a height of land such that Treaty Creek flows southeast to join the Bell-Irving River about 30 km downstream from the confluence of Teigen Creek and the Bell-Irving River. Both within Treaty and Teigen creeks, individual samples came from numerous sites and included, at the largest scale, samples located above and below putative migration barriers (Teigen upper N = 60, Teigen lower N = 23), and samples from upper and lower portions of watershed with no known migration barriers (Treaty upper N = 42, Treaty lower N = 39).

All samples were collected in the summer of 2009. Tissues consisted of fin (pelvic or adipose fin) clips in 95% ethanol. DNA was extracted and polymerase chain reaction (PCR)

amplification of microsatellite loci was completed as described in Taylor et al. (2007). The ten microsatellite loci used were developed from four species: brook trout (Sfo18), bull trout (Sco106, 202, 204, 220, and 218), and Dolly Varden (Smm17, 21, 22). All of the loci have been screened on a large number of trout and provide powerful tools for population differentiation (e.g. Taylor et al. 2007).

### *Statistical methods*

Tests for differences in allele frequencies pooled across loci were conducted using Weir and Cockerham's (1984)  $\theta$ , with significance tested using permutation analyses. This analysis was completed using GENETIX (Belkhir et al. 2004). I also visualized the relative similarity among all samples using Factorial Correspondence Analysis (FCA) to project individuals, and population means, in microsatellite allele frequency space using GENETIX. Factorial Correspondence Analysis is a type of factor analysis that seeks to find the best linear combination of variables (in this case allele frequencies at different loci) to best describe variation between individual observations (fish). In general terms, FCA is best suited for categorical (rather than continuous) data and determines the first  $K$  axis of an orthogonal number of axes that describe the most variance from a "cloud" of observations.

For tests of population differentiation within creek, I used the Bayesian, model-based clustering algorithm contained in the program STRUCTURE (Pritchard et al. 2000, version 2.3.2). This algorithm does not assume any population structure a priori and uses a likelihood approach to find the most likely number of  $K$  populations in the total data set that minimizes departures from Hardy-Weinburg equilibrium and linkage equilibrium (such deviations are common when a single sample of individuals actually consists of a mixture of fish from two or more genetically differentiated populations). The STRUCTURE analysis was

conducted assuming an admixture model with a burn-in period of 25 000 followed by 75 000 Monte Carlo Markov Chain replications (longer runs did not alter the results). We assessed the likelihood of different putative values of  $K$  from 1 to 8. We chose the  $K$  with the highest average log-likelihood score as representing the most likely number of populations (Pritchard et al., 2000).

## **Results**

### *Genetic variation*

All microsatellite DNA loci were polymorphic and exhibited average allele numbers per locus of between 3.0 (Sfo18) to 23.0 (Sco220) and expected heterozygosities of from 0.11 (Sfo18) to 0.92 (Sco220). The sample from Teigen Creek was slightly more variable (average number of alleles per locus = 13.6, average expected heterozygosity of 0.70) than that from Treaty Creek (11.7 and 0.65, respectively).

### *Genetic differentiation*

The proportion of the total variation in allele frequencies that is attributable to differences between samples is known as  $F_{ST}$  and is estimated from sample data using Weir and Cockerham's (1984)  $\theta$ . The overall  $\theta$  was 0.05 and was significantly greater than 0 ( $P < 0.001$ ,  $N = 1000$  permutations, 95% confidence interval: 0.033 - 0.075). The clear separation between char collected from the two creeks was also evident in the ordination of each fish along the first three FCA axes (Fig. 1).

The STRUCTURE analyses were conducted within each tributary separately with no *a priori* designation of samples by locality (above or below migration barriers in Teigen Creek; upper and lower portions of watershed in Treaty Creek) within creeks. In Treaty Creek, the population number ( $K$ ) associated with the highest likelihood score was  $K = 3$  (log likelihood = -2168 versus log likelihood of -2175 for the next most likely  $K = 4$ ). In Treaty Creek, there was a clear distinction between samples collected from the lower watershed (samples 1-34, Fig. 2) and those from the upper watershed (samples 35-81). When fish from the lower and upper watershed were examined separately, the  $F_{ST}$  value was 0.075 ( $P < 0.001$ ). In Teigen Creek, the value of  $K$  associated with the highest likelihood score was  $K = 5$  (log likelihood = -2114 versus log likelihood of -2156 for the next most likely  $K$  of 4). Within Teigen Creek, notwithstanding finer subdivision among localities, there was a clear separation between fish collected above (samples 25-83) and below (samples 1-24) the putative migration barrier (Fig. 3). When fish above and below the putative migration barrier in Teigen Creek were examined separately, the  $F_{ST}$  value was 0.077 ( $P < 0.001$ ). The other locality within Teigen Creek that appeared to be distinctive was site 1019 (“blue” samples, Fig. 3). There were also a number of individuals sampled below the putative migration barrier that were homozygous for an allele at Sfo18 (154 base pair allele) that is normally diagnostic for bull trout (*Salvelinus confluentus*). These seven fish were sampled from TEC2, M3, and 4001 sites (Fig. 3).

## Discussion

### *Genetic variation*

Although salmonid fishes (salmon, trout, char, grayling and whitefish) have been the focus of many studies of genetic variation within and between populations (reviewed by Hendry et al. 2004), there has been relatively little work conducted on Dolly Varden. Crane et al. (2004)

developed seven microsatellite DNA loci for Dolly Varden and reported allele numbers and heterozygosity values entirely consistent with the values in Treaty and Teigen creeks.

These markers clearly provide considerable power to investigate genetic differentiation in Dolly Varden populations.

### *Genetic differentiation*

The current analysis clearly indicated that the two creeks were significantly divergent from one another across the nine loci.  $F_{ST}$  value of 0.05 indicates that 5% of the total microsatellite DNA allele frequency variation assayed can be attributed to differences between Teigen and Treaty creeks (the remaining variation exists between individuals within each creek and also within individuals themselves, i.e., individual heterozygosity). The  $F_{ST}$  resolved is also consistent with values (0.02 - 0.09) across a similar spatial scale and reported in allozyme surveys of Dolly Varden populations within tributaries flowing to the Beaufort Sea on the North Slope of Alaska (Everett et al. 1997). Values of  $F_{ST}$  in freshwater systems can certainly be considerably higher (e.g.,  $\geq 0.5$ ), but this usually involves samples isolated in separate lakes, by great distances, or above migration barriers (reviewed in Hendry et al. 2004). For interconnected systems, such as examined in this study, the reported  $F_{ST}$  values are consistent with values reported in other salmonids (e.g., Taylor et al. 2003; Hendry et al. 2004).

Our analyses also indicate that there is significant population subdivision within each creek;  $F_{ST}$  values between above and below barrier localities both within Treaty and Teigen creeks were significant and slightly exceeded those between creeks. Such within stream variation above and below migration barriers is a common phenomenon in fluvial-dwelling salmonid populations, including char (e.g., Costello et al. 2003; Taylor et al. 2003). In fact, waterfalls and cascades are

considered one of the key determinants of genetic structure within stream-dwelling fishes more generally, and are one of the key components motivating “riverscape” approaches to stream fish ecology and conservation (e.g. Fausch et al. 2002). Although the presence of such within stream Variation in Treaty and Teigen creeks is not a unique situation, it is likely an important one to acknowledge for local management. First, the presence of above barrier and below barrier populations of Dolly Varden as determined with microsatellites likely associated with differences in life history and behaviour in distinct fluvial environments (e.g., Northcote 1988). Second, such “biocomplexity” may well be critical to the long term sustainability of char in variable environments (e.g., Hilborn et al. 2003).

### **Acknowledgements**

Monica Yau performed the DNA genotyping of Dolly Varden char in this analysis.

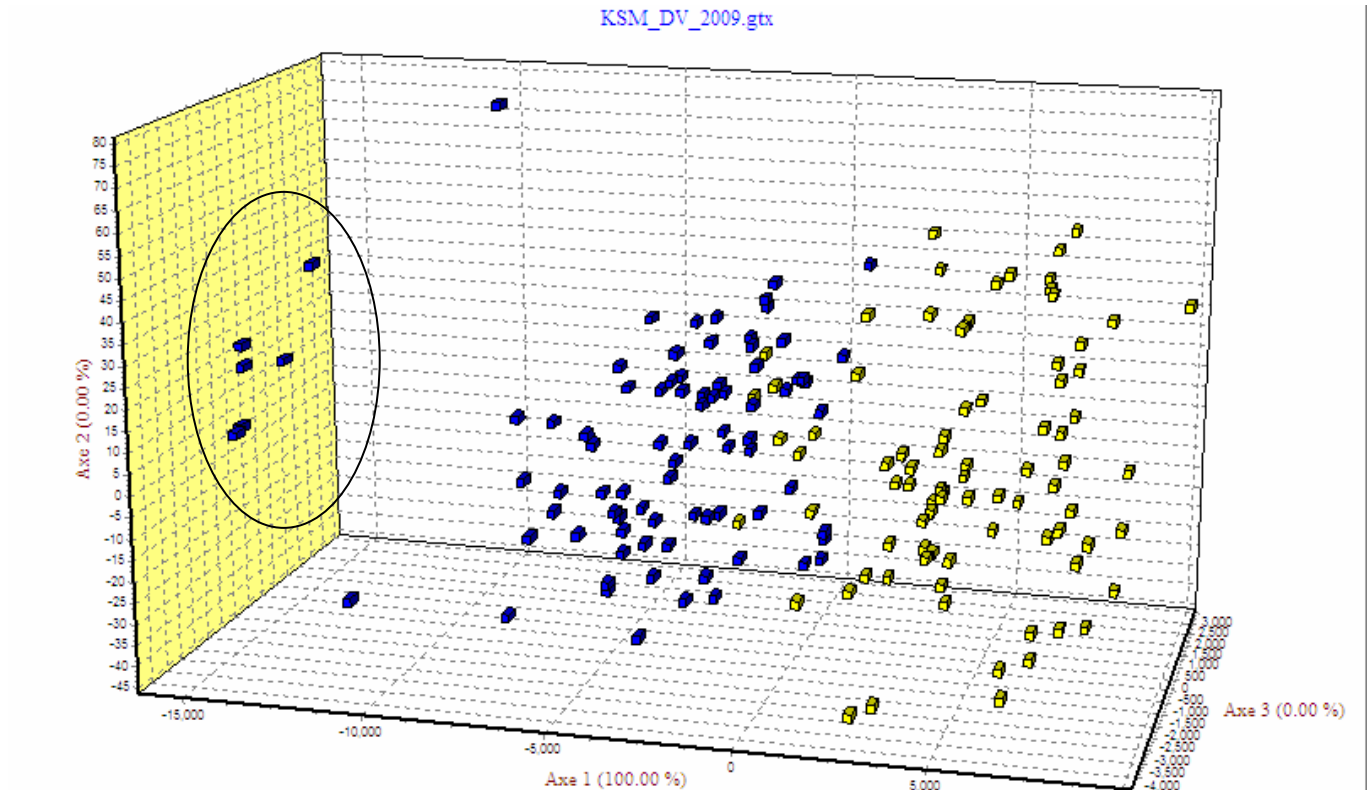


## Literature cited

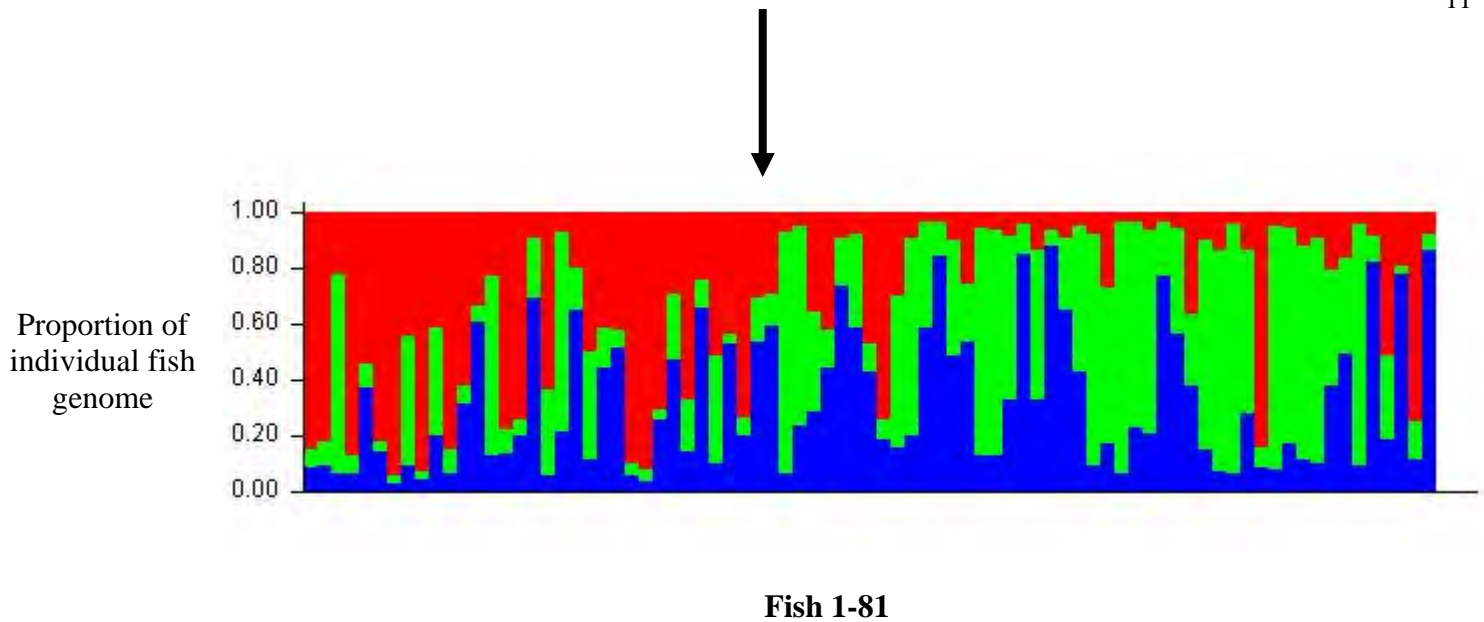
- Belkhir K, Borsa P, Chikhi N, Raufaste N, Bonhomme F (2004) GENETIX 4.02, logiciel sous Windows TM pour la genetique des populations. in. Laboratoire Genome, Populations, Interactions, CNRS UMR 5000, Universite de Montpellier II, Montpellier, France.
- Costello, A.B., Down, T., Pollard, S., Pacas, C.J., and E.B. Taylor. 2003. The influence of history and contemporary stream hydrology on the evolution of genetic diversity within species: an examination of microsatellite DNA variation in bull trout, *Salvelinus confluentus* (Pisces: Salmonidae). *Evolution* **57**: 328-344.
- Crane, P.A. Lewis, C.J., Kretschmer, E.J., Miller, S.J., Spearman, W.J., DeCicco, A.L., Lisac, M.J., and Wenburg, J.K. 2004. Characterization and inheritance of seven microsatellite loci from Dolly Varden, *Salvelinus malma*, and cross-species amplification in Arctic char, *S. alpinus*. *Conserv. Genet.* **5**: 737-741.
- Everett, R.J., Wilmot, R.L., and Krueger, C.C. 1997. Population genetic structure of Dolly Varden from Beaufort Sea drainages of northern Alaska and Canada. *Am. Fish. Soc. Symp.* **19**: 240-249.
- Fausch, K.D., Torgersen, C.E., Baxter, C.V., and Li, H.W. 2002. Landscapes to riverscapes: bridging the gap between research and conservation of stream fishes. *Bioscience* **52**: 483-498.
- Hendry, A.P., Castric, V., Kinnison, M.T., and Quinn, T.P. 2004. The evolution of dispersal: homing versus straying in salmonids. *In* Evolution illuminated: salmon and their relatives. *Edited by* A.P. Hendry and S.C. Stearns. Oxford Univ. Press, Oxford, UK. pp 52–91.
- Hilborn, R., Quinn, T.P., Schindler, D.E., and Rogers, D.E. 2003. Biocomplexity and fisheries sustainability. *Proc. Nat. Acad. Sci. USA* **100**: 6564-6568.
- Northcote, T.G. 1988. The biology and significance of stream trout populations (*Salmo* sp.) living above and below waterfalls. *Pol. Arch. Hydrobiol.* **35**:409-442.

- Pritchard, J.K., Stephens, M. & Donnelly, P. 2000. Inference of population structure using multilocus genotype data. *Genetics* **155**: 945–959.
- Schwartz, M.K., G. Luikart, and R.S. Waples. 2007. Genetic monitoring as a promising tool for conservation and management. *Trends Ecol. Evol.* **22**: 25-33.
- Taylor, E.B., M.D. Stamford, and J.S. Baxter. 2003. Population subdivision in westslope cutthroat trout (*Oncorhynchus clarki lewisi*) at the northern periphery of its range: evolutionary inferences and conservation implications. *Mol. Ecol.* **12**: 2609-2622.
- Taylor, E.B., P. Tamkee, G. Sterling, and W. Hughson. 2007. Microsatellite DNA analysis of rainbow trout (*Oncorhynchus mykiss*) from western Alberta, Canada: native status and evolutionary distinctiveness of “Athabasca” rainbow trout. *Conservation Genetics*, **8**: 1-15
- Weir, B.S., and Cockerham, C.C. 1984. Estimating F-statistics for the analysis of population structure. *Evolution*, **38**: 1358–1370.

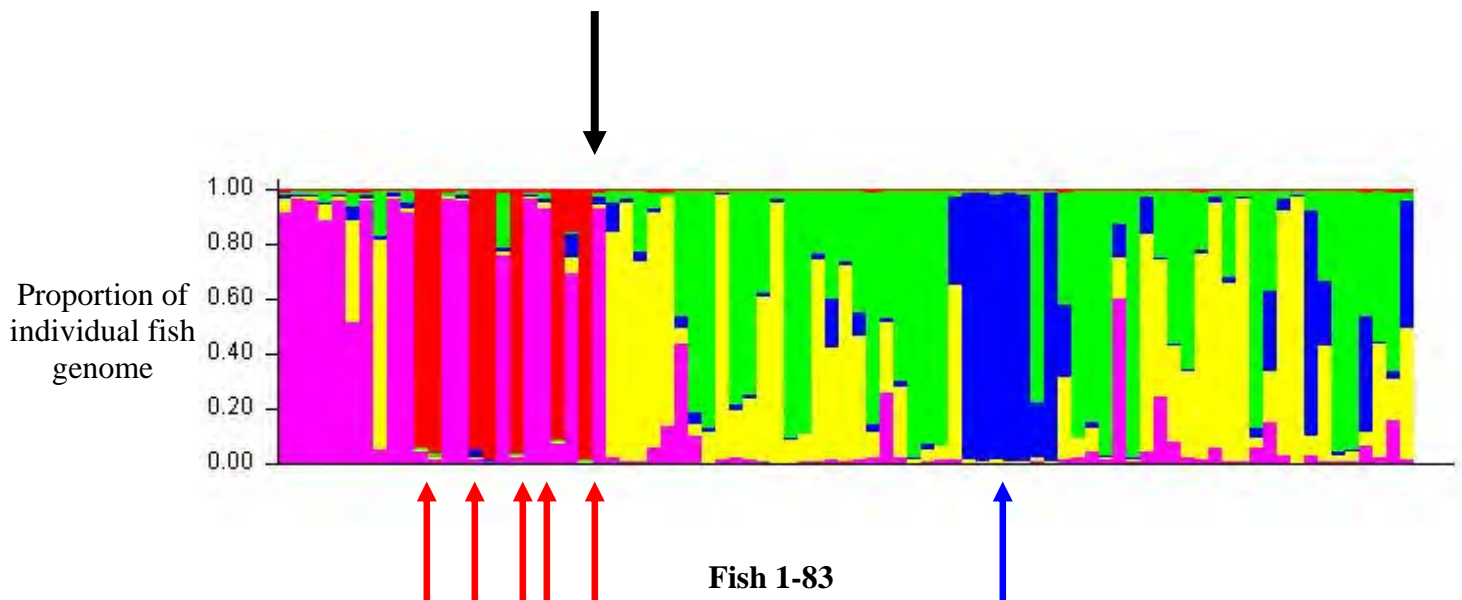
## Figures



**Figure 1.** Ordination of 164 samples of Dolly Varden char along three axes of microsatellite DNA allele frequency differences after factorial correspondence analysis. Individuals in yellow are from Treaty Creek and individuals in blue are from Teigen Creek. The encircled individuals represent those that carry the allele at Sfo 18 that is diagnostic of bull trout.



**Figure 2.** Results from STRUCTURE analysis for  $K = 3$  in Treaty Creek based on variation across nine microsatellite DNA loci. Each colour represents one of 3 genetic populations resolved in Treaty Creek. The proportion of each fish's genome that is comprised of genetic populations 1-3 is represented by the height of a thin vertical line. For example, fish number 1 (at the extreme left of the x-axis) has a genome that consists of about 0.85 from the "red" population, 0.075 "green", 0.075 "blue". The thick downward-oriented arrow represents the separation between fish collected from the lower watershed (to the left of the arrow) and from the upper watershed (to the right of the arrow) within Treaty Creek. Note that the colours depicted here are independent of the colour and genetic populations depicted in Figure 3.



**Figure 3.** Results from STRUCTURE analysis for  $K = 5$  in Teigen Creek based on variation across nine microsatellite DNA loci. Each colour represents one of 5 genetic populations resolved in Teigen Creek. The proportion of each fish’s genome that is comprised of genetic populations 1-5 is represented by the height of a thin vertical line. For example, fish number 1 (at the extreme left of the x-axis) has a genome that consists of about 0.91 from the “pink” population, 0.05 “yellow”, 0.02 “blue” and 0.02 “red”. The thick downward-oriented arrow represents the separation between fish collected below (to the left of the arrow) and above (to the right of the arrow) the putative migration barrier in Teigen Creek. The fish represented largely by the “blue” lines (above the blue arrow) are fish collected from site 1019, those in red are likely bull trout (red arrows).

## **Appendix 6.2-6**

### Biological Fish Data From Wetland Sites



**Appendix 6.2-6. Biological Fish Data From Wetland Sites**

Watershed	Site #	New Wetland			Species	Length (mm)	Weight (g)	Sex	Maturity	Age Structure	Sample		Confidence	Genetic Structure	Sample Number
		Name	Method	Set #							Number	Age			
Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	MT	2	CO	113	11.34	U	U	-	1	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	MT	2	CO	97	10.35	U	U	-	2	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	MT	2	CO	93	9.29	U	U	-	3	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	MT	2	CO	94	9.42	U	U	-	4	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	MT	2	CO	97	11.1	U	U	-	5	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	MT	2	CO	93	9.48	U	U	-	6	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	MT	2	CO	100	11.38	U	U	-	7	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	MT	2	CO	92	9.23	U	U	-	8	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 2)	TEC-W6	MT	4	CO	89	8.46	U	U	-	9	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 2)	TEC-W6	MT	4	CO	92	9.35	U	U	-	10	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 2)	TEC-W6	MT	4	CO	97	9.8	U	U	-	11	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 3)	TEC-W6	MT	5	CO	108	14.27	U	U	-	12	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 3)	TEC-W6	MT	5	CO	98	11.57	U	U	-	13	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 3)	TEC-W6	MT	6	CO	104	15.05	U	U	-	14	-	-	-	-
Teigen Creek	Teigen WL7 (Beaver Pond 3)	TEC-W6	MT	6	CO	100	12.89	U	U	-	15	-	-	-	-
Teigen Creek	Teigen WL7 (large Beaver Pond)	TEC-W7	MT	4	CO	118	18.56	U	U	-	1	-	-	-	-
Teigen Creek	Teigen WL7 (large Beaver Pond)	TEC-W7	MT	4	DV	119	15.76	U	U	-	2	-	-	-	-
Treaty Creek	Treaty Creek Wetland (Pond 3)	TRC-W3	MT	5	DV	124	16.16	U	U	-	1	-	-	-	-
Treaty Creek	WL10	TRC-W2	MT	4	DV	136	21.93	U	U	FR/SC	1	3	-	-	-
Treaty Creek	WL10	TRC-W2	MT	4	DV	159	38.96	U	U	FR/SC	2	3	-	-	-
Treaty Creek	WL10	TRC-W2	MT	4	DV	144	29.48	U	U	FR/SC	3	3	-	-	-
Treaty Creek	WL10	TRC-W2	MT	4	DV	123	39.9	U	U	FR/SC	4	4	-	-	-
Treaty Creek	WL10	TRC-W2	MT	4	DV	193	25.24	U	U	FR/SC	5	4	-	-	-
Treaty Creek	WL10	TRC-W2	MT	4	DV	54	1.77	U	U	-	-	-	-	-	-
Treaty Creek	WL10	TRC-W2	MT	3	DV	149	30.72	U	U	FR/SC	6	4	-	-	-
Treaty Creek	WL10	TRC-W2	MT	3	DV	192	70.54	U	U	FR/SC	7	-	-	-	-
Treaty Creek	WL10	TRC-W2	MT	1	DV	151	36.33	U	U	FR/SC	8	3	4 (QC)	-	-
Treaty Creek	WL10	TRC-W2	MT	1	DV	152	39.9	U	U	FR/SC	9	4	-	-	-
Treaty Creek	WL10	TRC-W2	MT	1	DV	151	33.03	U	U	FR/SC	10	3	-	-	-
Treaty Creek	WL10	TRC-W2	MT	1	DV	136	25.96	U	U	FR/SC	11	3	-	-	-
Treaty Creek	WL10	TRC-W2	MT	1	DV	129	21.75	U	U	FR/SC	12	3	-	-	-
Treaty Creek	WL10	TRC-W2	MT	1	DV	63	3.32	U	U	-	-	-	-	-	-
Treaty Creek	WL10	TRC-W2	MT	1	DV	64	2.81	U	U	-	-	-	-	-	-
Treaty Creek	WL10	TRC-W2	MT	1	DV	64	3.74	U	U	-	-	-	-	-	-
Treaty Creek	WL10	TRC-W2	MT	1	DV	52	1.63	U	U	-	-	-	-	-	-
South Teigen	ST-W1	ST-W1	MT	1	DV	136	23.9	U	U	FR	45	3	-	TP	45
South Teigen	ST-W1	ST-W1	MT	1	DV	132	23.6	U	U	FR	47	2	-	TP	47
South Teigen	ST-W1	ST-W1	MT	1	DV	80	4.7	U	U	-	-	-	-	-	-
South Teigen	ST-W1	ST-W1	MT	1	DV	95	8.4	U	U	-	-	-	-	-	-
South Teigen	ST-W1	ST-W1	MT	1	DV	95	8.4	U	U	-	-	-	-	-	-
South Teigen	ST-W1	ST-W1	MT	1	DV	100	9.4	U	U	FR	48	4	-	TP	48
South Teigen	ST-W1	ST-W1	MT	1	DV	133	22.4	U	U	FR	49	2	-	TP	49
South Teigen	ST-W1	ST-W1	MT	1	DV	128	21.9	U	U	-	-	-	-	-	-
South Teigen	ST-W1	ST-W1	MT	1	DV	101	9.2	U	U	-	-	-	-	-	-
South Teigen	ST-W1	ST-W1	MT	1	DV	137	23.9	U	U	FR	50	3	-	TP	50
South Teigen	ST-W1	ST-W1	MT	1	DV	117	14.1	U	U	FR	46	3	-	TP	46
South Teigen	ST-W1	ST-W1	MT	1	DV	118	16.3	U	U	-	-	-	-	-	-
South Teigen	ST-W1	ST-W1	MT	1	DV	142	26.8	U	U	-	-	-	-	-	-
South Teigen	ST-W1	ST-W1	MT	1	DV	133	24.4	U	U	-	-	-	-	-	-

DV = Dolly Varden, CO = coho salmon

Sex: M = male, F = female, U = undetermined; Maturity: IM = immature, M = mature, U = undetermined; FR = fin ray, AD = adipose

## **Appendix 6.2-7**

### Wetland Habitat Minnow Trap Effort and Catch Data

**Appendix 6.2-7. Wetland Habitat Minnow Trap Effort and Catch Data**

Dataset	Watershed	Wetland	New Wetland				Time Set		Time Set		Time Pulled		Set Duration		Species		
			Name	MT #	Easting	Northing	Date Set	Time Set	Conversion	Date Pulled	Time Pulled	Conversion	Conversion (hrs)	DV	CO	CH	
Compensation Wetlands	Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	1	440371	6283694	16-Sep-09	16:20	16.3	17-Sep-09	13:30	13.5	21.17	-	-	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (Beaver Pond 1)	TEC-W6	2	440373	6283706	16-Sep-09	16:20	16.3	17-Sep-09	13:30	13.5	21.17	-	8	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (Beaver Pond 2)	TEC-W6	3	440283	6273653	16-Sep-09	16:35	16.6	17-Sep-09	13:30	13.5	20.92	-	-	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (Beaver Pond 2)	TEC-W6	4	440277	6283649	16-Sep-09	16:40	16.7	17-Sep-09	13:30	13.5	20.83	-	3	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (Beaver Pond 3)	TEC-W6	5	440102	6283581	16-Sep-09	17:05	17.1	17-Sep-09	13:30	13.5	20.42	-	2	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (Beaver Pond 3)	TEC-W6	6	440225	6283586	16-Sep-09	17:08	17.1	17-Sep-09	13:30	13.5	20.37	-	2	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (Beaver Pond 4)	TEC-W6	7	440197	6283565	16-Sep-09	17:10	17.2	17-Sep-09	13:30	13.5	20.33	-	-	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (Beaver Pond 5)	TEC-W6	8	440167	6283570	16-Sep-09	17:20	17.3	17-Sep-09	13:30	13.5	20.17	-	-	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (large Beaver Pond)	TEC-W7	1	439667	6283348	16-Sep-09	14:00	14.0	17-Sep-09	12:20	12.3	22.33	-	-	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (large Beaver Pond)	TEC-W7	2	439651	6283340	16-Sep-09	14:00	14.0	17-Sep-09	12:20	12.3	22.33	-	-	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (large Beaver Pond)	TEC-W7	3	439706	6283379	16-Sep-09	14:00	14.0	17-Sep-09	12:20	12.3	22.33	-	-	-	
Compensation Wetlands	Teigen Creek	Teigen WL7 (large Beaver Pond)	TEC-W7	4	439735	6283374	16-Sep-09	14:00	14.0	17-Sep-09	12:20	12.3	22.33	1	1	-	
Compensation Wetlands	Treaty Creek	Treaty Creek Wetland (Pond 3)	TRC-W3	1	444222	6272066	18-Sep-09	15:00	15.0	19-Sep-09	10:00	10.0	19.00	-	-	-	
Compensation Wetlands	Treaty Creek	Treaty Creek Wetland (Pond 3)	TRC-W3	2	444222	6272066	18-Sep-09	15:00	15.0	19-Sep-09	10:00	10.0	19.00	-	-	-	
Compensation Wetlands	Treaty Creek	Treaty Creek Wetland (Pond 3)	TRC-W3	3	444222	6272066	18-Sep-09	15:00	15.0	19-Sep-09	10:00	10.0	19.00	-	-	-	
Compensation Wetlands	Treaty Creek	Treaty Creek Wetland (Pond 3)	TRC-W3	4	444222	6272066	18-Sep-09	15:00	15.0	19-Sep-09	10:00	10.0	19.00	-	-	-	
Compensation Wetlands	Treaty Creek	Treaty Creek Wetland (Pond 3)	TRC-W3	5	444222	6272066	18-Sep-09	15:00	15.0	19-Sep-09	10:00	10.0	19.00	1	-	-	
Compensation Wetlands	Treaty Creek	WL10	TRC-W2	1	446920	6271644	15-Sep-09	16:00	16.0	16-Sep-09	9:20	9.3	17.33	9	-	-	
Compensation Wetlands	Treaty Creek	WL10	TRC-W2	2	446911	6271584	15-Sep-09	16:05	16.1	16-Sep-09	9:40	9.7	17.58	-	-	-	
Compensation Wetlands	Treaty Creek	WL10	TRC-W2	3	446937	6271666	15-Sep-09	16:15	16.3	16-Sep-09	9:00	9.0	16.75	2	-	-	
Compensation Wetlands	Treaty Creek	WL10	TRC-W2	4	446944	6271695	15-Sep-09	16:20	16.3	16-Sep-09	8:30	8.5	16.17	6	-	-	
Wetlands	Teigen Creek	Teigen W4	TEC-W4	1	441144	6285223	15-Sep-09	13:15	13.3	16-Sep-09	9:20	9.3	20.08	-	10	-	
Wetlands	Teigen Creek	Teigen W4	TEC-W4	2	441120	6285198	15-Sep-09	13:15	13.3	16-Sep-09	9:20	9.3	20.08	-	4	-	
Wetlands	Teigen Creek	Teigen W4	TEC-W4	3	441078	6285156	15-Sep-09	13:15	13.3	16-Sep-09	9:20	9.3	20.08	-	-	-	
Wetlands	Teigen Creek	Teigen W4	TEC-W4	4	441117	6285161	15-Sep-09	13:15	13.3	16-Sep-09	9:20	9.3	20.08	-	-	-	
Wetlands	Teigen Creek	Teigen W2	TEC-W2	1	442515	6287650	15-Sep-09	8:55	8.9	16-Sep-09	8:20	8.3	23.42	1	-	1	
Wetlands	Teigen Creek	Teigen W2	TEC-W2	2	442494	6287646	15-Sep-09	10:00	10.0	16-Sep-09	8:20	8.3	22.33	1	13	1	
Wetlands	Teigen Creek	Teigen W2	TEC-W2	3	442490	6287643	15-Sep-09	10:05	10.1	16-Sep-09	8:20	8.3	22.25	1	3	2	
Wetlands	Teigen Creek	Teigen W2	TEC-W2	4	442391	6287558	15-Sep-09	10:25	10.4	16-Sep-09	8:20	8.3	21.92	-	-	-	
Wetlands	Teigen Creek	WL6 (channel)	TEC-W1	1	436896	6283954	15-Sep-09	12:40	12.7	16-Sep-09	14:20	14.3	25.67	-	-	-	
Wetlands	Teigen Creek	WL6 (channel)	TEC-W1	2	436928	6283961	15-Sep-09	12:55	12.9	16-Sep-09	14:25	14.4	25.50	-	-	-	
Wetlands	Teigen Creek	WL6 (channel)	TEC-W1	3	437118	6283741	15-Sep-09	14:00	14.0	16-Sep-09	15:00	15.0	25.00	-	-	-	
Wetlands	Teigen Creek	WL6 (channel)	TEC-W1	4	-	-	15-Sep-09	14:10	14.2	16-Sep-09	15:05	15.1	24.92	-	1	-	
Wetlands	Treaty Creek	WL11 Outflow	TRC-W1	1	439502	6273091	16-Sep-09	11:00	11.0	17-Sep-09	8:40	8.7	21.67	-	-	-	
Wetlands	Treaty Creek	WL11 Outflow	TRC-W1	2	439434	6273105	16-Sep-09	11:05	11.1	17-Sep-09	8:41	8.7	21.60	-	-	-	
Wetlands	Treaty Creek	WL11 Outflow	TRC-W1	3	439433	6273103	16-Sep-09	11:10	11.2	17-Sep-09	8:43	8.7	21.55	-	-	-	
Wetlands	Treaty Creek	WL11 Outflow	TRC-W1	4	-	-	16-Sep-09	11:15	11.3	17-Sep-09	8:38	8.6	21.38	1	-	-	
Wetlands	Teigen Creek	WL3	TEC-W3	1	443304	6289228	15-Sep-09	8:30	8.5	17-Sep-09	11:00	11.0	50.50	-	-	-	
Wetlands	Teigen Creek	WL3	TEC-W3	2	443388	6289200	15-Sep-09	8:40	8.7	17-Sep-09	11:05	11.1	50.42	-	-	-	
Wetlands	Teigen Creek	WL3	TEC-W3	3	443417	6289245	15-Sep-09	8:50	8.8	17-Sep-09	11:21	11.4	50.52	-	-	-	
Wetlands	Teigen Creek	WL3	TEC-W3	4	443425	6289209	15-Sep-09	9:30	9.5	17-Sep-09	11:32	11.5	50.03	-	-	-	
TMF Wetlands	North Treaty	NT-W1	-	1	-	-	2009/07/20	14:30	14.5	2009/07/21	15:30	15.5	25.00	-	-	-	
TMF Wetlands	North Treaty	NT-W1	-	2	-	-	2009/07/20	14:30	14.5	2009/07/21	15:30	15.5	25.00	-	-	-	
TMF Wetlands	North Treaty	NT-W1	-	3	-	-	2009/07/20	14:30	14.5	2009/07/21	15:30	15.5	25.00	-	-	-	
TMF Wetlands	North Treaty	NT-W1	-	4	-	-	2009/07/20	14:30	14.5	2009/07/21	15:30	15.5	25.00	-	-	-	
TMF Wetlands	North Treaty	NT-W1	-	5	-	-	2009/07/20	14:30	14.5	2009/07/21	15:30	15.5	25.00	-	-	-	
TMF Wetlands	South Teigen	ST-W1	-	1	-	-	2009/07/20	15:30	15.5	2009/07/21	16:30	16.5	25.00	4	-	-	
TMF Wetlands	South Teigen	ST-W1	-	2	-	-	2009/07/20	15:35	15.6	2009/07/21	16:35	16.6	25.00	1	-	-	
TMF Wetlands	South Teigen	ST-W1	-	3	-	-	2009/07/20	15:40	15.7	2009/07/21	16:40	16.7	25.00	6	-	-	
TMF Wetlands	South Teigen	ST-W1	-	4	-	-	2009/07/20	15:40	15.7	2009/07/21	16:45	16.8	25.08	-	-	-	
TMF Wetlands	South Teigen	ST-W1	-	5	-	-	2009/07/20	15:45	15.8	2009/07/21	16:50	16.8	25.08	3	-	-	

DV = Dolly Varden

## **Appendix 6.3-1**

Detailed Fish Habitat Assessment of Streams in Receiving and Reference Environment Watersheds

**Appendix 6.3-1. Detailed Fish Habitat Assessment of Streams in Receiving and Reference Environment Watersheds**

Stream	Site	Date	Habitat Number	Habitat Type	Distance from Start	Depth (m)			Width (m)			Bed Material						
						Length (m)	Slope (%)	Wetted	Wetted	Wetted	Bankfull	Wetted	Bankfull	Sand (%)	Gravel (%)	Cobble (%)	Boulder (%)	Bedrock (%)
Treaty	5544	14-Sep-09	1	G	0	35	2	0.3	0.6	0.4	1.1	8	12	90	5	5	0	0
Treaty	5544	14-Sep-09	2	R	35	12	3	0.2	0.3	0.25	0.6	4.5	6	5	15	70	10	0
Treaty	5544	14-Sep-09	3	G	47	40	1	0.3	0.7	0.35	1.25	5	7	75	5	15	5	0
Treaty	5544	14-Sep-09	4	R	87	45	4	0.15	0.35	0.2	0.45	4.2	8	10	5	80	5	0
Treaty	5544	14-Sep-09	5	R	0	150	4	-	-	-	-	18	22	10	10	70	10	0
Treaty	TR2.5	14-Sep-09	1	G	0	136	1	0.65	0.7	0.74	1.16	55	64	10	20	70	0	0
Treaty	TR3.5	14-Sep-09	1	R	0	245	1	0.43	0.67	0.45	1	100	259	35	25	45	0	0
Treaty	5543	14-Sep-09	1	R	0	25	3	0.25	0.15	0.2	0.5	4.2	15.6	30	25	40	5	-
Treaty	5543	14-Sep-09	2	P	25	30	1	0.4	0.6	0.5	1	5.5	8.6	80	5	15	-	-
Treaty	5543	14-Sep-09	3	G	55	20	2	0.25	0.4	0.3	0.8	4.6	7.1	20	20	60	-	-
Treaty	5543	14-Sep-09	4	R	85	10	4	0.1	0.2	0.15	0.6	6.2	8	5	5	80	10	-
Treaty	5543	14-Sep-09	5	P	95	8	1	0.2	0.45	0.3	0.55	6	10	75	5	15	5	-
Treaty	5543	14-Sep-09	6	R	0	100	3	-	-	-	-	22	49	10	10	60	20	-
Unuk	ECM9	12-Sep-09	1	C	0	149	3	0.4	0.37	0.49	1.24	11	31	5	15	29	50	0
Unuk	ECM9	12-Sep-09	2	R	149	25	1	0.75	0.77	0.9	1.65	13	18	5	10	54	30	1
Teigen	M3	14-Sep-09	1	R	0	100	2	0.33	0.66	0.28	1.49	26	41	0	5	85	10	0
Teigen	M3	14-Sep-09	2	G	100	102	1	0.56	0.64	0.65	1.65	21	32	5	10	70	15	0
Teigen	M3	14-Sep-09	3	R	202	93	2	0.42	0.42	0.41	1.67	15	35	1	5	60	34	0
Teigen	M3	14-Sep-09	4	P	295	44	1	0.58	0.72	1.18	1.73	21	27	4	10	80	5	1
Unuk	UR2	13-Sep-09	1	G	0	100	1	-	-	-	-	50	110	10	15	70	5	0
Unuk	UR2	13-Sep-09	2	R	100	200	1	-	-	-	-	60	130	5	15	75	5	0
Unuk	UR3	13-Sep-09	1	R	0	200	1	-	-	-	-	-	-	5	15	75	5	0
N Treaty	5524	11-Sep-09	1	P	0	10	3	0.35	0.62	0.37	1.2	4.7	6.5	-	20	30	50	-
N Treaty	5524	11-Sep-09	2	C	10	25	8	0.37	0.48	0.29	0.7	5.3	6.6	-	20	20	60	-
N Treaty	5524	11-Sep-09	3	P	35	13	2	0.65	1.2	0.8	1.5	6.5	7.2	-	40	30	30	-
N Treaty	5524	11-Sep-09	4	C	48	47	12	0.42	0.58	0.34	0.9	5.8	7	-	20	35	45	-
Teigen	M2	11-Sep-09	1	R	0	45	1	0.52	0.57	0.67	1.05	10.6	42.3	5	20	70	5	-
Teigen	M2	11-Sep-09	2	G	45	17	1	0.53	0.77	0.62	1.3	8.75	51.4	1	1	93	5	-
Teigen	M2	11-Sep-09	3	R	63	72	1	0.49	0.59	0.58	1.5	10.8	32.2	-	1	65	34	-
Teigen	M2	11-Sep-09	4	G	135	41	1	0.6	0.83	0.78	1.38	9.6	22.2	1	5	84	10	-
Teigen	M2	11-Sep-09	5	R	176	137	1	0.52	0.31	0.56	1.28	14	26.8	1	5	84	10	-
Teigen	M1	11-Sep-09	1	G	0	11.2	1	0.7	0.75	0.48	1.4	11.3	40.3	5	10	50	35	-
Teigen	M1	11-Sep-09	2	C	11.2	61	3	0.42	0.35	0.65	1.87	10.8	28	1	1	23	75	-
Teigen	M1	11-Sep-09	3	G	72.2	14.5	1	0.41	0.48	0.5	0.94	11.8	47	5	10	45	40	-
Teigen	M1	11-Sep-09	4	C	113.8	41.6	3	0.43	0.52	0.36	1.4	7.4	36.6	-	1	24	75	-
Teigen	M1	11-Sep-09	5	R	155.1	54	3	0.6	0.4	0.48	1.12	17.4	14.5	-	-	25	75	-
Bell Irving	B11	15-Aug-09	1	G	0	104	1	-	-	-	-	40	104	10	15	70	5	0
Bell Irving	B12	15-Aug-09	1	G	0	200	1	-	-	-	-	95	298	5	35	65	5	0
Treaty	9060	18-Sep-09	1	P	0	170	3	0.6	0.7	0.7	2	30	49	20	20	50	10	-
Treaty	9060	18-Sep-09	2	P	170	30	3	1	1	1	2	22	24	20	20	60	-	-
Teigen	9058	18-Sep-09	1	C	0	38	3	0.37	0.67	0.42	1.5	13	31	-	30	60	10	-
Teigen	9058	18-Sep-09	2	R	38	41	2	0.17	0.29	0.39	1.4	17	17	-	20	75	5	-
Teigen	9058	18-Sep-09	3	C	79	59	3	0.39	0.37	0.35	0.7	16	17	-	30	60	10	-
Teigen	9058	18-Sep-09	4	P	138	9	1	0.98	0.56	0.23	2.5	5	5	-	10	70	20	-
Teigen	9058	18-Sep-09	5	R	147	60	2	0.35	0.47	0.52	1	24	25	-	10	70	20	-
Teigen	TR4	11-Sep-09	1	R	0	11.8	1	0.54	0.51	0.48	0.72	7.05	7.05	1	1	70	28	-
Teigen	TR4	11-Sep-09	2	G	11.8	19.7	1	0.27	0.29	0.45	1.07	8.3	8.3	5	10	70	15	-
Teigen	TR4	11-Sep-09	3	R	31.5	48.4	2	0.2	0.3	0.33	0.85	7.1	7.5	-	5	80	15	-
Teigen	TR4	11-Sep-09	4	G	79.9	23	1	0.3	0.38	0.46	0.63	15	15.7	1	10	79	10	-
Teigen	TR4	11-Sep-09	5	R	102.9	46.6	2	0.43	0.5	0.36	0.8	4.8	9	-	5	65	30	-
Teigen	M4	16-Sep-09	1	P	0	40	0	0.72	1.4	1.8	2.5	31	49	14	5	80	1	-
Teigen	M4	16-Sep-09	2	G	40	68	1	0.56	0.6	0.49	0.92	24	151	15	4	80	1	-
Teigen	M4	16-Sep-09	3	R	108	16	1	0.37	0.22	0.38	0.87	55	143	10	4	85	1	-
Teigen	M4	16-Sep-09	4	G	124	36	0.5	0.37	0.7	1.03	0.97	50	138	10	4	85	1	-
Teigen	M4	16-Sep-09	5	R	160	42	1	0.71	0.49	0.6	1.35	41	141	15	1	84	-	-

**Appendix 6.3-1. Detailed Fish Habitat Assessment of Streams in Receiving and Reference Environment Watersheds**

Stream	Site	Date	Habitat		Spawning Gravel				Pool Info			Instream Cover			Off Channel Habitat			Functional LWD				Riparian Cover (%)		
			Number	Type	Amount	Type	Residual	Pool (%)	Boulder (%)	Instream Veg (%)	Overhang Veg (%)	Undercut Bank (%)	LWD (%)	SWD (%)	Type	Access	Length	10-20cm	20-50cm	>50cm	Total LWD Tally	Type	Structure	Canopy
Treaty	5544	14-Sep-09	1	-	-	S	0.4	5	0	0	5	0	0	-	-	-	2	0	0	2	SHR	-	5	
Treaty	5544	14-Sep-09	2	-	-	-	-	0	0	0	2	0	0	-	-	-	0	0	0	0	SHR	-	2	
Treaty	5544	14-Sep-09	3	-	-	S	0.5	10	0	0	5	0	2	-	-	-	4	1	0	5	SHR	-	5	
Treaty	5544	14-Sep-09	4	-	-	S	0.3	5	0	0	5	0	2	-	-	-	2	2	0	4	SHR	-	5	
Treaty	5544	14-Sep-09	5	-	-	-	-	0	0	0	5	2	4	-	-	-	15	4	1	20	SHR	-	5	
Treaty	TR2.5	14-Sep-09	1	-	-	-	-	5	0	0	1	0	1	-	SC	G	1	-	-	1	MIXED	-	1	
Treaty	TR3.5	14-Sep-09	1	R	L	-	-	5	0	0	1	0	1	-	SC	G	1	-	-	12	MIXED	-	1	
Treaty	5543	14-Sep-09	1	-	-	-	-	0	0	-	0	-	-	-	-	-	0	0	0	0	-	-	-	
Treaty	5543	14-Sep-09	2	-	-	S	0.45	0	0	2	0	0	5	-	-	-	10	2	0	12	-	-	-	
Treaty	5543	14-Sep-09	3	-	-	-	-	0	0	-	0	-	2	-	-	-	3	0	0	3	-	-	-	
Treaty	5543	14-Sep-09	4	-	-	S	0.25	0	0	-	5	-	-	-	-	-	20	0	0	20	-	-	-	
Treaty	5543	14-Sep-09	5	-	-	S	0.35	0	0	-	0	-	-	-	-	-	3	1	0	4	-	-	-	
Treaty	5543	14-Sep-09	6	-	-	-	-	0	0	-	5	-	5	-	-	-	6	4	0	10	-	-	-	
Unuk	ECM9	12-Sep-09	1	-	-	-	-	0	20	-	1	-	10	-	SC	G	20	-	-	0	CON	-	1	
Unuk	ECM9	12-Sep-09	2	R	18	S	0.51	20	5	-	1	-	5	-	-	-	-	-	0	CON	-	1		
Teigen	M3	14-Sep-09	1	-	-	S	0.31	5	5	0	1	-	1	-	-	-	-	-	5	SHR	-	1		
Teigen	M3	14-Sep-09	2	-	-	S	0.36	15	5	1	5	-	0	-	-	-	-	-	0	DEC	-	1		
Teigen	M3	14-Sep-09	3	-	-	-	-	0	5	1	1	-	0	-	SC	G	80	-	-	0	DEC	-	1	
Teigen	M3	14-Sep-09	4	A	H	S	0.93	35	2	1	2	-	0	-	SC	P	26	-	-	0	DEC	-	1	
Unuk	UR2	13-Sep-09	1	-	-	-	-	0	1	-	1	-	5	-	SC	G	100	-	1	0	MIXED	-	-	
Unuk	UR2	13-Sep-09	2	-	-	-	-	0	1	-	1	-	1	-	SC	G	200	1	-	0	MIXED	-	-	
Unuk	UR3	13-Sep-09	1	-	-	-	-	1	1	0	1	0	5	-	SC	G	-	1	-	-	MIXED	-	1	
N Treaty	5524	11-Sep-09	1	-	-	S	0.4	80	-	-	20	-	-	-	-	-	-	-	0	SHR	-	20		
N Treaty	5524	11-Sep-09	2	-	-	-	-	10	10	60	-	10	-	-	-	-	1	-	-	1	SHR	-	30	
N Treaty	5524	11-Sep-09	3	-	-	S	0.7	70	-	10	-	-	20	-	-	-	2	-	1	3	SHR	-	10	
N Treaty	5524	11-Sep-09	4	-	-	-	-	-	15	5	70	-	10	-	-	-	4	1	-	5	SHR	-	25	
Teigen	M2	11-Sep-09	1	-	-	-	-	-	5	1	-	1	-	-	-	-	-	-	1	MIXED	-	1		
Teigen	M2	11-Sep-09	2	-	-	S	0.17	10	1	-	1	-	1	-	-	-	-	-	1	MIXED	-	1		
Teigen	M2	11-Sep-09	3	-	-	-	-	-	15	-	1	5	1	-	-	-	-	-	1	MIXED	-	1		
Teigen	M2	11-Sep-09	4	-	-	S	0.25	10	5	4	1	5	10	-	-	-	-	-	2	DEC	-	1		
Teigen	M2	11-Sep-09	5	-	-	-	-	-	10	-	1	-	5	-	-	-	-	-	10	MIXED	-	1		
Teigen	M1	11-Sep-09	1	-	-	S	0.13	5	10	-	1	-	-	-	-	-	-	-	0	SHR	-	1		
Teigen	M1	11-Sep-09	2	-	-	-	-	-	20	-	5	-	5	-	-	-	1	-	-	3	DEC	-	1	
Teigen	M1	11-Sep-09	3	-	-	S	0.19	5	10	-	1	-	-	-	-	-	-	-	0	MIXED	-	1		
Teigen	M1	11-Sep-09	4	-	-	-	-	-	20	-	1	1	-	-	-	-	-	-	0	MIXED	-	1		
Teigen	M1	11-Sep-09	5	-	-	-	-	-	15	-	1	-	-	-	-	-	-	-	0	DEC	-	1		
Bell Irving	B11	15-Aug-09	1	-	-	-	-	25	1	0	1	5	15	-	SC	G	200	-	-	-	MIXED	-	1	
Bell Irving	B12	15-Aug-09	1	-	-	G	-	30	3	0	2	0	5	-	UNK	YES	20	-	-	-	MIXED	-	1	
Treaty	9060	18-Sep-09	1	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	0	SHR	SHR	0		
Treaty	9060	18-Sep-09	2	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	0	SHR	SHR	0		
Teigen	9058	18-Sep-09	1	-	-	-	-	5	10	-	5	-	5	-	-	-	1	1	-	2	SHR	SHR	1	
Teigen	9058	18-Sep-09	2	-	-	I	-	-	5	-	5	-	5	-	-	-	1	-	1	2	SHR	SHR	1	
Teigen	9058	18-Sep-09	3	-	-	I	-	-	10	10	-	5	-	-	-	-	1	-	-	1	SHR	SHR	1	
Teigen	9058	18-Sep-09	4	-	-	D	0.7	100	20	-	5	-	-	-	-	-	-	-	0	SHR	SHR	1		
Teigen	9058	18-Sep-09	5	-	-	-	-	-	10	20	-	5	-	-	-	-	-	-	0	SHR	SHR	1		
Teigen	TR4	11-Sep-09	1	-	-	-	-	-	20	1	1	-	-	-	-	-	-	-	0	MIXED	-	1		
Teigen	TR4	11-Sep-09	2	-	-	AR	10M2	S	0.15	-	20	1	5	1	-	-	-	-	0	MIXED	-	1		
Teigen	TR4	11-Sep-09	3	-	-	AR	14M2	-	-	30	1	5	5	-	SC	G	30	-	-	0	CON	-	1	
Teigen	TR4	11-Sep-09	4	-	-	-	-	-	35	1	5	1	-	-	-	-	-	-	0	CON	-	1		
Teigen	TR4	11-Sep-09	5	-	-	-	-	-	25	1	5	1	-	-	-	-	-	-	0	CON	-	1		
Teigen	M4	16-Sep-09	1	-	-	S	1	30	0	-	1	1	15	-	SC	G	40	-	4	4	DEC	-	1	
Teigen	M4	16-Sep-09	2	-	-	-	-	5	1	-	0	-	5	-	SC	G	68	-	3	3	DEC	-	0	
Teigen	M4	16-Sep-09	3	-	-	-	-	0	1	-	0	-	1	-	SC	G	16	-	1	1	DEC	-	0	
Teigen	M4	16-Sep-09	4	-	-	-	-	10	1	-	2	2	5	-	SC	G	36	-	1	1	DEC	-	1	
Teigen	M4	16-Sep-09	5	-	-	S	1	5	0	-	2	-	2	-	SC	G	42	-	2	2	DEC	-	1	

Pool Type: S = scour, D = dam, N = none; Off Channel Type: N = none, SC = side channel; Riparian Type: D = deciduous, C = coniferous, M = mixed, S = shrub, I = initial, PS = pole sapling, MF = mature forest  
Channel Access: G = accessible most flow, P = accessible at high flows; Woody Debris: SWD = small woody debris, LWD = large woody debris



**Appendix 6.3-1. Detailed Fish Habitat Assessment of Streams in Receiving and Reference Environment Watersheds**

Stream	Site	Date	Habitat Number	Habitat Type	Distance from Start	Length (m)	Slope (%)	Depth (m)			Width (m)			Bed Material				
								Wetted	Wetted	Wetted	Bankfull	Wetted	Bankfull	Sand (%)	Gravel (%)	Cobble (%)	Boulder (%)	Bedrock (%)
S Teigen	4001-2	5-Aug-09	1	C	0	80	4	0.5	0.4	0.4	0.73	14	19	-	10	50	40	-
S Teigen	4001-2	5-Aug-09	2	P	80	10	-	0.5	0.8	0.7	1.2	13	15	-	20	40	40	-
S Teigen	4001-2	5-Aug-09	3	R	90	10	-	0.5	0.7	0.5	1.39	10	12	-	10	70	20	-
S Teigen	STE2	6-Aug-09	1	C	0	50	4	0.24	0.38	0.5	0.78	9	10	-	20	70	10	-
S Teigen	STE2	6-Aug-09	2	P	50	20	-	1.2	1.2	0.5	1.5	11.5	12	-	20	80	-	-
S Teigen	STE2	6-Aug-09	3	R	70	30	-	0.5	0.32	0.1	0.7	11.5	12	-	10	80	10	-
Treaty	TRC2	21-Jul-09	1	R	0	250	2	0.15	0.4	0.5	1.5	35	160	20	30	40	10	0
Unuk	ECM8	20-Jul-09	1	R	0	0	1	0.6	0.7	1.2	1	30	42	10	20	30	40	-
Unuk	ECM8	20-Jul-09	2	R	0	150	2	0.3	0.4	0.2	1	-	-	20	20	30	30	-
Unuk	ECM8	20-Jul-09	3	P	100	40	0	0.8	1	0.7	2.5	-	-	80	20	10	-	-
Unuk	ECM8	20-Jul-09	4	C	190	25	4	0.3	0.2	0.3	1	-	-	10	60	30	-	-
Treaty	TRC3	21-Jul-09	1	R	0	250	31	0.4	0.3	0.5	1.5	70	150	30	60	10	-	-
Treaty	TRC3	21-Jul-09	2	P	15	8	0	0.8	0.6	-	1.2	5	-	80	20	-	-	-
Treaty	TRC3	21-Jul-09	3	R	15	40	2	0.2	0.1	0.3	0.8	15	-	30	70	-	-	-
Treaty	TRC3	21-Jul-09	4	G	40	50	0	0.4	0.3	0.2	0.8	15	-	40	60	-	-	-
Treaty	TRC3	21-Jul-09	5	R	50	50	2	0.3	0.4	0.3	1	20	-	20	80	-	-	-
Unuk	EUR2	17-Jul-09	1	R	0	100	5	0.5	0.3	0.4	1.2	9	14	15	20	50	15	0
Teigen	TEC1	10-Aug-09	1	P	0	7	2	0.18	0.21	0.43	1.2	7	23	-	90	10	-	-
Teigen	TEC1	10-Aug-09	2	R	7	44	2	0.39	0.3	0.44	0.93	12	28	-	80	20	-	-
Teigen	TEC1	10-Aug-09	3	P	51	26	2	0.79	0.88	0.52	1.43	20	21	-	80	20	-	-
Teigen	TEC1	10-Aug-09	4	R	77	22	2	0.55	0.37	0.21	1.38	14	15	-	70	30	-	-
Teigen	TEC1	10-Aug-09	5	G	99	24	2	0.53	0.79	0.69	1.45	12.5	20.5	-	70	30	-	-
Teigen	TEC1	10-Aug-09	6	R	123	77	2	0.39	0.52	0.48	1.65	12	26	-	40	40	20	-
Teigen	TEC2	10-Aug-09	1	R	0	43	1	0.49	0.46	0.5	0.78	19	65	-	30	50	20	-
Teigen	TEC2	10-Aug-09	2	P	43	63	1	0.53	0.92	1.1	2	17	42	10	80	10	-	-
Teigen	TEC2	10-Aug-09	3	R	156	50	1	0.38	0.41	0.63	1.31	30	70	-	40	60	-	-
Teigen	SNO2	10-Aug-09	1	P	0	21	1	1.05	1.5	1	-	34	51	30	70	-	-	-
Teigen	SNO2	10-Aug-09	2	G	21	110	1	1.05	0.96	0.49	1.33	26	60	40	60	-	-	-
Teigen	SNO2	10-Aug-09	3	R	110	78	1	0.23	0.8	1	1.5	26	101	10	90	-	-	-
Teigen	SNO2	10-Aug-09	4	P	188	40	1	1.5	2	1.5	1.5	17	100	50	50	-	-	-
Bowser	BR1	12-Jul-09	1	R	0	160	3	0.5	0.3	0.6	1.9	170	296	20	40	40	-	0
Unuk	UR1	12-Jul-09	1	P	0	38	1	0.5	0.2	0.3	0.8	18	39	60	10	30	-	-
Unuk	UR1	12-Jul-09	2	R	38	35	3	0.1	0.2	0.4	0.6	13	23	20	10	70	-	-
Unuk	UR1	12-Jul-09	3	P	73	20	2	1	1.2	0.8	1.6	13	15	20	40	40	-	-
Unuk	UR1	12-Jul-09	4	P	93	17	3	0.5	0.3	0.4	-	7	12	20	20	60	-	-
Unuk	UR1	12-Jul-09	5	R	0	100	4	-	-	-	-	60	80	10	30	60	-	-
Unuk	SUNR	12-Jul-09	1	R	0	26	4	0.2	0.3	0.2	0.7	2.7	3.9	20	10	60	10	0
Unuk	SUNR	12-Jul-09	2	G	26	16	2	0.3	0.4	0.35	0.6	10	18	70	5	15	10	0
Unuk	SUNR	12-Jul-09	3	R	42	103	5	0.3	0.5	0.25	0.8	4	5.5	20	10	30	40	0
Unuk	SUNR	12-Jul-09	4	R	0	160	5	-	-	-	-	22	22	10	10	40	40	0

**Appendix 6.3-1. Detailed Fish Habitat Assessment of Streams in Receiving and Reference Environment Watersheds**

Stream	Site	Date	Spawning Gravel		Pool Info			Instream Cover			Off Channel Habitat			Functional LWD				Riparian Cover (%)						
			Habitat Number	Type	Amount	Type	Residual	Pool (%)	Boulder (%)	Instream Veg (%)	Overhang Veg (%)	Undercut Bank (%)	LWD (%)	SWD (%)	Type	Access	Length	10-20cm	20-50cm	>50cm	Total LWD Tally	Type	Structure	Canopy
S Teigen	4001-2	5-Aug-09	1	-	-	-	10	40	-	5	-	5	-	-	-	-	1	1	1	3	MIXED	YF	1	
S Teigen	4001-2	5-Aug-09	2	-	-	S	0.2	100	30	-	5	-	-	-	-	-	-	-	-	-	MIXED	YF	1	
S Teigen	4001-2	5-Aug-09	3	-	-	-	-	-	20	-	5	-	5	-	-	-	1	1	1	3	MIXED	YF	1	
S Teigen	STE2	6-Aug-09	1	-	-	-	-	-	10	-	5	-	-	-	-	-	-	-	-	-	-	-	-	
S Teigen	STE2	6-Aug-09	2	L	-	-	-	80	-	-	-	-	10	-	-	-	1	-	-	1	-	-	-	
S Teigen	STE2	6-Aug-09	3	L	-	-	-	-	10	-	5	-	-	-	-	-	-	-	-	-	-	-	-	
Treaty	TRC2	21-Jul-09	1	-	-	-	0	2	2	0	2	0	5	-	GW	F	50	1	1	-	2	MIXED	MF	0
Unuk	ECM8	20-Jul-09	1	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	-	-	CON	MF	1	
Unuk	ECM8	20-Jul-09	2	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	CON	MF	5	
Unuk	ECM8	20-Jul-09	3	G	T	S	0.8	50	-	-	5	-	-	-	-	-	-	-	-	-	CON	MF	5	
Unuk	ECM8	20-Jul-09	4	-	-	-	-	-	15	-	5	-	-	-	-	-	2	-	-	2	CON	MF	1	
Treaty	TRC3	21-Jul-09	1	G	-	-	-	5	-	-	2	-	1	-	SC	G	100	10	-	2	MIXED	MF	-	
Treaty	TRC3	21-Jul-09	2	G	-	S	0.4	50	-	-	10	-	5	-	-	-	2	-	-	2	DEC	PS	10	
Treaty	TRC3	21-Jul-09	3	G	-	-	-	-	-	-	2	-	2	-	-	-	3	-	-	3	-	-	-	
Treaty	TRC3	21-Jul-09	4	-	-	-	-	-	-	-	10	2	2	-	SL	G	30	-	1	-	1	DEC	MF	-
Treaty	TRC3	21-Jul-09	5	-	-	-	-	-	-	-	5	2	-	-	-	-	-	2	-	2	DEC	MF	-	
Unuk	EUR2	17-Jul-09	1	R	L	-	0	10	10	0	10	0	0	-	-	-	-	-	0	0	SHR	SHR	10	
Teigen	TEC1	10-Aug-09	1	A	H	S	0.3	80	-	-	20	-	-	-	-	-	1	-	-	1	-	-	-	
Teigen	TEC1	10-Aug-09	2	A	H	-	-	-	-	-	5	-	-	Y	-	20	-	-	-	0	-	-	-	
Teigen	TEC1	10-Aug-09	3	A	H	S	0.7	50	-	-	5	-	10	-	-	-	3	-	-	1	-	-	-	
Teigen	TEC1	10-Aug-09	4	A	H	-	-	-	-	-	20	-	10	-	-	-	1	1	-	2	-	-	-	
Teigen	TEC1	10-Aug-09	5	A	-	-	-	-	-	-	40	-	-	Y	-	100	-	-	-	0	-	-	-	
Teigen	TEC1	10-Aug-09	6	A	-	-	-	-	10	-	10	-	-	-	-	-	-	-	1	1	-	-	-	
Teigen	TEC2	10-Aug-09	1	A	H	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Teigen	TEC2	10-Aug-09	2	A	H	S	0.1	60	-	-	-	-	5	-	-	-	1	1	-	2	-	-	-	
Teigen	TEC2	10-Aug-09	3	A	H	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Teigen	SNO2	10-Aug-09	1	A	-	S	1	100	-	-	-	5	10	-	-	-	1	-	2	2	-	-	-	
Teigen	SNO2	10-Aug-09	2	A	-	-	-	-	-	-	-	-	5	-	Y	-	100	1	1	-	2	-	-	
Teigen	SNO2	10-Aug-09	3	A	-	-	-	-	-	-	-	-	-	-	Y	-	100	1	1	-	2	-	-	
Teigen	SNO2	10-Aug-09	4	A	-	S	1	100	-	-	5	-	5	-	Y	-	-	1	-	-	1	-	-	
Bowser	BR1	12-Jul-09	1	R	H	-	-	0	0	0	0	0	0	-	-	-	-	-	-	-	N	INIT	0	
Unuk	UR1	12-Jul-09	1	-	-	S	0.3	30	-	-	20	-	-	-	-	-	-	-	-	-	CON	YF	5	
Unuk	UR1	12-Jul-09	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SHR	SHR	-	
Unuk	UR1	12-Jul-09	3	-	-	S	1	-	-	-	-	-	-	-	-	-	3	-	-	3	SHR	SHR	-	
Unuk	UR1	12-Jul-09	4	-	-	-	-	-	-	-	20	-	30	-	-	-	4	-	-	4	SHR	SHR	10	
Unuk	UR1	12-Jul-09	5	-	-	-	-	-	-	-	-	-	10	-	-	-	1	-	-	1	SHR	SHR	-	
Unuk	SUNR	12-Jul-09	1	N	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	SHR	SHR	0	
Unuk	SUNR	12-Jul-09	2	N	-	S	0.2	-	-	-	5	-	-	-	-	-	-	-	-	-	SHR	SHR	-	
Unuk	SUNR	12-Jul-09	3	N	-	-	-	-	-	-	10	-	-	-	-	-	4	-	-	4	SHR	SHR	10	
Unuk	SUNR	12-Jul-09	4	N	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	CON	MF	15	

Pool Type: S = scour, D = dam, N = none; Off Channel Type: N = none, SC = side channel; Riparian Type: D = deciduous, C = coniferous, M = mixed, S = shrub; Riparian Structure: YF = young forest, S = shrub, I = initial, PS = pole sapling, MF = mature forest  
Channel Access: G = accessible most flow, P = accessible at high flows; Woody Debris: SWD = small woody debris, LWD = large woody debris

## **Appendix 6.3-2**

### Receiving Environment Instream Flow Data

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	North Treaty	Hydraulic Unit Type	Pool	Type	-	1US, 2RB, 3LB, 4DS	
ILP	1050	Channel Type	CP	Make	Swoffer		
UTM	447232 6273395	Roughness (m)	0.13	Model #	2100		
Date	12-Aug-09	D95 (m)	0.65	Prop Size	2"		
Time	8:43	Channel Slope (%)	4.55	Calibration	612		
Crew	CB	Bankfull Width (m)	5.05				
Transect	1	Wetted Width (m)	4.62				
Width (m)	6.33						

Station	Distance (m)	Elevation Survey		R	B	Substrate (%)					Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)			LC	SC	LG	SG	F		Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.8	-	-	-	-	-	-	-	-	-	-	0	0
-	1.3	-	-	-	-	-	-	-	-	-	-	0	0
-	1.5	-	-	-	-	-	-	-	-	-	-	0	0
-	1.9	-	-	-	-	-	-	-	-	-	-	0	0
LWE	2.15	-	-	-	50	-	-	-	50	-	B	0	0
-	2.5	-	-	-	50	-	-	-	50	-	B	0.37	0
-	2.7	-	-	-	50	30	-	-	20	-	B	0.38	0
-	2.9	-	-	-	-	-	100	-	-	-	B	0.4	0.07
-	3.1	-	-	-	-	-	100	-	-	-	B	0.38	0.42
-	3.3	-	-	-	-	20	70	-	10	-	B	0.35	1.03
-	3.5	-	-	-	-	10	60	-	30	-	B	0.5	0.33
-	3.8	-	-	-	-	10	60	-	30	-	P	0.26	0.04
-	4	-	-	-	-	10	60	-	30	-	P	0.3	0.04
-	4.1	-	-	-	-	20	30	-	50	-	P	0.39	0.08
-	4.2	-	-	-	-	20	30	-	50	-	P	0.37	0.08
-	4.3	-	-	-	-	20	30	-	50	-	P	0.4	0.13
-	4.4	-	-	-	-	20	30	-	50	-	P	0.32	0.12
-	4.5	-	-	-	-	20	30	-	50	-	P	0.36	0.44
-	4.6	-	-	-	-	20	40	-	40	-	P	0.41	0.66
-	4.7	-	-	-	-	20	40	-	40	-	P	0.34	0.45
-	4.8	-	-	-	-	20	40	-	40	-	P	0.44	0.22
-	4.9	-	-	-	-	60	30	-	10	-	P	0.43	0.24
-	5	-	-	-	-	60	30	-	10	-	P	0.34	0.36
-	5.1	-	-	-	-	60	30	-	10	-	P	0.37	0.17
-	5.2	-	-	-	-	60	30	-	10	-	P	0.31	0.13
RWE	5.3	-	-	-	-	60	30	-	10	-	P	0	0
-	5.6	-	-	-	-	-	-	-	-	-	-	0	0
RBE	6.1	-	-	-	-	-	-	-	-	-	-	0	0
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-

Substrate: R = rock, B = boulder, LC = large cobble, SC = small cobble, LG = large gravel, SG = small gravel, F = fines  
 Cover: B = boulder, P = pool, U = undercut banks, OV = overhanging vegetation, LWD = large woody debris, SWD = small woody debris

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	North Treaty	Hydraulic Unit Type	Pool	Type	-	324,325,327,328,329	
ILP	1050	Channel Type	CP	Make	Swoffer		
UTM	447232 6273395	Roughness (m)	0.13	Model #	2100		
Date	16-Sep-09	D95 (m)	0.65	Prop Size	2"		
Time	12:00	Channel Slope (%)	4.55	Calibration	603		
Crew	CB	Bankfull Width (m)	5.05				
Transect	1	Wetted Width (m)	4.7				
Width (m)	6.33						

Station	Station Distance (m)	Elevation Survey		R	B	Substrate (%)				F	Cover Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)			LC	SC	LG	SG			Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.8	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.3	-	-	-	-	-	-	-	-	-	-	0	0
-	1.5	-	-	-	-	-	-	-	-	-	-	0	0
-	1.9	-	-	-	-	-	-	-	-	-	-	0	0
-	2.15	-	-	-	50	-	-	-	50	-	B	0.35	0
-	2.5	-	-	-	50	-	-	-	50	-	B	0.39	0
-	2.7	-	-	-	50	30	-	-	20	-	B	0	0
-	2.9	-	-	-	-	-	100	-	-	-	B	0.4	0.1
-	3.1	-	-	-	-	-	100	-	-	-	B	0.25	0.61
-	3.3	-	-	-	-	20	70	-	10	-	B	0.4	1.31
-	3.5	-	-	-	-	10	60	-	30	-	B	0.52	0.57
-	3.8	-	-	-	-	10	60	-	30	-	P	0.26	0.07
-	4	-	-	-	-	10	60	-	30	-	P	0.29	0.03
-	4.1	-	-	-	-	20	30	-	50	-	P	0.29	0.06
-	4.2	-	-	-	-	20	30	-	50	-	P	0.2	0.03
-	4.3	-	-	-	-	20	30	-	50	-	P	0.39	0.39
-	4.4	-	-	-	-	20	30	-	50	-	P	0.4	0.21
-	4.5	-	-	-	-	20	30	-	50	-	P	0.3	0.35
-	4.6	-	-	-	-	20	40	-	40	-	P	0.4	0.49
-	4.7	-	-	-	-	20	40	-	40	-	P	0.4	0.45
-	4.8	-	-	-	-	20	40	-	40	-	P	0.44	0.33
-	4.9	-	-	-	-	60	30	-	10	-	P	0.44	0.3
-	5	-	-	-	-	60	30	-	10	-	P	0.35	0.36
-	5.1	-	-	-	-	60	30	-	10	-	P	0.35	0.24
-	5.2	-	-	-	-	60	30	-	10	-	P	0.32	0.18
-	5.3	-	-	-	-	60	30	-	10	-	P	0.3	0.08
RWE	5.6	-	-	-	-	-	-	-	-	-	-	0	0
RBE	6.1	-	-	-	-	-	-	-	-	-	-	0	0
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	Swoffer		
<b>UTM</b>	447215 6273415	<b>Roughness (m)</b>	0.15	<b>Model #</b>	2100		
<b>Date</b>	12-Aug-09	<b>D95 (m)</b>	0.29	<b>Prop Size</b>	2"		
<b>Time</b>	10:07	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	612		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	9.15				
<b>Transect Width (m)</b>	2	<b>Wetted Width (m)</b>	3.78				
<b>Width (m)</b>	-						

Station	Distance (m)	Elevation Survey		R	B	LC	Substrate (%)				Cover Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)				SC	LG	SG	F		Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.2	-	-	-	-	-	-	-	-	-	-	0	0
-	1.2	-	-	-	-	-	-	-	-	-	-	0	0
-	2.2	-	-	-	-	-	-	-	-	-	-	0	0
-	3.2	-	-	-	-	-	-	-	-	-	-	0	0
-	4.2	-	-	-	-	-	-	-	-	-	-	0	0
LWE	5.2	-	-	-	-	-	90	10	-	-	-	0	0
-	5.25	-	-	-	-	-	90	10	-	-	-	0.02	0
-	5.4	-	-	-	-	-	90	10	-	-	-	0	0
-	5.55	-	-	-	-	-	90	10	-	-	-	0.04	0
-	5.7	-	-	-	-	-	90	10	-	-	-	0.06	0
-	5.85	-	-	-	-	-	100	-	-	-	-	0.1	0
-	6	-	-	-	-	-	100	-	-	-	-	0.02	0
-	6.15	-	-	-	-	-	100	-	-	-	-	0.1	0
-	6.3	-	-	-	-	-	100	-	-	-	-	0.11	0.51
-	6.45	-	-	-	-	-	100	-	-	-	-	0.12	0.97
-	6.6	-	-	-	-	-	100	-	-	-	-	0.05	0
-	6.9	-	-	-	-	-	100	-	-	-	-	0.13	1.2
-	7.05	-	-	-	-	-	100	-	-	-	-	0.16	0.38
-	7.2	-	-	-	-	-	100	-	-	-	-	0.14	0.7
-	7.4	-	-	-	-	-	100	-	-	-	-	0.15	0.24
-	7.6	-	-	-	-	-	100	-	-	-	-	0.11	0.26
-	7.8	-	-	-	-	-	100	-	-	-	-	0.16	0.79
-	8	-	-	-	-	-	100	-	-	-	-	0.17	0.67
-	8.2	-	-	-	-	-	100	-	-	-	-	0.17	0.89
-	8.4	-	-	-	-	30	70	-	-	-	-	0.17	1.16
-	8.6	-	-	-	-	30	70	-	-	-	U	0.14	0.51
-	8.8	-	-	-	-	30	70	-	-	-	U	0.07	0.02
-	8.95	-	-	-	-	-	-	-	-	-	-	0	0
RWE	9.1	-	-	-	-	30	70	-	-	-	U	0	0
RBE	9.3	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	330-333	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	-		
<b>UTM</b>	447215 6273415	<b>Roughness (m)</b>	0.15	<b>Model #</b>	-		
<b>Date</b>	16-Sep-09	<b>D95 (m)</b>	0.29	<b>Prop Size</b>	2"		
<b>Time</b>	12:40	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	9.15				
<b>Transect Width (m)</b>	2	<b>Wetted Width (m)</b>	3.7				
	-						

Station	Station	Elevation Survey			Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.2	-	-	-	-	-	-	-	-	-	-	0	0
-	1.2	-	-	-	-	-	-	-	-	-	-	0	0
-	2.2	-	-	-	-	-	-	-	-	-	-	0	0
-	3.2	-	-	-	-	-	-	-	-	-	-	0	0
-	4.2	-	-	-	-	-	-	-	-	-	-	0	0
LWE	5.2	-	-	-	-	-	90	10	-	-	-	0	0
-	5.25	-	-	-	-	-	90	10	-	-	-	0	0
-	5.4	-	-	-	-	-	90	10	-	-	-	0	0
-	5.55	-	-	-	-	-	90	10	-	-	-	0.01	0
-	5.7	-	-	-	-	-	90	10	-	-	-	0	0
-	5.85	-	-	-	-	-	100	-	-	-	-	0.1	0
-	6	-	-	-	-	-	100	-	-	-	-	0.01	0
-	6.15	-	-	-	-	-	100	-	-	-	-	0.09	0.21
-	6.3	-	-	-	-	-	100	-	-	-	-	0.1	0.56
-	6.45	-	-	-	-	-	100	-	-	-	-	0.15	1.11
-	6.6	-	-	-	-	-	100	-	-	-	-	0.07	0.95
-	6.9	-	-	-	-	-	100	-	-	-	-	0.13	1.32
-	7.05	-	-	-	-	-	100	-	-	-	-	0.06	1.4
-	7.2	-	-	-	-	-	100	-	-	-	-	0.14	1.44
-	7.4	-	-	-	-	-	100	-	-	-	-	0.15	0.57
-	7.6	-	-	-	-	-	100	-	-	-	-	0.14	0.3
-	7.8	-	-	-	-	-	100	-	-	-	-	0.23	0.72
-	8	-	-	-	-	-	100	-	-	-	-	0.25	0.55
-	8.2	-	-	-	-	-	100	-	-	-	-	0.16	0.07
-	8.4	-	-	-	-	30	70	-	-	-	-	0.23	0.84
-	8.6	-	-	-	-	30	70	-	-	-	U	0.16	0.63
-	8.8	-	-	-	-	30	70	-	-	-	U	0.1	0.02
RWE	8.95	-	-	-	-	-	-	-	-	-	-	0	0
-	9.1	-	-	-	-	30	70	-	-	-	U	0	0
RBE	9.3	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	North Treaty	Hydraulic Unit Type	Riffle	Type	-	1US, 2RB, 3LB, 4DS	
ILP	1050	Channel Type	CP	Make	swoffer		
UTM	-	Roughness (m)	0.11	Model #	2100		
Date	12-Aug-09	D95 (m)	0.36	Prop Size	2"		
Time	10:52	Channel Slope (%)	4.55	Calibration	612		
Crew	CB	Bankfull Width (m)	7.33				
Transect	3	Wetted Width (m)	3.95				
Width (m)	7.7						

Station	Station	Elevation Survey			Substrate (%)					Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.2	-	-	-	-	30	70	-	-	-	-	0	0
-	0.7	-	-	-	-	30	70	-	-	-	-	0	0
-	1.4	-	-	-	-	30	70	-	-	-	-	0	0
-	2	-	-	-	-	30	70	-	-	-	-	0	0
-	2.2	-	-	-	-	30	70	-	-	-	-	0	0
-	2.7	-	-	-	-	30	70	-	-	-	-	0	0
-	2.9	-	-	-	-	-	-	-	100	-	-	0	0
-	3.1	-	-	-	-	-	-	-	100	-	-	0	0
LWE	3.3	-	-	-	-	10	80	-	10	-	-	0	0
-	3.5	-	-	-	-	10	80	-	10	-	-	0.05	0
-	3.7	-	-	-	-	10	80	-	10	-	-	0.09	0.21
-	3.9	-	-	-	-	10	80	-	10	-	-	0.01	0
-	4.1	-	-	-	-	10	80	-	10	-	-	0.07	0.31
-	4.3	-	-	-	-	10	80	-	10	-	-	0.01	0
-	4.5	-	-	-	-	10	80	-	10	-	-	0.08	0.4
-	4.7	-	-	-	-	10	80	-	10	-	-	0.06	0.02
-	4.9	-	-	-	-	10	80	-	10	-	-	0.16	0.25
-	5.1	-	-	-	-	10	80	-	10	-	-	0.08	0.25
-	5.3	-	-	-	-	-	60	-	40	-	-	0.06	0.54
-	5.5	-	-	-	-	-	60	-	40	-	-	0.21	0.46
-	5.7	-	-	-	-	-	60	-	40	-	-	0.05	0
-	5.9	-	-	-	-	-	60	-	40	-	-	0.04	0
-	6.1	-	-	-	-	10	50	-	40	-	-	0.23	1.05
-	6.3	-	-	-	-	10	50	-	40	-	-	0.18	0.92
-	6.5	-	-	-	-	10	50	-	40	-	-	0.16	0.72
-	6.7	-	-	-	-	-	60	-	40	-	-	0.16	0.59
-	6.9	-	-	-	-	-	60	-	40	-	-	0.17	0.7
-	7.1	-	-	-	-	-	60	-	40	-	U	0.2	0.64
-	7.3	-	-	-	-	-	60	-	40	-	U	0.24	0.1
RWE	7.5	-	-	-	-	-	60	-	40	-	U	0	0
RBE	7.5	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	North Treaty	Hydraulic Unit Type	Riffle	Type	-	334-337	
ILP	-	Channel Type	CP	Make	swoffer		
UTM	-	Roughness (m)	0.11	Model #	2100		
Date	16-Sep-09	D95 (m)	0.36	Prop Size	2"		
Time	13:00	Channel Slope (%)	4.55	Calibration	603		
Crew	CB	Bankfull Width (m)	7.33				
Transect	3	Wetted Width (m)	5.1				
Width (m)	7.7						

Station	Station	Elevation Survey			Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.2	-	-	-	-	30	70	-	-	-	-	0	0
-	0.7	-	-	-	-	30	70	-	-	-	-	0	0
-	1.4	-	-	-	-	30	70	-	-	-	-	0	0
LWE	2	-	-	-	-	30	70	-	-	-	-	0	0
-	2.2	-	-	-	-	30	70	-	-	-	-	0	0
-	2.7	-	-	-	-	30	70	-	-	-	-	0	0
-	2.9	-	-	-	-	-	-	-	100	-	-	0	0
-	3.1	-	-	-	-	-	-	-	100	-	-	0	0
-	3.3	-	-	-	-	10	80	-	10	-	-	0	0
-	3.5	-	-	-	-	10	80	-	10	-	-	0.01	0
-	3.7	-	-	-	-	10	80	-	10	-	-	0.05	0.22
-	3.9	-	-	-	-	10	80	-	10	-	-	0.1	0.19
-	4.1	-	-	-	-	10	80	-	10	-	-	0	0
-	4.3	-	-	-	-	10	80	-	10	-	-	0.01	0
-	4.5	-	-	-	-	10	80	-	10	-	-	0.1	0.41
-	4.7	-	-	-	-	10	80	-	10	-	-	0.1	0
-	4.9	-	-	-	-	10	80	-	10	-	-	0.08	0.58
-	5.1	-	-	-	-	10	80	-	10	-	-	0.11	0.27
-	5.3	-	-	-	-	-	60	-	40	-	-	0.09	0.45
-	5.5	-	-	-	-	-	60	-	40	-	-	0.17	0.55
-	5.7	-	-	-	-	-	60	-	40	-	-	0.05	0.5
-	5.9	-	-	-	-	-	60	-	40	-	-	0.05	0.43
-	6.1	-	-	-	-	10	50	-	40	-	-	0.19	0.93
-	6.3	-	-	-	-	10	50	-	40	-	-	0.23	0.9
-	6.5	-	-	-	-	10	50	-	40	-	-	0.22	0.59
-	6.7	-	-	-	-	-	60	-	40	-	-	0.15	0.53
-	6.9	-	-	-	-	-	60	-	40	-	-	0.2	0.66
-	7.1	-	-	-	-	-	60	-	40	-	U	0.23	0.42
-	7.3	-	-	-	-	-	60	-	40	-	U	0.2	0.03
RWE	7.5	-	-	-	-	-	60	-	40	-	U	0	0
RBE	7.5	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Riffle	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447251 6273394	<b>Roughness (m)</b>	0.09	<b>Model #</b>	2100		
<b>Date</b>	12-Aug-09	<b>D95 (m)</b>	0.38	<b>Prop Size</b>	2"		
<b>Time</b>	11:43	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	612		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	5.7				
<b>Transect</b>	4	<b>Wetted Width (m)</b>	3.99				
<b>Width (m)</b>	6.25						

Station	Station Distance (m)	Elevation Survey		R	B	LC	Substrate (%)			F	Cover	Depth (m)	Depth-Velocity Velocity 0.4d (m/s)
		OBS Elev (m)	Elev (m)				SC	LG	SG				
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.2	-	-	-	-	-	-	-	-	-	-	0	0
LWE	0.72	-	-	-	-	-	-	-	-	-	-	0	0
-	0.9	-	-	-	-	-	40	20	40	-	-	0.05	0.39
-	1.1	-	-	-	-	-	40	20	40	-	-	0.15	0.15
-	1.3	-	-	-	-	-	80	10	10	-	-	0.14	0.31
-	1.5	-	-	-	-	-	80	10	10	-	-	0.05	0.62
-	1.7	-	-	-	-	-	80	10	10	-	-	0.17	0.26
-	1.9	-	-	-	-	-	80	10	10	-	-	0.24	0.25
-	2.1	-	-	-	-	-	80	10	10	-	-	0.28	0.55
-	2.3	-	-	-	-	-	80	10	10	-	-	0.3	0.76
-	2.5	-	-	-	-	-	80	10	10	-	-	0.23	0.57
-	2.7	-	-	-	40	-	60	-	-	-	B	0.13	0.8
-	2.9	-	-	-	50	-	60	-	10	-	B	0.11	0.62
-	3.1	-	-	-	-	-	60	-	10	-	-	0.09	0.43
-	3.3	-	-	-	-	-	60	-	10	-	-	0.12	0.15
-	3.5	-	-	-	-	-	30	10	10	-	-	0.14	0.14
-	3.7	-	-	-	-	-	30	10	10	-	-	0.17	0.29
-	3.8	-	-	-	-	-	30	10	10	-	-	0.14	0.27
-	3.9	-	-	-	-	-	30	10	10	-	-	0.14	0.28
-	4	-	-	-	-	-	30	10	10	-	-	0.13	0.26
-	4.1	-	-	-	-	-	30	10	10	-	-	0.04	0.15
-	4.2	-	-	-	-	-	30	10	10	-	-	0.11	0.01
RWE	4.5	-	-	-	-	-	30	10	10	-	-	0	0
-	4.6	-	-	-	-	-	-	-	100	-	-	0	0
-	5	-	-	-	-	-	-	-	100	-	-	0	0
RBE	5.3	-	-	-	-	-	-	-	100	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Riffle	<b>Type</b>	-	339-341	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447251 6273394	<b>Roughness (m)</b>	0.09	<b>Model #</b>	2100		
<b>Date</b>	16-Sep-09	<b>D95 (m)</b>	0.38	<b>Prop Size</b>	2"		
<b>Time</b>	13:15	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	5.7				
<b>Transect</b>	4	<b>Wetted Width (m)</b>	3.85				
<b>Width (m)</b>	6.25						

Station	Station	Elevation Survey		R	B	Substrate (%)				F	Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)			LC	SC	LG	SG		Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.2	-	-	-	-	-	-	-	-	-	-	0	0
LWE	0.72	-	-	-	-	-	-	-	-	-	-	0	0
-	0.9	-	-	-	-	-	40	20	40	-	-	0.15	0.17
-	1.1	-	-	-	-	-	40	20	40	-	-	0.15	0.21
-	1.3	-	-	-	-	-	80	10	10	-	-	0.18	0.24
-	1.5	-	-	-	-	-	80	10	10	-	-	0.08	0.54
-	1.7	-	-	-	-	-	80	10	10	-	-	0.24	0.27
-	1.9	-	-	-	-	-	80	10	10	-	-	0.24	0.4
-	2.1	-	-	-	-	-	80	10	10	-	-	0.3	0.61
-	2.3	-	-	-	-	-	80	10	10	-	-	0.29	0.8
-	2.5	-	-	-	-	-	80	10	10	-	-	0.24	0.38
-	2.7	-	-	-	40	-	60	-	-	-	B	0.18	0.97
-	2.9	-	-	-	50	-	60	-	10	-	B	0.1	0.74
-	3.1	-	-	-	-	-	60	-	10	-	-	0.1	0.43
-	3.3	-	-	-	-	-	60	-	10	-	-	0.11	0.2
-	3.5	-	-	-	-	-	30	10	10	-	-	0.19	0.17
-	3.7	-	-	-	-	-	30	10	10	-	-	0.2	0.31
-	3.8	-	-	-	-	-	30	10	10	-	-	0.16	0.31
-	3.9	-	-	-	-	-	30	10	10	-	-	0.15	0.14
-	4	-	-	-	-	-	30	10	10	-	-	0.14	0.1
-	4.1	-	-	-	-	-	30	10	10	-	-	0.15	0.07
-	4.2	-	-	-	-	-	30	10	10	-	-	0.1	0.2
-	4.5	-	-	-	-	-	30	10	10	-	-	0.01	0
RWE	4.6	-	-	-	-	-	-	-	100	-	-	0	0
-	5	-	-	-	-	-	-	-	100	-	-	0	0
RBE	5.3	-	-	-	-	-	-	-	100	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	North Treaty	Hydraulic Unit Type	Pool	Type	-	1US, 2RB, 3LB, 4DS	
ILP	1050	Channel Type	CP	Make	SWOFFER		
UTM	447288 6273347	Roughness (m)	0.12	Model #	2100		
Date	12-Aug-09	D95 (m)	0.48	Prop Size	2"		
Time	12:26	Channel Slope (%)	4.55	Calibration	612		
Crew	CB	Bankfull Width (m)	4.2				
Transect	5	Wetted Width (m)	3.61				
Width (m)	6.07						

Station	Station	Elevation Survey			Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.6	-	-	-	-	-	-	-	100	-	-	0	0
LWE	1.15	-	-	-	-	-	-	-	100	-	-	0	0
-	1.3	-	-	-	-	-	-	50	50	-	LWD, OV	0.01	0
-	1.45	-	-	-	-	-	-	50	50	-	LWD, OV	0.03	0
-	1.6	-	-	-	-	-	-	50	50	-	LWD, OV	0.06	0
-	1.75	-	-	-	-	-	-	50	50	-	LWD, OV	0.26	0
-	1.9	-	-	-	-	90	-	-	10	-	LWD, OV	0.33	0
-	2.05	-	-	-	-	90	-	-	10	-	LWD, OV	0.43	0.36
-	2.2	-	-	-	-	10	-	-	90	-	P	0.42	0.44
-	2.35	-	-	-	-	10	-	-	90	-	P	0.45	0.32
-	2.5	-	-	-	-	10	-	-	90	-	P	0.37	0.73
-	2.65	-	-	-	-	10	-	-	90	-	P, LWD	0.34	0.95
-	2.8	-	-	-	-	10	-	-	90	-	P, LWD	0.35	0.26
-	2.95	-	-	-	-	10	-	-	90	-	P, LWD	0.37	0.16
-	3.1	-	-	-	20	-	-	-	80	-	P, B	0.37	0.03
-	3.25	-	-	-	20	-	-	-	80	-	P, B	0.33	0.02
-	3.4	-	-	-	20	-	-	-	80	-	P, B	0.29	0.04
-	3.55	-	-	-	20	-	-	-	80	-	P, B	0.28	0.07
-	3.7	-	-	-	20	-	-	-	80	-	P, B	0.4	0.02
-	3.85	-	-	-	20	-	-	-	80	-	P, B	0.42	0.09
-	4	-	-	-	20	-	-	-	80	-	P, B	0.43	0.2
-	4.15	-	-	-	-	-	20	-	80	-	-	0.43	0.07
-	4.3	-	-	-	-	-	80	-	20	-	LWD	0.29	0.09
-	4.45	-	-	-	-	-	80	-	20	-	LWD	0.3	0.53
-	4.6	-	-	-	-	-	80	-	20	-	LWD	0.29	0.06
RWE	4.9	-	-	-	-	-	-	-	-	-	-	0	0
RBE	5.1	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	342-345	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447288 6273347	<b>Roughness (m)</b>	0.12	<b>Model #</b>	2100		
<b>Date</b>	16-Sep-09	<b>D95 (m)</b>	0.48	<b>Prop Size</b>	2"		
<b>Time</b>	14:00	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	4.2				
<b>Transect</b>	5	<b>Wetted Width (m)</b>	3.9				
<b>Width (m)</b>	6.07						

Station	Station		Elevation Survey		R	B	Substrate (%)				F	Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	LC			SC	LG	SG	Depth (m)			Velocity 0.4d (m/s)	
BM	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.6	-	-	-	-	-	-	-	100	-	-	-	0	0
-	1.15	-	-	-	-	-	-	-	100	-	-	-	0	0
LWE	1.3	-	-	-	-	-	-	50	50	-	LWD, OV	-	0	0
-	1.45	-	-	-	-	-	-	50	50	-	LWD, OV	-	0.02	0
-	1.6	-	-	-	-	-	-	50	50	-	LWD, OV	-	0.02	0
-	1.75	-	-	-	-	-	-	50	50	-	LWD, OV	-	0.05	0
-	1.9	-	-	-	-	90	-	-	10	-	LWD, OV	-	0.25	0
-	2.05	-	-	-	-	90	-	-	10	-	LWD, OV	-	0.25	0.57
-	2.2	-	-	-	-	10	-	-	90	-	P	-	0.46	0.45
-	2.35	-	-	-	-	10	-	-	90	-	P	-	0.46	0.36
-	2.5	-	-	-	-	10	-	-	90	-	P	-	0.4	0.66
-	2.65	-	-	-	-	10	-	-	90	-	P, LWD	-	0.47	0.66
-	2.8	-	-	-	-	10	-	-	90	-	P, LWD	-	0.37	0.63
-	2.95	-	-	-	-	10	-	-	90	-	P, LWD	-	0.37	0.29
-	3.1	-	-	-	-	20	-	-	80	-	P, B	-	0.39	0.04
-	3.25	-	-	-	-	20	-	-	80	-	P, B	-	0.25	0.05
-	3.4	-	-	-	-	20	-	-	80	-	P, B	-	0.3	0.01
-	3.55	-	-	-	-	20	-	-	80	-	P, B	-	0.36	0.04
-	3.7	-	-	-	-	20	-	-	80	-	P, B	-	0.44	0.06
-	3.85	-	-	-	-	20	-	-	80	-	P, B	-	0.46	0.18
-	4	-	-	-	-	20	-	-	80	-	P, B	-	0.44	0.05
-	4.15	-	-	-	-	-	-	20	80	-	-	-	0.45	0.08
-	4.3	-	-	-	-	-	-	80	20	-	LWD	-	0.45	0.22
-	4.45	-	-	-	-	-	-	80	20	-	LWD	-	0.34	0.78
-	4.6	-	-	-	-	-	-	80	20	-	LWD	-	0.34	0.12
RWE	4.9	-	-	-	-	-	-	-	-	-	-	-	0	0
RBE	5.1	-	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3LB, 4DS.	
<b>ILP</b>	1030	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447299 6273341	<b>Roughness (m)</b>	0.12	<b>Model #</b>	2100		
<b>Date</b>	12-Aug-09	<b>D95 (m)</b>	0.45	<b>Prop Size</b>	2"		
<b>Time</b>	13:24	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	612		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	5.6				
<b>Transect</b>	6	<b>Wetted Width (m)</b>	4.78				
<b>Width (m)</b>	7.42						

Station	Station		Elevation Survey		Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0 -	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1.3 -	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.9 -	-	-	-	-	70	30 -	-	-	-	OV	0	0
-	2.1 -	-	-	-	-	70	30 -	-	-	-	OV	0.17	0.56
-	2.3 -	-	-	-	-	70	30 -	-	-	-	OV	0.12	0.82
-	2.5 -	-	-	-	-	70	30 -	-	-	-	OV	0.23	0.3
-	2.7 -	-	-	-	-	70	30 -	-	-	-	OV	0.04	1.02
-	2.9 -	-	-	-	-	70	30 -	-	-	-	OV	0.03	0.54
-	3.1 -	-	-	-	50	50 -	-	-	-	-	OV, B	0.09	0
-	3.3 -	-	-	-	50	50 -	-	-	-	-	OV, B	0.09	0
-	3.5 -	-	-	-	50	50 -	-	-	-	-	OV, B	0	0
-	3.7 -	-	-	-	50	50 -	-	-	-	-	OV, B	0.01	0
-	3.9 -	-	-	-	50	50 -	-	-	-	-	OV, B	0.13	0
-	4.1 -	-	-	-	50	50 -	-	-	-	-	OV, B	0.14	0
-	4.3 -	-	-	-	50	50 -	-	-	-	-	OV, B	0.22	0.48
-	4.5 -	-	-	-	40	60 -	-	-	-	-	-	0.21	0.71
-	4.7 -	-	-	-	40	60 -	-	-	-	-	-	0.26	1.05
-	4.9 -	-	-	-	40	60 -	-	-	-	-	-	0.08	0
-	5.1 -	-	-	-	40	60 -	-	-	-	-	-	0.07	0.67
-	5.3 -	-	-	-	60	20 -	-	-	20 -	-	-	0.08	0.36
-	5.5 -	-	-	-	60	20 -	-	-	20 -	-	-	0.11	0.59
-	5.7 -	-	-	-	60	20 -	-	-	20 -	-	-	0.07	0
-	5.9 -	-	-	-	60	20 -	-	-	20 -	-	-	0.06	0
RWE	6.07 -	-	-	-	-	100 -	-	-	-	-	-	0	0
-	6.25 -	-	-	-	-	100 -	-	-	-	-	-	0	0
-	6.6 -	-	-	-	-	100 -	-	-	-	-	-	0	0
RBE	7 -	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	346-349	
<b>ILP</b>	1030	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447299 6273341	<b>Roughness (m)</b>	0.12	<b>Model #</b>	2100		
<b>Date</b>	16-Sep-09	<b>D95 (m)</b>	0.45	<b>Prop Size</b>	2"		
<b>Time</b>	14:28	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	5.6				
<b>Transect</b>	6	<b>Wetted Width (m)</b>	4.5				
<b>Width (m)</b>	7.42						

Station	Station	Elevation Survey			Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1.3	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.9	-	-	-	-	70	30	-	-	-	OV	0	0
-	2.1	-	-	-	-	70	30	-	-	-	OV	0.23	0.52
-	2.3	-	-	-	-	70	30	-	-	-	OV	0.16	0.94
-	2.5	-	-	-	-	70	30	-	-	-	OV	0.25	0.36
-	2.7	-	-	-	-	70	30	-	-	-	OV	0.14	0.51
-	2.9	-	-	-	-	70	30	-	-	-	OV	0.09	0.47
-	3.1	-	-	-	50	50	-	-	-	-	OV, B	0.1	0.2
-	3.3	-	-	-	50	50	-	-	-	-	OV, B	0.01	0
-	3.5	-	-	-	50	50	-	-	-	-	OV, B	0	0
-	3.7	-	-	-	50	50	-	-	-	-	OV, B	0.05	0
-	3.9	-	-	-	50	50	-	-	-	-	OV, B	0.14	0.01
-	4.1	-	-	-	50	50	-	-	-	-	OV, B	0.18	1.02
-	4.3	-	-	-	50	50	-	-	-	-	OV, B	0.22	0.72
-	4.5	-	-	-	40	60	-	-	-	-	-	0.2	0.75
-	4.7	-	-	-	40	60	-	-	-	-	-	0.14	0
-	4.9	-	-	-	40	60	-	-	-	-	-	0.02	0
-	5.1	-	-	-	40	60	-	-	-	-	-	0.25	1.09
-	5.3	-	-	-	60	20	-	-	20	-	-	0.1	0.42
-	5.5	-	-	-	60	20	-	-	20	-	-	0.1	0.85
-	5.7	-	-	-	60	20	-	-	20	-	-	0.11	0.98
-	5.9	-	-	-	60	20	-	-	20	-	-	0.1	0
-	6.07	-	-	-	-	100	-	-	-	-	-	0	0
RWE	6.25	-	-	-	-	100	-	-	-	-	-	0	0
-	6.6	-	-	-	-	100	-	-	-	-	-	0	0
RBE	7	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447286 6273399	<b>Roughness (m)</b>	0.14	<b>Model #</b>	2100		
<b>Date</b>	12-Aug-09	<b>D95 (m)</b>	0.48	<b>Prop Size</b>	2"		
<b>Time</b>	14:05	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	612		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	6.45				
<b>Transect Width (m)</b>	7	<b>Wetted Width (m)</b>	6.19				
<b>Width (m)</b>	9.42						

Station	Station Distance (m)	Elevation Survey		R	B	Substrate (%)				Cover Cover	Depth-Velocity		
		OBS Elev (m)	Elev (m)			LC	SC	LG	SG		F	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.4	-	-	-	-	-	-	-	-	-	-	0	0
-	1.7	-	-	-	-	-	-	30	70	-	LWD	0.07	0
-	2	-	-	-	-	-	-	30	70	-	LWD	0.02	0
-	2.3	-	-	-	-	-	60	-	40	-	LWD	0.03	0
-	2.6	-	-	-	-	-	60	-	40	-	LWD	0.11	0.04
-	2.9	-	-	-	-	70	30	-	-	-	-	0.26	0.12
-	3.2	-	-	-	-	70	30	-	-	-	-	0.27	0.8
-	3.5	-	-	-	-	70	30	-	-	-	-	0.27	0.68
-	3.8	-	-	-	-	70	-	-	30	-	P	0.34	0.14
-	4.1	-	-	-	-	30	-	-	70	-	P	0.3	0.01
-	4.4	-	-	-	-	30	-	-	70	-	P	0.33	0.15
-	4.7	-	-	-	-	30	-	-	70	-	P	0.39	0.11
-	5	-	-	-	-	-	10	-	90	-	P	0.42	0
-	5.3	-	-	-	-	-	10	-	90	-	P	0.36	0.01
-	5.6	-	-	-	-	-	10	-	90	-	P	0.36	0.04
-	5.9	-	-	-	-	-	10	-	90	-	P	0.4	0.13
-	6.2	-	-	-	-	-	10	-	90	-	P	0.41	0.38
-	6.5	-	-	-	50	30	-	-	20	-	P	0.4	0.42
-	6.8	-	-	-	50	10	-	-	40	-	P	0.34	0.08
-	7.1	-	-	-	50	10	-	-	40	-	P	0.24	0
-	7.3	-	-	-	50	10	-	-	40	-	P	0.19	0.07
RWE	7.34	-	-	-	-	-	-	-	-	-	-	0	0
-	7.43	-	-	-	-	-	-	-	-	-	-	0	0
-	8	-	-	-	100	-	-	-	-	-	-	0	0
-	8.5	-	-	-	100	-	-	-	-	-	-	0	0
RBE	9	-	-	-	-	-	-	-	-	-	-	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	350-353	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447286 6273399	<b>Roughness (m)</b>	0.14	<b>Model #</b>	2100		
<b>Date</b>	16-Sep-09	<b>D95 (m)</b>	0.48	<b>Prop Size</b>	2"		
<b>Time</b>	14:30	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	6.45				
<b>Transect</b>	7	<b>Wetted Width (m)</b>	6.7				
<b>Width (m)</b>	9.42						

Station	Station Distance (m)	Elevation Survey		R	B	LC	Substrate (%)				Cover Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)				SC	LG	SG	F		Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.4	-	-	-	-	-	-	-	-	-	-	0	0
-	1.7	-	-	-	-	-	-	30	70	-	LWD	0.05	0
-	2	-	-	-	-	-	-	30	70	-	LWD	0.05	0
-	2.3	-	-	-	-	-	-	60	40	-	LWD	0.05	0
-	2.6	-	-	-	-	-	-	60	40	-	LWD	0.15	0.09
-	2.9	-	-	-	-	70	30	-	-	-	-	0.28	0.35
-	3.2	-	-	-	-	70	30	-	-	-	-	0.28	1.02
-	3.5	-	-	-	-	70	30	-	-	-	-	0.34	0.75
-	3.8	-	-	-	-	70	-	-	30	-	P	0.4	0.05
-	4.1	-	-	-	-	30	-	-	70	-	P	0.36	0.13
-	4.4	-	-	-	-	30	-	-	70	-	P	0.32	0.16
-	4.7	-	-	-	-	30	-	-	70	-	P	0.43	0
-	5	-	-	-	-	-	10	-	90	-	P	0.45	0.05
-	5.3	-	-	-	-	-	10	-	90	-	P	0.41	0.03
-	5.6	-	-	-	-	-	10	-	90	-	P	0.4	0.03
-	5.9	-	-	-	-	-	10	-	90	-	P	0.43	0.27
-	6.2	-	-	-	-	-	10	-	90	-	P	0.45	0.45
-	6.5	-	-	-	50	30	-	-	20	-	P	0.4	0.13
-	6.8	-	-	-	50	10	-	-	40	-	P	0.36	0.02
-	7.1	-	-	-	50	10	-	-	40	-	P	0.29	0.01
-	7.3	-	-	-	50	10	-	-	40	-	P	0.24	0.04
-	7.34	-	-	-	-	-	-	-	-	-	-	0.02	0
RWE	7.43	-	-	-	-	-	-	-	-	-	-	0	0
-	8	-	-	-	100	-	-	-	-	-	-	0	0
-	8.5	-	-	-	100	-	-	-	-	-	-	0	0
RBE	9	-	-	-	-	-	-	-	-	-	-	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	North Treaty	Hydraulic Unit Type	Riffle	Type	-	1US, 2RB, 3LB, 4DS	
ILP	1050	Channel Type	CP	Make	SWOFFER		
UTM	447234 6273430	Roughness (m)	0.06	Model #	2100		
Date	12-Aug-09	D95 (m)	0.25	Prop Size	2"		
Time	15:26	Channel Slope (%)	4.55	Calibration	612		
Crew	CB	Bankfull Width (m)	6.01				
Transect	8	Wetted Width (m)	3.3				
Width (m)	7.4						

Station	Station	Elevation Survey			Substrate (%)					Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.3	-	-	-	-	-	-	-	-	-	-	0	0
LWE	0.55	-	-	-	-	-	-	-	-	-	-	0	0
-	0.7	-	-	-	-	-	40	40	20	-	OV	0.12	0
-	0.85	-	-	-	-	-	40	40	20	-	OV	0.13	0.01
-	1	-	-	-	-	-	40	40	20	-	OV	0.26	0.14
-	1.15	-	-	-	-	-	40	40	20	-	OV	0.26	0.22
-	1.3	-	-	-	-	-	40	40	20	-	OV	0.24	0.25
-	1.45	-	-	-	-	-	20	60	20	-	OV	0.29	0.38
-	1.6	-	-	-	-	-	60	20	20	-	-	0.27	0.48
-	1.75	-	-	-	-	-	60	20	20	-	-	0.27	0.38
-	1.9	-	-	-	-	-	60	20	20	-	-	0.34	0.31
-	2.05	-	-	-	-	10	80	10	-	-	-	0.29	0.4
-	2.2	-	-	-	-	10	80	10	-	-	-	0.37	0.57
-	2.35	-	-	-	-	10	80	10	-	-	-	0.33	0.63
-	2.5	-	-	-	-	10	80	10	-	-	-	0.37	0.45
-	2.65	-	-	-	-	90	10	-	-	-	-	0.05	0.3
-	2.8	-	-	-	-	90	10	-	-	-	-	0.03	0.39
-	2.95	-	-	-	-	90	10	-	-	-	-	0.13	0.54
-	3.1	-	-	-	-	90	10	-	-	-	-	0.1	0.14
-	3.25	-	-	-	-	90	10	-	-	-	-	0.07	0
-	3.4	-	-	-	-	90	10	-	-	-	-	0	0
-	3.55	-	-	-	-	90	10	-	-	-	-	0.03	0
RWE	3.7	-	-	-	-	90	10	-	-	-	-	0.01	0
-	3.92	-	-	-	-	90	10	-	-	-	-	0	0
-	4.4	-	-	-	-	-	-	40	60	-	-	0	0
-	4.9	-	-	-	-	-	-	40	60	-	-	0	0
-	5.4	-	-	-	-	-	-	40	60	-	-	0	0
-	5.9	-	-	-	-	-	-	-	100	-	-	0	0
RBE	6.2	-	-	-	-	-	-	-	100	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Riffle	<b>Type</b>	-	358-361	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447234 6273430	<b>Roughness (m)</b>	0.06	<b>Model #</b>	2100		
<b>Date</b>	16-Sep-09	<b>D95 (m)</b>	0.25	<b>Prop Size</b>	2"		
<b>Time</b>	15:30	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	6.01				
<b>Transect</b>	8	<b>Wetted Width (m)</b>	3.5				
<b>Width (m)</b>	7.4						

Station	Station	Elevation Survey			Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.3	-	-	-	-	-	-	-	-	-	-	0	0
LWE	0.55	-	-	-	-	-	-	-	-	-	-	0	0
-	0.7	-	-	-	-	-	40	40	20	-	OV	0.15	0
-	0.85	-	-	-	-	-	40	40	20	-	OV	0.2	0.05
-	1	-	-	-	-	-	40	40	20	-	OV	0.27	0.23
-	1.15	-	-	-	-	-	40	40	20	-	OV	0.27	0.28
-	1.3	-	-	-	-	-	40	40	20	-	OV	0.32	0.36
-	1.45	-	-	-	-	-	20	60	20	-	OV	0.35	0.47
-	1.6	-	-	-	-	-	60	20	20	-	-	0.37	0.39
-	1.75	-	-	-	-	-	60	20	20	-	-	0.3	0.5
-	1.9	-	-	-	-	-	60	20	20	-	-	0.3	0.41
-	2.05	-	-	-	-	10	80	10	-	-	-	0.35	0.67
-	2.2	-	-	-	-	10	80	10	-	-	-	0.3	0.79
-	2.35	-	-	-	-	10	80	10	-	-	-	0.35	0.76
-	2.5	-	-	-	-	10	80	10	-	-	-	0.38	0.67
-	2.65	-	-	-	-	90	10	-	-	-	-	0.27	0
-	2.8	-	-	-	-	90	10	-	-	-	-	0.25	0
-	2.95	-	-	-	-	90	10	-	-	-	-	0.25	0.08
-	3.1	-	-	-	-	90	10	-	-	-	-	0.22	0.02
-	3.25	-	-	-	-	90	10	-	-	-	-	0.08	0.11
-	3.4	-	-	-	-	90	10	-	-	-	-	0.08	0
-	3.55	-	-	-	-	90	10	-	-	-	-	0.04	0
-	3.7	-	-	-	-	90	10	-	-	-	-	0.04	0
RWE	3.92	-	-	-	-	90	10	-	-	-	-	0	0
-	4.4	-	-	-	-	-	-	40	60	-	-	0	0
-	4.9	-	-	-	-	-	-	40	60	-	-	0	0
-	5.4	-	-	-	-	-	-	40	60	-	-	0	0
-	5.9	-	-	-	-	-	-	-	100	-	-	0	0
RBE	6.2	-	-	-	-	-	-	-	100	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	North Treaty	Hydraulic Unit Type	Cascade	Type	-	1US, 2RB, 3LB, 4DS	
ILP	1050	Channel Type	CP	Make	SWOFFER		
UTM	447231 6273502	Roughness (m)	0.18	Model #	2100		
Date	12-Aug-09	D95 (m)	0.61	Prop Size	2"		
Time	16:04	Channel Slope (%)	4.55	Calibration	615		
Crew	CB	Bankfull Width (m)	6.7				
Transect	9	Wetted Width (m)	4.05				
Width (m)	7.58						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.4	-	-	-	-	-	-	-	-	-	-	0	0
-	1.4	-	-	-	-	-	-	-	-	-	-	0	0
-	1.8	-	-	-	-	-	-	-	-	-	-	0	0
LWE	2.3	-	-	-	-	-	-	-	-	-	-	0	0
-	2.5	-	-	-	-	90	-	10	-	-	OV	0.01	0
-	2.7	-	-	-	-	90	-	10	-	-	OV	0	0
-	2.9	-	-	-	-	90	-	10	-	-	OV	0.06	0.45
-	3.1	-	-	-	-	90	-	10	-	-	OV	0.11	0.35
-	3.3	-	-	-	-	90	-	10	-	-	OV	0.15	0.13
-	3.5	-	-	-	50	50	-	10	-	-	OV	0.11	1.13
-	3.7	-	-	-	50	50	-	-	-	-	B	0.11	1.02
-	3.9	-	-	-	50	50	-	-	-	-	B	0.11	0.97
-	4.1	-	-	-	50	50	-	-	-	-	B	0.22	0.68
-	4.3	-	-	-	50	50	-	-	-	-	B	0.27	0.26
-	4.5	-	-	-	50	50	-	-	-	-	B	0.26	0.83
-	4.7	-	-	-	50	50	-	-	-	-	B	0.24	0.44
-	4.9	-	-	-	50	50	-	-	-	-	B	0.17	0.05
-	5.1	-	-	-	50	50	-	-	-	-	B	0.21	0.09
-	5.2	-	-	-	50	50	-	-	-	-	B	0.33	0.26
-	5.3	-	-	-	50	50	-	-	-	-	B	0.21	0.44
-	5.4	-	-	-	50	50	-	-	-	-	B	0.14	0.53
-	5.5	-	-	-	50	50	-	-	-	-	B	0.12	0.77
-	5.6	-	-	-	50	50	-	-	-	-	B	0.09	0.42
-	5.8	-	-	-	50	50	-	-	-	-	B	0.08	0.01
RWE	6.1	-	-	-	-	-	-	-	-	-	-	0	0
-	6.6	-	-	-	-	-	-	-	-	-	-	0	0
RBE	7.2	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	354-357	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447231 6273502	<b>Roughness (m)</b>	0.18	<b>Model #</b>	2100		
<b>Date</b>	16-Sep-09	<b>D95 (m)</b>	0.61	<b>Prop Size</b>	2"		
<b>Time</b>	15:00	<b>Channel Slope (%)</b>	4.55	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	6.7				
<b>Transect</b>	9	<b>Wetted Width (m)</b>	4.2				
<b>Width (m)</b>	7.58						

Station	Elevation Survey		R	B	LC	Substrate (%)				Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)				Elev (m)	SC	LG	SG		F	Depth (m)
BM	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-
LBE	0.4	-	-	-	-	-	-	-	-	-	0	0
-	1.4	-	-	-	-	-	-	-	-	-	0	0
-	1.8	-	-	-	-	-	-	-	-	-	0	0
LWE	2.3	-	-	-	-	-	-	-	-	-	0	0
-	2.5	-	-	-	90	-	10	-	-	OV	0	0
-	2.7	-	-	-	90	-	10	-	-	OV	0.01	0
-	2.9	-	-	-	90	-	10	-	-	OV	0.09	0.56
-	3.1	-	-	-	90	-	10	-	-	OV	0.14	0
-	3.3	-	-	-	90	-	10	-	-	OV	0.12	0.31
-	3.5	-	-	50	50	-	10	-	-	OV	0.14	1.44
-	3.7	-	-	50	50	-	-	-	-	B	0.12	0.93
-	3.9	-	-	50	50	-	-	-	-	B	0.14	1.13
-	4.1	-	-	50	50	-	-	-	-	B	0.15	0.85
-	4.3	-	-	50	50	-	-	-	-	B	0.28	0.52
-	4.5	-	-	50	50	-	-	-	-	B	0.24	0.91
-	4.7	-	-	50	50	-	-	-	-	B	0.23	0.31
-	4.9	-	-	50	50	-	-	-	-	B	0.24	0.29
-	5.1	-	-	50	50	-	-	-	-	B	0.05	0.34
-	5.2	-	-	50	50	-	-	-	-	B	0.05	0.39
-	5.3	-	-	50	50	-	-	-	-	B	-	-
-	5.4	-	-	50	50	-	-	-	-	B	0.14	0.68
-	5.5	-	-	50	50	-	-	-	-	B	0.15	1.5
-	5.6	-	-	50	50	-	-	-	-	B	0.19	0
-	5.8	-	-	50	50	-	-	-	-	B	0.16	0.05
RWE	6.1	-	-	-	-	-	-	-	-	-	0	0
-	6.6	-	-	-	-	-	-	-	-	-	0	0
RBE	7.2	-	-	-	-	-	-	-	-	-	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447411 6273158	<b>Roughness (m)</b>	0.15	<b>Model #</b>	2100		
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.48	<b>Prop Size</b>	2"		
<b>Time</b>	8:17	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	615		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	6.8				
<b>Transect</b>	10	<b>Wetted Width (m)</b>	5.25				
<b>Width (m)</b>	7.63						

Station	Station Distance (m)	Elevation Survey		R	B	LC	Substrate (%)				Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)				SC	LG	SG	F		Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.2	-	-	-	-	-	-	-	-	100	-	0	0
-	0.8	-	-	-	-	-	-	-	-	100	-	0	0
-	1	-	-	-	-	-	-	-	-	100	-	0	0
LWE	1.1	-	-	-	-	-	-	-	-	100	-	0	0
-	1.35	-	-	-	-	-	-	-	25	75	OV, LWD	0.13	0.22
-	1.6	-	-	-	-	-	25	-	75	-	OV, LWD	0.08	0.62
-	1.85	-	-	-	-	-	25	-	75	-	OV, LWD	0.04	0.6
-	2.1	-	-	-	50	50	-	-	-	-	OV, B	0.05	0.52
-	2.35	-	-	-	50	50	-	-	-	-	OV, B	0.07	0.26
-	2.6	-	-	-	50	50	-	-	-	-	OV, B	0.1	0.31
-	2.85	-	-	-	-	50	50	-	-	-	-	0.21	0.12
-	3.1	-	-	-	50	50	-	-	-	-	-	0.15	0.47
-	3.35	-	-	-	50	50	-	-	-	-	-	0.32	0.54
-	3.6	-	-	-	50	50	-	-	-	-	-	0.27	0.2
-	3.85	-	-	-	50	50	-	-	-	-	-	0.08	1.32
-	4.1	-	-	-	50	50	-	-	-	-	B	0.11	1.07
-	4.35	-	-	-	50	50	-	-	-	-	B	0.17	0.64
-	4.6	-	-	-	50	50	-	-	-	-	B	0.13	0.04
-	4.85	-	-	-	50	50	-	-	-	-	-	0.04	0
-	5.1	-	-	-	-	-	75	-	25	-	OV	0.07	0
-	5.35	-	-	-	-	-	75	-	25	-	OV	0	0
-	5.6	-	-	-	-	-	75	-	25	-	OV	0.03	0
-	5.85	-	-	-	-	-	75	-	25	-	OV	0.02	0
-	5.9	-	-	-	-	-	75	-	25	-	OV	0.01	0
RWE	6.15	-	-	-	-	-	30	3	70	-	-	0	0
-	6.55	-	-	-	-	-	-	-	-	-	-	0	0
RBE	7.1	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	362-365	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447411 6273158	<b>Roughness (m)</b>	0.15	<b>Model #</b>	2100		
<b>Date</b>	17-Sep-09	<b>D95 (m)</b>	0.48	<b>Prop Size</b>	2"		
<b>Time</b>	8:30	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	6.8				
<b>Transect</b>	10	<b>Wetted Width (m)</b>	5.2				
<b>Width (m)</b>	7.63						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.2	-	-	-	-	-	-	-	-	100	-	0	0
-	0.8	-	-	-	-	-	-	-	-	100	-	0	0
LWE	1	-	-	-	-	-	-	-	-	100	-	0	0
-	1.1	-	-	-	-	-	-	-	-	100	-	0.1	0.11
-	1.35	-	-	-	-	-	-	-	25	75	OV, LWD	0.14	0.06
-	1.6	-	-	-	-	-	25	-	75	-	OV, LWD	0.03	0
-	1.85	-	-	-	-	-	25	-	75	-	OV, LWD	0.06	0.46
-	2.1	-	-	-	50	50	-	-	-	-	OV, B	0.06	0.29
-	2.35	-	-	-	50	50	-	-	-	-	OV, B	0.07	0.27
-	2.6	-	-	-	50	50	-	-	-	-	OV, B	0.16	0.28
-	2.85	-	-	-	-	50	50	-	-	-	-	0.2	0.09
-	3.1	-	-	-	50	50	-	-	-	-	-	0.25	0.39
-	3.35	-	-	-	50	50	-	-	-	-	-	0.3	0.32
-	3.6	-	-	-	50	50	-	-	-	-	-	0.3	0.49
-	3.85	-	-	-	50	50	-	-	-	-	-	0.1	1.39
-	4.1	-	-	-	50	50	-	-	-	-	B	0.1	1.18
-	4.35	-	-	-	50	50	-	-	-	-	B	0.2	0.92
-	4.6	-	-	-	50	50	-	-	-	-	B	0.16	0.35
-	4.85	-	-	-	50	50	-	-	-	-	-	0.1	0
-	5.1	-	-	-	-	-	75	-	25	-	OV	0.08	0
-	5.35	-	-	-	-	-	75	-	25	-	OV	0	0
-	5.6	-	-	-	-	-	75	-	25	-	OV	0.03	0
-	5.85	-	-	-	-	-	75	-	25	-	OV	0.05	0
-	5.9	-	-	-	-	-	75	-	25	-	OV	0.01	0
RWE	6.15	-	-	-	-	-	30	3	70	-	-	0	0
-	6.55	-	-	-	-	-	-	-	-	-	-	0	0
RBE	7.1	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos						
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Typ</b>	Pool	<b>Type</b>		1US, 2RB, 3LB, 4DS						
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER							
<b>UTM</b>	447344 6273100	<b>Roughness (m)</b>	0.08	<b>Model #</b>	2100							
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.28	<b>Prop Size</b>	2"							
<b>Time</b>	9:03	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	615							
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	8.3									
<b>Transect</b>	11	<b>Wetted Width (m)</b>	4.25									
<b>Width (m)</b>	12.71											

Station	Station	Elevation Survey			Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	7	-	-	-	100	-	-	-	-	-	-	0	0
LWE	7.1	-	-	-	-	-	-	-	-	-	-	0	0
-	7.2	-	-	-	-	25	50	25	-	-	P	0.52	0.39
-	7.4	-	-	-	-	25	50	25	-	-	P	0.43	0.32
-	7.6	-	-	-	-	25	50	25	-	-	P	0.44	0.1
-	7.8	-	-	-	-	25	50	25	-	-	P	0.44	0.05
-	8	-	-	-	-	25	50	25	-	-	P	0.5	0.06
-	8.2	-	-	-	-	25	50	25	-	-	P	0.32	0.05
-	8.4	-	-	-	-	25	50	25	-	-	P	0.56	0.07
-	8.6	-	-	-	-	25	50	25	-	-	P	0.52	0.09
-	8.8	-	-	-	-	40	30	20	-	10	P	0.49	0.07
-	9	-	-	-	-	40	30	20	-	10	P	0.48	0.08
-	9.2	-	-	-	-	40	30	20	-	10	P	0.46	0.01
-	9.4	-	-	-	-	40	30	20	-	10	P	0.48	0.02
-	9.6	-	-	-	-	40	30	20	-	10	P	0.56	0.04
-	9.8	-	-	-	-	40	30	20	-	10	P	0.44	0.08
-	10	-	-	-	-	40	30	20	-	10	P	0.46	0.01
-	10.2	-	-	-	-	40	30	20	-	10	P	0.41	0
-	10.4	-	-	-	-	50	-	25	25	-	P, B	0.37	0.1
-	10.6	-	-	-	-	50	-	25	25	-	P, B	0.31	0.1
-	10.8	-	-	-	-	50	-	25	25	-	P, B	0.06	0.04
-	11	-	-	-	-	50	-	25	25	-	P, B	0	0
RWE	11.2	-	-	-	-	50	-	25	25	-	P, B	0	0
-	11.5	-	-	-	-	-	40	-	10	50	-	0	0
RBE	12.2	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	366-369	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447344 6273100	<b>Roughness (m)</b>	0.08	<b>Model #</b>	2100		
<b>Date</b>	17-Sep-09	<b>D95 (m)</b>	0.28	<b>Prop Size</b>	2"		
<b>Time</b>	9:00	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	8.3				
<b>Transect</b>	11	<b>Wetted Width (m)</b>	4.5				
<b>Width (m)</b>	12.71						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	7	-	-	-	100	-	-	-	-	-	-	0	0
LWE	7.1	-	-	-	-	-	-	-	-	-	-	0	0
-	7.2	-	-	-	-	25	50	25	-	-	P	0.75	0.47
-	7.4	-	-	-	-	25	50	25	-	-	P	0.45	0.36
-	7.6	-	-	-	-	25	50	25	-	-	P	0.45	0.15
-	7.8	-	-	-	-	25	50	25	-	-	P	0.45	0.06
-	8	-	-	-	-	25	50	25	-	-	P	0.27	0.05
-	8.2	-	-	-	-	25	50	25	-	-	P	0.55	0.03
-	8.4	-	-	-	-	25	50	25	-	-	P	0.53	0.09
-	8.6	-	-	-	-	25	50	25	-	-	P	0.54	0.07
-	8.8	-	-	-	-	40	30	20	-	10	P	0.5	0.05
-	9	-	-	-	-	40	30	20	-	10	P	0.48	0.07
-	9.2	-	-	-	-	40	30	20	-	10	P	0.43	0.02
-	9.4	-	-	-	-	40	30	20	-	10	P	0.49	0.03
-	9.6	-	-	-	-	40	30	20	-	10	P	0.54	0.11
-	9.8	-	-	-	-	40	30	20	-	10	P	0.44	0.05
-	10	-	-	-	-	40	30	20	-	10	P	0.46	0.1
-	10.2	-	-	-	-	40	30	20	-	10	P	0.34	0.12
-	10.4	-	-	-	50	-	-	25	25	-	P, B	0.29	0.14
-	10.6	-	-	-	50	-	-	25	25	-	P, B	0.28	0
-	10.8	-	-	-	50	-	-	25	25	-	P, B	0.07	0.03
-	11	-	-	-	50	-	-	25	25	-	P, B	0	0
RWE	11.2	-	-	-	50	-	-	25	25	-	P, B	0	0
-	11.5	-	-	-	-	-	40	-	10	50	-	0	0
RBE	12.2	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Riffle	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447381 6273053	<b>Roughness (m)</b>	0.03	<b>Model #</b>	2100		
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.55	<b>Prop Size</b>	2"		
<b>Time</b>	10:00	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	615		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	8.4				
<b>Transect Width (m)</b>	12	<b>Wetted Width (m)</b>	6.25				
	10						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.8	-	-	-	-	-	-	-	30	70	-	0	0
-	1.4	-	-	-	-	-	-	-	30	70	-	0	0
-	1.8	-	-	-	-	-	-	-	30	70	-	0	0
-	2	-	-	-	-	-	-	-	30	70	-	0	0
LWE	2.07	-	-	-	-	-	-	-	-	-	OV	0	0
-	2.2	-	-	-	-	-	10	70	20	-	OV	0.05	0
-	2.5	-	-	-	-	-	10	70	20	-	OV	0.04	0.41
-	2.8	-	-	-	-	-	50	40	10	-	OV	0.14	0.69
-	3.1	-	-	-	-	-	50	40	10	-	OV	0.11	1
-	3.4	-	-	-	-	-	50	40	10	-	-	0.09	1.15
-	3.7	-	-	-	-	-	50	40	10	-	-	0.1	0.22
-	4	-	-	-	-	-	-	50	50	-	-	0.03	0.8
-	4.3	-	-	-	-	-	-	50	50	-	-	0	0
-	4.6	-	-	-	-	-	-	50	50	-	-	0	0
-	4.9	-	-	-	-	-	-	-	30	70	-	0.04	0
-	5.2	-	-	-	-	-	-	-	30	70	-	0.11	0
-	5.5	-	-	-	-	-	-	-	30	70	-	0.15	0.05
-	5.8	-	-	-	-	-	-	70	30	-	-	0.24	0.2
-	6.1	-	-	-	-	-	-	70	30	-	-	0.24	0.06
-	6.4	-	-	-	40	-	-	60	-	-	B	0.31	0.31
-	6.7	-	-	-	50	-	50	-	-	-	B	0.36	0.13
-	7	-	-	-	50	-	50	-	-	-	B	0.31	0.37
-	7.3	-	-	-	100	-	-	-	-	-	B	0	0
-	7.6	-	-	-	50	-	50	-	-	-	B	0.14	0
-	7.9	-	-	-	50	-	50	-	-	-	B	0	0
-	8.2	-	-	-	50	-	50	-	-	-	B	0.01	0
RWE	8.46	-	-	-	50	-	50	-	-	-	B	0	0
-	8.51	-	-	-	-	-	60	-	20	20	-	0	0
-	9	-	-	-	-	-	60	-	20	20	-	0	0
RBE	9.4	-	-	-	-	-	60	-	20	20	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Riffle	<b>Type</b>	-	378-381	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447381 6273053	<b>Roughness (m)</b>	0.03	<b>Model #</b>	2100		
<b>Date</b>	17-Sep-09	<b>D95 (m)</b>	0.55	<b>Prop Size</b>	2"		
<b>Time</b>	10:40	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	8.4				
<b>Transect Width (m)</b>	12	<b>Wetted Width (m)</b>	6.65				
	10						

Station	Station	Elevation Survey			Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.8	-	-	-	-	-	-	-	30	70	-	0	0
-	1.4	-	-	-	-	-	-	-	30	70	-	0	0
-	1.8	-	-	-	-	-	-	-	30	70	-	0	0
LWE	2	-	-	-	-	-	-	-	30	70	-	0	0
-	2.07	-	-	-	-	-	-	-	-	-	OV	0.02	0
-	2.2	-	-	-	-	-	10	70	20	-	OV	0.05	0
-	2.5	-	-	-	-	-	10	70	20	-	OV	0.05	0.16
-	2.8	-	-	-	-	-	50	40	10	-	OV	0.15	0
-	3.1	-	-	-	-	-	50	40	10	-	OV	0.08	1.12
-	3.4	-	-	-	-	-	50	40	10	-	-	0.11	0
-	3.7	-	-	-	-	-	50	40	10	-	-	0.08	0.29
-	4	-	-	-	-	-	-	50	50	-	-	0.02	0
-	4.3	-	-	-	-	-	-	50	50	-	-	0	0
-	4.6	-	-	-	-	-	-	50	50	-	-	0	0
-	4.9	-	-	-	-	-	-	-	30	70	-	0.05	0
-	5.2	-	-	-	-	-	-	-	30	70	-	0.13	0.09
-	5.5	-	-	-	-	-	-	-	30	70	-	0.16	0.02
-	5.8	-	-	-	-	-	-	70	30	-	-	0.25	0.29
-	6.1	-	-	-	-	-	-	70	30	-	-	0.3	0.15
-	6.4	-	-	-	-	-	-	60	-	-	B	0.33	0.37
-	6.7	-	-	-	-	-	50	-	-	-	B	0.41	0.44
-	7	-	-	-	-	-	50	-	-	-	B	0.22	0.18
-	7.3	-	-	-	-	-	100	-	-	-	B	0	0
-	7.6	-	-	-	-	-	50	-	-	-	B	0.11	0
-	7.9	-	-	-	-	-	50	-	-	-	B	0.04	0.27
-	8.2	-	-	-	-	-	50	-	-	-	B	0.01	0
-	8.46	-	-	-	-	-	50	-	-	-	B	0	0
RWE	8.51	-	-	-	-	-	60	-	20	20	-	0	0
-	9	-	-	-	-	-	60	-	20	20	-	0	0
RBE	9.4	-	-	-	-	-	60	-	20	20	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Riffle	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447384 6273064	<b>Roughness (m)</b>	0.1	<b>Model #</b>	2100		
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.5	<b>Prop Size</b>	2"		
<b>Time</b>	10:49	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	615		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	5.5				
<b>Transect</b>	13	<b>Wetted Width (m)</b>	4.03				
<b>Width (m)</b>	6.37						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1.4	-	-	-	-	-	-	-	-	-	-	0	0
-	1.5	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.55	-	-	-	-	-	-	-	-	-	OV	0	0
-	1.7	-	-	-	-	-	-	-	20	80	OV	0.21	0
-	1.9	-	-	-	-	-	-	-	20	80	OV	0.25	0
-	2.1	-	-	-	-	-	-	-	20	80	OV	0.31	0
-	2.3	-	-	-	-	-	-	-	20	80	OV	0.31	0
-	2.6	-	-	-	-	-	-	-	20	80	OV	0.29	0.2
-	2.8	-	-	-	-	20	60	-	20	-	OV	0.37	0.26
-	3	-	-	-	-	20	60	-	20	-	OV	0.34	0.26
-	3.2	-	-	-	-	20	60	-	20	-	OV	0.34	0.26
-	3.4	-	-	-	-	20	60	-	20	-	OV	0.31	0.29
-	3.6	-	-	-	-	20	60	-	20	-	OV	0.27	0.36
-	3.8	-	-	-	50	50	-	-	-	-	B	0.25	0.54
-	4	-	-	-	50	50	-	-	-	-	B	0.09	0.66
-	4.2	-	-	-	50	50	-	-	-	-	B	0.07	0.62
-	4.4	-	-	-	50	50	-	-	-	-	B	0.32	0.43
-	4.6	-	-	-	50	50	-	-	-	-	B	0.36	0.44
-	4.8	-	-	-	50	50	-	-	-	-	B	0.26	0.26
-	4.9	-	-	-	50	50	-	-	-	-	B	0.11	0
-	5	-	-	-	50	50	-	-	-	-	B	0.06	0
-	5.1	-	-	-	50	50	-	-	-	-	B	0.1	0
-	5.3	-	-	-	50	50	-	-	-	-	B	0.03	0
-	5.4	-	-	-	-	-	-	-	-	-	-	0	0
RWE	5.6	-	-	-	50	50	-	-	-	-	B	0	0
RBE	5.8	-	-	-	-	-	-	-	-	-	-	-	-
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Riffle	<b>Type</b>	-	382-385	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447384 6273064	<b>Roughness (m)</b>	0.1	<b>Model #</b>	2100		
<b>Date</b>	17-Sep-09	<b>D95 (m)</b>	0.5	<b>Prop Size</b>	2"		
<b>Time</b>	11:09	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	5.5				
<b>Transect</b>	13	<b>Wetted Width (m)</b>	4				
<b>Width (m)</b>	6.37						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1.4	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.5	-	-	-	-	-	-	-	-	-	-	0	0
-	1.55	-	-	-	-	-	-	-	-	-	OV	0.02	0
-	1.7	-	-	-	-	-	-	-	20	80	OV	0.16	0
-	1.9	-	-	-	-	-	-	-	20	80	OV	0.25	0
-	2.1	-	-	-	-	-	-	-	20	80	OV	0.3	0
-	2.3	-	-	-	-	-	-	-	20	80	OV	0.24	0.2
-	2.6	-	-	-	-	-	-	-	20	80	OV	0.3	0
-	2.8	-	-	-	-	20	60	-	20	-	OV	0.39	0.44
-	3	-	-	-	-	20	60	-	20	-	OV	0.36	0.28
-	3.2	-	-	-	-	20	60	-	20	-	OV	0.35	0.45
-	3.4	-	-	-	-	20	60	-	20	-	OV	0.36	0.27
-	3.6	-	-	-	-	20	60	-	20	-	OV	0.25	0.41
-	3.8	-	-	-	50	50	-	-	-	-	B	0.27	0.6
-	4	-	-	-	50	50	-	-	-	-	B	0.11	0.67
-	4.2	-	-	-	50	50	-	-	-	-	B	0.1	0
-	4.4	-	-	-	50	50	-	-	-	-	B	0.31	0.62
-	4.6	-	-	-	50	50	-	-	-	-	B	0.23	0.37
-	4.8	-	-	-	50	50	-	-	-	-	B	0.26	0.02
-	4.9	-	-	-	50	50	-	-	-	-	B	0.27	0
-	5	-	-	-	50	50	-	-	-	-	B	0.06	0.03
-	5.1	-	-	-	50	50	-	-	-	-	B	0.09	0.06
-	5.3	-	-	-	50	50	-	-	-	-	B	0.06	0
RWE	5.4	-	-	-	-	-	-	-	-	-	-	0	0
-	5.6	-	-	-	50	50	-	-	-	-	B	0	0
RBE	5.8	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447338 6273116	<b>Roughness (m)</b>	0.2	<b>Model #</b>	2100		
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.95	<b>Prop Size</b>	2"		
<b>Time</b>	11:42	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	615		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	5.9				
<b>Transect</b>	14	<b>Wetted Width (m)</b>	4.6				
<b>Width (m)</b>	6.88						

Station	Station		Elevation Survey		Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.5	-	-	-	-	-	-	-	-	-	-	0	0
LWE	0.7	-	-	-	-	-	-	-	-	-	-	0	0
-	0.8	-	-	-	-	-	100	-	-	-	OV	0.04	0
-	1	-	-	-	-	-	100	-	-	-	OV	0.1	0.19
-	1.2	-	-	-	-	-	100	-	-	-	OV	0.12	0.58
-	1.4	-	-	-	60	-	40	-	-	-	OV,B	0.16	0.53
-	1.6	-	-	-	60	-	40	-	-	-	OV,B	0.19	0.08
-	1.8	-	-	-	60	-	40	-	-	-	OV,B	0.17	0.3
-	2	-	-	-	60	-	40	-	-	-	OV,B	0.16	0.18
-	2.2	-	-	-	60	-	40	-	-	-	OV,B	0.18	0.24
-	2.4	-	-	-	60	-	40	-	-	-	OV,B	0.17	0.72
-	2.6	-	-	-	60	-	40	-	-	-	OV,B	0.09	0.44
-	2.8	-	-	-	60	-	40	-	-	-	OV,B	0.07	0.93
-	3	-	-	-	60	-	40	-	-	-	OV,B	0.2	0.56
-	3.2	-	-	-	30	-	70	-	-	-	OV,B	0.33	0.26
-	3.4	-	-	-	30	-	70	-	-	-	OV,B	0.21	0.13
-	3.6	-	-	-	30	-	70	-	-	-	OV,B	0.23	0.18
-	3.8	-	-	-	70	-	30	-	-	-	OV,B	0.2	0.1
-	4	-	-	-	70	-	30	-	-	-	OV,B	0.06	0.62
-	4.2	-	-	-	70	-	30	-	-	-	OV,B	0.13	0.52
-	4.4	-	-	-	70	-	30	-	-	-	OV,B	0.07	0.19
-	4.6	-	-	-	70	-	30	-	-	-	OV,B	0.08	0
-	4.8	-	-	-	70	-	30	-	-	-	OV,B	0.07	0
-	5	-	-	-	70	-	30	-	-	-	OV,B	0.06	0.01
-	5.2	-	-	-	-	-	-	60	40	-	OV	0.06	0
-	5.4	-	-	-	-	-	-	60	40	-	OV	0.01	0
RWE	5.45	-	-	-	-	-	-	60	40	-	OV	0	0
-	6	-	-	-	-	-	-	-	-	100	-	0	0
RBE	6.5	-	-	-	-	-	-	-	-	100	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	370-373	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447338 6273116	<b>Roughness (m)</b>	0.2	<b>Model #</b>	2100		
<b>Date</b>	17-Sep-09	<b>D95 (m)</b>	0.95	<b>Prop Size</b>	2"		
<b>Time</b>	9:30	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	5.9				
<b>Transect</b>	14	<b>Wetted Width (m)</b>	4.75				
<b>Width (m)</b>	6.88						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.5	-	-	-	-	-	-	-	-	-	-	0	0
LWE	0.7	-	-	-	-	-	-	-	-	-	-	0	0
-	0.8	-	-	-	-	-	100	-	-	-	OV	0.02	0
-	1	-	-	-	-	-	100	-	-	-	OV	0.09	0.18
-	1.2	-	-	-	-	-	100	-	-	-	OV	0.1	0.03
-	1.4	-	-	-	60	-	40	-	-	-	OV,B	0.2	0.4
-	1.6	-	-	-	60	-	40	-	-	-	OV,B	0.15	0.38
-	1.8	-	-	-	60	-	40	-	-	-	OV,B	0.14	0.4
-	2	-	-	-	60	-	40	-	-	-	OV,B	0.15	0.3
-	2.2	-	-	-	60	-	40	-	-	-	OV,B	0.14	0.06
-	2.4	-	-	-	60	-	40	-	-	-	OV,B	0.15	0.31
-	2.6	-	-	-	60	-	40	-	-	-	OV,B	0.17	1.11
-	2.8	-	-	-	60	-	40	-	-	-	OV,B	0.1	1.01
-	3	-	-	-	60	-	40	-	-	-	OV,B	0.18	0.87
-	3.2	-	-	-	30	-	70	-	-	-	OV,B	0.27	0.4
-	3.4	-	-	-	30	-	70	-	-	-	OV,B	0.3	0.48
-	3.6	-	-	-	30	-	70	-	-	-	OV,B	0.22	0.09
-	3.8	-	-	-	70	-	30	-	-	-	OV,B	0.2	0.07
-	4	-	-	-	70	-	30	-	-	-	OV,B	0.05	0.57
-	4.2	-	-	-	70	-	30	-	-	-	OV,B	0.06	0.6
-	4.4	-	-	-	70	-	30	-	-	-	OV,B	0.07	0.55
-	4.6	-	-	-	70	-	30	-	-	-	OV,B	0.06	0.19
-	4.8	-	-	-	70	-	30	-	-	-	OV,B	0.05	0.28
-	5	-	-	-	70	-	30	-	-	-	OV,B	0.04	0.06
-	5.2	-	-	-	-	-	-	60	40	-	OV	0.04	0
-	5.4	-	-	-	-	-	-	60	40	-	OV	0.02	0
RWE	5.45	-	-	-	-	-	-	60	40	-	OV	0	0
-	6	-	-	-	-	-	-	-	-	100	-	0	0
RBE	6.5	-	-	-	-	-	-	-	-	100	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447318 6273166	<b>Roughness (m)</b>	0.1	<b>Model #</b>	2100		
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.61	<b>Prop Size</b>	2"		
<b>Time</b>	12:30	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	615		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	7.5				
<b>Transect</b>	15	<b>Wetted Width (m)</b>	4.8				
<b>Width (m)</b>	7.9						

Station	Station	Elevation Survey			Substrate (%)					Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.5	-	-	-	-	-	-	-	-	-	-	0	0
-	0.9	-	-	-	-	-	-	-	-	-	-	0	0
-	1.25	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.42	-	-	-	-	-	-	-	60	40	OV, P, B	0	0
-	1.6	-	-	-	50	-	50	-	-	-	OV, P, B	0.25	0
-	1.8	-	-	-	50	-	50	-	-	-	OV, P, B	0.34	0
-	2	-	-	-	50	-	50	-	-	-	OV, P, B	0.37	0
-	2.2	-	-	-	50	-	50	-	-	-	OV, P, B	0.45	0
-	2.4	-	-	-	50	-	50	-	-	-	OV, P, B	0.47	0
-	2.6	-	-	-	50	-	50	-	-	-	P, B	0	0
-	2.8	-	-	-	50	-	50	-	-	-	P, B	0	0
-	3	-	-	-	50	-	50	-	-	-	P, B	0	0
-	3.1	-	-	-	50	-	50	-	-	-	P, B	0	0
-	3.2	-	-	-	50	-	50	-	-	-	P, B	0.41	0.04
-	3.4	-	-	-	50	-	50	-	-	-	P, B	0.41	0.24
-	3.6	-	-	-	50	-	50	-	-	-	P, B	0.67	0.09
-	3.8	-	-	-	50	-	50	-	-	-	P, B	0.74	0.1
-	4	-	-	-	50	-	50	-	-	-	P, B	0.57	0.47
-	4.2	-	-	-	70	-	30	-	-	-	P, B	0.66	0.44
-	4.4	-	-	-	70	-	30	-	-	-	P, B	0.62	0.05
-	4.6	-	-	-	70	-	30	-	-	-	P, B	0.23	0.06
-	4.8	-	-	-	70	-	30	-	-	-	P, B	0.31	0.03
-	5	-	-	-	70	-	30	-	-	-	P, B	0.43	0.02
-	5.2	-	-	-	70	-	30	-	-	-	P, B	0.33	0.04
-	5.4	-	-	-	70	-	30	-	-	-	P, B	0.17	0
-	5.6	-	-	-	70	-	30	-	-	-	P, B	0.24	0
-	5.8	-	-	-	30	-	70	-	-	-	B	0.34	0
-	6	-	-	-	30	-	70	-	-	-	B	0.12	0
RWE	6.2	-	-	-	30	-	70	-	-	-	B	0	0
RBE	6.4	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	North Treaty	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	374-377	
<b>ILP</b>	1050	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	447318 6273166	<b>Roughness (m)</b>	0.1	<b>Model #</b>	2100		
<b>Date</b>	17-Sep-09	<b>D95 (m)</b>	0.61	<b>Prop Size</b>	2"		
<b>Time</b>	10:00	<b>Channel Slope (%)</b>	3.76	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	7.5				
<b>Transect</b>	15	<b>Wetted Width (m)</b>	5.1				
<b>Width (m)</b>	7.9						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.5	-	-	-	-	-	-	-	-	-	-	0	0
-	0.9	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.25	-	-	-	-	-	-	-	-	-	-	0	0
-	1.42	-	-	-	-	-	-	-	60	40	OV, P, B	0.05	0
-	1.6	-	-	-	50	-	50	-	-	-	OV, P, B	0.08	0
-	1.8	-	-	-	50	-	50	-	-	-	OV, P, B	0.33	0
-	2	-	-	-	50	-	50	-	-	-	OV, P, B	0.39	0
-	2.2	-	-	-	50	-	50	-	-	-	OV, P, B	0.42	0
-	2.4	-	-	-	50	-	50	-	-	-	OV, P, B	0	0
-	2.6	-	-	-	50	-	50	-	-	-	P, B	0	0
-	2.8	-	-	-	50	-	50	-	-	-	P, B	0	0
-	3	-	-	-	50	-	50	-	-	-	P, B	0	0
-	3.1	-	-	-	50	-	50	-	-	-	P, B	0	0
-	3.2	-	-	-	50	-	50	-	-	-	P, B	0.01	0
-	3.4	-	-	-	50	-	50	-	-	-	P, B	0.4	0.41
-	3.6	-	-	-	50	-	50	-	-	-	P, B	0.64	0.17
-	3.8	-	-	-	50	-	50	-	-	-	P, B	0.74	0.21
-	4	-	-	-	50	-	50	-	-	-	P, B	0.55	0.55
-	4.2	-	-	-	70	-	30	-	-	-	P, B	0.55	0.35
-	4.4	-	-	-	70	-	30	-	-	-	P, B	0.6	0.26
-	4.6	-	-	-	70	-	30	-	-	-	P, B	0.3	0.08
-	4.8	-	-	-	70	-	30	-	-	-	P, B	0.35	0.08
-	5	-	-	-	70	-	30	-	-	-	P, B	0.35	0
-	5.2	-	-	-	70	-	30	-	-	-	P, B	0.15	0.12
-	5.4	-	-	-	70	-	30	-	-	-	P, B	0.15	0.11
-	5.6	-	-	-	70	-	30	-	-	-	P, B	0.34	0
-	5.8	-	-	-	30	-	70	-	-	-	B	0.16	0
-	6	-	-	-	30	-	70	-	-	-	B	0.27	0
RWE	6.2	-	-	-	30	-	70	-	-	-	B	0	0
RBE	6.4	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440679 6279748	<b>Roughness (m)</b>	0.18	<b>Model #</b>	2100		
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.98	<b>Prop Size</b>	2"		
<b>Time</b>	13:30	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	9.15				
<b>Transect</b>	1	<b>Wetted Width (m)</b>	5.8				
<b>Width (m)</b>	10.66						

Station	Station Distance (m)	Elevation Survey		R	B	Substrate (%)				Cover	Depth-Velocity		
		OBS Elev (m)	Elev (m)			LC	SC	LG	SG		F	Depth (m)	Velocity 0.4d (m/s)
BM	-	0.981	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.8	1.3	-	-	-	-	-	-	-	-	-	0	0
-	1.6	1.837	-	-	-	-	-	-	-	-	-	0	0
-	2.2	1.922	-	-	-	-	-	-	-	-	-	0	0
-	2.65	2.053	-	-	-	-	-	-	-	-	-	0	0
LWE	2.9	2.258	-	-	-	-	-	-	-	-	-	0	0
-	3	2.254	-	-	-	-	-	-	40	60	-	0.03	0
-	3.3	2.3	-	-	-	-	-	-	40	60	-	0.08	0
-	3.6	2.43	-	-	-	50	-	-	50	-	B,P	0.07	0.21
-	3.9	2.501	-	-	-	50	-	-	50	-	B,P	0.25	0.36
-	4.2	2.577	-	-	-	50	-	-	50	-	B,P	0.36	0.22
-	4.5	2.677	-	-	50	-	-	-	50	-	B,P	0.41	0.23
-	4.8	2.68	-	-	50	-	-	-	50	-	B,P	0.47	0.14
-	5.1	2.73	-	-	50	-	-	-	50	-	B,P	0.6	0.2
-	5.4	2.886	-	-	50	50	-	-	-	-	B,P	0.67	0.27
-	5.7	2.829	-	-	50	50	-	-	-	-	B,P	0.61	0.54
-	6	3.072	-	-	50	50	-	-	-	-	B,P	0.81	0.57
-	6.3	3.088	-	-	50	50	-	-	-	-	B,P	0.87	0.89
-	6.6	3.027	-	-	100	-	-	-	-	-	B,P	0.92	1.13
-	6.9	2.986	-	-	100	-	-	-	-	-	B,P	0.79	0.98
-	7.2	2.948	-	-	30	70	-	-	-	-	B,P	0.68	0.56
-	7.5	2.794	-	100	-	-	-	-	-	-	P	0.54	0.28
-	7.8	2.613	-	100	-	-	-	-	-	-	P	0.35	0.1
-	8.1	2.468	-	100	-	-	-	-	-	-	P	0.24	0.22
-	8.2	2.372	-	100	-	-	-	-	-	-	P	0.17	0.06
-	8.3	2.283	-	100	-	-	-	-	-	-	P	0.07	0.17
RWE	8.58	2.104	-	100	-	-	-	-	-	-	P	0	0
-	9	1.97	-	-	-	-	-	-	-	-	-	0	0
RBE	9.5	1.627	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	swoffer		
<b>UTM</b>	440679 6279748	<b>Roughness (m)</b>	0.18	<b>Model #</b>	2100		
<b>Date</b>	15-Sep-09	<b>D95 (m)</b>	0.98	<b>Prop Size</b>	2"		
<b>Time</b>	11:43	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	9.15				
<b>Transect</b>	1	<b>Wetted Width (m)</b>	5.85				
<b>Width (m)</b>	10.66						

Station	Station	Elevation Survey			Substrate (%)					Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	0.981	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.8	1.3	-	-	-	-	-	-	-	-	-	0	0
-	1.6	1.837	-	-	-	-	-	-	-	-	-	0	0
-	2.2	1.922	-	-	-	-	-	-	-	-	-	0	0
LWE	2.65	2.053	-	-	-	-	-	-	-	-	-	0	0
-	2.9	2.258	-	-	-	-	-	-	-	-	-	0	0
-	3	2.254	-	-	-	-	-	-	40	60	-	0.05	0
-	3.3	2.3	-	-	-	-	-	-	40	60	-	0.09	0
-	3.6	2.43	-	-	-	50	-	-	50	-	B,P	0.11	0
-	3.9	2.501	-	-	-	50	-	-	50	-	B,P	0.25	0
-	4.2	2.577	-	-	-	50	-	-	50	-	B,P	0.37	0.26
-	4.5	2.677	-	-	50	-	-	-	50	-	B,P	0.45	0.07
-	4.8	2.68	-	-	50	-	-	-	50	-	B,P	0.46	0
-	5.1	2.73	-	-	50	-	-	-	50	-	B,P	0.42	0.05
-	5.4	2.886	-	-	50	50	-	-	-	-	B,P	0.66	0.6
-	5.7	2.829	-	-	50	50	-	-	-	-	B,P	0.64	0.7
-	6	3.072	-	-	50	50	-	-	-	-	B,P	0.77	1.08
-	6.3	3.088	-	-	50	50	-	-	-	-	B,P	0.81	0.99
-	6.6	3.027	-	-	100	-	-	-	-	-	B,P	0.76	0.97
-	6.9	2.986	-	-	100	-	-	-	-	-	B,P	0.76	0.71
-	7.2	2.948	-	-	30	70	-	-	-	-	B,P	0.67	0.4
-	7.5	2.794	-	100	-	-	-	-	-	-	P	0.55	0.32
-	7.8	2.613	-	100	-	-	-	-	-	-	P	0.32	0.28
-	8.1	2.468	-	100	-	-	-	-	-	-	P	0.21	0.19
-	8.2	2.372	-	100	-	-	-	-	-	-	P	0.17	0
-	8.3	2.283	-	100	-	-	-	-	-	-	P	0.01	0
RWE	8.58	2.104	-	100	-	-	-	-	-	-	P	0	0
-	9	1.97	-	-	-	-	-	-	-	-	-	0	0
RBE	9.5	1.627	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440691 6279776	<b>Roughness (m)</b>	0.24	<b>Model #</b>	2100		
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.49	<b>Prop Size</b>	2"		
<b>Time</b>	14:38	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	615		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	8.6				
<b>Transect</b>	2	<b>Wetted Width (m)</b>	7.2				
<b>Width (m)</b>	10.64						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	0.952	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1	1.577	-	-	-	-	-	-	-	-	-	0	0
-	1.4	1.744	-	-	-	-	-	-	-	-	-	0	0
LWE	1.8	2.079	-	-	-	80	-	20	-	-	OV	0	0
-	1.9	2.103	-	-	-	80	-	20	-	-	OV	0.03	0
-	2.3	2.06	-	-	-	80	-	20	-	-	OV	0.11	0.19
-	2.7	2.139	-	-	-	80	-	20	-	-	OV	0.02	0.46
-	3.1	2.186	-	-	-	80	-	20	-	-	OV	0.01	0
-	3.5	2.191	-	-	-	80	-	20	-	-	OV	0.06	0.1
-	3.9	2.256	-	-	30	70	-	-	-	-	-	0.27	0.87
-	4.3	2.462	-	-	30	70	-	-	-	-	-	0.35	0.29
-	4.7	2.534	-	-	30	70	-	-	-	-	B	0.43	0.98
-	5.1	2.409	-	-	70	30	-	-	-	-	B	0.41	0.68
-	5.5	2.183	-	-	70	30	-	-	-	-	B	0.11	0.97
-	5.9	2.529	-	-	70	30	-	-	-	-	B	0.23	0.91
-	6.3	2.504	-	-	40	60	-	-	-	-	B	0.31	0
-	6.7	2.477	-	-	40	60	-	-	-	-	B	0.31	0.42
-	7.1	2.372	-	-	40	60	-	-	-	-	B	0.23	1.04
-	7.6	2.342	-	-	40	60	-	-	-	-	-	0.21	0.97
-	7.8	2.432	-	-	-	100	-	-	-	-	-	0.24	0.85
-	8.2	2.387	-	-	-	100	-	-	-	-	-	0.1	1.03
-	8.6	2.258	-	50	-	50	-	-	-	-	-	0.17	1
-	9	2.221	-	50	-	50	-	-	-	-	-	0.06	0
RWE	9.1	2.121	-	50	-	50	-	-	-	-	-	0	0
RBE	9.8	1.848	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440691 6279776	<b>Roughness (m)</b>	0.24	<b>Model #</b>	2100		
<b>Date</b>	15-Sep-09	<b>D95 (m)</b>	0.49	<b>Prop Size</b>	2"		
<b>Time</b>	12:00	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	8.6				
<b>Transect</b>	2	<b>Wetted Width (m)</b>	7.3				
<b>Width (m)</b>	10.64						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	0.952	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1	1.577	-	-	-	-	-	-	-	-	-	0	0
-	1.4	1.744	-	-	-	-	-	-	-	-	-	0	0
LWE	1.8	2.079	-	-	-	80	-	20	-	-	OV	0	0
-	1.9	2.103	-	-	-	80	-	20	-	-	OV	0.05	0
-	2.3	2.06	-	-	-	80	-	20	-	-	OV	0.1	0
-	2.7	2.139	-	-	-	80	-	20	-	-	OV	0.05	0
-	3.1	2.186	-	-	-	80	-	20	-	-	OV	0.15	0.16
-	3.5	2.191	-	-	-	80	-	20	-	-	OV	0.1	0.7
-	3.9	2.256	-	-	30	70	-	-	-	-	-	0.24	0
-	4.3	2.462	-	-	30	70	-	-	-	-	-	0.36	0.5
-	4.7	2.534	-	-	30	70	-	-	-	-	B	0.44	1.18
-	5.1	2.409	-	-	70	30	-	-	-	-	B	0.25	0
-	5.5	2.183	-	-	70	30	-	-	-	-	B	0.18	0
-	5.9	2.529	-	-	70	30	-	-	-	-	B	0.39	0
-	6.3	2.504	-	-	40	60	-	-	-	-	B	0.31	0
-	6.7	2.477	-	-	40	60	-	-	-	-	B	0.3	0.4
-	7.1	2.372	-	-	40	60	-	-	-	-	B	0.32	0.67
-	7.6	2.342	-	-	40	60	-	-	-	-	-	0.22	0.93
-	7.8	2.432	-	-	-	100	-	-	-	-	-	0.28	0.73
-	8.2	2.387	-	-	-	100	-	-	-	-	-	0.1	0
-	8.6	2.258	-	50	-	50	-	-	-	-	-	0.16	1.03
-	9	2.221	-	50	-	50	-	-	-	-	-	0.06	0
RWE	9.1	2.121	-	50	-	50	-	-	-	-	-	0	0
RBE	9.8	1.848	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440624 6279841	<b>Roughness (m)</b>	0.12	<b>Model #</b>	2100		
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.45	<b>Prop Size</b>	2"		
<b>Time</b>	15:13	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	615		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	8.89				
<b>Transect</b>	3	<b>Wetted Width (m)</b>	7.88				
<b>Width (m)</b>	9.97						

Station	Station	Elevation Survey			Substrate (%)					Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	-	-	-	-	-	-	-	-	-	-	-	-	-
LWE	1.7	-	-	-	-	-	-	-	-	-	-	0	0
-	1.8	-	-	-	-	-	-	-	-	100	-	0.02	0
-	2.2	-	-	-	-	-	-	-	-	100	-	0.03	0
-	2.6	-	-	-	-	50	-	-	-	50	-	0.1	0
-	3	-	-	-	-	50	-	-	-	50	-	0.16	0.12
-	3.4	-	-	-	-	-	50	50	-	-	-	0.24	0.17
-	3.8	-	-	-	-	-	100	-	-	-	-	0.22	0.21
-	4.2	-	-	-	50	-	50	-	-	-	B	0.35	0.35
-	4.6	-	-	-	50	-	50	-	-	-	B	0.25	0.42
-	5	-	-	-	100	-	-	-	-	-	B	0.34	0
-	5.4	-	-	-	-	-	100	-	-	-	-	0.44	0.57
-	5.8	-	-	-	-	60	40	-	-	-	-	0.37	0.48
-	6.2	-	-	-	-	60	40	-	-	-	-	0.44	0.66
-	6.6	-	-	-	50	50	-	-	-	-	B	0.42	0.51
-	7	-	-	-	-	60	40	-	-	-	-	0.32	0.48
-	7.4	-	-	-	-	60	40	-	-	-	-	0.46	0.6
-	7.8	-	-	-	-	60	40	-	-	-	-	0.51	0.67
-	8.2	-	-	-	-	60	40	-	-	-	-	0.49	0.24
-	8.6	-	-	-	-	60	40	-	-	-	-	0.46	0.29
-	9	-	-	-	-	60	40	-	-	-	-	0.25	0.37
-	9.4	-	-	-	-	60	40	-	-	-	UC	0.19	0.11
RWE	9.6	-	-	-	-	60	40	-	-	-	-	0	0
RBE	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440545 6279943	<b>Roughness (m)</b>	0.14	<b>Model #</b>	2100		
<b>Date</b>	13-Aug-09	<b>D95 (m)</b>	0.65	<b>Prop Size</b>	2"		
<b>Time</b>	15:49	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	615		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	10.3				
<b>Transect</b>	4	<b>Wetted Width (m)</b>	9.6				
<b>Width (m)</b>	13.4						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.14	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.9	1.28	-	-	-	-	-	-	-	-	-	0	0
-	1.6	1.43	-	-	-	-	-	-	-	-	-	0	0
LWE	1.9	1.49	-	-	-	-	-	-	-	-	-	0	0
-	2	1.64	-	-	75	-	-	25	-	-	B	0.01	0
-	2.5	1.62	-	-	75	-	-	25	-	-	B	0	0
-	3	1.57	-	-	75	-	-	25	-	-	B	0	0
-	3.5	1.79	-	-	-	-	75	25	-	-	-	0.16	0.86
-	4	1.76	-	-	-	-	75	25	-	-	-	0.11	0.3
-	4.5	1.81	-	-	-	-	75	25	-	-	-	0.17	0.19
-	5	1.74	-	-	25	75	-	-	-	-	-	0.11	0.69
-	5.5	1.71	-	-	25	75	-	-	-	-	-	0.04	0.86
-	6	1.89	-	-	50	50	-	-	-	-	B	0.2	0.96
-	6.5	1.79	-	-	50	50	-	-	-	-	B	0.21	0.04
-	7	1.84	-	-	-	90	10	-	-	-	-	0.26	0.06
-	7.5	1.93	-	-	-	100	-	-	-	-	-	0.29	0.64
-	8	1.89	-	-	-	100	-	-	-	-	-	0.31	0.45
-	8.4	1.99	-	-	-	100	-	-	-	-	-	0.37	1.1
-	8.8	2.03	-	-	-	100	-	-	-	-	-	0.36	0.59
-	9.2	1.93	-	-	-	100	-	-	-	-	-	0.3	1.41
-	9.6	1.97	-	-	-	100	-	-	-	-	B	0.31	1.07
-	10	1.9	-	50	-	50	-	-	-	-	B	0.36	0.67
-	10.4	2.07	-	50	-	50	-	-	-	-	B	0.45	0.57
-	10.8	1.92	-	50	-	50	-	-	-	-	B	0.33	0.54
-	11.2	1.75	-	50	-	50	-	-	-	-	B	0.09	0
RWE	11.4	1.44	-	-	-	-	-	-	-	-	-	0	0
-	11.9	1.51	-	-	-	-	-	-	-	-	-	0	0
RBE	12.3	0.85	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440545 6279943	<b>Roughness (m)</b>	0.14	<b>Model #</b>	2100		
<b>Date</b>	15-Sep-09	<b>D95 (m)</b>	0.65	<b>Prop Size</b>	2"		
<b>Time</b>	10:20	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	10.3				
<b>Transect</b>	4	<b>Wetted Width (m)</b>	9.6				
<b>Width (m)</b>	13.4						

Station	Station	Elevation Survey			Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.14	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.9	1.28	-	-	-	-	-	-	-	-	-	0	0
-	1.6	1.43	-	-	-	-	-	-	-	-	-	0	0
-	1.9	1.49	-	-	-	-	-	-	-	-	-	0	0
LWE	2	1.64	-	-	75	-	-	25	-	-	B	0	0
-	2.5	1.62	-	-	75	-	-	25	-	-	B	0	0
-	3	1.57	-	-	75	-	-	25	-	-	B	0	0
-	3.5	1.79	-	-	-	-	75	25	-	-	-	0.16	0.81
-	4	1.76	-	-	-	-	75	25	-	-	-	0.1	0.15
-	4.5	1.81	-	-	-	-	75	25	-	-	-	0.16	0.05
-	5	1.74	-	-	25	75	-	-	-	-	-	0.09	0.4
-	5.5	1.71	-	-	25	75	-	-	-	-	-	0.05	0.68
-	6	1.89	-	-	50	50	-	-	-	-	B	0.23	0.55
-	6.5	1.79	-	-	50	50	-	-	-	-	B	0.24	0.09
-	7	1.84	-	-	-	90	10	-	-	-	-	0.24	0.07
-	7.5	1.93	-	-	-	100	-	-	-	-	-	0.29	0.49
-	8	1.89	-	-	-	100	-	-	-	-	-	0.31	0.47
-	8.4	1.99	-	-	-	100	-	-	-	-	-	0.44	0.44
-	8.8	2.03	-	-	-	100	-	-	-	-	-	0.44	0.69
-	9.2	1.93	-	-	-	100	-	-	-	-	-	0.39	1.11
-	9.6	1.97	-	-	-	100	-	-	-	-	B	0.35	1.14
-	10	1.9	-	50	-	50	-	-	-	-	B	0.36	0.69
-	10.4	2.07	-	50	-	50	-	-	-	-	B	0.45	0.7
-	10.8	1.92	-	50	-	50	-	-	-	-	B	0.24	0.53
-	11.2	1.75	-	50	-	50	-	-	-	-	B	0.17	0.06
RWE	11.4	1.44	-	-	-	-	-	-	-	-	-	0	0
-	11.9	1.51	-	-	-	-	-	-	-	-	-	0	0
RBE	12.3	0.85	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440635 6274786	<b>Roughness (m)</b>	0.17	<b>Model #</b>	2100		
<b>Date</b>	14-Aug-09	<b>D95 (m)</b>	0.63	<b>Prop Size</b>	2"		
<b>Time</b>	8:13	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	608		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	12.5				
<b>Transect</b>	5	<b>Wetted Width (m)</b>	12				
<b>Width (m)</b>	14.12						

Station	Station Distance (m)	Elevation Survey		R	B	Substrate (%)				Cover	Depth-Velocity		
		OBS Elev (m)	Elev (m)			LC	SC	LG	SG		F	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.071	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
LWE & LBE	0.85	1.546	-	-	-	-	-	-	-	-	-	0	0
-	0.9	2.129	-	-	70	-	-	30	-	-	B, P	0.11	0.04
-	1.3	2.257	-	-	70	-	-	30	-	-	B, P	0.23	0.09
-	1.7	2.192	-	-	50	50	-	-	-	-	B, P	0.36	0
-	2.1	2.487	-	-	50	50	-	-	-	-	B, P	0.41	0.84
-	2.5	2.5	-	-	50	50	-	-	-	-	B, P	0.55	0.13
-	2.9	2.501	-	-	50	50	-	-	-	-	B, P	0.55	0.08
-	3.3	2.487	-	-	100	-	-	-	-	-	B, P	0.45	1.31
-	3.7	2.473	-	-	100	-	-	-	-	-	B, P	0.37	1.53
-	4.1	2.453	-	-	40	40	20	-	-	-	B, P	0.45	0.2
-	4.5	2.541	-	-	40	40	20	-	-	-	B, P	0.44	0.25
-	4.9	2.22	-	-	40	40	20	-	-	-	B, P	0.45	0.77
-	5.3	2.239	-	-	40	40	20	-	-	-	B, P	0.23	1.1
-	5.9	2.267	-	-	-	30	70	-	-	-	-	0.2	0.18
-	6.5	2.176	-	-	-	30	70	-	-	-	-	0.21	0
-	7.7	-	-	-	-	30	70	-	-	-	-	0.12	0.18
-	7.1	2.001	-	-	-	30	70	-	-	-	-	0.11	0.57
-	8.3	2.004	-	-	-	30	70	-	-	-	-	0.06	0.4
-	8.9	1.949	-	-	-	30	70	-	-	-	-	0	0
-	9.5	2.208	-	-	-	30	70	-	-	-	-	0.16	0
-	10.1	2.167	-	-	80	-	-	20	-	-	-	0.12	0
-	10.7	2.06	-	-	80	-	-	20	-	-	-	0.06	0.02
-	11.3	1.848	-	-	80	-	-	20	-	-	-	0	0
-	11.9	1.937	-	-	-	-	20	-	80	-	-	0.04	0
-	12.5	1.912	-	-	-	-	20	-	80	-	-	0.06	0
RWE	12.94	1.47	-	-	-	-	-	-	-	-	-	0	0
-	13.2	1.901	-	-	-	-	-	-	-	-	-	-	-
RBE	13.7	1.383	-	-	-	-	-	-	-	-	-	-	-
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	South Teigen	Hydraulic Unit Type	Pool	Type	-	1US, 2RB, 3DS, 4LB	
ILP	1001	Channel Type	CP	Make	SWOFFER		
UTM	440635 6274786	Roughness (m)	0.17	Model #	2100		
Date	15-Sep-09	D95 (m)	0.63	Prop Size	2"		
Time	13:00	Channel Slope (%)	2.6	Calibration	603		
Crew	CB	Bankfull Width (m)	12.5				
Transect	5	Wetted Width (m)	12.5				
Width (m)	14.12						

Station	Station	Elevation Survey			Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.071	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
LWE & LBE	0.85	1.546	-	-	-	-	-	-	-	-	-	0	0
-	0.9	2.129	-	-	70	-	-	30	-	-	B, P	0.13	0.04
-	1.3	2.257	-	-	70	-	-	30	-	-	B, P	0.24	0.01
-	1.7	2.192	-	-	50	50	-	-	-	-	B, P	0.34	0
-	2.1	2.487	-	-	50	50	-	-	-	-	B, P	0.46	0.61
-	2.5	2.5	-	-	50	50	-	-	-	-	B, P	0.45	0.11
-	2.9	2.501	-	-	50	50	-	-	-	-	B, P	0.53	0.05
-	3.3	2.487	-	-	100	-	-	-	-	-	B, P	0.46	0.87
-	3.7	2.473	-	-	100	-	-	-	-	-	B, P	0.5	1.03
-	4.1	2.453	-	-	40	40	20	-	-	-	B, P	0.45	0.1
-	4.5	2.541	-	-	40	40	20	-	-	-	B, P	0.55	0.18
-	4.9	2.22	-	-	40	40	20	-	-	-	B, P	0.23	0.39
-	5.3	2.239	-	-	40	40	20	-	-	-	B, P	0.4	0.17
-	5.9	2.267	-	-	-	30	70	-	-	-	-	0.18	0.58
-	6.5	2.176	-	-	-	30	70	-	-	-	-	0.1	1.26
-	7.1	2.001	-	-	-	30	70	-	-	-	-	0.1	0.43
-	7.7	-	-	-	-	30	70	-	-	-	-	-	-
-	8.3	2.004	-	-	-	30	70	-	-	-	-	0.08	0.53
-	8.9	1.949	-	-	-	30	70	-	-	-	-	0	0
-	9.5	2.208	-	-	-	30	70	-	-	-	-	0.14	0
-	10.1	2.167	-	-	80	-	-	20	-	-	-	0.07	0
-	10.7	2.06	-	-	80	-	-	20	-	-	-	0.05	0
-	11.3	1.848	-	-	80	-	-	20	-	-	-	0	0
-	11.9	1.937	-	-	-	-	20	-	80	-	-	0.07	0
-	12.5	1.912	-	-	-	-	20	-	80	-	-	0.07	0.01
-	12.94	1.47	-	-	-	-	-	-	-	-	-	0	0
RWE	13.2	1.901	-	-	-	-	-	-	-	-	-	0	0
RBE	13.7	1.383	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Riffle	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440641 6279777	<b>Roughness (m)</b>	0.18	<b>Model #</b>	2100		
<b>Date</b>	14-Aug-09	<b>D95 (m)</b>	0.78	<b>Prop Size</b>	2"		
<b>Time</b>	9:00	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	608		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	11.1				
<b>Transect</b>	6	<b>Wetted Width (m)</b>	9.5				
<b>Width (m)</b>	13.45						

Station	Distance (m)	Elevation Survey		R	B	Substrate (%)				Cover	Depth-Velocity		
		OBS Elev (m)	Elev (m)			LC	SC	LG	SG		F	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
LWE & LBE	2.35	-	-	-	60	40	-	-	-	-	B	0	0
-	2.4	-	-	-	60	40	-	-	-	-	B	0.05	0.19
-	2.9	-	-	-	60	40	-	-	-	-	B	0.27	0.39
-	3.4	-	-	-	60	40	-	-	-	-	-	0.41	0.78
-	3.9	-	-	-	-	70	30	-	-	-	-	0.41	0.67
-	4.4	-	-	-	-	70	30	-	-	-	-	0.37	0.75
-	4.9	-	-	-	-	70	30	-	-	-	-	0.28	0.93
-	5.4	-	-	-	-	70	30	-	-	-	-	0.21	0.83
-	5.9	-	-	-	50	-	50	-	-	-	B	0.06	0.57
-	6.4	-	-	-	50	-	50	-	-	-	B	0.15	0.84
-	6.9	-	-	-	50	-	50	-	-	-	B	0.2	0.43
-	7.4	-	-	-	50	-	50	-	-	-	B	0.11	0.81
-	7.9	-	-	-	50	-	50	-	-	-	B	0.22	0.16
-	8.4	-	-	-	-	60	40	-	-	-	-	0.28	0.73
-	8.9	-	-	-	-	60	40	-	-	-	-	0.24	0.83
-	9.4	-	-	-	-	60	40	-	-	-	-	0.16	0.43
-	9.9	-	-	-	-	60	40	-	-	-	-	0.16	0.24
-	10.4	-	-	-	-	-	20	-	80	-	-	0.16	0.24
-	10.9	-	-	-	-	-	20	-	80	-	-	0.11	0.24
-	11.4	-	-	-	-	-	20	-	80	-	-	0.06	0.01
RWE & RBE	11.7	-	-	-	-	-	-	-	-	-	-	0	0
-	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440616 6279878	<b>Roughness (m)</b>	0.18	<b>Model #</b>	2100		
<b>Date</b>	14-Aug-09	<b>D95 (m)</b>	0.83	<b>Prop Size</b>	2"		
<b>Time</b>	9:30	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	608		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	11.4				
<b>Transect</b>	7	<b>Wetted Width (m)</b>	10.35				
<b>Width (m)</b>	13.14						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	0.8	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.5	0.9084	-	-	-	-	-	-	-	-	-	0	0
LWE	1.25	1.262	-	-	-	-	-	-	-	-	-	0	0
-	1.5	1.848	-	-	-	-	70	-	-	30	LWD, OV	0.33	0
-	2	1.86	-	-	-	-	70	-	-	30	LWD, OV	0.32	0
-	2.5	1.788	-	-	-	-	70	-	-	30	LWD, OV	0.31	0.01
-	3	1.955	-	-	70	30	-	-	-	-	LWD, OV	0.43	0.19
-	3.5	1.601	-	-	70	30	-	-	-	-	B	0.07	0.86
-	4	1.752	-	-	70	30	-	-	-	-	B	0.23	0
-	4.5	1.658	-	-	50	-	-	-	50	-	B	0.11	0.17
-	5	1.631	-	-	50	-	-	-	50	-	B	0.16	0.4
-	5.5	1.744	-	-	-	-	-	50	50	-	B	0.16	0.55
-	6	1.933	-	-	50	-	-	50	-	-	B, P	0.41	0.82
-	6.5	1.98	-	-	100	-	-	-	-	-	B, P	0.46	0.63
-	7	2.1	-	-	100	-	-	-	-	-	B, P	0.6	0.2
-	7.5	2.11	-	-	100	-	-	-	-	-	B, P	0.57	0.1
-	8	2.169	-	-	100	-	-	-	-	-	B, P	0.63	0.42
-	8.5	1.968	-	-	-	-	-	40	60	-	-	0.46	0.51
-	9	2.07	-	-	100	-	-	-	-	-	B	0.25	1.34
-	9.5	1.28	-	-	100	-	-	-	-	-	B	0	0
-	10	1.9	-	-	100	-	-	-	-	-	B	0.37	0
-	10.5	1.609	-	-	50	-	50	-	-	-	B	0.14	0.27
-	11	1.619	-	-	-	-	100	-	-	-	LWD	0.1	0.4
-	11.5	0.97	-	-	-	-	100	-	-	-	LWD	0.01	0
RWE	11.7	0.95	-	-	-	-	-	-	-	-	-	0	0
-	11.82	1.291	-	-	-	-	-	-	-	-	-	0	0
RBE	12.3	0.784	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440616 6279878	<b>Roughness (m)</b>	0.18	<b>Model #</b>	2100		
<b>Date</b>	15-Sep-09	<b>D95 (m)</b>	0.83	<b>Prop Size</b>	2"		
<b>Time</b>	9:49	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	11.4				
<b>Transect</b>	7	<b>Wetted Width (m)</b>	10.6				
<b>Width (m)</b>	13.14						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	0.8	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.5	0.9084	-	-	-	-	-	-	-	-	-	0	0
LWE	1.25	1.262	-	-	-	-	-	-	-	-	-	0	0
-	1.5	1.848	-	-	-	-	70	-	-	30	LWD, OV	0.35	0
-	2	1.86	-	-	-	-	70	-	-	30	LWD, OV	0.34	0
-	2.5	1.788	-	-	-	-	70	-	-	30	LWD, OV	0.3	0.01
-	3	1.955	-	-	70	30	-	-	-	-	LWD, OV	0.43	0.21
-	3.5	1.601	-	-	70	30	-	-	-	-	B	0.11	0
-	4	1.752	-	-	70	30	-	-	-	-	B	0.15	0.22
-	4.5	1.658	-	-	50	-	-	-	50	-	B	0.13	0.09
-	5	1.631	-	-	50	-	-	-	50	-	B	0.15	0.19
-	5.5	1.744	-	-	-	-	-	50	50	-	B	0.25	0.68
-	6	1.933	-	-	50	-	-	50	-	-	B, P	0.44	0.82
-	6.5	1.98	-	-	100	-	-	-	-	-	B, P	0.6	0.52
-	7	2.1	-	-	100	-	-	-	-	-	B, P	0.6	0.17
-	7.5	2.11	-	-	100	-	-	-	-	-	B, P	0.59	0.17
-	8	2.169	-	-	100	-	-	-	-	-	B, P	0.61	0.16
-	8.5	1.968	-	-	-	-	-	40	60	-	-	0.54	0.65
-	9	2.07	-	-	100	-	-	-	-	-	B	0	0
-	9.5	1.28	-	-	100	-	-	-	-	-	B	0	0
-	10	1.9	-	-	100	-	-	-	-	-	B	0.34	1.09
-	10.5	1.609	-	-	50	-	50	-	-	-	B	0.15	0.31
-	11	1.619	-	-	-	-	100	-	-	-	LWD	0.14	0.27
-	11.5	0.97	-	-	-	-	100	-	-	-	LWD	0.1	0
RWE	11.7	0.95	-	-	-	-	-	-	-	-	-	0	0
-	11.82	1.291	-	-	-	-	-	-	-	-	-	0	0
RBE	12.3	0.784	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440604 6279831	<b>Roughness (m)</b>	0.08	<b>Model #</b>	2100		
<b>Date</b>	14-Aug-09	<b>D95 (m)</b>	0.49	<b>Prop Size</b>	2"		
<b>Time</b>	10:07	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	608		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	9.55				
<b>Transect</b>	8	<b>Wetted Width (m)</b>	7.5				
<b>Width (m)</b>	11.05						

Station	Station Distance (m)	Elevation Survey		R	B	Substrate (%)					Cover Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)			LC	SC	LG	SG	F		Depth (m)	ocity 0.4d (m)
BM	-	1.01	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1	1.26	-	-	-	-	-	-	-	-	-	0	0
LWE	1.42	1.63	-	-	-	-	-	-	-	-	-	0	0
-	1.5	1.64	-	-	-	50	50	-	-	-	OV	0.04	0.01
-	1.9	1.68	-	-	-	50	50	-	-	-	OV	0.04	0.09
-	2.3	1.7	-	-	-	50	50	-	-	-	OV	0	0
-	2.7	1.65	-	-	-	-	70	-	30	-	OV	0.01	0
-	3.1	1.84	-	-	-	-	70	-	30	-	-	0.18	0.18
-	3.5	1.82	-	-	-	-	70	-	30	-	-	0.21	0.25
-	3.9	1.78	-	-	-	-	70	-	30	-	-	0.15	0.29
-	4.3	1.95	-	-	-	-	70	-	30	-	-	0.31	0.35
-	4.7	2.03	-	-	-	70	30	-	-	-	-	0.33	0.64
-	5.1	2.04	-	-	-	70	30	-	-	-	-	0.34	0.8
-	5.5	2.01	-	-	-	70	30	-	-	-	-	0.37	0.82
-	5.9	2.03	-	-	-	70	30	-	-	-	-	0.32	1.22
-	6.3	1.97	-	-	-	70	30	-	-	-	-	0.26	1.09
-	6.7	2	-	-	-	70	30	-	-	-	-	0.41	0.82
-	7.1	1.87	-	-	-	70	30	-	-	-	-	0.86	0.42
-	7.5	1.78	-	-	-	70	30	-	-	-	-	0.17	0.64
-	7.9	1.78	-	-	-	70	30	-	-	-	-	0.21	0.05
-	8.3	1.65	-	-	-	70	30	-	-	-	-	0.24	0.15
-	8.7	1.69	-	-	-	80	-	-	-	20	-	0.03	0
RWE	8.87	1.62	-	-	-	-	-	-	-	-	-	0	0
-	9.6	1.21	-	-	-	-	-	-	-	-	-	0	0
RBE	10.1	0.96	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440604 6279831	<b>Roughness (m)</b>	0.08	<b>Model #</b>	2100		
<b>Date</b>	15-Sep-09	<b>D95 (m)</b>	0.49	<b>Prop Size</b>	2"		
<b>Time</b>	11:00	<b>Channel Slope (%)</b>	2.6	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	9.55				
<b>Transect</b>	8	<b>Wetted Width (m)</b>	7.5				
<b>Width (m)</b>	11.05						

Station	Station	Elevation Survey		R	B	LC	Substrate (%)				Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)				SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.01	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1	1.26	-	-	-	-	-	-	-	-	-	0	0
LWE	1.42	1.63	-	-	-	-	-	-	-	-	-	0	0
-	1.5	1.64	-	-	-	50	50	-	-	-	OV	0.08	0
-	1.9	1.68	-	-	-	50	50	-	-	-	OV	0.05	0.19
-	2.3	1.7	-	-	-	50	50	-	-	-	OV	0.1	0
-	2.7	1.65	-	-	-	-	70	-	30	-	OV	0	0
-	3.1	1.84	-	-	-	-	70	-	30	-	-	0.2	0.34
-	3.5	1.82	-	-	-	-	70	-	30	-	-	0.2	0.45
-	3.9	1.78	-	-	-	-	70	-	30	-	-	0.19	0.39
-	4.3	1.95	-	-	-	-	70	-	30	-	-	0.34	0.47
-	4.7	2.03	-	-	-	70	30	-	-	-	-	0.35	0.7
-	5.1	2.04	-	-	-	70	30	-	-	-	-	0.4	0.62
-	5.5	2.01	-	-	-	70	30	-	-	-	-	0.38	0.99
-	5.9	2.03	-	-	-	70	30	-	-	-	-	0.41	0.46
-	6.3	1.97	-	-	-	70	30	-	-	-	-	0.37	0.63
-	6.7	2	-	-	-	70	30	-	-	-	-	0.45	0.55
-	7.1	1.87	-	-	-	70	30	-	-	-	-	0.36	0.4
-	7.5	1.78	-	-	-	70	30	-	-	-	-	0.17	0.62
-	7.9	1.78	-	-	-	70	30	-	-	-	-	0.2	0.4
-	8.3	1.65	-	-	-	70	30	-	-	-	-	0.15	0.04
-	8.7	1.69	-	-	-	80	-	-	-	20	-	0.05	0
RWE	8.87	1.62	-	-	-	-	-	-	-	-	-	0	0
-	9.6	1.21	-	-	-	-	-	-	-	-	-	0	0
RBE	10.1	0.96	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440294 6280418	<b>Roughness (m)</b>	0.19	<b>Model #</b>	2100		
<b>Date</b>	14-Aug-09	<b>D95 (m)</b>	0.45	<b>Prop Size</b>	2"		
<b>Time</b>	11:40	<b>Channel Slope (%)</b>	2.85	<b>Calibration</b>	608		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	9.7				
<b>Transect</b>	9	<b>Wetted Width (m)</b>	7.7				
<b>Width (m)</b>	11.32						

Station	Station	Elevation Survey		R	B	Substrate (%)				Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)			LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.466	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.5	1.666	-	-	-	-	-	-	-	-	-	0	0
-	1	1.878	-	-	-	-	-	-	-	-	-	0	0
LWE	1.3	2.028	-	-	-	-	-	-	-	-	OV	0	0
-	1.35	2.089	-	-	-	-	-	-	-	-	-	0	0
-	1.5	2.13	-	-	-	20	60	-	20	-	OV	0.04	0.21
-	1.9	2.132	-	-	-	20	60	-	20	-	OV	0.04	0
-	2.3	2.28	-	-	-	20	60	-	20	-	OV	0.2	0.47
-	2.7	2.153	-	-	-	20	60	-	20	-	OV	0.06	0.27
-	3.1	2.3	-	-	-	20	60	-	20	-	OV	0.21	0.08
-	3.5	2.301	-	-	-	20	60	-	20	-	B	0.21	0.07
-	3.9	2.369	-	-	-	20	60	-	20	-	B	0.26	0.3
-	4.3	2.374	-	-	-	20	60	-	20	-	B	0.25	0.04
-	4.7	2.432	-	-	-	20	60	-	20	-	B	0.34	0.03
-	5.1	2.449	-	-	-	20	60	-	20	-	B	0.35	0.51
-	5.5	2.431	-	-	-	20	60	-	20	-	-	0.35	0.81
-	5.9	2.357	-	-	-	10	80	10	-	-	-	0.31	1.13
-	6.3	2.386	-	-	-	10	80	10	-	-	-	0.3	0.74
-	6.7	2.538	-	-	-	40	60	-	-	-	B	0.35	0.45
-	7.1	2.601	-	-	-	60	40	-	-	-	B	0.51	0.14
-	7.5	2.568	-	-	-	60	40	-	-	-	B	0.46	0.63
-	7.9	2.45	-	-	-	60	40	-	-	-	B	0.36	0.8
-	8.3	2.229	-	-	-	60	40	-	-	-	B	0.11	0.58
-	8.7	2.14	-	-	-	60	40	-	-	-	B	0	0
RWE	9.15	2.066	-	-	-	-	-	-	-	-	-	-	-
-	9.2	2.04	-	-	-	-	-	-	-	-	-	0	0
-	9.7	1.779	-	-	-	-	-	-	-	-	-	0	0
RBE	10.2	1.612	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440294 6280418	<b>Roughness (m)</b>	0.19	<b>Model #</b>	2100		
<b>Date</b>	15-Sep-09	<b>D95 (m)</b>	0.45	<b>Prop Size</b>	2"		
<b>Time</b>	8:02	<b>Channel Slope (%)</b>	2.85	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	9.7				
<b>Transect</b>	9	<b>Wetted Width (m)</b>	8				
<b>Width (m)</b>	11.32						

Station	Station	Elevation Survey		R	B	Substrate (%)				Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)			LC	SC	LG	SG		F	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.466	-	-	-	-	-	-	-	-	-	-	
PIN	0	-	-	-	-	-	-	-	-	-	-	-	
LBE	0.5	1.666	-	-	-	-	-	-	-	-	0	0	
-	1	1.878	-	-	-	-	-	-	-	-	0	0	
-	1.3	2.028	-	-	-	-	-	-	-	OV	0	0	
LWE	1.35	2.089	-	-	-	-	-	-	-	-	0	0	
-	1.5	2.13	-	-	-	20	60	-	20	-	OV	0.01	0
-	1.9	2.132	-	-	-	20	60	-	20	-	OV	0.05	0.41
-	2.3	2.28	-	-	-	20	60	-	20	-	OV	0.2	0.47
-	2.7	2.153	-	-	-	20	60	-	20	-	OV	0.06	0.36
-	3.1	2.3	-	-	-	20	60	-	20	-	OV	0.2	0
-	3.5	2.301	-	-	-	20	60	-	20	-	B	0.2	0.12
-	3.9	2.369	-	-	-	20	60	-	20	-	B	0.26	0.16
-	4.3	2.374	-	-	-	20	60	-	20	-	B	0.25	0.11
-	4.7	2.432	-	-	-	20	60	-	20	-	B	0.35	0.05
-	5.1	2.449	-	-	-	20	60	-	20	-	B	0.34	0.73
-	5.5	2.431	-	-	-	20	60	-	20	-	-	0.34	1
-	5.9	2.357	-	-	10	80	10	-	-	-	-	0.27	1.57
-	6.3	2.386	-	-	10	80	10	-	-	-	-	0.21	1.07
-	6.7	2.538	-	-	40	60	-	-	-	-	B	0.36	0.78
-	7.1	2.601	-	-	60	40	-	-	-	-	B	0.5	0.19
-	7.5	2.568	-	-	60	40	-	-	-	-	B	0.47	0.36
-	7.9	2.45	-	-	60	40	-	-	-	-	B	0.44	0.87
-	8.3	2.229	-	-	60	40	-	-	-	-	B	0.11	0.31
-	8.7	2.14	-	-	60	40	-	-	-	-	B	0.05	0
RWE	9.15	2.066	-	-	-	-	-	-	-	-	-	0	0
-	9.2	2.04	-	-	-	-	-	-	-	-	-	0	0
-	9.7	1.779	-	-	-	-	-	-	-	-	-	0	0
RBE	10.2	1.612	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440250 6280487	<b>Roughness (m)</b>	0.05	<b>Model #</b>	2100		
<b>Date</b>	14-Aug-09	<b>D95 (m)</b>	0.1	<b>Prop Size</b>	2"		
<b>Time</b>	12:18	<b>Channel Slope (%)</b>	2.85	<b>Calibration</b>	608		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	8.3				
<b>Transect</b>	10	<b>Wetted Width (m)</b>	7.05				
<b>Width (m)</b>	9.56						

Station	Station Distance (m)	Elevation Survey		R	B	Substrate (%)				Cover	Depth-Velocity		
		OBS Elev (m)	Elev (m)			LC	SC	LG	SG		F	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.394	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1	1.691	-	-	-	-	-	-	-	100	-	0	0
-	1.5	1.873	-	-	-	-	-	-	-	100	-	0	0
LWE	1.9	1.946	-	-	-	-	-	-	20	80	OV, P	0	0
-	2.1	1.993	-	-	-	-	-	-	20	80	OV, P	0.07	0
-	2.4	2.06	-	-	-	-	-	-	20	80	OV, P	0.11	0.01
-	2.7	2.09	-	-	-	-	-	-	20	80	OV, P	0.16	0
-	3	2.238	-	-	-	-	-	-	90	10	OV, P	0.31	0
-	3.3	2.23	-	-	-	-	-	-	90	10	OV, P	0.3	0.04
-	3.6	2.239	-	-	-	-	-	-	90	10	P, OV	0.3	0.07
-	3.9	2.294	-	-	-	-	-	-	90	10	P, OV	0.36	0.12
-	4.2	2.356	-	-	-	-	-	20	80	-	P, OV	0.42	0.14
-	4.5	2.458	-	-	-	-	-	20	80	-	P	0.51	0.21
-	4.8	2.51	-	-	-	-	-	20	80	-	P	0.6	0.26
-	5.1	2.588	-	-	-	-	-	20	80	-	P	0.64	0.33
-	5.4	2.614	-	-	-	-	-	20	80	-	P	0.66	0.36
-	5.7	2.672	-	-	-	-	-	20	80	-	P	0.75	0.37
-	6	2.729	-	-	-	-	-	20	80	-	P	0.8	0.41
-	6.3	2.884	-	-	-	-	-	20	80	-	P	0.97	0.56
-	6.6	2.869	-	-	-	-	-	20	80	-	P	0.97	0.48
-	6.9	2.88	-	-	-	-	-	80	20	-	P	0.89	0.37
-	7.2	2.778	-	-	-	-	-	80	20	-	P	0.77	0.22
-	7.5	2.628	-	-	-	-	-	80	20	-	P	0.62	0.04
-	7.8	2.409	-	-	-	-	-	80	20	-	P, OV	0.49	0.17
-	8.1	2.268	-	-	-	-	90	10	-	-	P, OV	0.31	0.13
-	8.4	2.176	-	-	-	-	-	-	-	-	P, OV	0.34	0.12
-	8.7	2.003	-	-	-	100	-	-	-	-	-	0.06	0.01
RWE	8.95	1.931	-	-	-	-	-	-	-	-	-	0	0
RBE	9.3	1.096	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440250 6280487	<b>Roughness (m)</b>	0.05	<b>Model #</b>	2100		
<b>Date</b>	14-Sep-09	<b>D95 (m)</b>	0.1	<b>Prop Size</b>	2"		
<b>Time</b>	16:30	<b>Channel Slope (%)</b>	2.85	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	8.3				
<b>Transect</b>	10	<b>Wetted Width (m)</b>	7.1				
<b>Width (m)</b>	9.56						

Station	Station Distance (m)	Elevation Survey		R	B	Substrate (%)				Cover	Depth-Velocity		
		OBS Elev (m)	Elev (m)			LC	SC	LG	SG		F	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.394	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1	1.691	-	-	-	-	-	-	-	100	-	0	0
-	1.5	1.873	-	-	-	-	-	-	-	100	-	0	0
LWE	1.9	1.946	-	-	-	-	-	-	20	80	OV, P	0	0
-	2.1	1.993	-	-	-	-	-	-	20	80	OV, P	0.06	0
-	2.4	2.06	-	-	-	-	-	-	20	80	OV, P	0.14	0
-	2.7	2.09	-	-	-	-	-	-	20	80	OV, P	0.17	0
-	3	2.238	-	-	-	-	-	-	90	10	OV, P	0.3	0
-	3.3	2.23	-	-	-	-	-	-	90	10	OV, P	0.29	0.07
-	3.6	2.239	-	-	-	-	-	-	90	10	P, OV	0.31	0.1
-	3.9	2.294	-	-	-	-	-	-	90	10	P, OV	0.36	0.17
-	4.2	2.356	-	-	-	-	-	20	80	-	P, OV	0.44	0.2
-	4.5	2.458	-	-	-	-	-	20	80	-	P	0.54	0.22
-	4.8	2.51	-	-	-	-	-	20	80	-	P	0.6	0.18
-	5.1	2.588	-	-	-	-	-	20	80	-	P	0.66	0.26
-	5.4	2.614	-	-	-	-	-	20	80	-	P	0.7	0.27
-	5.7	2.672	-	-	-	-	-	20	80	-	P	0.76	0.34
-	6	2.729	-	-	-	-	-	20	80	-	P	0.8	0.45
-	6.3	2.884	-	-	-	-	-	20	80	-	P	0.98	0.57
-	6.6	2.869	-	-	-	-	-	20	80	-	P	1	0.49
-	6.9	2.88	-	-	-	-	-	80	20	-	P	0.89	0.4
-	7.2	2.778	-	-	-	-	-	80	20	-	P	0.7	0.11
-	7.5	2.628	-	-	-	-	-	80	20	-	P	0.7	0.04
-	7.8	2.409	-	-	-	-	-	80	20	-	P, OV	0.46	0.09
-	8.1	2.268	-	-	-	-	90	10	-	-	P, OV	0.34	0
-	8.4	2.176	-	-	-	-	-	-	-	-	P, OV	0.35	0.1
-	8.7	2.003	-	-	-	100	-	-	-	-	-	0.09	0
RWE	8.95	1.931	-	-	-	-	-	-	-	-	-	0	0
RBE	9.3	1.096	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	South Teigen	Hydraulic Unit Type	Cascade	Type	-	1US, 2RB, 3LB, 4DS	
ILP	1001	Channel Type	CP	Make	SWOFFER		
UTM	-	Roughness (m)	0.17	Model #	2100		
Date	14-Aug-09	D95 (m)	0.7	Prop Size	2"		
Time	12:51	Channel Slope (%)	2.85	Calibration	608		
Crew	CB	Bankfull Width (m)	9.6				
Transect	11	Wetted Width (m)	8.03				
Width (m)	11.77						

Station	Distance (m)	Elevation Survey		R	B	LC	Substrate (%)				Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)				SC	LG	SG	F		Cover	Depth (m)
BM	-	1.062	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.9	0.209	-	-	-	-	-	-	-	-	-	0	0
-	1.4	0.974	-	-	-	-	-	-	-	-	-	0	0
-	1.8	1.194	-	-	-	-	-	-	-	-	-	0	0
-	2.3	1.274	-	-	-	-	-	-	-	-	-	0	0
-	2.5	1.224	-	-	-	-	-	-	-	-	-	0	0
-	3	1.772	-	-	-	-	-	-	-	-	-	0	0
LWE	3.1	1.561	-	-	-	-	-	-	-	-	-	0	0
-	3.3	1.799	-	-	70	30	-	-	-	-	B	0.31	0.11
-	3.7	1.853	-	-	70	30	-	-	-	-	B	0.23	0.04
-	4.1	1.821	-	-	70	30	-	-	-	-	B	0.21	0.72
-	4.5	1.801	-	-	70	30	-	-	-	-	B	0.3	0.45
-	4.9	1.863	-	-	-	100	-	-	-	-	-	0.29	0.47
-	5.3	1.77	-	-	-	100	-	-	-	-	-	0.26	1.16
-	5.7	1.909	-	-	-	100	-	-	-	-	-	0.31	0.81
-	6.1	1.844	-	-	-	100	-	-	-	-	-	0.3	0.14
-	6.5	1.87	-	-	-	80	-	20	-	-	-	0.32	0.2
-	6.9	1.879	-	-	-	80	-	20	-	-	-	0.33	0.1
-	7.3	1.866	-	-	-	80	-	20	-	-	-	0.33	0.47
-	7.7	1.812	-	-	-	80	-	20	-	-	-	0.25	0.95
-	8.1	1.84	-	-	-	80	-	20	-	-	OV	0.29	0.68
-	8.5	1.866	-	-	-	80	-	20	-	-	OV	0.31	1.03
-	8.9	1.841	-	-	-	80	-	20	-	-	OV	0.24	0.57
-	9.3	1.687	-	-	-	80	-	20	-	-	OV	0.15	0.42
-	9.7	1.653	-	-	-	-	-	75	25	-	OV	0.19	0.22
-	10.1	1.652	-	-	-	-	-	-	100	-	OV	0.1	0.18
-	10.3	-	-	-	-	-	-	-	100	-	OV	0	0
RWE	10.5	1.552	-	-	-	-	-	-	-	-	OV	0	0
-	11	1.459	-	-	-	-	-	-	-	-	-	0	0
RBE	11.2	1.35	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2**

General		Channel		Flow Meter		Photos	
Stream Name	South Teigen	Hydraulic Unit Type	Cascade	Type	-	1US, 2RB, 3DS, 4LB	
ILP	1001	Channel Type	CP	Make	SWOFFER		
UTM	-	Roughness (m)	0.17	Model #	2100		
Date	14-Sep-09	D95 (m)	0.7	Prop Size	2"		
Time	16:00	Channel Slope (%)	2.85	Calibration	603		
Crew	CB	Bankfull Width (m)	9.6				
Transect	11	Wetted Width (m)	7.4				
Width (m)	11.77						

Station	Distance (m)	Elevation Survey		R	B	LC	Substrate (%)				Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)				SC	LG	SG	F		Depth (m)	Velocity 0.4d (m/s)
BM	-	1.062	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.9	0.209	-	-	-	-	-	-	-	-	-	0	0
-	1.4	0.974	-	-	-	-	-	-	-	-	-	0	0
-	1.8	1.194	-	-	-	-	-	-	-	-	-	0	0
-	2.3	1.274	-	-	-	-	-	-	-	-	-	0	0
-	2.5	1.224	-	-	-	-	-	-	-	-	-	0	0
-	3	1.772	-	-	-	-	-	-	-	-	-	0	0
LWE	3.1	1.561	-	-	-	-	-	-	-	-	-	0	0
-	3.3	1.799	-	-	70	30	-	-	-	-	B	0.25	0.43
-	3.7	1.853	-	-	70	30	-	-	-	-	B	0.24	0.05
-	4.1	1.821	-	-	70	30	-	-	-	-	B	0.21	0.64
-	4.5	1.801	-	-	70	30	-	-	-	-	B	0.24	0.39
-	4.9	1.863	-	-	-	100	-	-	-	-	-	0.34	0.7
-	5.3	1.77	-	-	-	100	-	-	-	-	-	0.31	1.2
-	5.7	1.909	-	-	-	100	-	-	-	-	-	0.35	0.67
-	6.1	1.844	-	-	-	100	-	-	-	-	-	0.3	0.17
-	6.5	1.87	-	-	-	80	-	20	-	-	-	0.38	0.28
-	6.9	1.879	-	-	-	80	-	20	-	-	-	0.34	0.11
-	7.3	1.866	-	-	-	80	-	20	-	-	-	0.34	0.39
-	7.7	1.812	-	-	-	80	-	20	-	-	-	0.27	0.57
-	8.1	1.84	-	-	-	80	-	20	-	-	OV	0.31	0.56
-	8.5	1.866	-	-	-	80	-	20	-	-	OV	0.32	0.99
-	8.9	1.841	-	-	-	80	-	20	-	-	OV	0.33	0
-	9.3	1.687	-	-	-	80	-	20	-	-	OV	0.25	0
-	9.7	1.653	-	-	-	-	-	75	25	-	OV	0.22	0.25
-	10.1	1.652	-	-	-	-	-	-	100	-	OV	0.11	0.13
-	10.3	-	-	-	-	-	-	-	100	-	OV	0	0
RWE	10.5	1.552	-	-	-	-	-	-	-	-	OV	0	0
-	11	1.459	-	-	-	-	-	-	-	-	-	0	0
RBE	11.2	1.35	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	South Teigen	Hydraulic Unit Type	Riffle	Type	-	1US, 2RB, 3LB, 4DS	
ILP	1001	Channel Type	CP	Make	SWOFFER		
UTM	-	Roughness (m)	0.12	Model #	2100		
Date	14-Aug-09	D95 (m)	0.89	Prop Size	2"		
Time	13:44	Channel Slope (%)	2.85	Calibration	608		
Crew	CB	Bankfull Width (m)	9.5				
Transect	12	Wetted Width (m)	6.6				
Width (m)	11.07						

Station	Station Distance (m)	Elevation Survey		R	B	LC	Substrate (%)				Cover Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)				SC	LG	SG	F		Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.7	-	-	-	-	-	-	-	-	-	-	0	0
-	1.3	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.95	-	-	-	-	-	-	-	-	-	-	0	0
-	2.1	-	-	-	-	-	-	60	-	40	OV	0.08	0
-	2.4	-	-	-	-	-	-	60	-	40	OV	0.15	0.21
-	2.7	-	-	-	-	75	25	-	-	-	OV	0.11	0.21
-	3	-	-	-	-	75	25	-	-	-	OV	0.12	0.27
-	3.3	-	-	-	-	75	25	-	-	-	-	0.27	0.2
-	3.6	-	-	-	-	75	25	-	-	-	-	0.21	0.54
-	3.9	-	-	-	-	75	25	-	-	-	-	0.24	0.62
-	4.2	-	-	-	-	75	25	-	-	-	-	0.24	0.88
-	4.5	-	-	-	-	75	25	-	-	-	-	0.17	0.84
-	4.8	-	-	-	-	75	25	-	-	-	-	0.3	0.74
-	5.1	-	-	-	-	75	25	-	-	-	-	0.36	0.47
-	5.4	-	-	-	-	75	25	-	-	-	-	0.29	0.72
-	5.7	-	-	-	-	75	25	-	-	-	-	0.33	0.19
-	6	-	-	-	-	75	25	-	-	-	-	0.3	0.36
-	6.3	-	-	-	-	75	25	-	-	-	-	0.35	0.4
-	6.6	-	-	-	-	75	25	-	-	-	-	0.3	0.81
-	6.9	-	-	-	-	75	25	-	-	-	-	0.27	0.15
-	7.2	-	-	-	-	75	25	-	-	-	-	0.52	0.56
-	7.5	-	-	-	-	75	25	-	-	-	-	0.51	0.52
-	7.8	-	-	-	-	75	25	-	-	-	LWD	0.51	0.75
-	8.1	-	-	-	-	75	25	-	-	-	LWD	0.27	1.01
-	8.4	-	-	-	-	75	25	-	-	-	LWD	0.26	0.32
RWE	8.95	-	-	-	-	-	-	-	-	-	-	0	0
-	9.3	-	-	-	-	-	-	-	-	-	-	0	0
-	9.7	-	-	-	-	-	-	-	-	-	-	0	0
RBE	10.2	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	South Teigen	Hydraulic Unit Type	Riffle	Type	-	1US, 2RB, 3DS, 4LB	
ILP	1001	Channel Type	CP	Make	SWOFFER		
UTM	-	Roughness (m)	0.12	Model #	2100		
Date	14-Sep-09	D95 (m)	0.89	Prop Size	2"		
Time	15:27	Channel Slope (%)	2.85	Calibration	603		
Crew	CB	Bankfull Width (m)	9.5				
Transect	12	Wetted Width (m)	7.14				
Width (m)	11.07						

Station	Distance (m)	Elevation Survey		R	B	LC	Substrate (%)				Cover Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)				SC	LG	SG	F		Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.7	-	-	-	-	-	-	-	-	-	-	0	0
-	1.3	-	-	-	-	-	-	-	-	-	-	0	0
LWE	1.95	-	-	-	-	-	-	-	-	-	-	0	0
-	2.1	-	-	-	-	-	-	60	-	40	OV	0.08	0
-	2.4	-	-	-	-	-	-	60	-	40	OV	0.14	0.16
-	2.7	-	-	-	-	75	25	-	-	-	OV	0.07	0
-	3	-	-	-	-	75	25	-	-	-	OV	0.14	0.28
-	3.3	-	-	-	-	75	25	-	-	-	-	0.25	0
-	3.6	-	-	-	-	75	25	-	-	-	-	0.25	0
-	3.9	-	-	-	-	75	25	-	-	-	-	0.23	0.28
-	4.2	-	-	-	-	75	25	-	-	-	-	0.27	0.55
-	4.5	-	-	-	-	75	25	-	-	-	-	0.22	0.22
-	4.8	-	-	-	-	75	25	-	-	-	-	0.27	0.47
-	5.1	-	-	-	-	75	25	-	-	-	-	0.35	0.48
-	5.4	-	-	-	-	75	25	-	-	-	-	0.3	0.67
-	5.7	-	-	-	-	75	25	-	-	-	-	0.31	0.29
-	6	-	-	-	-	75	25	-	-	-	-	0.3	0.38
-	6.3	-	-	-	-	75	25	-	-	-	-	0.29	0.37
-	6.6	-	-	-	-	75	25	-	-	-	-	0.26	0.75
-	6.9	-	-	-	-	75	25	-	-	-	-	0.33	0.09
-	7.2	-	-	-	-	75	25	-	-	-	-	0.5	0.27
-	7.5	-	-	-	-	75	25	-	-	-	-	0.54	0.25
-	7.8	-	-	-	-	75	25	-	-	-	LWD	0.5	0.58
-	8.1	-	-	-	-	75	25	-	-	-	LWD	0.29	1.07
-	8.4	-	-	-	-	75	25	-	-	-	LWD	0.45	0.12
RWE	8.95	-	-	-	-	-	-	-	-	-	-	0	0
-	9.3	-	-	-	-	-	-	-	-	-	-	0	0
-	9.7	-	-	-	-	-	-	-	-	-	-	0	0
RBE	10.2	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3LB, 4DS	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440287 6280631	<b>Roughness (m)</b>	0.05	<b>Model #</b>	2100		
<b>Date</b>	14-Aug-09	<b>D95 (m)</b>	1.8	<b>Prop Size</b>	2"		
<b>Time</b>	15:00	<b>Channel Slope (%)</b>	2.85	<b>Calibration</b>	608		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	11.1				
<b>Transect</b>	13	<b>Wetted Width (m)</b>	9.85				
<b>Width (m)</b>	12.45						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.201	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.7	1.43	-	-	-	-	-	-	-	-	-	0	0
LWE	1.33	1.644	-	-	-	-	-	-	-	-	B, OV, P	0	0
-	1.5	1.999	-	-	60	-	-	-	40	-	B, OV, P	0.21	0
-	1.9	2.11	-	-	60	-	-	-	40	-	B, OV, P	0.32	0
-	2.3	2.134	-	-	60	-	-	-	40	-	B, OV, P	0.34	0
-	2.7	1.823	-	-	60	-	-	-	40	-	B, OV, P	0.17	0
-	3.1	1.722	-	-	60	-	-	-	40	-	B, OV, P	0	0
-	3.5	2.467	-	-	60	-	-	-	40	-	B, P	0.66	0.1
-	3.9	2.5	-	-	40	-	-	-	40	10	B, P	0.73	0.01
-	4.3	2.09	-	-	40	-	-	-	40	10	B, P	0.38	0
-	4.7	1.869	-	-	40	-	-	-	40	10	B, P	0.24	0
-	5.1	2.547	-	-	40	-	-	-	40	10	B, P	0.77	0.24
-	5.5	2.574	-	-	40	-	-	-	40	10	B, P	0.78	0.09
-	5.9	2.589	-	-	40	-	-	-	40	10	B, P	0.81	0.04
-	6.3	2.628	-	-	-	-	10	-	-	90	P	0.85	0.12
-	6.7	2.67	-	-	-	-	10	-	-	90	P	0.86	0.02
-	7.1	2.69	-	-	-	-	10	-	-	90	P	0.86	0.01
-	7.5	2.772	-	-	-	-	10	-	-	90	P	1.02	0.03
-	7.9	2.797	-	-	-	-	10	-	-	90	P	0.97	0.08
-	8.3	2.771	-	-	-	-	10	-	-	90	P	1.04	0.58
-	8.7	2.85	-	-	-	-	10	-	-	90	P	0.81	0.88
-	9.1	2.339	-	-	50	-	25	-	-	25	P, OV, B	0.54	1
-	9.5	2.41	-	-	50	-	25	-	-	25	P, OV, B	0.65	0.44
-	9.9	2.372	-	-	50	-	25	-	-	25	P, OV, B	0.57	0
-	10.3	2.236	-	-	25	75	-	-	-	-	OV, P, B	0.47	0.05
-	10.7	1.813	-	-	-	100	-	-	-	-	-	0.26	0
RWE	11.1	1.762	-	-	-	-	-	-	-	-	-	0	0
-	11.5	1.62	-	-	-	-	-	-	-	-	-	0	0
-	11.9	1.488	-	-	-	-	-	-	-	-	-	0	0
RBE	12.3	1.25	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Pool	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440287 6280631	<b>Roughness (m)</b>	0.05	<b>Model #</b>	2100		
<b>Date</b>	14-Sep-09	<b>D95 (m)</b>	1.8	<b>Prop Size</b>	2"		
<b>Time</b>	14:42	<b>Channel Slope (%)</b>	2.85	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	11.1				
<b>Transect</b>	13	<b>Wetted Width (m)</b>	9.8				
<b>Width (m)</b>	12.45						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.201	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.7	1.43	-	-	-	-	-	-	-	-	-	0	0
LWE	1.33	1.644	-	-	-	-	-	-	-	-	B, OV, P	0	0
-	1.5	1.999	-	-	60	-	-	-	40	-	B, OV, P	0.12	0
-	1.9	2.11	-	-	60	-	-	-	40	-	B, OV, P	0.24	0
-	2.3	2.134	-	-	60	-	-	-	40	-	B, OV, P	0.31	0.05
-	2.7	1.823	-	-	60	-	-	-	40	-	B, OV, P	0.01	0
-	3.1	1.722	-	-	60	-	-	-	40	-	B, OV, P	0	0
-	3.5	2.467	-	-	60	-	-	-	40	-	B, P	0.62	0
-	3.9	2.5	-	-	40	-	-	-	40	10	B, P	0.67	0
-	4.3	2.09	-	-	40	-	-	-	40	10	B, P	0.25	0.01
-	4.7	1.869	-	-	40	-	-	-	40	10	B, P	0.1	0
-	5.1	2.547	-	-	40	-	-	-	40	10	B, P	0.15	0.08
-	5.5	2.574	-	-	40	-	-	-	40	10	B, P	0.77	0.03
-	5.9	2.589	-	-	40	-	-	-	40	10	B, P	0.77	0.04
-	6.3	2.628	-	-	-	-	10	-	-	90	P	0.8	0.08
-	6.7	2.67	-	-	-	-	10	-	-	90	P	0.86	0.02
-	7.1	2.69	-	-	-	-	10	-	-	90	P	0.89	0.01
-	7.5	2.772	-	-	-	-	10	-	-	90	P	0.97	0.02
-	7.9	2.797	-	-	-	-	10	-	-	90	P	1.02	0.1
-	8.3	2.771	-	-	-	-	10	-	-	90	P	0.98	0.62
-	8.7	2.85	-	-	-	-	10	-	-	90	P	0.71	0.83
-	9.1	2.339	-	-	50	-	25	-	-	25	P, OV, B	0.6	0.41
-	9.5	2.41	-	-	50	-	25	-	-	25	P, OV, B	0.64	0.28
-	9.9	2.372	-	-	50	-	25	-	-	25	P, OV, B	0.55	0.02
-	10.3	2.236	-	-	25	75	-	-	-	-	OV, P, B	0.45	0.2
-	10.7	1.813	-	-	-	100	-	-	-	-	-	0.01	0
RWE	11.1	1.762	-	-	-	-	-	-	-	-	-	0	0
-	11.5	1.62	-	-	-	-	-	-	-	-	-	0	0
-	11.9	1.488	-	-	-	-	-	-	-	-	-	0	0
RBE	12.3	1.25	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440325 6280848	<b>Roughness (m)</b>	0.13	<b>Model #</b>	2100		
<b>Date</b>	14-Sep-09	<b>D95 (m)</b>	0.55	<b>Prop Size</b>	2"		
<b>Time</b>	9:30	<b>Channel Slope (%)</b>	1.53	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	9				
<b>Transect</b>	14	<b>Wetted Width (m)</b>	8.6				
<b>Width (m)</b>	12.2						

Station	Station	Elevation Survey		R	B	Substrate (%)				Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)			LC	SC	LG	SG		F	Depth (m)	Velocity 0.4d (m/s)
BM	-	2.206	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
LWE & LBE	0.5	2.413	-	-	-	-	-	-	-	-	-	0	0
-	0.6	2.421	-	-	100	-	-	-	-	-	B, OV	0	0
-	0.9	2.393	-	-	100	-	-	-	-	-	B, OV	0	0
-	1.2	2.622	-	-	100	-	-	-	-	-	B, OV	0	0
-	1.5	2.958	-	-	60	40	-	-	-	-	OV	0.25	0.06
-	1.8	2.879	-	-	60	40	-	-	-	-	OV	0.22	0.79
-	2.1	2.913	-	-	60	40	-	-	-	-	OV	0.3	0.66
-	2.4	2.842	-	-	60	40	-	-	-	-	B, OV	0.16	0.17
-	2.7	2.941	-	-	60	40	-	-	-	-	B, OV	0.11	0.77
-	3	2.85	-	-	60	40	-	-	-	-	B, OV	0.25	0.81
-	3.3	2.985	-	-	60	40	-	-	-	-	B, OV	0.4	0.64
-	3.6	2.93	-	-	-	70	30	-	-	-	B	0.29	0.96
-	3.9	3.07	-	-	-	70	30	-	-	-	B	0.5	0.52
-	4.2	3.113	-	-	-	70	30	-	-	-	B	0.37	0.89
-	4.5	3.14	-	-	-	70	30	-	-	-	B	0.45	0.1
-	4.8	3.032	-	-	-	70	30	-	-	-	B	0.35	0.11
-	5.1	3.188	-	-	-	70	30	-	-	-	B	0.55	0.82
-	5.4	3.044	-	-	-	70	30	-	-	-	B	0.27	1.32
-	5.7	2.882	-	-	-	70	30	-	-	-	B	0.38	0.41
-	6	2.898	-	-	-	70	30	-	-	-	B	0.25	0
-	6.3	2.862	-	-	60	-	40	-	-	-	B, OV	0.25	0.12
-	6.6	2.849	-	-	60	-	40	-	-	-	B, OV	0.1	0
-	6.9	2.721	-	-	60	-	40	-	-	-	B, OV	0	0
-	7.2	2.697	-	-	60	-	30	10	-	-	-	0.1	0
-	7.5	2.602	-	-	60	-	30	10	-	-	-	0	0
-	7.9	2.665	-	-	60	-	30	10	-	-	-	0	0
-	8.4	2.584	-	-	60	-	30	10	-	-	-	0	0
RWE	8.6	2.627	-	-	60	-	30	10	-	-	-	0	0
-	9.2	2.558	-	-	60	-	30	10	-	-	-	0	0
-	9.5	2.536	-	-	60	-	30	10	-	-	-	0	0
RBE	10	2.42	-	-	60	-	30	10	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	South Teigen	Hydraulic Unit Type	Cascade	Type	-	1US, 2RB, 3DS, 4LB	
ILP	1001	Channel Type	CP	Make	SWOFFER		
UTM	-	Roughness (m)	0.24	Model #	2100		
Date	14-Sep-09	D95 (m)	0.54	Prop Size	2"		
Time	10:51	Channel Slope (%)	1.53	Calibration	603		
Crew	CB	Bankfull Width (m)	12.6				
Transect	15	Wetted Width (m)	10.4				
Width (m)	14.8						

Station	Distance (m)	Elevation Survey		R	B	LC	Substrate (%)				Cover	Depth-Velocity	
		OBS Elev (m)	Elev (m)				SC	LG	SG	F		Cover	Depth (m)
BM	-	1.37	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.5	1.62	-	-	40	-	60	-	-	-	-	0	0
-	1	2.021	-	-	40	-	60	-	-	-	-	0	0
-	1.5	2.264	-	-	40	-	60	-	-	-	-	0	0
-	2	2.542	-	-	40	-	60	-	-	-	-	0	0
LWE	2.4	2.6	-	-	40	-	60	-	-	-	-	0	0
-	3	2.712	-	-	40	-	60	-	-	-	-	0.1	0.03
-	3.5	2.688	-	-	40	-	60	-	-	-	B	0	0
-	4	2.637	-	-	40	-	60	-	-	-	B	0	0
-	4.5	2.627	-	-	40	-	60	-	-	-	B	0	0
-	5	3	-	-	40	40	20	-	-	-	B	0.25	1.31
-	5.5	2.93	-	-	40	40	20	-	-	-	B	0.28	0.56
-	6	2.721	-	-	40	40	20	-	-	-	B	0	0
-	6.5	2.863	-	-	40	40	20	-	-	-	B	0.13	0.36
-	7	2.97	-	-	-	-	100	-	-	-	-	0.22	0.42
-	7.5	2.982	-	-	-	-	100	-	-	-	-	0.22	1.05
-	8	2.804	-	-	40	60	-	-	-	-	B	0.1	1.17
-	8.5	3.03	-	-	40	60	-	-	-	-	B	0.37	0.96
-	9	2.75	-	-	40	60	-	-	-	-	B	0.14	0.82
-	9.5	2.939	-	-	40	60	-	-	-	-	B	0.2	1.15
-	10	3.01	-	-	40	60	-	-	-	-	B	0.29	0.83
-	10.5	3.101	-	-	-	40	40	20	-	-	-	0.36	0.04
-	11	3.027	-	-	-	40	40	20	-	-	-	0.27	0.02
-	11.5	2.911	-	-	-	40	40	20	-	-	-	0.2	0.01
RWE	12	2.761	-	-	-	40	40	20	-	-	-	0	0
-	12.5	2.588	-	-	-	60	-	40	-	-	-	0	0
RBE	13	2.327	-	-	-	60	-	40	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	South Teigen	Hydraulic Unit Type	Pool	Type	-	1US, 2RB, 3DS, 4LB	
ILP	1001	Channel Type	CP	Make	SWOFFER		
UTM	-	Roughness (m)	0.11	Model #	2100		
Date	14-Sep-09	D95 (m)	0.68	Prop Size	2"		
Time	11:47	Channel Slope (%)	1.53	Calibration	603		
Crew	CB	Bankfull Width (m)	12.9				
Transect	16	Wetted Width (m)	9.3				
Width (m)	14						

Station	Elevation Survey		R	B	LC	Substrate (%)				Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)				Elev (m)	SC	LG	SG		F	Cover	Depth (m)
BM	-	0.13	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1	0.782	-	-	-	-	-	-	-	-	0	0	0
-	1.5	1.575	-	-	-	-	-	-	-	-	0	0	0
LWE	1.9	1.839	-	-	-	-	-	-	-	-	0	0	0
-	2.5	1.907	-	-	-	-	-	-	80	20	-	0.1	0
-	3	2.027	-	-	-	-	-	-	80	20	-	0.2	0
-	3.5	2.158	-	-	-	-	-	-	80	20	-	0.3	0
-	4	2.191	-	-	50	-	-	-	50	-	P, B	0.43	0.03
-	4.5	2.222	-	-	50	-	-	-	50	-	P, B	0.39	0.04
-	5	2.279	-	-	50	-	-	-	50	-	P, B	0.45	0.17
-	5.5	2.179	-	-	80	20	-	-	-	-	P	0.4	0.24
-	6	2.46	-	-	80	20	-	-	-	-	P	0.57	0.51
-	6.5	2.39	-	-	80	20	-	-	-	-	P	0.58	0.44
-	7	2.484	-	-	80	20	-	-	-	-	P	0.6	0.79
-	7.5	2.611	-	-	80	20	-	-	-	-	P	0.8	0.51
-	8	2.579	-	-	80	20	-	-	-	-	P	0.66	0.27
-	8.5	2.511	-	-	-	80	10	10	-	-	P	0.66	0.03
-	9	2.46	-	-	40	-	-	30	30	-	P, B	0.58	0.03
-	9.5	2.309	-	-	40	-	-	30	30	-	P, B	0.45	0.08
-	10	2.268	-	-	40	-	-	30	30	-	P, B	0.43	0.07
-	10.5	2.2	-	-	40	-	-	30	30	-	P, B	0.35	0.01
-	11	1.834	-	-	100	-	-	-	-	-	B	0	0
-	11.5	1.71	-	-	100	-	-	-	-	-	B	0	0
RWE	12	1.842	-	-	100	-	-	-	-	-	B	0	0
-	12.5	1.803	-	-	-	-	-	-	100	-	-	0	0
-	13	1.701	-	-	-	-	-	-	100	-	-	0	0
RBE	13.6	1.29	-	-	-	-	-	-	100	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-



**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440461 6281231	<b>Roughness (m)</b>	0.26	<b>Model #</b>	2100		
<b>Date</b>	14-Sep-09	<b>D95 (m)</b>	1.3	<b>Prop Size</b>	2"		
<b>Time</b>	13:08	<b>Channel Slope (%)</b>	1.53	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	14.7				
<b>Transect</b>	17	<b>Wetted Width (m)</b>	7.8				
<b>Width (m)</b>	16						

Station	Station		Elevation Survey		Substrate (%)						Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	0.838	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	1.1	1.419	-	-	-	70	30	-	-	-	-	0	0
-	1.7	1.473	-	-	-	70	30	-	-	-	-	0	0
-	2.3	1.831	-	-	-	70	30	-	-	-	-	0	0
-	2.9	2.05	-	-	-	70	30	-	-	-	-	0	0
-	3.5	2.061	-	-	-	70	30	-	-	-	-	0	0
LWE	3.9	2.653	-	-	-	70	30	-	-	-	-	0	0
-	4.5	2.612	-	-	90	10	-	-	-	-	P, B	0.6	0
-	5.1	1.923	-	-	90	10	-	-	-	-	P, B	0	0
-	5.7	1.899	-	-	90	10	-	-	-	-	B	0	0
-	6.3	2.244	-	-	90	10	-	-	-	-	B	0.14	0
-	6.9	2.87	-	-	40	60	-	-	-	-	B	0.69	0.69
-	7.5	2.72	-	-	40	60	-	-	-	-	B	0.57	0.12
-	8.1	2.468	-	-	40	60	-	-	-	-	B	0.28	1.51
-	8.7	2.47	-	-	40	60	-	-	-	-	B	0.31	0.18
-	9.3	2.469	-	-	40	60	-	-	-	-	B	0.27	0.62
-	9.9	2.28	-	-	40	60	-	-	-	-	B	0.19	1.12
-	10.5	2.271	-	-	40	60	-	-	-	-	B	0	0
-	11.1	2.22	-	-	40	60	-	-	-	-	B	0.1	0.03
-	11.7	2.439	-	-	40	60	-	-	-	-	B	0.1	0.23
-	12.3	1.984	-	-	100	-	-	-	-	-	B	0	0
-	12.9	1.65	-	-	100	-	-	-	-	-	B	0	0
-	13.5	1.624	-	-	100	-	-	-	-	-	B	0.01	0
RWE	13.7	1.759	-	-	100	-	-	-	-	-	B	0	0
-	14.3	2	-	-	-	90	-	-	-	10	-	0	0
-	14.9	1.956	-	-	-	-	-	-	-	100	-	0	0
-	15.5	1.484	-	-	-	-	-	-	-	100	-	0	0
RBE	15.6	1.08	-	-	-	-	-	-	-	100	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	441031 6272290	<b>Roughness (m)</b>	0.18	<b>Model #</b>	2100		
<b>Date</b>	15-Sep-09	<b>D95 (m)</b>	0.4	<b>Prop Size</b>	2"		
<b>Time</b>	14:14	<b>Channel Slope (%)</b>	1.46	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	14.4				
<b>Transect</b>	18	<b>Wetted Width (m)</b>	10.3				
<b>Width (m)</b>	15.7						

Station	Station	Elevation Survey			Substrate (%)					Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.647	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.2	1.826	-	-	-	-	-	-	-	-	-	0	0
LWE	1.3	2.75	-	-	40	60	-	-	-	-	OV	0	0
-	1.5	2.82	-	-	40	60	-	-	-	-	OV	0.05	0
-	2.2	2.839	-	-	40	60	-	-	-	-	OV	0.05	0
-	2.9	3.141	-	-	40	60	-	-	-	-	OV, B	0.31	0.44
-	3.6	3.036	-	-	20	60	20	-	-	-	OV, B	0.25	1.15
-	4.3	3.19	-	-	20	60	20	-	-	-	OV, B	0.38	0.07
-	5	3.24	-	-	20	60	20	-	-	-	B	0.45	0.91
-	5.7	3.208	-	-	20	60	20	-	-	-	B	0.37	0.13
-	6.4	3.22	-	-	20	60	20	-	-	-	B	0.4	1.46
-	7	3.18	-	-	20	60	20	-	-	-	B	0.43	0.99
-	7.5	3.141	-	-	20	60	20	-	-	-	B	0.35	0.16
-	8	2.886	-	-	20	60	20	-	-	-	B	0.14	0.02
-	8.5	2.819	-	-	30	30	40	-	-	-	B	0.08	0.07
-	9	2.856	-	-	-	-	60	40	-	-	-	0.1	0.15
-	9.5	2.791	-	-	-	-	60	40	-	-	-	0.04	0
-	10	2.792	-	-	-	-	60	40	-	-	-	0	0
-	10.5	2.8	-	-	-	-	60	40	-	-	-	0	0
-	11	2.751	-	-	-	-	60	40	-	-	-	0	0
-	11.5	2.814	-	-	-	-	60	40	-	-	-	0.01	0
RWE	11.9	2.802	-	-	-	-	60	40	-	-	-	0	0
-	12	2.809	-	-	-	-	-	-	100	-	-	0	0
-	13.7	2.669	-	-	-	-	-	-	100	-	-	0	0
RBE	14.6	2.494	-	-	-	-	-	-	100	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	441061 6282322	<b>Roughness (m)</b>	0.12	<b>Model #</b>	2100		
<b>Date</b>	15-Sep-09	<b>D95 (m)</b>	0.3	<b>Prop Size</b>	2"		
<b>Time</b>	15:10	<b>Channel Slope (%)</b>	1.46	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	10.7				
<b>Transect</b>	19	<b>Wetted Width (m)</b>	10				
<b>Width (m)</b>	17.7						

Station	Station	Elevation Survey			Substrate (%)					Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	0.387	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	6	1.014	-	-	-	-	-	-	-	-	-	0	0
LWE	6.7	1.421	-	-	-	10	70	-	20	-	-	0	0
-	6.9	1.416	-	-	-	10	70	-	20	-	-	0.04	0
-	7.3	1.3	-	-	-	10	70	-	20	-	-	0.07	0
-	7.7	1.333	-	-	50	40	-	-	10	-	-	0.1	0
-	8.1	1.642	-	-	50	40	-	-	10	-	-	0	0
-	8.5	1.338	-	-	50	40	-	-	10	-	-	0	0
-	8.9	1.278	-	-	50	40	-	-	10	-	-	0.01	0
-	9.3	1.348	-	-	50	40	-	-	10	-	-	0.1	0
-	9.7	1.39	-	-	50	40	-	-	10	-	-	0	0
-	10.1	1.396	-	-	50	40	-	-	10	-	-	0.08	0.06
-	10.5	1.394	-	-	50	40	-	-	10	-	-	0	0
-	10.9	1.476	-	-	50	40	-	-	10	-	-	0.15	0
-	11.3	1.358	-	-	50	40	-	-	10	-	-	0.01	0
-	11.7	1.412	-	-	50	40	-	-	10	-	-	0.08	0
-	12.1	1.399	-	-	60	-	40	-	-	-	B	0.07	0
-	12.5	1.562	-	-	60	-	40	-	-	-	B	0.14	0.55
-	12.9	1.553	-	-	60	-	40	-	-	-	B	0.1	0.35
-	13.3	1.513	-	-	30	70	-	-	-	-	B	0.3	0.28
-	13.7	1.78	-	-	30	70	-	-	-	-	B	0.34	1.03
-	14.1	1.923	-	-	30	70	-	-	-	-	B	0.5	1.32
-	14.5	1.94	-	-	70	30	-	-	-	-	B	0.55	1.61
-	14.9	2	-	-	70	30	-	-	-	-	B	0.6	0.13
-	15.3	2.153	-	-	70	30	-	-	-	-	B	0.74	0.43
-	15.7	1.843	-	-	50	50	-	-	-	-	B	0.45	0.16
-	16.1	1.811	-	-	50	50	-	-	-	-	B	0.35	0.06
-	16.5	0.682	-	-	50	50	-	-	-	-	B	0.15	0
RWE	16.7	0.543	-	-	50	50	-	-	-	-	UC, B	0	0
RBE	16.9	0.45	-	-	50	50	-	-	-	-	UC, B	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	440964 6282435	<b>Roughness (m)</b>	0.2	<b>Model #</b>	2100		
<b>Date</b>	16-Sep-09	<b>D95 (m)</b>	0.5	<b>Prop Size</b>	2"		
<b>Time</b>	9:00	<b>Channel Slope (%)</b>	1.46	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	13				
<b>Transect</b>	20	<b>Wetted Width (m)</b>	11.75				
<b>Width (m)</b>	14.65						

Station	Station		Elevation Survey			Substrate (%)					Cover	Depth-Velocity	
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	-	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.5	-	-	-	-	80	20	-	-	-	-	0	0
-	1.3	-	-	-	-	80	20	-	-	-	-	0	0
-	1.7	-	-	-	-	80	20	-	-	-	-	0	0
LWE	2.05	-	-	-	-	80	20	-	-	-	-	0	0
-	2.2	-	-	-	-	80	20	-	-	-	-	0.08	0
-	2.7	-	-	-	-	80	20	-	-	-	-	0.23	0.69
-	3.2	-	-	-	-	80	20	-	-	-	-	0.41	0.59
-	3.7	-	-	-	-	80	20	-	-	-	-	0.4	0.43
-	4.2	-	-	-	-	80	20	-	-	-	-	0.4	0.02
-	4.7	-	-	-	-	80	20	-	-	-	-	0.32	0.49
-	5.2	-	-	-	-	80	20	-	-	-	-	0.35	0.38
-	5.7	-	-	-	-	80	20	-	-	-	-	0.38	0.46
-	6.2	-	-	-	-	80	20	-	-	-	-	0.46	1.09
-	6.7	-	-	-	70	30	-	-	-	-	B	0.64	0.65
-	7.2	-	-	-	70	30	-	-	-	-	B	0.75	1.06
-	7.7	-	-	-	70	30	-	-	-	-	B	0.6	0.64
-	8.2	-	-	-	70	30	-	-	-	-	B	0.27	0.99
-	8.7	-	-	-	70	30	-	-	-	-	B	0.55	0.13
-	9.2	-	-	-	70	30	-	-	-	-	B	0.59	0.8
-	9.7	-	-	-	70	30	-	-	-	-	B	0.58	0.73
-	10.2	-	-	-	-	80	-	20	-	-	-	0.37	0.78
-	10.7	-	-	-	50	50	-	-	-	-	-	0.28	0.86
-	11.2	-	-	-	50	50	-	-	-	-	-	0.26	0.29
-	11.7	-	-	-	100	-	-	-	-	-	-	0	0
-	12.2	-	-	-	100	-	-	-	-	-	-	0	0
-	12.7	-	-	-	50	-	50	-	-	-	-	0.26	0.38
-	13.2	-	-	-	-	-	-	-	-	-	-	0.14	0.04
RWE	13.5	-	-	-	-	-	-	-	-	-	-	0	0
RBE	13.8	-	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
<b>Stream Name</b>	South Teigen	<b>Hydraulic Unit Type</b>	Cascade	<b>Type</b>	-	1US, 2RB, 3DS, 4LB	
<b>ILP</b>	1001	<b>Channel Type</b>	CP	<b>Make</b>	SWOFFER		
<b>UTM</b>	441006 6282436	<b>Roughness (m)</b>	0.32	<b>Model #</b>	2100		
<b>Date</b>	16-Sep-09	<b>D95 (m)</b>	0.7	<b>Prop Size</b>	2"		
<b>Time</b>	9:20	<b>Channel Slope (%)</b>	1.46	<b>Calibration</b>	603		
<b>Crew</b>	CB	<b>Bankfull Width (m)</b>	20.7				
<b>Transect</b>	21	<b>Wetted Width (m)</b>	16.5				
<b>Width (m)</b>	21.5						

Station	Station	Elevation Survey		R	B	Substrate (%)				Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)			LC	SC	LG	SG		F	Depth (m)	Velocity 0.4d (m/s)
BM	-	1.269	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.4	1.588	-	-	-	-	-	-	-	-	0	0	0
-	1	2.449	-	-	-	-	-	-	-	-	0	0	0
LWE	1.6	2.559	-	-	40	20	-	40	-	-	B	0	0
-	1.9	2.683	-	-	40	20	-	40	-	-	B	0.01	0
-	2.5	2.706	-	-	40	20	-	40	-	-	B	0.15	0
-	3.3	2.839	-	-	-	90	10	-	-	-	-	0.21	0.45
-	4.1	2.778	-	-	-	90	10	-	-	-	-	0.2	0.5
-	4.9	2.887	-	-	-	90	10	-	-	-	-	0.38	0.6
-	5.7	2.859	-	-	50	50	-	-	-	-	B	0.34	0.22
-	6.5	2.671	-	-	50	50	-	-	-	-	B	0.2	0.35
-	7.3	2.843	-	-	50	50	-	-	-	-	B	0.38	0.21
-	8.1	2.97	-	-	50	50	-	-	-	-	B	0.47	0.58
-	8.9	2.902	-	-	50	50	-	-	-	-	B	0.38	1.08
-	9.7	2.871	-	-	-	60	40	-	-	-	-	0.41	1.14
-	10.5	2.85	-	-	-	60	40	-	-	-	-	0.39	0.73
-	11.3	2.849	-	-	-	60	40	-	-	-	-	0.33	0.61
-	12.1	2.569	-	-	-	60	40	-	-	-	-	0.25	0.74
-	12.9	2.66	-	-	-	60	40	-	-	-	-	0.15	0.27
-	13.7	2.549	-	-	-	-	-	40	60	-	-	0.01	0
-	14.5	2.482	-	-	-	-	-	40	60	-	-	0	0
-	15.3	2.461	-	-	-	-	-	40	60	-	-	0	0
-	16.1	2.504	-	-	-	-	20	80	-	-	-	0.01	0
-	16.9	2.51	-	-	-	-	20	80	-	-	-	0.08	0
-	17.7	2.498	-	-	-	-	20	80	-	-	-	0.02	0
-	18.5	2.5	-	-	-	-	20	80	-	-	OV	0.1	0.24
-	19.3	2.604	-	-	-	-	20	80	-	-	OV	0.13	0
RWE	20.2	2.184	-	-	-	-	20	80	-	-	OV	0	0
-	20.6	1.761	-	-	-	-	-	-	-	-	-	0	0
RBE	21	1.6	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

**Appendix 6.3-2. Receiving Environment Instream Flow Data**

General		Channel		Flow Meter		Photos	
Stream Name	South Teigen	Hydraulic Unit Type	Cascade	Type	-	1US, 2RB, 3DS, 4LB	
ILP	1001	Channel Type	CP	Make	SWOFFER		
UTM	-	Roughness (m)	0.17	Model #	2100		
Date	16-Sep-09	D95 (m)	0.45	Prop Size	2"		
Time	10:00	Channel Slope (%)	1.46	Calibration	603		
Crew	CB	Bankfull Width (m)	17.4				
Transect	22	Wetted Width (m)	14.6				
Width (m)	17.75						

Station	Elevation Survey		Substrate (%)							Cover	Depth-Velocity		
	Distance (m)	OBS Elev (m)	Elev (m)	R	B	LC	SC	LG	SG	F	Cover	Depth (m)	Velocity 0.4d (m/s)
BM	-	2.312	-	-	-	-	-	-	-	-	-	-	-
PIN	0	-	-	-	-	-	-	-	-	-	-	-	-
LBE	0.6	2.481	-	-	-	-	-	-	-	-	-	0	0
LWE	1	3.639	-	-	-	-	-	-	-	100	LWD	0	0
-	1.8	3.779	-	-	-	-	-	-	-	100	LWD	0.19	0
-	2.6	3.852	-	-	-	-	100	-	-	-	-	0.26	0.61
-	3.4	3.88	-	-	-	-	100	-	-	-	-	0.24	1.16
-	4.2	4.03	-	-	-	-	100	-	-	-	-	0.37	1.08
-	5	3.96	-	-	-	60	40	-	-	-	-	0.34	1.31
-	5.8	4.17	-	-	-	60	40	-	-	-	-	0.5	1.23
-	6.6	4.096	-	-	20	-	80	-	-	-	B	0.4	0.25
-	7.4	3.968	-	-	-	20	80	-	-	-	-	0.4	1.21
-	8.2	3.974	-	-	-	20	80	-	-	-	-	0.49	0.8
-	9	4.099	-	-	40	60	-	-	-	-	B	0.38	0
-	9.8	3.902	-	-	40	60	-	-	-	-	B	0.2	0.45
-	10.6	3.657	-	-	40	60	-	-	-	-	B	0.02	0
-	11.4	3.742	-	-	40	60	-	-	-	-	B	0.1	0.76
-	12.2	3.431	-	-	100	-	-	-	-	-	B	0	0
-	13	3.52	-	-	100	-	-	-	-	-	B	0	0
-	13.8	3.639	-	-	60	-	40	-	-	-	B	0.1	0.25
-	14.6	3.66	-	-	60	-	40	-	-	-	B	0.15	0.07
-	15.2	3.442	-	-	60	-	40	-	-	-	B	0	0
RWE	15.9	3.4	-	-	-	-	-	-	-	-	-	0	0
-	16.9	3.29	-	-	-	-	-	-	-	-	-	0	0
RBE	17.4	3.164	-	-	-	-	-	-	-	-	-	0	0
PIN	-	-	-	-	-	-	-	-	-	-	-	-	-

## **Appendix 6.3-3**

Receiving and Reference Environment MMER Sites Biological  
Fish Data



**Appendix 6.3-3. Receiving and Reference Environment MMER Sites Biological Fish Data**

Date	Site	Sample		Species	Sex	Maturity	Fork Length (mm)	Total Weight (g)	Weight (g)			Stomach weight (g)	Eggs Taken (Y/N)	Age Taken (S/F/O)	Age (years)	Adipose Taken (Y/N)	
		Method	H/P #						Sample #	Minus Contents	Gonad weight (g)						Liver weight (g)
6-Aug-09	STE2	EF	1	1	DV	UNK	IM	52	1.4	-	-	-	-	N	-	N	
6-Aug-09	STE2	EF	1	2	DV	UNK	IM	49	1.08	-	-	-	-	N	-	N	
6-Aug-09	STE2	EF	1	3	DV	UNK	IM	55	1.46	-	-	-	-	N	-	N	
6-Aug-09	STE2	EF	1	4	DV	UNK	IM	30	0.21	-	-	-	-	N	-	N	
6-Aug-09	STE2	EF	1	5	DV	UNK	IM	58	1.86	-	-	-	-	N	-	N	
6-Aug-09	STE2	EF	1	6	DV	UNK	IM	51	1.42	-	-	-	-	N	-	N	
6-Aug-09	STE2	EF	1	7	DV	UNK	IM	79	4.9	-	-	-	-	N	-	N	
6-Aug-09	STE2	EF	1	8	DV	UNK	IM	86	6.21	-	-	-	-	N	-	N	
6-Aug-09	STE2	EF	1	9	DV	M	IM	109	12.21	10.68	-	0.12	0.85	N	SFO	2	Y
6-Aug-09	STE2	EF	1	10	DV	UNK	IM	113	13.12	12.07	-	0.17	0.51	N	SF	2	Y
6-Aug-09	STE2	EF	1	11	DV	F	IM	108	12.65	11.29	-	0.15	0.77	N	SFO	3	Y
6-Aug-09	STE2	EF	1	12	DV	F	MTC	136	23.17	20.8	-	0.3	1.52	N	SFO	2	Y
6-Aug-09	STE2	EF	1	13	DV	F	MTC	125	18.78	17.6	F	0.2	0.7	N	SFO	3	Y
6-Aug-09	STE2	EF	1	14	DV	M	M	132	26.13	23.47	-	0.46	1.5	N	SFO	3	Y
6-Aug-09	STE2	EF	1	15	DV	M	M	151	36.83	33.12	-	0.45	2.8	N	SFO	4	Y
6-Aug-09	STE2	EF	1	16	DV	F	M	175	47.68	41.31	3.38	0.9	2.28	Y	SFO	5	Y
6-Aug-09	NTR2	EF	1	1	MW	M	-	330	-	-	-	-	N	SF	11	N	
6-Aug-09	NTR2	EF	1	2	DV	M	M	144	32.63	30.66	-	0.51	1.07	N	SFO	3	Y
6-Aug-09	NTR2	EF	1	3	DV	M	M	112	14.61	12.64	-	0.31	0.94	N	SFO	-	Y
6-Aug-09	NTR2	EF	1	4	DV	UNK	IM	63	2.7	2.7	-	-	N	N	-	Y	
6-Aug-09	NTR2	EF	1	5	DV	M	M	183	61.82	56.83	-	0.75	3.65	N	SFO	4	Y
6-Aug-09	NTR2	EF	1	6	DV	M	M	136	28.99	25.59	-	0.34	1.68	N	SFO	3	Y
6-Aug-09	NTR2	EF	1	7	DV	M	M	176	62.68	59.88	-	0.88	2.98	N	SFO	4	Y
6-Aug-09	NTR2	EF	1	8	DV	UNK	IM	77	4.12	4.12	-	-	N	N	-	Y	
7-Aug-09	SCR	EF	1	1	DV	UNK	IM	63	2.18	-	-	-	-	-	-	N	
7-Aug-09	SCR	EF	1	2	DV	UNK	IM	91	7.02	-	-	-	-	-	SF	3	N
7-Aug-09	SCR	EF	1	3	DV	UNK	IM	100	9.45	-	-	-	-	-	SF	3	N
7-Aug-09	SCR	EF	1	4	DV	UNK	IM	60	2.2	-	-	-	-	-	-	N	
7-Aug-09	SCR	EF	1	5	DV	UNK	IM	95	7.69	-	-	-	-	-	SF	2	N
7-Aug-09	SCR	EF	1	6	DV	UNK	IM	109	13.81	-	-	-	-	-	SF	3	N
7-Aug-09	SCR	EF	1	7	DV	UNK	IM	74	4.37	-	-	-	-	-	-	N	
7-Aug-09	SCR	EF	1	8	DV	UNK	IM	80	5.65	-	-	-	-	-	-	N	
7-Aug-09	SCR	EF	1	9	DV	UNK	IM	54	1.91	-	-	-	-	-	-	N	
7-Aug-09	SCR	EF	1	10	DV	UNK	IM	68	2.84	-	-	-	-	-	-	N	
7-Aug-09	SCR	EF	1	11	DV	UNK	IM	72	3.31	-	-	-	-	-	-	N	
7-Aug-09	SCR	EF	1	12	DV	F	MTC	113	13.05	11.8	0.08	0.09	0.83	N	SFO	3	Y
7-Aug-09	SCR	EF	1	13	DV	M	M	121	16.59	15.61	0.72	0.11	0.65	N	SFO	3	Y
7-Aug-09	SCR	EF	1	14	DV	M	M	135	27.48	25.87	1.48	0.29	0.91	N	SFO	3	Y
7-Aug-09	SCR	EF	1	15	DV	M	M	148	34.77	32.5	1.18	0.6	1.56	N	SFO	3	Y
7-Aug-09	SCR	EF	1	16	DV	F	IM	109	10.84	9.91	-	0.11	0.62	N	SF	3	Y
7-Aug-09	SCR	EF	1	17	DV	F	IM	115	13.31	12.39	-	0.15	0.54	N	SF	3	Y
7-Aug-09	SCR	EF	1	18	DV	F	MTC	141	23.71	21.73	1.09	0.43	0.96	Y	SFO	2	Y
7-Aug-09	SCR	EF	1	19	DV	M	MTC	117	15.48	14.37	-	0.19	0.82	N	SFO	2	Y
7-Aug-09	SCR	EF	1	20	BT	-	-	109	10.79	-	-	-	-	-	-	N	
7-Aug-09	SC3	EF	1	1	DV	M	M	123	20.95	18.76	0.8	0.36	1.56	N	SFO	-	N
7-Aug-09	SC3	EF	1	2	DV	M	MTC	101	11.42	10.09	-	0.26	0.98	N	SF	3	N
7-Aug-09	SC3	EF	1	3	DV	M	M	136	27.78	24.94	0.85	0.34	2.26	N	SFO	3	N

EF = electrofishing, DV = Dolly Varden, BT = bull trout

F = female, M = male, IM = immature, M = mature

AD = adipose, F = fin ray, S = scale, O = otolith

## **Appendix 6.3-4**

Receiving and Reference Environment Stream and Lake Fish  
Fecundity Data

**Appendix 6.3-4. Receiving and Reference Environment Stream and Lake Fish Fecundity Data**

<b>Site</b>	<b>Sample Number</b>	<b>Fish No.</b>	<b>Weight of Ovaries (g)</b>	<b>Egg Description</b>	<b>SS</b>	<b>Count</b>	<b>Sub-total</b>	<b>Total</b>
STE2	090494	DV-16	4.606	> 3 mm	10	20	200	700
				1 - 2 mm	10	50	500	
SCR	090495	DV-18	1.506	2 - 3 mm	5	40	200	595
				1 - 2 mm	5	79	395	
TDL	090496	DV-16	13.883	5 mm	1	2	2	5182
				2 - 3 mm	10	8	80	
				1 - 2 mm	10	510	5100	

## **Appendix 6.3-5**

Tissue Metal Concentrations from Fish Captured at Receiving  
and Reference Environment Sites

**Appendix 6.3-5. Tissue Metal Concentrations from Fish Captured at Receiving and Reference Environment Sites**

Sample ID	SCR DV-14	SCR DV-12	SCR DV-19	SCR DV-13	SCR DV-15	SCR DV-16	SCR DV-17	SCR DV-18	SCR DV-3		
Date Sampled	07-AUG-09	07-AUG-09	07-AUG-09	07-AUG-09	07-AUG-09	07-AUG-09	07-AUG-09	07-AUG-09	07-AUG-09		
Time Sampled	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00		
ALS Sample ID	L824787-1	L824787-2	L824787-3	L824787-4	L824787-5	L824787-6	L824787-7	L824787-8	L824787-9		
Matrix	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue		
Physical Tests	Units	Detection Limits									
% Moisture	%	0.10	75.3	74.7	75.8	74.1	76.0	78.0	73.8	75.4	74.2
<b>Metals</b>											
Aluminum (Al)-Total	mg/kg wwt	2.00	46.6	118	110	40.9	33.7	16.8	43.4	66.8	38.3
Antimony (Sb)-Total	mg/kg wwt	0.01	<0.010	0.014	0.020	<0.010	<0.010	<0.010	<0.010	0.010	<0.010
Arsenic (As)-Total	mg/kg wwt	0.01-0.20	0.140	0.182	0.325	0.126	0.112	0.076	0.039	0.156	0.169
Barium (Ba)-Total	mg/kg wwt	0.01	2.12	2.50	2.61	1.93	2.09	1.64	1.07	2.17	1.58
Beryllium (Be)-Total	mg/kg wwt	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bismuth (Bi)-Total	mg/kg wwt	0.03	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Cadmium (Cd)-Total	mg/kg wwt	0.01	0.140	0.105	0.210	0.127	0.0947	0.0778	0.0435	0.118	0.208
Calcium (Ca)-Total	mg/kg wwt	2.00	4770	5540	5250	5210	5230	5470	4200	4870	4420
Chromium (Cr)-Total	mg/kg wwt	0.10	0.11	0.25	0.16	0.12	0.16	0.15	0.19	0.18	0.16
Cobalt (Co)-Total	mg/kg wwt	0.02	0.153	0.215	0.247	0.122	0.157	0.090	0.077	0.153	0.179
Copper (Cu)-Total	mg/kg wwt	0.01	0.711	0.862	0.816	0.687	0.917	0.633	0.631	0.738	2.58
Iron (Fe)-Total	mg/kg wwt	0.2-0.40	80.7	199	198	73.2	62.1	37.5	71.2	110	61.4
Lead (Pb)-Total	mg/kg wwt	0.02	0.040	0.065	0.096	0.038	0.028	0.022	<0.020	0.056	0.044
Lithium (Li)-Total	mg/kg wwt	0.10	<0.10	0.11	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Magnesium (Mg)-Total	mg/kg wwt	1.00	309	382	361	354	327	339	336	338	311
Manganese (Mn)-Total	mg/kg wwt	0.01	4.96	8.51	9.66	4.19	5.11	3.47	2.69	5.66	3.60
Mercury (Hg)-Total	mg/kg wwt	0.00	0.0075	0.0059	0.0072	0.0082	0.0063	0.0069	0.0060	0.0077	0.0179
Molybdenum (Mo)-Total	mg/kg wwt	0.01	0.013	0.018	0.022	0.011	0.014	0.013	0.011	0.017	0.020
Nickel (Ni)-Total	mg/kg wwt	0.10	<0.10	0.19	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Phosphorus (P)-Total	mg/kg wwt	5.0-10.0	5100	5390	5100	5330	5250	4690	3970	4860	4670
Potassium (K)-Total	mg/kg wwt	20.0-40.0	3630	3710	3670	3800	3520	3430	3210	3590	3590
Selenium (Se)-Total	mg/kg wwt	0.20	0.94	1.51	0.91	0.94	1.12	0.73	1.29	0.62	1.16
Sodium (Na)-Total	mg/kg wwt	20.0-40.0	827	835	858	838	811	762	675	819	732
Strontium (Sr)-Total	mg/kg wwt	0.01	6.36	9.98	7.85	7.33	7.73	7.89	7.06	7.20	6.05
Thallium (Tl)-Total	mg/kg wwt	0.01	0.018	<0.010	0.022	0.025	0.018	0.019	<0.010	0.016	0.019
Tin (Sn)-Total	mg/kg wwt	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	0.053	<0.050	<0.050	<0.050
Titanium (Ti)-Total	mg/kg wwt	0.10-0.20	0.89	1.81	2.08	0.81	0.69	0.61	0.90	1.61	1.78
Uranium (U)-Total	mg/kg wwt	0.00	0.0023	0.0028	0.0036	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.0034
Vanadium (V)-Total	mg/kg wwt	0.10	0.12	0.33	0.32	0.12	<0.10	<0.10	0.11	0.20	0.15
Zinc (Zn)-Total	mg/kg wwt	0.10	20.5	34.2	26.9	26.7	31.0	28.4	27.7	26.6	31.0

**Appendix 6.3-5. Tissue Metal Concentrations from Fish Captured at Receiving and Reference Environment Sites**

Sample ID			SC3 DV-2	SC3 DV-1	STE2 DV-12	STE2 DV-13	STE2 DV-11	STE2 DV-14	STE2 DV-15	STE2 DV-10	STE2 DV-16
Date Sampled			07-AUG-09	07-AUG-09	08-AUG-09	08-AUG-09	08-AUG-09	08-AUG-09	08-AUG-09	08-AUG-09	08-AUG-09
Time Sampled			10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00
ALS Sample ID			L824787-10	L824787-11	L824787-12	L824787-13	L824787-14	L824787-15	L824787-16	L824787-17	L824787-18
Matrix			Tissue	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue
Physical Tests	Units	Detection Limits									
% Moisture	%	0.10	73.9	74.8	76.1	76.2	77.0	77.5	77.0	77.3	79.1
<b>Metals</b>											
Aluminum (Al)-Total	mg/kg wwt	2.00	32.8	13.4	6.7	8.3	28.3	65.2	30.3	26.7	20.3
Antimony (Sb)-Total	mg/kg wwt	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)-Total	mg/kg wwt	0.01-0.20	0.135	0.126	0.027	0.029	0.047	0.065	0.041	0.041	0.025
Barium (Ba)-Total	mg/kg wwt	0.01	1.62	1.39	0.497	0.637	0.941	1.78	1.15	1.01	1.01
Beryllium (Be)-Total	mg/kg wwt	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bismuth (Bi)-Total	mg/kg wwt	0.03	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Cadmium (Cd)-Total	mg/kg wwt	0.01	0.200	0.171	0.0276	0.0333	0.0347	0.0461	0.0337	0.0550	0.0335
Calcium (Ca)-Total	mg/kg wwt	2.00	5000	5790	4220	4510	4800	6610	5730	5970	4910
Chromium (Cr)-Total	mg/kg wwt	0.10	0.21	0.18	0.21	0.21	0.31	0.50	0.28	0.26	0.26
Cobalt (Co)-Total	mg/kg wwt	0.02	0.192	0.121	0.151	0.265	0.288	0.405	0.350	0.359	0.243
Copper (Cu)-Total	mg/kg wwt	0.01	3.60	4.53	0.708	0.799	0.921	1.36	1.03	0.999	1.19
Iron (Fe)-Total	mg/kg wwt	0.2-0.40	58.5	35.8	17.6	20.2	38.4	77.9	44.3	35.9	37.5
Lead (Pb)-Total	mg/kg wwt	0.02	0.037	0.021	<0.020	<0.020	<0.020	0.020	<0.020	<0.020	<0.020
Lithium (Li)-Total	mg/kg wwt	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Magnesium (Mg)-Total	mg/kg wwt	1.00	312	322	306	342	340	458	334	357	314
Manganese (Mn)-Total	mg/kg wwt	0.01	3.49	2.65	2.29	2.45	3.39	6.35	4.23	4.56	3.32
Mercury (Hg)-Total	mg/kg wwt	0.00	0.0145	0.0151	0.0136	0.0114	0.0138	0.0189	0.0144	0.0140	0.0283
Molybdenum (Mo)-Total	mg/kg wwt	0.01	0.024	0.016	0.013	0.015	0.016	0.024	0.019	0.016	0.013
Nickel (Ni)-Total	mg/kg wwt	0.10	<0.10	<0.10	<0.10	<0.10	0.13	0.27	0.12	0.11	<0.10
Phosphorus (P)-Total	mg/kg wwt	5.0-10.0	4350	4830	4630	4360	4540	6910	5260	5600	4760
Potassium (K)-Total	mg/kg wwt	20.0-40.0	3220	3310	3610	3480	3480	4800	3340	3570	3500
Selenium (Se)-Total	mg/kg wwt	0.20	1.17	1.08	1.58	1.41	1.51	2.06	1.55	1.37	1.35
Sodium (Na)-Total	mg/kg wwt	20.0-40.0	773	800	844	946	986	1250	1000	1030	1050
Strontium (Sr)-Total	mg/kg wwt	0.01	6.78	7.03	6.88	7.58	7.74	10.1	8.85	9.88	7.34
Thallium (Tl)-Total	mg/kg wwt	0.01	0.020	0.013	<0.010	<0.010	<0.010	0.014	<0.010	<0.010	<0.010
Tin (Sn)-Total	mg/kg wwt	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Titanium (Ti)-Total	mg/kg wwt	0.10-0.20	1.84	1.08	0.19	0.27	0.65	0.64	0.73	0.55	0.30
Uranium (U)-Total	mg/kg wwt	0.00	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Vanadium (V)-Total	mg/kg wwt	0.10	0.15	<0.10	<0.10	<0.10	0.11	0.23	0.11	<0.10	<0.10
Zinc (Zn)-Total	mg/kg wwt	0.10	40.0	35.0	29.3	32.3	31.1	41.7	34.5	32.7	46.6

**Appendix 6.3-5. Tissue Metal Concentrations from Fish Captured at Receiving and Reference Environment Sites**

Sample ID	STE2 DV-9	NTR2 DV-6	NTR2 DV-5	NTR2 DV-4	NTR2 DV-3	NTR2 DV-2	NTR2 DV-8	NTR2 DV-7		
Date Sampled	09-AUG-09	06-AUG-09	06-AUG-09	06-AUG-09	06-AUG-09	06-AUG-09	06-AUG-09	06-AUG-09		
Time Sampled	10:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00		
ALS Sample ID	L824787-19	L824787-20	L824787-21	L824787-22	L824787-23	L824787-24	L824787-25	L824787-26		
Matrix	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue	Tissue		
<b>Physical Tests</b>	<b>Units</b>	<b>Detection Limits</b>								
% Moisture	%	0.10	75.3	73.1	73.0	-	73.5	75.1	73.6	74.1
<b>Metals</b>										
Aluminum (Al)-Total	mg/kg ww	2.00	13.8	5.2	7.6	52.8	103	16.9	88.7	4.0
Antimony (Sb)-Total	mg/kg ww	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (As)-Total	mg/kg ww	0.01-0.20	0.040	0.023	0.022	<0.20	0.065	0.061	<0.10	0.029
Barium (Ba)-Total	mg/kg ww	0.01	1.11	0.604	0.744	1.64	2.22	0.861	1.98	0.879
Beryllium (Be)-Total	mg/kg ww	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bismuth (Bi)-Total	mg/kg ww	0.03	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Cadmium (Cd)-Total	mg/kg ww	0.01	0.0334	0.0188	0.0189	0.123	0.0388	0.0435	0.0799	0.0214
Calcium (Ca)-Total	mg/kg ww	2.00	6560	3670	3340	4450	4260	4650	4010	4020
Chromium (Cr)-Total	mg/kg ww	0.10	0.26	0.19	0.25	0.44	0.55	0.24	0.57	0.22
Cobalt (Co)-Total	mg/kg ww	0.02	0.307	0.053	0.089	0.255	0.183	0.161	0.210	0.088
Copper (Cu)-Total	mg/kg ww	0.01	0.870	0.679	0.720	1.11	0.969	0.831	1.01	0.879
Iron (Fe)-Total	mg/kg ww	0.2-0.40	21.7	14.4	18.1	57.2	103	24.8	103	14.1
Lead (Pb)-Total	mg/kg ww	0.02	0.026	<0.020	<0.020	0.030	0.026	<0.020	0.026	<0.020
Lithium (Li)-Total	mg/kg ww	0.10	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	0.10	<0.10
Magnesium (Mg)-Total	mg/kg ww	1.00	392	318	303	369	379	347	369	306
Manganese (Mn)-Total	mg/kg ww	0.01	3.72	1.38	1.15	3.47	3.25	2.26	4.16	1.31
Mercury (Hg)-Total	mg/kg ww	0.00	0.0124	0.0064	0.0055	0.0054	0.0075	0.0062	0.0052	0.0053
Molybdenum (Mo)-Total	mg/kg ww	0.01	0.016	0.010	<0.010	0.031	0.015	0.012	0.022	0.011
Nickel (Ni)-Total	mg/kg ww	0.10	<0.10	<0.10	<0.10	0.22	0.33	<0.10	0.34	<0.10
Phosphorus (P)-Total	mg/kg ww	5.0-10.0	5710	4610	4490	3740	4480	5090	4300	5030
Potassium (K)-Total	mg/kg ww	20.0-40.0	3380	3640	3600	2600	3550	3740	3260	3530
Selenium (Se)-Total	mg/kg ww	0.20	1.80	1.77	1.15	1.85	1.33	1.44	1.27	1.08
Sodium (Na)-Total	mg/kg ww	20.0-40.0	935	854	816	849	940	872	800	922
Strontium (Sr)-Total	mg/kg ww	0.01	11.0	7.22	6.31	8.79	8.15	7.86	8.33	7.34
Thallium (Tl)-Total	mg/kg ww	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tin (Sn)-Total	mg/kg ww	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Titanium (Ti)-Total	mg/kg ww	0.10-0.20	0.41	0.17	0.16	0.44	0.71	0.26	0.76	0.15
Uranium (U)-Total	mg/kg ww	0.00	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Vanadium (V)-Total	mg/kg ww	0.10	<0.10	<0.10	<0.10	0.18	0.37	<0.10	0.28	<0.10
Zinc (Zn)-Total	mg/kg ww	0.10	36.6	25.4	19.4	39.6	32.6	24.7	35.9	23.7



## **Appendix 6.3-6**

Receiving and Reference Environment Stream and Lake Fish  
Diet Data by Number

**Appendix 6.3-6. Receiving and Reference Environment Stream and Lake Fish Diet Data by Number**

Fish No.	DV-15	DV-16	DV-25	DV-26	DV-40	DV-06	DV-15	DV-16	DV-30
Location	LAL	LAL	LAL	LAL	LAL	TDL	TDL	TDL	TDL
Date	8-Jul-09	8-Jul-09	8-Jul-09	8-Jul-09	8-Jul-09	9-Jul-09	9-Jul-09	9-Jul-09	9-Jul-09
Sample No.	090457	090458	090459	090460	090461	090462	090463	090464	090465
Fullness (%)	25	40	10	40	100	30	50	50	90
Digestion (%)	25	25	25	50	25	10	10	10	50
Actual Weight (mg)	433	569	155	487	3861	924	2208	2643	8078
<b>Comments</b>									
<b>Species/Group</b>	<b>Stage</b>	<b>Origin</b>							
<u>OLIGOCHAETA</u>									
Oligochaeta	dam	FW	-	-	-	-	-	-	-
Lumbricidae		FW	-	-	-	-	-	-	-
Lumbriculidae		FW	-	-	-	-	-	-	-
<u>CRUSTACEA</u>									
<u>Cladocera</u>									
Daphnidae									
<i>Daphnia middendorffiana</i>		FW	-	300	70	-	1680	3938	4778
Chydoridae									
<i>Eurycerus</i> sp.		FW	1	-	-	-	-	-	-
Calanoida									
<i>Heterocope septentrionalis</i>		A	FW	-	-	-	-	39	-
Cyclopoida		FW	-	50	2	-	-	-	-
AMPHIPODA									
Gammaridae		FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>		juv	FW	1	-	-	-	-	2
<i>Gammarus lacustris</i>		FW	1	-	-	2	-	-	1
<u>ARACHNIDA</u>									
Aranea		A	TERR	-	-	-	-	-	-
Hydracarina		FW	-	1	-	-	-	-	-
EPHEMEROPTERA		N	FW	-	-	-	-	-	-
Ameletidae									
<i>Ameletus</i>		N	FW	-	-	-	-	-	-
Baetidae									
<i>Baetis bicaudatus</i>		N	FW	4	-	-	-	-	-
Ephemerellidae									
<i>Ephemerella</i> sp		N	FW	-	-	-	-	-	-
<i>Ephemerella coloradensis</i>		N	FW	-	-	-	-	-	-
Heptageniidae		N*	FW	-	-	-	-	-	-
<i>Cinygmula</i>		N	FW	-	-	-	-	-	-
<i>Epeorus</i>		N	FW	-	-	-	-	-	-
<i>Heptagenia</i>		N	FW	-	-	-	-	-	-
ODONATA									
Anisoptera		N	FW	-	-	-	-	-	-
PLECOPTERA		N*	FW	-	-	-	-	-	-
Plecoptera		A	FW	-	-	-	-	-	-
Chloroperlidae									
<i>Suwallia</i>		N	FW	-	-	-	-	-	-
Nemouridae									
<i>Zapada</i>		N	FW	-	-	-	-	-	-
Perlodidae		N	FW	-	-	-	-	-	-
HEMIPTERA		A	TERR	-	-	-	-	-	-
Aphididae		N	TERR	-	-	-	-	-	-
Aphididae		A	TERR	-	-	-	-	-	-
Coccoidea		N	TERR	-	-	-	-	-	-
TRICHOPTERA		L	FW	-	-	-	-	-	-
Trichoptera		P	FW	-	-	-	-	-	-
Trichoptera		A	FW	-	-	-	-	-	-
Hydropsychidae									
<i>Hydropsyche</i>		L	FW	-	-	-	-	-	-
Limnephilidae		L	FW	-	-	-	-	-	7
<i>Hesperophylax</i>		L	FW	-	-	-	-	-	8
<i>Limnephilus</i>		L	FW	-	-	-	-	-	10
<i>Psychoglypha</i>		L	FW	-	-	-	-	-	-
Rhyacophilidae									
<i>Rhyacophila</i> sp		L	FW	-	-	-	-	-	-
<i>Rhyacophila bifila</i>		L	FW	-	-	-	-	-	-
LEPIDOPTERA		L	TERR	-	-	-	-	-	-
Lepidoptera		A	TERR	-	-	-	-	-	-
COLEOPTERA		A	TERR	-	-	-	-	-	-
Dytiscidae		A	FW	-	-	-	-	-	-
<i>Hydroporus</i>		L	FW	-	-	-	-	-	-
<i>Hydroporus</i>		A	FW	-	-	-	-	-	-
Cerambycidae		A	TERR	-	1	-	-	-	-
Chrysomelidae		A	TERR	-	3	-	-	-	-
Hydrophilidae									
<i>Hydrochara</i>		L	FW	-	-	-	-	-	-
Staphylinidae		A	TERR	-	1	-	-	-	-
HYMENOPTERA		A	TERR	-	1	-	-	-	-
Formicidae		A		-	-	-	-	-	-
DIPTERA		L	TERR	-	-	-	-	-	-
Diptera		A	FW	-	-	-	-	-	-
Blephariceridae									
<i>Agathon</i>		L	FW	-	-	-	-	-	-
Culicidae		A	FW	-	-	-	-	-	-
Empididae		L	FW	-	-	-	-	-	-
Empididae		A	FW	-	-	-	-	-	-

**Appendix 6.3-6. Receiving and Reference Environment Stream and Lake Fish Diet Data by Number**

Fish No.	DV-15	DV-16	DV-25	DV-26	DV-40	DV-06	DV-15	DV-16	DV-30
Location	LAL	LAL	LAL	LAL	LAL	TDL	TDL	TDL	TDL
Date	8-Jul-09	8-Jul-09	8-Jul-09	8-Jul-09	8-Jul-09	9-Jul-09	9-Jul-09	9-Jul-09	9-Jul-09
Sample No.	090457	090458	090459	090460	090461	090462	090463	090464	090465
Fullness (%)	25	40	10	40	100	30	50	50	90
Digestion (%)	25	25	25	50	25	10	10	10	50
Actual Weight (mg)	433	569	155	487	3861	924	2208	2643	8078
<b>Comments</b>									
<b>Species/Group</b>	<b>Stage</b>	<b>Origin</b>							
<i>Chelifera</i>	L	FW	-	-	-	-	-	-	-
Muscidae	L	FW	-	-	-	-	-	-	-
Muscidae	A	FW	-	-	-	-	-	-	-
<i>Limnophora</i>	L	FW	-	-	-	-	-	-	-
Simuliidae			-	-	-	-	-	-	-
<i>Simulium</i>	L	FW	-	-	-	-	-	-	-
<i>Simulium</i>	P	FW	-	-	-	-	-	-	-
Tabanidae	L	FW	-	-	-	-	-	-	-
Tipulidae	L	FW	-	-	-	-	-	-	-
Tipulidae	A	FW	-	-	-	-	-	-	-
<i>Hexatoma</i>	L	FW	-	-	-	-	-	-	-
<u>Chironomidae</u>	L*	FW	-	-	-	-	-	-	-
Chironomidae	P	FW	17	7	36	-	-	-	34
Tanypodinae			-	-	-	-	-	-	-
<i>Procladius</i>	L	FW	-	1	-	-	-	-	1
<i>Procladius</i>	P	FW	22	1	13	-	-	-	-
<i>Thienemannimyia</i>	L	FW	-	-	-	-	-	-	-
<i>Thienemannimyia</i>	P	FW	-	-	1	-	-	-	-
Tanytarsini	L*	FW	-	-	-	-	-	-	-
Tanytarsini	P	FW	-	-	-	-	-	-	-
<i>Tanytarsus</i>	P	FW	33	8	11	950	-	-	-
Chironomini	L*	FW	-	-	-	-	-	-	-
Chironomini	P	FW	3	-	-	-	-	-	-
<i>Chironomus</i>	L	FW	-	-	-	-	3	-	120
<i>Chironomus</i>	P	FW	-	-	-	-	-	-	-
<i>Phaenopsectra</i>	L	FW	2	3	-	-	-	-	2
<i>Phaenopsectra</i>	P	FW	7	6	8	3	190	-	11
Orthoclaadiinae	L*	FW	4	1	-	-	-	-	-
Orthoclaadiinae	P	FW	-	-	-	-	-	-	-
<i>Brillia</i>	L	FW	-	-	-	-	-	-	-
Diamesinae	P	FW	-	-	-	-	-	-	-
<i>Diamesa</i>	L	FW	-	-	-	-	-	-	-
<i>Diamesa</i>	P	FW	-	-	-	-	-	-	-
MOLLUSCA			-	-	-	-	-	-	-
Bivalvia			-	-	-	-	-	-	-
Sphaeriidae			-	-	-	-	-	-	-
<i>Pisidium</i>		FW	-	-	2	-	-	-	3
Gastropoda	dam	FW	-	-	-	-	-	-	-
Planorbidae			-	-	-	-	-	-	-
<i>Gyraulus</i>		FW	-	-	1	-	-	-	200
<u>INSECTA</u>	parts		-	-	-	-	-	-	-
NON-FOOD ITEMS			-	-	-	-	-	-	-
Case Materials			-	-	-	-	-	-	X
Pebble			-	-	-	-	-	X	-
Plant			X	-	X	-	-	-	-
Mud			-	-	-	-	-	-	-

Stage: N = nymph, A = adult, L = larvae, P = pupae, juv = juvenile, \* indicates too small to be identified further  
 Origin: FW = freshwater, TERR = terrestrial

**Appendix 6.3-6. Receiving and Reference Environment Stream and Lake Fish Diet Data by Number**

Fish No.	DV-31	DV-34	DV-09	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15
Location	TDL	TDL	STE2	STE2	STE2	STE2	STE2	STE2	STE2
Date	9-Jul-09	9-Jul-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09
Sample No.	090466	090467	090468	090469	090470	090471	090472	090473	090474
Fullness (%)	75	60	90	90	100	90	75	100	100
Digestion (%)	50	10	50	75	50	50	75	20	15
Actual Weight (mg)	2900	2537	116	64	174	302	78	559	937
			incomplete			incomplete			
			stomach			stomach			
Comments	Stage	Origin							
<b>OLIGOCHAETA</b>									
Oligochaeta	dam	FW	-	-	-	-	-	-	-
Lumbricidae		FW	-	-	-	-	-	-	-
Lumbriculidae		FW	-	-	-	-	-	-	-
<b>CRUSTACEA</b>									
<b>Cladocera</b>									
Daphnidae			-	-	-	-	-	-	-
<i>Daphnia middendorffiana</i>		FW	400	4500	-	-	-	-	-
Chydoridae			-	-	-	-	-	-	-
<i>Eurycerus</i> sp.		FW	-	-	-	-	-	-	-
Calanoida			-	-	-	-	-	-	-
<i>Heterocope septentrionalis</i>	A	FW	10	-	-	-	-	-	-
Cyclopoida		FW	-	-	-	-	-	-	-
<b>AMPHIPODA</b>									
Gammaridae		FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>	juv	FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>		FW	-	-	-	-	-	-	-
<b>ARACHNIDA</b>									
Aranea	A	TERR	-	-	-	-	-	1	-
Hydracarina		FW	-	-	-	1	-	1	-
<b>EPHEMEROPTERA</b>									
Ameletidae			-	-	-	-	-	-	-
<i>Ameletus</i>	N	FW	-	-	-	-	1	2	1
Baetidae			-	-	-	-	-	-	-
<i>Baetis bicaudatus</i>	N	FW	-	-	6	5	2	3	2
Ephemerellidae			-	-	-	-	-	-	-
<i>Ephemerella</i> sp	N	FW	-	-	-	-	-	1	-
<i>Ephemerella coloradensis</i>	N	FW	-	-	-	-	-	-	1
Heptageniidae	N*	FW	-	-	2	-	-	-	2
<i>Cinygmula</i>	N	FW	-	-	-	3	1	-	-
<i>Epeorus</i>	N	FW	-	-	2	-	-	-	1
<i>Heptagenia</i>	N	FW	-	-	-	-	-	-	1
<b>ODONATA</b>									
Anisoptera	N	FW	-	-	-	-	-	-	-
<b>PLECOPTERA</b>									
Plecoptera	N*	FW	-	-	-	1	1	3	1
Chloroperlidae	A	FW	-	-	-	-	-	-	1
<i>Suwallia</i>	N	FW	-	-	-	-	-	-	1
Nemouridae			-	-	6	-	-	-	-
<i>Zapada</i>	N	FW	-	-	4	-	3	5	3
Perlodidae	N	FW	-	-	-	-	-	-	1
<b>HEMIPTERA</b>									
Aphididae	A	TERR	-	-	-	-	-	-	-
Aphididae	N	TERR	-	-	-	-	-	-	-
Aphididae	A	TERR	-	-	-	-	-	-	-
Coccoidea	N	TERR	-	-	-	-	-	-	-
<b>TRICHOPTERA</b>									
Trichoptera	L	FW	-	-	-	-	-	-	3
Trichoptera	P	FW	-	-	-	-	-	-	-
Trichoptera	A	FW	-	-	-	1	-	-	-
<b>HYDROPSYCHIDAE</b>									
<i>Hydropsyche</i>	L	FW	-	-	1	-	-	-	1
Limnephilidae	L	FW	-	-	-	-	-	-	-
<i>Hesperophylax</i>	L	FW	-	-	-	-	-	-	-
<i>Limnephilus</i>	L	FW	-	-	-	-	-	-	-
<i>Psychoglypha</i>	L	FW	-	-	-	-	-	-	-
<b>RHYACOPHILIDAE</b>									
<i>Rhyacophila</i> sp	L	FW	-	-	-	-	-	2	3
<i>Rhyacophila bifila</i>	L	FW	-	-	-	1	1	2	4
<b>LEPIDOPTERA</b>									
Lepidoptera	A	TERR	-	-	-	1	1	-	-
<b>COLEOPTERA</b>									
Dytiscidae	A	TERR	-	-	1	-	-	-	1
<i>Hydroporus</i>	A	FW	-	-	-	-	-	-	-
<i>Hydroporus</i>	L	FW	-	-	-	-	-	-	-
<i>Hydroporus</i>	A	FW	-	-	-	-	-	-	-
Cerambycidae	A	TERR	-	-	-	-	-	-	-
Chrysomelidae	A	TERR	-	-	-	-	-	-	-
Hydrophilidae			-	-	-	-	-	-	-
<i>Hydrochara</i>	L	FW	-	-	-	-	-	-	1
Staphylinidae	A	TERR	-	-	-	1	-	-	3
<b>HYMENOPTERA</b>									
Formicidae	A	TERR	-	-	1	-	-	1	-
<b>DIPTERA</b>									
Diptera	A	FW	-	-	-	4	16	-	5
Blephariceridae			-	-	-	-	-	-	-
<i>Agathon</i>	L	FW	-	-	-	-	-	-	-
Culicidae	A	FW	-	-	-	-	-	-	-
Empididae	L	FW	-	-	-	-	-	-	-
Empididae	A	FW	-	-	-	-	2	-	-

**Appendix 6.3-6. Receiving and Reference Environment Stream and Lake Fish Diet Data by Number**

Fish No.	DV-31	DV-34	DV-09	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15
Location	TDL	TDL	STE2	STE2	STE2	STE2	STE2	STE2	STE2
Date	9-Jul-09	9-Jul-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09
Sample No.	090466	090467	090468	090469	090470	090471	090472	090473	090474
Fullness (%)	75	60	90	90	100	90	75	100	100
Digestion (%)	50	10	50	75	50	50	75	20	15
Actual Weight (mg)	2900	2537	116	64	174	302	78	559	937
			incomplete			incomplete			
			stomach			stomach			
Comments	Stage	Origin							
<i>Chelifera</i>	L	FW	-	-	-	-	1	1	-
Muscidae	L	FW	-	-	-	-	-	-	-
Muscidae	A	FW	-	-	-	1	-	-	1
<i>Limnophora</i>	L	FW	-	-	-	-	-	-	-
Simuliidae			-	-	-	-	-	-	-
<i>Simulium</i>	L	FW	-	-	17	3	12	24	18
<i>Simulium</i>	P	FW	-	-	-	-	2	1	1
Tabanidae	L	FW	-	-	-	-	1	-	-
Tipulidae	L	FW	-	-	-	-	-	-	-
Tipulidae	A	FW	-	-	-	-	-	-	-
<i>Hexatoma</i>	L	FW	-	-	-	-	-	-	-
Chironomidae	L*	FW	-	-	-	-	-	-	-
Chironomidae	P	FW	-	-	-	-	-	-	-
Tanypodinae			-	-	-	-	-	-	-
<i>Procladius</i>	L	FW	-	-	-	-	-	-	-
<i>Procladius</i>	P	FW	2	-	-	-	-	-	-
<i>Thiennemannimyia</i>	L	FW	-	-	-	-	-	-	-
<i>Thiennemannimyia</i>	P	FW	-	-	-	-	-	-	-
Tanytarsini	L*	FW	-	-	1	-	1	-	-
Tanytarsini	P	FW	-	-	-	-	-	-	-
<i>Tanytarsus</i>	P	FW	-	-	-	-	-	-	-
Chironomini	L*	FW	10	-	-	-	-	-	-
Chironomini	P	FW	-	-	-	-	-	-	-
<i>Chironomus</i>	L	FW	203	-	-	-	-	-	-
<i>Chironomus</i>	P	FW	8	-	-	-	-	-	-
<i>Phaenopsectra</i>	L	FW	-	5	-	-	-	-	-
<i>Phaenopsectra</i>	P	FW	-	-	-	-	-	-	-
Orthoclaadiinae	L*	FW	-	-	2	-	-	4	4
Orthoclaadiinae	P	FW	-	-	-	-	-	-	-
<i>Brillia</i>	L	FW	-	-	-	-	-	-	-
Diamesinae	P	FW	-	-	-	-	-	-	-
<i>Diamesa</i>	L	FW	-	-	2	-	-	-	-
<i>Diamesa</i>	P	FW	-	-	-	-	-	-	-
MOLLUSCA			-	-	-	-	-	-	-
Bivalvia			-	-	-	-	-	-	-
Sphaeriidae			-	-	-	-	-	-	-
<i>Pisidium</i>		FW	-	-	-	-	-	-	-
Gastropoda	dam	FW	-	-	-	-	-	-	-
Planorbidae			-	-	-	-	-	-	-
<i>Gyraulus</i>		FW	1	-	-	-	-	-	-
INSECTA	parts		-	-	X	X	-	X	X
NON-FOOD ITEMS			-	-	-	-	-	-	-
Case Materials			-	-	X	-	-	-	-
Pebble			-	-	-	-	X	-	X
Plant			X	-	-	-	-	X	X
Mud			-	-	-	-	-	-	-

Stage: N = nymph, A = adult, L = larvae, P = pupae, juv = juvenile, \* indicates too small to be identified further  
 Origin: FW = freshwater, TERR = terrestrial

**Appendix 6.3-6. Receiving and Reference Environment Stream and Lake Fish Diet Data by Number**

Fish No.	DV-16	DV-01	DV-02	DV-03	DV-12	DV-13	DV-14	DV-15	DV-16
Location	STE2	SC3	SC3	SC3	SCR	SCR	SCR	SCR	SCR
Date	6-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09
Sample No.	090475	090476	090477	090478	090479	090480	090481	090482	090483
Fullness (%)	80	100	90	11	80	50	60	75	60
Digestion (%)	10	50	40	40	50	50	75	75	75
Actual Weight (mg)	470	509	384	1227	192	75	115	371	156
<b>Comments</b>									
<b>Species/Group</b>	<b>Stage</b>		<b>Origin</b>						
<u>OLIGOCHAETA</u>									
Oligochaeta	dam	FW	-	-	-	-	-	-	-
Lumbricidae		FW	-	1	-	-	-	-	-
Lumbriculidae		FW	-	1	1	-	-	-	-
<u>CRUSTACEA</u>									
<u>Cladocera</u>									
Daphnidae									
<i>Daphnia middendorffiana</i>		FW	-	-	-	-	-	-	-
Chydoridae									
<i>Eurycerus</i> sp.		FW	-	-	-	-	-	-	-
Calanoida									
<i>Heterocope septentrionalis</i>	A	FW	-	-	-	-	-	-	-
Cyclopoida		FW	-	-	-	-	-	-	-
AMPHIPODA									
Gammaridae		FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>	juv	FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>		FW	-	-	-	-	-	-	-
<u>ARACHNIDA</u>									
Aranea	A	TERR	-	-	-	-	-	-	-
Hydracarina		FW	-	-	-	-	-	-	-
EPHEMEROPTERA	N	FW	-	-	-	1	1	-	-
Ameletidae									
<i>Ameletus</i>	N	FW	-	-	-	-	1	1	5
Baetidae									
<i>Baetis bicaudatus</i>	N	FW	21	6	13	35	-	1	-
Ephemerellidae									
<i>Ephemerella</i> sp	N	FW	1	-	-	-	-	-	-
<i>Ephemerella coloradensis</i>	N	FW	-	-	-	-	2	-	-
Heptageniidae	N*	FW	-	-	-	-	-	-	-
<i>Cinygmula</i>	N	FW	-	1	-	2	-	-	-
<i>Epeorus</i>	N	FW	-	-	1	11	1	-	-
<i>Heptagenia</i>	N	FW	-	-	-	-	-	-	-
ODONATA									
Anisoptera	N	FW	-	-	-	-	-	-	1
PLECOPTERA	N*	FW	-	-	-	1	-	1	-
Plecoptera	A	FW	-	-	-	-	-	-	-
Chloroperlidae									
<i>Suwallia</i>	N	FW	-	-	-	-	-	-	-
Nemouridae									
<i>Zapada</i>	N	FW	3	2	2	2	2	-	-
Perlodidae	N	FW	4	-	-	1	-	-	1
HEMIPTERA	A	TERR	-	2	-	-	-	-	-
Aphididae	N	TERR	-	6	-	-	-	-	-
Aphididae	A	TERR	-	11	-	-	-	-	-
Coccoidea	N	TERR	-	1	-	-	-	-	-
TRICHOPTERA	L	FW	-	-	-	-	-	-	-
Trichoptera	P	FW	-	-	-	-	-	-	-
Trichoptera	A	FW	-	-	-	-	-	-	-
Hydropsychidae									
<i>Hydropsyche</i>	L	FW	3	-	1	6	-	-	-
Limnephilidae	L	FW	-	-	-	-	-	-	-
<i>Hesperophylax</i>	L	FW	-	-	-	-	-	-	-
<i>Limnephilus</i>	L	FW	-	-	-	-	-	-	-
<i>Psychoglypha</i>	L	FW	-	-	-	-	-	1	-
Rhyacophilidae									
<i>Rhyacophila</i> sp	L	FW	1	-	1	6	1	-	-
<i>Rhyacophila bifila</i>	L	FW	2	-	-	-	-	-	-
LEPIDOPTERA	L	TERR	-	-	3	3	-	1	-
Lepidoptera	A	TERR	-	-	-	-	-	-	-
COLEOPTERA	A	TERR	-	1	1	-	-	-	-
Dytiscidae	A	FW	-	-	-	-	-	1	-
<i>Hydroporus</i>	L	FW	-	-	-	-	-	1	-
<i>Hydroporus</i>	A	FW	-	-	-	-	-	1	-
Cerambycidae	A	TERR	-	1	-	-	-	-	-
Chrysomelidae	A	TERR	-	-	-	-	-	-	-
Hydrophilidae									
<i>Hydrochara</i>	L	FW	-	1	-	-	-	-	-
Staphylinidae	A	TERR	-	2	-	-	-	2	-
HYMENOPTERA	A	TERR	2	5	-	-	-	-	-
Formicidae	A		-	-	-	-	-	-	-
DIPTERA	L	TERR	-	-	-	-	1	-	-
Diptera	A	FW	2	19	-	-	-	-	-
Blephariceridae									
<i>Agathon</i>	L	FW	-	-	-	1	-	-	-
Culicidae	A	FW	1	-	-	-	-	-	-
Empididae	L	FW	-	-	-	1	-	-	-
Empididae	A	FW	-	6	-	-	-	-	-

**Appendix 6.3-6. Receiving and Reference Environment Stream and Lake Fish Diet Data by Number**

Fish No.	DV-16	DV-01	DV-02	DV-03	DV-12	DV-13	DV-14	DV-15	DV-16
Location	STE2	SC3	SC3	SC3	SCR	SCR	SCR	SCR	SCR
Date	6-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09
Sample No.	090475	090476	090477	090478	090479	090480	090481	090482	090483
Fullness (%)	80	100	90	11	80	50	60	75	60
Digestion (%)	10	50	40	40	50	50	75	75	75
Actual Weight (mg)	470	509	384	1227	192	75	115	371	156
<b>Comments</b>									
<b>Species/Group</b>	<b>Stage</b>	<b>Origin</b>							
<i>Chelifera</i>	L	FW	-	-	-	-	-	-	-
Muscidae	L	FW	-	-	1	-	-	-	-
Muscidae	A	FW	-	-	-	-	-	-	-
<i>Limnophora</i>	L	FW	-	-	1	-	-	-	-
Simuliidae	-	-	-	-	-	-	-	-	-
<i>Simulium</i>	L	FW	37	1	3	3	2	-	-
<i>Simulium</i>	P	FW	1	1	-	-	1	-	-
Tabanidae	L	FW	-	-	-	-	-	-	-
Tipulidae	L	FW	-	-	-	-	-	-	-
Tipulidae	A	FW	-	1	-	-	-	-	-
<i>Hexatoma</i>	L	FW	1	1	-	-	-	-	-
Chironomidae	L*	FW	-	-	-	-	1	-	-
Chironomidae	P	FW	-	2	2	-	-	-	-
Tanypodinae	-	-	-	-	-	-	-	-	-
<i>Procladius</i>	L	FW	-	-	-	-	-	-	-
<i>Procladius</i>	P	FW	-	-	-	-	-	-	-
<i>Thienemannimyia</i>	L	FW	-	-	-	-	1	-	-
<i>Thienemannimyia</i>	P	FW	-	-	-	-	-	-	-
Tanytarsini	L*	FW	-	-	-	-	-	-	-
Tanytarsini	P	FW	-	-	-	-	1	-	-
<i>Tanytarsus</i>	P	FW	-	-	-	-	-	-	-
Chironomini	L*	FW	-	-	-	-	-	-	-
Chironomini	P	FW	-	-	-	-	-	-	-
<i>Chironomus</i>	L	FW	-	-	-	-	-	-	-
<i>Chironomus</i>	P	FW	-	-	-	-	-	-	-
<i>Phaenopsectra</i>	L	FW	-	-	-	-	-	-	-
<i>Phaenopsectra</i>	P	FW	-	-	-	-	-	-	-
Orthoclaadiinae	L*	FW	-	-	9	8	1	7	4
Orthoclaadiinae	P	FW	-	-	-	-	-	-	-
<i>Brillia</i>	L	FW	-	1	-	-	-	-	-
Diamesinae	P	FW	-	-	-	-	-	-	-
<i>Diamesa</i>	L	FW	-	14	252	115	-	1	1
<i>Diamesa</i>	P	FW	-	6	3	4	-	-	-
MOLLUSCA	-	-	-	-	-	-	-	-	-
Bivalvia	-	-	-	-	-	-	-	-	-
Sphaeriidae	-	-	-	-	-	-	-	-	-
<i>Pisidium</i>	-	FW	-	-	-	-	-	-	-
Gastropoda	dam	FW	-	-	-	-	-	-	-
Planorbidae	-	-	-	-	-	-	-	-	-
<i>Gyraulus</i>	-	FW	-	-	-	-	1	-	-
INSECTA	parts		X	X	-	-	-	X	X
NON-FOOD ITEMS	-	-	-	-	-	-	-	-	-
Case Materials	-	-	-	-	-	-	-	-	-
Pebble	-	-	-	-	X	-	-	-	-
Plant	-	X	-	X	X	-	-	-	X
Mud	-	-	-	-	-	-	-	-	-

Stage: N = nymph, A = adult, L = larvae, P = pupae, juv = juvenile, \* indicates too small to be identified further  
 Origin: FW = freshwater, TERR = terrestrial



**Appendix 6.3-6. Receiving and Reference Environment Stream and Lake Fish Diet Data by Number**

Fish No.	DV-17	DV-18	DV-19	DV-02	DV-03	DV-05	DV-06	DV-07	RB-17	RB-35
Location	SCR	SCR	SCR	NTR2	NTR2	NTR2	NTR2	NTR2	TDL	TDL
Date	7-Aug-09	7-Aug-09	7-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Jul-09	9-Jul-09
Sample No.	090484	090485	090486	090487	090488	090489	090490	090491	090492	090493
Fullness (%)	75	25	75	75	100	100	50	75	75	25
Digestion (%)	75	90	90	90	50	75	25	50	25	10
Actual Weight (mg)	136	49	185	83	126	768	107	307	1065	619
incomplete stomach										
Comments	Stage	Origin								
<u>OLIGOCHAETA</u>										
Oligochaeta	dam	FW	-	-	1	-	-	-	-	-
Lumbricidae		FW	-	-	-	-	-	-	-	-
Lumbriculidae		FW	-	-	-	-	-	-	-	-
<u>CRUSTACEA</u>										
<u>Cladocera</u>										
Daphnidae			-	-	-	-	-	-	-	-
<i>Daphnia middendorffiana</i>		FW	-	-	-	-	-	-	2000	1300
Chydoridae			-	-	-	-	-	-	-	-
<i>Eurycerus</i> sp.		FW	-	-	-	-	-	-	-	-
Calanoidea			-	-	-	-	-	-	-	-
<i>Heterocope septentrionalis</i>		A	FW	-	-	-	-	-	-	-
Cyclopoida		FW	-	-	-	-	-	-	-	-
AMPHIPODA										
Gammaridae		FW	-	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>		juv	FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>		FW	-	-	-	-	-	-	-	-
<u>ARACHNIDA</u>										
Aranea		A	TERR	-	-	-	-	-	-	-
Hydracarina		FW	-	-	-	-	-	-	-	-
EPHEMEROPTERA										
Ameletidae		N	FW	1	-	-	-	-	-	-
Ameletus		N	FW	-	2	2	-	-	1	-
Baetidae			-	-	-	-	-	-	-	-
<i>Baetis bicaudatus</i>		N	FW	1	-	3	6	5	15	-
Ephemerellidae			-	-	-	-	-	-	-	-
<i>Ephemerella</i> sp		N	FW	1	-	-	-	-	1	-
<i>Ephemerella coloradensis</i>		N	FW	-	-	1	-	-	-	-
Heptageniidae		N*	FW	-	-	-	-	1	-	-
<i>Cinygmula</i>		N	FW	-	-	1	4	1	1	3
<i>Epeorus</i>		N	FW	-	-	1	-	1	2	1
<i>Heptagenia</i>		N	FW	-	-	-	-	1	-	-
ODONATA										
Anisoptera		N	FW	-	-	-	-	-	-	-
PLECOPTERA		N*	FW	-	-	-	1	-	-	-
Plecoptera		A	FW	-	-	-	-	-	-	1
Chloroperlidae			-	-	-	-	-	-	-	-
<i>Suwallia</i>		N	FW	-	-	-	-	2	-	-
Nemouridae			-	-	-	-	-	-	-	-
<i>Zapada</i>		N	FW	5	-	8	-	-	1	1
Perlodidae		N	FW	-	-	-	-	1	-	1
HEMIPTERA										
Aphididae		A	TERR	-	-	-	-	-	-	-
Aphididae		N	TERR	-	-	-	-	-	-	-
Aphididae		A	TERR	-	-	-	-	-	-	-
Coccoidea		N	TERR	-	-	-	-	-	-	-
TRICHOPTERA										
Trichoptera		L	FW	-	-	-	-	2	-	-
Trichoptera		P	FW	-	-	-	-	-	1	-
Trichoptera		A	FW	-	-	-	-	-	-	-
HYDROPSYCHIDA										
<i>Hydropsyche</i>		L	FW	-	-	-	-	-	-	-
Limnephilidae		L	FW	-	-	-	-	-	-	-
<i>Hesperophylax</i>		L	FW	-	-	-	-	-	-	-
<i>Limnephilus</i>		L	FW	-	-	-	-	-	-	-
<i>Psychoglypha</i>		L	FW	-	-	-	-	-	-	-
RHYNCHOPHYTES										
Rhyacophilidae			-	-	-	-	-	-	-	-
<i>Rhyacophila</i> sp		L	FW	-	-	-	-	-	1	-
<i>Rhyacophila bifila</i>		L	FW	-	-	-	-	-	-	-
LEPIDOPTERA										
Lepidoptera		A	TERR	-	-	-	1	-	-	-
COLEOPTERA										
Dytiscidae		A	TERR	-	2	1	-	-	-	2
<i>Hydroporus</i>		A	FW	-	-	-	-	-	-	-
<i>Hydroporus</i>		L	FW	-	-	-	-	-	-	-
<i>Hydroporus</i>		A	FW	-	-	-	-	-	-	-
Cerambycidae		A	TERR	-	-	-	-	-	-	-
Chrysomelidae		A	TERR	-	-	-	-	-	-	-
Hydrophilidae			-	-	-	-	-	-	-	-
<i>Hydrochara</i>		L	FW	-	-	-	-	1	-	-
Staphylinidae		A	TERR	-	-	1	-	-	1	2
HYMENOPTERA										
Formicidae		A	TERR	2	-	1	-	-	-	-
Diptera		L	TERR	-	-	-	-	-	1	-
Diptera		A	FW	4	-	-	-	-	1	3
Blephariceridae			-	-	-	-	-	-	-	-
<i>Agathon</i>		L	FW	-	-	-	-	-	-	-
Culicidae		A	FW	-	-	-	-	-	-	-
Empididae		L	FW	-	-	-	-	-	-	-
Empididae		A	FW	1	-	-	-	-	-	-

**Appendix 6.3-6. Receiving and Reference Environment Stream and Lake Fish Diet Data by Number**

Fish No.	DV-17	DV-18	DV-19	DV-02	DV-03	DV-05	DV-06	DV-07	RB-17	RB-35
Location	SCR	SCR	SCR	NTR2	NTR2	NTR2	NTR2	NTR2	TDL	TDL
Date	7-Aug-09	7-Aug-09	7-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Jul-09	9-Jul-09
Sample No.	090484	090485	090486	090487	090488	090489	090490	090491	090492	090493
Fullness (%)	75	25	75	75	100	100	50	75	75	25
Digestion (%)	75	90	90	90	50	75	25	50	25	10
Actual Weight (mg)	136	49	185	83	126	768	107	307	1065	619
incomplete stomach										
Comments	Stage	Origin								
<i>Chelifera</i>	L	FW	-	-	-	-	-	-	-	-
Muscidae	L	FW	-	-	-	-	3	-	-	-
Muscidae	A	FW	-	-	-	-	1	-	1	-
<i>Limnophora</i>	L	FW	-	-	-	-	-	-	-	-
Simuliidae			-	-	-	-	-	-	-	-
<i>Simulium</i>	L	FW	-	-	7	-	-	14	-	1
<i>Simulium</i>	P	FW	-	-	-	-	3	13	-	2
Tabanidae	L	FW	-	-	-	-	-	-	-	-
Tipulidae	L	FW	-	-	-	-	-	1	1	-
Tipulidae	A	FW	-	-	-	-	-	-	-	2
<i>Hexatoma</i>	L	FW	-	-	-	-	1	-	-	-
Chironomidae	L*	FW	-	1	-	-	-	-	-	-
Chironomidae	P	FW	-	-	1	6	-	1	1	12
Tanypodinae			-	-	-	-	-	-	-	-
<i>Procladius</i>	L	FW	-	-	-	-	-	-	-	-
<i>Procladius</i>	P	FW	-	-	-	-	-	-	-	-
<i>Thiennemannimyia</i>	L	FW	-	-	-	-	-	-	-	-
<i>Thiennemannimyia</i>	P	FW	-	-	-	-	-	-	-	-
Tanytarsini	L*	FW	-	-	-	-	-	-	-	-
Tanytarsini	P	FW	-	-	-	-	-	-	-	-
<i>Tanytarsus</i>	P	FW	-	-	-	-	-	-	-	-
Chironomini	L*	FW	-	-	-	-	-	-	-	-
Chironomini	P	FW	-	-	-	-	-	-	-	-
<i>Chironomus</i>	L	FW	-	-	-	-	-	-	-	-
<i>Chironomus</i>	P	FW	-	-	-	-	-	-	-	-
<i>Phaenopsectra</i>	L	FW	-	-	-	-	-	-	-	6
<i>Phaenopsectra</i>	P	FW	-	-	-	-	-	-	-	-
Orthoclaadiinae	L*	FW	10	-	2	3	-	6	-	10
Orthoclaadiinae	P	FW	-	-	-	2	-	4	-	2
<i>Brillia</i>	L	FW	-	-	-	1	-	-	-	-
Diamesinae	P	FW	1	-	-	-	-	-	-	-
<i>Diamesa</i>	L	FW	4	-	5	2	-	8	-	11
<i>Diamesa</i>	P	FW	-	-	-	6	-	-	-	1
MOLLUSCA			-	-	-	-	-	-	-	-
Bivalvia			-	-	-	-	-	-	-	-
Sphaeriidae			-	-	-	-	-	-	-	-
<i>Pisidium</i>		FW	-	-	-	-	-	-	-	-
Gastropoda	dam	FW	-	-	-	-	-	1	-	-
Planorbidae			-	-	-	-	-	-	-	-
<i>Gyraulus</i>		FW	-	-	-	-	-	-	-	-
INSECTA	parts		-	X	-	-	-	X	X	-
NON-FOOD ITEMS			-	-	-	-	-	-	-	-
Case Materials			-	-	-	-	-	-	-	-
Pebble			-	-	-	X	X	-	X	-
Plant			-	-	-	-	X	-	X	X
Mud			-	-	X	-	-	X	-	-

Stage: N = nymph, A = adult, L = larvae, P = pupae, juv = juvenile, \* indicates too small to be identified further  
 Origin: FW = freshwater, TERR = terrestrial

## **Appendix 6.3-7**

Receiving and Reference Environment Stream and Lake Fish  
Diet Data by Weight

**Appendix 6.3-7. Receiving and Reference Environment Stream and Lake Fish Diet Data by Weight**

Fish No.	DV-15	DV-16	DV-25	DV-26	DV-40	DV-06	DV-15	DV-16	DV-30
Location	LAL	LAL	LAL	LAL	LAL	TDL	TDL	TDL	TDL
Date	8-Jul-09	8-Jul-09	8-Jul-09	8-Jul-09	8-Jul-09	9-Jul-09	9-Jul-09	9-Jul-09	9-Jul-09
Sample No.	090457	090458	090459	090460	090461	090462	090463	090464	090465
Fullness (%)	25	40	10	40	100	30	50	50	90
Digestion (%)	25	25	25	50	25	10	10	10	50
Actual Weight (mg)	433	569	155	487	3861	924	2208	2643	8078
<b>Comments</b>									
<b>Species/Group</b>	<b>Stage</b>		<b>Origin</b>						
<b>OLIGOCHAETA</b>									
Oligochaeta	dam	FW	-	-	-	-	-	-	-
Lumbricidae		FW	-	-	-	-	-	-	-
Lumbriculidae		FW	-	-	-	-	-	-	-
<b>CRUSTACEA</b>									
<b>Cladocera</b>									
Daphnidae			-	-	-	-	-	-	-
<i>Daphnia middendorffiana</i>		FW	-	320	70	-	924	2166	2389
Chydoridae			-	-	-	-	-	-	-
<i>Eurycerus</i> sp.		FW	2	-	-	-	-	-	-
Calanoida			-	-	-	-	-	-	-
<i>Heterocope septentrionalis</i>	A	FW	-	-	-	-	-	39	-
Cyclopoida		FW	-	15	1	-	-	-	-
<b>AMPHIPODA</b>									
Gammaridae		FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>	juv	FW	2	-	-	-	-	-	8
<i>Gammarus lacustris</i>		FW	60	-	-	150	-	-	75
<b>ARACHNIDA</b>									
Aranea	A	TERR	-	-	-	-	-	-	-
Hydracarina		FW	-	1	-	-	-	-	-
<b>EPHEMEROPTERA</b>									
Ameletidae			-	-	-	-	-	-	-
<i>Ameletus</i>	N	FW	-	-	-	-	-	-	-
Baetidae			-	-	-	-	-	-	-
<i>Baetis bicaudatus</i>	N	FW	2	-	-	-	-	-	-
Ephemerellidae			-	-	-	-	-	-	-
<i>Ephemerella</i> sp	N	FW	-	-	-	-	-	-	-
<i>Ephemerella coloradensis</i>	N	FW	-	-	-	-	-	-	-
Heptageniidae	N*	FW	-	-	-	-	-	-	-
<i>Cinygmula</i>	N	FW	-	-	-	-	-	-	-
<i>Epeorus</i>	N	FW	-	-	-	-	-	-	-
<i>Heptagenia</i>	N	FW	-	-	-	-	-	-	-
<b>ODONATA</b>									
Anisoptera	N	FW	-	-	-	-	-	-	-
<b>PLECOPTERA</b>									
Plecoptera	N*	FW	-	-	-	-	-	-	-
	A	FW	-	-	-	-	-	-	-
Chloroperlidae	N	FW	-	-	-	-	-	-	-
<i>Suwallia</i>	N	FW	-	-	-	-	-	-	-
Nemouridae			-	-	-	-	-	-	-
<i>Zapada</i>	N	FW	-	-	-	-	-	-	-
Perlodidae	N	FW	-	-	-	-	-	-	-
<b>HEMIPTERA</b>									
Aphididae	A	TERR	-	-	-	-	-	-	-
Aphididae	N	TERR	-	-	-	-	-	-	-
Aphididae	A	TERR	-	-	-	-	-	-	-
Coccoidea	N	TERR	-	-	-	-	-	-	-
<b>TRICHOPTERA</b>									
Trichoptera	L	FW	-	-	-	-	-	-	-
Trichoptera	P	FW	-	-	-	-	-	-	-
Trichoptera	A	FW	-	-	-	-	-	-	-
Hydropsychidae			-	-	-	-	-	-	-
<i>Hydropsyche</i>	L	FW	-	-	-	-	-	-	-
Limnephilidae	L	FW	-	-	-	-	-	-	70
<i>Hesperophylax</i>	L	FW	-	-	-	-	-	-	227
<i>Limnephilus</i>	L	FW	-	-	-	-	-	-	684
<i>Psychoglypha</i>	L	FW	-	-	-	-	-	-	-
Rhyacophilidae			-	-	-	-	-	-	-
<i>Rhyacophila</i> sp	L	FW	-	-	-	-	-	-	-
<i>Rhyacophila bifila</i>	L	FW	-	-	-	-	-	-	-
<b>LEPIDOPTERA</b>									
Lepidoptera	L	TERR	-	-	-	-	-	-	-
Lepidoptera	A	TERR	-	-	-	-	-	-	-
<b>COLEOPTERA</b>									
Dytiscidae	A	FW	-	-	-	-	-	-	-
<i>Hydroporus</i>	L	FW	-	-	-	-	-	-	-
<i>Hydroporus</i>	A	FW	-	-	-	-	-	-	-
Cerambycidae	A	TERR	-	2	-	-	-	-	-
Chrysomelidae	A	TERR	-	150	-	-	-	-	-
Hydrophilidae			-	-	-	-	-	-	-
<i>Hydrochara</i>	L	FW	-	-	-	-	-	-	-
Staphylinidae	A	TERR	-	2	2	-	-	-	-
<b>HYMENOPTERA</b>									
Formicidae	A	TERR	-	1	-	-	-	-	-
Formicidae	A	TERR	-	-	-	-	-	-	-
<b>DIPTERA</b>									
Diptera	L	TERR	-	-	-	-	-	-	-
Diptera	A	FW	-	-	-	-	-	-	-
Blephariceridae			-	-	-	-	-	-	-
<i>Agathon</i>	L	FW	-	-	-	-	-	-	-
Culicidae	A	FW	-	-	-	-	-	-	-

**Appendix 6.3-7. Receiving and Reference Environment Stream and Lake Fish Diet Data by Weight**

Fish No.	DV-15	DV-16	DV-25	DV-26	DV-40	DV-06	DV-15	DV-16	DV-30
Location	LAL	LAL	LAL	LAL	LAL	TDL	TDL	TDL	TDL
Date	8-Jul-09	8-Jul-09	8-Jul-09	8-Jul-09	8-Jul-09	9-Jul-09	9-Jul-09	9-Jul-09	9-Jul-09
Sample No.	090457	090458	090459	090460	090461	090462	090463	090464	090465
Fullness (%)	25	40	10	40	100	30	50	50	90
Digestion (%)	25	25	25	50	25	10	10	10	50
Actual Weight (mg)	433	569	155	487	3861	924	2208	2643	8078
<b>Comments</b>									
<b>Species/Group</b>	<b>Stage</b>	<b>Origin</b>							
Empididae	L	FW	-	-	-	-	-	-	-
Empididae	A	FW	-	-	-	-	-	-	-
Chelifera	L	FW	-	-	-	-	-	-	-
Muscidae	L	FW	-	-	-	-	-	-	-
Muscidae	A	FW	-	-	-	-	-	-	-
Limnophora	L	FW	-	-	-	-	-	-	-
Simuliidae			-	-	-	-	-	-	-
Simulium	L	FW	-	-	-	-	-	-	-
Simulium	P	FW	-	-	-	-	-	-	-
Tabanidae	L	FW	-	-	-	-	-	-	-
Tipulidae	L	FW	-	-	-	-	-	-	-
Tipulidae	A	FW	-	-	-	-	-	-	-
Hexatoma	L	FW	-	-	-	-	-	-	-
Chironomidae	L*	FW	-	-	-	-	-	-	-
Chironomidae	P	FW	108	14	-	180	-	-	167
Tanypodinae			-	-	-	-	-	-	-
Procladius	L	FW	-	9	-	-	-	-	4
Procladius	P	FW	98	4	3	60	-	-	-
Thienemannimyia	L	FW	-	-	-	-	-	-	-
Thienemannimyia	P	FW	-	-	3	-	-	-	-
Tanytarsini	L*	FW	-	-	-	-	-	-	-
Tanytarsini	P	FW	-	-	-	-	-	-	-
Tanytarsus	P	FW	70	13	16	1420	-	-	-
Chironomini	L*	FW	-	-	-	-	-	-	-
Chironomini	P	FW	44	-	-	-	-	-	-
Chironomus	L	FW	-	-	-	-	3	-	1072
Chironomus	P	FW	-	-	-	-	-	-	-
Phaenopsectra	L	FW	4	2	-	-	-	-	20
Phaenopsectra	P	FW	29	34	60	17	2441	-	66
Orthoclaadiinae	L*	FW	13	2	-	-	-	-	-
Orthoclaadiinae	P	FW	-	-	-	-	-	-	-
Brillia	L	FW	-	-	-	-	-	-	-
Diamesinae	P	FW	-	-	-	-	-	-	-
Diamesa	L	FW	-	-	-	-	-	-	-
Diamesa	P	FW	-	-	-	-	-	-	-
MOLLUSCA			-	-	-	-	-	-	-
Bivalvia			-	-	-	-	-	-	-
Sphaeriidae			-	-	-	-	-	-	-
Pisidium		FW	-	-	14	-	-	-	28
Gastropoda	dam	FW	-	-	-	-	-	-	-
Planorbidae			-	-	-	-	-	-	-
Gyraulus		FW	-	-	17	-	-	-	3011
INSECTA	parts		-	-	-	-	-	-	-
NON-FOOD ITEMS			-	-	-	-	-	-	-
Case Materials			-	-	-	-	-	-	2612
Pebble			-	-	-	-	-	254	-
Plant			1	-	49	-	-	-	-
Mud			-	-	-	-	-	-	-

Stage: N = nymph, A = adult, L = larvae, P = pupae, juv = juvenile, \* indicates too small to be identified further  
 Origin: FW = freshwater, TERR = terrestrial

**Appendix 6.3-7. Receiving and Reference Environment Stream and Lake Fish Diet Data by Weight**

Fish No.	DV-31	DV-34	DV-09	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15
Location	TDL	TDL	STE2	STE2	STE2	STE2	STE2	STE2	STE2
Date	9-Jul-09	9-Jul-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09
Sample No.	090466	090467	090468	090469	090470	090471	090472	090473	090474
Fullness (%)	75	60	90	90	100	90	75	100	100
Digestion (%)	50	10	50	75	50	50	75	20	15
Actual Weight (mg)	2900	2537	116	64	174	302	78	559	937
<b>Comments</b>			incomplete			incomplete			
<b>Species/Group</b>			stomach			stomach			
<b>Stage</b>	<b>Origin</b>								
<b>OLIGOCHAETA</b>									
Oligochaeta	dam	FW	-	-	-	-	-	-	-
Lumbricidae		FW	-	-	-	-	-	-	-
Lumbriculidae		FW	-	-	-	-	-	-	-
<b>CRUSTACEA</b>									
<b>Cladocera</b>									
Daphnidae			-	-	-	-	-	-	-
<i>Daphnia middendorffiana</i>		FW	152	2313	-	-	-	-	-
Chydoridae			-	-	-	-	-	-	-
<i>Eurycerus</i> sp.		FW	-	-	-	-	-	-	-
Calanoida			-	-	-	-	-	-	-
<i>Heterocope septentrionalis</i>	A	FW	10	-	-	-	-	-	-
Cyclopoida		FW	-	-	-	-	-	-	-
<b>AMPHIPODA</b>									
Gammaridae		FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>	juv	FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>		FW	-	-	-	-	-	-	-
<b>ARACHNIDA</b>									
Aranea	A	TERR	-	-	-	-	-	10	-
Hydracarina		FW	-	-	-	0.1	-	1	-
<b>EPHEMEROPTERA</b>									
Ameletidae			-	-	-	-	-	-	-
<i>Ameletus</i>	N	FW	-	-	-	-	6	32	17
Baetidae			-	-	-	-	-	-	-
<i>Baetis bicaudatus</i>	N	FW	-	-	30	30	12	9	4
Ephemerellidae			-	-	-	-	-	-	-
<i>Ephemerella</i> sp	N	FW	-	-	-	-	-	4	-
<i>Ephemerella coloradensis</i>	N	FW	-	-	-	-	-	-	-
Heptageniidae	N*	FW	-	-	2	-	-	-	2
<i>Cinygmula</i>	N	FW	-	-	-	18	-	-	-
<i>Epeorus</i>	N	FW	-	-	12	-	-	-	14
<i>Heptagenia</i>	N	FW	-	-	-	-	-	-	12
<b>ODONATA</b>									
Anisoptera	N	FW	-	-	-	-	-	-	-
PLECOPTERA	N*	FW	-	-	-	2	1	15	2
Plecoptera	A	FW	-	-	-	-	-	-	-
Chloroperlidae	N	FW	-	-	-	-	-	-	-
<i>Suwallia</i>	N	FW	-	-	-	-	-	-	3
Nemouridae			-	-	2	-	-	-	-
<i>Zapada</i>	N	FW	-	-	4	-	3	5	3
Perlodidae	N	FW	-	-	-	-	-	-	21
<b>HEMIPTERA</b>									
Aphididae	N	TERR	-	-	-	-	-	-	-
Aphididae	A	TERR	-	-	-	-	-	-	-
Coccoidea	N	TERR	-	-	-	-	-	-	-
<b>TRICHOPTERA</b>									
Trichoptera	L	FW	-	-	-	-	-	-	9
Trichoptera	P	FW	-	-	-	-	-	-	-
Trichoptera	A	FW	-	-	-	87	-	-	-
<b>Hydropsychidae</b>									
<i>Hydropsyche</i>	L	FW	-	-	12	-	-	-	10
Limnephilidae	L	FW	-	-	-	-	-	-	-
<i>Hesperophylax</i>	L	FW	-	-	-	-	-	-	-
<i>Limnephilus</i>	L	FW	-	-	-	-	-	-	-
<i>Psychoglypha</i>	L	FW	-	-	-	-	-	-	-
Rhyacophilidae			-	-	-	-	-	-	-
<i>Rhyacophila</i> sp	L	FW	-	-	-	-	-	13	15
<i>Rhyacophila bifila</i>	L	FW	-	-	-	16	10	64	96
<b>LEPIDOPTERA</b>									
Lepidoptera	A	TERR	-	-	-	-	-	-	-
COLEOPTERA	A	TERR	-	-	2	-	-	-	2
Dytiscidae	A	FW	-	-	-	-	-	-	-
<i>Hydroporus</i>	L	FW	-	-	-	-	-	-	-
<i>Hydroporus</i>	A	FW	-	-	-	-	-	-	-
Cerambycidae	A	TERR	-	-	-	-	-	-	-
Chrysomelidae	A	TERR	-	-	-	-	-	-	-
<b>Hydrophilidae</b>									
<i>Hydrochara</i>	L	FW	-	-	-	-	-	-	1
Staphylinidae	A	TERR	-	-	-	4	-	-	3
<b>HYMENOPTERA</b>									
Formicidae	A	TERR	-	-	0.5	-	-	1	-
Formicidae	A		-	-	-	2	-	-	-
<b>DIPTERA</b>									
Diptera	A	FW	-	-	-	-	-	-	-
Diptera	A	FW	-	-	-	36	48	-	15
Blephariceridae			-	-	-	-	-	-	-
<i>Agathon</i>	L	FW	-	-	-	-	-	-	-
Culicidae	A	FW	-	-	-	-	-	-	-

**Appendix 6.3-7. Receiving and Reference Environment Stream and Lake Fish Diet Data by Weight**

Fish No.	DV-31	DV-34	DV-09	DV-10	DV-11	DV-12	DV-13	DV-14	DV-15
Location	TDL	TDL	STE2	STE2	STE2	STE2	STE2	STE2	STE2
Date	9-Jul-09	9-Jul-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09	6-Aug-09
Sample No.	090466	090467	090468	090469	090470	090471	090472	090473	090474
Fullness (%)	75	60	90	90	100	90	75	100	100
Digestion (%)	50	10	50	75	50	50	75	20	15
Actual Weight (mg)	2900	2537	116	64	174	302	78	559	937
<b>Comments</b>			incomplete			incomplete			
			stomach			stomach			
Species/Group	Stage	Origin							
Empididae	L	FW	-	-	-	-	-	-	-
Empididae	A	FW	-	-	-	6	-	-	-
<i>Chelifera</i>	L	FW	-	-	-	-	2	1	-
Muscidae	L	FW	-	-	-	-	-	-	-
Muscidae	A	FW	-	-	-	10	-	-	12
<i>Limnophora</i>	L	FW	-	-	-	-	-	-	-
Simuliidae			-	-	-	-	-	-	-
<i>Simulium</i>	L	FW	-	31	9	17	72	24	62
<i>Simulium</i>	P	FW	-	-	-	-	10	5	5
Tabanidae	L	FW	-	-	-	-	15	-	-
Tipulidae	L	FW	-	-	-	-	-	-	-
Tipulidae	A	FW	-	-	-	-	-	-	-
<i>Hexatoma</i>	L	FW	-	-	-	-	-	-	-
Chironomidae	L*	FW	-	-	-	-	-	-	-
Chironomidae	P	FW	-	-	-	-	-	-	-
Tanypodinae			-	-	-	-	-	-	-
<i>Procladius</i>	L	FW	-	-	-	-	-	-	-
<i>Procladius</i>	P	FW	14	-	-	-	-	-	-
<i>Thiennemannimyia</i>	L	FW	-	-	-	-	-	-	-
<i>Thiennemannimyia</i>	P	FW	-	-	-	-	-	-	-
Tanytarsini	L*	FW	-	0.1	-	-	0.1	-	-
Tanytarsini	P	FW	-	-	-	-	-	-	-
<i>Tanytarsus</i>	P	FW	-	-	-	-	-	-	-
Chironomini	L*	FW	5	-	-	-	-	-	-
Chironomini	P	FW	-	-	-	-	-	-	-
<i>Chironomus</i>	L	FW	2596	-	-	-	-	-	-
<i>Chironomus</i>	P	FW	95	-	-	-	-	-	-
<i>Phaenopsectra</i>	L	FW	-	24	-	-	-	-	-
<i>Phaenopsectra</i>	P	FW	-	-	-	-	-	-	-
Orthoclaadiinae	L*	FW	-	-	0.2	-	-	1	4
Orthoclaadiinae	P	FW	-	-	-	-	-	-	-
<i>Brillia</i>	L	FW	-	-	-	-	-	-	-
Diamesinae	P	FW	-	-	-	-	-	-	-
<i>Diamesa</i>	L	FW	-	-	0.2	-	-	-	-
<i>Diamesa</i>	P	FW	-	-	-	-	-	-	-
MOLLUSCA			-	-	-	-	-	-	-
Bivalvia			-	-	-	-	-	-	-
Sphaeriidae			-	-	-	-	-	-	-
<i>Pisidium</i>		FW	-	-	-	-	-	-	-
Gastropoda	dam	FW	-	-	-	-	-	-	-
Planorbidae			-	-	-	-	-	-	-
<i>Gyraulus</i>		FW	18	-	-	-	-	-	-
INSECTA	parts		-	18	16	-	54	-	99
NON-FOOD ITEMS			-	-	-	-	-	-	-
Case Materials			-	4	-	-	-	-	-
Pebble			-	-	-	0.9	-	62	-
Plant			10	-	-	-	-	11	7
Mud			-	-	-	-	-	-	-

Stage: N = nymph, A = adult, L = larvae, P = pupae, juv = juvenile, \* indicates too small to be identified further  
 Origin: FW = freshwater, TERR = terrestrial



**Appendix 6.3-7. Receiving and Reference Environment Stream and Lake Fish Diet Data by Weight**

<b>Fish No.</b>	<b>DV-16</b>	<b>DV-01</b>	<b>DV-02</b>	<b>DV-03</b>	<b>DV-12</b>	<b>DV-13</b>	<b>DV-14</b>	<b>DV-15</b>	<b>DV-16</b>
<b>Location</b>	<b>STE2</b>	<b>SC3</b>	<b>SC3</b>	<b>SC3</b>	<b>SCR</b>	<b>SCR</b>	<b>SCR</b>	<b>SCR</b>	<b>SCR</b>
<b>Date</b>	<b>6-Aug-09</b>	<b>7-Aug-09</b>	<b>7-Aug-09</b>	<b>7-Aug-09</b>	<b>7-Aug-09</b>	<b>7-Aug-09</b>	<b>7-Aug-09</b>	<b>7-Aug-09</b>	<b>7-Aug-09</b>
<b>Sample No.</b>	<b>090475</b>	<b>090476</b>	<b>090477</b>	<b>090478</b>	<b>090479</b>	<b>090480</b>	<b>090481</b>	<b>090482</b>	<b>090483</b>
<b>Fullness (%)</b>	80	100	90	11	80	50	60	75	60
<b>Digestion (%)</b>	10	50	40	40	50	50	75	75	75
<b>Actual Weight (mg)</b>	470	509	384	1227	192	75	115	371	156
<b>Comments</b>									
<b>Species/Group</b>	<b>Stage</b>		<b>Origin</b>						
<b>OLIGOCHAETA</b>									
Oligochaeta	dam	FW	-	-	-	-	-	-	-
Lumbricidae		FW	-	8	-	-	-	-	-
Lumbriculidae		FW	-	2	50	-	-	-	-
<b>CRUSTACEA</b>									
<b>Cladocera</b>									
Daphnidae									
<i>Daphnia middendorffiana</i>		FW	-	-	-	-	-	-	-
Chydoridae									
<i>Eurycerus</i> sp.		FW	-	-	-	-	-	-	-
Calanoida									
<i>Heterocope septentrionalis</i>	A	FW	-	-	-	-	-	-	-
Cyclopoida		FW	-	-	-	-	-	-	-
<b>AMPHIPODA</b>									
Gammaridae		FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>	juv	FW	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>		FW	-	-	-	-	-	-	-
<b>ARACHNIDA</b>									
Aranea	A	TERR	-	-	-	-	-	-	-
Hydracarina		FW	-	-	-	-	-	-	-
<b>EPHEMEROPTERA</b>									
Ameletidae									
<i>Ameletus</i>	N	FW	-	-	-	-	26	18	100
Baetidae									
<i>Baetis bicaudatus</i>	N	FW	78	18	50	75	-	2	-
Ephemerellidae									
<i>Ephemerella</i> sp	N	FW	20	-	-	-	-	-	-
<i>Ephemerella coloradensis</i>	N	FW	-	-	-	-	38	-	-
Heptageniidae	N*	FW	-	-	-	-	-	-	-
<i>Cinygmula</i>	N	FW	-	3	-	4	-	-	-
<i>Epeorus</i>	N	FW	-	-	15	717	56	-	-
<i>Heptagenia</i>	N	FW	-	-	-	-	-	-	-
<b>ODONATA</b>									
Anisoptera	N	FW	-	-	-	-	-	-	150
<b>PLECOPTERA</b>									
Plecoptera	N*	FW	-	-	-	2	-	4	5
Plecoptera	A	FW	-	-	-	-	-	-	-
Chloroperlidae	N	FW	-	-	-	-	-	-	-
<i>Suwallia</i>	N	FW	-	-	-	-	-	-	-
Nemouridae									
<i>Zapada</i>	N	FW	3	4	7	4	10	-	-
Perlodidae	N	FW	16	-	-	27	-	-	-
<b>HEMIPTERA</b>									
Hemiptera	A	TERR	-	7	-	-	-	-	-
Aphididae	N	TERR	-	3	-	-	-	-	-
Aphididae	A	TERR	-	13	-	-	-	-	-
Coccoidea	N	TERR	-	1	-	-	-	-	-
<b>TRICHOPTERA</b>									
Trichoptera	L	FW	-	-	-	-	-	-	-
Trichoptera	P	FW	-	-	-	-	-	-	-
Trichoptera	A	FW	-	-	-	-	-	-	-
Hydropsychidae									
<i>Hydropsyche</i>	L	FW	81	-	11	159	-	-	-
Limnephilidae	L	FW	-	-	-	-	-	-	-
<i>Hesperophylax</i>	L	FW	-	-	-	-	-	-	-
<i>Limnephilus</i>	L	FW	-	-	-	-	-	-	-
<i>Psychoglypha</i>	L	FW	-	-	-	-	-	24	-
Rhyacophilidae									
<i>Rhyacophila</i> sp	L	FW	5	-	5	64	25	-	-
<i>Rhyacophila bifila</i>	L	FW	62	-	-	-	-	-	-
<b>LEPIDOPTERA</b>									
Lepidoptera	L	TERR	-	-	50	62	-	29	-
Lepidoptera	A	TERR	-	-	-	-	-	-	-
<b>COLEOPTERA</b>									
Coleoptera	A	TERR	-	2	25	-	-	-	-
Dytiscidae	A	FW	-	-	-	-	-	6	-
<i>Hydroporus</i>	L	FW	-	-	-	-	-	3	-
<i>Hydroporus</i>	A	FW	-	-	-	-	-	10	-
Cerambycidae	A	TERR	-	14	-	-	-	-	-
Chrysomelidae	A	TERR	-	-	-	-	-	-	-
Hydrophilidae									
<i>Hydrochara</i>	L	FW	-	5	-	-	-	-	-
Staphylinidae	A	TERR	-	14	-	-	-	-	-
<b>HYMENOPTERA</b>									
Hymenoptera	A	TERR	10	10	-	-	-	-	-
Formicidae	A		-	-	-	-	-	-	-
Diptera	L	TERR	-	-	-	-	14	-	-
Diptera	A	FW	10	109	-	-	-	-	-
Blephariceridae									
<i>Agathon</i>	L	FW	-	-	-	10	-	-	-
Culicidae	A	FW	5	-	-	-	-	-	-

**Appendix 6.3-7. Receiving and Reference Environment Stream and Lake Fish Diet Data by Weight**

Fish No.	DV-16	DV-01	DV-02	DV-03	DV-12	DV-13	DV-14	DV-15	DV-16
Location	STE2	SC3	SC3	SC3	SCR	SCR	SCR	SCR	SCR
Date	6-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09	7-Aug-09
Sample No.	090475	090476	090477	090478	090479	090480	090481	090482	090483
Fullness (%)	80	100	90	11	80	50	60	75	60
Digestion (%)	10	50	40	40	50	50	75	75	75
Actual Weight (mg)	470	509	384	1227	192	75	115	371	156
<b>Comments</b>									
<b>Species/Group</b>	<b>Stage</b>	<b>Origin</b>							
Empididae	L	FW	-	-	-	4	-	-	-
Empididae	A	FW	-	32	-	-	-	-	-
<i>Chelifera</i>	L	FW	-	-	-	-	-	-	-
Muscidae	L	FW	-	-	-	74	-	-	-
Muscidae	A	FW	-	-	-	-	-	-	-
<i>Limnophora</i>	L	FW	-	-	14	-	-	-	-
Simuliidae			-	-	-	-	-	-	-
<i>Simulium</i>	L	FW	105	1	9	12	6	-	-
<i>Simulium</i>	P	FW	5	3	-	-	5	-	-
Tabanidae	L	FW	-	-	-	-	-	-	-
Tipulidae	L	FW	-	-	-	-	-	-	-
Tipulidae	A	FW	-	150	-	-	-	-	-
<i>Hexatoma</i>	L	FW	6	2	-	-	-	-	-
Chironomidae	L*	FW	-	-	-	-	1	-	-
Chironomidae	P	FW	-	4	4	-	-	-	-
Tanypodinae			-	-	-	-	-	-	-
<i>Procladius</i>	L	FW	-	-	-	-	-	-	-
<i>Procladius</i>	P	FW	-	-	-	-	-	-	-
<i>Thiennemannimyia</i>	L	FW	-	-	-	-	2	-	-
<i>Thiennemannimyia</i>	P	FW	-	-	-	-	-	-	-
Tanytarsini	L*	FW	-	-	-	-	-	-	-
Tanytarsini	P	FW	-	-	-	-	2	-	-
<i>Tanytarsus</i>	P	FW	-	-	-	-	-	-	-
Chironomini	L*	FW	-	-	-	-	-	-	-
Chironomini	P	FW	-	-	-	-	-	-	-
<i>Chironomus</i>	L	FW	-	-	-	-	-	-	-
<i>Chironomus</i>	P	FW	-	-	-	-	-	-	-
<i>Phaenopsectra</i>	L	FW	-	-	-	-	-	-	-
<i>Phaenopsectra</i>	P	FW	-	-	-	-	-	-	-
Orthoclaadiinae	L*	FW	-	-	9	6	1	4	2
Orthoclaadiinae	P	FW	-	-	-	-	-	-	-
<i>Brillia</i>	L	FW	-	2	-	-	-	-	-
Diamesinae	P	FW	-	-	-	-	-	-	-
<i>Diamesa</i>	L	FW	-	11	110	50	-	8	4
<i>Diamesa</i>	P	FW	-	31	16	16	-	-	-
MOLLUSCA			-	-	-	-	-	-	-
Bivalvia			-	-	-	-	-	-	-
Sphaeriidae			-	-	-	-	-	-	-
<i>Pisidium</i>		FW	-	-	-	-	-	-	-
Gastropoda	dam	FW	-	-	-	-	-	-	-
Planorbidae			-	-	-	-	-	-	-
<i>Gyraulus</i>		FW	-	-	-	-	2	-	-
INSECTA	parts		32	60	-	-	-	41	37
NON-FOOD ITEMS			-	-	-	-	-	-	-
Case Materials			-	-	-	-	-	-	-
Pebble			-	-	-	29	-	-	-
Plant			32	-	9	2	-	-	3
Mud			-	-	-	-	-	-	-

Stage: N = nymph, A = adult, L = larvae, P = pupae, juv = juvenile, \* indicates too small to be identified further  
 Origin: FW = freshwater, TERR = terrestrial

**Appendix 6.3-7. Receiving and Reference Environment Stream and Lake Fish Diet Data by Weight**

Fish No.	DV-17	DV-18	DV-19	DV-02	DV-03	DV-05	DV-06	DV-07	RB-17	RB-35
Location	SCR	SCR	SCR	NTR2	NTR2	NTR2	NTR2	NTR2	TDL	TDL
Date	7-Aug-09	7-Aug-09	7-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Jul-09	9-Jul-09
Sample No.	090484	090485	090486	090487	090488	090489	090490	090491	090492	090493
Fullness (%)	75	25	75	75	100	100	50	75	75	25
Digestion (%)	75	90	90	90	50	75	25	50	25	10
Actual Weight (mg)	136	49	185	83	126	768	107	307	1065	619
incomplete stomach										
Comments	Stage	Origin								
<b>OLIGOCHAETA</b>										
Oligochaeta	dam	FW	-	-	5	-	-	-	-	-
Lumbricidae		FW	-	-	-	-	-	-	-	-
Lumbriculidae		FW	-	-	-	-	-	-	-	-
<b>CRUSTACEA</b>										
<b>Cladocera</b>										
Daphnidae		FW	-	-	-	-	-	-	-	-
<i>Daphnia middendorffiana</i>		FW	-	-	-	-	-	-	942	619
Chydoridae		FW	-	-	-	-	-	-	-	-
<i>Eurycercus</i> sp.		FW	-	-	-	-	-	-	-	-
Calanoida		FW	-	-	-	-	-	-	-	-
<i>Heterocope septentrionalis</i>	A	FW	-	-	-	-	-	-	-	-
Cyclopoida		FW	-	-	-	-	-	-	-	-
AMPHIPODA		FW	-	-	-	-	-	-	-	-
Gammaridae		FW	-	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>	juv	FW	-	-	-	-	-	-	-	-
<i>Gammarus lacustris</i>		FW	-	-	-	-	-	-	-	-
<b>ARACHNIDA</b>										
Aranea	A	TERR	-	-	-	-	-	-	-	-
Hydracarina		FW	-	-	-	-	-	-	-	-
<b>EPHEMEROPTERA</b>										
Ameletidae		FW	2	-	-	-	-	-	-	-
<i>Ameletus</i>	N	FW	-	40	20	-	-	10	-	-
Baetidae		FW	-	-	-	-	-	-	-	-
<i>Baetis bicaudatus</i>	N	FW	4	-	15	30	25	75	35	-
Ephemerellidae		FW	-	-	-	-	-	-	-	-
<i>Ephemerella</i> sp.	N	FW	96	-	-	-	-	-	4	-
<i>Ephemerella coloradensis</i>	N	FW	-	-	13	-	-	-	-	-
Heptageniidae	N*	FW	-	-	-	-	-	20	-	-
<i>Cinygmula</i>	N	FW	-	-	3	12	5	4	4	12
<i>Epeorus</i>	N	FW	-	-	60	-	4	15	64	-
<i>Heptagenia</i>	N	FW	-	-	-	-	-	36	-	-
ODONATA		FW	-	-	-	-	-	-	-	-
Anisoptera	N	FW	-	-	-	-	-	-	-	-
PLECOPTERA	N*	FW	-	-	-	3	-	-	-	-
Plecoptera	A	FW	-	-	-	-	-	-	-	7
Chloroperlidae	N	FW	-	-	-	-	-	-	-	-
<i>Suwallia</i>	N	FW	-	-	-	-	-	2	-	-
Nemouridae		FW	-	-	-	-	-	-	-	-
<i>Zapada</i>	N	FW	9	-	9	-	-	-	1	2
Perlodidae	N	FW	-	-	-	-	-	2	4	-
HEMIPTERA	A	TERR	-	-	-	-	-	-	-	-
Aphididae	N	TERR	-	-	-	-	-	-	-	-
Aphididae	A	TERR	-	-	-	-	-	-	-	-
Coccoidea	N	TERR	-	-	-	-	-	-	-	-
TRICHOPTERA	L	FW	-	-	-	-	-	15	-	-
Trichoptera	P	FW	-	-	-	-	-	-	2	-
Trichoptera	A	FW	-	-	-	-	-	-	-	-
Hydropsychidae		FW	-	-	-	-	-	-	-	-
<i>Hydropsyche</i>	L	FW	-	-	-	-	-	-	-	-
Limnephilidae	L	FW	-	-	-	-	-	-	-	-
<i>Hesperophylax</i>	L	FW	-	-	-	-	-	-	-	-
<i>Limnephilus</i>	L	FW	-	-	-	-	-	-	-	-
<i>Psychoglypha</i>	L	FW	-	-	-	-	-	-	-	-
Rhyacophilidae		FW	-	-	-	-	-	-	-	-
<i>Rhyacophila</i> sp.	L	FW	-	-	-	-	-	-	4	-
<i>Rhyacophila bifila</i>	L	FW	-	-	-	-	-	-	-	-
LEPIDOPTERA	L	TERR	-	-	-	-	-	-	52	-
Lepidoptera	A	TERR	-	-	-	30	-	-	-	-
COLEOPTERA	A	TERR	-	6	2	-	-	-	-	49
Dytiscidae	A	FW	-	-	-	-	-	-	-	-
<i>Hydroporus</i>	L	FW	-	-	-	-	-	-	-	-
<i>Hydroporus</i>	A	FW	-	-	-	-	-	-	-	-
Cerambycidae	A	TERR	-	-	-	-	-	-	-	-
Chrysomelidae	A	TERR	-	-	-	-	-	-	-	-
Hydrophilidae		FW	-	-	-	-	-	-	-	-
<i>Hydrochara</i>	L	FW	-	-	-	-	-	2	7	-
Staphylinidae	A	TERR	-	-	-	2	-	-	7	8
HYMENOPTERA	A	TERR	2	-	1	-	-	-	-	-
Formicidae	A	FW	-	-	-	-	-	-	-	-
DIPTERA	L	TERR	-	-	-	-	-	-	2	-
Diptera	A	FW	10	-	-	-	-	-	17	4
Blephariceridae		FW	-	-	-	-	-	-	-	5
<i>Agathon</i>	L	FW	-	-	-	-	-	-	-	-
Culicidae	A	FW	-	-	-	-	-	-	-	-

**Appendix 6.3-7. Receiving and Reference Environment Stream and Lake Fish Diet Data by Weight**

Fish No.	DV-17	DV-18	DV-19	DV-02	DV-03	DV-05	DV-06	DV-07	RB-17	RB-35		
Location	SCR	SCR	SCR	NTR2	NTR2	NTR2	NTR2	NTR2	TDL	TDL		
Date	7-Aug-09	7-Aug-09	7-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Aug-09	9-Jul-09	9-Jul-09		
Sample No.	090484	090485	090486	090487	090488	090489	090490	090491	090492	090493		
Fullness (%)	75	25	75	75	100	100	50	75	75	25		
Digestion (%)	75	90	90	90	50	75	25	50	25	10		
Actual Weight (mg)	136	49	185	83	126	768	107	307	1065	619		
incomplete stomach												
Comments												
Species/Group	Stage	Origin										
Empididae	L	FW	-	-	-	-	-	-	-	-		
Empididae	A	FW	2	-	-	-	-	-	-	-		
Chelifera	L	FW	-	-	-	-	-	-	-	-		
Muscidae	L	FW	-	-	-	-	25	-	-	-		
Muscidae	A	FW	-	-	-	-	-	18	-	-		
Limnophora	L	FW	-	-	-	-	-	-	-	-		
Simuliidae	-	-	-	-	-	-	-	-	-	-		
Simulium	L	FW	-	-	21	-	-	56	-	3		
Simulium	P	FW	-	-	-	-	24	91	-	10		
Tabanidae	L	FW	-	-	-	-	-	-	-	-		
Tipulidae	L	FW	-	-	-	-	-	25	20	-		
Tipulidae	A	FW	-	-	-	-	-	-	50	-		
Hexatoma	L	FW	-	-	-	-	18	-	-	-		
Chironomidae	L*	FW	-	1	-	-	-	-	-	-		
Chironomidae	P	FW	-	-	1	6	-	1	1	24		
Tanyptodinae	-	-	-	-	-	-	-	-	-	-		
Procladius	L	FW	-	-	-	-	-	-	-	-		
Procladius	P	FW	-	-	-	-	-	-	-	-		
Thiennemannimyia	L	FW	-	-	-	-	-	-	-	-		
Thiennemannimyia	P	FW	-	-	-	-	-	-	-	-		
Tanytarsini	L*	FW	-	-	-	-	-	-	-	-		
Tanytarsini	P	FW	-	-	-	-	-	-	-	-		
Tanytarsus	P	FW	-	-	-	-	-	-	-	-		
Chironomini	L*	FW	-	-	-	-	-	-	-	-		
Chironomini	P	FW	-	-	-	-	-	-	-	-		
Chironomus	L	FW	-	-	-	-	-	-	-	-		
Chironomus	P	FW	-	-	-	-	-	-	-	-		
Phaenopsectra	L	FW	-	-	-	-	-	-	-	45		
Phaenopsectra	P	FW	-	-	-	-	-	-	-	-		
Orthoclaadiinae	L*	FW	5	-	1	1	-	3	-	27		
Orthoclaadiinae	P	FW	-	-	-	2	-	6	-	3		
Brillia	L	FW	-	-	-	2	-	-	-	-		
Diamesinae	P	FW	4	-	-	-	-	-	-	-		
Diamesa	L	FW	2	-	2	4	-	10	-	13		
Diamesa	P	FW	-	-	-	20	-	-	-	3		
MOLLUSCA	-	-	-	-	-	-	-	-	-	-		
Bivalvia	-	-	-	-	-	-	-	-	-	-		
Sphaeriidae	-	-	-	-	-	-	-	-	-	-		
Pisidium	-	FW	-	-	-	-	-	-	-	-		
Gastropoda	-	dam	-	-	-	-	-	20	-	-		
Planorbidae	-	-	-	-	-	-	-	-	-	-		
Gyraulus	-	FW	-	-	-	-	-	-	-	-		
INSECTA	-	parts	-	2	-	-	-	242	-	-		
NON-FOOD ITEMS	-	-	-	-	-	-	-	-	-	-		
Case Materials	-	-	-	-	-	-	-	-	-	-		
Pebble	-	-	-	-	1	2	-	-	7	-		
Plant	-	-	-	-	-	-	-	54	4	9		
Mud	-	-	-	32	-	-	-	64	-	-		

Stage: N = nymph, A = adult, L = larvae, P = pupae, juv = juvenile, \* indicates too small to be identified further  
 Origin: FW = freshwater, TERR = terrestrial

## **Appendix 6.4-1**

### Todedada Lake Habitat Data

**Appendix 6.4-1. Todedada Lake Habitat Data**

Lake	Category	Unit #	Bed Material (D/SD)					Shoreline Type					Beginning		End	
			Sand	Gravel	Cobble	Boulder	Bedrock	Coniferous	Deciduous	Mixed	Shrub	None	Easting	Northing	Easting	Northing
TDL	Littoral Substrate	1	D	SD									451692	6259677	451617	6259925
TDL	Littoral Substrate	2		SD	D								451617	6259925	451599	6259957
TDL	Littoral Substrate	3	D	SD									451599	6259957	451490	6260266
TDL	Littoral Substrate	4		D	SD								451490	6260266	451494	6260300
TDL	Littoral Substrate	5	D	SD									451494	6260300	451670	6260190
TDL	Littoral Substrate	6	D		SD								451670	6260190	451677	6260162
TDL	Littoral Substrate	7	D	SD									451677	6260162	451712	6260124
TDL	Littoral Substrate	8	D		SD								451712	6260124	451740	6260059
TDL	Littoral Substrate	9	D	SD									451740	6260059	451864	6259959
TDL	Littoral Substrate	10	D				SD						451864	6259959	451895	6259869
TDL	Littoral Substrate	11	D		SD								451895	6259869	451908	6259549
TDL	Littoral Substrate	12	D				SD						451908	6259549	451898	6259480
TDL	Littoral Substrate	13	D		SD								451898	6259480	451907	6259386
TDL	Littoral Substrate	14	SD				D						451907	6259386	451932	6259357
TDL	Littoral Substrate	15	D		SD								451932	6259357	451740	6259384
TDL	Littoral Substrate	16	D	SD									451740	6259384	451716	6259454
TDL	Littoral Substrate	17	D		SD								451716	6259454	451705	6259556
TDL	Littoral Substrate	18	D	SD									451705	6259556	451692	6259677
TDL	Shoreline Substrate	1		SD	D								451692	6259677	451652	6259705
TDL	Shoreline Substrate	2	D	SD									451652	6259705	451504	6260118
TDL	Shoreline Substrate	3			D	SD							451504	6260118	451514	6260172
TDL	Shoreline Substrate	4	SD	D									451514	6260172	451491	6260300
TDL	Shoreline Substrate	5	D	SD									451491	6260300	451885	6259905
TDL	Shoreline Substrate	6	SD	D									451885	6259905	451896	6259587
TDL	Shoreline Substrate	7	D		SD								451896	6259587	451907	6259386
TDL	Shoreline Substrate	8	SD				D						451907	6259386	451932	6259357
TDL	Shoreline Substrate	9	D	SD									451932	6259357	451692	6259677
TDL	Riparian Vegetation	1						X					451692	6259677	451541	6259974
TDL	Riparian Vegetation	2										X	451541	6259974	451521	6250006
TDL	Riparian Vegetation	3						X					451521	6250006	451511	6260055
TDL	Riparian Vegetation	4								X			451511	6260055	451654	6260332
TDL	Riparian Vegetation	5						X					451654	6260332	451811	6259991
TDL	Riparian Vegetation	6								X			451811	6259991	451921	6259736
TDL	Riparian Vegetation	7						X					451921	6259736	451906	6259283
TDL	Riparian Vegetation	8									X		451906	6259283	451858	6259304
TDL	Riparian Vegetation	9						X					451858	6259304	451686	6259515
TDL	Riparian Vegetation	10									X		451686	6259515	451692	6259677

D = dominant, SD = sub-dominant, T = trace

## **Appendix 6.4-2**

Biological Fish Data from Receiving and Reference  
Environment Lakes



**Appendix 6.4-2. Biological Fish Data from Receiving and Reference Environment Lakes**

Site #	Method	Set #	Species	Length (mm)	Weight (g)	Condition (g/mm3)	Sex (M/F/U)	Maturity	Age Structure (OT/FC/SC)	Age Sample #	Age	Confidence
LAL - West Teigen Lake	GN	5	DV	265	166	0.8920	U	U	FC/SC	31	5	-
LAL - West Teigen Lake	GN	5	DV	329	352	0.9885	U	U	FC/SC	32	5	-
LAL - West Teigen Lake	GN	5	DV	369	427	0.8499	U	U	FC/SC	33	5	-
LAL - West Teigen Lake	GN	5	DV	270	184	0.9348	U	U	FC/SC	34	7	-
LAL - West Teigen Lake	GN	5	DV	268	181	0.9403	U	U	FC/SC	35	7	-
LAL - West Teigen Lake	GN	5	DV	265	201	1.0801	U	U	FC/SC	36	6	-
LAL - West Teigen Lake	GN	5	DV	291	264	1.0713	U	U	FC/SC	37	6	-
LAL - West Teigen Lake	GN	5	DV	299	254	0.9502	U	U	FC/SC	38	6	-
LAL - West Teigen Lake	GN	5	DV	270	173	0.8789	U	U	FC/SC	39	8	-
LAL - West Teigen Lake	GN	6	DV	264	179	0.9728	F	IM	FC/SC	40	6	-
LAL - West Teigen Lake	GN	2	DV	280	215	0.9794	U	U	FC/SC	1	7	-
LAL - West Teigen Lake	GN	2	DV	322	327	0.9794	U	U	FC/SC	2	6	-
LAL - West Teigen Lake	GN	2	DV	309	270	0.9151	U	U	FC/SC	3	5	-
LAL - West Teigen Lake	GN	2	DV	254	173	1.0557	U	U	FC/SC	4	6	-
LAL - West Teigen Lake	GN	2	DV	300	243	0.9000	U	U	FC/SC	5	6	-
LAL - West Teigen Lake	GN	2	DV	252	160	0.9998	U	U	FC/SC	6	4	-
LAL - West Teigen Lake	GN	2	DV	249	154	0.9975	U	U	FC/SC	7	5	-
LAL - West Teigen Lake	GN	2	DV	311	296	0.9840	U	U	FC/SC	8	4	-
LAL - West Teigen Lake	GN	2	DV	384	445	0.7859	U	U	FC/SC	9	9	poor
LAL - West Teigen Lake	GN	2	DV	248	275	1.8029	U	U	FC/SC	10	6	-
LAL - West Teigen Lake	GN	2	DV	330	329	0.9155	U	U	FC/SC	11	5	-
LAL - West Teigen Lake	GN	2	DV	268	194	1.0079	U	U	FC/SC	12	4	-
LAL - West Teigen Lake	GN	2	DV	284	235	1.0259	U	U	FC/SC	13	6	-
LAL - West Teigen Lake	GN	2	DV	300	283	1.0481	U	U	FC/SC	14	7	-
LAL - West Teigen Lake	GN	2	DV	335	360	0.9576	M	IM	FC/SC	15	7	-
LAL - West Teigen Lake	GN	2	DV	303	238	0.8556	F	IM	FC/SC	16	5	-
LAL - West Teigen Lake	GN	3	DV	314	284	0.9173	U	U	FC/SC	17	9	-
LAL - West Teigen Lake	GN	3	DV	334	379	1.0172	U	U	FC/SC	18	7	-
LAL - West Teigen Lake	GN	3	DV	352	354	0.8117	U	U	FC/SC	19	8	-
LAL - West Teigen Lake	GN	3	DV	280	228	1.0386	U	U	FC/SC	20	6	-
LAL - West Teigen Lake	GN	3	DV	280	210	0.9566	U	U	FC/SC	21	6	-
LAL - West Teigen Lake	GN	3	DV	360	378	0.8102	U	U	FC/SC	22	5	-
LAL - West Teigen Lake	GN	3	DV	323	320	0.9496	U	U	FC/SC	23	6	-
LAL - West Teigen Lake	GN	3	DV	236	115	0.8749	U	U	FC/SC	24	4	-
LAL - West Teigen Lake	GN	3	DV	245	155	1.0540	F	IM	FC/SC	25	5	-
LAL - West Teigen Lake	GN	3	DV	336	397	1.0466	M	IM	FC/SC	26	5	-
LAL - West Teigen Lake	MT	5	DV	87	6	0.9112	U	IM	-	27	-	-
LAL - West Teigen Lake	GN	5	DV	330	334	0.9294	U	U	FC/SC	28	6	-

**Appendix 6.4-2. Biological Fish Data from Receiving and Reference Environment Lakes**

Site #	Method	Set #	Species	Length (mm)	Weight (g)	Condition (g/mm3)	Sex (M/F/U)	Maturity	Age Structure (OT/FC/SC)	Age Sample #	Age	Confidence
LAL - West Teigen Lake	GN	5	DV	370	335	0.6614	U	U	FC/SC	29	7	-
LAL - West Teigen Lake	GN	5	DV	464	350	0.3504	U	U	FC/SC	30	7	-
TDL - Todedada Lake	GN	1	DV	285	278	1.2009	U	U	FC/SC	1	5	-
TDL - Todedada Lake	GN	1	DV	272	217	1.0783	U	U	FC/SC	2	5	-
TDL - Todedada Lake	GN	1	DV	282	249	1.1103	U	U	FC/SC	3	5	-
TDL - Todedada Lake	GN	1	RB	354	498	1.1226	U	U	FC/SC	4	5	-
TDL - Todedada Lake	GN	1	RB	256	207	1.2338	U	U	FC/SC	5	5	-
TDL - Todedada Lake	GN	1	DV	319	345	1.0628	M	M	FC/SC	6	8	-
TDL - Todedada Lake	GN	3	DV	415	620	0.8675	U	U	FC/SC	7	6	-
TDL - Todedada Lake	GN	3	DV	410	613	0.8894	U	U	FC/SC	8	8	-
TDL - Todedada Lake	GN	3	DV	375	542	1.0278	U	U	FC/SC	9	6	-
TDL - Todedada Lake	GN	3	DV	386	480	0.8346	U	U	FC/SC	10	8	-
TDL - Todedada Lake	GN	3	DV	388	457	0.7824	U	U	FC/SC	11	-	-
TDL - Todedada Lake	GN	3	DV	370	492	0.9713	U	U	FC/SC	12	10	-
TDL - Todedada Lake	GN	3	DV	368	489	0.9812	U	U	FC/SC	13	12	-
TDL - Todedada Lake	GN	3	DV	295	246	0.9582	U	U	FC/SC	14	8	-
TDL - Todedada Lake	GN	3	DV	395	536	0.8697	M	M	FC/SC	15	6	-
TDL - Todedada Lake	GN	3	DV	384	526	0.9289	F	M	FC/SC	16	8	-
TDL - Todedada Lake	GN	3	RB	373	530	1.0213	F	IM	FC/SC	17	5	-
TDL - Todedada Lake	GN	4	DV	409	562	0.8214	U	U	FC/SC	18	8	poor
TDL - Todedada Lake	GN	4	DV	430	645	0.8112	U	U	FC/SC	19	8	-
TDL - Todedada Lake	GN	4	DV	381	601	1.0867	U	U	FC/SC	20	7	-
TDL - Todedada Lake	GN	4	DV	383	520	0.9256	U	U	FC/SC	21	6	-
TDL - Todedada Lake	GN	4	DV	398	640	1.0152	U	U	FC/SC	22	7	-
TDL - Todedada Lake	GN	4	DV	390	670	1.1295	U	U	FC/SC	23	-	-
TDL - Todedada Lake	GN	4	DV	409	680	0.9939	U	U	FC/SC	24	7	-
TDL - Todedada Lake	GN	4	DV	419	694	0.9434	U	U	FC/SC	25	7	-
TDL - Todedada Lake	GN	4	DV	395	510	0.8275	U	U	FC/SC	26	7	-
TDL - Todedada Lake	GN	4	DV	567	380	0.2085	U	U	FC/SC	27	6	-
TDL - Todedada Lake	GN	4	DV	400	583	0.9109	U	U	FC/SC	28	9	-
TDL - Todedada Lake	GN	4	DV	401	559	0.8669	U	U	FC/SC	29	7	-
TDL - Todedada Lake	GN	4	DV	421	758	1.0158	M	M	FC/SC	30	8	-
TDL - Todedada Lake	GN	5	DV	425	687	0.8949	M	M	FC/SC	31	8	-
TDL - Todedada Lake	GN	5	RB	255	190	1.1459	U	U	FC/SC	32	4	-
TDL - Todedada Lake	GN	5	DV	403	605	0.9244	U	U	FC/SC	33	-	-
TDL - Todedada Lake	GN	5	DV	419	724	0.9842	M	M	FC/SC	34	11	-
TDL - Todedada Lake	GN	5	RB	358	493	1.0745	F	IM	FC/SC	35	8	-
TDL - Todedada Lake	MT	5	RB	113	15	1.0396	U	IM	FC/SC	36	2	-

GN = gillnet, MT = minnow trap, DV = Dolly Varden, RB = rainbow trout, M = male / mature, F = female, U = undetermined, IM = immature, FC = fin ray, SC = scale, OT = otolith

## **Appendix 6.4-3**

Receiving and Reference Environment Lake Habitat Gillnet  
Effort and Catch Data

**Appendix 6.4-3. Receiving and Reference Environment Lake Habitat Gillnet Effort and Catch Data**

Lake	GN #	Depth (m)	Start		End		Date In	Time In	Time In Conversion	Date Pulled	Time Pulled	Time Pulled Conversion	Set Duration Conversion (hrs)	Gillnet Area (m2)	Species		
			Easting	Northing	Depth (m)	Easting									Northing	DV	RB
LAL - West Teigen Lake	1	12.4	431765	627777	10.7	431671	6279817	8-Jul-09	9:55	9.92	08-Jul-09	11:12	11.20	1.28	218.9	-	-
LAL - West Teigen Lake	2	7.5	432021	6279789	3.7	432020	6279691	8-Jul-09	10:44	10.73	09-Jul-09	11:45	11.75	1.02	218.9	16	-
LAL - West Teigen Lake	3	5.2	432232	6279954	5	432279	6279863	8-Jul-09	11:20	11.33	10-Jul-09	13:10	13.17	1.83	218.9	10	-
LAL - West Teigen Lake	4	12.4	431881	6279799	9.9	431830	6279865	8-Jul-09	13:03	13.05	11-Jul-09	14:30	14.50	1.45	218.9	-	-
LAL - West Teigen Lake	5	6.5	432505	6279906	5.8	432411	6279895	8-Jul-09	14:26	14.43	12-Jul-09	15:30	15.50	1.07	218.9	12	-
LAL - West Teigen Lake	6	3.5	432266	6280021	11.3	432337	6280083	8-Jul-09	15:13	15.22	13-Jul-09	16:24	16.40	1.18	218.9	1	-
SUL - Sulphurets Lake	1	2.7	421075	6261227	22.5	421065	6261323	11-Jul-09	10:45	10.75	12-Jul-09	9:25	9.42	22.67	218.9	-	-
SUL - Sulphurets Lake	2	3.6	420609	6261167	18.1	420624	6261249	11-Jul-09	10:55	10.92	12-Jul-09	9:37	9.62	22.70	218.9	-	-
TDL - Todedada Lake	1	11.9	451617	6260224	11.1	451618	6260134	9-Jul-09	10:43	10.72	09-Jul-09	11:40	11.67	0.95	218.9	4	2
TDL - Todedada Lake	2	16.1	451818	6259831	10.1	451912	6259809	9-Jul-09	11:36	11.60	09-Jul-09	12:55	12.92	1.32	218.9	-	-
TDL - Todedada Lake	3	12.8	451809	6259577	3.3	451711	6259582	9-Jul-09	12:45	12.75	09-Jul-09	14:10	14.17	1.42	218.9	10	1
TDL - Todedada Lake	4	9.9	451838	6259388	7	451898	6259310	9-Jul-09	13:59	13.98	09-Jul-09	15:10	15.17	1.18	218.9	14	-
TDL - Todedada Lake	5	12.7	451810	6259573	6.9	451896	6259543	9-Jul-09	15:06	15.10	09-Jul-09	16:00	16.00	0.90	218.9	3	1

Dashes indicates not applicable

DV = Dolly Varden, RB = rainbow trout

## **Appendix 6.4-4**

Receiving and Reference Environment Lake Habitat Minnow  
Trap Effort and Catch Data

**Appendix 6.4-4. Receiving and Reference Environment Lake Habitat Minnow Trap Effort and Catch Data**

Lake	Easting	Northing	MT #	Date Set	Time Set	Time Set		Date Pulled	Time Pulled	Conversion	Set Duration Conversion (hrs)	Species	
						Conversion	Time Pulled					DV	RB
LAL - West Teigen Lake	431719	6279637	1	7-Jul-09	14:55	14.92		8-Jul-09	14:43	14.72	23.80	-	-
LAL - West Teigen Lake	431447	6279601	2	7-Jul-09	14:58	14.97		8-Jul-09	14:47	14.78	23.82	-	-
LAL - West Teigen Lake	431554	6279773	3	7-Jul-09	15:01	15.02		8-Jul-09	14:49	14.82	23.80	-	-
LAL - West Teigen Lake	431793	6279898	4	7-Jul-09	15:03	15.05		8-Jul-09	14:52	14.87	23.82	-	-
LAL - West Teigen Lake	431885	6279911	5	7-Jul-09	15:05	15.08		8-Jul-09	14:55	14.92	23.83	1	-
LAL - West Teigen Lake	432279	6280079	6	7-Jul-09	15:09	15.15		8-Jul-09	16:27	16.45	25.30	-	-
LAL - West Teigen Lake	432471	6280100	7	7-Jul-09	15:44	15.73		8-Jul-09	16:29	16.48	24.75	-	-
LAL - West Teigen Lake	432583	627990	8	7-Jul-09	15:46	15.77		8-Jul-09	16:31	16.52	24.75	-	-
LAL - West Teigen Lake	432498	6279799	9	7-Jul-09	15:47	15.78		8-Jul-09	16:33	16.55	24.77	-	-
LAL - West Teigen Lake	432394	6279776	10	7-Jul-09	15:48	15.80		8-Jul-09	16:36	16.60	24.80	-	-
SUL - Sulphurets Lake	420730	6261144	1	11-Jul-09	10:06	10.10		12-Jul-09	9:39	9.65	23.55	-	-
SUL - Sulphurets Lake	420645	6261143	2	11-Jul-09	10:08	10.13		12-Jul-09	9:40	9.67	23.53	-	-
SUL - Sulphurets Lake	420464	6261179	3	11-Jul-09	10:10	10.17		12-Jul-09	9:42	9.70	23.53	-	-
SUL - Sulphurets Lake	420353	6261249	4	11-Jul-09	10:11	10.18		12-Jul-09	9:43	9.72	23.53	-	-
SUL - Sulphurets Lake	420437	6261371	5	11-Jul-09	10:17	10.28		12-Jul-09	9:44	9.73	23.45	-	-
SUL - Sulphurets Lake	420542	6261400	6	11-Jul-09	10:18	10.30		12-Jul-09	9:46	9.77	23.47	-	-
SUL - Sulphurets Lake	420651	6261407	7	11-Jul-09	10:20	10.33		12-Jul-09	9:48	9.80	23.47	-	-
SUL - Sulphurets Lake	420872	6261460	8	11-Jul-09	10:23	10.38		12-Jul-09	9:51	9.85	23.47	-	-
SUL - Sulphurets Lake	421057	6261524	9	11-Jul-09	10:26	10.43		12-Jul-09	9:53	9.88	23.45	-	-
SUL - Sulphurets Lake	421123	6261215	10	11-Jul-09	10:29	10.48		12-Jul-09	9:55	9.92	23.43	-	-
TDL - Todedada Lake	451601	6259854	1	9-Jul-09	10:29	10.48		10-Jul-09	10:50	10.83	24.35	-	-
TDL - Todedada Lake	451511	6260044	2	9-Jul-09	10:32	10.53		10-Jul-09	10:53	10.88	24.35	-	-
TDL - Todedada Lake	451485	6260288	3	9-Jul-09	10:35	10.58		10-Jul-09	10:56	10.93	24.35	-	-
TDL - Todedada Lake	451676	6260189	4	9-Jul-09	10:38	10.63		10-Jul-09	10:58	10.97	24.33	-	-
TDL - Todedada Lake	451761	6260045	5	9-Jul-09	10:47	10.78		10-Jul-09	11:01	11.02	24.23	-	1
TDL - Todedada Lake	451934	6259795	6	9-Jul-09	10:51	10.85		10-Jul-09	11:05	11.08	24.23	-	-
TDL - Todedada Lake	451912	6259554	7	9-Jul-09	10:54	10.90		10-Jul-09	11:08	11.13	24.23	-	-
TDL - Todedada Lake	451918	6259370	8	9-Jul-09	10:56	10.93		10-Jul-09	11:10	11.17	24.23	-	-
TDL - Todedada Lake	451867	6259288	9	9-Jul-09	10:58	10.97		10-Jul-09	11:11	11.18	24.22	-	-
TDL - Todedada Lake	451723	6259433	10	9-Jul-09	11:00	11.00		10-Jul-09	11:14	11.23	24.23	-	-

DV = Dolly Varden, RB = rainbow trout