2565.00/WP8349

Reconnaissance Level Fish and Fish Habitat Inventory in the Bulkley T.S.A.

(Working Unit #9 - Fulton)

PART 2 OF 2

Prepared for:

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April 1998

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EXECUTIVE SUMMARY

Triton Environmental Consultants Ltd. was retained by Pacific Inland Resources (PIR) in partnership with the Ministry of Environment, Lands and Parks (MELP) in Smithers to conduct reconnaissance level fish and fish habitat inventories in the Bulkley Forest District. This report summarizes the historical fisheries data collected by SKR Consultants Ltd and the field data collected by Triton survey crews in working unit 9. The historical records indicate the presence of the following species in this working area:

- cutthroat trout (*Oncorhynchus clarkii*)
- lake whitefish (*Prosopium coulteri*)
- lake trout (*Salvelinus namaycush*)
- peamouth chub (*Mylocheilus caurinus*)
- burbot (*Lota lota*)
- longnose suckers (*Catastomus catastomus*)

A total of 160 sites were sampled between July 25 and October 2 1996 and July 7 and September 20 1997. Eighteen sites were classified as "Not A Creek" due to the lack of a defined channel. Fish were captured by electrofishing at 43 sites and by minnow trapping at 1 site, the species sampled include Dolly Varden (*S. malma*), rainbow trout (*Oncorhynchus mykiss*), cutthroat trout, prickly sculpin (*Cottus asper*), mountain whitefish (*Prosopium williamsoni*), red sided shiner (*Richardsonius balteatus*), burbot and longnose dace (*Rhinichthys cataractae*). Thirty sites were classified as S5 or S6 and the basis for the non fish bearing status is summarized. This report also includes recommendations for resampling in reaches that fish are likely to use, but where no fish were caught.

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5.11 McKendrick Creek (480-6972-427) (93 L 087)

5.11.1 Sensitive Habitats and Barriers

The McKendrick Creek mainstem is 21.5 km in length and is fed by 32 tributaries. Reach 1 is unconfined, has low gradient, and a large side channel that has been identified as a fisheries sensitive zone. Reach 2 is more confined, with steep valley walls. Reach 3 has low gradient and contains several wetlands in direct contact with the channel, as well as 1 small lake and a large side channel, which has been identified as a fisheries sensitive zone. Reach 4 is somewhat confined, with moderately steep gradient and reaches 5 and 6 are quite confined, with varied gradient. Reach 7 is a non fish bearing lake and reach 8 is a small non fishbearing inlet. Reach 1 is crossed by a number of roads and is flanked on the left bank by a cluster of buildings. An abandoned pit mine is also found in this reach. All of the tributaries to the left bank of McKendrick are crossed by a logging road. This system was sampled at 24 locations, including reaches 1, 4 and 6 of the mainstem. A series of cascades and falls was noted at the reach 4 and 5 break, which delineate the upper limit of fish distribution in this watershed.

5.11.2 Fish Summary Tables and Stream Classification

No fisheries information was available for this creek. Fish were caught by electrofishing at 6 sites and were visually observed at another 2. Dolly Varden and rainbow trout were caught by electrofishing in reach 1 of the maincreek and Dolly Varden were visually observed in a tributary associated with reach 3 of the mainstem. Dolly Varden were also caught by electrofishing in reach 4 of the mainstem and cutthroat trout were caught in a tributary to reach 3. McKendrick Creek was classified as an S2 in reach one, based on an average channel width of 9.2 meters and the presence of Dolly Varden in the sampling area. This classification is consistent through reach 4. Reaches 5 and 6 have been classified as non fish bearing because no evidence of a resident population of fish was found above the series of cascade and falls barriers at the reach 4 and 5 break. The tributaries to this system range in size from S2 to S6 sized creeks. The large tributary to reach 2 of McKendrick Creek, sampled at H97, was classified as an S2 based on an average channel width of 7.07 meters and the presence of rearing habitat in the sampling area. The gradient at the sample site was only 9%, however, this same tributary was sampled in reach 2 and the average gradient of the sample site was 23%. The smaller stream flowing into reach 2 of this tributary has 17% gradient. No fish were caught or observed in any part of this system, suggesting a gradient barrier at or near the mouth of the stream.

DFO/MoELP Stream Survey Form

Site Number: JULIE 95 **Reach No.: 1**

McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: JULIE 95, Unit 9, North of 302-5 block on 1km. See C5 **Stream (Gaz.):** McKendrick Creek **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 6.0 MA **Date:** 16-Aug-96 **Time:** 9:00 **Agency:** TEC **Access:** V4 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .6480 .60840 **Length surveyed (m):** 100.0 HC **Survey Crew:** JP \HK \ \ \ \ \ \ \ **Photos:** J-5-11,12 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	9.2	HC
Av. Wet. Width (m):	6.7	HC
Av. Max Riffle Depth (cm):	20	MS
Av. Max Pool Depth (cm):	108	MS
Gradient (%):	3.0	CL
Pool: 10 Riffle: 70 Run: 20 Other: 0		
% Side Channel:	0	GE
% Debris Area:	0-5	GE
%Stable:	70	GE

Specific Data

8.8	9.6	8.5	10.2	10.1	8.2
6.8	7.4	5.5	7.6	6.3	6.5
16	21	24	0	0	0
140	105	80	0	0	0

Cover

Cover Total % : 70 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
10	5	65	0	10	10

Crown Closure % : 10 Aspect : N

Bed Material

Fines	Clay, silt, sand (<2mm):	0	0
Gravels	Small (2-16mm):	20	10
	Large (16-64mm):		10
Larges	Sm. cobble (64-128mm):	75	20
	Lge cobble (128-256mm):		25
	Bldr cobble (>256mm):		30
Bedrock		5	5

D90 (cm): 60 Compaction: Medium

Discharge

Wetted Width (m) :	6.8	HC
Mean Depth (m) :	0.5	MS
Mean Velocity (m/s) :	0.55	F
Discharge (m3/s) :	1.30	F

Banks

Height (m): 1.4

% Unstable: 30

Fines ☐ Gravels ☐ Larges ☒ Bedrock ☐

Confinement: FC

Valley : Channel Ratio 2-5

Stage: M Flood Signs Ht(m): 0.9

Bars (%): 10 pH: Braided: N

Water Temp. (°C): 9.0 02 (ppm):

Turb. (cm): 140 Cond. (µmhos):

Reach Symbol

(Fish)

RB, DV

9 B 3.0 | 0280

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	RB	1	125	J	R			EL
	DV	1	138	J	R			EL

Comments

C1 S2

C2 LS = 2%, RS = 5%.

C3 No fisheries sensitive zones noted on site.

C4 Electroshocking effort , using a 12 B POW electroshocker, was 636 seconds over 250 meters.

C5 Lat N 54 52' 58.2", Long W 126 41' 32.8"

C6 The streambanks of the sampling site are undercut and contain moss cover, exposed roots and boulder and cobble armouring.

C7 No pH, DO or conductivity measurements were made at this site. The mean air temperature on this day was 11.5°C

C8 The sampling area, which connects with Chapman Lake, contains spawning gravels and rearing habitat. Chapman Lake provides overwintering habitat.

C9 In addition to the fish listed in the fish summary of this card, a 98mm rainbow trout was caught, by electrofishing.

1 A 5 m long bedrock chute, not a barrier to fish passage, was seen 80 m upstream of a bridge.

Photo #: J-5-11, 1996/08/16
Site #: J95, Looking upstream, large pool.

Photo #: J-5-12, 1996/08/16
Site #: J95, Looking downstream toward bridge.

DFO/MoELP Stream Survey Form

Site Number: Y218

Reach No.: 4

McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y218, Unit 9 | **Stream (Gaz.):** McKendrick Creek | **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 | **U.T.M. :** 9 .6423 .60764 | **Reach Length (km):** 2.3 MW | **Length surveyed (m):** 150.0 GE | **Date:** 06-Sep-97 | **Time:** 13:00 | **Agency:** TEC | **Survey Crew:** JP \FC\ \ \ \ \ \ \ | **Access:** V2 | **Fish Card:** N | Field ☒ Historical ☐ | **Photos:** Y-25-20,21,22 | **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	6.3	MS
Av. Wet. Width (m):	5.1	MS
Av. Max Riffle Depth (cm):	8	MS
Av. Max Pool Depth (cm):	66	MS
Gradient (%):	0.5	CL
Pool: 15 Riffle: 5 Run: 80 Other: 0		
% Side Channel:	0-10	GE
% Debris Area:	5-15	GE
%Stable:	30	GE

Specific Data

6.8	4.8	7.4	5.0	5.7	8.0
4.6	2.8	5.6	3.9	5.7	8.0
8	10	7			
49	58	53	80	89	

Cover

Cover Total % : 20 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
25	30	0	5	10	30

Crown Closure % : 10 | Aspect : N

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	70	40
	Large (16-64mm):		30
Larges	Sm. cobble (64-128mm):	10	10
	Lge cobble (128-256mm):		0
	Bldr cobble (>256mm):		0
Bedrock		0	0

D90 (cm): 7 | Compaction: Medium

Discharge

Wetted Width (m) :	1.7	MS
Mean Depth (m) :	0.0	MS
Mean Velocity (m/s) :	0.73	F
Discharge (m3/s) :	0.93	F

Banks

Height (m): 0.2

% Unstable: 5

Fines ☐ Gravels ☒ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M | Flood Signs Ht(m): 0.7

Bars (%): 20 | pH: 7.2 | Braided: Y

Water Temp. (°C): 8.0 | 02 (ppm):

Turb. (cm): | Cond. (µmhos): 130

Reach Symbol

(Fish)

DV TR

6 D 0.5 | 2710

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	1	90	J				EL
	TR	10	20-35	F				VO

Comments

C1: S2.

C2: LS=10%, RS=15%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 400V, was 289 seconds over 150 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 14.0 C.

C7: There is good rearing habitatt here including cutbanks, pools and LOD cover. Spawniong gravels were also observed, however, an incrcase in fines occurs approaching the beaver dam below the site.

Photo #: Y-25-20, 06/09/97
Site #: Y218, Looking upstream at the channel, note overveg and LOD

Photo #: Y-25-21, 06/09/97
Site #: Y218, Looking downstream at the channel

Photo #: Y-25-22, 06/09/97
Site #: Y218, Measuring Dolly Varden on the fishboard

DFO/MoELP Stream Survey Form

Site Number: Y221 **Reach No.:** 5

McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y221, Unit 9 **Stream (Gaz.):** McKendrick Creek **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 2.9 MW **Date:** 06-Sep-97 **Time:** 17:23 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 643443 60756 **Length surveyed (m):** 500.0 GE **Survey Crew:** JP \FC\ \ \ \ \ \ \ **Photos:** Y-26-4,5,6,7,8,11,12 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	3.5	MS
Av. Wet. Width (m):	2.2	MS
Av. Max Riffle Depth (cm):	13	MS
Av. Max Pool Depth (cm):	36	MS
Gradient (%):	16.0	CL
Pool: 30 Riffle: 20 Run: 30 Other: 20		
% Side Channel:	0	GE
% Debris Area:	5-15	GE
%Stable:	40	GE

Specific Data

4.5	3.7	2.2	2.3	4.5	3.7
2.0	2.3	1.7	2.8	1.9	2.3
10	9	13	20	11	
23	23	29	34	27	80

Bed Material

Fines	Clay, silt, sand (<2mm):	10	10
Gravels	Small (2-16mm):	20	10
	Large (16-64mm):		10
	Sm. cobble (64-128mm):		5
Larges	Lge cobble (128-256mm):	30	10
	Bldr cobble (>256mm):		15
Bedrock		40	40

N D90 (cm): Compaction: High

Cover

Cover Total % : 15 GE

Pool	LOD	Bldr	In Veg	O Veg	Cbnk
30	30	35	0	0	5

Crown Closure % : 20 Aspect : SW

Discharge

Wetted Width (m) :	1.0	MS
Mean Depth (m) :	0.3	MS
Mean Velocity (m/s) :	0.26	F
Discharge (m3/s) :	0.06	F

Reach Symbol

(Fish)

NF

4 A 16.0 | 1234

(Width, Valley: Channel, Slope) (Bed Material)

Banks

Height (m): 0.2

% Unstable: 0

Fines ☐ Gravels ☐ Larges ☐ Bedrock ☒

Confinement: CO

Valley : Channel Ratio 0-2

Stage: M Flood Signs Ht(m): 2

Bars (%): 0 pH: 8.0 Braided: N

Water Temp. (°C): 8.5 02 (ppm):

Turb. (cm): Cond. (µmhos): 100

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA	1			EL

Comments

C1: S5.

C2: LS=60%, RS=65%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 500V, was 771 seconds over 200 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperautre at this site was 16.0 C.

C7: This reach flows through a canyon with several cascades, falls and log jams.

Photo #: Y-26-4, 06/09/97
Site #: Y221, Looking upstream at the channel, note 3m cascade and pool

Photo #: Y-26-5, 06/09/97
Site #: Y221, Looking upstream at the channel, note debris jam

Photo #: Y-26-6, 06/09/97
Site #: Y221, Looking upstream at the channel

Photo #: Y-26-7, 06/09/97
Site #: Y221, Looking upstream at the channel

Photo #: Y-26-11, 06/09/97
Site #: Y221, Looking upstream at the channel

Photo #: Y-26-12, 06/09/97
Site #: Y221, Looking downstream at the channel

Photo #: Y-26-13, 06/09/97
Site #: Y221, Looking upstream at the channel

Photo #: Y-26-14, 06/09/97
Site #: Y221, Looking downstream at the channel

Photo #: Y-26-15, 06/09/97
Site #: Y221, Looking downstream at the channel

Photo #: Y-26-8, 06/09/97
Site #: Y221, Looking upstream at the channel, 4m falls

DFO/MoELP Stream Survey Form **Site Number:** Y230 **Reach No.:** 6

McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y230, Unit 9; below lake at headwaters of McKendrick **Stream (Gaz.):** McKendrick Creek **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 0.6 MW **Date:** 08-Sep-97 **Time:** 11:50 **Agency:** TEC **Access:** H **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .646365.6075685 **Length surveyed (m):** 200.0 GE **Survey Crew:** JP\FC\ \ \ \ \ \ \ **Photos:** Y-27-24,25 **Air Photos:**

Channel Characteristics

			Specific Data					
C1	Av. Chan. Width (m):	2.4 MS	2.3	3.2	1.6	5.6	0.7	1.0
C1	Av. Wet. Width (m):	2.4 MS	2.4	3.3	1.7	5.6	0.8	1.2
	Av. Max Riffle Depth (cm):	6 MS	7	5	6			
	Av. Max Pool Depth (cm):	55 MS	75	32	42	50	74	
	Gradient (%):	1.5 CL						
	Pool: 20 Riffle: 5 Run: 75 Other: 0							
	% Side Channel:	0-10 GE						
	% Debris Area:	0-5 GE						
	%Stable:	5 GE						

Cover

Cover Total % : 20 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
25	0	0	10	30	35

Crown Closure % : 0 Aspect : SW

Bed Material

	Fines	Clay, silt, sand (<2mm):	40	40
	Gravels	Small (2-16mm):	30	15
		Large (16-64mm):		15
	Larges	Sm. cobble (64-128mm):	30	15
		Lge cobble (128-256mm):		10
		Bldr cobble (>256mm):		5
	Bedrock		0	0

D90 (cm): 24 Compaction: Medium

Discharge

	Wetted Width (m) :	0.5 MS
	Mean Depth (m) :	0.1 MS
	Mean Velocity (m/s) :	0.41 F
	Discharge (m3/s) :	0.02 F

Banks

Height (m): 0.2

% Unstable: 0

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m):

Bars (%): 0 pH: 7.3 Braided: Y

Water Temp. (°C): 11.0 02 (ppm):

Turb. (cm): Cond. (µmhos): 50

Reach Symbol

(Fish)

NF

2 D 1.5 | 4330

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1: S6. One additional measurement was taken for channel and wetted width; 2.1 and 2.1.

C2: LS=25%, RS=15%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 600V, was 205 seconds over 200 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 16.0 C.

C7: This low gradient reach flows through a meadow below a lake. There are both narrow sections and wide pools and runs. Undercut banks, pools and overstream vegetation cover is abundant. Potential spawning gravels were covered in silt at the time of sampling. The canyon reach below this has multiple small falls and cascades.

C8: Loons, goldeneyes and a frog were spotted in/on the lake.

Photo #: Y-27-24, 08/09/97
Site #: Y230, Looking upstream at the channel

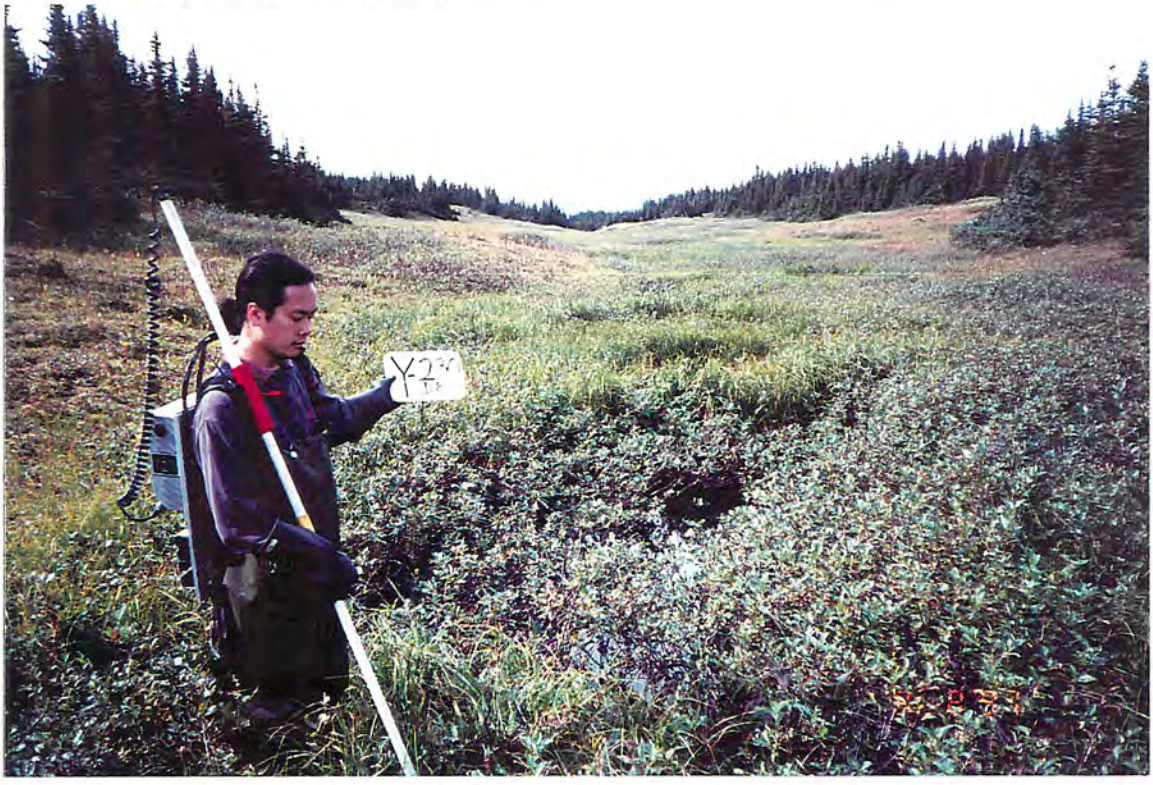


Photo #: Y-27-25, 08/09/97
Site #: Y230, Looking downstream at the channel, note the thick willow cover

DFO/MoELP Stream Survey Form

Site Number: JULIE 118 Reach No.: 1

Trib. to Mckendrick cr

TRITON Environmental Consultants Ltd.

Location: JULIE 118, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 3.6 MA **Date:** 19-Aug-96 **Time:** 11:20 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9.6485 .60852 **Length surveyed (m):** 100.0 GE **Survey Crew:** JP \HK \ \ \ \ \ \ **Photos:** J-7-13,14 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	3.0	MS
Av. Wet. Width (m):	2.0	MS
Av. Max Riffle Depth (cm):	9	MS
Av. Max Pool Depth (cm):	78	MS
Gradient (%):	4.0	CL
Pool: 10 Riffle: 30 Run: 60 Other:	0	
% Side Channel:	0-10	GE
% Debris Area:	5-15	GE
%Stable:	90	GE

Specific Data

2.7	2.9	3.5	3.3	2.8	3.0
1.8	1.9	2.1	2.2	2.3	1.7
10	9	9			
70	75	90			

Cover

Cover Total % : 70 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
15	20	10	5	20	30

Crown Closure % : 80 Aspect : S

Bed Material

Fines	Clay, silt, sand (<2mm):	10	10
Gravels	Small (2-16mm):	40	20
	Large (16-64mm):		20
Larges	Sm. cobble (64-128mm):	50	30
	Lge cobble (128-256mm):		10
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 25 Compaction: Medium

Discharge

Wetted Width (m) :	1.3	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.80	F
Discharge (m3/s) :	0.08	f

Banks

Height (m): 0.4

% Unstable: 0

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

(DV)

3 B 4.0 | 1450

(Width, Valley: Channel, Slope) (Bed Material)

Confinement: FC

Valley : Channel Ratio 2-5

Stage: H Flood Signs Ht(m): 0.2

Bars (%): 0 pH: 6.8 Braided: N

Water Temp. (°C): 8.5 02 (ppm):

Turb. (cm): 90 Cond. (µmhos): 1670

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				VO

Comments

C8 No fisheries sensitive zones noted.

C6 DO, pH and conductivity were not measured at this site. The water was clear to the bottom. The mean air temperature on this day was 11.6°C

C7 Excellent fish habitat was observed at this site, including a deep pool at the downstream end of the culvert and some deeply undercut banks. The culvert at this road crossing is not a barrier to fish passage upstream.

C9 The culvert was assessed and is not a barrier. No obvious erosion problems, steep but stable side slope.

C1 S3

C2 LS=30 %, RS=30%

C3 An electroshocker was not available for sampling.

C4 Lat N 54 53' 28.5", Long W 126 41' 01.5"

C5 No additional bank texture information. The side slopes are steep but stable in the sampling area.

Photo #: J-7-13, 1996/08/19
Site #: J118, Looking upstream, channel through alder.

Photo #: J-7-14, 1996/08/19
Site #: J118, Looking downstream, meterstick across channel.

DFO/MoELP Stream Survey Form

Site Number: Y243 **Reach No.: 2**

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y243, Unit 9 **Stream (Gaz.):** Unnamed **Watershed Code:** 078-9200-000-000-000-000-000-000-000-000-000-

Map #: 93 L 087 **Reach Length (km):** 3.6 MW **Date:** 10-Scp-97 **Time:** 15:30 **Agency:** TEC **Access:** V4 **Fish Card:** N **Field** ☒ **Historical** ☐

U.T.M. : 9 645184 6082730 **Length surveyed (m):** 100.0 GE **Survey Crew:** JP \FC\ \ \ \ \ \ \ **Photos:** Y-29-15,16 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	4.9	MS
Av. Wet. Width (m):	3.7	MS
Av. Max Riffle Depth (cm):	7	MS
Av. Max Pool Depth (cm):	34	MS
Gradient (%):	17.0	CL
Pool: 40 Riffle: 10 Run: 20 Other: 30		
% Side Channel:	0-10	GE
% Debris Area:	>15	GE
%Stable:	30	GE

Specific Data

5.5	4.1	5.5	5.9	3.3	5.4
3.8	3.0	5.2	4.3	3.2	2.8
8	7	5	6	11	
26	22	51	31	39	

Cover

Cover Total % : 25 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	20	60	0	0	0

Crown Closure % : 10 Aspect : E

Bed Material

Fines	Clay, silt, sand (<2mm):	0	0
Gravels	Small (2-16mm):	20	5
	Large (16-64mm):		15
Larges	Sm. cobble (64-128mm):	70	20
	Lge cobble (128-256mm):		20
	Bldr cobble (>256mm):		30
Bedrock		10	10

D90 (cm): Compaction: High

Discharge

Wetted Width (m) :	1.1	MS
Mean Depth (m) :	0.2	MS
Mean Velocity (m/s) :	0.24	F
Discharge (m3/s) :	0.04	F

Banks

Height (m): 0.4

% Unstable: 20

Fines ☐ Gravels ☐ Larges ☒ Bedrock ☐

Reach Symbol

(Fish)

(DV)

5 A 17.0 | 0271

(Width, Valley: Channel, Slope) | (Bed Material)

Confinement: CO

Valley : Channel Ratio 0-2

Stage: M Flood Signs Ht(m): 1.1

Bars (%): 10 pH: 7.6 Braided: N

Water Temp. (°C): 9.5 02 (ppm):

Turb. (cm): Cond. (µmhos): 40

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1: S3.

C2: LS=60%, RS=54%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 600V, was 126 seconds over 100 meters.

C5: No additional bank texture information.

C6: The DO, pH and conductivity were not measured at this site, the water was clear to bottom. The air temperature at this site was 16.0 C.

C7: This stream is very steep with lots of small cascades over boulders, bedrock and LOD. This is step-pool habitat with lots of good boulder, LOD and pool cover, however it may not be accessible due to high gradient and multiple small cascades.

Photo #: Y-29-15, 10/09/97
Site #: Y243, Looking upstream at the channel, cascade/step pool habitat

Photo #: Y-29-16, 10/09/97
Site #: Y243, Looking downstream at the channel

DFO/MoELP Stream Survey Form

Site Number: Y244 **Reach No.: 1**

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y244, Unit 9 **Stream (Gaz.):** Unnamed **Watershed Code:** 078-9300-000-000-000-000-000-000-000-000-000-

Map #: 93 L 087 **Reach Length (km):** 1.9 MW **Date:** 10-Sep-97 **Time:** 16:09 **Agency:** TEC **Access:** V4 **Fish Card:** N **Field** ☒ **Historical** ☐

U.T.M. : 9 .648184.606730 **Length surveyed (m):** 100.0 GE **Survey Crew:** JP \FC\ \ \ \ \ \ \ **Photos:** Y-29-17,18 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	5.3	MS
Av. Wet. Width (m):	2.0	MS
Av. Max Riffle Depth (cm):	5	MS
Av. Max Pool Depth (cm):	22	MS
Gradient (%):	23.0	CL
Pool: 40 Riffle: 10 Run: 20 Other:	30	
% Side Channel:	0-10	GE
% Debris Area:	>15	GE
%Stable:	25	GE

Specific Data

3.6	3.5	5.4	5.6	6.0	7.4	
1.6	1.9	1.8	1.7	1.7	3.2	
5	4	3	3	9		
29	18	22	16	26		

Cover

Cover Total % : 20 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	20	60	0	0	0

Crown Closure % : 15 Aspect : S

Bed Material

Fines	Clay, silt, sand (<2mm):	0	0
Gravels	Small (2-16mm):	20	5
	Large (16-64mm):		15
Larges	Sm. cobble (64-128mm):	80	25
	Lge cobble (128-256mm):		25
	Bldr cobble (>256mm):		30
Bedrock		0	0

D90 (cm): 68 Compaction: High

Discharge

Wetted Width (m) :	0.9	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.23	F
Discharge (m3/s) :	0.02	F

Banks

Height (m): 0.4

% Unstable: 20

Fines ☐ Gravels ☐ Larges ☒ Bedrock ☐

Reach Symbol

(Fish)

(DV)

5 A 23.0 | 0280

(Width, Valley: Channel, Slope) (Bed Material)

Confinement: CO

Valley : Channel Ratio 0-2

Stage: M Flood Signs Ht(m): 1

Bars (%): 5 pH: 7.7 Braided: Y

Water Temp. (°C): 9.0 02 (ppm):

Turb. (cm): Cond. (µmhos): 65

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1: S2.

C2: I.S=55%, RS=60%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 600V, was 70 seconds over 100 meters.

C5: No additional bank texture information.

C6: The DO, pH and conductivity were not measured at this site, the water was clear to bottom. The air temperature at this site was 16.C.

C7: This stream is very steep, but has good boulder, pool and LOD cover in step-pool habitat. There are multiple small cascades over boulders and LOD. No spawning habitat is present.

Photo #: Y-29-17, 10/09/97
Site #: Y244, Looking upstream at the channel,note abundant debris

Photo #: Y-29-18, 10/09/97
Site #: Y244, Looking downstream at the channel

DFO/MoELP Stream Survey Form

Site Number: Y214 **Reach No.:** 1

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y214, Unit 9; below cutblock 302-1 across McKendrick Creek from Little Joe Creek **Stream (Gaz.):** Unnamed **Watershed Code:** 079-0100-000-000-000-000-000-000-000-000-000-

Map #: 93 L 087 **Reach Length (km):** 1.8 | MW **Date:** 05-Sep-97 **Time:** 16:10 **Agency:** TEC **Access:** V2 **Fish Card:** N **Field** ☒ **Historical** ☐

U.T.M. : 9 .64547 .608061 **Length surveyed (m):** 200.0 | GE **Survey Crew:** JP\FC\ \ \ \ \ \ \ **Photos:** Y-25-9,10,11,12 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	7.1	MS
Av. Wet. Width (m):	3.5	MS
Av. Max Riffle Depth (cm):	8	MS
Av. Max Pool Depth (cm):	41	MS
Gradient (%):	7.0	CL
Pool: 10 Riffle: 20 Run: 65 Other:	5	
% Side Channel:	0-10	GE
% Debris Area:	>15	GE
%Stable:	20	GE

Specific Data

5.4	4.0	6.0	7.2	13.7	6.2
2.3	1.7	2.1	3.6	9.4	1.9
10	9	8	6	7	
49	42	39	31	42	

Cover

Cover Total % : 30 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
25	35	10	10	10	10

Crown Closure % : 15 Aspect : NE

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	50	25
	Large (16-64mm):		25
Larges	Sm. cobble (64-128mm):	30	10
	Lge cobble (128-256mm):		10
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 29 Compaction: Medium

Discharge

Wetted Width (m) :	1.2	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.40	F
Discharge (m3/s) :	0.04	F

Banks

Height (m): 0.5

% Unstable: 20

Fines ☐ Gravels ☒ Larges ☐ Bedrock ☐

Confinement: OC

Valley : Channel Ratio 5-10

Stage: M Flood Signs Ht(m): 1.3

Bars (%): 50 pH: 8.0 Braided: Y

Water Temp. (°C): 10.5 02 (ppm):

Turb. (cm): Cond. (µmhos): 150

Reach Symbol

(Fish)

DV

7 C 7.0 | 2530

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location
	2	X	0.3

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	1	171	A				EL
	DV	7	100-162	J				EL

Comments

C1: S2.

C2: LS=12%, RS=33%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 300V, was 210 seconds over 150 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 12.0 C.

C7: There is lots of good boulder and debris cover for rearing as well as some spawning gravel. Debris jams with gravel and cobble indicate flooding. A 2 m log jam was noted at the site, but is not permanent barrier.

Photo #: Y-25-9, 05/09/97
Site #: Y214, Looking downstream at the channel

Photo #: Y-25-10, 05/09/97
Site #: Y214, Looking upstream at the channel

Photo #: Y-25-11, 05/09/97
Site #: Y214, Measuring Dolly Varden on the fishboard

Photo #: Y-25-12, 05/09/97
Site #: Y214, Measuring Dolly Varden on the fishboard

DFO/MoELP Stream Survey Form

Site Number: Y234 **Reach No.:** 3

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y234, Unit 9 **Stream (Gaz.):** Unnamed **Watershed Code:** 079-2800-000-000-000-000-000-000-000-000-000-

Map #: 93 L 086 **Reach Length (km):** 3.1 MW **Date:** 08-Sep-97 **Time:** 16:02 **Agency:** TEC **Access:** H **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .639741.6079005 **Length surveyed (m):** 100.0 GE **Survey Crew:** JP \FC \ \ \ \ \ \ **Photos:** Y-28-9,10,11,12,13,14 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	5.1	T
Av. Wet. Width (m):	3.1	MS
Av. Max Riffle Depth (cm):	10	MS
Av. Max Pool Depth (cm):	39	MS
Gradient (%):	11.0	CL
Pool: 25 Riffle: 20 Run: 45 Other: 10		
% Side Channel:	0	GE
% Debris Area:	5-15	GE
%Stable:	20	GE

Specific Data

8.9	6.0	3.8	4.1	3.5	4.5
5.5	2.6	3.1	2.2	1.4	3.7
8	4	9	13	14	
42	19	58	42	36	

Bed Material

Fines	Clay, silt, sand (<2mm):	0	0
Gravels	Small (2-16mm):	20	5
	Large (16-64mm):		15
Larges	Sm. cobble (64-128mm):	60	15
	Lge cobble (128-256mm):		15
	Bldr cobble (>256mm):		30
Bedrock		20	20

D90 (cm): ☐ Compaction: High

Cover

Cover Total % : 20 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
30	20	40	0	10	0

Crown Closure % : 5 Aspect : E

Discharge

Wetted Width (m) :	1.1	MS
Mean Depth (m) :	0.2	MS
Mean Velocity (m/s) :	0.64	F
Discharge (m3/s) :	0.11	F

Banks

Height (m): 0.4

% Unstable: 15

Fines ☐ Gravels ☐ Larges ☒ Bedrock ☐

Confinement: CO

Valley : Channel Ratio 0-2

Stage: M Flood Signs Ht(m): 1

Bars (%): 5 pH: 7.8 Braided: N

Water Temp. (°C): 11.0 02 (ppm):

Turb. (cm): Cond. (µmhos): 70

Reach Symbol

(Fish)

NF

5 A 11.0 | 0262

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location
	10	C	3.2
	15	C	3.4

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C7: There are two large cascades downstream of the site, one is 10 m and the other is 15 m. The gradient is steep but there is a fair bit of boulder cover.

C1: S5.

C2: LS=35%, RS=50%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 500V, was 150 seconds over 100 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 21.0 C.

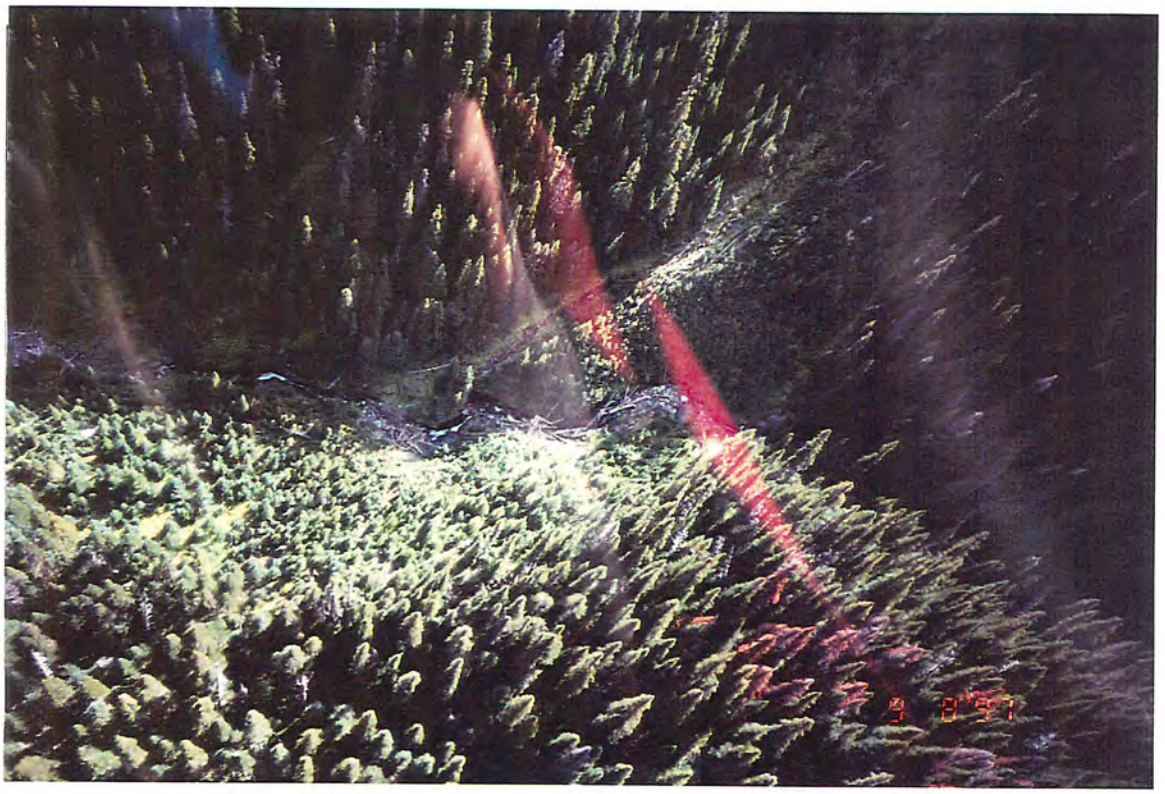


Photo #: Y-28-9, 08/09/97
Site #: Y234, Looking upstream at the channel

Photo #: Y-28-10, 08/09/97
Site #: Y234, Looking upstream at the channel

Photo #: Y-28-11, 08/09/97
Site #: Y234, Looking upstream at the channel

Photo #: Y-28-12, 08/09/97
Site #: Y234, Looking upstream at the channel, debris jam and cascade

Photo #: Y-28-13, 08/09/97
Site #: Y234, Looking downstream at the channel, note boulder cover

Photo #: Y-28-14, 08/09/97
Site #: Y234, Looking upstream at the channel

DFO/MoELP Stream Survey Form **Site Number:** Y217 **Reach No.:** 1

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y217, Unit9; below a small lake **Stream (Gaz.):** Unnamed **Watershed Code:** 079-3700-000-000-000-000-000-000-000-000-000-

Map #: 93 L 087 **Reach Length (km):** 0.2 MW **Date:** 06-Sep-97 **Time:** 11:29 **Agency:** TEC **Access:** V2 **Fish Card:** N Field ☒ Historical ☐

U.T.M. : 9 .642320.60763 **Length surveyed (m):** 200.0 GE **Survey Crew:** JP\FC\ \ \ \ \ \ \ **Photos:** Y-25-17,18,19 **Air Photos:**

Channel Characteristics

C1	Av. Chan. Width (m):	1.8	MS
C1	Av. Wet. Width (m):	1.6	MS
	Av. Max Riffle Depth (cm):	2	MS
	Av. Max Pool Depth (cm):	61	MS
	Gradient (%):	1.0	CL
	Pool: 15 Riffle: 5 Run: 75 Other: 5		
	% Side Channel:	0-10	GE
	% Debris Area:	>15	GE
	%Stable:	60	GE

Specific Data

1.7	1.6	1.4	2.5	1.5	1.7
0.5	1.2	1.8	2.4	1.6	1.7
2	3	2	2		
69	36	77			

Cover

Cover Total % : 30 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
25	30	5	10	10	20

Crown Closure % : 10 Aspect : W

Bed Material

	Fines	Clay, silt, sand (<2mm):	50	50
	Gravels	Small (2-16mm):	30	15
		Large (16-64mm):		15
	Larges	Sm. cobble (64-128mm):	20	10
		Lge cobble (128-256mm):		5
		Bldr cobble (>256mm):		5
	Bedrock		0	0

D90 (cm): 31 Compaction: Medium

Discharge

Wetted Width (m) :	0.1	MS
Mean Depth (m) :	0.0	MS
Mean Velocity (m/s) :	0.31	F
Discharge (m3/s) :	0.02	

Banks

Height (m): 0.2

% Unstable: 5

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 0.8

Barn (%): 0 pH: 7.0 Braided: N

Water Temp. (°C): 10.0 02 (ppm):

Turb. (cm): Cond. (µmhos): 140

Reach Symbol

(Fish)

CT

2 D 1.0 | 5320

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location
	1	BD	0.2

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	CT	5	55-95	J				EL

Comments

C1: S3. One additional measurement was taken for channel and wetted width; 2.2 and 2.2.

C2: LS=3%, RS=12%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 400V, was 240 seconds over 200 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 17.0 C.

C7: This stream alternates between slow muddy, swampy runs and short ruffle, run, pool sections over gravel and cobble. There is a clearcut right up to the south side of the stream and large tree on the north side. A 1m beaverdam was found below the lake with lots of smaller debris jams and small old beaver dams.

Photo #: Y-25-17, 06/09/97
Site #: Y217, Looking upstream at the channel

Photo #: Y-25-18, 06/09/97
Site #: Y217, Looking downstream at the channel

Photo #: Y-25-19, 06/09/97
Site #: Y217, Measuring Dolly Varden on the fishboard

DFO/MoELP Stream Survey Form

Site Number: Y216 **Reach No.: 1**

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y216, Unit 9; drains into NE side of small lake above a road crossing

Stream (Gaz.): Unnamed

Watershed Code: 079-3700-000-000-000-000-000-000-000-000-000-

Map #: 93 L 087 **Reach Length (km):** 0.7 MW **Date:** 05-Sep-97 **Time:** 10:25 **Agency:** TEC **Access:** V2 **Fish Card:** N **Field** ☒ **Historical** ☐

U.T.M.: 9 .642745.6076420 **Length surveyed (m):** 100.0 GE **Survey Crew:** JP\FC\ \ \ \ \ \ \ **Photos:** Y-25-15,16 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	0.8	MS
Av. Wet. Width (m):	0.8	MS
Av. Max Riffle Depth (cm):	2	MS
Av. Max Pool Depth (cm):	27	MS
Gradient (%):	6.0	CL
Pool: 25 Riffle: 5 Run: 65 Other: 5		
% Side Channel:	0-10	GE
% Debris Area:	>15	GE
%Stable:	40	GE

Specific Data

0.8	0.9	0.7	0.8	0.8	1.1
0.8	0.7	0.7	0.6	0.8	1.0
2	3	1			
15	31	22	39	29	

Cover

Cover Total %: 20 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	20	0	15	25	20

Crown Closure %: 0 Aspect: W

Bed Material

Fines	Clay, silt, sand (<2mm):	60	60
Gravels	Small (2-16mm):	30	15
	Large (16-64mm):		15
Larges	Sm. cobble (64-128mm):	10	10
	Lge cobble (128-256mm):		0
	Bldr cobble (>256mm):		0
Bedrock		0	0

D90 (cm): 8 Compaction: Medium

Discharge

Wetted Width (m):	0.7	MS
Mean Depth (m):	0.0	MS
Mean Velocity (m/s):	0.03	F
Discharge (m3/s):	0.02	F

Banks

Height (m): 0.1

% Unstable: 5

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: L Flood Signs Ht(m): 0.2

Bars (%): 0 pH: 7.2 Braided: Y

Water Temp. (°C): 10.5 02 (ppm):

Turb. (cm): Cond. (µmhos): 130

Reach Symbol

(Fish)

(CT)

I D 6.0 | 6310

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1: S4.

C2: LS=36%, RS=8%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 400V, was 128 seconds over 100 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 18.0 C.

C7: This small silty stream gradually changes into a series of swampy pools. It has rearing cover with some pools and lots of LOD cover. The gravel in this stream is very silty and probably not good for spawning. This stream runs through a cutblock with no buffer zone. The stream seeps underground below the road and then flows in well defined channel to the lake.

C8: Several frogs were sighted but not caught.

Photo #: Y-25-15, 06/09/97
Site #: Y216, Looking upstream at the channel

Photo #: Y-25-16, 06/09/97
Site #: Y216, Looking downstream at the channel

DFO/MoELP Stream Survey Form

Site Number: Y215 **Reach No.: 3**

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y215, Unit 9; above a small lake **Stream (Gaz.):** Unnamed **Watershed Code:** 079-3800-000-000-000-000-000-000-000-000-000-

Map #: 93 L 087 **Reach Length (km):** 1.0 MW **Date:** 05-Sep-97 **Time:** 9:40 **Agency:** TEC **Access:** FT **Fish Card:** N Field ☒ Historical ☐

U.T.M. : 9 .642574.6076214 **Length surveyed (m):** 150.0 GE **Survey Crew:** JP \FC \ \ \ \ \ \ \ **Photos:** Y-25-13,14 **Air Photos:**

Channel Characteristics

			Specific Data					
Av. Chan. Width (m):	1.1	MS	1.6	0.8	0.9	1.6	0.9	0.6
Av. Wet. Width (m):	0.9	MS	1.2	0.9	0.8	1.6	0.6	0.6
Av. Max Riffle Depth (cm):	2	MS	2	1	2	3		
Av. Max Pool Depth (cm):	19	MS	10	15	18	19	33	
Gradient (%):	8.0	CL						

Pool: 20 Riffle: 5 Run: 70 Other: 5

% Side Channel: 0-10 GE

% Debris Area: >15 GE

%Stable: 60 GE

Bed Material

Fines	Clay, silt, sand (<2mm):	60	60
Gravels	Small (2-16mm):	10	5
	Large (16-64mm):		5
Larges	Sm. cobble (64-128mm):		5
	Lge cobble (128-256mm):	30	5
	Bldr cobble (>256mm):		20
Bedrock		0	0

D90 (cm): 41 Compaction: Low

Cover

Cover Total % : 50 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
10	20	15	5	40	10

Crown Closure % : 0 Aspect : NE

Discharge

N Wetted Width (m) :

N Mean Depth (m) :

N Mean Velocity (m/s) :

N Discharge (m3/s) :

Banks

Height (m): 0.2

% Unstable: 5

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: OC

Valley : Channel Ratio 5-10

Stage: L Flood Signs Ht(m): 0.3

Bars (%): 0 pH: 7.2 Braided: Y

Water Temp. (°C): 9.0 02 (ppm):

Turb. (cm): Cond. (µmhos): 120

Reach Symbol

(Fish)

(CT)

1 C 8.0 | 6130

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1: S4.

C2: LS=30%, RS=32%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 400V, was 120 seconds over 150 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 10.0 C.

C7: This is a small muddy channel that drains into a small lake. Some of the steeper sections of this reach have some good boulder cover. Riaprain cover consists of thick alder and fireweed. The channel disappears near the lake, possibly due to impacts associated with the old road. The channel becomes smaller and muddier upstream and flows through a cutblock, in which no buffer zone was left behind.

Photo #: Y-25-13, 06/09/97
Site #: Y215, Looking upstream at the channel

Photo #: Y-25-14, 06/09/97
Site #: Y215, Looking downstream at the channel

DFO/MoELP Stream Survey Form

Site Number: Y219 **Reach No.:** 1

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y219, Unit 9 **Stream (Gaz.):** Unnamed **Watershed Code:** 079-4200-000-000-000-000-000-000-000-000-000-

Map #: 93 L 087 **Reach Length (km):** 1.7 MW **Date:** 06-Sep-97 **Time:** 14:06 **Agency:** TEC **Access:** V2 **Fish Card:** N **Field** ☒ **Historical** ☐

U.T.M. : 9 .6427 .60754 **Length surveyed (m):** 100.0 GE **Survey Crew:** JP\FC\ \ \ \ \ \ \ **Photos:** 4,25, Y-26-1,2,3,13,14,15 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	3.9	MS
Av. Wet. Width (m):	2.2	MS
Av. Max Riffle Depth (cm):	8	MS
Av. Max Pool Depth (cm):	17	MS
Gradient (%):	11.0	CL
Pool: 10 Riffle: 20 Run: 65 Other: 5		
% Side Channel:	0-10	GE
% Debris Area:	5-15	GE
%Stable:	25	GE

Specific Data

6.0	3.2	4.3	3.1	4.0	2.6
2.8	2.4	1.8	2.6	1.5	1.9
13	13	8	5	4	6
22	14	15	23	12	

Cover

Cover Total % : 20 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
25	30	25	0	10	10

Crown Closure % : 20 Aspect : NW

Bed Material

Fines	Clay, silt, sand (<2mm):	10	10
Gravels	Small (2-16mm):	30	10
	Large (16-64mm):		20
Larges	Sm. cobble (64-128mm):	60	20
	Lge cobble (128-256mm):		20
	Bldr cobble (>256mm):		20
Bedrock		0	0

D90 (cm): 24 Compaction: Medium

Discharge

Wetted Width (m) :	2.4	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.32	F
Discharge (m3/s) :	0.06	F

Banks

Height (m): 0.2

% Unstable: 5

Fines ☐ Gravels ☐ Larges ☒ Bedrock ☐

Reach Symbol

(Fish)

DV

4 C 11.0 | 1360

(Width, Valley: Channel, Slope) (Bed Material)

Confinement: OC

Valley : Channel Ratio 5-10

Stage: M Flood Signs Ht(m): 0.7

Bars (%): 10 pH: 8.0 Braided: N

Water Temp. (°C): 9.5 02 (ppm):

Turb. (cm): Cond. (µmhos): 120

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	1	49	F				EL
	DV	10	95-140	J				EL

Comments

C1: S3.

C2: LS=25%, RS=15%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at i, 5, 400V, was 196 seconds over 100 meters.

C5: No additional bank texture information noted.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 15.0 C.

C7: There is good rearing habitat here including pools, boulders, cutbanks and vegetation cover. As the stream flows through the cutblock, the channel contains less LOD, 100% unstable banks and 0% crown closure.

Photo #: Y-26-2, 06/09/97
Site #: Y219, Looking upstream at the channel

Photo #: Y-26-3, 06/09/97
Site #: Y219, Looking downstream at the channel, note blowdown

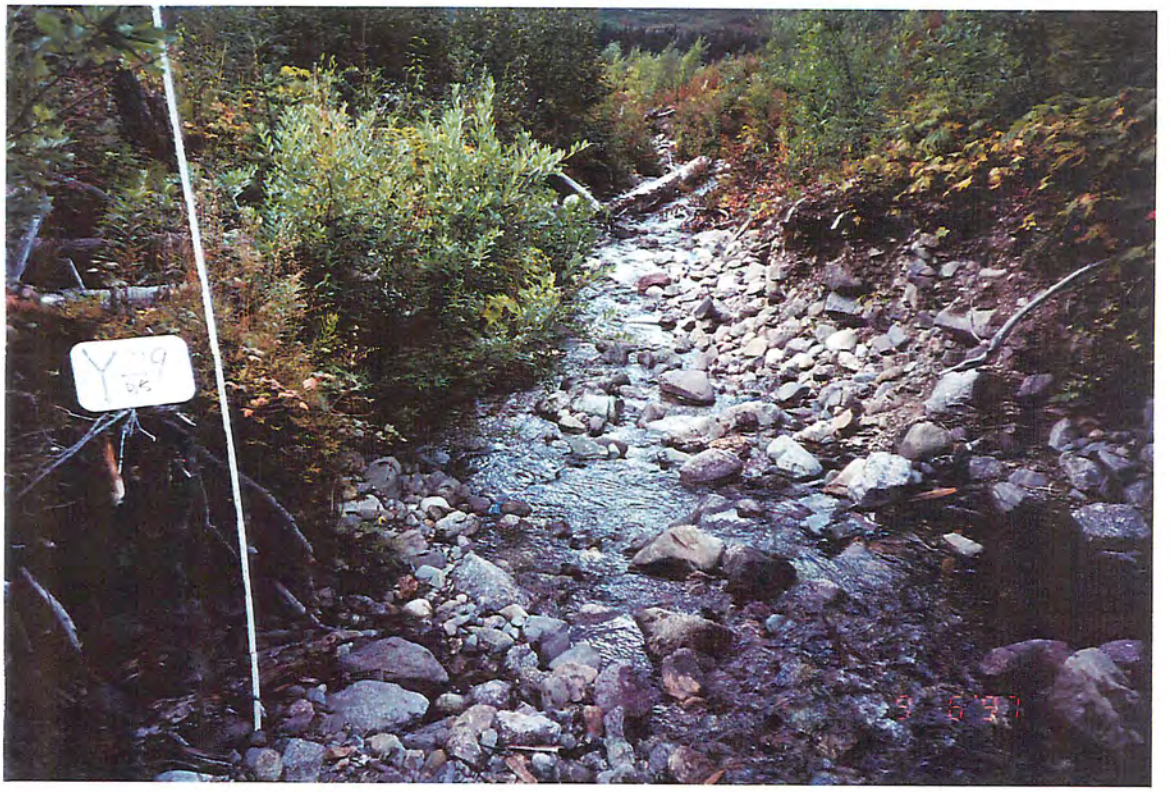


Photo #: Y-25-25, 06/09/97
Site #: Y219, Looking downstream at the channel, note boulder cover

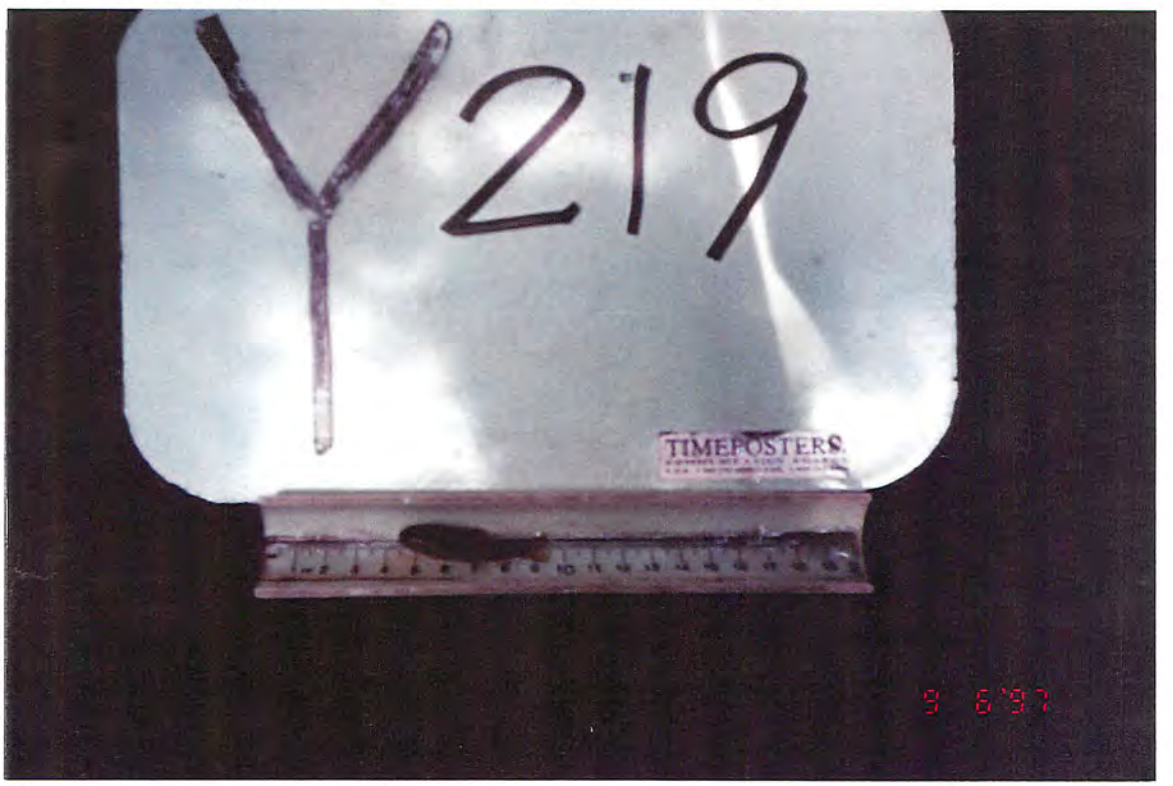


Photo #: Y-26-1, 06/09/97
Site #: Y219, Dolly Varden on fishboard

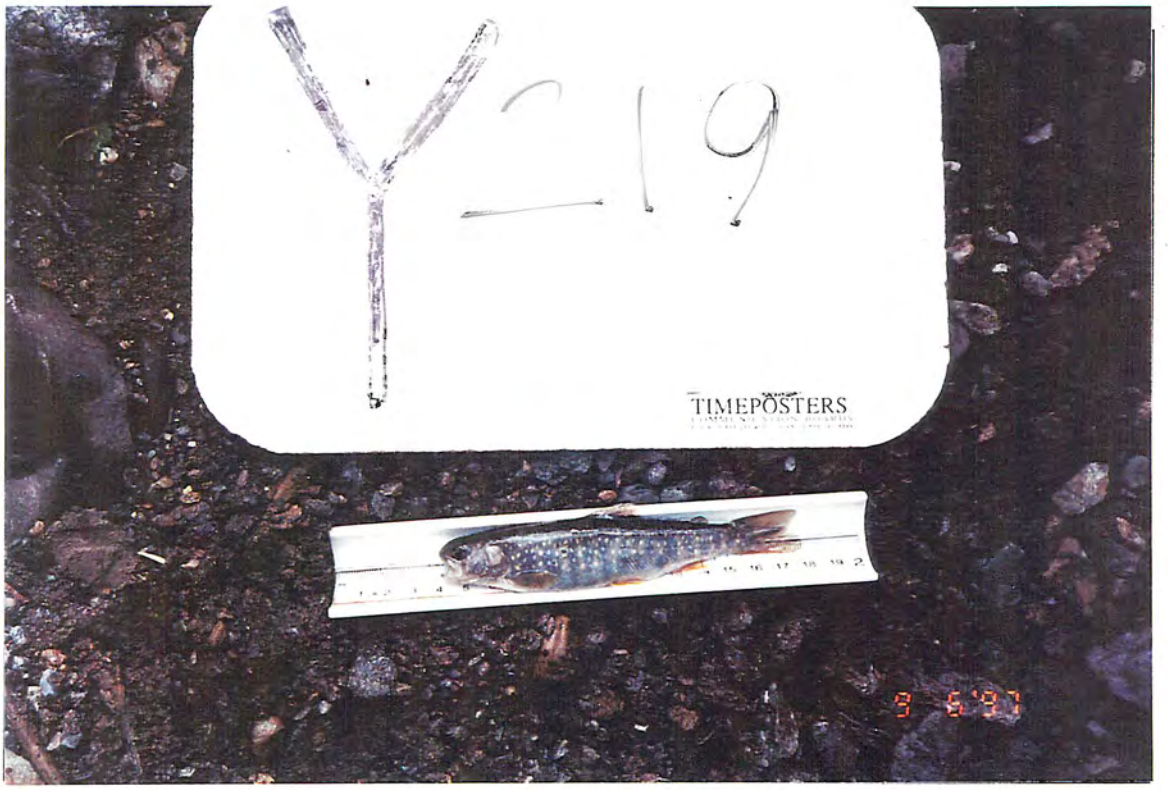


Photo #: Y-25-23, 06/09/97
Site #: Y219, Measuring Dolly Varden on the fishboard

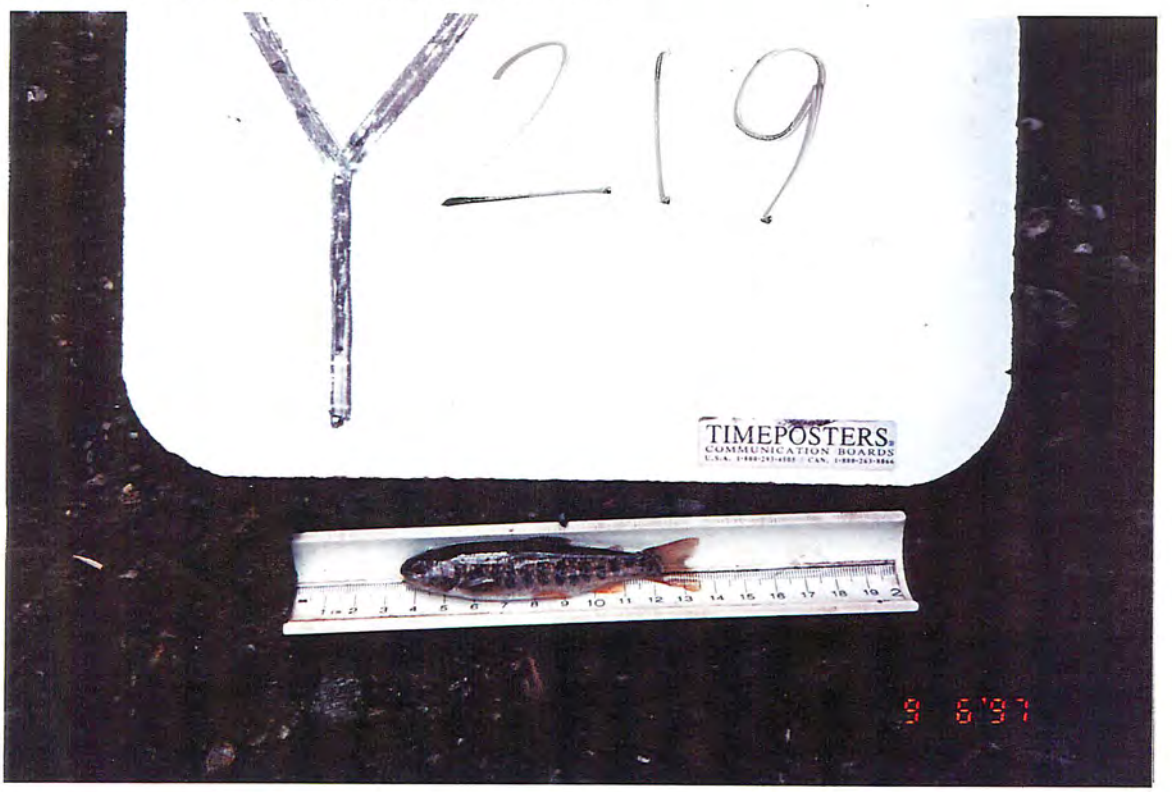


Photo #: Y-25-24, 06/09/97
Site #: Y219, Measuring Dolly Varden on the fishboard

DFO/MoELP Stream Survey Form

Site Number: Y220 Reach No.: 1

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y220, Unit 9 | Stream (Gaz.): Unnamed | Watershed Code: 079-4400-000-000-000-000-000-000-000-000-000-

Map #: 93 L 087 | Reach Length (km): 1.6 MW | Date: 06-Sep-97 | Time: 16:54 | Agency: TEC | Access: V2 | Fish Card: N | Field ☒ | Historical ☐

U.T.M.: 9 .6435 .60757 | Length surveyed (m): 150.0 GE | Survey Crew: JP \FC \ \ \ \ \ \ \ | Photos: Y-26-9,10 | Air Photos:

Channel Characteristics

Av. Chan. Width (m):	4.1	MS
Av. Wet. Width (m):	2.2	MS
Av. Max Riffle Depth (cm):	6	MS
Av. Max Pool Depth (cm):	31	MS
Gradient (%):	21.5	CL
Pool: 20 Riffle: 10 Run: 50 Other: 20		
% Side Channel:	0	GE
% Debris Area:	>15	GE
%Stable:	50	GE

Specific Data

3.8	4.1	6.2	2.6	4.6	3.3
2.9	2.1	2.4	2.3	1.3	2.4
3	7	3	7	8	
19	36	24	46		

Cover

Cover Total %: 35 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	25	45	0	0	10

Crown Closure %: 40 Aspect: SW

Bed Material

Fines	Clay, silt, sand (<2mm):	0	0
Gravels	Small (2-16mm):	20	5
	Large (16-64mm):		15
Larges	Sm. cobble (64-128mm):	80	20
	Lge cobble (128-256mm):		20
	Bldr cobble (>256mm):		40
Bedrock		0	0

D90 (cm): 150 Compaction: High

Discharge

Wetted Width (m):	0.8	MS
Mean Depth (m):	0.1	MS
Mean Velocity (m/s):	0.25	F
Discharge (m3/s):	0.02	F

Banks

Height (m): 0.2

% Unstable: 5

Fines ☐ Gravels ☐ Larges ☒ Bedrock ☐

Confinement: CO

Valley : Channel Ratio 0-2

Stage: M Flood Signs Ht(m):

Bars (%): 5 pH: 8.0 Braided: N

Water Temp. (°C): 8.5 02 (ppm):

Turb. (cm): Cond. (µmhos): 120

Reach Symbol

(Fish)

NF

4 A 22.0 | 0280

(Width, Valley: Channel, Slope) | (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1: S5

C2: LS=68%, RS=48%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 500V, was 72 seconds over 150 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 14.0 C.

C7: This stream is very steep with lots of large boulder cover, LOD and pools. There are lots of small cascades into step pools.

Photo #: Y-26-9, 06/09/97
Site #: Y220, Looking upstream at the channel, note boulder habitat

Photo #: Y-26-10, 06/09/97
Site #: Y220, Looking downstream at the channel

DFO/MoELP Stream Survey Form

Site Number: Y229 **Reach No.: 1**

Trib to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: Y229, Unit 9 **Stream (Gaz.):** Unnamed **Watershed Code:** 079-4700-000-000-000-000-000-000-000-000-000-

Map #: 93 L 087 **Reach Length (km):** 1.6 MW **Date:** 08-Sep-97 **Time:** 10:48 **Agency:** TEC **Access:** H **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .645556.607548 **Length surveyed (m):** 100.0 GE **Survey Crew:** JP\FC\ \ \ \ \ \ \ **Photos:** Y-27-22,23 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	2.0	MS
Av. Wet. Width (m):	1.6	MS
Av. Max Riffle Depth (cm):	5	MS
Av. Max Pool Depth (cm):	21	MS
Gradient (%):	20.0	CL
Pool: 40 Riffle: 40 Run: 15 Other: 5		
% Side Channel:	0-10	GE
% Debris Area:	>15	GE
%Stable:	10	GE

Specific Data

1.3	1.3	1.9	2.2	2.8	2.6
1.3	1.3	1.8	1.7	2.2	1.1
6	6	4	5		
24	17	30	12		

Cover

Cover Total % : 25 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
30	20	25	0	15	10

Crown Closure % : 10 Aspect : W

Bed Material

Fines	Clay, silt, sand (<2mm):	10	10
Gravels	Small (2-16mm):	30	5
	Large (16-64mm):		25
Larges	Sm. cobble (64-128mm):	60	10
	Lge cobble (128-256mm):		30
	Bldr cobble (>256mm):		20
Bedrock		0	0

D90 (cm): 20 Compaction: Medium

Discharge

Wetted Width (m) :	0.7	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.16	F
Discharge (m3/s) :	0.01	F

Banks

Height (m): 0.1

% Unstable: 2

Fines ☐ Gravels ☐ Larges ☒ Bedrock ☐

Confinement: FC

Valley : Channel Ratio 2-5

Stage: M Flood Signs Ht(m):

Bars (%): 5 pH: 7.9 Braided: N

Water Temp. (°C): 8.0 02 (ppm):

Turb. (cm): Cond. (µmhos): 70

Reach Symbol

(Fish)

NF

2 B 20.0 | 1360

(Width, Valley: Channel, Slope) | (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1: S6.

C2: LS=20%, RS=65%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 600V, was 274 seconds over 300 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site, the water was clear to bottom. The air temperature at this site was 12.0 C.

C7: Pools, large cobble and boulders provide cover at this site. No spawning gravels were noted. There is a small percentage of cascades, some reaching 50 cm in height.

Photo #: Y-27-22, 08/09/97
Site #: Y229, Looking downstream at the channel

Photo #: Y-27-23, 08/09/97
Site #: Y229, Looking upstream at the channel

DFO/MoELP Stream Survey Form

Site Number: HASLETT 97 Reach No.: 1

Trib. to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: HASLETT 97, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 1.8 MA **Date:** 20-Aug-96 **Time:** 8:50 **Agency:** TEC **Access:** V2 **Fish Card:** N Field ☒ Historical ☐

U.T.M.: 9 .6456 .60817 **Length surveyed (m):** 125.0 GE **Survey Crew:** JH\PK\ \ \ \ \ \ \ **Photos:** H- 6 - 14,14a,15,16 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	7.1	MS
Av. Wet. Width (m):	3.3	MS
Av. Max Riffle Depth (cm):	19	MS
Av. Max Pool Depth (cm):	110	MS
Gradient (%):	9.0	CL
Pool: 20 Riffle: 55 Run: 25 Other:	0	
% Side Channel:		GE
% Debris Area:	35	GE
%Stable:	80	GE

Specific Data

6.2	7.1	6.4	6.9	8.3	7.5
3.4	4.0	3.7	2.6	2.8	3.0
15	20	22	0	0	0
150	70	110			

Cover

Cover Total %: 60 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
25	35	20	0	15	5

Crown Closure %: 40 Aspect: SE

Bed Material

Fines	Clay, silt, sand (<2mm):	10	10
Gravels	Small (2-16mm):	20	10
	Large (16-64mm):		10
Larges	Sm. cobble (64-128mm):	70	20
	Lge cobble (128-256mm):		30
	Bldr cobble (>256mm):		20
Bedrock		0	0

D90 (cm): 57 Compaction: High

Discharge

Wetted Width (m):	2.8	MS
Mean Depth (m):	0.1	MS
Mean Velocity (m/s):	0.43	F
Discharge (m3/s):	0.09	F

Banks

Height (m): 0.4

% Unstable: 35

Fines ☐ Gravels ☐ Larges ☒ Bedrock ☐

Confinement: OC

Valley : Channel Ratio 5-10

Stage: L Flood Signs Ht(m): 2

Bars (%): 25 pH: Braided: N

Water Temp. (°C): 7.0 02 (ppm):

Turb. (cm): 150 Cond. (µmhos):

Reach Symbol

(Fish)

(RB), (DV)

7 C 9.0 | 1270

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location
	2	CV	0.5

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				VO

Comments

C1 S2

C2 LS = 16%, RS = 33%

C3 This site was not electrofished.

C4 Lat N 54 51' 37.5" Long W 126 43' 50.5"

C5 No additional bank texture information. Some evidence of slope failure was observed near the road crossing.

C6 DO, pH and conductivity were not measured at this site. The water was clear to the bottom. The mean air temperature on this day was 11.8°C

C7 Some good fish habitat was found at this site. No permanent obstructions were noted. The upstream end of the wooden culvert is a barrier to fish passage at low flow.

Photo #: H-6-14, 1996/08/20
Site #: H97, Looking upstream toward culvert.

Photo #: H-6-14b, 1996/08/20
Site #: H97, Looking upstream toward culvert.

Photo #: H-6-15, 1996/08/20
Site #: H97, Looking downstream.

Photo #: H-6-16, 1996/08/20
Site #: H97, Looking upstream, boulders and LOD.

DFO/MoELP Stream Survey Form

Site Number: HASLETT 98 **Reach No.:** 2

Trib. to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: HASLETT 98 , Unit 9 , see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 Reach Length (km): 1.7 MA Date: 20-Aug-96 Time: 9:20 Agency: TEC Access: HL Fish Card: N Field ☒ Historical ☐

U.T.M. : 9 .6452 .60816 Length surveyed (m): 150.0 GE Survey Crew: JH\HK\ \ \ \ \ \ \ Photos: H-6-17,18 Air Photos:

Channel Characteristics

Av. Chan. Width (m):	4.1	MS
Av. Wet. Width (m):	1.0	MS
Av. Max Riffle Depth (cm):	10	MS
Av. Max Pool Depth (cm):	39	MS
Gradient (%):	6.0	CL

Pool: 30 Riffle: 45 Run: 25 Other: 0

% Side Channel: GE

% Debris Area: 30 GE

%Stable: 75 GE

Specific Data

4.3	4.0	3.8	3.5	4.1	5.0
1.1	0.9	1.2	1.0	1.2	0.9
13	8	9		12	
35	44	38			

Cover

Cover Total % : 55 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
15	30	10	5	30	10

Crown Closure % : 55 Aspect : SE

Bed Material

Fines	Clay, silt, sand (<2mm):	0	0
Gravels	Small (2-16mm):	20	10
	Large (16-64mm):		10
Larges	Sm. cobble (64-128mm):	80	40
	Lge cobble (128-256mm):		30
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 24 Compaction: High

Discharge

Wetted Width (m) :	1.1	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.36	F
Discharge (m3/s) :	0.03	F

Banks

Height (m): 0.2

% Unstable: 15

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

(RB) (DV)

4 D 6.0 | 0280

(Width, Valley: Channel, Slope) (Bed Material)

Confinement: UC

Valley : Channel Ratio 10+

Stage: L Flood Signs Ht(m): 0.5

Bars (%): 15 pH: Braided: N

Water Temp. (°C): 7.5 02 (ppm):

Turb. (cm): 44 Cond. (µmhos):

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				VO

Comments

C1 S3

C2 LS = 8% RS = 5%

C3 This site was not electrofished.

C4 Lat 54 51' 36.8" Long W 126 44' 15.4"

C5 Gravels and fines were noted in the bank texture at this site.

C6 DO, pH and conductivity were not measured at this site. The water was clear to the bottom. The mean air temperature on this day was 11.8°C

C7 Some good fish habitat was observed at this site. LOD and overstream vegetaiton comprise most of the cover for fish in the sampling area. Some potential erosion problems exist near the road.

Photo #: H-6-17, 1996/08/20
Site #: H98, Looking downstream.

Photo #: H-6-18, 1996/08/20
Site #: H98, Looking upstream, pool in relation to LOD.

DFO/MoELP Stream Survey Form

Site Number: HASLETT 100 **Reach No.: 1**

Trib. to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: HASLETT 100, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 1.0 MA **Date:** 20-Aug-96 **Time:** 11:15 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .6447 .60806 **Length surveyed (m):** 200.0 GE **Survey Crew:** JH \HK \ \ \ \ \ \ \ **Photos:** H- 6 - 22,23 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	1.8	MS
Av. Wet. Width (m):	0.8	MS
Av. Max Riffle Depth (cm):	4	MS
Av. Max Pool Depth (cm):	29	MS
Gradient (%):	9.0	CL

Pool: 30 Riffle: 40 Run: 30 Other: 0

% Side Channel: GE

% Debris Area: 10 GE

%Stable: 65 GE

Specific Data

1.6	1.8	1.5	2.1	2.3	1.5
0.7	0.8	0.9	0.6	0.7	0.9
4	5	4	0	0	0
28	35	24	0	0	0

Cover

Cover Total % : 60 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
5	20	10	5	40	20

Crown Closure % : 40 Aspect : SE

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	20	10
	Large (16-64mm):		10
Larges	Sm. cobble (64-128mm):	60	10
	Lge cobble (128-256mm):		40
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 25 Compaction: Medium

Discharge

Wetted Width (m) :	1.1	MS
Mean Depth (m) :	0.0	MS
Mean Velocity (m/s) :	0.29	F
Discharge (m3/s) :	0.01	F

Banks

Height (m): 0.1

% Unstable: 10

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

Stage: L Flood Signs Ht(m): 0.5

Bars (%): 10 pH: Braided: N

Water Temp. (°C): 7.0 02 (ppm):

Turb. (cm): 35 Cond. (µmhos):

Reach Symbol

(Fish)

DV

2 E 9.0 | 2260

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location
	0	CV	0.5
C9	2	BD	0.5

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	1		NA				VO

Comments

C1 S3

C2 LS -5% RS - 8%

C4 This site was not electrofished.

C5 Lat 54 51' 04.7" Long W 126 44' 47.2"

C7 DO, pH and conductivity were not measured at this site. The water clear to bottom. The mean air temperature on this day was 11.8°C

C8 Marginal to good fish habitat occurs at this site. Heavy siltation was observed at the road crossing. The culvert is a minor obstruction to fish migration at low flow. Downstream of the road the creek becomes swamp like. The channel eventually becomes more defined again farther downstream.

C9 The beaver dam is located 500 meters from the mouth and the culvert is located 450 meters from the mouth.

Photo #: H-6-22, 1996/08/20
Site #: H100, Looking downstream.

Photo #: H-6-23, 1996/08/20
Site #: H100, Looking upstream toward beaver dam.

DFO/MoELP Stream Survey Form

Site Number: HASLETT 101 **Reach No.:** 2

Trib. to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: HASLETT 101, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #:	93 L 087	**Reach Length (km):**	0.8	MA	**Date:**	20-Aug-96	**Time:**	12:00	**Agency:**	TEC	**Access:**	V2	**Fish Card:**	N	Field ☒ Historical ☐
U.T.M. :	9 .6433 . 60793	**Length surveyed (m):**	150.0	GE	**Survey Crew:**	JH \HK \ \ \ \ \ \			**Photos:**	H- 6 - 24, 7 - 1			**Air Photos:**		

Channel Characteristics

Av. Chan. Width (m):	1.3	MS
Av. Wet. Width (m):	0.5	MS
Av. Max Riffle Depth (cm):	4	MS
Av. Max Pool Depth (cm):	18	MS
Gradient (%):	9.0	CL
Pool: 55 Riffle: 20 Run: 25 Other:	0	
% Side Channel:	0	GE
% Debris Area:	30	GE
%Stable:	80	GE

Specific Data

1.2	1.5	0.9	1.4	1.0	1.6
0.4	0.4	0.5	0.6	0.4	0.6
3	5	4	0	0	0
18	20	15			

Cover

Cover Total % : 85 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
5	15	0	15	55	10

Crown Closure % : 95 Aspect : S

Bed Material

Fines	Clay, silt, sand (<2mm):	90	90
Gravels	Small (2-16mm):	10	5
	Large (16-64mm):		5
Larges	Sm. cobble (64-128mm):	0	0
	Lge cobble (128-256mm):		0
	Bldr cobble (>256mm):		0
Bedrock		0	0

D90 (cm): 2 Compaction: Low

Discharge

Wetted Width (m) :	0.1	MS
Mean Depth (m) :	0.0	MS
Mean Velocity (m/s) :	0.10	F
Discharge (m3/s) :	0.00	f

Banks

Height (m): 0.1

% Unstable: 5

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: L Flood Signs Ht(m): 0.3

Bars (%): 0 pH: Braided: N

Water Temp. (°C): 10.0 02 (ppm):

Turb. (cm): 20 Cond. (µmhos):

Reach Symbol

(Fish)

NF

I D 9.0 | 9100

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				VO

Comments

C1: S6

C2: LS = 2% RS = 4%

C4: This site was not electrofished.

C5: Lat N 54 50' 25" Long W 126 46' 06.6"

C7: DO, pH and conductivity were not measured at this site. The mean air temperature on this day was 11.8°C

C8: Marginal fish habitat occurs at this site. This is a small creek with largely underground flow. Above the road crossing, the cutblock has heavily impacted on the stream. Sedimentation and a large amount of organic debris were observed in the channel upstream of the road. Future sampling at high flows is recommended.

Photo #: H-7-1, 1996/08/20
Site #: H101, Looking upstream, LOD in channel through alder.

DFO/MoELP Stream Survey Form

Site Number: HASLETT 102 **Reach No.: 1**

Trib. to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: HASLETT 102, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 1.6 MA **Date:** 20-Aug-96 **Time:** 13:20 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .6431 .60788 **Length surveyed (m):** 150.0 GE **Survey Crew:** JH \HK \ \ \ \ \ \ **Photos:** H-7-2,3 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	2.0	MS
Av. Wet. Width (m):	0.8	MS
Av. Max Riffle Depth (cm):	6	MS
Av. Max Pool Depth (cm):	24	MS
Gradient (%):	10.0	CL

Pool: 30 Riffle: 40 Run: 30 Other: 0

% Side Channel: GE

% Debris Area: 20 GE

%Stable: 65 GE

Specific Data

2.2	2.4	1.8	2.0	1.9	1.6
0.7	0.7	0.9	1.0	0.8	0.6
4	7	9	0	5	
20	25	27			

Cover

Cover Total % : 60 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
15	35	5	5	25	15

Crown Closure % : 40 Aspect : SE

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	40	15
	Large (16-64mm):		25
Larges	Sm. cobble (64-128mm):	40	25
	Lge cobble (128-256mm):		10
	Bldr cobble (>256mm):		5
Bedrock		0	0

D90 (cm): 25 Compaction: Medium

Discharge

Wetted Width (m) :	0.6	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.07	F
Discharge (m3/s) :	0.00	F

Banks

Height (m): 0.2

% Unstable: 10

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: L Flood Signs Ht(m): 0.5

Bars (%): 30 pH: Braided: N

Water Temp. (°C): 9.0 02 (ppm):

Turb. (cm): 27 Cond. (µmhos):

Reach Symbol

(Fish)

(RB) (DV)

2 D 10.0 | 2440

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				VO

Comments

C1 S3

C2 LS - 7% RS - 4%

C3 This site was not electrofished.

C4 Lat N 54 50' 11.3" Long W 126 46' 19.0"

C5 The banks at this site contain both fines and gravels.

C6 DO, pH and conductivity were not measured at this site. The mean air temperature on this day was 11.8°C

C7 Some good fish habitat was noted at this site. No erosion problems were observed. Future sampling at high flows is recommended. Logging upstream has altered water retention in this area, perhaps resulting in lower flows.

Photo #: H-7-2, 1996/08/20
Site #: H102, Looking downstream.

Photo #: H-7-3, 1996/08/20
Site #: H102, Looking upstream, LOD and cutbank.

DFO/MoELP Stream Survey Form

Site Number: HASLETT 104 Reach No.: 1

Trib. to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: HASLETT 104, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 0.8 MA **Date:** 20-Aug-96 **Time:** 15:00 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .6422 .60774 **Length surveyed (m):** 300.0 GE **Survey Crew:** JH \HK \ \ \ \ \ \ \ **Photos:** H-7-6,7,8,9 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	3.1	MS
Av. Wet. Width (m):	0.9	MS
Av. Max Riffle Depth (cm):	4	MS
Av. Max Pool Depth (cm):	33	MS
Gradient (%):	8.0	CL
Pool: 25 Riffle: 40 Run: 35 Other:	0	
% Side Channel:		GE
% Debris Area:	20	GE
%Stable:	50	GE

Specific Data

2.2	2.5	3.2	4.0	3.8	3.0
0.9	1.3	0.4	0.8	0.7	1.2
2	4	5		3	
32	33	28	40		

Cover

Cover Total % : 60 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
10	25	0	5	40	20

Crown Closure % : 30 Aspect : SE

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	60	30
	Large (16-64mm):		30
Larges	Sm. cobble (64-128mm):	20	10
	Lge cobble (128-256mm):		10
	Bldr cobble (>256mm):		0
Bedrock		0	0

D90 (cm): 12 Compaction: Low

Discharge

Wetted Width (m) :	0.7	MS
Mean Depth (m) :	0.0	MS
Mean Velocity (m/s) :	0.14	F
Discharge (m3/s) :	0.00	F

Banks

Height (m): 0.3

% Unstable: 30

Fines ☐ Gravels ☒ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

Stage: L Flood Signs Ht(m): 1.2

Bars (%): 15 pH: Braided: N

Water Temp. (°C): 8.5 02 (ppm):

Turb. (cm): 40 Cond. (µmhos):

Reach Symbol

(Fish)

(RB) (DV)

3 E 8.0 | 2620

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				VO

Comments

C1: S3

C2: LS = 2%, RS = 2%

C3: The electroshocking effort, using a Smithroot 12 B POIW model was 302 seconds over 50 meters.

C4: Lat N 54 49' 26.0" Long W 126 47' 09.0"

C5: Gravels and fines make up the bank texture at this site.

C6: DO, pH and conductivity were not measured at this site. The water was clear to the bottom. The mean air temperature on this day was 11.8°C

C7: The channel contained water 200 meters above road crossing at the time of sampling. Below the road the channel was dry. Some good habitat may occur at this site, however fish may only have access to the site at high flow. Future sampling is recommended.

C8: This creek moves through a cutblock in which logging has been carried out down to the banks in some sections. Substantial bank erosion was noted in the sampling area.

Photo #: H-7-6, 1996/08/20
Site #: H104, Looking downstream toward cutblock, dry channel.

Photo #: H-7-7, 1996/08/20
Site #: H104, Dry channel leading into cutblock.

Photo #: H-7-8, 1996/08/20
Site #: H104, Looking downstream.

Photo #: H-7-9, 1996/08/20
Site #: H104, Looking upstream, meterstick across channel.

DFO/MoELP Stream Survey Form

Site Number: HASLETT 105 **Reach No.: 1**

Trib. to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: HASLETT 105, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 0.9 MA **Date:** 21-Aug-96 **Time:** 10:15 **Agency:** TEC **Access:** V2 **Fish Card:** N Field ☒ Historical ☐

U.T.M. : 9 .6420 .60772 **Length surveyed (m):** 200.0 GE **Survey Crew:** JH \ HK\ \ \ \ \ \ \ **Photos:** H-7-12,13 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	2.0	TA
Av. Wet. Width (m):	1.5	TA
Av. Max Riffle Depth (cm):	7	MS
Av. Max Pool Depth (cm):	23	MS
Gradient (%):	4.0	CL
Pool: 30 Riffle: 40 Run: 30 Other:	0	
% Side Channel:	0-10	GE
% Debris Area:	5-15	GE
%Stable:	70	GE

Specific Data

2.1	2.3	2.2	1.9	1.9	1.5
1.8	2.2	1.8	1.1	1.3	0.8
10	5	7			
20	29	22	21		

Cover

Cover Total % : 75 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	40	5	0	15	20

Crown Closure % : 25 Aspect : E

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	50	30
	Large (16-64mm):		20
Larges	Sm. cobble (64-128mm):	30	20
	Lge cobble (128-256mm):		5
	Bldr cobble (>256mm):		5
Bedrock		0	0

D90 (cm): 27 Compaction: Medium

Discharge

Wetted Width (m) :	1.5	MS
Mean Depth (m) :	0.3	MS
Mean Velocity (m/s) :	0.16	F
Discharge (m3/s) :	0.05	F

Banks

Height (m): 0.3

% Unstable: 10

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

Stage: L Flood Signs Ht(m): 0

Bars (%): 40 pH: Braided: N

Water Temp. (°C): 8.5 02 (ppm):

Turb. (cm): 29 Cond. (µmhos):

Reach Symbol

(Fish)

DV

2 E 4.0 | 2530

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	8	85-122	J	R			EL

Comments

C1: S3

C2: LS = 2%; RS = 3%

C3: No fisheries sensitive zones were noted at this site.

C4: The electroshocking effort, using a Smithroot 12 B POW model was 136 seconds over 100 meters.

C5: Lat 54 49 19.3 Long 126 47 23.5

C6: No additional bank texture information.

C7: DO, pH and conductivity were not measured at this site. The water was clear to the bottom. The mean air temperature on this day was 10.9°C

C8: LOD, cutbanks and deep pools provide most of the cover avaialble to fish at this site.

Photo #: H-7-12, 1996/08/21
Site #: H105, Looking upstream, LOD in channel.

Photo #: H-7-13, 1996/08/21
Site #: H105, Looking downstream.

DFO/MoELP Stream Survey Form

Site Number: JULIE 170 **Reach No.:** 2

Trib. to McKendrick Cr.

TRITON Environmental Consultants Ltd.

Location: JULIE 170, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-472-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 2.0 MA **Date:** 25-Aug-96 **Time:** 9:45 **Agency:** TEC **Access:** HL **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .6446 .60852 **Length surveyed (m):** 140.0 GE **Survey Crew:** J E\M \ \ \ \ \ \ \ **Photos:** J-11-18,19 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	1.3	MS
Av. Wet. Width (m):	0.6	MS
Av. Max Riffle Depth (cm):	3	MS
Av. Max Pool Depth (cm):	10	MS
Gradient (%):	12.0	CL
Pool: 100 Riffle: 0 Run: 0 Other: 0		
% Side Channel:	0	GE
% Debris Area:	0	GE
%Stable:	0	GE

Specific Data

1.3	1.5	0.9	1.2	1.4	1.6
0.6	1.0	0.6	0.4	0.2	0.9
3	4	3	0	0	0
15	20	25	40	0	0

Cover

Cover Total % : 50 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	60	0	20	20

Crown Closure % : 20 Aspect : N

Bed Material

Fines	Clay, silt, sand (<2mm):	0	0
Gravels	Small (2-16mm):	20	0
	Large (16-64mm):		20
Larges	Sm. cobble (64-128mm):	80	40
	Lge cobble (128-256mm):		20
	Bldr cobble (>256mm):		20
Bedrock		0	0

D90 (cm): 32 Compaction: Low

Discharge

Wetted Width (m) :	0.8	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.03	F
Discharge (m3/s) :	0.00	F

Banks

Height (m): 0.2

% Unstable: 60

Fines ☐ Gravels ☐ Larges ☒ Bedrock ☐

Confinement: FC

Valley : Channel Ratio 2-5

Stage: L Flood Signs Ht(m): 0.2

Bars (%): 40 pH: 6.2 Braided: Y

Water Temp. (°C): 3.0 02 (ppm):

Turb. (cm): 40 Cond. (µmhos): 57

Reach Symbol

(Fish)

NF

I	B	12.0	0280

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1 S6

C2 LS = 60%, RS = 60%

C3 No fisheries sensitive zones noted on site.

C4 The electroshocking effort, using a Smithroot 12 B POW model, was 100 seconds over 200 square meters.

C5 Lat N 54 53 36.2, Long W 126 44 44.6

C6 No additional bank texture information.

C7 DO measurements were not taken at this site. The mean air temperature on this day was 14.5°C

C8 No additional information regarding fish habitat.

C9 This creek occurs in an area containing a great deal of avalanche debris. The substrate of this creek is quite angular.

Photo #: J-11-18, 1996/08/25
Site #: J170, Looking upstream, channel through snow from avalanche.

Photo #: J-11-19, 1996/08/25
Site #: J170, Looking downstream, cobble channel.

DFO/MoELP Stream Survey Form

Site Number: HASLETT 103 **Reach No.: 1**

Trib. to McKendrick Lk

TRITON Environmental Consultants Ltd.

Location: HASLETT 103, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-427-000-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 2.1 MA **Date:** 20-Aug-96 **Time:** 14:11 **Agency:** TEC **Access:** V2 **Fish Card:** N Field ☒ Historical ☐

U.T.M. : 9 .6426 .60780 **Length surveyed (m):** 150.0 GE **Survey Crew:** JH \HK \ \ \ \ \ \ **Photos:** H-7-4,5 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	6.2	MS
Av. Wet. Width (m):	3.3	MS
Av. Max Riffle Depth (cm):	12	MS
Av. Max Pool Depth (cm):	73	MS
Gradient (%):	6.0	CL
Pool: 20 Riffle: 30 Run: 50 Other:	0	
% Side Channel:		GE
% Debris Area:	15	GE
%Stable:	85	GE

Specific Data

3.8	4.0	6.5	7.1	8.0	7.6
1.6	1.5	3.6	4.2	5.1	3.8
10	16	7	0	15	
60	75	85			

Cover

Cover Total % : 70 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	25	15	0	30	10

Crown Closure % : 65 Aspect : SE

Bed Material

Fines	Clay, silt, sand (<2mm):	10	10
Gravels	Small (2-16mm):	30	10
	Large (16-64mm):		20
Larges	Sm. cobble (64-128mm):	60	10
	Lge cobble (128-256mm):		40
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 32 Compaction: High

Discharge

Wetted Width (m) :	3.7	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.38	F
Discharge (m3/s) :	0.11	F

Banks

Height (m): 0.3

% Unstable: 15

Fines ☐ Gravels ☒ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: L Flood Signs Ht(m): 1.3

Bars (%): 20 pH: Braided: N

Water Temp. (°C): 9.0 02 (ppm):

Turb. (cm): 85 Cond. (µmhos):

Reach Symbol

(Fish)

DV

6 D 6.0 | 1360

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	1	40	J	R			VO

Comments

C1 S2

C2 LS - 5% RS -10%

C3 This site was not electrofished.

C4 Lat N 54 49' 46.0" Long W 126 46' 45.5"

C5 The banks contain both fines and gravels at this site.

C6 DO, pH and conductivity were not measured at this site. The water was clear to the bottom. The mean air temperature on this day was 11.8°C

C7 Some good rearing habitat was observed at this site. Potential spawning habitat also occurs in the sampling area. Some slight bank erosion was noted near the road crossing.

Photo #: H-7-4, 1996/08/20
Site #: H103, Looking downstream.

Photo #: H-7-5, 1996/08/20
Site #: H103, Looking upstream, channel through alder.

5.12 Morin Creek and Morin Lake (480-6972-657) (93 L 097)

5.12.1 Sensitive Habitats and Barriers

Morin Creek is 1.4 km long (including Morin Lake) and is fed by 2 small tributaries. The creek flows north and has low gradient. Morin Lake is 606 m long, 505 m wide and historically contains cutthroat trout. Both Morin Creek and Morin Lake have associated wetlands that have been classified as fisheries sensitive zones. Multiple beaver dams were noted just north of Morin Lake. This system was sampled in 2 locations, including the mainstem.

5.12.2 Fish Summary Tables and Stream Classification

As previously mentioned, the historical information indicates the presence of cutthroat trout in Morin Lake. One sample site was electrofished and no fish were caught. However, a number of cutthroat trout ranging in size from 170 to 300 mm were caught by angling in Morin Lake. Morin Creek was classified as an S3 in reach one based on an average channel width of 2.77 meters and the presence of fish habitat on site. One tributary to this system was classified as "Not a Creek" due to the lack of a defined channel and the other was classified as S4 based on an average channel width of 1.24 meters and the presence of cutthroat trout rearing habitat in the sampling area. The tiny inlet to this lake was not sampled.

DFO/MoELP Stream Survey Form

Site Number: TERRY 163 **Reach No.: 1**

Morin Cr.

TRITON Environmental Consultants Ltd.

Location: TERRY 163, Unit 9, Bulkley forest district, see C5 **Stream (Gaz.):** Morin Creek **Watershed Code:** 480-6972-870-166-000-000-000-000-000-000-000-0

Map #: 93 L 097 **Reach Length (km):** 1.5 MA **Date:** 25-Aug-96 **Time:** 9:50 **Agency:** TEC **Access:** V4 **Fish Card:** N Field ☒ Historical ☐

U.T.M. : 9 .6422 .60964 **Length surveyed (m):** 75.0 GE **Survey Crew:** GM \HK \ \ \ \ \ \ \ **Photos:** T-9-14,15,18 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	2.8	MS
Av. Wet. Width (m):	1.6	MS
Av. Max Riffle Depth (cm):	1	GE
N Av. Max Pool Depth (cm):	0	GE
Gradient (%):	1.0	GE
Pool: 0 Riffle: 0 Run: 100 Other: 0		
% Side Channel:	0	GE
% Debris Area:	20	GE
%Stable:	80	GE

Specific Data

2.5	4.0	2.9	2.4	2.6	2.2
1.3	2.1	1.6	1.8	2.2	0.3
0	1				

Cover

Cover Total % : 35 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	20	0	10	65	5

Crown Closure % : 10 Aspect : SW

Bed Material

Fines	Clay, silt, sand (<2mm):	70	70
Gravels	Small (2-16mm):	15	10
	Large (16-64mm):		5
Larges	Sm. cobble (64-128mm):	15	5
	Lge cobble (128-256mm):		5
	Bldr cobble (>256mm):		5
Bedrock		0	0

D90 (cm): 27 Compaction: Low

Discharge

Wetted Width (m) :	2.5	GE
Mean Depth (m) :	1.3	MS
Mean Velocity (m/s) :	0.02	F
Discharge (m3/s) :	0.05	F

Reach Symbol

(Fish)

(CT)

3 D 1.0 | 7210

(Width, Valley: Channel, Slope) (Bed Material)

Banks

Height (m): 0.2

% Unstable: 5

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 0.2

Bars (%): 0 pH: 6.0 Braided: N

Water Temp. (°C): 9.0 02 (ppm):

Turb. (cm): 120 Cond. (µmhos):

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1: S3

C2: LS = 22%, RS = 2%

C3: No fisheries sensitive zones were noted at this site.

C4: The electroshocking effort, using a Smithroot, 15 A model, was 319 seconds over 200 square meters.

C5: Lat N 54 59' 47.4", Long W 126 46' 36"

C6: No additional bank texture information.

C7: DO was not measured at this site. The water was clear to the bottom. The mean air temperature on this day was 14.5°C

C8: This site could provide good rearing and possible overwintering habitat if fish could access it. Future sampling is recommended to determine the presence or absence of fish at this site.

C9: Six beaver dams were observed at this site, roughly 300 meters from the mouth of the stream. This slow moving reach meanders through a swamp.

Photo #: T-9-14, 1996/08/25
Site #: T163, Upstream view, Morin C.

Photo #: T-9-15, 1996/08/25
Site #: T163, Downstream view, Morin C.

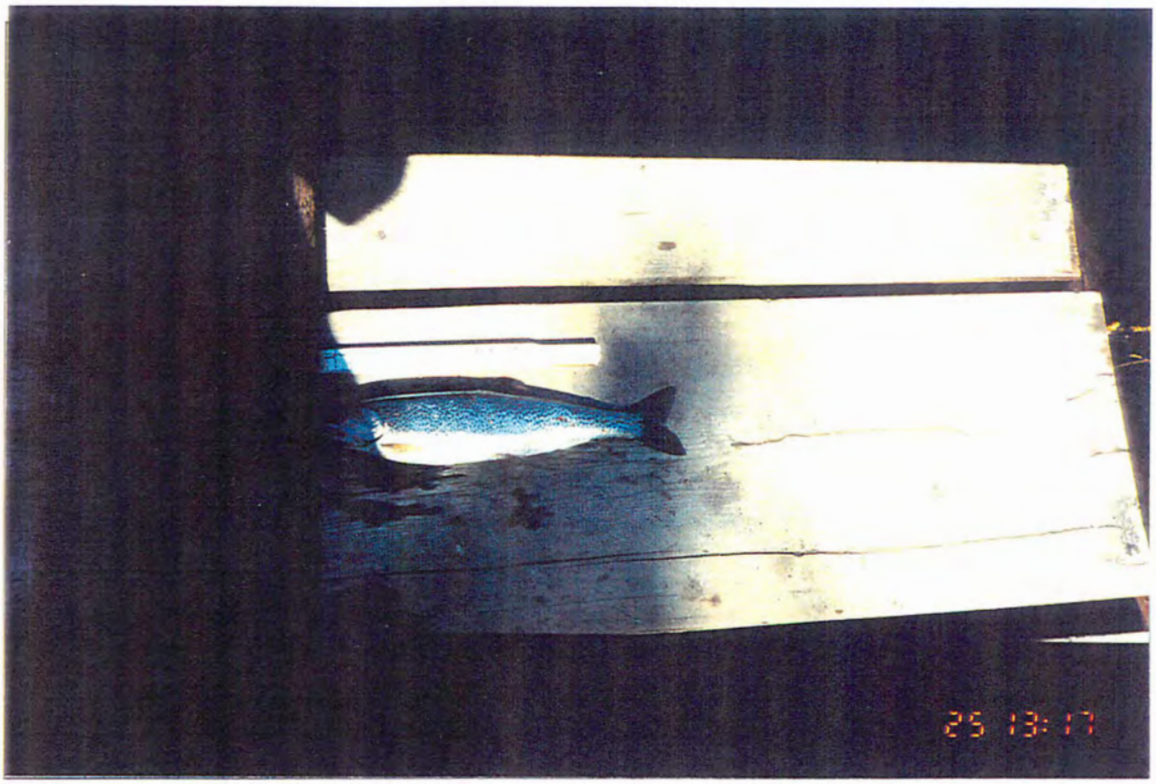


Photo #: T-9-18, 1996/08/25
Site #: T163, Cutthroat trout caught by fisherman in Morin L.

DFO/MoELP Stream Survey Form

Site Number: TERRY 162 **Reach No.: 1**

Trib. to Morin Cr.

TRITON Environmental Consultants Ltd.

Location: TERRY 162, Unit 9, Bulkley forest district, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 080-7500-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 | Reach Length (km): 1.6 MA | Date: 25-Aug-96 | Time: 9:05 | Agency: TEC | Access: V4 | Fish Card: N | Field ☒ | Historical ☐

U.T.M. : 9 .6423 .60965 | Length surveyed (m): 220.0 GE | Survey Crew: GM \HK \ \ \ \ \ \ \ | Photos: T-9-12,13 | Air Photos:

Channel Characteristics

	Av. Chan. Width (m):	1.2	MS
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
	Gradient (%):	6.0	CL
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
	% Side Channel:	0	
	% Debris Area:	40	GE
	%Stable:	10	GE

Specific Data

0.7 0.7 0.9 1.8 1.6 1.8

Cover

Cover Total % : 70 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	50	10	10	20	10

Crown Closure % : 10 Aspect : W

Bed Material

Fines	Clay, silt, sand (<2mm):	5	5
Gravels	Small (2-16mm):	45	15
	Large (16-64mm):		30
Larges	Sm. cobble (64-128mm):	50	15
	Lge cobble (128-256mm):		25
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 37 Compaction: High

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

Height (m): 0.4

% Unstable: 10

Fines ☐ Gravels ☒ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

(DV)

1 D 6.0 | 1450

(Width, Valley: Channel, Slope) | (Bed Material)

Confinement: UC

Valley : Channel Ratio 10+

Stage: Dry Flood Signs Ht(m): 0.5

Bars (%): 15 pH: Braided: N

Water Temp. (°C): 02 (ppm):

Turb. (cm): 0 Cond. (µmhos):

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 S4

C2 LS = 1%, RS = 1%

C3 No fisheries sensitive zones were noted.

C4 No electroshocking was carried out at this site.

C5 Lat N 54 59' 53.1", Long W 126 46' 31"

C6 No additional bank texture information.

C7 Water quality was not measured at this site. The mean air temperature on this day was 14.5°C

C8 This site would provide good temporary rearing habitat during high flow (if it is linked to Morin Creek). It could also provide some spawning habitat. The LOD and pools provide most of the cover at this site.

C9 The air temperature was not recorded at this site.

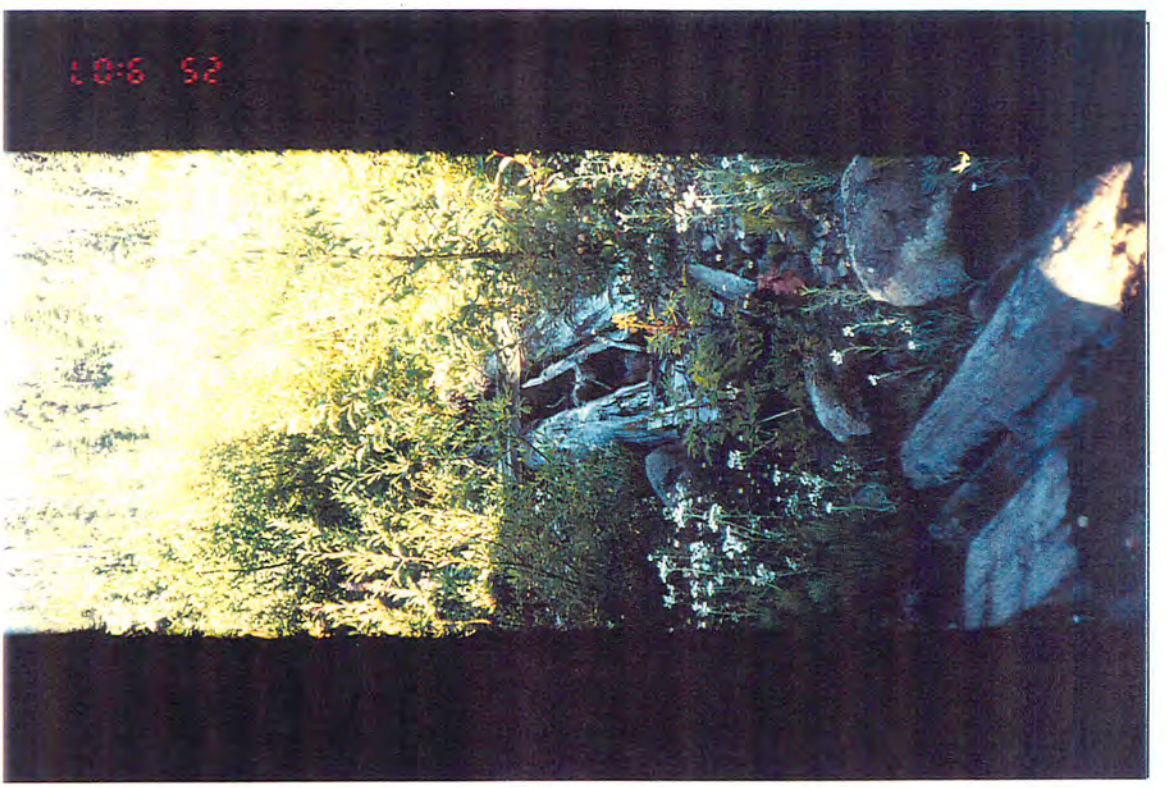


Photo #: T-9-12, 1996/08/25
Site #: T162, Downstream view, remnants of old bridge.

Photo #: T-9-13, 1996/08/25
Site #: T162, Downstream view, 100m downstream of road.

5.13 Nata Creek (460-6972-544) (93 L 096, 93 L 097)

5.13.1 Sensitive Habitats and Barriers

The mainstem of Nata Creek is 15 km in length and is fed by 13 tributaries. Reach 1 is unconfined and has low gradient. Reach 2 is more confined and has slightly steeper gradient. These features continue to increase through reach 4. Reaches 5 has steep, impassable gradient. Reach 1 of Nata Creek contains a large side channel that has been identified as a fisheries sensitive zone. No falls or cascade barriers were identified in this watershed. The Nata Creek system was sampled at 5 locations, including reaches 1, 2 and 4 of the mainstem.

5.13.2 Fish Summary Tables and Stream Classification

No historical data exists for Nata Creek. Five sample sites were electrofished in this study and Dolly Varden and cutthroat trout were caught in reach 1 and Dolly Varden were caught in reach 2. Dolly Varden were also caught by electrofishing in a tributary to reach 2. Nata Creek was classified as an S2 in reaches 1, 2 and 4. based on an average channel widths of 7.33, 10.18 and 5.65 meters, and the presence of fish and/or fish habitat in the sampling areas. The 2 unnamed tributaries sampled in this inventory were classified as S3 based on average channel widths of 1.63 and 2.23 meters and the presence of fish and/or suitable fish habitat in the sampling areas. The tributaries to the upper reaches have steep gradient and have been classified as non fish bearing.

DFO/MoELP Stream Survey Form

Site Number: TERRY 165 **Reach No.: 2**

Nata Cr.

TRITON Environmental Consultants Ltd.

Location: TERRY 165, Unit 9, Bulkley forest district, see C5. **Stream (Gaz.):** Nata Creek **Watershed Code:** 480-6972-544-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 **Reach Length (km):** 3.4 MA **Date:** 25-Aug-96 **Time:** 13:30 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .6431 .60947 **Length surveyed (m):** 200.0 GE **Survey Crew:** GM \HK \ \ \ \ \ \ \ **Photos:** T-9-19,20 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	10.2	T
Av. Wet. Width (m):	6.8	T
Av. Max Riffle Depth (cm):	17	MS
Av. Max Pool Depth (cm):	47	MS
Gradient (%):	4.0	CL
Pool: 10 Riffle: 10 Run: 80 Other: 0		
% Side Channel:	0	GE
% Debris Area:	5-15	GE
%Stable:	40	GE

Specific Data

12.5	11.6	14.3	6.9	7.7	8.1
6.4	7.2	8.0	6.2	6.2	6.5
18	20	9	22		
45	54	27	61		

Cover

Cover Total % : 45 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	25	10	0	20	25

Crown Closure % : 10 Aspect : E

Bed Material

Fines	Clay, silt, sand (<2mm):	10	10
Gravels	Small (2-16mm):	20	5
	Large (16-64mm):		15
Larges	Sm. cobble (64-128mm):	70	30
	Lge cobble (128-256mm):		35
	Bldr cobble (>256mm):		5
Bedrock		0	0

D90 (cm): 52 Compaction: Medium

Discharge

Wetted Width (m) :	6.2	MS
Mean Depth (m) :	0.4	MS
Mean Velocity (m/s) :	1.10	F
Discharge (m3/s) :	2.05	F

Banks

Height (m): 1.5

% Unstable: 20

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

DV

10 D 4.0 | 1270

(Width, Valley: Channel, Slope) (Bed Material)

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 2

Bars (%): 0 pH: 6.9 Braided: Ni

Water Temp. (°C): 7.0 02 (ppm):

Turb. (cm): 60 Cond. (µmhos):

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	5	40-110	J				EL

Comments

C1: S2

C2: LS = 10%, RS = 18%

C3: No fisheries sensitive zones were noted at this site.

C4: The electroshocking effort, using a Smithroot 15 A model was 287 seconds over 157 square meters.

C5: Lat N 54 58' 54.21", Long W 126 45' 47.3"

C6: No additional bank texture information.

C7: DO, and conductivity were not measured at this site. The mean air temperature on this day was 14.5°C

C8: Some excellent rearing and spawning habitat was observed at this site.

Photo #: T-9-19, 1996/08/25
Site #: T165, Upstream view from bridge, Nata C.

Photo #: T-9-20, 1996/08/25
Site #: T165, Downstream view from bridge, Nata C.

DFO/MoELP Stream Survey Form

Site Number: Y53 **Reach No.:** 1

Nata Cr.

TRITON Environmental Consultants Ltd.

Location: Y53, Unit 9 **Stream (Gaz.):** Nata Creek **Watershed Code:** 480-6972-544-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 **U.T.M.:** 9 .6472 .60952 **Reach Length (km):** 2.2 MW **Length surveyed (m):** 100.0 GE **Date:** 18-Jul-97 **Time:** 17:00 **Agency:** TEC **Survey Crew:** SJ \DD\ \ \ \ \ \ \ **Access:** M **Fish Card:** N **Field** ☒ **Historical** ☐ **Photos:** Y-7-15,16,17,18,19 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	7.3	T
Av. Wet. Width (m):	6.7	T
Av. Max Riffle Depth (cm):	25	MS
Av. Max Pool Depth (cm):	58	MS
Gradient (%):	2.0	CL
Pool: 15 Riffle: 5 Run: 80 Other: 0		
% Side Channel:	0	GE
% Debris Area:	5-15	GE
%Stable:	0	GE

Specific Data

8.2	6.8	7.0	6.3	8.3	7.4
7.5	6.0	6.1	6.0	7.8	6.6
20	30				
40	65	72	60	55	

Cover

Cover Total % : 30 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	30	30	0	10	10

Crown Closure % : 0 Aspect : S

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	40	20
	Large (16-64mm):		20
Larges	Sm. cobble (64-128mm):	40	10
	Lge cobble (128-256mm):		20
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 40 Compaction: Medium

Discharge

Wetted Width (m) :	5.6 T
Mean Depth (m) :	0.5 MS
Mean Velocity (m/s) :	1.00 F
Discharge (m3/s) :	2.10 F

Banks

Height (m): 0.3

% Unstable: 30

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 1.2

Bars (%): 10 pH: 7.7 Braided: N

Water Temp. (°C): 9.0 02 (ppm):

Turb. (cm): 90 Cond. (µmhos): 40

Reach Symbol

(Fish)

CT DV

7 D 2.0 | 2440

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	CT	1	100	J	R			EL
	DV	2	80-95	J	R			EL

Comments

C1: S2.

C2: LS=10%, RS=3%

C3: No fisheries sensitive zones noted.

C4: The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 400V, was 341 seconds over 100 meters.

C5: No additional bank texture information.

C6: DO was not measured at this site. The air temperature at this site was 18.0 C.

C7: This reach does not contain enough resting cover to provide good habitat. It is a medium to high energy system with deep runs and a small amount of unstable LOD. It is slightly turbid from glacial till, this may have prompted fish to migrate to the tributaries.

Photo #: Y-7-15, 18/07/97
Site #: Y53, Looking upstream at the channel, with crew member electrofishing.

Photo #: Y-7-16, 18/07/97
Site #: Y53, Looking downstream at the channel, note the debrisjam in the foreground.

Photo #: Y-7-19, 18/07/97
Site #: Y53, Fish on the fish board.

DFO/MoELP Stream Survey Form

Site Number: E281

Reach No.: 4

Nata Cr.

TRITON Environmental Consultants Ltd.

Location: E281, Unit 9, NW of Chapman Lk. | Stream (Gaz.): Nata Creek | Watershed Code: 480-6972-544-000-000-000-000-000-000-000-000-0

Map #: 93 L 096 | Reach Length (km): 1.4 MA | Date: 09-Sep-97 | Time: 16:06 | Agency: TEC | Access: H | Fish Card: N | Field ☒ Historical ☐

U.T.M. : 9 .6384 .60920 | Length surveyed (m): 100.0 GE | Survey Crew: SJ \JL \ \ \ \ \ \ \ | Photos: E-27-2A, 2B,5,6 | Air Photos:

Channel Characteristics

Av. Chan. Width (m):	5.7	MS
Av. Wet. Width (m):	5.5	MS
Av. Max Riffle Depth (cm):	0	MS
Av. Max Pool Depth (cm):	47	MS
Gradient (%):	5.0	CL
Pool: 5 Riffle: 0 Run: 95 Other: 0		
% Side Channel:	0	GE
% Debris Area:	0	GE
%Stable:	15	GE

Specific Data

4.9	5.7	5.9	6.1	5.4	5.9
4.4	5.8	5.7	5.9	5.1	5.8
55	50	49	48	34	

Cover

Cover Total % : 20 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
10	10	50	0	10	20

Crown Closure % : 15 Aspect : N

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	30	10
	Large (16-64mm):		20
Larges	Sm. cobble (64-128mm):	50	20
	Lge cobble (128-256mm):		20
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 40 Compaction: Medium

Discharge

Wetted Width (m) :	4.7	MS
Mean Depth (m) :	0.2	MS
Mean Velocity (m/s) :	0.97	F
Discharge (m3/s) :	0.68	F

Banks

Height (m): 0.2

% Unstable: 10

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

(DV)

6 D 5.0 | 2350

(Width, Valley: Channel, Slope) (Bed Material)

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 1

Bars (%): 0 pH: 7.7 Braided: Y

Water Temp. (°C): 6.0 02 (ppm):

Turb. (cm): 20 Cond. (µmhos): 60

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1 S2

C2 LS = 21%, RS = 16%

C3 No fisheries sensitive zones noted.

C4 The electroshocking effort, using a Smithroot 12 B POW model, set at I-5-400V, was 220 seconds over 100 meters.

C5 Fines and larges make up the bank texture at this site.

C6 DO was not measured, the water was milky. The air temperature at this site was 14.C.

C7 This reach has some cutbank, pool and boulder rearing cover, as well as some spawning gravels.

Photo #: E-27-2A, 09-Sep-97
Site #: E281, Aerial photo of streamside land use

Photo #: E-27-2B, 09-Sep-97
Site #: E281, Aerial photo of waterfalls

Photo #: E-27-5, 09-Sep-97
Site #: E281, Looking upstream at the channel

Photo #: E-27-6, 09-Sep-97
Site #: E281, Looking upstream at the channel

DFO/MoELP Stream Survey Form

Site Number: TERRY 166 Reach No.: 1

Trib. to Nata Cr.

TRITON Environmental Consultants Ltd.

Location: TERRY 166, Unit 9, Bulkley forest district, see C5. Stream (Gaz.): Unnamed Watershed Code: 080-7500-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 Reach Length (km): 3.7 MA Date: 25-Aug-96 Time: 14:45 Agency: TEC Access: H Fish Card: N Field ☒ Historical ☐

U.T.M. : 9 .6422 .60938 Length surveyed (m): 100.0 GE Survey Crew: GM \HK \ \ \ \ \ \ Photos: T-9-21,22 Air Photos:

Channel Characteristics

Av. Chan. Width (m):	1.6	MS
Av. Wet. Width (m):	1.0	MS
Av. Max Riffle Depth (cm):	6	MS
Av. Max Pool Depth (cm):	15	MS
Gradient (%):	3.0	CL

Pool: 20 Riffle: 50 Run: 30 Other: 0

% Side Channel: GE

% Debris Area: 40 GE

%Stable: 20 GE

Specific Data

2.1	1.8	1.5	1.7	1.4	1.3
1.3	0.8	0.8	1.5	0.8	0.9
4	6	5	8	6	4
15	14	11	20		

Cover

Cover Total % : 45 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
5	30	0	10	45	10

Crown Closure % : 25 Aspect : NE

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	65	35
	Large (16-64mm):		30
Larges	Sm. cobble (64-128mm):	15	10
	Lge cobble (128-256mm):		5
	Bldr cobble (>256mm):		0
Bedrock		0	0

D90 (cm): 13 Compaction: Medium

Discharge

Wetted Width (m) :	0.8	MS
Mean Depth (m) :	0.0	MS
Mean Velocity (m/s) :	0.13	F
Discharge (m3/s) :	0.00	F

Banks

Height (m): 0.3

% Unstable: 50

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 0.5

Bars (%): 10 pH: 6.6 Braided: Y

Water Temp. (°C): 13.0 02 (ppm):

Turb. (cm): 20 Cond. (µmhos):

Reach Symbol

(Fish)

DV

2 D 3.0 | 2620

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
C4	DV	1	210	A				EL
	SA	10	20	J				VO

Comments

C1: S3

C2: LS = 20%, RS = 30%

C3: No fisheries sensitive zones were noted at this site.

C4: The electroshocking effort was not recorded at this site. A 115 mm juvenile dolly varden was also caught at this site.

C5: Lat N 54 58' 27", Long W 126 46' 24.7"

C6: No additional bank texture information.

C7: DO and conductivity were not measured at this site. The water was rust coloured. The mean air temperature on this day was 14.5°C

C8: Good rearing habitat was observed at this site. Spawning and overwintering habitat were not observed by the crew.

C9: This creek runs through a cutblock where loggin took place right down to the streambanks. Much of the LOD in the channel is derived from logging slash. A mat of algae was seen on the cobble. The culvert at this road crossing is in good condition.

1: The air temperature was not measured at this site.

Photo #: T-9-21, 1996/08/25
Site #: T166, Upstream view, rust-coloured creek.

Photo #: T-9-22, 1996/08/25
Site #: T166, Downstream view, rust-coloured creek.

DFO/MoELP Stream Survey Form

Site Number: E280

Reach No.: 1

Trib. to Nata Cr.

TRITON Environmental Consultants Ltd.

Location: E280, Unit 9, NW of Chapman Lk. **Stream (Gaz.):** Unnamed **Watershed Code:** 100-0600-000-000-000-000-000-000-000-000-000-

Map #: 93 L 096 Reach Length (km): 0.5 MA Date: 09-Sep-97 Time: 15:30 Agency: TEC Access: H Fish Card: N Field ☒ Historical ☐

U.T.M. : 9 .6384 .60920 Length surveyed (m): 100.0 GE Survey Crew: SJ \JL\ \ \ \ \ \ \ Photos: E-27-3,4 Air Photos:

Channel Characteristics

Av. Chan. Width (m):	2.2	MS
Av. Wet. Width (m):	2.1	MS
Av. Max Riffle Depth (cm):	7	MS
Av. Max Pool Depth (cm):	30	MS
Gradient (%):	9.0	CL
Pool: 10 Riffle: 40 Run: 50 Other:	0	
% Side Channel:	0-10	GE
% Debris Area:	0-5	GE
%Stable:	15	GE

Specific Data

1.6	1.8	2.3	2.2	2.8	2.7
1.5	1.9	2.2	2.1	2.6	2.5
5	9	11	4	7	
26	25	36	34		

Cover

Cover Total % : 20 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	10	50	0	10	10

Crown Closure % : 15 Aspect : W

Bed Material

Fines	Clay, silt, sand (<2mm):	10	10
Gravels	Small (2-16mm):	20	10
	Large (16-64mm):		10
Larges	Sm. cobble (64-128mm):	70	10
	Lge cobble (128-256mm):		20
	Bldr cobble (>256mm):		40
Bedrock		0	0

D90 (cm): 40 Compaction: High

Discharge

Wetted Width (m) :	1.1	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.31	F
Discharge (m3/s) :	0.03	F

Banks

Height (m): 0.2

% Unstable: 10

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 0.3

Bars (%): 0 pH: 7.8 Braided: Y

Water Temp. (°C): 6.0 02 (ppm):

Turb. (cm): Cond. (µmhos): 140

Reach Symbol

(Fish)

(DV)

2 D 9.0 | 1270

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1 S3

C2 LS = 11%, RS = 11%

C3 No fisheries sensitive zones noted.

C4 The electroshocking effort, using a Smithroot 12 B POW model, was 112 seconds over 150 meters.

C5 Fines and larges make up the bank texture at this site.

C6 DO was not measured, the water was clear to the bottom. The air temperature at this site was 18.C.

C7 Rearing habitat in the form of boulders, pools, and cutbanks was noted in the sampling area.

Photo #: E-27-3, 09-Sep-97
Site #: E280, Looking upstream at the channel, note the abundant LOD

Photo #: E-27-4, 09-Sep-97
Site #: E280, Looking downstream at the channel

5.14 Regan Creek (480-6972-341-267) (93 L 087)

5.14.1 Sensitive Habitats and Barriers

The Regan Creek mainstem is 9.6 km in length and is fed by 7 tributaries. Reaches 1 and 2 are unconfined and have low gradient, with gently increasing slope noted in reach 2. Reach 3 has moderately steep gradient, which abruptly becomes steep gradient in reach 4. Reach 1 is crossed by 2 roads and contains 3 beaver dams. This reach has several small wetlands in direct contact with the channel which have been identified as fisheries sensitive zones. Two very small lakes were also noted in this reach. Regan Creek was sampled at 6 locations, including reaches 1 and 2 of the mainstem.

5.14.2 Fish Summary Tables and Stream Classification

No fisheries information exists for Regan Creek, however, Dolly Varden were visually observed at 3 of the sample sites on this system. Regan Creek was classified as S2 in reach 1 at site J112, based on an average channel width of 5.8 meters and the presence of Dolly Varden in the sampling area. One tributary to this system was classified as an S2 at site J110, based on an average channel width of 5.30 meters and the presence of rearing habitat in the sampling area. A series of beaver dams was observed downstream of the road crossing at this site. Five of the tributaries to the main creek were classified as S3 and one was classified as S4. Fish were visually observed in two of the tributaries.

DFO/MoELP Stream Survey Form

Site Number: JULIE 108 **Reach No.: 2**

Regan Cr

TRITON Environmental Consultants Ltd.

Location: JULIE 108, Unit 9, north end of block 312-5, see C5. **Stream (Gaz.):** Regan Creek **Watershed Code:** 480-6972-341-416-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 2.3 MA **Date:** 18-Aug-96 **Time:** 12:15 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M.: 9 .6531 .60771 **Length surveyed (m):** 100.0 HC **Survey Crew:** JP \HK \ \ \ \ \ \ \ **Photos:** J-6-17,18,19 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	2.0	MS
Av. Wet. Width (m):	1.0	MS
Av. Max Riffle Depth (cm):	11	MS
Av. Max Pool Depth (cm):	31	MS
Gradient (%):	4.0	GE
Pool: 40 Riffle: 20 Run: 40 Other:	0	
% Side Channel:	0-10	GE
% Debris Area:	30	GE
%Stable:	60	GE

Specific Data

1.8	1.5	2.9	2.2	2.0	1.8
0.9	1.0	1.3	0.9	0.8	1.1
10	12	12			
25	30	38	0	0	0

Cover

Cover Total %: 60 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	25	20	5	25	25

Crown Closure %: 0 Aspect: NE

Bed Material

Fines	Clay, silt, sand (<2mm):	30	30
Gravels	Small (2-16mm):	20	10
	Large (16-64mm):		10
Larges	Sm. cobble (64-128mm):	50	10
	Lge cobble (128-256mm):		30
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 35 Compaction: Medium

Discharge

Wetted Width (m):	1.0	MS
Mean Depth (m):	0.2	MS
Mean Velocity (m/s):	0.14	F
Discharge (m3/s):	0.02	F

Banks

Height (m): 0.4

% Unstable: 10

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: L Flood Signs Ht(m): 0.35

Bars (%): 10 pH: Braided: Y

Water Temp. (°C): 10.0 02 (ppm):

Turb. (cm): 38 Cond. (µmhos):

Reach Symbol

(Fish)

(DV)

2 D 4.0 | 3250

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				VO

Comments

C1 S3

C2 LS = 3%, RS = 3%

C3 No fisheries sensitive zones noted on site.

C4 An electroshocker was not available for sampling this day. This site could be used by Dolly Varden for rearing, so future sampling is recommended.

C5 Lat N 54 49 05.3, Long W 126 38 41.1

C6 No additional bank texture information.

C7 No pH, DO or conductivity measurements were taken at this site. The mean air temperature on this day was 10.0°C

C8 Some spawning and rearing habitat is present on site. This creek also connects to known fish bearing waters. No overwintering habitat was observed at this site.

C9 The creek currently contains a large amount of logging debris. In addition, a newly installed culvert appears to be causing siltation in the creek. Some stream channel clean up and culvert maintenance are recommended at this site.

1 Several stream channels to the north of this block have been incorrectly mapped.

Photo #: J-6-17, 1996/08/18
Site #: J108, Looking upstream past culvert.

Photo #: J-6-18, 1996/08/18
Site #: J108, Normal part of creek.

Photo #: J-6-19, 1996/08/18
Site #: J108, Looking upstream toward culvert and silt.

DFO/MoELP Stream Survey Form **Site Number:** JULIE 111 **Reach No.: 1**

Regan Cr

TRITON Environmental Consultants Ltd.

Location: JULIE 111, Unit 9, East of 549-1, see C5. **Stream (Gaz.):** Regan Creek **Watershed Code:** 480-6972-341-416-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 5.2 MA **Date:** 18-Aug-96 **Time:** 14:45 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .6530 .60790 **Length surveyed (m):** 100.0 HC **Survey Crew:** JP \HK \ \ \ \ \ \ **Photos:** J-6-24,25 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	5.8	MS
Av. Wet. Width (m):	2.2	MS
Av. Max Riffle Depth (cm):	6	MS
Av. Max Pool Depth (cm):	58	MS
Gradient (%):	1.0	CL
Pool: 50 Riffle: 20 Run: 30 Other:	0	
% Side Channel:		GE
% Debris Area:	15	GE
%Stable:	80	GE

Specific Data

7.2	5.8	4.5	6.2	5.0	6.1
4.5	1.7	1.6	1.9	1.5	1.8
5	6	6			
60	55				

Cover

Cover Total % : 60 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	20	10	10	30	10

Crown Closure % : 70 Aspect : E

Bed Material

Fines	Clay, silt, sand (<2mm):	30	30
Gravels	Small (2-16mm):	40	20
	Large (16-64mm):		20
Larges	Sm. cobble (64-128mm):	30	10
	Lge cobble (128-256mm):		10
	Bldr cobble (>256mm):		10
Bedrock		0	0

D90 (cm): 28 Compaction: Medium

Discharge

Wetted Width (m) :	1.6	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.17	F
Discharge (m3/s) :	0.02	F

Banks

Height (m): 0.4

% Unstable: 10

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: Flood Flood Signs Ht(m): 0

Bars (%): 0 pH: 7.8 Braided: N

Water Temp. (°C): 7.0 02 (ppm):

Turb. (cm): 60 Cond. (µmhos): 180

Reach Symbol

(Fish)

(DV)

6 D 1.0 | 3430

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1: S2

C2: LS = 2%, RS = 2%

C3: No fisheries sensitive zones noted on site.

C4: An electroshocker was not available for sampling.

C5: Lat N 54 50 04.6, Long W 126 37 01.4

C6: No additional bank texture information.

C7: No pH, DO, conductivity measurements were made at this site. The mean air temperature on this day was 10.0°C

C8: This site could provide rearing habitat for fish. Future sampling is recommended to determine the presence or absence of fish.

C9: The road crosses a wooden crib structure that is not a barrier to fish passage.

1: A series of beaver dams occurs above and below the road. A beaver dam at the downstream end of the road crossing has caused flooding into the treed portion of this area. A .55 m high dam is located 50 meters upstream from the road and a 1 meter high dam is located 80 meters uspstream of the road.

Photo #: J-6-24, 1996/08/18
Site #: J111, Looking downstream, channel through alder.

Photo #: J-6-25, 1996/08/18
Site #: J111, Looking upstream, channel through alder.

DFO/MoELP Stream Survey Form | **Site Number: JULIE 112** | **Reach No.: 1**

Regan Cr

TRITON Environmental Consultants Ltd.

Location: JULIE 112, Unit 9, see C5. | Stream (Gaz.): Regan Creek | Watershed Code: 480-6972-341-416-000-000-000-000-000-000-000-0

Map #: 93 L 087 | Reach Length (km): 5.2 MA | Date: 18-Aug-96 | Time: 15:35 | Agency: TEC | Access: V4 | Fish Card: N | Field ☒ Historical ☐

U.T.M. : 9 .6536 . 60810 | Length surveyed (m): 100.0 GE | Survey Crew: JP\HK\ \ \ \ \ \ \ | Photos: J-7-1,2 | Air Photos:

Channel Characteristics

Av. Chan. Width (m):	5.8	MS
Av. Wet. Width (m):	1.8	MS
Av. Max Riffle Depth (cm):	8	MS
Av. Max Pool Depth (cm):	36	MS
Gradient (%):	3.0	CL
Pool: 25 Riffle: 25 Run: 50 Other:	0	
% Side Channel:	0	GE
% Debris Area:	5	GE
%Stable:	100	GE

Specific Data

5.1	5.3	6.5	6.2	6.0	5.8
1.6	1.8	2.0	1.5	1.9	2.2
7	8	10	0	0	0
30	35	44	0	0	0

Cover

Cover Total % : 40 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	5	25	5	60	5

Crown Closure % : 20 | Aspect : NW

Bed Material

Fines	Clay, silt, sand (<2mm):	5	5
Gravels	Small (2-16mm):	20	10
	Large (16-64mm):		10
Larges	Sm. cobble (64-128mm):	75	50
	Lge cobble (128-256mm):		20
	Bldr cobble (>256mm):		5
Bedrock		0	0

D90 (cm): 36 | Compaction: Medium

Discharge

Wetted Width (m) :	1.0	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.24	F
Discharge (m3/s) :	0.02	F

Banks

Height (m): 0.4

% Unstable: 0

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: FC

Valley : Channel Ratio 2-5

Stage: M | Flood Signs Ht(m): 0.3

Bars (%): 15 | pH: 7.6 | Braided: N

Water Temp. (°C): 8.5 | 02 (ppm):

Turb. (cm): 44 | Cond. (µmhos): 140

Reach Symbol

(Fish)

DV

6 B 3.0 | 0280

(Width, Valley: Channel, Slope) | (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	1	50	J	R			VO

Comments

C1 S2

C2 LS = 10%, RS = 10%

C3 No fisheries sensitive zones noted on site.

C4 An electroshocker was not available for sampling.

C5 Lat N 54 51 25.9, Long W 126 36 27.7

C6 No additional bank texture information.

C7 No pH, DO, conductivity measurements were taken at this site. The mean air temperature on this day was 10.0°C

C8 Excellent rearing habitat, but marginal spawning habitat,was noted at this site.

C9 No barriers to fish passage were found at this site. The two bridges at the road crossing do not impact on the creek.

Photo #: J-7-1, 1996/08/18
Site #: J112, Looking upstream, meterstick across channel.

Photo #: J-7-2, 1996/08/18
Site #: J112, Looking downstream, LOD in channel.

DFO/MoELP Stream Survey Form

Site Number: JULIE 106 **Reach No.:** 1

Trib. to Regan Cr

TRITON Environmental Consultants Ltd.

Location: JULIE 106, Unit 9, north side of 549-1, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-341-416-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 1.2 MA **Date:** 18-Aug-96 **Time:** 10:45 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M. : 9 .6515 .60785 **Length surveyed (m):** 120.0 HC **Survey Crew:** JP \HK \ \ \ \ \ \ \ **Photos:** J-6-13,14 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	1.5	MS
Av. Wet. Width (m):	0.8	MS
Av. Max Riffle Depth (cm):	8	MS
Av. Max Pool Depth (cm):	25	MS
Gradient (%):	2.0	CL
Pool: 20 Riffle: 20 Run: 60 Other: 0		
% Side Channel:		GE
% Debris Area:	40	GE
%Stable:	50	GE

Specific Data

1.3	1.5	1.5	1.6	1.7	1.2
0.9	0.9	0.8	1.0	0.7	0.8
10	8	5	0	0	0
32	28	15	0	0	0

Cover

Cover Total % : 0 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	20	20	0	30	30

Crown Closure % : 0 Aspect : NE

Bed Material

Fines	Clay, silt, sand (<2mm):	60	60
Gravels	Small (2-16mm):	20	10
	Large (16-64mm):		10
Larges	Sm. cobble (64-128mm):	20	10
	Lge cobble (128-256mm):		5
	Bldr cobble (>256mm):		5
Bedrock		0	0

D90 (cm): 50 Compaction: Medium

Discharge

Wetted Width (m) :	0.3	MS
Mean Depth (m) :	0.0	MS
Mean Velocity (m/s) :	0.46	F
Discharge (m3/s) :	0.00	F

Banks

Height (m): 0.5

% Unstable: 20

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 0.4

Bars (%): 0 pH: Braided: N

Water Temp. (°C): 9.0 02 (ppm):

Turb. (cm): 32 Cond. (µmhos):

Reach Symbol

(Fish)

DV

2 D 2.0 | 6220

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	1	45	J	R			VO

Comments

C1: S3

C2: LS = 2%, RS= 2%

C3: No fisheries sensitive zones were noted at this site.

C4: An electroshocker was not available for fish sampling at the time of survey.

C5: Lat N 54 49 51, Long W 126 38 30.2

C6: Logging was carried out right down to the creek banks and has impacted on them slightly.

C7: No pH, DO or conductivity measurements were taken at this site. The mean air temperature on this day was 10.0°C

C8: This site appears to contain some rearing habitat.

Photo #: J-6-13, 1996/08/18
Site #: J106, Looking downstream, logging debris in channel.

Photo #: J-6-14, 1996/08/18
Site #: J106, Looking upstream.

DFO/MoELP Stream Survey Form

Site Number: JULIE 107

Reach No.: 1

Trib. to Regan Cr

TRITON Environmental Consultants Ltd.

Location: JULIE 107, Unit 9, in the middle of block 549-1, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-341-416-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 2.3 MA **Date:** 18-Aug-96 **Time:** 11:20 **Agency:** TEC **Access:** V2 **Fish Card:** N Field ☒ Historical ☐

U.T.M. : 9 .6517 .60781 **Length surveyed (m):** 100.0 HC **Survey Crew:** JP \HK \ \ \ \ \ \ \ **Photos:** J-6-15,16 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	3.9	MS
Av. Wet. Width (m):	3.1	MS
Av. Max Riffle Depth (cm):	8	MS
Av. Max Pool Depth (cm):	54	MS
Gradient (%):	3.0	CL
Pool: 25 Riffle: 25 Run: 50 Other:	0	
% Side Channel:		GE
% Debris Area:	20	GE
%Stable:	30	GE

Specific Data

3.8	4.0	4.5	3.3	3.6	4.2
3.0	3.1	4.0	2.8	2.5	3.4
8	6	10	0	0	0
68	55	40	0	0	0

Cover

Cover Total % : 60 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
10	20	10	0	40	20

Crown Closure % : 0 Aspect : N

Bed Material

Fines	Clay, silt, sand (<2mm):	20	20
Gravels	Small (2-16mm):	30	10
	Large (16-64mm):		20
Larges	Sm. cobble (64-128mm):	50	20
	Lge cobble (128-256mm):		25
	Bldr cobble (>256mm):		5
Bedrock		0	0

D90 (cm): 28 Compaction: Medium

Discharge

Wetted Width (m) :	2.0	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.20	F
Discharge (m3/s) :	0.03	F

Banks

Height (m): 0.4

% Unstable: 0

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 0.2

Bars (%): 0 pH: Braided: N

Water Temp. (°C): 8.5 02 (ppm):

Turb. (cm): 68 Cond. (µmhos):

Reach Symbol

(Fish)

DV

4 D 3.0 | 2350

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	2	65-100	J	R			VO

Comments

C1 S3

C2 LS = 2%, RS = 2%

C3 No fisheries sensitive zones noted at this site.

C4 No electroshocking was carried out at this site as a shocker was not available.

C5 Lat N 54 49 37.7, Long W 126 38 17.8

C6 Logging was carried out right down to the stream banks at this site. No conifer cover remains.

C7 DO, pH and conductivity measurements were not made at this site. The mean air temperature on this day was 10.0°C

C8 Some great rearing habitat can be found at this site, consisting of pools, LOD and undercut banks.

C9 The culvert at the road crossing at this site is not a barrier to fish passage. In addition a small pool has formed at the downstream outlet of the culvert.

1 This creek splits into two similarily sized branches 20 meters downstream of the road.

Photo #: J-6-15, 1996/08/18
Site #: J107, Left branch of creek.

Photo #: J-6-16, 1996/08/18
Site #: J107, Looking downstream from culvert.

DFO/MoELP Stream Survey Form

Site Number: JULIE 110 **Reach No.:** 2

Trib. to Regan Cr

TRITON Environmental Consultants Ltd.

Location: JULIE 110, Unit 9, East of 549-1, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 480-6972-341-416-000-000-000-000-000-000-000-0

Map #: 93 L 087 **Reach Length (km):** 3.7 MA **Date:** 18-Aug-96 **Time:** 14:10 **Agency:** TEC **Access:** V2 **Fish Card:** N ☐ Field ☒ Historical ☐

U.T.M.: 9 .6532 .60784 **Length surveyed (m):** 100.0 HC **Survey Crew:** JP \HK\ \ \ \ \ \ \ **Photos:** J-6-22,23 **Air Photos:**

Channel Characteristics

Av. Chan. Width (m):	5.3	MS
Av. Wet. Width (m):	1.2	MS
Av. Max Riffle Depth (cm):	6	MS
Av. Max Pool Depth (cm):	30	MS
Gradient (%):	1.0	CL
Pool: 70 Riffle: 20 Run: 10 Other:	0	
% Side Channel:	10-40	GE
% Debris Area:	>15	GE
%Stable:	70	GE

Specific Data

6.3	4.7	4.4	5.1	5.3	6.0
1.1	1.4	0.9	1.3	1.0	1.5
5	8	6			
33	25	31			

Cover

Cover Total %: 70 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
10	40	0	0	40	10

Crown Closure %: 70 Aspect: N

Bed Material

Fines	Clay, silt, sand (<2mm):	90	90
Gravels	Small (2-16mm):	10	10
	Large (16-64mm):		0
Larges	Sm. cobble (64-128mm):	0	0
	Lge cobble (128-256mm):		0
	Bldr cobble (>256mm):		0
Bedrock		0	0

D90 (cm): 1 Compaction: Low

Discharge

Wetted Width (m):	1.1	MS
Mean Depth (m):	0.1	MS
Mean Velocity (m/s):	0.10	F
Discharge (m3/s):	0.01	F

Banks

Height (m): 0.1

% Unstable: 60

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: Flood Flood Signs Ht(m): 0

Bars (%): 0 pH: 7.4 Braided: Y

Water Temp. (°C): 7.5 02 (ppm):

Turb. (cm): 33 Cond. (µmhos): 140

Reach Symbol

(Fish)

(DV)

5 D 1.0 | 9100

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 S2

C2 LS = 3%, RS = 3%

C3 No fisheries sensitive zones noted on site.

C4 An electroshocker was not available for fish sampling this day.

C5 Lat N 54 49 46.2, Long W 126 36 49

C6 No additional bank texture information.

C7 DO, pH and conductivity measurements were not made at this site. The water at this site is rust coloured. The mean air temperature on this day was 10.0°C

C8 On the whole this site provides marginal habitat for fish. Some potential rearing habitat is available.

C9 Upstream of the road crossing the stream is completely covered by alder. The culvert at the road crossing does not block fish passage.

1 A series of beaver dams occurs downstream of the road crossing.

Photo #: J-6-22, 1996/08/18
Site #: J110, Channel through alder in swampy area.

Photo #: J-6-23, 1996/08/18
Site #: J110, Channel through alder in swampy area.

5.15 Taka Creek (480-6972-870) (93 L 096, 93 L 097)

5.15.1 Sensitive Habitats and Barriers

The mainstem of Taka Creek is 11.2 km long and is fed by 15 tributaries. Reach 1 has low gradient and a small wetland at the confluence with Morin Creek, which has been identified as a fisheries sensitive zone. Reach two is moderately steep with canyon like confinement and reach 3 is characterized by steep gradient. No barriers were identified in this system, however, extreme gradient likely resulting in multiple cascades, was noted in reach 3. Taka Creek was sampled in reaches 1 and 2 of the mainstem.

5.15.2 Fish Summary Tables and Stream Classification

No historical information exists for Taka Creek, however Dolly Varden were caught by electroshocking at both mainstem sample sites. The tributaries to Taka Creek were not sampled in this inventory. On the TRIM sheet, the tributaries associated with the lower reaches appear to be S4 sized streams, while those associated with the upper reaches appear to be S6 streams, based on steep gradient.

DFO/MoELP Stream Survey Form **Site Number:** JULIE 172 **Reach No.: 2**

Taka Cr.

TRITON Environmental Consultants Ltd.

Location: JULIE 172, Unit 9, see C5 **Stream (Gaz.):** Taka Creek **Watershed Code:** 480-6972-657-669-000-000-000-000-000-000-000-0

Map #: 93 L 096 **Reach Length (km):** 3.4 MA **Date:** 25-Aug-96 **Time:** 13:45 **Agency:** TEC **Access:** HL **Fish Card:** N Field ☒ Historical ☐

U.T.M.: 9 .6366 .60929 **Length surveyed (m):** 200.0 GE **Survey Crew:** JP \EM\ \ \ \ \ \ \ **Photos:** J-12-4,5 **Air Photos:**

Channel Characteristics

C1	Av. Chan. Width (m):	5.0	MS
	Av. Wet. Width (m):	4.3	MS
	Av. Max Riffle Depth (cm):	11	MS
	Av. Max Pool Depth (cm):	42	MS
	Gradient (%):	6.0	CL
	Pool: 20 Riffle: 50 Run: 30 Other: 0		
	% Side Channel:		GE
	% Debris Area:	5-15	GE
	%Stable:	15	GE

Specific Data

4.9	3.6	7.3	4.5	4.6	5.1
3.2	3.8	5.3	4.5	4.4	4.6
13	10	10			
50	40	35			

Cover

Cover Total %: 15 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
25	25	20	0	10	20

Crown Closure %: 10 Aspect: NE

Bed Material

Fines	Clay, silt, sand (<2mm):	0	0
Gravels	Small (2-16mm):	10	5
	Large (16-64mm):		5
Larges	Sm. cobble (64-128mm):	90	35
	Lge cobble (128-256mm):		35
	Bldr cobble (>256mm):		20
Bedrock		0	0

D90 (cm): 30 Compaction: Medium

Discharge

Wetted Width (m):	2.4	MS
Mean Depth (m):	0.2	MS
Mean Velocity (m/s):	0.22	F
Discharge (m3/s):	0.08	F

Banks

Height (m): 0.4

% Unstable: 5

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: FC

Valley : Channel Ratio 2-5

Stage: M Flood Signs Ht(m): 1.3

Bars (%): 15 pH: Braided: N

Water Temp. (°C): 8.0 02 (ppm):

Turb. (cm): 50 Cond. (µmhos):

Reach Symbol

(Fish)

DV

5 B 6.0 | 0190

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	5	98	J	R			EL

Comments

C1 S2. This site has been classified as an S2 because the average channel width of 5.0 m is close to the S2 / S3 cutt off point. Dolly Varden were caught at this site so an S2 classification was assigned to protect as much habitat as possible.

C2 LS = 40%, RS = 20%

C3 No fisheries sensitive zones noted in the area.

C4 The electroshocking effort, using a 12 B POW model, was 323 seconds over 120 square meters.

C5 Lat N 59 58 05.8, Long W 126 51 41.9

C6 No additional bank texture information.

C7 DO, pH, and conductivity measurements were not taken at this site. The mean air temperature on this day was 14.5°C

C8 This site has some good rearing habitat.

Photo #: J-12-3, 1996/08/25
Site #: Aerial photo of falls, headwaters to Taka C.

Photo #: J-12-4, 1996/08/25
Site #: J172, Looking downstream, boulder cover.

Photo #: J-12-5, 1996/08/25
Site #: J172, Looking upstream, LOD cover.

DFO/MoELP Stream Survey Form

Site Number: TERRY 164 **Reach No.: 1**

Taka Cr.

TRITON Environmental Consultants Ltd.

Location: TERRY 164, Unit 9, Bulkley forest district, see C5. **Stream (Gaz.):** Taka Creek **Watershed Code:** 480-6972-870-000-000-000-000-000-000-000-000-0

Map #:	93 L 097	Reach Length (km):	3.9	MA	Date:	25-Aug-96	Time:	11:40	Agency:	TEC	Access:	H	Fish Card:	N	Field ☒ Historical ☐
U.T.M. :	9 .6413 .60951	Length surveyed (m):	150.0	GE	Survey Crew:	GM \HK \ \ \ \ \ \ \			Photos:	T-9-16,17			Air Photos:		

Channel Characteristics

Av. Chan. Width (m):	4.7	MS
Av. Wet. Width (m):	1.9	MS
Av. Max Riffle Depth (cm):	9	MS
Av. Max Pool Depth (cm):	35	MS
Gradient (%):	10.0	CL
Pool: 30 Riffle: 40 Run: 30 Other:	0	
% Side Channel:	0-10	GE
% Debris Area:	65	GE
%Stable:	45	GE

Specific Data

4.5	5.0	4.5	4.4	5.0	4.8
1.4	1.6	1.9	2.3	2.3	2.1
10	5	8	10	11	12
39	20	38	30	50	

Cover

Cover Total % : 90 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
20	40	5	5	20	10

Crown Closure % : 60 Aspect : E

Bed Material

Fines	Clay, silt, sand (<2mm):	10	10
Gravels	Small (2-16mm):	60	20
	Large (16-64mm):		40
Larges	Sm. cobble (64-128mm):	30	20
	Lge cobble (128-256mm):		5
	Bldr cobble (>256mm):		5
Bedrock		0	0

D90 (cm): 27 Compaction: Medium

Discharge

Wetted Width (m) :	1.6	MS
Mean Depth (m) :	0.1	MS
Mean Velocity (m/s) :	0.52	F
Discharge (m3/s) :	0.06	F

Banks

Height (m): 0.7

% Unstable: 40

Fines ☒ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: UC

Valley : Channel Ratio 10+

Stage: M Flood Signs Ht(m): 1

Bars (%): 10 pH: 7.3 Braided: Y

Water Temp. (°C): 8.0 02 (ppm):

Turb. (cm): 50 Cond. (µmhos):

Reach Symbol

(Fish)

DV

5 D 10.0 | 1630

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	DV	4	40-90	J				EL

Comments

C1 S3

C2 LS = 13%, RS = 13%

C3 No fisheries sensitive zones were noted at this site.

C4 The electroshocking effort, using a Smithroot 15 A model, was 152 seconds over 70 meters.

C5 Lat N 54 59' 09.9", Long w 126 42' 24.6"

C6 No additional bank texture information.

C7 DO and conductivity were not measured at this site. The water was clear to the bottom. The mean air temperature on this day was 14.5°C

C8 Excellent rearing and spawning habitat was observed at this site. Step pool habitat was noted.

Photo #: T-9-16, 1996/08/25
Site #: T164, Upstream view, Taka C.

Photo #: T-9-17, 1996/08/25
Site #: T164, Downstream view, Taka C.

DFO/MoELP Stream Survey Form

Site Number: TERRY 101

Reach No.: 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 101, Unit 9, see C5. | Stream (Gaz.): Unnamed | Watershed Code: 003-7500-000-000-000-000-000-000-000-000-000-0

Map #: 93 M 007 | Reach Length (km): 0.0 GE | Date: 15-Aug-96 | Time: 14:05 | Agency: TEC | Access: V2 | Fish Card: N | Field ☒ | Historical ☐

U.T.M. : 9 .6466 .61029 | Length surveyed (m): 0.0 | Survey Crew: HS \TD \ \ \ \ \ \ | Photos: T-5-22,23,24 | Air Photos:

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	0.0	MA

N Pool: 0 Riffle: 0 Run: 0 Other: 0

N % Side Channel:

N % Debris Area: 0 GE

%Stable: 0 GE

Specific Data

0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	0	0	0
0	0	0	0	0	0

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Cover

N Cover Total % : 0

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure % : 0 N Aspect :

Discharge

N Wetted Width (m) :

N Mean Depth (m) :

N Mean Velocity (m/s) :

N Discharge (m3/s) :

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

NF

0 E 0.0 | 0000

(Width, Valley: Channel, Slope) | (Bed Material)

N Confinement: N/A

N Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m): 0

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): 02 (ppm):

Turb. (cm): 0 Cond. (µmhos):

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC

C2 The side slopes were not measured.

C3 No fisheries sensitive zones noted.

C4 This site was not electrofished.

C5 Lat N 55 03' 04.4", Long W 126 42' 18.4"

C6 Bank texture not applicable.

C7 Water quality not applicable.

C8 No fish habtiat was observed at this site.

Photo #: T-5-22, 1996/08\15
Site #: T101, Cut block.

Photo #: T-5-23, 1996/08\15
Site #: T101, Not a creek.

Photo #: T-5-24, 1996/08\15
Site #: T101, Not a creek.

DFO/MoELP Stream Survey Form

Site Number: TERRY 98 **Reach No.:** 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 98, Unit 9, see C5. Stream (Gaz.): Unnamed Watershed Code: 003-7900-000-000-000-000-000-000-000-000-000-0

Map #: 93 M 007 Reach Length (km): 0.0 GE Date: 14-Aug-96 Time: 11:35 Agency: TEC Access: V2 Fish Card: N Field ☒ Historical ☐

U.T.M.: 9 .6458 .61020 Length surveyed (m): 0.0 Survey Crew: TD\HS\ \ \ \ \ \ \ Photos: T- 5 - 19 Air Photos:

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
	Gradient (%):	2.3	MA

N Pool: 0 Riffle: 0 Run: 0 Other: 0

N % Side Channel:

N % Debris Area: 0 GE

%Stable: 0 GE

Specific Data

0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	0	0	0
0	0	0	0	0	0

Bed Material

N	Fines	Clay, silt, sand (<2mm):	100	100
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction: Low

Cover

Cover Total %: 0 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure %: 0 Aspect: S

Discharge

N	Wetted Width (m):	0.0	
N	Mean Depth (m):	0.0	
N	Mean Velocity (m/s):	0.00	
N	Discharge (m3/s):		

Banks

Height (m): 0.0

% Unstable: 0

Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

Stage: Dry Flood Signs Ht(m): 0

Bars (%): 0 pH: 0.0 Braided: N

Water Temp. (°C): 0.0 02 (ppm): 0.0

Turb. (cm): 0 Cond. (µmhos): 0

Reach Symbol

(Fish)

NF

0 E 2.3 | F

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1: NC

C2: The side slopes were not measured.

C3: No fisheries sensitive zones noted.

C4: This site was not electrofished.

C5: Lat N 55 02' 36", Long W 126 43' 18".

C6: Bank texture not applicable.

C7: Water quality not applicable.

C8: No fish habitat was observed at this site.

Photo #: T-5-19, 1996/08\14
Site #: T98, Not a creek.

DFO/MoELP Stream Survey Form

Site Number: TERRY 100

Reach No.: 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 100, Unit 9, see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 003-8000-000-000-000-000-000-000-000-000-000-0

Map #: 93 M 007 **Reach Length (km):** 0.0 GE **Date:** 14-Aug-96 **Time:** 13:30 **Agency:** TEC **Access:** V2 **Fish Card:** N **Field** ☒ **Historical** ☐

U.T.M. : 9 .6449 .61012 **Length surveyed (m):** 0.0 **Survey Crew:** TD \HS \ \ \ \ \ \ \ **Photos:** T- 5 - 21 **Air Photos:**

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
	Gradient (%):	1.5	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:		GE
N	% Debris Area: 0		GE
	%Stable:	0	GE

Specific Data

0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	0	0	0
0	0	0	0	0	0

Cover

N Cover Total % : 0 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure % : 0 N Aspect : SE

Bed Material

N	Fines	Clay, silt, sand (<2mm):	100	100
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

NF

0 E 1.5 | F

(Width, Valley: Channel, Slope) (Bed Material)

N Confinement: N/A

Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m): 0

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): 02 (ppm):

Turb. (cm): 0 Cond. (µmhos):

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1 NC

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones were noted.

This site was not electrofished.

C5 Lat N 55 02' 13", Long W 126 43' 58".

C6 Bank texture not applicable.

C7 Water quality not applicable.

C8 A defined channel was not observed at this site.

Photo #: T-5-21, 1996/08\14
Site #: T100, Not a creek.

DFO/MoELP Stream Survey Form **Site Number:** W251 **Reach No.: 0**

Not a creek

TRITON Environmental Consultants Ltd.

Location: W251, Unit 9; 0.1km west of Fulton Cr. **Stream (Gaz.):** Unnamed **Watershed Code:** 003-8800-000-000-000-000-000-000-000-000-000-

Map #: 93 M 007 **Reach Length (km):** 0.0 MA **Date:** 09-Sep-97 **Time:** 11:00 **Agency:** TEC **Access:** V2 **Fish Card:** N **Field** ☒ **Historical** ☐

U.T.M. : 9 .6410 .61018 **Length surveyed (m):** 100.0 GE **Survey Crew:** DD \UP\ \ \ \ \ \ \ **Photos:** W-O-14,15 **Air Photos:**

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	6.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:	0	GE
N	% Debris Area:	0	GE
	%Stable:	0	GE

Specific Data

Cover

N Cover Total % : 0 GE

	Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
N	0	0	0	0	0	0

N Crown Closure % : 0 N Aspect : E

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m): 0

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): 02 (ppm):

Turb. (cm): Cond. (µmhos):

Reach Symbol

(Fish)

NF

0 E 6.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC.

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones noted.

C4 This site was not electrofished.

C5 No additional bank texture information.

C6 Water quality was not evaluated at this site. The air temperature at this site was 15.0 C.

C7 This site has been mechanically channelized for 25m below the road. From this point, the channel is discontinuous and disipatessipates into a willw swale. It is an ephemeral drainage, not a creek. There is absolutely no evidence of a channel above the road. There is a small amount of water flowing at the road but it dissipates underground.

Photo #: W-O-14, 09-Sep-97
Site #: W251, Looking downstream at the channel

Photo #: W-O-15, 09-Sep-97
Site #: W251, Looking upstream at the channel

DFO/MoELP Stream Survey Form **Site Number:** Y225 **Reach No.: 0**

Not a creek

TRITON Environmental Consultants Ltd.

Location: Y225, Unit 9 **Stream (Gaz.):** Unnamed **Watershed Code:** 080-2200-000-000-000-000-000-000-000-000-000-

Map #: 93 L 088 **Reach Length (km):** 0.0 GE **Date:** 07-Sep-97 **Time:** 14:58 **Agency:** TEC **Access:** V4 **Fish Card:** N **Field** ☒ **Historical** ☐

U.T.M. : 9 .655076.60850 **Length surveyed (m):** 100.0 GE **Survey Crew:** JP \FC\ \ \ \ \ \ \ **Photos:** Y-27-5,6,7 **Air Photos:**

Channel Characteristics

Specific Data

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	6.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:	0	GE
N	% Debris Area:	0	GE
	%Stable:	0	GE

Cover

N Cover Total % : 0 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure % : 0 N Aspect : E

Discharge

N	Wetted Width (m) :	
N	Mean Depth (m) :	
N	Mean Velocity (m/s) :	
N	Discharge (m3/s) :	

Reach Symbol

(Fish)

NF

0 E 6.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m):

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): 02 (ppm):

Turb. (cm): Cond. (µmhos):

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA			1	NA

Comments

C1 NC.

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones noted.

C4 This site was not electrofished.

C5 No additional bank texture information.

C6 Water quality was not evaluated at this site.

C7 This site consists of a grassy swale with some muddy areas but no flow and no continuous channel. This area had been clearcut about 10-12 years ago.

Photo #: Y-27-5, 07/09/97
Site #: Y225, Looking downstream at the channel, note thick overveg

DFO/MoELP Stream Survey Form

Site Number: Y226 **Reach No.:** 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: Y226, Unit 9; below the road crossing in the cutblock **Stream (Gaz.):** Unnamed **Watershed Code:** 080-2700-000-000-000-000-000-000-000-000-000-

Map #: 93 L 088 **Reach Length (km):** 0.0 GE **Date:** 07-Sep-97 **Time:** 17:00 **Agency:** TEC **Access:** V4 **Fish Card:** N Field ☒ Historical ☐

U.T.M. : 9 654761 6082194 **Length surveyed (m):** 200.0 GE **Survey Crew:** JP\FC\ \ \ \ \ \ \ **Photos:** Y-27-8 **Air Photos:**

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	5.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:	0	GE
N	% Debris Area:	0	GE
	%Stable:	0	GE

Specific Data

Cover

N Cover Total % : 0 GE

	Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
N	0	0	0	0	0	0

N Crown Closure % : 0 N Aspect : E

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

NF

0 E 5.0 | 0000

(Width, Valley: Channel, Slope) | (Bed Material)

Confinement: N/A

Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m):

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): 02 (ppm):

Turb. (cm): Cond. (µmhos):

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC.

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones noted.

C4 This site was not electrofished.

C5 No additional bank texture information.

C6 Water quality was not evaluated at this site.

C7 This site consists of isolated pools, dry channels and swampy areas everywhere. The area was walked and no defined channel could be found. There is evidence of flow everywhere, perhaps associated with the wet season, but there is no defined channel. A defined channel may be present near the mouth.

C8 Frogs were observed.

Photo #: Y-27-8, 07/09/97
Site #: Y226, Culvert at road crossing - NC

DFO/MoELP Stream Survey Form

Site Number: TERRY 150 **Reach No.: 0**

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 150, Unit 9, see C5, 1km N of Chapman lk. campground **Stream (Gaz.):** Unnamed **Watershed Code:** 080-3400-000-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 **Reach Length (km):** 0.0 GE **Date:** 23-Aug-96 **Time:** 9:00 **Agency:** TEC **Access:** V4 **Fish Card:** N **Field** ☒ **Historical** ☐

U.T.M. : 9 .6486 .60888 **Length surveyed (m):** 25.0 HC **Survey Crew:** GM \HK \ \ \ \ \ \ \ **Photos:** T- 8B - 14,15 **Air Photos:**

Channel Characteristics

	Av. Chan. Width (m):	2.0	GE
N	Av. Wet. Width (m):	0.0	
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	0.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
	% Side Channel:	0	
	% Debris Area:	0	GE
	%Stable:	0	GE

Specific Data

0

Cover

N Cover Total % : 0

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure % : 0 N Aspect :

Bed Material

Fines	Clay, silt, sand (<2mm):	100	100
Gravels	Small (2-16mm):	0	0
	Large (16-64mm):		0
Larges	Sm. cobble (64-128mm):	0	0
	Lge cobble (128-256mm):		0
	Bldr cobble (>256mm):		0
Bedrock		0	0

N D90 (cm): 0 Compaction: Low

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

NF

2 E 0.0 | F

(Width, Valley: Channel, Slope) (Bed Material)

N Confinement: N/A

N Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m): 0

N Bars (%): 0 pH: 0.0 Braided: N

N Water Temp. (°C): 0.0 02 (ppm): 0.0

Turb. (cm): 0 Cond. (µmhos): 0

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				EL

Comments

C1 NC

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones were noted at this site.

C4 This site was not electrofished.

C5 Lat N 54 55' 26.5 " Long W 126 40' 51.5"

C6 No additional bank texture information.

C7 Water quality was not evaluated at this site.

C8 This site does not contain fish habitat.

C9 Standing water associated with runoff was observed at this site.

Photo #: T-8b-14, 1996/08/23
Site #: T150, Not a creek, culvert at road.

Photo #: T-8b-15, 1996/08/23
Site #: T150, Not a creek, taken from road.

DFO/MoELP Stream Survey Form

Site Number: TERRY 122

Reach No.: 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 122, Unit 9, see C5. Stream (Gaz.): Unnamed Watershed Code: 080-3500-000-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 Reach Length (km): 0.0 GE Date: 18-Aug-96 Time: 14:00 Agency: TEC Access: V2 Fish Card: N Field ☒ Historical ☐

U.T.M. : 9 .6483 .60892 Length surveyed (m): 20.0 GE Survey Crew: \TDH\S \ \ \ \ \ \ Photos: T-7-9 Air Photos:

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
	Gradient (%):	0.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:		
N	% Debris Area: 0		GE
	%Stable:	0	GE

Specific Data

0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0
0	0	0	0	0	0
0	0	0	0	0	0

Cover

N Cover Total % : 0

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure % : 0 N Aspect :

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 Compaction:

Discharge

N	Wetted Width (m) :	0.0
N	Mean Depth (m) :	0.0
N	Mean Velocity (m/s) :	0.00
N	Discharge (m3/s) :	

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

N Confinement: N/A

N Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m): 0

N Bars (%): 0 pH: 0.0 Braided: N

N Water Temp. (°C): 0.0 02 (ppm): 0.0

Turb. (cm): 0 Cond. (µmhos): 0

Reach Symbol

(Fish)

NF

0 E 0.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones were noted at this site.

C4 This site was not electrofished.

C5 Lat N 54 55' 39", Long W 126 41' 08"

C6 No additional bank texture information.

C7 Water quality was not evaluated at this site.

C8 No defined channel was observed at this site.

Photo #: T-7-9, 1996/08/18
Site #: T122, Not a creek.

DFO/MoELP Stream Survey Form

Site Number: TERRY 121 **Reach No.: 0**

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 121, Unit 9, see C5. Stream (Gaz.): Unnamed Watershed Code: 080-3800-000-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 Reach Length (km): 0.0 GE Date: 18-Aug-96 Time: 13:30 Agency: TEC Access: V2 Fish Card: N Field ☒ Historical ☐

U.T.M.: 9 .6483 .60894 Length surveyed (m): 20.0 GE Survey Crew: TD \HS \ \ \ \ \ \ Photos: T-7-8 Air Photos:

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
	Gradient (%):	0.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:		
N	% Debris Area: 0		GE
	%Stable:	0	GE

Specific Data

0.0	0.0	0.0	0.0	0.0	0.0	
0.0	0.0	0.0	0.0	0.0	0.0	
0	0	0	0	0	0	
0	0	0	0	0	0	

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 Compaction:

Cover

N Cover Total %: 0

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure %: 0 N Aspect:

Discharge

N	Wetted Width (m):	0.0
N	Mean Depth (m):	0.0
N	Mean Velocity (m/s):	0.00
N	Discharge (m3/s):	

Reach Symbol

(Fish)

NF

0 E 0.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

N Confinement: N/A

N Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m): 0

N Bars (%): 0 pH: 0.0 Braided: N

N Water Temp. (°C): 0.0 02 (ppm): 0.0

Turb. (cm): 0 Cond. (µmhos): 0

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones were noted at this site.

C4 This site was not electrofished.

C5 Lat N 54 55' 53.2", Long W 126 47' 24"

C6 No additional bank texture information.

C7 Water quality was not evaluated at this site.

C8 This is an alder swale not a creek. No fish habitat is present at this site.

Photo #: T-7-8, 1996/08/18
Site #: T121, Not a creek, dogwood and willows.

DFO/MoELP Stream Survey Form

Site Number: TERRY 181 **Reach No.: 0**

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 181, Unit 9, see C5. Stream (Gaz.): Unnamed Watershed Code: 080-4100-000-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 Reach Length (km): 0.0 GE Date: 27-Aug-96 Time: 11:20 Agency: TEC Access: V4 Fish Card: N Field ☒ Historical ☐

U.T.M. : 9 .6451 .60911 Length surveyed (m): 100.0 GE Survey Crew: GM \HK \ \ \ \ \ \ \ Photos: None Air Photos:

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	4.0	CL

N Pool: 0 Riffle: 0 Run: 0 Other: 0

N % Side Channel:

% Debris Area: 0 GE

%Stable: 0 GE

Specific Data

Cover

N Cover Total % : 0

	Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
N	0	0	0	0	0	0

N Crown Closure % : 0 N Aspect :

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 Compaction:

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

Stage: Dry N Flood Signs Ht(m):

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): 02 (ppm):

Turb. (cm): Cond. (µmhos):

Reach Symbol

(Fish)

NF

0 E 4.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1: NC

C2: LS = 15%, RS = 20%

C3: No fisheries sensitive zones were noted at this site.

C4: This site was not electrofished.

C5: Lat N 54 56' 52.2", Long W 126 44' .06"

C6: No additional bank texture information.

C7: Water quality was not evaluated at this site.

C8: No additional fish habitat information.

C9: A gully, not a creek occurs at this site. However, it may become a creek further downslope. This area should be checked out.

DFO/MoELP Stream Survey Form

Site Number: Y50

Reach No.: 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: Y50, Unit 9 | **Stream (Gaz.):** Unnamed | **Watershed Code:** 080-5000-000-000-000-000-000-000-000-000-000-

Map #:	93 L 097	Reach Length (km):	0.0	MA	Date:	18-Jul-97	Time:	13:30	Agency:	TEC	Access:	M	Fish Card:	N	Field ☒ Historical ☐
U.T.M. :	9 .6503 .60930	Length surveyed (m):	100.0	GE	Survey Crew:	DD\SJ\ \ \ \ \ \ \			Photos:			Y-7-8,9	Air Photos:		

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	2.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other:	0	
N	% Side Channel:	0	GE
N	% Debris Area:	0	GE
	%Stable:	0	GE

Specific Data

Cover

N Cover Total % : 0 GE

	Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
N	0	0	0	0	0	0

N Crown Closure % : 0 N Aspect : S

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):		0
		Lge cobble (128-256mm):	0	0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

NF

0 E 2.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

Confinement: N/A

Valley : Channel Ratio | N/A |

N Stage: Dry N Flood Signs Ht(m):

N Bars (%): 0 pH: | Braided: N

N Water Temp. (°C): | 02 (ppm):

Turb. (cm): Cond. (µmhos):

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC.

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones noted.

C4 This site was not electroshocked.

C5 No additional bank texture information.

C6 Water quality was not evaluated at this site.

C7 This may have been an S4 at one time, but it has been totally obliterated by logging activity. At the time of sampling it was no more than a small gulley. No channel was located.

Photo #: Y-7-8, 18/07/97
Site #: Y50, Looking upslope at the channel.

Photo #: Y-7-9, 18/07/97
Site #: Y50, Looking downslope at the channel,note the condition of the culvert.

DFO/MoELP Stream Survey Form

Site Number: Y52

Reach No.: 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: Y52, Unit 9 | **Stream (Gaz.):** Unnained | **Watershed Code:** 080-5400-000-000-000-000-000-000-000-000-000-

Map #: 93 L 097 | **Reach Length (km):** 0.0 | MA | **Date:** 18-Jul-97 | **Time:** 15:45 | **Agency:** TEC | **Access:** M | **Fish Card:** N | **Field** ☒ **Historical** ☐

U.T.M.: 9 .6495 .60968 | **Length surveyed (m):** 50.0 | GE | **Survey Crew:** DD \SJ\ \ \ \ \ \ \ | **Photos:** Y-7-14 | **Air Photos:**

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	7.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:	0	GE
N	% Debris Area:	0	GE
	%Stable:	0	GE

Specific Data

Cover

N Cover Total % : 0 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure % : 0 N Aspect : W

Discharge

N	Wetted Width (m) :	
N	Mean Depth (m) :	
N	Mean Velocity (m/s) :	
N	Discharge (m3/s) :	

Reach Symbol

(Fish)

NF

0 E 7.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):		0
		Lge cobble (128-256mm):	0	0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m):

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): 02 (ppm):

Turb. (cm): Cond. (µmhos):

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1: NC.

C2: The side slopes at this site were not measured.

C3: No fisheries sensitive zones noted.

C4: This site was not electroshocked.

C5: No additional bank texture information.

C6: Water quality was not evaluated at this site.

C7: The only evidence of a creek at this site is a culvert, no channel was found.

Photo #: Y-7-14, 18/07/97
Site #: Y52, An NC, with culvert, fireweed, alder and grasses.

DFO/MoELP Stream Survey Form **Site Number:** E7 **Reach No.: 0**

Not a creek

TRITON Environmental Consultants Ltd.

Location: E7, Unit 9 Stream (Gaz.): Unnamed Watershed Code: 080-5600-000-000-000-000-000-000-000-000-000-

Map #: 93 L 097 Reach Length (km): 0.0 GE Date: 10-Jul-97 Time: 10:11 Agency: TEC Access: V2 Fish Card: N Field ☒ Historical ☐

U.T.M. : 9 .6486 .60932 Length surveyed (m): 100.0 GE Survey Crew: JL \EM\ \ \ \ \ \ \ Photos: E-1-9,10 Air Photos:

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	12.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:	0	GE
N	% Debris Area:	0	GE
	%Stable:	0	GE

Specific Data

Cover

N Cover Total % : 0 GE

	Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
N	0	0	0	0	0	0

N Crown Closure % : 0 N Aspect : SW

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0 % Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m):

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): 02 (ppm):

Turb. (cm): Cond. (µmhos):

Reach Symbol

(Fish)

NF

0 E 12.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC.

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones noted.

C4 This site was not electrofished.

C5 No additional bank texture information.

C6 Water quality was not evaluated at this site.

C7 This is not a creek, it is an alder swale. Three isolated pools were observed in the sampling area. They were approximately 40cm in diameter, 20cm deep and filled with leaf litter.

Photo #: E-1-9, 09-Jul-97
Site #: E7, Looking downstream at the channel.

Photo #: E-1-10, 10-Jul-97
Site #: E7, Looking upstream at the channel.

DFO/MoELP Stream Survey Form

Site Number: Y54

Reach No.: 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: Y54, Unit 9 | **Stream (Gaz.):** Unnamed | **Watershed Code:** 080-5900-000-000-000-000-000-000-000-000-000-

Map #:	93 L 097	Reach Length (km):	0.0	MA	Date:	18-Jul-97	Time:	18:30	Agency:	TEC	Access:	M	Fish Card:	N	Field ☒ Historical ☐
U.T.M.:	9 .6470 .60943	Length surveyed (m):	100.0	GE	Survey Crew:	DD\SJ\ \ \ \ \ \ \			Photos:		Y-7-20		Air Photos:		

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	4.0	MA
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:	0	GE
N	% Debris Area:	0	GE
	%Stable:	0	GE

Specific Data

Cover

N Cover Total % : 0 GE

	Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
N	0	0	0	0	0	0

N Crown Closure % : 0 N Aspect : SE

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
		Sm. cobble (64-128mm):		0
N	Larges	Lge cobble (128-256mm):	0	0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Discharge

N	Wetted Width (m) :	
N	Mean Depth (m) :	
N	Mean Velocity (m/s) :	
N	Discharge (m3/s) :	

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Confinement: N/A

Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m):

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): O2 (ppm):

Turb. (cm): Cond. (µmhos):

Reach Symbol

(Fish)

NF

0 E 4.0 | 0000

(Width, Valley: Channel, Slope) | (Bed Material)

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC.

C2 The side slopes were not measured at this site.

C3 No fisheries sensitive zones were noted.

C4 This site was not electroshocked.

C5 No additional bank texture information.

C6 Water quality was not evaluated at this site.

C7 This is just a large dry swale which once held water backed up by the road. Essentially it is just a gulley below the road. There is no culvert.

Photo #: Y-7-20, 18/07/97
Site #: Y54, An NC, with woody debris,grasses and willow.

Photo #: T-9-10, 1996/08/25
Site #: T161, Downstream view from road.

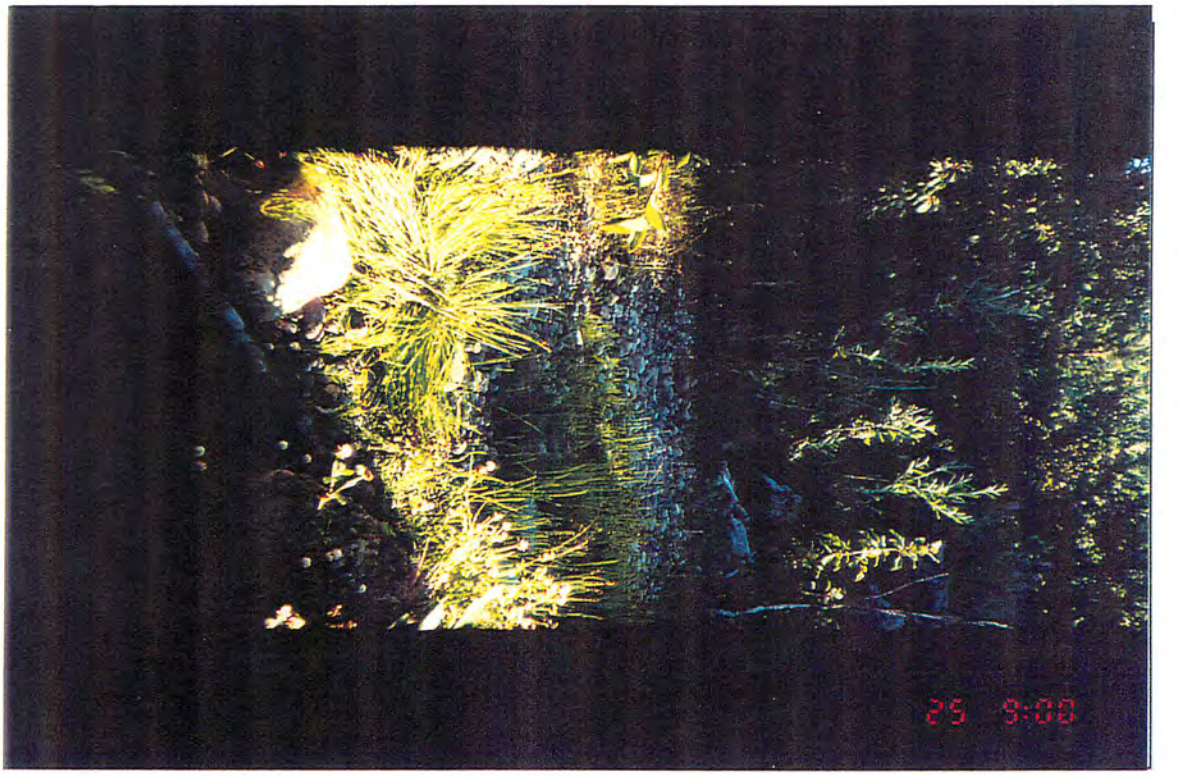


Photo #: T-9-11, 1996/08/25
Site #: T161, Upstream view from road.

DFO/MoELP Stream Survey Form

Site Number: TERRY 161 **Reach No.: 0**

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 161, Unit 9, Bulkley forest district, see C5 **Stream (Gaz.):** Unnamed **Watershed Code:** 080-7600-000-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 **Reach Length (km):** 0.0 GE **Date:** 25-Aug-96 **Time:** 8:40 **Agency:** TEC **Access:** V4 **Fish Card:** N Field ☒ Historical ☐

U.T.M.: 9 .6422 .60965 **Length surveyed (m):** 75.0 GE **Survey Crew:** GM \HK \ \ \ \ \ \ \ **Photos:** T-9-10,11 **Air Photos:**

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	2.0	CL

N Pool: 0 Riffle: 0 Run: 0 Other: 0

N % Side Channel:

% Debris Area: 0 GE

%Stable: 0 GE

Specific Data

Cover

N Cover Total % : 0

	Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
N	0	0	0	0	0	0

N Crown Closure % : 0 Aspect : W

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 Compaction:

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

NF

0 E 2.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

N Confinement: N/A

N Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m):

N Bars (%): 0 pH: Braided: N

Water Temp. (°C): 02 (ppm):

Turb. (cm): 0 Cond. (µmhos):

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC

C2 LS = 6%, RS = 12%

C3 No fisheries sensitive zones were noted at this site.

C4 No electroshocking was carried out at this site.

C5 Lat N 54 59' 55.3", Long W 126 46' 35.6"

C6 No additional bank texture information.

C7 Water quality measurements were not taken at this site.

C8 No fish habitat is present at this site, which is a small drainage channel associated with a culvert.

C9 The channel runs for 15m on both sides of the road. The west side of the channel ends in a cluster of willow and alder, while the east side of the channel ends in a cluster of spruce.

DFO/MoELP Stream Survey Form

Site Number: W270

Reach No.: 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: W270, Unit 9 | **Stream (Gaz.):** Unnamed | **Watershed Code:** 080-7900-000-000-000-000-000-000-000-000-000-

Map #: 93 L 097 | **Reach Length (km):** 0.0 GE | **Date:** 13-Sep-97 | **Time:** 10:45 | **Agency:** TEC | **Access:** V2 | **Fish Card:** N | Field ☒ Historical ☐

U.T.M.: 9 .6540 .60954 | **Length surveyed (m):** 70.0 GE | **Survey Crew:** DD \JP\ \ \ \ \ \ \ | **Photos:** W-Q-9 | **Air Photos:**

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
	Gradient (%):	4.0	MA

N Pool: 0 Riffle: 0 Run: 0 Other: 0

N % Side Channel: GE

N % Debris Area: 0 GE

%Stable: 0 GE

Specific Data

Cover

N Cover Total % : 0 GE

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure % : N Aspect : NW

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 N Compaction:

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

NF

0 E 4.0 | 0000

(Width, Valley: Channel, Slope) | (Bed Material)

Confinement: N/A

Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m): 0

N Bars (%): 0 pH: Braided: N

N Water Temp. (°C): 02 (ppm):

Turb. (cm): Cond. (µmhos):

Obstructions

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC

C2 Side slopes not applicable.

C3 No fisheries sensitive zones present.

C4 No electroshocking effort.

C5 Bank texture not applicable.

C6 Water quality not applicable.

C7 This is an alder gully in a 30-40 year old cutblock. No evidence of a channel was found.

Photo #: W-Q-9, 13-Sep-97
Site #: W270, Looking at an "NC"

DFO/MoELP Stream Survey Form

Site Number: TERRY 171 **Reach No.: 0**

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 171, Unit 9, 350m south of the logging road by Hagarty L., see C5. **Stream (Gaz.):** Unnamed **Watershed Code:** 080-8400-000-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 **Reach Length (km):** 0.0 GE **Date:** 25-Aug-96 **Time:** 18:20 **Agency:** TEC **Access:** V2 **Fish Card:** N Field ☒ Historical ☐

U.T.M. : 9 .6444 .60935 **Length surveyed (m):** 30.0 GE **Survey Crew:** GM \HK \ \ \ \ \ \ \ **Photos:** None **Air Photos:**

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	2.0	CL
N	Pool: 0 Riffle: 0 Run: 0 Other: 0		
N	% Side Channel:		
	% Debris Area:	0	GE
	%Stable:	0	GE

Specific Data

Cover

N Cover Total % : 0

	Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
N	0	0	0	0	0	0

N Crown Closure % : 0 N Aspect :

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 Compaction:

Discharge

N	Wetted Width (m) :		
N	Mean Depth (m) :		
N	Mean Velocity (m/s) :		
N	Discharge (m3/s) :		

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

Reach Symbol

(Fish)

NF

0 E 2.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

N Confinement: N/A

N Valley : Channel Ratio N/A

N Stage: Dry Flood Signs Ht(m):

Bars (%): 0 pH: Braided: N

Water Temp. (°C): 02 (ppm):

Turb. (cm): Cond. (µmhos):

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1: NC

C2: LS = 4%, RS = 15%

C3: No fisheries sensitive zones were noted at this site.

C4: No electroshocking was carried out at this site.

C5: Lat N 54 58' 12.6", Long W 126 44' 27.7"

C6: No additional bank texture information.

C7: Water quality was not evaluated at this site.

C8: No fish habitat occurs at this site, which is an alder swale.

DFO/MoELP Stream Survey Form

Site Number: TERRY 168

Reach No.: 0

Not a creek

TRITON Environmental Consultants Ltd.

Location: TERRY 168, Unit 9, 400m from the turnoff to Chapman L., See C5.

Stream (Gaz.): Unnamed

Watershed Code: 080-8600-000-000-000-000-000-000-000-000-000-0

Map #: 93 L 097 **U.T.M. :** 9 .6438 .60932

Reach Length (km): 0.0 GE **Length surveyed (m):** 50.0 GE

Date: 25-Aug-96 **Time:** 17:10 **Agency:** TEC **Access:** H **Fish Card:** N Field ☒ Historical ☐

Survey Crew: GM \HK \ \ \ \ \ \ \ **Photos:** None **Air Photos:**

Channel Characteristics

N	Av. Chan. Width (m):	0.0	GE
N	Av. Wet. Width (m):	0.0	GE
N	Av. Max Riffle Depth (cm):	0	GE
N	Av. Max Pool Depth (cm):	0	GE
N	Gradient (%):	3.0	CL

N Pool: 0 Riffle: 0 Run: 0 Other: 0

N % Side Channel:

% Debris Area: 0 GE

%Stable: 0 GE

Specific Data

Cover

N Cover Total % : 0

Pool	LOD	Bldr	In Veg	O Veg	Ctbnk
0	0	0	0	0	0

N Crown Closure % : 0 N Aspect :

Bed Material

N	Fines	Clay, silt, sand (<2mm):	0	0
N	Gravels	Small (2-16mm):	0	0
		Large (16-64mm):		0
N	Larges	Sm. cobble (64-128mm):	0	0
		Lge cobble (128-256mm):		0
		Bldr cobble (>256mm):		0
N	Bedrock		0	0

N D90 (cm): 0 Compaction:

Discharge

N Wetted Width (m) :

N Mean Depth (m) :

N Mean Velocity (m/s) :

N Discharge (m3/s) :

Banks

N Height (m): 0.0

% Unstable: 0

N Fines ☐ Gravels ☐ Larges ☐ Bedrock ☐

N Confinement: N/A

N Valley : Channel Ratio N/A

N Stage: Dry N Flood Signs Ht(m):

N Bars (%): 0 pH: Braided: N

Water Temp. (°C): 02 (ppm):

Turb. (cm): Cond. (µmhos):

Reach Symbol

(Fish)

NF

0 E 3.0 | 0000

(Width, Valley: Channel, Slope) (Bed Material)

Obstructions

C	Height (m)	Type	Location

Fish Summary

C	Species	Number	Size Range (mm)	Life Phase	Use 1	Use 2	Use 3	Method
	NF			NA				NA

Comments

C1 NC

C2 LS = 15%, RS = 12%

C3 No fisheries sensitive zones were noted at this site.

C4 No electroshocking was carried out at this site.

C5 Lat N 54 58' 06.8", Long W 126 44' 57.6"

C6 No additional bank texture information.

C7 Water quality was not evaluated at this site.

C8 This is an alder swale, not a creek. No fish habitat occurs at this site.

5.16 Fish Age, Growth and Other Observations

Fish catch data were compiled for all records that contained a discrete size measurement. These data were summarised and plotted in histograms by species, the results are presented in Figures 2a through 2i. Species caught in Working Unit 9 included rainbow trout, Dolly Varden, burbot, prickly sculpin, cutthroat trout, longnose dace, mountain whitefish, red sided shiner, and salmon (general). The following table summarises the numbers of fish caught in each size class.

Table 8. Catch Data by Species and by Size Class (mm) in Working Unit 9

	RB	DV	BB	CAS	CT	LNC	RMW	RSC	SA
0-25		1			2				2
25-50	4	14			6			1	
50-75	5	10		2	15				
75-100	3	15			14				1
100-125	1	14	1		3	1		1	
125-150	1	12			5				
150-175		4	1						
175-200		1	1				1		
200-225		2							
225-250									
250-275									
275-300									
300-325									
325-350									
350-375									
375-400									
400-425									
425-450									
450-475									
475-500					2				
>500									

5.17 Rare and Endangered Species

No rare or endangered species were observed in this working unit.

5.18 Wildlife Observations

A variety of wildlife species and signs were observed in this working unit. Loons, goldeneyes, tadpoles and frogs were observed in this working area as were beaver, moose and bear sign. Beaver dams and ponds were the most commonly observed wildlife signs in working unit 9. **Table 7** summarizes the wildlife and wildlife signs observed in working unit 9.

5.19 Recommendations for Future Sampling

A list of all sites for which future sampling is recommended in unit 9 is provided in Table 6. At a minimum however, future sampling should be carried out in the following reaches:

- J171, reach 2 of Cronin Creek,
- B94, reach 2 of Higgins Creek,
- H97, reach 1 of an unnamed tributary to McKendrick Creek,

Sites J171 and B94 are on large creeks, with potential gradient barriers downstream of the sample sites and should be revisited. H97, flows directly into McKendrick Creek, a productive fish bearing stream. This small system should be accessible to fish through reach 1 and part of reach 2 and provide habitat for Dolly Varden. Future sampling is therefore recommended.

6.0 CONCLUSION AND RECOMMENDATIONS

Barriers which delineate or are assumed to delineate the upper limits of fish distribution within a given watershed, were noted on the following streams inventoried in working unit 9:

- Debenture Creek
- Fink Creek
- Haystack Creek
- Little Joe Creek
- McKendrick Creek

Barriers are also assumed to be present on the Cronin Creek system. The remaining systems sampled in this inventory appear to have no significant barriers limiting fish distribution. This working unit is quite productive for fish, with trout visually observed through the headwaters of the Fulton River.

7.0 REFERENCES

Department of Fisheries & Oceans and Ministry of Environment. 1989. Fish Habitat Inventory & Information Program: Stream Survey Field Guide. Department of Fisheries & Oceans and Ministry of Environment.

Haas, G.R. and JD McPhail. 1991. Systematics and distributions of Dolly Varden (*Salvelinus malma*) and bull trout (*Salvelinus confluentus*) in North America. Canadian Journal of Fisheries and Aquatic Sciences 48:2191-2211.

Province of British Columbia. 1996. Resource Inventory Committee (RIC): Fish Sampling Manual (Originally called Fish Collection, Preservation, Measurement and Enumeration Manual, RIC Draft 1994).

Province of British Columbia. 1995a. Forest Practices Code: Fish-stream Identification Guidebook, July 1995.

Province of British Columbia. 1995b. Forest Practices Code: Riparian Management Area Guidebook, Draft 2.

Province of British Columbia. 1995c. Gully Assessment Procedure Guidebook, April 1995.

Province of British Columbia. 1995d. Resource Inventory Committee (RIC): BC Standards, Specifications and Guidelines for Resource Surveys Using Global Positioning Systems (GPS) Technology.

Province of British Columbia. 1993. Resource Inventory Committee (RIC): Field Key to the Freshwater Fishes of British Columbia.

Saimoto, R.S. 1996. Literature Review for Stream Inventory in the Bulkley Forest District.

LEGEND

- River / Stream
- Lakes
- Highway
- Railway
- 093M.000 UTM Mapsheet
- Watershed Boundary
- Unit Boundaries (by mapsheet)
- Study Area (by mapsheet)

INSET MAP

BABINE RIVER WATERSHED
KISPIOX RIVER WATERSHED
BULKLEY RIVER WATERSHED
BABINE LAKE WATERSHED
BABINE RIVER WATERSHED
UNIT 9

HAZELTON
SOUTH HAZELTON
SMITHERS
TELKWA
HOUSTON

Skeena River
Nilkitkwa River
Babine River
Kispiox River
Shegunia River
Nichyeskwa Cr.
Suskwa River
Driftwood River
Harold Price Cr.
Kitwancool River
Bulkley River
Blunt Cr
Babine Lake
Kisegueela River
Kitsuns Cr.
Fulton River
Red Canyon Cr.
Serb Cr.
Telkwa River
Zymoetz River
Clore River
Kitnayakwa River

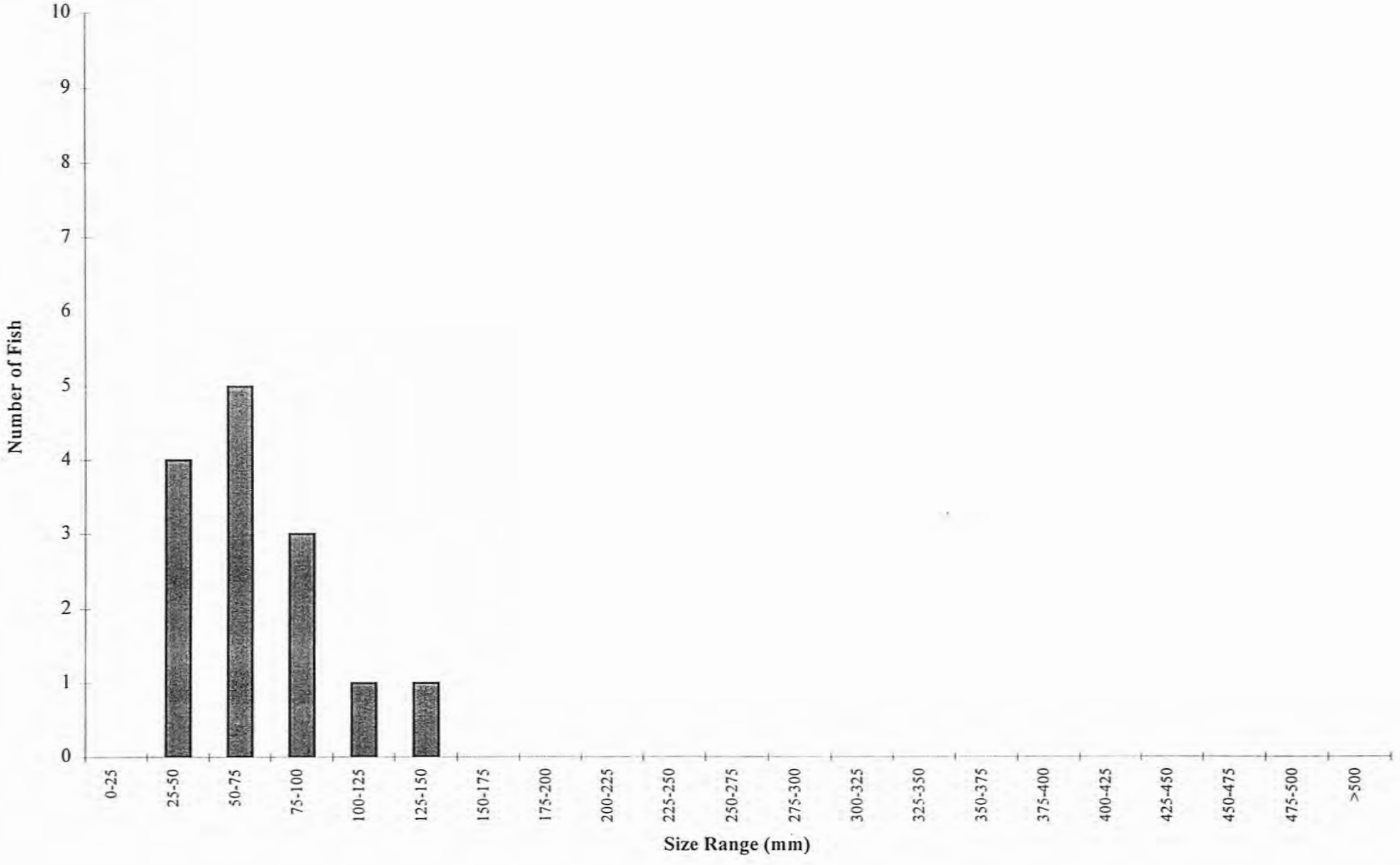
093M.095 093M.096
093M.085 093M.086 093M.087
093M.075 093M.076 093M.077
093M.067 093M.068
093M.066
093M.055 093M.056 093M.057 093M.058
093M.045 093M.046 093M.047 093M.048
093M.035 093M.036 093M.037 093M.038
093M.024 093M.026 093M.027 093M.028
093M.025
093M.013 093M.014 093M.015 093M.016 093M.017 093M.018
093M.002
093M.003 093M.004 093M.005 093M.006 093M.007 093M.008
103I.100 093L.091 093L.092 093L.093 093L.094 093L.095 093L.096 093L.097 093L.098
103I.090 093L.081 093L.082 093L.083 093L.084 093L.085 093L.086 093L.087 093L.088
103I.080 093L.071 093L.072 093L.073 093L.074 093L.075 093L.076 093L.077
093L.061 093L.062 093L.063 093L.064 093L.065 093L.066 093L.067
093L.052 093L.053 093L.054 093L.055 093L.056 093L.057
093L.042 093L.043 093L.044 093L.045

FISH AND FISH HABITAT INVENTORY IN THE BULKLEY FOREST DISTRICT	Sources : 1 : 20,000 TRIM B.C. Watershed Atlas 1 : 50,000 M.O.E.L.P	5 0 5 10 15 20 Kilometers 1 : 500,000
UNIT 9 OVERVIEW MAP Project ID : 2565	Projection : UTM Zone 9 Datum : NAD83 Created : February, 1998	TRITON Environmental Consultants Ltd.

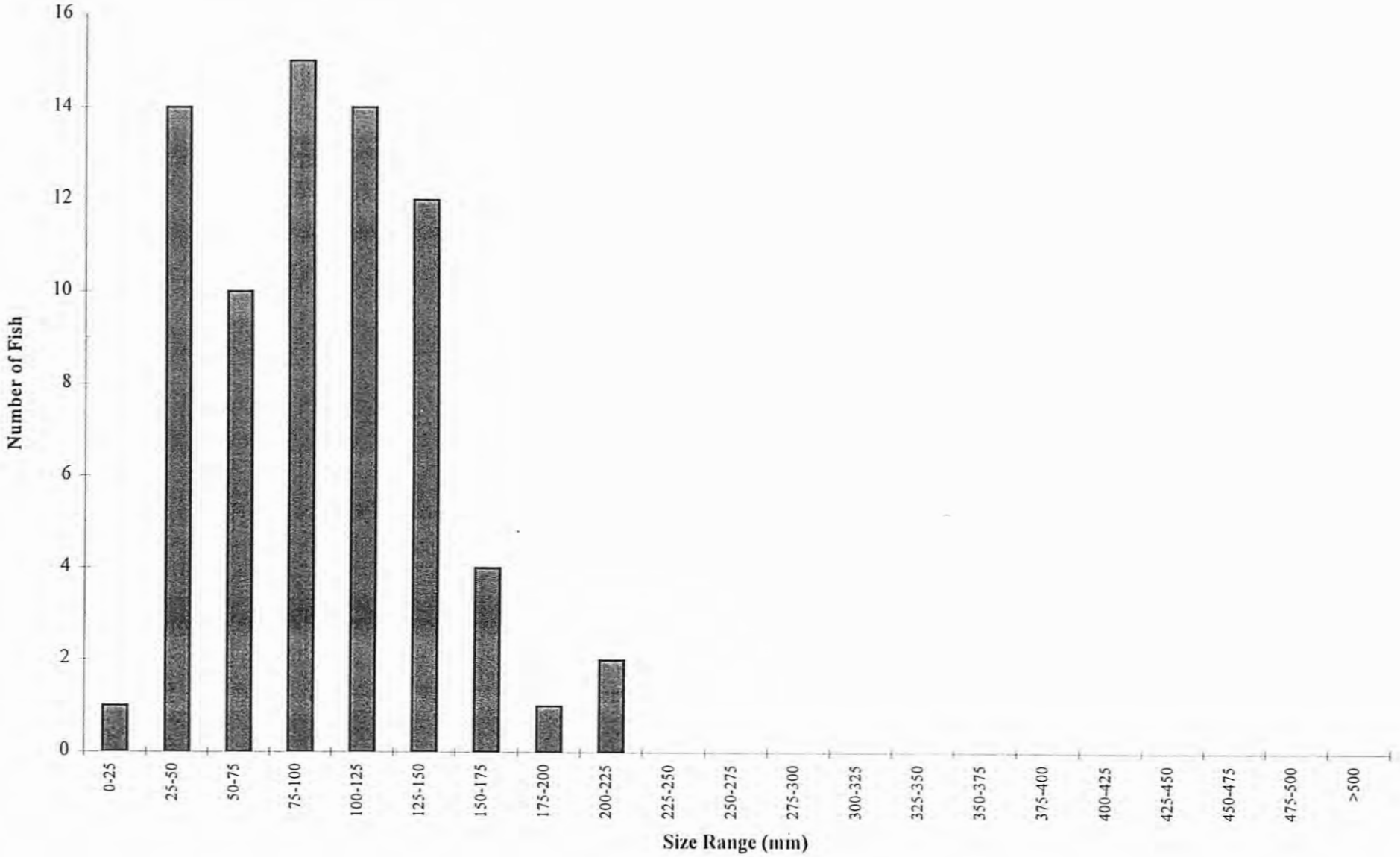
FIGURE 1

MAp 256506223

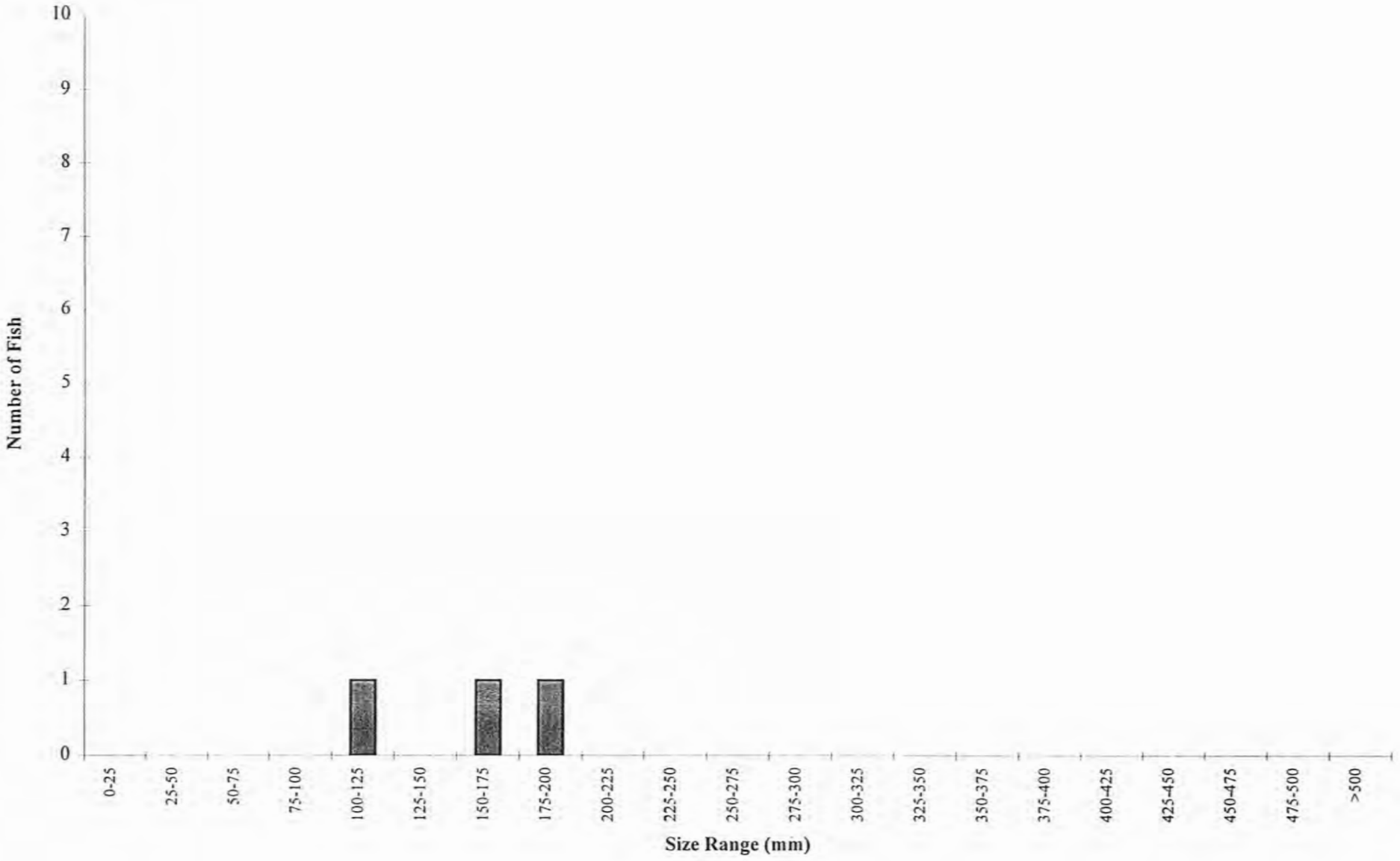
Working Unit 9 - Rainbow Trout



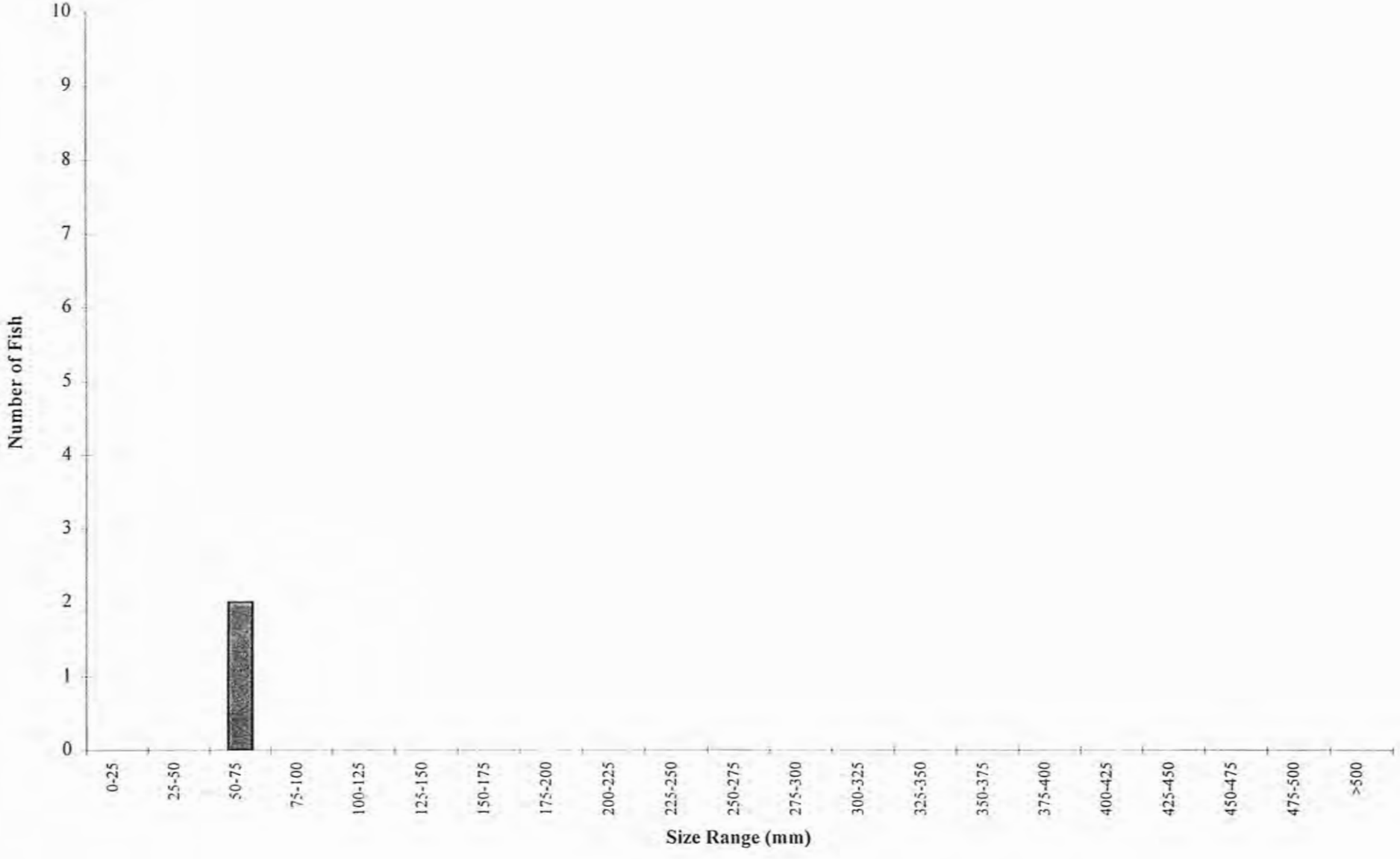
Working Unit 9 - Dolly Varden



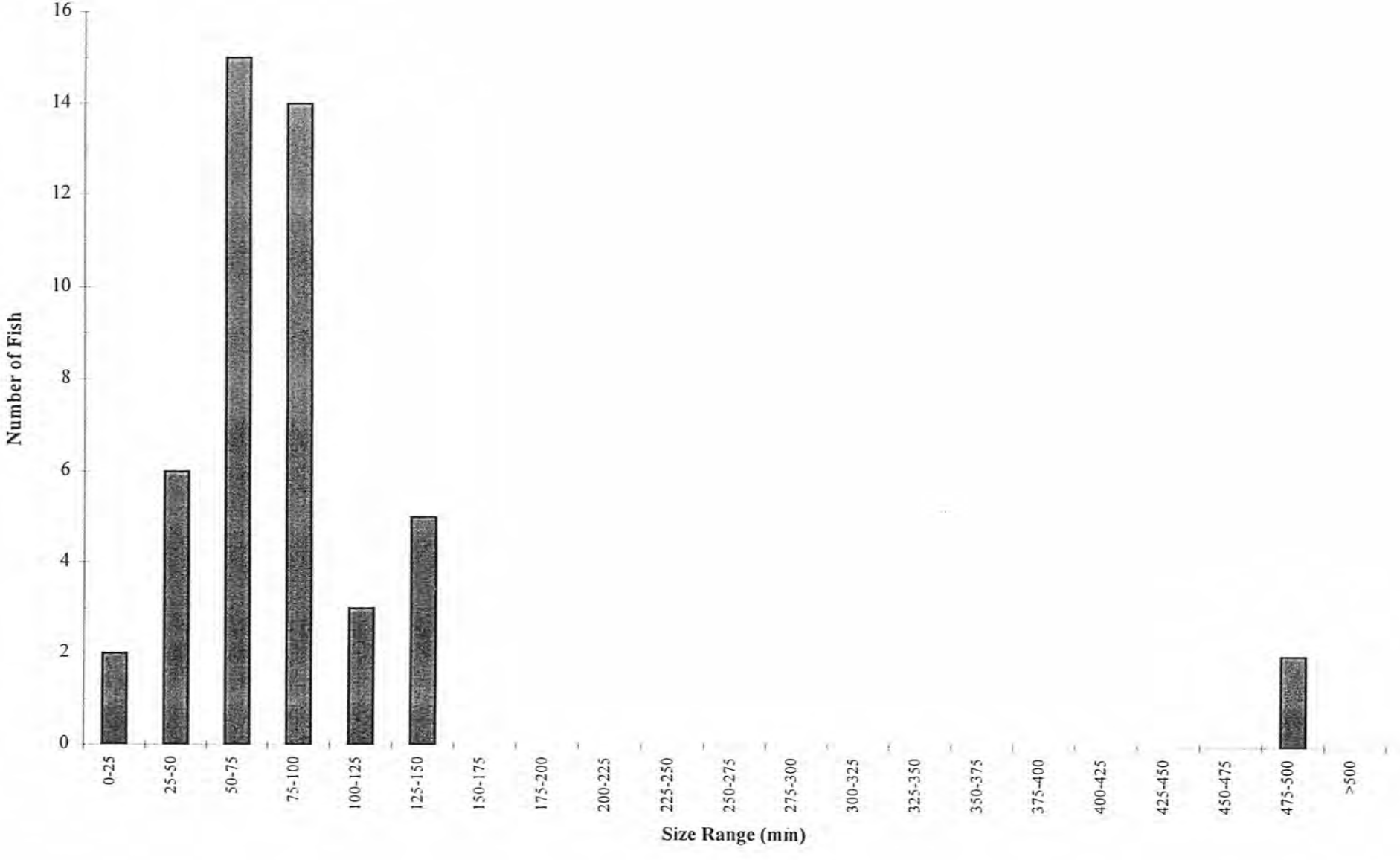
Working Unit 9 - Burbot



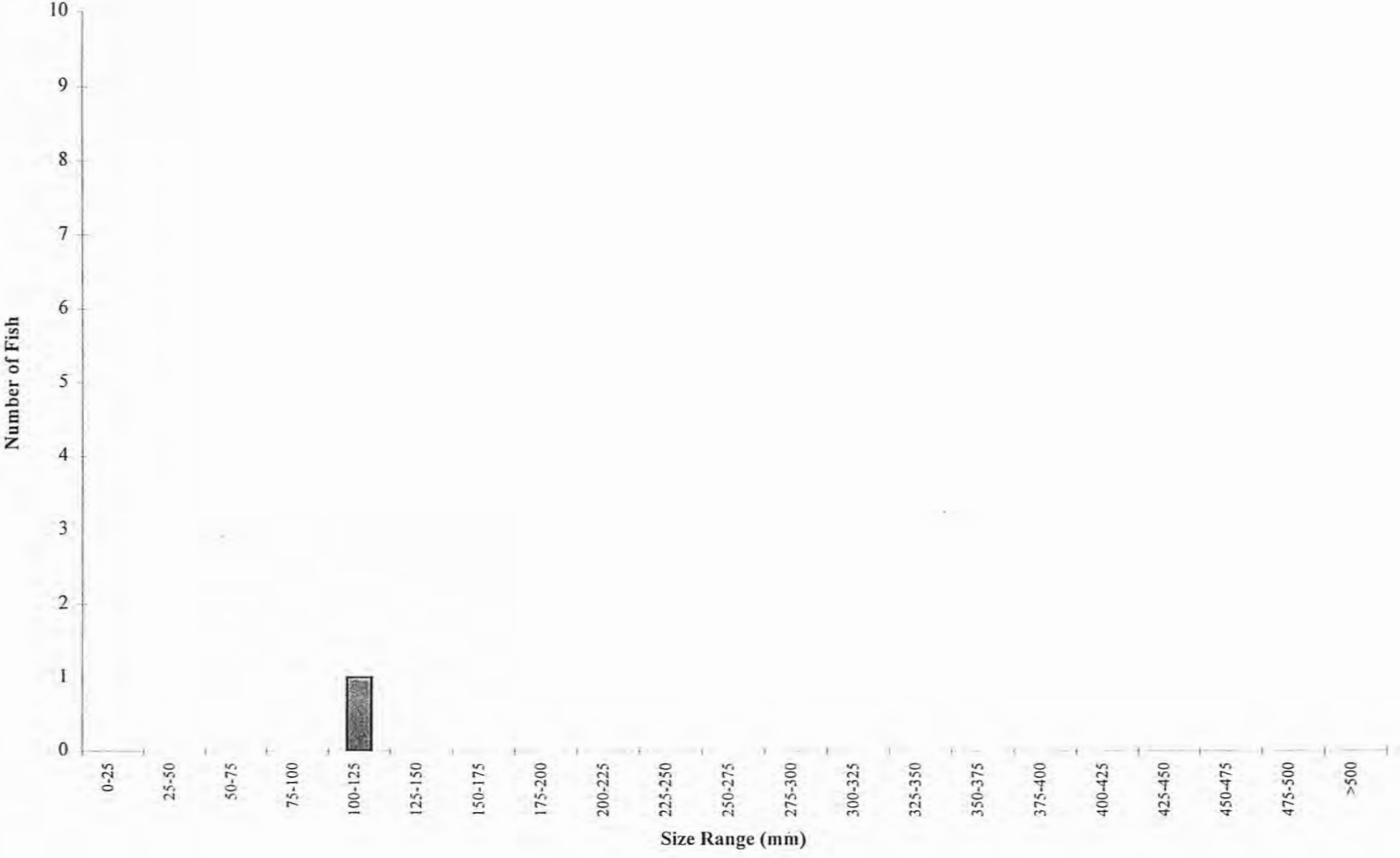
Working Unit 9 - Prickly Sculpin



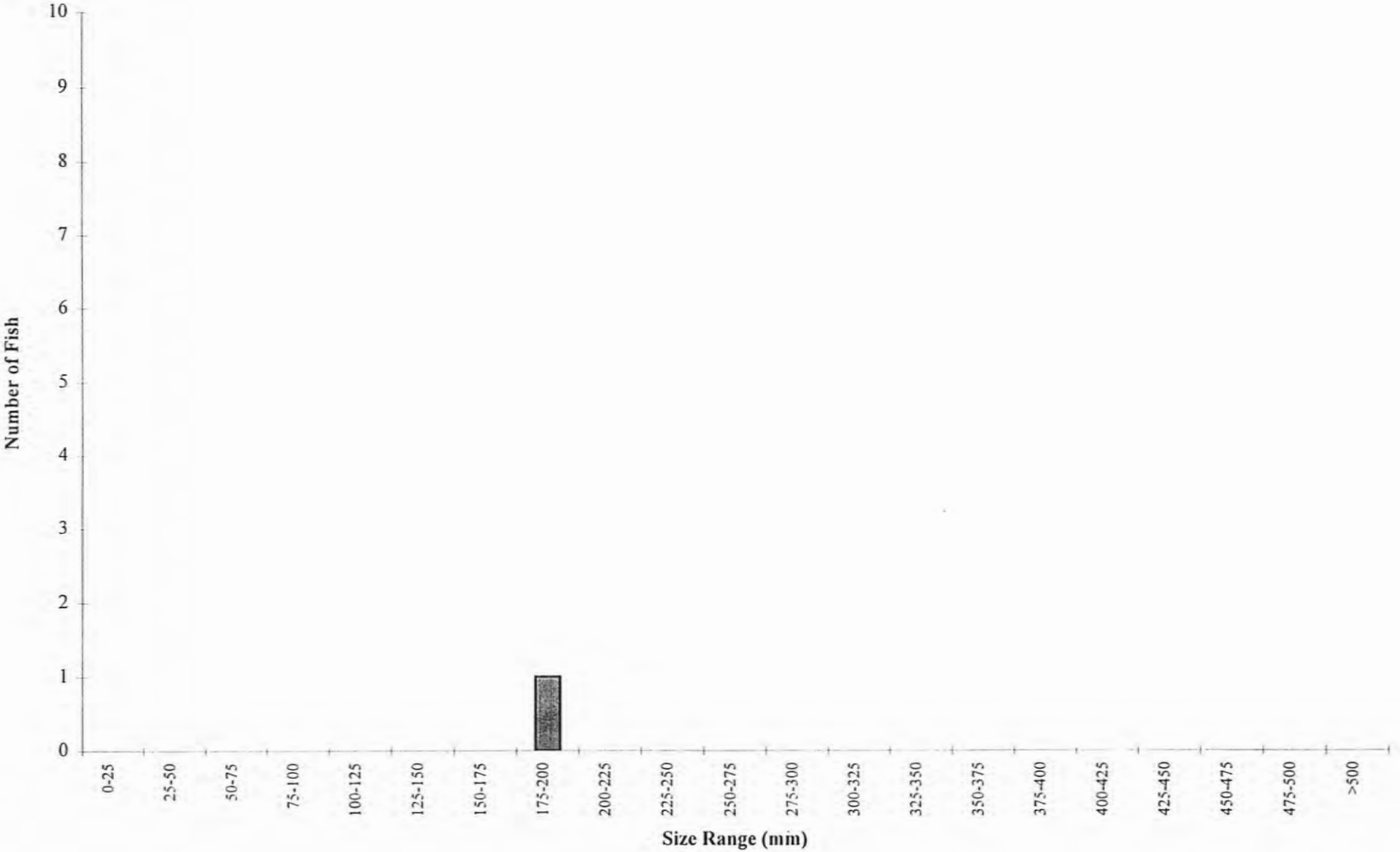
Working Unit 9 - Cutthroat Trout



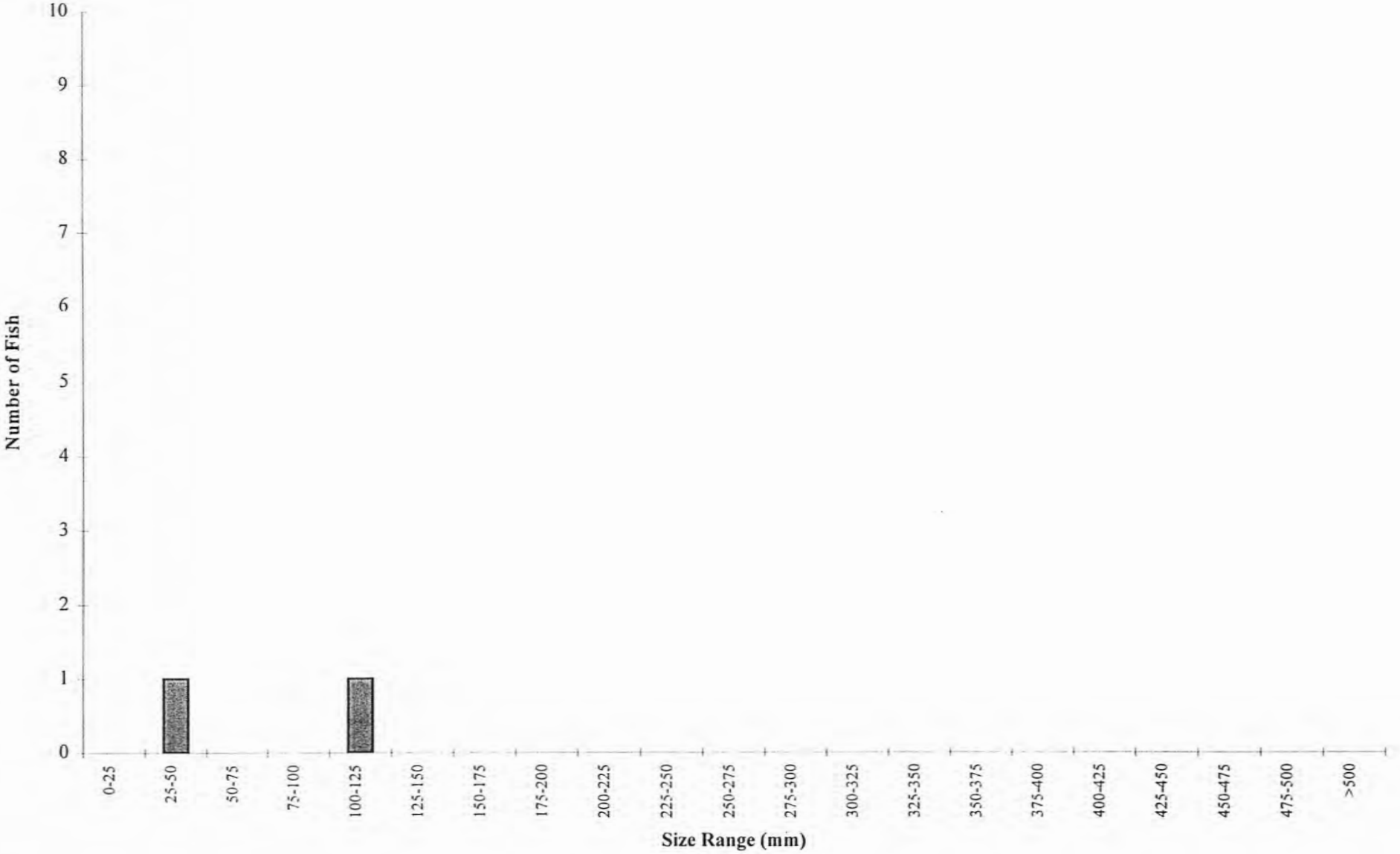
Working Unit 9 - Long Nose Dace



Working Unit 9 - Mountain Whitefish



Working Unit 9 - Red Sided Shiner



Working Unit 9 - Salmon

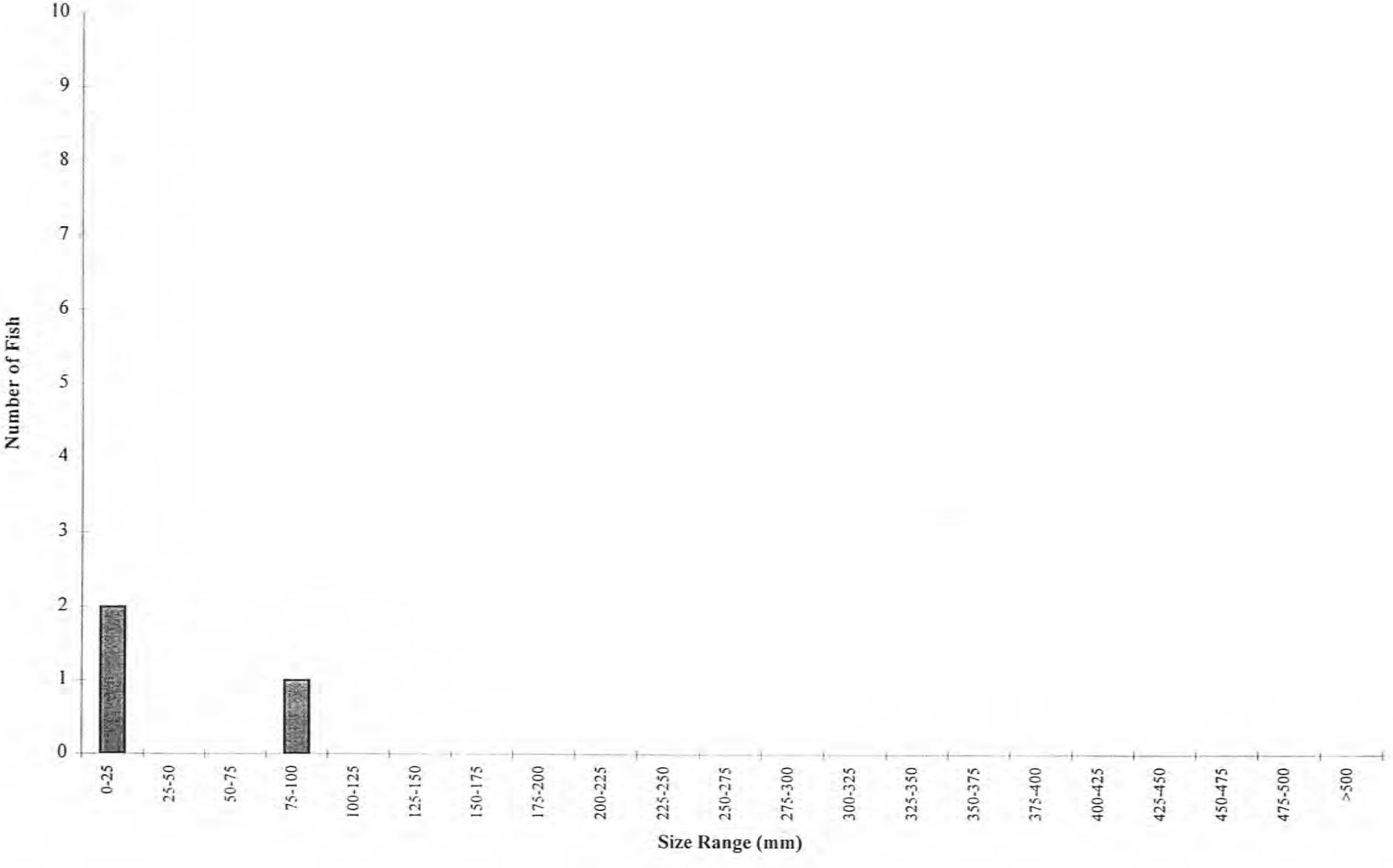


Table 1. Riparian Management Areas and Stream Classification

	Channel Width(m)	Reserve Zone	Management Zone Width	Total RMA Width
Fish Bearing				
S1	>20.0	50	20	70
S2	>5.0-20.0	30	20	50
S3	1.5-5.0	20	20	40
S4	<1.5	0	30	30
Non Fish Bearing				
S5	>=3.0	0	30	30
S6	<3.0	0	20	20

Table 2. Summary of Water Quality Data Collected in Working Unit 9 in 1996 and 1997

Watershed Code	Stream "Local"	Sort 2	Stream "Local"	Sort	Location	Map #	UTM	Reach Number	Survey Date	Agency	pH	Temp. (C)	Conductivity (umhos/cm)
480-6972-657-000-000-	Bristol Cr.	1	Bristol Cr.	Bristol Cr.	JULIE 127, Unit 9	93 M 007	9 . 6470 . 61055	5	08/21/96	TEC		11.00	
480-6972-657-000-000-	Bristol Cr.	1	Bristol Cr.	Bristol Cr.	TERRY 102, Unit 9	93 M 007	9 .6461 .61023	3	08/15/96	TEC			
480-6972-657-000-000-	Bristol Cr.	1	Bristol Cr.	Bristol Cr.	JULIE 128, Unit 9	93 M 007	9 .6464 .61040	3	08/21/96	TEC	7.50	9.00	57.00
480-6972-657-000-000-	Trib. to Bristol Cr.	2	Bristol Cr.	Bristol Cr.	JULIE 126, Unit 9	93 M 007	9 .6482 .61064	6	08/21/96	TEC			
003-7300-000-000-000-	Trib. to Bristol L.	2	Bristol L.	Bristol L.	JULIE 130, Unit 9	93 M 007	9 . 6470 . 61016	1	08/21/96	TEC		9.00	
003-7200-000-000-000-	Trib. to Bristol L.	2	Bristol L.	Bristol L.	JULIE 129, Unit 9	93 M 007	9 . 6470 . 61013	1	08/21/96	TEC	7.20	8.00	96.00
480-6972-341-000-000-	Bristow Cr	1	Bristow Cr	Bristow Cr	JULIE 114, Unit 9	93 L 087	9 .6520 .60813	2	08/18/96	TEC	8.00	7.00	140.00
480-6972-341-000-000-	Trib. to Bristow Cr	2	Bristow Cr	Bristow Cr	JULIE 109, Unit 9	93 L 087	9 .6513 .60797	2	08/18/96	TEC		11.00	
480-6972-341-000-000-	Trib. to Bristow Cr	2	Bristow Cr	Bristow Cr	JULIE 115, Unit 9	93 L 087	9 .6516 .60817	1	08/18/96	TEC			
480-6972-341-000-000-	Trib. to Bristow Cr	2	Bristow Cr	Bristow Cr	JULIE 113, Unit 9	93 L 087	9 .6522 .60812	1	08/18/96	TEC		9.00	
480-6972-341-000-000-	Bristow Cr.	1	Bristow Cr.	Bristow Cr.	Y231, Unit 9	93 L 087	9 .648185.60773	2	09/08/97	TEC	7.99	10.00	100.00
480-6972-341-000-000-	Bristow Cr.	1	Bristow Cr.	Bristow Cr.	Y223, Unit 9	93 L 088	9 .655477.6084508	1	09/07/97	TEC	7.79	9.00	140.00
480-6972-341-000-000-	Bristow Cr.	1	Bristow Cr.	Bristow Cr.	JULIE 103, Unit 9	93 L 087	9 .6508 .60794	2	08/16/96	TEC		12.00	
080-2900-000-000-000-	Trib to Bristow Cr.	2	Bristow Cr.	Bristow Cr.	Y224, Unit 9	93 L 088	9 .6548 .60844	1	09/07/97	TEC	7.58	9.50	120.00
079-7400-000-000-000-	Trib to Bristow Cr.	2	Bristow Cr.	Bristow Cr.	Y232, Unit 9	93 L 087	9 .647993.60781	1	09/08/97	TEC	7.02	12.00	90.00
079-7300-000-000-000-	Trib to Bristow Cr.	2	Bristow Cr.	Bristow Cr.	Y233, Unit 9	93 L 087	9 .64822 .607790	1	09/08/97	TEC	7.67	9.00	90.00
080-3200-000-000-000-	Trib. to Chapman L	2	Chapman L	Chapman L	TERRY 124, Unit 9	93 L 097	9 .6490 .60876	1	08/18/96	TEC	7.59	9.00	
080-3100-000-000-000-	Trib. to Chapman L	2	Chapman L	Chapman L	TERRY 125, Unit 9	93 L 097	9 .6495 .60866	1	08/18/96	TEC	7.89	10.50	
080-4000-000-000-000-	Trib. to Chapman L	2	Chapman L	Chapman L	TERRY 120, Unit 9	93 L 097	9 .6475 .60913	1	08/18/96	TEC	7.76	9.00	
080-4400-000-000-000-	Trib. to Chapman L	2	Chapman L	Chapman L	TERRY 119, Unit 9	93 L 097	9 .6475 .60917	1	08/18/96	TEC	7.90	8.00	
480-6972-000-000-000-	Trib. to Chapman L	2	Chapman L	Chapman L	TERRY 123, Unit 9	93 L 097	9 .6484 . 60890	1	08/18/96	TEC	8.00	8.00	
080-4300-000-000-000-	Trib. to Chapman L.	2	Chapman L.	Chapman L.	TERRY 178, Unit 9	93 L 097	9 .6445 .60912	1	08/27/96	TEC	7.30	9.00	
080-4000-000-000-000-	Trib. to Chapman L.	2	Chapman L.	Chapman L.	TERRY 179, Unit 9	93 M 097	9 .6443 .60910	2	08/27/96	TEC	6.90	10.00	
080-4200-000-000-000-	Trib. to Chapman L.	2	Chapman L.	Chapman L.	TERRY 180, Unit 9	93 L 097	9 .6447 .60904	1	08/27/96	TEC	6.60	9.00	
080-5000-000-000-000-	Trib to Chapman Lk.	2	Chapman Lk.	Chapman Lk.	Y51, Unit 9	93 L 097	9 .6496 .60901	1	07/18/97	TEC	7.50	12.00	70.00
080-9300-000-000-000-	Trib. to Chapman Lk.	2	Chapman Lk.	Chapman Lk.	Z18, Unit 9	93 L 097	9 .647889. 609002	1	07/10/97	TEC	7.60	10.00	50.00
080-4500-000-000-000-	Trib. to Chapman Lk.	2	Chapman Lk.	Chapman Lk.	Z17, Unit 9	93 L 097	9 .6477 .60928	1	07/10/97	TEC	6.60	10.00	50.00
080-4500-000-000-000-	Trib. to Chapman Lk.	2	Chapman Lk.	Chapman Lk.	Z16, Unit 9	93 L 097	9 .64749 .609263	2	07/10/97	TEC	6.70	10.00	50.00
480-6972-472-000-000-	Cronin Cr.	1	Cronin Cr.	Cronin Cr.	E279, Unit 9	93 L 097	9 .6413 .60880	2	09/09/97	TEC	7.82	9.00	70.00
480-6972-472-000-000-	Cronin Cr.	1	Cronin Cr.	Cronin Cr.	TERRY 152, Unit 9	93 L 097	9 .6454 .60876	2	08/23/96	TEC	7.20	6.00	
480-6972-472-000-000-	Cronin Cr.	1	Cronin Cr.	Cronin Cr.	JULIE 171, Unit 9, see	93 L 097	9 . 6414 . 60884	2	08/25/96	TEC		7.00	
080-9100-000-000-000-	Trib. to Cronin Cr.	2	Cronin Cr.	Cronin Cr.	TERRY 151, Unit 9	93 L 097	9 .6466 6.0883	1	08/23/96	TEC	7.20	8.00	
080-9900-000-000-000-	Trib. to Cronin Cr.	2	Cronin Cr.	Cronin Cr.	TERRY 153, Unit 9	93 L 097	9 .6455 .60879	1	08/23/96	TEC			

Watershed Code	Stream "Local"	Sort 2	Stream "Local"	Sort	Location	Map #	UTM	Reach Number	Survey Date	Agency	pH	Temp. (C)	Conductivity (umhos/cm)
080-9200-000-000-000-	Trib. to Cronin Cr.	2	Cronin Cr.	Cronin Cr.	TERRY 154, Unit 9	93 L 097	9 .6460 .60883	1	08/23/96	TEC			
080-9400-000-000-000-	Trib. to Cronin Cr.	2	Cronin Cr.	Cronin Cr.	TERRY 155, Unit 9	93 L 097	9 .64565 . 608907	2	08/23/96	TEC		7.00	
080-9500-000-000-000-	Trib. to Cronin Cr.	2	Cronin Cr.	Cronin Cr.	TERRY 156, Unit 9	93 L 097	9 .6456 . 60887	1	08/23/96	TEC		10.00	
080-9600-000-000-000-	Trib. to Cronin Cr.	2	Cronin Cr.	Cronin Cr.	W273, Unit 9	93 L 097	9 .6469 .60875	2	09/13/97	TEC	7.05	8.00	120.00
480-6972-341-267-000-	Trib. to Fink Cr	2	Fink Cr	Fink Cr	JULIE 104, Unit 9	93 L 087	9 .6497 .60801	2	08/18/96	TEC		9.00	
480-6972-341-267-000-	Trib. to Fink Cr	2	Fink Cr	Fink Cr	JULIE 105, Unit 9	93 L 087	9 .6496 .60801	1	08/18/96	TEC	7.00	9.00	110.00
480-6972-341-267-000-	Fink Cr.	1	Fink Cr.	Fink Cr.	JULIE 100, Unit 9	93 L 087	9 .6490 .60810	2	08/16/96	TEC		10.00	
480-6972-341-267-000-	Fink Cr.	1	Fink Cr.	Fink Cr.	Y211, Unit 9	93 L 087	9 .646872.6079170	4	09/05/97	TEC	7.82	6.50	100.00
480-4672-341-267-000-	Fink Cr.	1	Fink Cr.	Fink Cr.	Y212, Unit 9	93 L 087	9 .6484 .60806	3	09/05/97	TEC	8.10	8.00	150.00
480-6972-341-267-000-	Fink Cr.	1	Fink Cr.	Fink Cr.	HASLETT 108, Unit 9	93 L 087	9 .6509 .60833	1	08/21/96	TEC	7.70	9.00	130.00
480-6972-341-267-000-	Trib. to Fink Cr.	2	Fink Cr.	Fink Cr.	JULIE 102 , Unit 9	93 L 087	9 .6495 .60802	102	08/16/96	TEC		15.00	
480-6972-341-267-000-	Trib. to Fink Cr.	2	Fink Cr.	Fink Cr.	JULIE 96, Unit 9	93 L 087	9 .6485 .60824	1	08/16/96	TEC		8.50	
480-6972-341-267-000-	Trib. to Fink Cr.	2	Fink Cr.	Fink Cr.	JULIE 97, Unit 9	93 M 087	9 .6485 .60824	1	08/16/96	TEC		9.00	
480-6972-341-267-000-	Trib. to Fink Cr.	2	Fink Cr.	Fink Cr.	JULIE 98 , Unit 9	93 L 087	9 .6485 .60824	1	08/16/96	TEC		8.50	
480-6972-341-267-000-	Trib. to Fink Cr.	2	Fink Cr.	Fink Cr.	JULIE 99, Unit 9	93 L 087	9 .6489 .60814	1	08/16/96	TEC		12.00	
480-6972-341-267-000-	Trib. to Fink Cr.	2	Fink Cr.	Fink Cr.	JULIE 101, Unit 9	93 L 087	9 .6492 .60805	2	08/16/96	TEC		11.00	
480-6972-341-267-000-	Trib. to Fink Cr.	2	Fink Cr.	Fink Cr.	JULIE 116, Unit 9	93 L 087	9. 6505 . 60795	1	08/19/96	TEC		10.00	
480-6972-341-267-000-	Trib. to Fink Cr.	2	Fink Cr.	Fink Cr.	JULIE 117, Unit 9	93 L 087	9 . 6507 . 60794	1	08/19/96	TEC		8.50	
480-6972-427-541-501-	Four Cr.	1	Four Cr.	Four Cr.	Y228, Unit 9	93 L 086	9 .6406 .60812	5	09/08/97	TEC	7.51	9.00	20.00
003-8100-000-000-000-	Trib. to Fulton R	2	Fulton R	Fulton R	JULIE 152, Unit 9	93 M 007	9 . 6435 . 61011	1	08/23/96	TEC		11.00	
003-8900-000-000-000-	Trib. to Fulton R	2	Fulton R	Fulton R	TERRY 118, Unit 9	93 M 007	9 .6409 .61010	1	08/18/96	TEC	7.95	9.50	
003-8200-000-000-000-	Trib. to Fulton R	2	Fulton R	Fulton R	JULIE 151, Unit 9	93 M 007	9 .6430 .61008	1	08/23/96	TEC	6.60	11.00	55.00
003-8100-000-000-000-	Trib. to Fulton R	2	Fulton R	Fulton R	JULIE 150, Unit 9	93 M 007	9 .6429 .61010	3	08/23/96	TEC		11.00	
002-9900-000-000-000-	Fulton R.	1	Fulton R.	Fulton R.	HASLETT 75, Unit 9	93 M 006	9 .6339 .60995	6	08/15/96	TEC		7.00	
480-6972-472-000-000-	Fulton R.	1	Fulton R.	Fulton R.	TERRY 146, Unit 9	93 L 097	9 .6481 .60934	3	08/22/96	TEC	7.70	9.00	100.00
480-6972-000-000-000-	Fulton R.	1	Fulton R.	Fulton R.	HASSLET 79, Unit 9	93 M 006	9.6350 .60992	3	08/15/96	TEC		8.50	
480-6972-000-000-000-	Fulton R.	1	Fulton R.	Fulton R.	TERRY 115, Unit 9	93 M 007	9.6415 .61001	4	08/17/96	TEC	7.99	10.50	
480-6972-000-000-000-	Fulton R.	1	Fulton R.	Fulton R.	TERRY 99, Unit 9	93 M 007	9 .6452 .61004	4	08/14/96	TEC		14.50	
080-2300-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	Y222, Unit 9	93 L 088	9 .655483.608410	1	09/07/97	TEC	7.29	7.00	150.00
003-9000-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	W252, Unit 9	93 M 007	9 .6410 .61007	1	09/09/97	TEC	6.68	5.50	60.00
080-5700-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	E8, Unit 9	93 L 097	9 .6485 .60933	1	07/10/97	TEC	7.40	8.50	40.00
003-6800-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	W257, Unit 9	93 M 007	9 .6450 .60977	1	09/10/97	TEC			
003-6500-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	W256, Unit 9	93 L 097	9 .6445 .60966	1	09/10/97	TEC	7.46	7.00	130.00
003-9100-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	W253, Unit 9	93 M 007	9 .6420 .60988	1	09/09/97	TEC	8.22	6.00	310.00
003-8700-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	W250, Unit 9	93 M 006	9 .6405 .61029	1	09/09/97	TEC	7.35	6.00	90.00
080-2500-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	Y242, Unit 9	93 L 088	9 .656197.6082681	2	09/10/97	TEC	7.88	10.00	200.00
080-6300-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	Y49, Unit 9	93 L 097	9 .6517 .60946	2	07/18/97	TEC	6.90	12.00	50.00

Watershed Code	Stream "Local"	Sort 2	Stream "Local"	Sort	Location	Map #	UTM	Reach Number	Survey Date	Agency	pH	Temp. (C)	Conductivity (umhos/cm)
003-6900-000-000-000-	Trib to Fulton R.	2	Fulton R.	Fulton R.	W254, Unit 9	93 M 007	9 .6440 .60997	2	09/09/97	TEC	7.70	8.00	240.00
480-6972-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	HASLETT 109, Unit 9	93 L 087	9 .6507 .60847	2	08/21/96	TEC		9.50	
003-0000-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	HASLETT 78, Unit 9	93 M 006	9 .6353 .60985	1	08/15/96	TEC		8.50	
003-0600-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	JULIE 148, Unit 9	93 M 006	9 .6372 .61014	1	08/23/96	TEC	6.70	11.00	21.00
003-0200-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	HASLETT 76, Unit 9	93 M 006	9 .6340 .60994	1	08/15/96	TEC		7.00	
080-2200-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	Y279, Unit 9	93 L 088	9 .654689.6084974	2	09/07/97	TEC			
003-8600-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	TERRY 114, Unit 9	93 M 006	9.6406 .61031	1	08/17/96	TEC	6.96	10.50	
003-0100-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	HASLETT 77, Unit 9	93 M 006	9 .6343 .60993	1	08/15/96	TEC		7.00	
003-8500-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	JULIE 147, Unit 9	93 M 006	9 .6380 .61041	3	08/23/96	TEC			
003-0800-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	JULIE 149, Unit 9	93 M 006	9 .6355 .61024	3	08/23/96	TEC		9.00	
002-9200-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	HASSLET 80, Unit 9	93 M 006	9 .6392 .60977	1	08/16/96	TEC		6.00	
002-9500-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	HASSLET 81, Unit 9	93 M 006	9 .6357 .60975	1	08/16/96	TEC		8.50	
002-9600-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	HASSLET 82, Unit 9	93 M 006	9 .6356 .60978	1	08/16/96	TEC		7.00	
002-9800-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	HASSLET 83, Unit 9	93 M 006	9.6362 .60982	1	08/16/96	TEC		7.00	
480-6972-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	HASSLET 84, Unit 9	93 M 006	9.6359 .60984	1	08/16/96	TEC		7.00	
003-8590-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	TERRY 113, Unit 9	93 M 006	9 .6403 .61038	1	08/17/96	TEC	7.01	11.00	
080-7300-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	TERRY 149, Unit 9	93 L 097	9 .6438 .60959	1	08/22/96	TEC		8.00	
480-6972-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	TERRY 148, Unit 9	93 L 097	9 .6432 .60960	2	08/22/96	TEC		8.00	
002-9300-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	W269, Unit 9	93 M 006	9 .6393 .60991	1	09/12/97	TEC	6.31	8.00	70.00
003-8400-000-000-000-	Trib. to Fulton R.	2	Fulton R.	Fulton R.	TERRY 112, Unit 9	93 M 006	9 .6401 .61052	2	08/17/96	TEC	7.28	12.00	
480-6972-528-000-000-	Hagarty Cr	1	Hagarty Cr	Hagarty Cr	TERRY 145, Unit 9	93 M 097	9 .6427 .60938	1	08/22/96	TEC	6.80	9.00	74.00
480-6972-528-000-000-	Hagarty Cr.	1	Hagarty Cr.	Hagarty Cr.	TERRY 147, Unit 9	93 L 097	9 .6455 .60928	1	08/22/96	TEC	7.10	11.00	
080-8900-000-000-000-	Trib to Hagarty Cr.	2	Hagarty Cr.	Hagarty Cr.	W258, Unit 9	93 L 097	9 .6436 .60918	2	09/10/97	TEC	8.08	9.00	120.00
080-8900-000-000-000-	Trib. to Hagarty Cr.	2	Hagarty Cr.	Hagarty Cr.	W272, Unit 9	93 L 097	9 .6448 .60917	1	09/13/97	TEC	7.41	8.00	110.00
080-8700-000-000-000-	Trib. to Hagarty L.	2	Hagarty L.	Hagarty L.	TERRY 169, Unit 9	93 L 097	9 .6438 .60931	1	08/25/96	TEC			
480-6972-528-000-000-	Trib. to Hagarty L.	2	Hagarty L.	Hagarty L.	TERRY 170, Unit 9	93 L 097	9 .6440 .60928	1	08/25/96	TEC	6.80	16.00	
480-6972-544-458-000-	Haystack Cr	1	Haystack Cr	Haystack Cr	BRUCE 95, Unit 9	93 L 096	9 .6405 .60902	2	08/25/96	TEC	5.60	6.50	149.00
480-6972-544-458-000-	Haystack Cr.	1	Haystack Cr.	Haystack Cr.	TERRY 167, Unit 9	93 L 097	9 .6419 .60935	1	08/25/96	TEC	7.50	9.00	
080-8200-000-000-000-	Trib. to Haystack Cr.	2	Haystack Cr.	Haystack Cr.	W271, Unit 9	93 L 097	9 .6475 .60928	1	09/13/97	TEC	7.80	6.00	100.00
480-6972-472-411-000-	Higgins Cr	1	Higgins Cr	Higgins Cr	BRUCE 94, Unit 9	93 L 097	9 .6420 .60861	2	08/25/96	TEC		4.00	
480-6972-427-541-000-	Little Joe Cr.	1	Little Joe Cr.	Little Joe Cr.	Y227, Unit 9	93 L 086	9 .6402 .60826	5	09/08/97	TEC	7.61	10.00	70.00
480-6972-427-541-000-	Little Joe Cr.	1	Little Joe Cr.	Little Joe Cr.	HASLETT 99, Unit 9	93 L 087	9 .6449 .60808	1	08/20/96	TEC	7.63	7.00	100.00
079-4800-000-000-000-	Trib to Little Joe Cr.	2	Little Joe Cr.	Little Joe Cr.	Y213, Unit 9	93 L 087	9 .6441 .60812	1	09/05/97	TEC	7.91	10.50	90.00
480-6972-427-000-000-	Trib. to Mckendrick cr	2	Mckendrick cr	Mckendrick cr	JULIE 118, Unit 9	93 L 087	9.6485 .60852	1	08/19/96	TEC	6.75	8.50	1670.00
480-6972-427-000-000-	McKendrick Cr.	1	McKendrick	McKendrick	Y221, Unit 9	93 L 087	9 .643443.60756	5	09/06/97	TEC	7.98	8.50	100.00
480-6972-427-000-000-	McKendrick Cr.	1	McKendrick	McKendrick	JULIE 95, Unit 9	93 L 087	9 .6480 .60840	1	08/16/96	TEC		9.00	
480-6972-427-000-000-	McKendrick Cr.	1	McKendrick	McKendrick	Y218, Unit 9	93 L 087	9 .6423 .60764	4	09/06/97	TEC	7.20	8.00	130.00

Watershed Code	Stream "Local"	Sort 2	Stream "Local"	Sort	Location	Map #	UTM	Reach Number	Survey Date	Agency	pH	Temp. (C)	Conductivity (umhos/cm)
480-6972-427-000-000-	McKendrick Cr.	1	McKendrick	McKendrick	Y230, Unit 9	93 L 087	9 .646365.6075685	6	09/08/97	TEC	7.30	11.00	50.00
079-0100-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y214, Unit 9	93 L 087	9 .64547 .608061	1	09/05/97	TEC	7.96	10.50	150.00
079-3700-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y216, Unit 9	93 L 087	9 .642745.6076420	1	09/05/97	TEC	7.15	10.50	130.00
079-4200-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y219, Unit 9	93 L 087	9 .6427 .60754	1	09/06/97	TEC	7.98	9.50	120.00
079-4400-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y220, Unit 9	93 L 087	9 .6435 .60757	1	09/06/97	TEC	7.99	8.50	120.00
079-4700-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y229, Unit 9	93 L 087	9 .645556.607548	1	09/08/97	TEC	7.86	8.00	70.00
079-2800-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y234, Unit 9	93 L 086	9 .639741.6079005	3	09/08/97	TEC	7.78	11.00	70.00
078-9200-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y243, Unit 9	93 L 087	9 .645184.6082730	2	09/10/97	TEC	7.62	9.50	40.00
078-9300-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y244, Unit 9	93 L 087	9 .648184.606730	1	09/10/97	TEC	7.72	9.00	65.00
079-3800-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y215, Unit 9	93 L 087	9 .642574.6076214	3	09/05/97	TEC	7.15	9.00	120.00
480-6972-427-000-000-	Trib. to McKendrick Cr.	2	McKendrick	McKendrick	HASLETT 105, Unit 9	93 L 087	9 .6420 .60772	1	08/21/96	TEC		8.50	
480-6972-427-000-000-	Trib. to McKendrick Cr.	2	McKendrick	McKendrick	HASLETT 101, Unit 9	93 L 087	9 .6433 . 60793	2	08/20/96	TEC		10.00	
480-6972-472-000-000-	Trib. to McKendrick Cr.	2	McKendrick	McKendrick	JULIE 170, Unit 9	93 L 087	9 .6446 .60852	2	08/25/96	TEC	6.20	3.00	57.00
480-6972-427-000-000-	Trib. to McKendrick Cr.	2	McKendrick	McKendrick	HASLETT 97, Unit 9	93 L 087	9 .6456 .60817	1	08/20/96	TEC		7.00	
480-6972-427-000-000-	Trib. to McKendrick Cr.	2	McKendrick	McKendrick	HASLETT 98 , Unit 9	93 L 087	9 .6452 .60816	2	08/20/96	TEC		7.50	
480-6972-427-000-000-	Trib. to McKendrick Cr.	2	McKendrick	McKendrick	HASLETT 104, Unit 9	93 L 087	9 .6422 .60774	1	08/20/96	TEC		8.50	
480-6972-427-000-000-	Trib. to McKendrick Cr.	2	McKendrick	McKendrick	HASLETT 102, Unit 9	93 L 087	9 .6431 .60788	1	08/20/96	TEC		9.00	
480-6972-427-000-000-	Trib. to McKendrick Cr.	2	McKendrick	McKendrick	HASLETT 100, Unit 9	93 L 087	9 .6447 .60806	1	08/20/96	TEC		7.00	
079-3700-000-000-000-	Trib to McKendrick Cr.	2	McKendrick	McKendrick	Y217, Unit 9	93 L 087	9 .642320.60763	1	09/06/97	TEC	7.04	10.00	140.00
480-6972-427-000-000-	Trib. to McKendrick Lk	2	McKendrick	McKendrick	HASLETT 103, Unit 9	93 L 087	9 .6426 .60780	1	08/20/96	TEC	7.71	7.00	100.00
480-6972-870-166-000-	Morin Cr.	1	Morin Cr.	Morin Cr.	TERRY 163, Unit 9	93 L 097	9 .6422 .60964	1	08/25/96	TEC	6.00	9.00	
080-7500-000-000-000-	Trib. to Morin Cr.	2	Morin Cr.	Morin Cr.	TERRY 162, Unit 9	93 L 097	9 .6423 .60965	1	08/25/96	TEC			
480-6972-544-000-000-	Nata Cr.	1	Nata Cr.	Nata Cr.	E281, Unit 9	93 L 096	9 .6384 .60920	4	09/09/97	TEC	7.70	6.00	60.00
480-6972-544-000-000-	Nata Cr.	1	Nata Cr.	Nata Cr.	TERRY 165, Unit 9	93 L 097	9 .6431 .60947	2	08/25/96	TEC	6.90	7.00	
480-6972-544-000-000-	Nata Cr.	1	Nata Cr.	Nata Cr.	Y53, Unit 9	93 L 097	9 .6472 .60952	1	07/18/97	TEC	7.70	9.00	40.00
080-7500-000-000-000-	Trib. to Nata Cr.	2	Nata Cr.	Nata Cr.	TERRY 166, Unit 9	93 L 097	9 .6422 .60938	1	08/25/96	TEC	6.60	13.00	
100-0600-000-000-000-	Trib. to Nata Cr.	2	Nata Cr.	Nata Cr.	E280, Unit 9	93 L 096	9 .6384 .60920	1	09/09/97	TEC	7.76	6.00	140.00
480-6972-341-416-000-	Regan Cr	1	Regan Cr	Regan Cr	JULIE 108, Unit 9	93 L 087	9 .6531 .60771	2	08/18/96	TEC		10.00	
480-6972-341-416-000-	Regan Cr	1	Regan Cr	Regan Cr	JULIE 111, Unit 9	93 L 087	9 .6530 .60790	1	08/18/96	TEC	7.81	7.00	180.00
480-6972-341-416-000-	Regan Cr	1	Regan Cr	Regan Cr	JULIE 112, Unit 9	93 L 087	9 .6536 . 60810	1	08/18/96	TEC	7.59	8.50	140.00
480-6972-341-416-000-	Trib. to Regan Cr	2	Regan Cr	Regan Cr	JULIE 106, Unit 9	93 L 087	9 .6515 .60785	1	08/18/96	TEC		9.00	
480-6972-341-416-000-	Trib. to Regan Cr	2	Regan Cr	Regan Cr	JULIE 107, Unit 9	93 L 087	9 .6517 .60781	1	08/18/96	TEC		8.50	
480-6972-341-416-000-	Trib. to Regan Cr	2	Regan Cr	Regan Cr	JULIE 110, Unit 9	93 L 087	9 .6532 .60784	2	08/18/96	TEC	7.36	7.50	140.00
480-6972-870-000-000-	Taka Cr.	1	Taka Cr.	Taka Cr.	TERRY 164, Unit 9	93 L 097	9 .6413 .60951	1	08/25/96	TEC	7.30	8.00	
480-6972-657-669-000-	Taka Cr.	1	Taka Cr.	Taka Cr.	JULIE 172, Unit 9	93 L 096	9 .6366 .60929	2	08/25/96	TEC		8.00	

Table 3. Summary of Barriers Observed in Working Unit 9 in 1996 and 1997

Watershed Code	Stream "Local"	Location	TRIM Number	UTM	Reach Number	Survey Date	Agency	Height (m)	Type	Distance from the Mouth (km)
003-7200-000-000-000-000-000-	Trib. to Bristol L.	JULIE 129, Unit 9	93 M 007	9 . 6470 . 61013	1	08/21/96	TEC	0.50	C	0.40
480-6972-341-000-000-000-000-	Bristow Cr	Y231, Unit 9	93 L 087	9 .648185.60773	2	09/08/97	TEC	2.00	C	4.45
080-9300-000-000-000-000-000-	Trib. to Chapman L	Z18, Unit 9	93 L 097	9 .647889. 609002	1	07/10/97	TEC	0.80	F	0.10
080-9400-000-000-000-000-000-	Trib. to Cronin Cr	TERRY 155, Unit 9	93 L 097	9 .64565 . 608907	2	08/23/96	TEC	2.00	CV	1.20
080-9500-000-000-000-000-000-	Trib. to Cronin Cr	TERRY 156, Unit 9	93 L 097	9 .6456 . 60887	1	08/23/96	TEC	2.00	BD	1.30
480-4672-341-267-000-000-000-	Fink Cr	Y212, Unit 9	93 L 087	9 .6484 .60806	3	09/05/97	TEC	2.00	C	5.90
480-4672-341-267-000-000-000-	Fink Cr	Y212, Unit 9	93 L 087	9 .6484 .60806	3	09/05/97	TEC	3.00	C	6.00
480-6972-427-541-501-000-000-	Four Cr	Y228, Unit 9	93 L 086	9 .6406 .60812	5	09/08/97	TEC	10.00	C	1.50
480-6972-427-541-501-000-000-	Four Cr	Y228, Unit 9	93 L 086	9 .6406 .60812	5	09/08/97	TEC	5.00	C	1.60
480-6972-427-541-501-000-000-	Four Cr	Y228, Unit 9	93 L 086	9 .6406 .60812	5	09/08/97	TEC	8.00	F	1.60
480-6972-544-458-000-000-000-	Haystack Cr	TERRY 167, Unit 9	93 L 097	9 .6419 .60935	1	08/25/96	TEC	0.70	C	0.13
480-6972-472-411-000-000-000-	Higgins Cr	BRUCE 94, Unit 9	93 L 097	9 .6420 .60861	2	08/25/96	TEC	1.00	D	2.68
480-6972-427-541-000-000-000-	Little Joe Cr	HASLETT 99, Unit 9	93 L 087	9 .6449 .60808	1	08/20/96	TEC	0.30	CV	0.60
480-6972-427-541-000-000-000-	Little Joe Cr	Y227, Unit 9	93 L 086	9 .6402 .60826	5	09/08/97	TEC	50.00	F	5.50
079-0100-000-000-000-000-000-	Trib to McKendrick Cr	Y214, Unit 9	93 L 087	9 .64547 .608061	1	09/05/97	TEC	2.00	X	0.29
079-2800-000-000-000-000-000-	Trib to McKendrick Cr	Y234, Unit 9	93 L 086	9 .639741.6079005	3	09/08/97	TEC	10.00	C	3.20
079-2800-000-000-000-000-000-	Trib to McKendrick Cr	Y234, Unit 9	93 L 086	9 .639741.6079005	3	09/08/97	TEC	15.00	C	3.40
480-6972-427-000-000-000-000-	Trib. to McKendrick Cr	HASLETT 97, Unit 9	93 L 087	9 .6456 .60817	1	08/20/96	TEC	2.00	CV	0.50
480-6972-427-000-000-000-000-	Trib. to McKendrick Cr	HASLETT 100, Unit 9	93 L 087	9 .6447 .60806	1	08/20/96	TEC	0.40	CV	0.50
480-6972-427-000-000-000-000-	Trib. to McKendrick Cr	HASLETT 100, Unit 9	93 L 087	9 .6447 .60806	1	08/20/96	TEC	2.00	BD	0.45

Table 4. Summary of Site Data Collected in Working Unit 9 in 1996 and 1997

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Agency	Average Channel Width (m)	Gradient (%)	RS Species	Proposed Stream Class	Fishing Method
480-6972-657-000-000-	Bristol Cr.	JULIE 127, Unit 9	93 M 007	9 . 6470 . 61055	5	08/21/96	TEC	2.48	0.50	(RB) (DV)	S3	NA
480-6972-657-000-000-	Bristol Cr.	JULIE 128, Unit 9	93 M 007	9 .6464 .61040	3	08/21/96	TEC	1.92	3.00	RB	S3	EL
480-6972-657-000-000-	Bristol Cr.	TERRY 102, Unit 9	93 M 007	9 .6461 .61023	3	08/15/96	TEC	2.50	1.00	(CT)	S3	EL
480-6972-657-000-000-	Bristol Cr.	JULIE 126, Unit 9	93 M 007	9 .6482 .61064	7	08/21/96	TEC	0.62	1.00	NF	S6	EL
003-7200-000-000-000-	Trib. to Bristol L.	JULIE 129, Unit 9	93 M 007	9 . 6470 . 61013	1	08/21/96	TEC	2.05	7.00	RB	S3	EL
003-7300-000-000-000-	Trib. to Bristol L.	JULIE 130, Unit 9	93 M 007	9 . 6470 . 61016	1	08/21/96	TEC	1.75	4.00	NF	S6	EL
480-6972-341-000-000-	Bristow Cr	JULIE 114, Unit 9	93 L 087	9 .6520 .60813	2	08/18/96	TEC	3.85	4.00	DV	S3	VO
480-6972-341-000-000-	Trib. to Bristow Cr	JULIE 109, Unit 9	93 L 087	9 .6513 .60797	2	08/18/96	TEC	1.28	0.50	NF	S6	NA
480-6972-341-000-000-	Trib. to Bristow Cr	JULIE 113, Unit 9	93 L 087	9 .6522 .60812	1	08/18/96	TEC	0.53	12.00	NF	S6	NA
480-6972-341-000-000-	Trib. to Bristow Cr	JULIE 115, Unit 9	93 L 087	9 .6516 .60817	1	08/18/96	TEC	0.55	6.00	NF	S6	NA
480-6972-341-000-000-	Bristow Cr.	JULIE 103, Unit 9	93 L 087	9 .6508 .60794	2	08/16/96	TEC	4.88	3.00	DV	S3	EL
480-6972-341-000-000-	Bristow Cr.	Y223, Unit 9	93 L 088	9 .655477.6084508	1	09/07/97	TEC	7.68	1.50	DV CT	S2	EL
480-6972-341-000-000-	Bristow Cr.	Y231, Unit 9	93 L 087	9 .648185.60773	4	09/08/97	TEC	1.62	8.00	NF	S6	EL
079-7300-000-000-000-	Trib to Bristow Cr.	Y233, Unit 9	93 L 087	9 .64822 .607790	1	09/08/97	TEC	1.18	5.00	NF	S6	EL
079-7400-000-000-000-	Trib to Bristow Cr.	Y232, Unit 9	93 L 087	9 .647993.60781	1	09/08/97	TEC	0.58	10.00	NF	S6	EL
080-2900-000-000-000-	Trib to Bristow Cr.	Y224, Unit 9	93 L 088	9 .6548 .60844	1	09/07/97	TEC	1.50	6.00	CT	S3	EL
080-3100-000-000-000-	Trib. to Chapman L	TERRY 125, Unit 9	93 L 097	9 .6495 .60866	1	08/18/96	TEC	2.02	7.50	CT	S3	EL
080-3200-000-000-000-	Trib. to Chapman L	TERRY 124, Unit 9	93 L 097	9 .6490 .60876	1	08/18/96	TEC	1.77	15.00	CT	S3	EL
080-4000-000-000-000-	Trib. to Chapman L	TERRY 120, Unit 9	93 L 097	9 .6475 .60913	1	08/18/96	TEC	2.78	4.00	CT	S3	EL
080-4400-000-000-000-	Trib. to Chapman L	TERRY 119, Unit 9	93 L 097	9 .6475 .60917	1	08/18/96	TEC	1.97	4.00	(CT)	S3	EL
080-4000-000-000-000-	Trib. to Chapman L.	TERRY 179, Unit 9	93 M 097	9 .6443 .60910	2	08/27/96	TEC	1.80	9.00	(CT)	S3	EL
080-4200-000-000-000-	Trib. to Chapman L.	TERRY 180, Unit 9	93 L 097	9 .6447 .60904	1	08/27/96	TEC	1.80	15.00	(CT)	S3	EL
080-4300-000-000-000-	Trib. to Chapman L.	TERRY 178, Unit 9	93 L 097	9 .6445 .60912	1	08/27/96	TEC	1.70	3.00	CT	S3	EL
080-4500-000-000-000-	Trib. to Chapman Lk.	Z16, Unit 9	93 L 097	9 .64749 .609263	2	07/10/97	TEC	2.57	10.50	NF	S6	EL
080-4500-000-000-000-	Trib. to Chapman Lk.	Z17, Unit 9	93 L 097	9 .6477 .60928	1	07/10/97	TEC	2.28	6.00	(CT)	S3	EL
080-5000-000-000-000-	Trib to Chapman Lk.	Y51, Unit 9	93 L 097	9 .6496 .60901	1	07/18/97	TEC	2.70	3.00	CT	S3	EL
080-9300-000-000-000-	Trib. to Chapman Lk.	Z18, Unit 9	93 L 097	9 .647889. 609002	1	07/10/97	TEC	1.47	11.00	CT	S3	EL
480-6972-000-000-000-	Cronin Cr	TERRY 123, Unit 9	93 L 097	9 .6484 . 60890	1	08/18/96	TEC	12.48	5.00	CT , DV,	S2	EL
480-6972-472-000-000-	Cronin Cr.	TERRY 152, Unit 9	93 L 097	9 .6454 .60876	2	08/23/96	TEC	14.50	8.00	(CT)	S2	EL
480-6972-472-000-000-	Cronin Cr.	E279, Unit 9	93 L 097	9 .6413 .60880	2	09/09/97	TEC	10.23	8.00	(DV)	S2	EL
480-6972-472-000-000-	Cronin Cr.	JULIE 171, Unit 9, see	93 L 097	9 . 6414 . 60884	2	08/25/96	TEC	8.58	2.00	(DV)	S2	EL
080-9100-000-000-000-	Trib. to Cronin Cr.	TERRY 151, Unit 9	93 L 097	9 .6466 6.0883	1	08/23/96	TEC	2.45	6.00	CT	S3	EL
080-9200-000-000-000-	Trib. to Cronin Cr.	TERRY 154, Unit 9	93 L 097	9 .6460 .60883	1	08/23/96	TEC	1.88	2.00	(CT)	S3	EL
080-9400-000-000-000-	Trib. to Cronin Cr.	TERRY 155, Unit 9	93 L 097	9 .64565 . 608907	2	08/23/96	TEC	0.68	4.00	(CT	S4	VO
080-9500-000-000-000-	Trib. to Cronin Cr.	TERRY 156, Unit 9	93 L 097	9 .6456 . 60887	1	08/23/96	TEC	0.78	2.00	NF	S6	VO

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Agency	Average Channel Width (m)	Gradient (%)	RS Species	Proposed Stream Class	Fishing Method
080-9600-000-000-000-	Trib. to Cronin Cr.	W273, Unit 9	93 L 097	9 .6469 .60875	2	09/13/97	TEC	20.00	1.00	DV	S2	EL
080-9900-000-000-000-	Trib. to Cronin Cr.	TERRY 153, Unit 9	93 L 097	9 .6455 .60879	1	08/23/96	TEC	0.66	2.00	NF	S6	EL
480-6972-341-267-000-	Trib. to Fink Cr	JULIE 104, Unit 9	93 L 087	9 .6497 .60801	2	08/18/96	TEC	2.77	17.00	NF	S6	NA
480-6972-341-267-000-	Trib. to Fink Cr	JULIE 105, Unit 9	93 L 087	9 .6496 .60801	1	08/18/96	TEC	0.77	4.00	(DV)	S4	MT
480-4672-341-267-000-	Fink Cr.	Y212, Unit 9	93 L 087	9 .6484 .60806	3	09/05/97	TEC	5.40	11.00	NF	S5	EL
480-6972-341-267-000-	Fink Cr.	JULIE 100, Unit 9	93 L 087	9 .6490 .60810	2	08/16/96	TEC	7.20	9.00	(DV)	S2	EL
480-6972-341-267-000-	Fink Cr.	HASLETT 108, Unit 9	93 L 087	9 .6509 .60833	1	08/21/96	TEC	4.08	3.00	DV, CT	S3	EL
480-6972-341-267-000-	Fink Cr.	Y211, Unit 9	93 L 087	9 .646872.6079170	4	09/05/97	TEC	3.78	8.00	NF	S5	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 96, Unit 9	93 L 087	9 .6485 .60824	1	08/16/96	TEC	2.48	3.00	DV	S3	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 97, Unit 9	93 M 087	9 .6485 .60824	1	08/16/96	TEC	1.30	4.00	DV	S4	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 98 , Unit 9	93 L 087	9 .6485 .60824	1	08/16/96	TEC	2.08	6.00	DV	S3	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 99, Unit 9	93 L 087	9 .6489 .60814	1	08/16/96	TEC	1.62	3.00	DV	S3	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 101, Unit 9	93 L 087	9 .6492 .60805	2	08/16/96	TEC	1.15	5.00	NF	S6	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 102 , Unit 9	93 L 087	9 .6495 .60802	2	08/16/96	TEC	1.93	7.00	NF	S6	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 116, Unit 9	93 L 087	9. 6505 . 60795	1	08/19/96	TEC	2.93	2.00	(DV)	S3	VO
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 117, Unit 9	93 L 087	9 . 6507 . 60794	1	08/19/96	TEC	2.23	2.00	(DV)	S3	VO
480-6972-427-541-501-	Four Cr.	Y228, Unit 9	93 L 086	9 .6406 .60812	5	09/08/97	TEC	3.47	9.00	NF	S5	EL
080-2300-000-000-000-	Trib to Fulton Cr.	Y222, Unit 9	93 L 088	9 .655483.608410	1	09/07/97	TEC	1.58	5.00	(CT)	S3	EL
003-8100-000-000-000-	Trib. to Fulton R	JULIE 150, Unit 9	93 M 007	9 .6429 .61010	3	08/23/96	TEC	0.37	0.50	(RB, DV)	S4	NA
003-8100-000-000-000-	Trib. to Fulton R	JULIE 152, Unit 9	93 M 007	9 . 6435 . 61011	1	08/23/96	TEC	1.28	1.00	RSC	S4	MT
003-8200-000-000-000-	Trib. to Fulton R	JULIE 151, Unit 9	93 M 007	9 .6430 .61008	1	08/23/96	TEC	0.87	1.00	(RB, DV)	S4	EL
003-8900-000-000-000-	Trib. to Fulton R	TERRY 118, Unit 9	93 M 007	9 .6409 .61010	1	08/18/96	TEC	1.55	3.00	CT	S3	EL
002-9900-000-000-000-	Fulton R.	HASLETT 75, Unit 9	93 M 006	9 .6339 .60995	6	08/15/96	TEC	1.45	4.50	(CT)	S3	VO
480-6972-000-000-000-	Fulton R.	TERRY 99, Unit 9	93 M 007	9 .6452 .61004	4	08/14/96	TEC	8.00	1.00	CAS, LNC,	S2	EL
480-6972-000-000-000-	Fulton R.	HASSLET 79, Unit 9	93 M 006	9.6350 .60992	3	08/15/96	TEC	2.90	7.00	(CT) (DV)	S3	EL
480-6972-000-000-000-	Fulton R.	TERRY 115, Unit 9	93 M 007	9.6415 .61001	4	08/17/96	TEC	14.95	5.00	RB BB DV	S2	EL
480-6972-472-000-000-	Fulton R.	TERRY 146, Unit 9	93 L 097	9 .6481 .60934	3	08/22/96	TEC	22.83	1.00	CT	S1	CR
002-9200-000-000-000-	Trib. to Fulton R.	HASSLET 80, Unit 9	93 M 006	9 .6392 .60977	1	08/16/96	TEC	2.80	5.00	CT	S3	VO
002-9300-000-000-000-	Trib. to Fulton R.	W269, Unit 9	93 M 006	9 .6393 .60991	1	09/12/97	TEC	1.58	0.50	(RB) (CT)	S3	VO
002-9500-000-000-000-	Trib. to Fulton R.	HASSLET 81, Unit 9	93 M 006	9 .6357 .60975	1	08/16/96	TEC	2.39	9.00	(CT)	S3	EL
002-9600-000-000-000-	Trib. to Fulton R.	HASSLET 82, Unit 9	93 M 006	9 .6356 .60978	1	08/16/96	TEC	3.85	10.00	(CT)	S3	VO
002-9800-000-000-000-	Trib. to Fulton R.	HASSLET 83, Unit 9	93 M 006	9.6362 .60982	1	08/16/96	TEC	1.80	20.00	(CT)	S3	VO
003-0000-000-000-000-	Trib. to Fulton R.	HASLETT 78, Unit 9	93 M 006	9 .6353 .60985	1	08/15/96	TEC	1.57	10.00	CT	S3	VO
003-0100-000-000-000-	Trib. to Fulton R.	HASLETT 77, Unit 9	93 M 006	9 .6343 .60993	1	08/15/96	TEC	2.08	6.00	CT	S3	VO
003-0200-000-000-000-	Trib. to Fulton R.	HASLETT 76, Unit 9	93 M 006	9 .6340 .60994	1	08/15/96	TEC	1.00	8.00	(CT)	S4	EL
003-0600-000-000-000-	Trib. to Fulton R.	JULIE 148, Unit 9	93 M 006	9 .6372 .61014	1	08/23/96	TEC	3.25	0.00	(RB)	S3	EL
003-0800-000-000-000-	Trib. to Fulton R.	JULIE 149, Unit 9	93 M 006	9 .6355 .61024	3	08/23/96	TEC	3.57	9.00	(DV, RB)	S3	EL
003-6500-000-000-000-	Trib to Fulton R.	W256, Unit 9	93 L 097	9 .6445 .60966	1	09/10/97	TEC	2.15	0.00	(CT) (RB)	S3	EL

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Agency	Average Channel Width (m)	Gradient (%)	RS Species	Proposed Stream Class	Fishing Method
003-6800-000-000-000-	Trib to Fulton R.	W257, Unit 9	93 M 007	9 .6450 .60977	1	09/10/97	TEC	1.07	1.00	(CT) (RB)	S4	NA
003-6900-000-000-000-	Trib to Fulton R.	W254, Unit 9	93 M 007	9 .6440 .60997	2	09/09/97	TEC	0.98	8.00	(CT)	S4	EL
003-8500-000-000-000-	Trib. to Fulton R.	JULIE 147, Unit 9	93 M 006	9 .6380 .61041	3	08/23/96	TEC	1.58	2.00	(RB, DV)	S3	NA
003-8590-000-000-000-	Trib. to Fulton R.	TERRY 113, Unit 9	93 M 006	9 .6403 .61038	1	08/17/96	TEC	1.73	2.00	CT	S3	EL
003-8600-000-000-000-	Trib. to Fulton R.	TERRY 114, Unit 9	93 M 006	9.6406 .61031	1	08/17/96	TEC	2.90	3.00	CT	S3	EL
003-8700-000-000-000-	Trib to Fulton R.	W250, Unit 9	93 M 006	9 .6405 .61029	1	09/09/97	TEC	1.00	4.00	(CT)	S4	EL
003-9000-000-000-000-	Trib to Fulton R.	W252, Unit 9	93 M 007	9 .6410 .61007	1	09/09/97	TEC	1.25	2.00	(CT)	S4	EL
003-9100-000-000-000-	Trib to Fulton R.	W253, Unit 9	93 M 007	9 .6420 .60988	1	09/09/97	TEC	1.27	6.00	(CT)	S4	EL
080-2200-000-000-000-	Trib. to Fulton R.	Y279, Unit 9	93 L 088	9 .654689.6084974	2	09/07/97	TEC	0.82	1.00	NF	S6	NA
080-2500-000-000-000-	Trib to Fulton R.	Y242, Unit 9	93 L 088	9 .656197.6082681	2	09/10/97	TEC	1.55	3.00	CT	S3	EL
080-5700-000-000-000-	Trib to Fulton R.	E8, Unit 9	93 L 097	9 .6485 .60933	1	07/10/97	TEC	0.70	3.00	(DV)	S4	EL
080-6300-000-000-000-	Trib to Fulton R.	Y49, Unit 9	93 L 097	9 .6517 .60946	2	07/18/97	TEC	1.08	1.00	(DV)	S4	EL
080-7300-000-000-000-	Trib. to Fulton R.	TERRY 149, Unit 9	93 L 097	9 .6438 .60959	1	08/22/96	TEC	0.87	4.00	NF	S6	NA
480-6972-000-000-000-	Trib. to Fulton R.	HASSLET 84, Unit 9	93 M 006	9.6359 .60984	1	08/16/96	TEC	1.20	9.00	TR	S4	VO
480-6972-000-000-000-	Trib. to Fulton R.	HASLETT 109, Unit 9	93 L 087	9 .6507 .60847	2	08/21/96	TEC	1.72	3.00	DV	S3	EL
480-6972-000-000-000-	Trib. to Fulton R.	TERRY 148, Unit 9	93 L 097	9 .6432 .60960	2	08/22/96	TEC	1.34	2.00	NF	S6	NA
003-8400-000-000-000-	Trib. to Fulton R.	TERRY 112, Unit 9	93 M 006	9 .6401 .61052	2	08/17/96	TEC	1.63	1.00	NF	S6	VO
480-6972-528-000-000-	Hagarty Cr	TERRY 145, Unit 9	93 M 097	9 .6427 .60938	1	08/22/96	TEC	3.60	3.00	DV	S3	VO
480-6972-528-000-000-	Hagarty Cr.	TERRY 147, Unit 9	93 L 097	9 .6455 .60928	1	08/22/96	TEC	4.02	3.00	DV	S3	VO
080-8900-000-000-000-	Trib to Hagarty Cr.	W258, Unit 9	93 L 097	9 .6436 .60918	2	09/10/97	TEC	2.32	8.00	(RB) (CT)	S3	EL
080-8900-000-000-000-	Trib. to Hagarty Cr.	W272, Unit 9	93 L 097	9 .6448 .60917	1	09/13/97	TEC	2.30	3.00	DV CT	S3	EL
080-8700-000-000-000-	Trib. to Hagarty L.	TERRY 169, Unit 9	93 L 097	9 .6438 .60931	1	08/25/96	TEC	1.38	2.00	(DV)	S4	NA
480-6972-528-000-000-	Trib. to Hagarty L.	TERRY 170, Unit 9	93 L 097	9 .6440 .60928	1	08/25/96	TEC	1.84	7.00	(DV)	S3	VO
480-6972-544-458-000-	Haystack Cr	BRUCE 95, Unit 9	93 L 096	9 .6405 .60902	2	08/25/96	TEC	5.22	7.00	DV	S2	EL
480-6972-544-458-000-	Haystack Cr.	TERRY 167, Unit 9	93 L 097	9 .6419 .60935	1	08/25/96	TEC	5.57	10.00	DV	S2	EL
080-8200-000-000-000-	Trib. to Haystack Cr.	W271, Unit 9	93 L 097	9 .6475 .60928	1	09/13/97	TEC	2.03	6.00	DV	S3	EL
480-6972-472-411-000-	Higgins Cr	BRUCE 94, Unit 9	93 L 097	9 .6420 .60861	2	08/25/96	TEC	4.67	4.00	(DV, RB, BT)	S3	EL
480-6972-427-541-000-	Little Joe Cr.	HASLETT 99, Unit 9	93 L 087	9 .6449 .60808	1	08/20/96	TEC	13.07	8.00	DV	S2	EL
480-6972-427-541-000-	Little Joe Cr.	Y227, Unit 9	93 L 086	9 .6402 .60826	5	09/08/97	TEC	6.28	7.00	NF	S5	EL
079-4800-000-000-000-	Trib to Little Joe Cr.	Y213, Unit 9	93 L 087	9 .6441 .60812	1	09/05/97	TEC	1.93	21.00	NF	S6	EL
480-6972-427-000-000-	McKendrick Cr.	JULIE 95, Unit 9	93 L 087	9 .6480 .60840	1	08/16/96	TEC	9.20	3.00	RB, DV	S2	EL
480-6972-427-000-000-	McKendrick Cr.	Y218, Unit 9	93 L 087	9 .6423 .60764	4	09/06/97	TEC	6.28	0.50	DV TR	S2	EL
480-6972-427-000-000-	McKendrick Cr.	Y221, Unit 9	93 L 087	9 .643443.60756	5	09/06/97	TEC	3.48	16.00	NF	S5	EL
480-6972-427-000-000-	McKendrick Cr.	Y230, Unit 9	93 L 087	9 .646365.6075685	6	09/08/97	TEC	2.40	1.50	NF	S6	EL
480-6972-427-000-000-	Trib. to McKendrick Cr	JULIE 118, Unit 9	93 L 087	9.6485 .60852	1	08/19/96	TEC	3.03	4.00	(DV)	S3	VO
078-9200-000-000-000-	Trib to McKendrick Cr.	Y243, Unit 9	93 L 087	9 .645184.6082730	2	09/10/97	TEC	4.95	17.00	(DV)	S3	EL
078-9300-000-000-000-	Trib to McKendrick Cr.	Y244, Unit 9	93 L 087	9 .648184.606730	1	09/10/97	TEC	5.25	23.00	(DV)	S2	EL
079-0100-000-000-000-	Trib to McKendrick Cr.	Y214, Unit 9	93 L 087	9 .64547 .608061	1	09/05/97	TEC	7.08	7.00	DV	S2	EL

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Agency	Average Channel Width (m)	Gradient (%)	RS Species	Proposed Stream Class	Fishing Method
079-2800-000-000-000-	Trib to McKendrick Cr.	Y234, Unit 9	93 L 086	9 .639741.6079005	3	09/08/97	TEC	5.13	11.00	NF	S5	EL
079-3700-000-000-000-	Trib to McKendrick Cr.	Y216, Unit 9	93 L 087	9 .642745.6076420	1	09/05/97	TEC	0.85	6.00	(CT)	S4	EL
079-3800-000-000-000-	Trib to McKendrick Cr.	Y215, Unit 9	93 L 087	9 .642574.6076214	3	09/05/97	TEC	1.07	8.00	(CT)	S4	EL
079-4200-000-000-000-	Trib to McKendrick Cr.	Y219, Unit 9	93 L 087	9 .6427 .60754	1	09/06/97	TEC	3.87	11.00	DV	S3	EL
079-4400-000-000-000-	Trib to McKendrick Cr.	Y220, Unit 9	93 L 087	9 .6435 .60757	1	09/06/97	TEC	4.10	21.50	NF	S5	EL
079-4700-000-000-000-	Trib to McKendrick Cr.	Y229, Unit 9	93 L 087	9 .645556.607548	1	09/08/97	TEC	2.02	20.00	NF	S6	EL
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 97, Unit 9	93 L 087	9 .6456 .60817	1	08/20/96	TEC	7.07	9.00	(RB), (DV)	S2	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 98 , Unit 9	93 L 087	9 .6452 .60816	2	08/20/96	TEC	4.12	6.00	(RB) (DV)	S3	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 100, Unit 9	93 L 087	9 .6447 .60806	1	08/20/96	TEC	1.80	9.00	DV	S3	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 101, Unit 9	93 L 087	9 .6433 . 60793	2	08/20/96	TEC	1.30	9.00	NF	S6	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 102, Unit 9	93 L 087	9 .6431 .60788	1	08/20/96	TEC	1.98	10.00	(RB) (DV)	S3	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 104, Unit 9	93 L 087	9 .6422 .60774	1	08/20/96	TEC	3.12	8.00	(RB) (DV)	S3	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 105, Unit 9	93 L 087	9 .6420 .60772	1	08/21/96	TEC	1.98	4.00	DV	S3	EL
480-6972-472-000-000-	Trib. to McKendrick Cr.	JULIE 170, Unit 9	93 L 087	9 .6446 .60852	2	08/25/96	TEC	1.32	12.00	NF	S6	EL
079-3700-000-000-000-	Trib to McKendrick Cr.	Y217, Unit 9	93 L 087	9 .642320.60763	1	09/06/97	TEC	1.80	1.00	CT	S3	EL
480-6972-427-000-000-	Trib to McKendrick Cr.	HASLETT 103, Unit 9	93 L 087	9 .6426 .60780	1	08/20/96	TEC	6.17	6.00	DV	S2	VO
480-6972-870-166-000-	Morin Cr.	TERRY 163, Unit 9	93 L 097	9 .6422 .60964	1	08/25/96	TEC	2.77	1.00	(CT)	S3	EL
080-7500-000-000-000-	Trib. to Morin Cr.	TERRY 162, Unit 9	93 L 097	9 .6423 .60965	1	08/25/96	TEC	1.24	6.00	(DV)	S4	NA
480-6972-544-000-000-	Nata Cr.	TERRY 165, Unit 9	93 L 097	9 .6431 .60947	2	08/25/96	TEC	10.18	4.00	DV	S2	EL
480-6972-544-000-000-	Nata Cr.	Y53, Unit 9	93 L 097	9 .6472 .60952	1	07/18/97	TEC	7.33	2.00	CT DV	S2	EL
480-6972-544-000-000-	Nata Cr.	E281, Unit 9	93 L 096	9 .6384 .60920	4	09/09/97	TEC	5.65	5.00	(DV)	S2	EL
080-7500-000-000-000-	Trib. to Nata Cr.	TERRY 166, Unit 9	93 L 097	9 .6422 .60938	1	08/25/96	TEC	1.63	3.00	DV	S3	EL
100-0600-000-000-000-	Trib. to Nata Cr.	E280, Unit 9	93 L 096	9 .6384 .60920	1	09/09/97	TEC	2.23	9.00	(DV)	S3	EL
003-7500-000-000-000-	Not a creek	TERRY 101, Unit 9	93 M 007	9 .6466 .61029	0	08/15/96	TEC	0.00	0.00	NF	NC	NA
003-7900-000-000-000-	Not a creek	TERRY 98, Unit 9	93 M 007	9 .6458 .61020	0	08/14/96	TEC	0.00	2.30	NF	NC	NA
003-8000-000-000-000-	Not a creek	TERRY 100, Unit 9	93 M 007	9 .6449 .61012	0	08/14/96	TEC	0.00	1.50	NF	NC	EL
003-8800-000-000-000-	Not a creek	W251, Unit 9	93 M 007	9 .6410 .61018	0	09/09/97	TEC	0.00	6.00	NF	NC	NA
080-2200-000-000-000-	Not a creek	Y225, Unit 9	93 L 088	9 .655076.60850	0	09/07/97	TEC	0.00	6.00	NF	NC	NA
080-2700-000-000-000-	Not a creek	Y226, Unit 9	93 L 088	9 .654761.6082194	0	09/07/97	TEC	0.00	5.00	NF	NC	NA
080-3400-000-000-000-	Not a creek	TERRY 150, Unit 9	93 L 097	9 .6486 .60888	0	08/23/96	TEC	2.00	0.00	NF	NC	EL
080-3500-000-000-000-	Not a creek	TERRY 122, Unit 9	93 L 097	9 .6483 .60892	0	08/18/96	TEC	0.00	0.00	NF	NC	NA
080-3800-000-000-000-	Not a creek	TERRY 121, Unit 9	93 L 097	9 .6483 .60894	0	08/18/96	TEC	0.00	0.00	NF	NC	NA
080-4100-000-000-000-	Not a creek	TERRY 181, Unit 9	93 L 097	9 .6451 .60911	0	08/27/96	TEC	0.00	4.00	NF	NC	NA
080-5000-000-000-000-	Not a creek	Y50, Unit 9	93 L 097	9 .6503 .60930	0	07/18/97	TEC	0.00	2.00	NF	NC	NA
080-5400-000-000-000-	Not a creek	Y52, Unit 9	93 L 097	9 .6495 .60968	0	07/18/97	TEC	0.00	7.04	NF	NC	NA
080-5600-000-000-000-	Not a creek	E7, Unit 9	93 L 097	9 .6486 .60932	0	07/10/97	TEC	0.00	12.00	NF	NC	NA
080-5900-000-000-000-	Not a creek	Y54, Unit 9	93 L 097	9 .6470 .60943	0	07/18/97	TEC	0.00	4.00	NF	NC	NA
080-7600-000-000-000-	Not a creek	TERRY 161, Unit 9	93 L 097	9 .6422 .60965	0	08/25/96	TEC	0.00	2.00	NF	NC	NA

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Agency	Average Channel Width (m)	Gradient (%)	RS Species	Proposed Stream Class	Fishing Method
080-7900-000-000-000-	Not a creek	W270, Unit 9	93 L 097	9 .6540 .60954	1	09/13/97	TEC	0.00	4.00	NF	NC	NA
080-8400-000-000-000-	Not a creek	TERRY 171, Unit 9	93 L 097	9 .6444 .60935	0	08/25/96	TEC	0.00	2.00	NF	NC	NA
080-8600-000-000-000-	Not a creek	TERRY 168, Unit 9	93 L 097	9 .6438 .60932	0	08/25/96	TEC	0.00	3.00	NF	NC	NA
480-6972-341-416-000-	Regan Cr	JULIE 108, Unit 9	93 L 087	9 .6531 .60771	2	08/18/96	TEC	2.03	4.00	(DV)	S3	VO
480-6972-341-416-000-	Regan Cr	JULIE 111, Unit 9	93 L 087	9 .6530 .60790	1	08/18/96	TEC	5.80	1.00	(DV)	S2	NA
480-6972-341-416-000-	Regan Cr	JULIE 112, Unit 9	93 L 087	9 .6536 . 60810	1	08/18/96	TEC	5.82	3.00	DV	S2	VO
480-6972-341-416-000-	Trib. to Regan Cr	JULIE 106, Unit 9	93 L 087	9 .6515 .60785	1	08/18/96	TEC	1.47	2.00	DV	S3	VO
480-6972-341-416-000-	Trib. to Regan Cr	JULIE 107, Unit 9	93 L 087	9 .6517 .60781	1	08/18/96	TEC	3.90	3.00	DV	S3	VO
480-6972-341-416-000-	Trib. to Regan Cr	JULIE 110, Unit 9	93 L 087	9 .6532 .60784	2	08/18/96	TEC	5.30	1.00	(DV)	S2	NA
480-6972-657-669-000-	Taka Cr.	JULIE 172, Unit 9	93 L 096	9 .6366 .60929	2	08/25/96	TEC	5.00	6.00	DV	S2	EL
480-6972-870-000-000-	Taka Cr.	TERRY 164, Unit 9	93 L 097	9 .6413 .60951	1	08/25/96	TEC	4.70	10.00	DV	S3	EL

Table 5. Summary of Non Fish Bearing Classifications Established in Working Unit 9 in 1996 and 1997

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Proposed Stream Class	Electroshocking Effort	Rationale
480-6972-657-000-000-000-000-000-000-000-000-000	Bristol Cr	JULIE 126, Unit 9	93 M 007	9 .6482 .61064	7	08/21/96	S6	This dry site was not electrofished.	This tributary has been classified as non fish bearing because it lacks suitable fish habitat. The channel is discontinuous in the sampling area and occasionally runs as a small mud channel through an alder swale.
003-7300-000-000-000-000-000-000-000-000-000-000	Trib. to Bristol L.	JULIE 130, Unit 9	93 M 007	9 . 6470 . 61016	1	08/21/96	S6	No habitat was available for shocking.	This tributary has been classified as non fish bearing because it lacks suitable fish habitat. This stream is a borderline "not a creek".
480-6972-341-000-000-000-000-000-000-000-000-000	Trib. to Bristow Cr	JULIE 109, Unit 9	93 L 087	9 .6513 .60797	2	08/18/96	S6	An electroshocker was not available for sampling this day.	This reach has been classified as non fish bearing because it lacks suitable fish habitat and drains into a swamp. This is an important frog nursery as evidenced by an estimated 2000 tadpoles observed by the crew.
480-6972-341-000-000-000-000-000-000-000-000-000	Trib. to Bristow Cr	JULIE 113, Unit 9	93 L 087	9 .6522 .60812	1	08/18/96	S6	An electroshocker was not available for fish sampling.	This tributary has been classified as non fish bearing because it lacks suitable spawning, rearing or overwintering habitat.
480-6972-341-000-000-000-000-000-000-000-000-000	Trib. to Bristow Cr	JULIE 115, Unit 9	93 L 087	9 .6516 .60817	1	08/18/96	S6	An electroshocker was not available for sampling this day.	This tributary has been classified as non fish bearing because it contains no spawning or rearing habitat and because it does not seem to directly connect with the small lake in the area, which would be subject to winterkill.
480-6972-341-000-000-000-000-000-000-000-000-000	Bristow Cr.	Y231, Unit 9	93 L 087	9 .648185.60773	4	09/08/97	S6.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 500V, was 139 seconds over 300 meters.	This reach has been classified as non fish bearing because it is located above a 15 meter falls, and no evidence of a resident population was found in the sampling area.
079-7400-000-000-000-000-000-000-000-000-000-	Trib to Bristow Cr.	Y232, Unit 9	93 L 087	9 .647993.60781	1	09/08/97	S6.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 7, 500V, was 202 seconds over 100 meters.	This reach has been classified as non fish bearing because it is located above a 15 meter falls, and no evidence of a resident population was found in the sampling area.
079-7300-000-000-000-000-000-000-000-000-000-	Trib to Bristow Cr.	Y233, Unit 9	93 L 087	9 .64822 .607790	1	09/08/97	S6.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 600V, was 238 seconds over 200 meters.	This reach has been classified as non fish bearing because it is located above a 15 meter falls, and no evidence of a resident population was found in the sampling area.
080-4500-000-000-000-000-000-000-000-000-000-	Trib. to Chapman Lk.	Z16, Unit 9	93 L 097	9 .64749 .609263	2	07/10/97	S6.	The electroshocking effort, using a Smithroot Type VII model set at 600V, 60HZ, 6MS, was 46 seconds over 5 meters. The shocking effort at this site was limited by low flows.	This reach has been classified as non fish bearing because it occurs above a section of subterranean flow and section of steep gradient.
080-9900-000-000-000-000-000-000-000-000-000-000	Trib. to Cronin Cr.	TERRY 153, Unit 9	93 L 097	9 .6455 .60879	1	08/23/96	S6	This site was not electrofished, the flow was too low at the time of sampling.	This tributary has been classified as non fish bearing because it is intermittent and does not contain suitable fish habitat. Rearing cover and spawning substrate are lacking.

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Proposed Stream Class	Electroshocking Effort	Rationale
080-9500-000-000-000-000-000-000-000-000-000-000	Trib. to Cronin Cr.	TERRY 156, Unit 9	93 L 097	9 .6456 . 60887	1	08/23/96	S6	This site was not electrofished, the flow was too low at the t	This tributary has been classified as non fish bearing because it does not contain suitable fish habitat and is located above beaver dams which will impede fish access upstream.
480-6972-341-267-000-000-000-000-000-000-000-000	Trib. to Fink Cr	JULIE 104, Unit 9	93 L 087	9 .6497 .60801	2	08/18/96	S6	No electrofishing was carried out. The steep gradient above the road precludes the presence of fish.	This reach has been classified as non fish bearing because it lacks suitable spawning, rearing and overwintering habitat. The gradient in creases above the road and the channel moves through a ditch which parallels the road in the sampling area.
480-6972-341-267-000-000-000-000-000-000-000-000	Fink Cr.	Y211, Unit 9	93 L 087	9 .646872.6079170	4	09/05/97	S5.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 500V, was 513 seconds over 200 meters.	This reach has been classified as non fish bearing because it is located above a 3 and 2 meter cascade, above which no evidence of a resident population was found.
480-4672-341-267-000-000-000-000-000-000-000-000	Fink Cr.	Y212, Unit 9	93 L 087	9 .6484 .60806	3	09/05/97	S5.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 6, 400V, was 350 seconds over 200 meters.	This reach has been classified as non fish bearing because it is located above a 3 and 2 meter cascade, above which no evidence of a resident population was found.
480-6972-341-267-000-000-000-000-000-000-000-000	Trib. to Fink Cr.	JULIE 101, Unit 9	93 L 087	9 .6492 .60805	2	08/16/96	S6	The electroshocking effort , using a 12 B POW model. was 68 seconds over 220 meters .	This reach has been classified as non fish bearing because it does not contain suitable fish habitat. The creek disappears roughly 150 meters downstream of the road crossing.
480-6972-341-267-000-000-000-000-000-000-000-000	Trib. to Fink Cr.	JULIE 102 , Unit 9	93 L 087	9 .6495 .60802	2	08/16/96	S6	The electroshocking effort, using a 12 B POW electroshocker, was 287 seconds over 250 meters.	This tributary has been classified as non fish bearing because it disappears downstream of the road crossing and lacks suitable spawning, rearing and overwintering habitat.
480-6972-427-541-501-000-000-000-000-000-000-000	Four Cr.	Y228, Unit 9	93 L 086	9 .6406 .60812	5	09/08/97	S5.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 500V, was 312 seconds over 300 meters.	This reach has been classified as non fish bearing because it is located above a 10 m cascade, above which no fish were caught, by electrofishing or minnow trapping.
003-8400-000-000-000-000-000-000-000-000-000-000	Trib. to Fulton R.	TERRY 112, Unit 9	93 M 006	9 .6401 .61052	2	08/17/96	S6	This site was not electrofished. the flow was too low at the t	This reach has been classified as non fish bearing because it lacks suitable fish habitat. Little cover and very low flows were observed in the sampling area.
480-6972-000-000-000-000-000-000-000-000-000-000	Trib. to Fulton R.	TERRY 148, Unit 9	93 L 097	9 .6432 .60960	2	08/22/96	S6	An electroshocker was not available for sampling this day.	This reach has been classified as non fish bearing because it lacks suitable fish habitat. Rearing cover in particular appears to be limited.
080-7300-000-000-000-000-000-000-000-000-000-000	Trib. to Fulton R.	TERRY 149, Unit 9	93 L 097	9 .6438 .60959	1	08/22/96	S6	An electroshocker was not available for sampling.	This tributary has been classified as non fish bearing because it lacks suitable fish habitat. The creek moves underground downstream of the sampling area.
080-2200-000-000-000-000-000-000-000-000-000-	Trib. to Fulton R.	Y279, Unit 9	93 L 088	9 .654689.6084974	2	09/07/97	S6	This dry site was not electrofished.	This reach has been classified as non fish bearing because it lacks suitable rearing, spawning and overwintering habitat. The channel exists upstream of the road, and is a small channel running through an alder swale.
480-6972-427-541-000-000-000-000-000-000-000-000	Little Joe Cr.	Y227, Unit 9	93 L 086	9 .6402 .60826	5	09/08/97	S5.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 500V, was 576 seconds over 250 meters.	This reach has been classified as non fish bearing because it is located above a 50 meter falls, above which no fish were caught, by electrofishing or minnow trapping.

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Proposed Stream Class	Electroshocking Effort	Rationale
079-4800-000-000-000-000-000-000-000-000-000-	Trib to Little Joe Cr.	Y213, Unit 9	93 L 087	9 .6441 .60812	1	09/05/97	S6.	The electroshocking effort, using a Smithroot 12 B POW model set at J, 5, 400V, was 187 seconds over 200 meters.	This reach has been classified as non fish bearing because of steep (30%) gradient near the mouth, and the absence of fish in the sampling area.
480-6972-427-000-000-000-000-000-000-000-000-000	McKendrick Cr.	Y221, Unit 9	93 L 087	9 .643443.60756	5	09/06/97	S5.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 500V, was 771 seconds over 200 meters.	This reach has been classified as non fish bearing because it is located above a series of falls and cascade barriers, up to 3 m in height, and no evidence of a resident population of fish was found in the sampling area.
480-6972-427-000-000-000-000-000-000-000-000-000	McKendrick Cr.	Y230, Unit 9	93 L 087	9 .646365.6075685	6	09/08/97	S6.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 600V, was 205 seconds over 200 meters.	This reach has been classified as non fish bearing because it is located above a series of falls and cascade barriers, up to 3 m in height, and no evidence of a resident population of fish was found in the sampling area.
480-6972-427-000-000-000-000-000-000-000-000-000	Trib. to McKendrick Cr.	HASLETT 101, Unit 9	93 L 087	9 .6433 . 60793	2	08/20/96	S6	This site was not electrofished.	This small tributary has been classified as non fish bearing because it lacks suitable fish habitat. Underground flow, sedimentation and a large amount of instream woody debris were noted in the sampling area.
480-6972-472-000-000-000-000-000-000-000-000-000	Trib. to McKendrick Cr.	JULIE 170, Unit 9	93 L 087	9 .6446 .60852	2	08/25/96	S6	The electroshocking effort, using a Smithroot 12 B POW model, was 100 seconds over 200 square meters.	This reach has been classified as non fish bearing because it lacks suitable fish habitat. the substrate is angular and lichen covered in the sampling area.
079-4400-000-000-000-000-000-000-000-000-000-	Trib to McKendrick Cr.	Y220, Unit 9	93 L 087	9 .6435 .60757	1	09/06/97	S5	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 500V, was 72 seconds over 150 meters.	This reach has been classified as non fish bearing because it is located above a series of falls and cascade barriers, up to 3 m in height, and no evidence of a resident population of fish was found in the sampling area.
079-4700-000-000-000-000-000-000-000-000-000-	Trib to McKendrick Cr.	Y229, Unit 9	93 L 087	9 .645556.607548	1	09/08/97	S6.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5, 600V, was 274 seconds over 300 meters.	This reach has been classified as non fish bearing because it is located above a series of falls and cascade barriers, up to 3 m in height, and no evidence of a resident population of fish was found in the sampling area.
079-2800-000-000-000-000-000-000-000-000-000-	Trib to McKendrick Cr.	Y234, Unit 9	93 L 086	9 .639741.6079005	3	09/08/97	S5.	The electroshocking effort, using a Smithroot 12 B POW model set at I, 5. 500V, was 150 seconds over 100 meters.	This reach has been classified as non fish bearing because it is located above a 15 meter and a 10 meter cascade barrier, and no evidence of a resident population was found in the sampling area.

Table 6. Summary of Sample sites in Working Unit 9 for Which Future Sampling is Recommended

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Agency	Average Channel Width (m)	Gradient (%)	Fish Species	Proposed Stream Class	Fishing Method
480-6972-657-000-000-	Bristol Cr.	TERRY 102, Unit 9	93 M 007	9 .6461 .61023	3	08/15/96	TEC	2.50	1.00	(CT)	S3	EL
480-6972-657-000-000-	Bristol Cr.	JULIE 127, Unit 9	93 M 007	9 . 6470 . 61055	5	08/21/96	TEC	2.48	0.50	(RB) (DV)	S3	NA
080-4400-000-000-000-	Trib. to Chapman L	TERRY 119, Unit 9	93 L 097	9 .6475 .60917	1	08/18/96	TEC	1.97	4.00	(CT)	S3	EL
080-4000-000-000-000-	Trib. to Chapman L.	TERRY 179, Unit 9	93 M 097	9 .6443 .60910	2	08/27/96	TEC	1.80	9.00	(CT)	S3	EL
080-4200-000-000-000-	Trib. to Chapman L.	TERRY 180, Unit 9	93 L 097	9 .6447 .60904	1	08/27/96	TEC	1.80	15.00	(CT)	S3	EL
080-4500-000-000-000-	Trib. to Chapman Lk.	Z17, Unit 9	93 L 097	9 .6477 .60928	1	07/10/97	TEC	2.28	6.00	(CT)	S3	EL
480-6972-472-000-000-	Cronin Cr.	TERRY 152, Unit 9	93 L 097	9 .6454 .60876	2	08/23/96	TEC	14.50	8.00	(CT)	S2	EL
480-6972-472-000-000-	Cronin Cr.	E279, Unit 9	93 L 097	9 .6413 .60880	2	09/09/97	TEC	10.23	8.00	(DV)	S2	EL
480-6972-472-000-000-	Cronin Cr.	JULIE 171, Unit 9, see	93 L 097	9 . 6414 . 60884	2	08/25/96	TEC	8.58	2.00	(DV)	S2	EL
080-9400-000-000-000-	Trib. to Cronin Cr.	TERRY 155, Unit 9	93 L 097	9 .64565 . 608907	2	08/23/96	TEC	0.68	4.00	(CT	S4	VO
080-9200-000-000-000-	Trib. to Cronin Cr.	TERRY 154, Unit 9	93 L 097	9 .6460 .60883	1	08/23/96	TEC	1.88	2.00	(CT)	S3	EL
480-6972-341-267-000-	Trib. to Fink Cr	JULIE 105, Unit 9	93 L 087	9 .6496 .60801	1	08/18/96	TEC	0.77	4.00	(DV)	S4	MT
480-6972-341-267-000-	Fink Cr.	JULIE 100, Unit 9	93 L 087	9 .6490 .60810	2	08/16/96	TEC	7.20	9.00	(DV)	S2	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 116, Unit 9	93 L 087	9. 6505 . 60795	1	08/19/96	TEC	2.93	2.00	(DV)	S3	VO
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 117, Unit 9	93 L 087	9 . 6507 . 60794	1	08/19/96	TEC	2.23	2.00	(DV)	S3	VO
080-2300-000-000-000-	Trib to Fulton Cr.	Y222, Unit 9	93 L 088	9 .655483.608410	1	09/07/97	TEC	1.58	5.00	(CT)	S3.	EL
003-8100-000-000-000-	Trib. to Fulton R	JULIE 150, Unit 9	93 M 007	9 .6429 .61010	3	08/23/96	TEC	0.37	0.50	(RB, DV)	S4	NA
003-8200-000-000-000-	Trib. to Fulton R	JULIE 151, Unit 9	93 M 007	9 .6430 .61008	1	08/23/96	TEC	0.87	1.00	(RB, DV)	S4	EL
002-9900-000-000-000-	Fulton R.	HASLETT 75, Unit 9	93 M 006	9 .6339 .60995	6	08/15/96	TEC	1.45	4.50	(CT)	S3	VO
480-6972-000-000-000-	Fulton R.	HASSLET 79, Unit 9	93 M 006	9.6350 .60992	3	08/15/96	TEC	2.90	7.00	(CT) (DV) (RB)	S3.	EL
002-9500-000-000-000-	Trib. to Fulton R.	HASSLET 81, Unit 9	93 M 006	9 .6357 .60975	1	08/16/96	TEC	2.39	9.00	(CT)	S3	EL
002-9600-000-000-000-	Trib. to Fulton R.	HASSLET 82, Unit 9	93 M 006	9 .6356 .60978	1	08/16/96	TEC	3.85	10.00	(CT)	S3	VO
002-9800-000-000-000-	Trib. to Fulton R.	HASSLET 83, Unit 9	93 M 006	9.6362 .60982	1	08/16/96	TEC	1.80	20.00	(CT)	S3	VO
003-0200-000-000-000-	Trib. to Fulton R.	HASLETT 76, Unit 9	93 M 006	9 .6340 .60994	1	08/15/96	TEC	1.00	8.00	(CT)	S4	EL
003-6900-000-000-000-	Trib to Fulton R.	W254, Unit 9	93 M 007	9 .6440 .60997	2	09/09/97	TEC	0.98	8.00	(CT)	S4.	EL
003-8700-000-000-000-	Trib to Fulton R.	W250, Unit 9	93 M 006	9 .6405 .61029	1	09/09/97	TEC	1.00	4.00	(CT)	S4.	EL
003-9000-000-000-000-	Trib to Fulton R.	W252, Unit 9	93 M 007	9 .6410 .61007	1	09/09/97	TEC	1.25	2.00	(CT)	S4.	EL
003-9100-000-000-000-	Trib to Fulton R.	W253, Unit 9	93 M 007	9 .6420 .60988	1	09/09/97	TEC	1.27	6.00	(CT)	S4.	EL
003-6500-000-000-000-	Trib to Fulton R.	W256, Unit 9	93 L 097	9 .6445 .60966	1	09/10/97	TEC	2.15	0.00	(CT) (RB)	S3.	EL
003-6800-000-000-000-	Trib to Fulton R.	W257, Unit 9	93 M 007	9 .6450 .60977	1	09/10/97	TEC	1.07	1.00	(CT) (RB)	S4.	NA
080-5700-000-000-000-	Trib to Fulton R.	E8, Unit 9	93 L 097	9 .6485 .60933	1	07/10/97	TEC	0.70	3.00	(DV)	S4.	EL
080-6300-000-000-000-	Trib to Fulton R.	Y49, Unit 9	93 L 097	9 .6517 .60946	2	07/18/97	TEC	1.08	1.00	(DV)	S4.	EL
003-0800-000-000-000-	Trib. to Fulton R.	JULIE 149, Unit 9	93 M 006	9 .6355 .61024	3	08/23/96	TEC	3.57	9.00	(DV, RB)	S3	EL
003-0600-000-000-000-	Trib. to Fulton R.	JULIE 148, Unit 9	93 M 006	9 .6372 .61014	1	08/23/96	TEC	3.25	0.00	(RB)	S3	EL
002-9300-000-000-000-	Trib. to Fulton R.	W269, Unit 9	93 M 006	9 .6393 .60991	1	09/12/97	TEC	1.58	0.50	(RB) (CT)	S3 / FSZ	VO

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Agency	Average Channel Width (m)	Gradient (%)	Fish Species	Proposed Stream Class	Fishing Method
003-8500-000-000-000-	Trib. to Fulton R.	JULIE 147, Unit 9	93 M 006	9 .6380 .61041	3	08/23/96	TEC	1.58	2.00	(RB, DV)	S3	NA
080-8900-000-000-000-	Trib to Hagarty Cr.	W258, Unit 9	93 L 097	9 .6436 .60918	2	09/10/97	TEC	2.32	8.00	(RB) (CT)	S3.	EL
080-8700-000-000-000-	Trib. to Hagarty L.	TERRY 169, Unit 9	93 L 097	9 .6438 .60931	1	08/25/96	TEC	1.38	2.00	(DV)	S4	NA
480-6972-528-000-000-	Trib. to Hagarty L.	TERRY 170, Unit 9	93 L 097	9 .6440 .60928	1	08/25/96	TEC	1.84	7.00	(DV)	S3	VO
480-6972-472-411-000-	Higgins Cr	BRUCE 94, Unit 9	93 L 097	9 .6420 .60861	2	08/25/96	TEC	4.67	4.00	(DV, RB, BT)	S3	EL
079-3700-000-000-000-	Trib to McKendrick Cr.	Y216, Unit 9	93 L 087	9 .642745.6076420	1	09/05/97	TEC	0.85	6.00	(CT)	S4.	EL
079-3800-000-000-000-	Trib to McKendrick Cr.	Y215, Unit 9	93 L 087	9 .642574.6076214	3	09/05/97	TEC	1.07	8.00	(CT)	S4.	EL
480-6972-427-000-000-	Trib. to McKendrick Cr	JULIE 118, Unit 9	93 L 087	9.6485 .60852	1	08/19/96	TEC	3.03	4.00	(DV)	S3	VO
078-9200-000-000-000-	Trib to McKendrick Cr.	Y243, Unit 9	93 L 087	9 .645184.6082730	2	09/10/97	TEC	4.95	17.00	(DV)	S3.	EL
078-9300-000-000-000-	Trib to McKendrick Cr.	Y244, Unit 9	93 L 087	9 .648184.606730	1	09/10/97	TEC	5.25	23.00	(DV)	S2.	EL
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 98 , Unit 9	93 L 087	9 .6452 .60816	2	08/20/96	TEC	4.12	6.00	(RB) (DV)	S3	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 102, Unit 9	93 L 087	9 .6431 .60788	1	08/20/96	TEC	1.98	10.00	(RB) (DV)	S3	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 104, Unit 9	93 L 087	9 .6422 .60774	1	08/20/96	TEC	3.12	8.00	(RB) (DV)	S3	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 97, Unit 9	93 L 087	9 .6456 .60817	1	08/20/96	TEC	7.07	9.00	(RB), (DV)	S2	VO
480-6972-870-166-000-	Morin Cr.	TERRY 163, Unit 9	93 L 097	9 .6422 .60964	1	08/25/96	TEC	2.77	1.00	(CT)	S3	EL
080-7500-000-000-000-	Trib. to Morin Cr.	TERRY 162, Unit 9	93 L 097	9 .6423 .60965	1	08/25/96	TEC	1.24	6.00	(DV)	S4	NA
480-6972-544-000-000-	Nata Cr.	E281, Unit 9	93 L 096	9 .6384 .60920	4	09/09/97	TEC	5.65	5.00	(DV)	S2	EL
100-0600-000-000-000-	Trib. to Nata Cr.	E280, Unit 9	93 L 096	9 .6384 .60920	1	09/09/97	TEC	2.23	9.00	(DV)	S3	EL
480-6972-341-416-000-	Regan Cr	JULIE 108, Unit 9	93 L 087	9 .6531 .60771	2	08/18/96	TEC	2.03	4.00	(DV)	S3	VO
480-6972-341-416-000-	Regan Cr	JULIE 111, Unit 9	93 L 087	9 .6530 .60790	1	08/18/96	TEC	5.80	1.00	(DV)	S2	NA
480-6972-341-416-000-000-000-000-000-000-	Trib. to Regan Cr	JULIE 110, Unit 9	93 L 087	9 .6532 .60784	2	08/18/96	TEC	5.30	1.00	(DV)	S2	NA

Table 7. Summary of Wildlife and Wildlife Signs Observed in Working Unit 9 in 1996 and 1997

Watershed Code	TRIM Number	Location	UTM	Reach Number	Survey Date	Agency	Species and Signs
480-6972-427-000-000-000-000-000-000-000-000	93 L 087	HASLETT 100, Unit 9	9 .6447 .60806	1	08/20/96	TEC	The beaver dam is located 500 meters from the mouth.
480-6972-341-267-000-000-000-000-000-000-000	93 L 087	HASLETT 108, Unit 9	9 .6509 .60833	1	08/21/96	TEC	Some good fish habitat occurs at this site. Some flooding near the road, resulting from beaver activity was observed at this site.
480-6972-341-000-000-000-000-000-000-000-000	93 L 087	JULIE 109, Unit 9	9 .6513 .60797	1	08/18/96	TEC	An estimated 2000 tadpoles were seen in the channel, illustrating the significance of this site for frogs.
480-6972-341-416-000-000-000-000-000-000-000	93 L 087	JULIE 110, Unit 9	9 .6532 .60784	2	08/18/96	TEC	A series of beaver dams occurs downstream of the road crossing.
480-6972-341-416-000-000-000-000-000-000-000	93 L 087	JULIE 111, Unit 9	9 .6530 .60790	1	08/18/96	TEC	A series of beaver dams occurs above and below the road. A beaver dam at the downstream end of the road crossing has caused flooding into the treed portion of this area.
003-0600-000-000-000-000-000-000-000-000-000	93 M 006	JULIE 148, Unit 9	9 .6372 .61014	1	08/23/96	TEC	Tadpoles and adult frogs were observed in the sampling area.
003-8100-000-000-000-000-000-000-000-000-000	93 M 007	JULIE 150, Unit 9	9 .6429 .61010	3	08/23/96	TEC	Many tadpoles and frogs were seen at this site.
003-8200-000-000-000-000-000-000-000-000-000	93 M 007	JULIE 151, Unit 9	9 .6430 .61008	1	08/23/96	TEC	Many tadpoles and frogs were observed in this area.
003-8600-000-000-000-000-000-000-000-000-000	93 M 007	TERRY 114, Unit 9	9.6406 .61031	1	08/17/96	TEC	The remnants of a beaver dam were found 30 meters upstream from the road. Fish were caught above and below the road.
080-9500-000-000-000-000-000-000-000-000-000	93 L 097	TERRY 156, Unit 9	9 .6456 . 60887	2	08/23/96	TEC	This site does not contain suitable habitat. It is unlikely that fish would even access this area because of the beaver dam, culvert and generally poor drainage.
480-6972-870-166-000-000-000-000-000-000-000	93 L 097	TERRY 163, Unit 9	9 .6422 .60964	1	08/25/96	TEC	Six beaver dams were observed at this site, roughly 300 meters from the mouth of the stream.
080-4200-000-000-000-000-000-000-000-000-000	93 L 097	TERRY 180, Unit 9	9 .6447 .60904	1	08/27/96	TEC	Many frogs was noted in the sampling area.
003-6500-000-000-000-000-000-000-000-000-	93 L 097	W256, Unit 9	9 .6445 .60966	1	09/10/97	TEC	There is evidence of a high concentration of wildlife; moose, bear, beaver.
003-6800-000-000-000-000-000-000-000-000-	93 M 007	W257, Unit 9	9 .6450 .60977	1	09/10/97	TEC	There is a large amount of moose and bear activity in the area.
080-9600-000-000-000-000-000-000-000-000-	93 L 097	W273, Unit 9	9 .6469 .60875	2	09/13/97	TEC	This is a flooded area heavily impacted by beaver activity.

Watershed Code	TRIM Number	Location	UTM	Reach Number	Survey Date	Agency	Species and Signs
079-3700-000-000-000-000-000-000-000-000-000-	93 L 087	Y216, Unit 9	9 .642745.6076420	1	09/05/97	TEC	Several frogs were sighted but not caught.
079-3700-000-000-000-000-000-000-000-000-000-	93 L 087	Y217, Unit 9	9 .642320.60763	1	09/06/97	TEC	A 1m beaver dam was found below the lake.
480-6972-427-000-000-000-000-000-000-000-000-000	93 L 087	Y218, Unit 9	9 .6423 .60764	3	09/06/97	TEC	A beaver dam was noted below the site.
080-2300-000-000-000-000-000-000-000-000-000-	93 L 088	Y222, Unit 9	9 .655483.608410	1	09/07/97	TEC	There are several beaver dams below this site.
080-2700-000-000-000-000-000-000-000-000-000-	93 L 088	Y226, Unit 9	9 .654761.6082194	0	09/07/97	TEC	Frogs were observed.
480-6972-427-000-000-000-000-000-000-000-000-000	93 L 087	Y230, Unit 9	9 .646365.6075685	6	09/08/97	TEC	Loons, goldeneyes and a frog were spotted on the lake.

APPENDIX 1

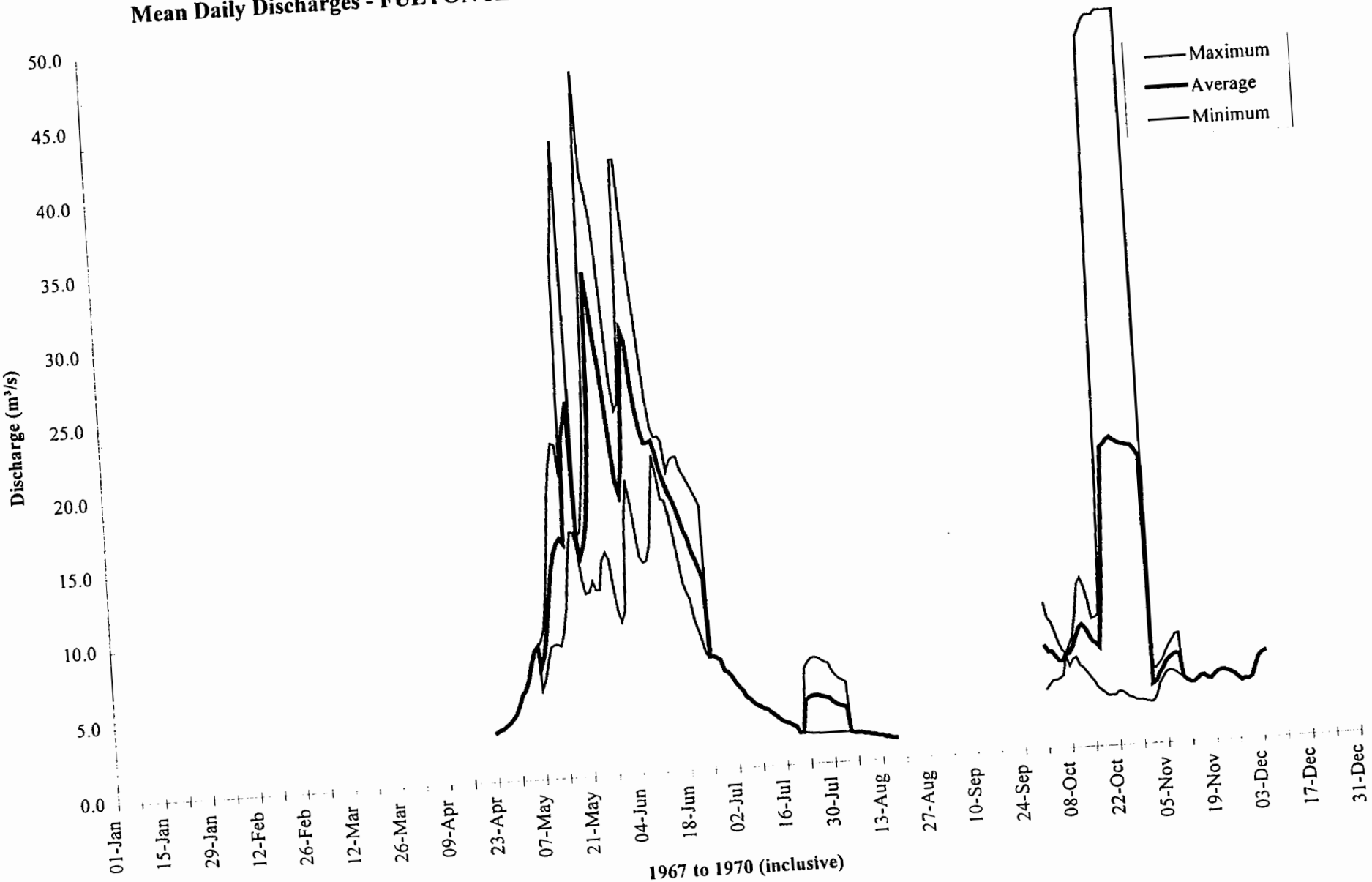
Hydrological Data

Station Number: 08EC009
Latitude: 54:54:00N
Longitude: 126:39:00W
Drainage Area (km²): 332
Station Name: FULTON RIVER AT OUTLET OF CHAPMAN LAKE

MAD: 16.0
Min Mean Daily (All Records): 1.39
Max Mean Daily (All Records): 49.3

	Max. Instantaneous Discharge		Max. Daily Discharge		Min. Daily Discharge	
1961			113	23-May	1.42	12-Mar
1962					0.566	24-Mar

Mean Daily Discharges - FULTON RIVER AT OUTLET OF CHAPMAN LAKE, 1967 to 1970 (inclusive)



APPENDIX 2

Fish Data

Appendix 2. Summary of Fish Data Collected in Working Unit 9 in 1996 and 1997

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Agency	Species	Number	Size Range	Life Phase	Method/ Reference
480-6972-657-000-000-	Bristol Cr.	JULIE 128, Unit 9	93 M 007	9 .6464 .61040	3	08/21/96	TEC	RB	2.00	50	J	EL
003-7200-000-000-000-	Trib. to Bristol L.	JULIE 129, Unit 9	93 M 007	9 . 6470 . 61013	1	08/21/96	TEC	RB	1.00	89	J	EL
480-6972-341-000-000-	Bristow Cr	JULIE 114, Unit 9	93 L 087	9 .6520 .60813	2	08/18/96	TEC	DV	3.00	50-60	J	VO
480-6972-341-000-000-	Bristow Cr.	JULIE 103, Unit 9	93 L 087	9 .6508 .60794	2	08/16/96	TEC	DV	3.00	105	J	EL
480-6972-341-000-000-	Bristow Cr.	Y223, Unit 9	93 L 088	9 .655477.6084508	1	09/07/97	TEC	DV	1.00	66	F	EL
480-6972-341-000-000-	Bristow Cr.	Y223, Unit 9	93 L 088	9 .655477.6084508	1	09/07/97	TEC	DV	2.00	100-177	J	EL
480-6972-341-000-000-	Bristow Cr.	Y223, Unit 9	93 L 088	9 .655477.6084508	1	09/07/97	TEC	CT	1.00	61	F	EL
480-6972-341-000-000-	Bristow Cr.	Y223, Unit 9	93 L 088	9 .655477.6084508	1	09/07/97	TEC	CT	11.00	50-146	J	EL
080-2900-000-000-000-	Trib to Bristow Cr.	Y224, Unit 9	93 L 088	9 .6548 .60844	1	09/07/97	TEC	CT	5.00	40-43	F	VO
080-2900-000-000-000-	Trib to Bristow Cr.	Y224, Unit 9	93 L 088	9 .6548 .60844	1	09/07/97	TEC	CT	10.00	60-100	J	EL
080-4000-000-000-000-	Trib. to Chapman L	TERRY 120, Unit 9	93 L 097	9 .6475 .60913	1	08/18/96	TEC	CT	8.00	60-110	J	EL
480-6972-000-000-000-	Trib. to Chapman L	TERRY 123, Unit 9	93 L 097	9 .6484 . 60890	1	08/18/96	TEC	DV	8.00	65-120	J	EL
480-6972-000-000-000-	Trib. to Chapman L	TERRY 123, Unit 9	93 L 097	9 .6484 . 60890	1	08/18/96	TEC	MW	1.00	180	A	EL
480-6972-000-000-000-	Trib. to Chapman L	TERRY 123, Unit 9	93 L 097	9 .6484 . 60890	1	08/18/96	TEC	CT	1.00	65	J	EL
080-3200-000-000-000-	Trib. to Chapman L	TERRY 124, Unit 9	93 L 097	9 .6490 .60876	1	08/18/96	TEC	CT	5.00	50-70	J	EL
080-3100-000-000-000-	Trib. to Chapman L	TERRY 125, Unit 9	93 L 097	9 .6495 .60866	1	08/18/96	TEC	CT	11.00	60-140	J	EL
080-4300-000-000-000-	Trib. to Chapman L.	TERRY 178, Unit 9	93 L 097	9 .6445 .60912	1	08/27/96	TEC	CT	7.00	60-90	J	EL
080-9300-000-000-000-	Trib. to Chapman L.	Z18, Unit 9	93 L 097	9 .647889. 609002	1	07/10/97	TEC	CT	1.00	70	J	EL
080-5000-000-000-000-	Trib. to Chapman L.	Y51, Unit 9	93 L 097	9 .6496 .60901	1	07/18/97	TEC	CT	5.00	73-90	J	EL
080-9100-000-000-000-	Trib. to Cronin Cr.	TERRY 151, Unit 9	93 L 097	9 .6466 6.0883	1	08/23/96	TEC	CT	2.00	20-70	J	EL
080-9600-000-000-000-	Trib. to Cronin Cr.	W273, Unit 9	93 L 097	9 .6469 .60875	2	09/13/97	TEC	DV	1.00	50	F	EL
480-6972-341-267-000-	Fink Cr.	HASLETT 108, Unit 9	93 L 087	9 .6509 .60833	1	08/21/96	TEC	DV	1.00	126	J	EL
480-6972-341-267-000-	Fink Cr.	HASLETT 108, Unit 9	93 L 087	9 .6509 .60833	1	08/21/96	TEC	CT	2.00	95	J	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 96, Unit 9	93 L 087	9 .6485 .60824	1	08/16/96	TEC	DV	1.00	120	J	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 97, Unit 9	93 M 087	9 .6485 .60824	1	08/16/96	TEC	DV	1.00	210	A	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 98 , Unit 9	93 L 087	9 .6485 .60824	1	08/16/96	TEC	DV	1.00	210	A	EL
480-6972-341-267-000-	Trib. to Fink Cr.	JULIE 99, Unit 9	93 L 087	9 .6489 .60814	1	08/16/96	TEC	DV	1.00	40	J	EL
003-8100-000-000-000-	Trib. to Fulton R	JULIE 152, Unit 9	93 M 007	9 . 6435 . 61011	1	08/23/96	TEC	RSC	30.00	40-120	A	MT
003-8900-000-000-000-	Trib. to Fulton R	TERRY 118, Unit 9	93 M 007	9 .6409 .61010	1	08/18/96	TEC	CT	1.00	150	J	EL
480-6972-000-000-000-	Fulton R.	TERRY 99, Unit 9	93 M 007	9 .6452 .61004	4	08/14/96	TEC	CAS	2.00	60-70	J	EL
480-6972-000-000-000-	Fulton R.	TERRY 115, Unit 9	93 M 007	9.6415 .61001	4	08/17/96	TEC	BB	6.00	120-180	J	EL
480-6972-000-000-000-	Fulton R.	TERRY 115, Unit 9	93 M 007	9.6415 .61001	4	08/17/96	TEC	DV	4.00	110-160	J	EL
480-6972-000-000-000-	Fulton R.	TERRY 115, Unit 9	93 M 007	9.6415 .61001	4	08/17/96	TEC	RB	3.00	60-150	J	EL
480-6972-472-000-000-	Fulton R.	TERRY 146, Unit 9	93 L 097	9 .6481 .60934	3	08/22/96	TEC	CT	1.00	500	A	CR
480-6972-000-000-000-	Fulton R.	TERRY 99, Unit 9	93 M 007	9 .6452 .61004	4	08/14/96	TEC	CT	2.00	110-113	J	EL
480-6972-000-000-000-	Fulton R.	TERRY 99, Unit 9	93 M 007	9 .6452 .61004	4	08/14/96	TEC	LNC	1.00	120	A	EL
480-6972-000-000-000-	Fulton R.	TERRY 99, Unit 9	93 M 007	9 .6452 .61004	4	08/14/96	TEC	BB	1.00	160	J	EL

Watershed Code	Stream "Local"	Location	Map #	UTM	Reach Number	Survey Date	Agency	Species	Number	Size Range	Life Phase	Method/ Reference
002-9200-000-000-000-	Trib. to Fulton R.	HASSLET 80, Unit 9	93 M 006	9 .6392 .60977	1	08/16/96	TEC	CT	3.00	35-55	J	VO
003-8590-000-000-000-	Trib. to Fulton R.	TERRY 113, Unit 9	93 M 006	9 .6403 .61038	1	08/17/96	TEC	CT	16.00	25-80	J	EL
003-8600-000-000-000-	Trib. to Fulton R.	TERRY 114, Unit 9	93 M 006	9.6406 .61031	1	08/17/96	TEC	CT	6.00	60-140	J	EL
480-6972-000-000-000-	Trib. to Fulton R.	HASLETT 109, Unit 9	93 L 087	9 .6507 .60847	2	08/21/96	TEC	DV	1.00	115	J	EL
003-0100-000-000-000-	Trib. to Fulton R.	HASLETT 77, Unit 9	93 M 006	9 .6343 .60993	1	08/15/96	TEC	CT	2.00	45-50	J	VO
003-0000-000-000-000-	Trib. to Fulton R.	HASLETT 78, Unit 9	93 M 006	9 .6353 .60985	1	08/15/96	TEC	CT	1.00	50	J	VO
480-6972-000-000-000-	Trib. to Fulton R.	HASSLET 84, Unit 9	93 M 006	9.6359 .60984	1	08/16/96	TEC	TR			NA	VO
080-2500-000-000-000-	Trib to Fulton R.	Y242, Unit 9	93 L 088	9 .656197.6082681	2	09/10/97	TEC	CT	4.00	62-100	J	EL
480-6972-528-000-000-	Hagarty Cr	TERRY 145, Unit 9	93 M 097	9 .6427 .60938	1	08/22/96	TEC	DV	1.00	30	J	VO
480-6972-528-000-000-	Hagarty Cr	TERRY 147, Unit 9	93 L 097	9 .6455 .60928	1	08/22/96	TEC	DV	1.00	100	J	VO
080-8900-000-000-000-	Trib. to Hagarty Cr.	W272, Unit 9	93 L 097	9 .6448 .60917	1	09/13/97	TEC	DV	2.00	115-180	A	EL
080-8900-000-000-000-	Trib. to Hagarty Cr.	W272, Unit 9	93 L 097	9 .6448 .60917	1	09/13/97	TEC	CT	2.00	70-115	J	EL
480-6972-544-458-000-	Haystack Cr	BRUCE 95, Unit 9	93 L 096	9 .6405 .60902	2	08/25/96	TEC	DV	8.00	56-110	J	EL
480-6972-544-458-000-	Haystack Cr.	TERRY 167, Unit 9	93 L 097	9 .6419 .60935	1	08/25/96	TEC	DV	5.00	55-130	J	EL
080-8200-000-000-000-	Trib. to Haystack Cr.	W271, Unit 9	93 L 097	9 .6475 .60928	1	09/13/97	TEC	DV	9.00	80-145	J	EL
480-6972-427-541-000-	Little Joe Cr.	HASLETT 99, Unit 9	93 L 087	9 .6449 .60808	1	08/20/96	TEC	DV	2.00	69-109	J	EL
480-6972-427-000-000-	McKendrick Cr.	JULIE 95, Unit 9	93 L 087	9 .6480 .60840	1	08/16/96	TEC	RB	1.00	125	J	EL
480-6972-427-000-000-	McKendrick Cr.	JULIE 95, Unit 9	93 L 087	9 .6480 .60840	1	08/16/96	TEC	DV	1.00	138	J	EL
480-6972-427-000-000-	McKendrick Cr.	Y218, Unit 9	93 L 087	9 .6423 .60764	4	09/06/97	TEC	DV	1.00	90	J	EL
480-6972-427-000-000-	McKendrick Cr.	Y218, Unit 9	93 L 087	9 .6423 .60764	4	09/06/97	TEC	TR	10.00	20-35	F	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 100, Unit 9	93 L 087	9 .6447 .60806	1	08/20/96	TEC	DV	1.00		NA	VO
480-6972-427-000-000-	Trib. to McKendrick Cr.	HASLETT 105, Unit 9	93 L 087	9 .6420 .60772	1	08/21/96	TEC	DV	8.00	85-122	J	EL
079-0100-000-000-000-	Trib to McKendrick Cr.	Y214, Unit 9	93 L 087	9 .64547 .608061	1	09/05/97	TEC	DV	1.00	171	A	EL
079-0100-000-000-000-	Trib to McKendrick Cr.	Y214, Unit 9	93 L 087	9 .64547 .608061	1	09/05/97	TEC	DV	7.00	100-162	J	EL
079-4200-000-000-000-	Trib to McKendrick Cr.	Y219, Unit 9	93 L 087	9 .6427 .60754	1	09/06/97	TEC	DV	1.00	49	F	EL
079-4200-000-000-000-	Trib to McKendrick Cr.	Y219, Unit 9	93 L 087	9 .6427 .60754	1	09/06/97	TEC	DV	10.00	95-140	J	EL
079-3700-000-000-000-	Trib to McKendrick Cr.	Y217, Unit 9	93 L 087	9 .642320.60763	1	09/06/97	TEC	CT	5.00	55-95	J	EL
480-6972-427-000-000-	Trib to McKendrick Cr.	HASLETT 103, Unit 9	93 L 087	9 .6426 .60780	1	08/20/96	TEC	DV	1.00	40	J	VO
480-6972-544-000-000-	Nata Cr.	TERRY 165, Unit 9	93 L 097	9 .6431 .60947	2	08/25/96	TEC	DV	5.00	40-110	J	EL
480-6972-544-000-000-	Nata Cr.	Y53, Unit 9	93 L 097	9 .6472 .60952	1	07/18/97	TEC	CT	1.00	100	J	EL
480-6972-544-000-000-	Nata Cr.	Y53, Unit 9	93 L 097	9 .6472 .60952	1	07/18/97	TEC	DV	2.00	80-95	J	EL
080-7500-000-000-000-	Trib. to Nata Cr.	TERRY 166, Unit 9	93 L 097	9 .6422 .60938	1	08/25/96	TEC	DV	1.00	210	A	EL
080-7500-000-000-000-	Trib. to Nata Cr.	TERRY 166, Unit 9	93 L 097	9 .6422 .60938	1	08/25/96	TEC	SA	10.00	20	J	VO
480-6972-341-416-000-	Regan Cr	JULIE 112, Unit 9	93 L 087	9 .6536 . 60810	1	08/18/96	TEC	DV	1.00	50	J	VO
480-6972-341-416-000-	Trib. to Regan Cr	JULIE 106, Unit 9	93 L 087	9 .6515 .60785	1	08/18/96	TEC	DV	1.00	45	J	VO
480-6972-341-416-000-	Trib. to Regan Cr	JULIE 107, Unit 9	93 L 087	9 .6517 .60781	1	08/18/96	TEC	DV	2.00	65-100	J	VO
480-6972-870-000-000-	Taka Cr.	TERRY 164, Unit 9	93 L 097	9 .6413 .60951	1	08/25/96	TEC	DV	4.00	40-90	J	EL
480-6972-657-669-000-	Taka Cr.	JULIE 172, Unit 9	93 L 096	9 .6366 .60929	2	08/25/96	TEC	DV	5.00	98	J	EL

APPENDIX 3

Photodocumentation Summary

Appendix 3. Photodocumentation Summary for Working Unit 9

Group	Roll	Frame	Watershed Code	Survey Crew	Site Number	Unit Number	Agency	Survey Date	Stream "Local"	Map #	UTM Zone	UTM Northing	UTM Easting	Reach Number	Aspect	Photo Direction	Photo Type	Scale Item	Comments
B	6	17	4806972472411000000000	BM DD	B94	Unit 9	TEC	25/08/96	Higgins Cr	93 L 097	9	6420000	608610	2	N	Up	Ch		100m cascade downstream of site B94.
B	6	18	4806972472411000000000	BM DD	B94	Unit 9	TEC	25/08/96	Higgins Cr	93 L 097	9	6420000	608610	2	N	Dn	Ch		Looking downstream, channel through willows.
B	6	16	4806972472411000000000	BM DD	B94	Unit 9	TEC	25/08/96	Higgins Cr	93 L 097	9	6420000	608610	2	N	Up	Ch		100m cascade downstream of site B94.
B	6	20	4806972544458000000000	BM DD	B95	Unit 9	TEC	25/08/96	Haystack Cr	93 L 096	9	6405000	609020	2	NW	Dn	Ch		Looking downstream.
B	6	21	4806972544458000000000	BM DD	B95	Unit 9	TEC	25/08/96	Haystack Cr	93 L 096	9	6405000	609020	2	NW	Up	Ch		Looking upstream, LOD in Haystack C.
E	1	9	0805600000000000000000	JL EM	E7	Unit 9	TEC	09/07/97	Not a creek	93 L 097	9	6486000	609320	0	SW	Dn	Ch	photoboard, crew member	Looking downstream at the channel.
E	1	10	0805600000000000000000	JL EM	E7	Unit 9	TEC	10/07/97	Not a creek	93 L 097	9	6486000	609320	0	NE	Up	Ch	photoboard, crew member	Looking upstream at the channel.
E	1	12	0805700000000000000000	JL EM	E8	Unit 9	TEC	10/07/97	Trib to Fulton R.	93 L 097	9	6485000	609330	1	NE	Up	Ch	photoboard	Looking downstream at the channel.
E	1	11	0805700000000000000000	JL EM	E8	Unit 9	TEC	10/07/97	Trib to Fulton R.	93 L 097	9	6485000	609330	1	SW	Dn	Ch	photoboard	Looking downstream at the channel.
E	27	2	4806972472000000000000	SJ JL	E279	Unit 9	TEC	09/09/97	Cronin Cr.	93 L 097	9	6413000	608800	2	E	Dn	Ch	photoboard, crew member	Looking downstream at the channel, note the woody debris
E	27	1	4806972472000000000000	SJ JL	E279	Unit 9	TEC	09/09/97	Cronin Cr.	93 L 097	9	6413000	608800	2	W	Up	Ch	photoboard, crew member	Looking upstream at the channel
E	27	4	1000600000000000000000	SJ JL	E280	Unit 9	TEC	09/09/97	Trib. to Nata Cr.	93 L 096	9	6384000	609200	1	W	Dn	Ch	photoboard	Looking downstream at the channel
E	27	3	1000600000000000000000	SJ JL	E280	Unit 9	TEC	09/09/97	Trib. to Nata Cr.	93 L 096	9	6384000	609200	1	E	Up	Ch	photoboard	Looking upstream at the channel, note the abundant LOD
E	27	2B	4806972544000000000000	SJ JL	E281	Unit 9	TEC	09/09/97	Nata Cr.	93 L 096	9	6384000	609200	4	S	Up	Ch	NA	Aerial photo of waterfalls
E	27	6	4806972544000000000000	SJ JL	E281	Unit 9	TEC	09/09/97	Nata Cr.	93 L 096	9	6384000	609200	4		X	Ch	NA	Looking upstream at the channel
E	27	5	4806972544000000000000	SJ JL	E281	Unit 9	TEC	09/09/97	Nata Cr.	93 L 096	9	6384000	609200	4	S	Up	Ch	NA	Looking upstream at the channel
E	27	2A	4806972544000000000000	SJ JL	E281	Unit 9	TEC	09/09/97	Nata Cr.	93 L 096	9	6384000	609200	4		X	Ch	NA	Aerial photo of streamside land use
H	4	9	0030200000000000000000	JH KG	H76	Unit 9	TEC	15/08/96	Trib. to Fulton R.	93 M 006	9	6340000	609940	1	NE	Up	Ch	Ward	Looking upstream.
H	4	11	0030000000000000000000	JH KG	H78	Unit 9	TEC	15/08/96	Trib. to Fulton R.	93 M 006	9	6353000	609850	1	NE	Up	Ch		Looking upstream, LOD in channel.
H	4	12	0030000000000000000000	JH KG	H78	Unit 9	TEC	15/08/96	Trib. to Fulton R.	93 M 006	9	6353000	609850	1	NE	Dn	Ch		Looking downstream.
H	4	15	4806972000000000000000	KG JH	H79	Unit 9	TEC	16/08/96	Fulton R.	93 M 006	9	6350000	609920	5	SE	Dn	Ch		Looking downstream, grassy channel through willows.
H	4	14	4806972000000000000000	KG JH	H79	Unit 9	TEC	15/08/96	Fulton R.	93 M 006	9	6350000	609920	5	SE	Up	Ch		Looking upstream, channel through grassy area.
H	6	16	4806972427000000000000	JH PK	H97	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6456000	608170	1	SE	Up	Ch	meterstick	Looking upstream, boulders and LOD.
H	6	14	4806972427000000000000	JH PK	H97	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6456000	608170	1	SE	Up	Ch	Jen	Looking upstream toward culvert.
H	7	14B	4806972427000000000000	JH PK	H97	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6456000	608170	1	SE	Up	Ch	Jen	Looking upstream toward culvert.
H	6	15	4806972427000000000000	JH PK	H97	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6456000	608170	1	SE	Dn	Ch		Looking downstream.

Group	Roll	Frame	Watershed Code	Survey Crew	Site Number	Unit Number	Agency	Survey Date	Stream "Local"	Map #	UTM Zone	UTM Northing	UTM Easting	Reach Number	Aspect	Photo Direction	Photo Type	Scale Item	Comments
H	6	18	48069724270000000000000	JH HK	H98	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6452000	608160	2	SE	Up	Ch		Looking upstream, pool in relation to LOD.
H	6	17	48069724270000000000000	JH HK	H98	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6452000	608160	2	SE	Dn	Ch		Looking downstream.
H	6	19	48069724275410000000000	JH HK	H99	Unit 9	TEC	20/08/96	Little Joe Cr.	93 L 087	9	6449000	608080	1	SE	Dn	Ch	flagging	Looking downstream.
H	6	21	48069724275410000000000	JH HK	H99	Unit 9	TEC	20/08/96	Little Joe Cr.	93 L 087	9	6449000	608080	1	SE	Up	Ch		Looking upstream toward culvert.
H	6	20	48069724275410000000000	JH HK	H99	Unit 9	TEC	20/08/96	Little Joe Cr.	93 L 087	9	6449000	608080	1	SE	Up	Ch		Looking upstream, cutbank and LOD cover.
H	6	23	48069724270000000000000	JH HK	H100	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6447000	608060	1	SE	Up	Ch	meterstick	Looking upstream toward beaver dam.
H	6	22	48069724270000000000000	JH HK	H100	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6447000	608060	1	SE	Dn	Ch	Flagging	Looking downstream.
H	7	1	48069724270000000000000	JH HK	H101	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6433000	607930	2	S	Up	Ch	meterstick	Looking upstream, LOD in channel through alder.
H	7	2	48069724270000000000000	JH HK	H102	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6431000	607880	1	SE	Dn	Ch		Looking downstream.
H	7	3	48069724270000000000000	JH HK	H102	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6431000	607880	1	SE	Up	Ch		Looking upstream, LOD and cutbank.
H	7	5	48069724270000000000000	JH HK	H103	Unit 9	TEC	20/08/96	Trib. to McKendrick Lk	93 L 087	9	6426000	607800	1	SE	Up	Ch	meterstick	Looking upstream, channel through alder.
H	7	4	48069724270000000000000	JH HK	H103	Unit 9	TEC	20/08/96	Trib. to McKendrick Lk	93 L 087	9	6426000	607800	1	SE	Dn	Ch	flagging	Looking downstream.
H	7	7	48069724270000000000000	JH HK	H104	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6422000	607740	1	SE	Dn	Ch		Dry channel leading into cutblock.
H	7	8	48069724270000000000000	JH HK	H104	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6422000	607740	1	SE	Dn	Ch	Jen	Looking downstream.
H	7	9	48069724270000000000000	JH HK	H104	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6422000	607740	1	SE	Up	Ch	meterstick	Looking upstream, meterstick across channel.
H	7	6	48069724270000000000000	JH HK	H104	Unit 9	TEC	20/08/96	Trib. to McKendrick Cr.	93 L 087	9	6422000	607740	1	SE	Dn	Ch		Looking downstream toward cutblock, dry channel.
H	7	13	48069724270000000000000	JH HK	H105	Unit 9	TEC	21/08/96	Trib. to McKendrick Cr.	93 L 087	9	6420000	607720	1	E	Dn	Ch		Looking downstream.
H	7	12	48069724270000000000000	JH HK	H105	Unit 9	TEC	21/08/96	Trib. to McKendrick Cr.	93 L 087	9	6420000	607720	1	E	Up	Ch	2 children	Looking upstream, LOD in channel.
H	7	22	4806972341267000000000	JH HK	H108	Unit 9	TEC	21/08/96	Fink Cr.	93 L 087	9	6509000	608330	1	E	Up	O		Looking upstream toward beaver dam and road.
H	7	21	4806972341267000000000	JH HK	H108	Unit 9	TEC	21/08/96	Fink Cr.	93 L 087	9	6509000	608330	1	E		Ch		Channel through willow.
H	1	24	4806972000000000000000	JH HK	H109	Unit 9	TEC	21/08/96	Trib. to Fulton R.	93 L 087	9	6507000	608470	2	NE		Ch		Channel through alder, willow, and grass.
H	7	23	4806972000000000000000	JH HK	H109	Unit 9	TEC	21/08/96	Trib. to Fulton R.	93 L 087	9	6507000	608470	2	NE		Ch		Channel through alder and dogwood.
H	4	19	0029200000000000000000	KG JH	H80	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6392000	609770	1	E	Dn	Ch		Looking downstream, debris in channel.
H	4	18	0029200000000000000000	KG JH	H80	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6392000	609770	1	E	Up	Ch	Jen	Looking upstream.

Group	Roll	Frame	Watershed Code	Survey Crew	Site Number	Unit Number	Agency	Survey Date	Stream "Local"	Map #	UTM Zone	UTM Northing	UTM Easting	Reach Number	Aspect	Photo Direction	Photo Type	Scale Item	Comments
H	4	20	00295000000000000000000	JH KG	H81	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6357000	609750	1	NW	Up	Ch	Karla	Looking upstream.
H	4	21	00295000000000000000000	JH KG	H81	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6357000	609750	1	NW	Dn	Ch		Looking downstream.
H	4	23	00296000000000000000000	JH KG	H82	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6356000	609780	1	NE	Up	Ch		Looking upstream.
H	4	22	00296000000000000000000	JH KG	H82	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6356000	609780	1	NE	Up	Ch	Karla	Looking upstream, cascade not a barrier.
H	5	24	00298000000000000000000	JH KG	H83	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6362000	609820	1	NE	Dn	Ch		Looking downstream, LOD in channel.
H	5	2	48069720000000000000000	KG JH	H84	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6359000	609840	1	NE	Up	Ch		Looking upstream.
H	5	1	48069720000000000000000	KG JH	H84	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6359000	609840	1	NE		Ch		Aerial view of site H84.
H	6	1A	48069720000000000000000	KG JH	H84	Unit 9	TEC	16/08/96	Trib. to Fulton R.	93 M 006	9	6359000	609840	1	NE	Dn	Ch		Looking downstream, LOD and boulder cover.
J	5	12	48069724270000000000000	JP HK	J95	Unit 9	TEC	16/08/96	McKendrick Cr.	93 L 087	9	6480000	608400	1	N	Dn	Ch	truck	Looking downstream toward bridge.
J	5	11	48069724270000000000000	JP HK	J95	Unit 9	TEC	16/08/96	McKendrick Cr.	93 L 087	9	6480000	608400	1	N	Up	Ch		Looking upstream, large pool.
J	5	13	48069723412670000000000	JP HK	J96	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6485000	608240	1	E	Up	Ch		Looking upstream, shrub lined channel.
J	5	14	48069723412670000000000	JP HK	J96	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6485000	608240	1	E	Dn	Ch		Looking downstream, alder shaded pools.
J	5	16	48069723412670000000000	JP HK	J97	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 M 087	9	6485000	608240	1	N	Dn	Ch		Looking downstream, channel shaded by ferns.
J	5	15	48069723412670000000000	JP HK	J97	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 M 087	9	6485000	608240	1	N	Up	Ch		Looking upstream.
J	5	17	48069723412670000000000	JP HK	J98	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6485000	608240	1	E	Up	Ch		Looking upstream, moss-covered cobble.
J	5	18	48069723412670000000000	JP HK	J98	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6485000	608240	1	E	Dn	Ch		Looking downstream, LOD in channel.
J	5	19	48069723412670000000000	JP HK	J99	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6489000	608140	1	N	Up	Ch		Looking upstream, LOD and pools.
J	5	20	48069723412670000000000	JP HK	J99	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6489000	608140	1	N	Dn	Ch		Looking downstream.
J	6	21	48069723412670000000000	JP HK	J100	Unit 9	TEC	16/08/96	Fink Cr.	93 L 087	9	6490000	608100	2	N	Up	Ch		Looking upstream, Fink C.
J	6	1	48069723412670000000000	JP HK	J100	Unit 9	TEC	16/08/96	Fink Cr.	93 L 087	9	6490000	608100	2	N	Up	Ch		Fink C. above road crossing.
J	6	2	48069723412670000000000	JPHK	J101	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6492000	608050	2	E	Up	Ch		Looking upstream, grass in channel.
J	6	3	48069723412670000000000	JPHK	J101	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6492000	608050	2	E	Dn	Ch	Hubert	Looking downstream toward road.
J	6	4	48069723412670000000000	JP HK	J102	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6495000	608020	1	NE	Up	Ve	Julie	Looking upstream, grassy channel.
J	6	5	48069723412670000000000	JP HK	J102	Unit 9	TEC	16/08/96	Trib. to Fink Cr.	93 L 087	9	6495000	608020	1	NE	Dn	Ve		Looking downstream, grassy channel.
J	6	6	48069723410000000000000	JP HK	J103	Unit 9	TEC	16/08/96	Bristow Cr.	93 L 087	9	6508000	607940	2	N	Up	Ch		Looking upstream from bridge.
J	6	7	48069723410000000000000	JP HK	J103	Unit 9	TEC	16/08/96	Bristow Cr.	93 L 087	9	6508000	607940	2	N	Dn	Ch		Looking downstream from bridge.
J	6	13	48069723414160000000000	JP HK	J106	Unit 9	TEC	18/08/96	Trib. to Regan Cr	93 L 087	9	6515000	607850	1	NE	Dn	Ch	Hubert	Looking downstream, logging debris in channel.
J	6	14	48069723414160000000000	JP HK	J106	Unit 9	TEC	18/08/96	Trib. to Regan Cr	93 L 087	9	6515000	607850	1	NE	Up	Ch	Hubert	Looking upstream.
J	6	15	48069723414160000000000	JP HK	J107	Unit 9	TEC	18/08/96	Trib. to Regan Cr	93 L 087	9	6517000	607810	1	N	Up	Ch		Left branch of creek.
J	6	16	48069723414160000000000	JP HK	J107	Unit 9	TEC	18/08/96	Trib. to Regan Cr	93 L 087	9	6517000	607810	1	N	Dn	Ch		Looking downstream from culvert.
J	6	17	48069723414160000000000	JP HK	J108	Unit 9	TEC	18/08/96	Regan Cr	93 L 087	9	6531000	607710	2	NE	Up	Ch		Looking upstream past culvert.
J	6	18	48069723414160000000000	JP HK	J108	Unit 9	TEC	18/08/96	Regan Cr	93 L 087	9	6531000	607710	2	NE	Dn	Ch		Normal part of creek.
J	6	19	48069723414160000000000	JP HK	J108	Unit 9	TEC	18/08/96	Regan Cr	93 L 087	9	6531000	607710	2	NE	Up	Ch		Looking upstream toward culvert and silt.
J	6	20	48069723410000000000000	JP HK	J109	Unit 9	TEC	18/08/96	Trib. to Bristow Cr	93 L 087	9	6513000	607970	2	NE	Dn	Ch		Looking downstream, tadpoles in stream.
J	6	21	48069723410000000000000	JP HK	J109	Unit 9	TEC	18/08/96	Trib. to Bristow Cr	93 L 087	9	6513000	607970	2	NE	Up	Ch		Looking upstream toward road.
J	6	23	48069723414160000000000	JP HK	J110	Unit 9	TEC	18/08/96	Trib. to Regan Cr	93 L 087	9	6532000	607840	2	N	Up	Ch		Channel through alder in swampy area.
J	6	22	48069723414160000000000	JP HK	J110	Unit 9	TEC	18/08/96	Trib. to Regan Cr	93 L 087	9	6532000	607840	2	N	Dn	Ch		Channel through alder in swampy area.
J	6	24	48069723414160000000000	JP HK	J111	Unit 9	TEC	18/08/96	Regan Cr	93 L 087	9	6530000	607900	1	E	Dn	Ch	meterstick	Looking downstream, channel through alder.
J	7	25	48069723414160000000000	JP HK	J111	Unit 9	TEC	18/08/96	Regan Cr	93 L 087	9	6530000	607900	1	E	Up	Ch		Looking upstream, channel through alder.
J	7	2	48069723414160000000000	JP HK	J112	Unit 9	TEC	18/08/96	Regan Cr	93 L 087	9	6536000	608100	1	NW	Dn	Ch	flagging	Looking downstream,LOD in channel.

Group	Roll	Frame	Watershed Code	Survey Crew	Site Number	Unit Number	Agency	Survey Date	Stream "Local"	Map #	UTM Zone	UTM Northing	UTM Easting	Reach Number	Aspect	Photo Direction	Photo Type	Scale Item	Comments
J	7	1	48069723414160000000000	JP HK	J112	Unit 9	TEC	18/08/96	Regan Cr	93 L 087	9	6536000	608100	1	NW	Up	Ch	meterstick	Looking upstream, meterstick across channel.
J	7	3	48069723410000000000000	JP HK	J113	Unit 9	TEC	18/08/96	Trib. to Bristow Cr	93 L 087	9	6522000	608120	1	N	Up	Ch	cap	Looking upstream, dense over vegetation.
J	7	4	48069723410000000000000	JP HK	J113	Unit 9	TEC	18/08/96	Trib. to Bristow Cr	93 L 087	9	6522000	608120	1	N	Dn	Ve		Looking downstream, channel covered by alder.
J	7	5	48069723410000000000000	JP HK	J114	Unit 9	TEC	18/08/96	Bristow Cr	93 L 087	9	6520000	608130	2	NE	Dn	Ch	flagging	Looking downstream.
J	7	6	48069723410000000000000	JP HK	J114	Unit 9	TEC	18/08/96	Bristow Cr	93 L 087	9	6520000	608130	2	NE	Up	Ch	meterstick	Looking upstream, cutbank and over stream cover.
J	7	7	48069723410000000000000	JP HK	J115	Unit 9	TEC	18/08/96	Trib. to Bristow Cr	93 L 087	9	6516000	608170	1	E	Dn	Ch	flagging	Looking downstream.
J	7	8	48069723410000000000000	JP HK	J115	Unit 9	TEC	18/08/96	Trib. to Bristow Cr	93 L 087	9	6516000	608170	1	E	Up	Ch	meterstick	Looking upstream, meterstick across channel.
J	7	10	48069723412670000000000	JP HK	J116	Unit 9	TEC	19/08/96	Trib. to Fink Cr.	93 L 087	9	6505000	607950	1	N	Up	Ch	1/2 meterstick	Looking upstream, channel through grass and alder.
J	7	9	48069723412670000000000	JP HK	J116	Unit 9	TEC	19/08/96	Trib. to Fink Cr.	93 L 087	9	6505000	607950	1	N	Dn	Ch	1/2 meterstick	Looking downstream, LOD in channel.
J	7	11	48069723412670000000000	JP HK	J117	Unit 9	TEC	19/08/96	Trib. to Fink Cr.	93 L 087	9	6507000	607940	1	N	Dn	Ch	flagging	Looking downstream, LOD in channel.
J	7	12	48069723412670000000000	JP HK	J117	Unit 9	TEC	19/08/96	Trib. to Fink Cr.	93 L 087	9	6507000	607940	1	N	Up	Ch	meterstick	Looking upstream, logging debris in channel.
J	7	13	48069724270000000000000	JP HK	J118	Unit 9	TEC	19/08/96	Trib. to McKendrick Cr	93 L 087	9	6485000	608520	1	S	Up	Ch		Looking upstream, channel through alder.
J	7	14	48069724270000000000000	JP HK	J118	Unit 9	TEC	19/08/96	Trib. to McKendrick Cr	93 L 087	9	6485000	608520	1	S	Dn	Ch	1/2 meterstick	Looking downstream, meterstick across channel.
J	8	6	48069726570000000000000	JP EW	J126	Unit 9	TEC	21/08/96	Trib. to Bristol Cr.	93 M 007	9	6482000	610640	6	W	Up	Ch		Looking upstream.
J	8	7	48069726570000000000000	JP EW	J126	Unit 9	TEC	21/08/96	Trib. to Bristol Cr.	93 M 007	9	6482000	610640	6	W	Dn	Ch		Looking downstream, small pool.
J	8	9	48069726570000000000000	JP EM	J127	Unit 9	TEC	21/08/96	Bristol Cr.	93 M 007	9	6470000	610550	5	S	Up	Ch		Looking upstream.
J	8	8	48069726570000000000000	JP EM	J127	Unit 9	TEC	21/08/96	Bristol Cr.	93 M 007	9	6470000	610550	5	S	Up	Ch	Ward	Looking upstream, grassy channel from lake.
J	8	10	48069726570000000000000	JP EM	J128	Unit 9	TEC	21/08/96	Bristol Cr.	93 M 007	9	6464000	610400	3	W	Xs	Ch		Looking cross-stream, large debris in channel.
J	8	11	48069726570000000000000	JP EM	J128	Unit 9	TEC	21/08/96	Bristol Cr.	93 M 007	9	6464000	610400	3	W	Dn	Ch		Looking downstream, large debris in channel.
J	8	13	00372000000000000000000	JP EM	J129	Unit 9	TEC	21/08/96	Trib. to Bristol L.	93 M 007	9	6470000	610130	1	N	Dn	Ch	electrofishing unit	Looking downstream.
J	8	14	00373000000000000000000	JP EM	J130	Unit 9	TEC	21/08/96	Trib. to Bristol L.	93 M 007	9	6470000	610160	1	N		O		Aerial photo of site J130
J	8	15	00373000000000000000000	JP EM	J130	Unit 9	TEC	21/08/96	Trib. to Bristol L.	93 M 007	9	6470000	610160	1	N		O		Aerial photo of site J131
J	10	2	00385000000000000000000	JPEM	J147	Unit 9	TEC	23/08/96	Trib. to Fulton R.	93 M 006	9	6380000	610410	3	N	Dn	Ch		Looking downstream, dry channel.
J	10	1	00385000000000000000000	JPEM	J147	Unit 9	TEC	23/08/96	Trib. to Fulton R.	93 M 006	9	6380000	610410	3	N	Up	Ch		Looking upstream, dry channel.
J	10	3	00306000000000000000000	JP EM	J148	Unit 9	TEC	23/08/96	Trib. to Fulton R.	93 M 006	9	6372000	610140	1	N	Up	Ch	Eamon	Looking upstream through meadow.
J	10	4	00306000000000000000000	JP EM	J148	Unit 9	TEC	23/08/96	Trib. to Fulton R.	93 M 006	9	6372000	610140	1	N	Dn	Ch		Looking downstream through meadow.
J	10	6	00308000000000000000000	JP EM	J149	Unit 9	TEC	23/08/96	Trib. to Fulton R.	93 M 006	9	6355000	610240	3	N	Dn	Ch		Looking downstream.
J	10	5	00308000000000000000000	JP EM	J149	Unit 9	TEC	23/08/96	Trib. to Fulton R.	93 M 006	9	6355000	610240	3	N	Up	Ch		Looking upstream, good fish habitat.
J	10	7	00381000000000000000000	JP EM	J150	Unit 9	TEC	23/08/96	Trib. to Fulton R	93 M 007	9	6429000	610100	3	SE		Ve		Tiny channel through grassy area.
J	10	8	00381000000000000000000	JP EM	J150	Unit 9	TEC	23/08/96	Trib. to Fulton R	93 M 007	9	6429000	610100	3	SE		Ve		Tiny channel through grassy area.
J	10	10	00382000000000000000000	JP EM	J151	Unit 9	TEC	23/08/96	Trib. to Fulton R	93 M 007	9	6430000	610080	1	E	Dn	O		Looking downstream toward meadow.
J	10	9	00382000000000000000000	JP EM	J151	Unit 9	TEC	23/08/96	Trib. to Fulton R	93 M 007	9	6430000	610080	1	E	Up	Ch		Looking upstream, channel in grassy area.
J	10	12	00381000000000000000000	JP EM	J152	Unit 9	TEC	23/08/96	Trib. to Fulton Cr	93 M 007	9	6435000	610110	1	E	Dn	Ch		Aerial photo of site J152.
J	10	11	00381000000000000000000	JP EM	J152	Unit 9	TEC	23/08/96	Trib. to Fulton Cr	93 M 007	9	6435000	610110	1	E	Up	Ch		Aerial photo of site J152.
J	11	18	48069724720000000000000	J EM	J170	Unit 9	TEC	25/08/96	Trib. to McKendrick Cr.	93 L 087	9	6446000	608520	2	N	Up	Ch	Eamon	Looking upstream, channel through snow from avalanche.

Group	Roll	Frame	Watershed Code	Survey Crew	Site Number	Unit Number	Agency	Survey Date	Stream "Local"	Map #	UTM Zone	UTM Northing	UTM Easting	Reach Number	Aspect	Photo Direction	Photo Type	Scale Item	Comments
J	11	19	4806972472000000000000	J EM	J170	Unit 9	TEC	25/08/96	Trib. to McKendrick Cr.	93 L 087	9	6446000	608520	2	N	Dn	Ch		Looking downstream, cobble channel.
J	12	4	4806972657669000000000	JP EM	J172	Unit 9	TEC	25/08/96	Taka Cr.	93 L 096	9	6366000	609290	2	NE	Dn	Ch		Looking downstream, boulder cover.
J	12	5	4806972657669000000000	JP EM	J172	Unit 9	TEC	25/08/96	Taka Cr.	93 L 096	9	6366000	609290	2	NE	Up	Ch		Looking upstream, LOD cover.
T	9	13	0807500000000000000000	GM HK	T162	Unit 9	TEC	25/08/96	Trib. to Morin Cr.	93 L 097	9	6423000	609650	1	W	Dn	Ch		Downstream view, 100m downstream of road.
T	9	12	0807500000000000000000	GM HK	T162	Unit 9	TEC	25/08/96	Trib. to Morin Cr.	93 L 097	9	6423000	609650	1	W	Dn	Ch		Downstream view, remnants of old bridge.
T	9	18	4806972870166000000000	GM HK	T163	Unit 9	TEC	25/08/96	Morin Cr.	93 L 097	9	6422000	609640	1	SW		Fi		Cutthroat trout caught by fisherman in Morin L.
T	9	15	4806972870166000000000	GM HK	T163	Unit 9	TEC	25/08/96	Morin Cr.	93 L 097	9	6422000	609640	1	SW	Dn	Ch		Downstream view, Morin C.
T	9	14	4806972870166000000000	GM HK	T163	Unit 9	TEC	25/08/96	Morin Cr.	93 L 097	9	6422000	609640	1	SW	Up	Ch		Upstream view, Morin C.
T	9	16	4806972870000000000000	GM HK	T164	Unit 9	TEC	25/08/96	Taka Cr.	93 L 097	9	6413000	609510	1	E	Up	Ch		Upstream view, Taka C.
T	9	17	4806972870000000000000	GM HK	T164	Unit 9	TEC	25/08/96	Taka Cr.	93 L 097	9	6413000	609510	1	E	Dn	Ch		Downstream view, Taka C.
T	9	21	0807500000000000000000	GM HK	T166	Unit 9	TEC	25/08/96	Trib. to Nata Cr.	93 L 097	9	6422000	609380	1	NE	Up	Ch		Upstream view, rust-coloured creek.
T	9	22	0807500000000000000000	GM HK	T166	Unit 9	TEC	25/08/96	Trib. to Nata Cr.	93 L 097	9	6422000	609380	1	NE	Dn	Ch		Downstream view, rust-coloured creek.
T	9	20	4806972544000000000000	GM HK	T165	Unit 9	TEC	25/08/96	Nata Cr.	93 L 097	9	6431000	609470	2	E	Dn	Ch		Downstream view from bridge, Nata C.
T	9	19	4806972544000000000000	GM HK	T165	Unit 9	TEC	25/08/96	Nata Cr.	93 L 097	9	6431000	609470	2	E	Up	Ch		Upstream view from bridge, Nata C.
T	9	24	4806972544458000000000	GM HK	T167	Unit 9	TEC	25/08/96	Haystack Cr.	93 L 097	9	6419000	609350	1	NE	Up	Ch		Upstream view.
T	9	23	4806972544458000000000	GM HK	T167	Unit 9	TEC	25/08/96	Haystack Cr.	93 L 097	9	6419000	609350	1	NE	Dn	Ch		Downstream view.
T	10	19	0804300000000000000000	GM HK	T178	Unit 9	TEC	27/08/96	Trib. to Chapman L.	93 L 097	9	6445000	609120	1	SE	Dn	Ch		Downstream view.
T	10	18	0804300000000000000000	GM HK	T178	Unit 9	TEC	27/08/96	Trib. to Chapman L.	93 L 097	9	6445000	609120	1	SE	Up	Ch		Upstream view taken from road.
T	10	21	0804000000000000000000	GM HK	T179	Unit 9	TEC	27/08/96	Trib. to Chapman L.	93 M 097	9	6443000	609100	2	NE	Up	Ch		Upstream view, stream is parallel to road.
T	10	20	0804000000000000000000	GM HK	T179	Unit 9	TEC	27/08/96	Trib. to Chapman L.	93 M 097	9	6443000	609100	2	NE	Dn	Ch		Downstream view taken from road.
T	8A	24	0804200000000000000000	GM HK	T180	Unit 9	TEC	27/08/96	Trib. to Chapman L.	93 L 097	9	6447000	609040	1	E	Up	Ch		Upstream view, 150m upstream of road.
T	10	23	0804200000000000000000	GM HK	T180	Unit 9	TEC	27/08/96	Trib. to Chapman L.	93 L 097	9	6447000	609040	1	E	Up	Ch		Upstream view towards culvert.
T	10	22	0804200000000000000000	GM HK	T180	Unit 9	TEC	27/08/96	Trib. to Chapman L.	93 L 097	9	6447000	609040	1	E	Dn	Ch		Downstream view taken from road.
T	5	20	4806972000000000000000	TD HS	T99	Unit 9	TEC	14/08/96	Fulton R.	93 M 007	9	6452000	610040	4	SE	Up	Ch		Upstream view; large, willow-lined stream.
T	5	25	4806972657000000000000	HS TD	T102	Unit 9	TEC	15/08/96	Bristol Cr.	93 M 007	9	6461000	610230	3			Ch		Channel.
T	6	1	4806972657000000000000	HS TD	T102	Unit 9	TEC	15/08/96	Bristol Cr.	93 M 007	9	6461000	610230	3			Ch		Channel.
T	6	14	0038400000000000000000	TD HS	T112	Unit 9	TEC	17/08/96	Trib. to Fulton River	93 M 006	9	6401000	610520	2	NE		Ch		Channel with isolated pool.
T	6	13	0038400000000000000000	TD HS	T112	Unit 9	TEC	17/08/96	Trib. to Fulton River	93 M 006	9	6401000	610520	2	NE		Ch		Channel.
T	6	16	0038590000000000000000	HS TD	T113	Unit 9	TEC	17/08/96	Trib. to Fulton R.	93 M 006	9	6403000	610380	1	NE		Ch		Channel through alders and grass.
T	6	15	0038590000000000000000	HS TD	T113	Unit 9	TEC	17/08/96	Trib. to Fulton R.	93 M 006	9	6403000	610380	1	NE		Ch		Channel, LOD over large cobble.
T	6	18	0038600000000000000000	HS TD	T114	Unit 9	TEC	17/08/96	Trib. to Fulton R.	93 M 006	9	6406000	610310	1	NE	Dn	Ch		Downstream view with gravel bar.
T	6	17	0038600000000000000000	HS TD	T114	Unit 9	TEC	17/08/96	Trib. to Fulton R.	93 M 006	9	6406000	610310	1	NE	Up	Ch		Upstream view, two culverts.
T	6	20	4806972000000000000000	HS TD	T115	Unit 9	TEC	17/08/96	Fulton R.	93 M 007	9	6415000	610010	4	N	Dn	Ch		Downstream view with gravel bar.
T	6	19	4806972000000000000000	HS TD	T115	Unit 9	TEC	17/08/96	Fulton R.	93 M 007	9	6415000	610010	4	N	Up	Ch		Upstream view, logjam and eroded bank.
T	7	2	0038900000000000000000	TD HK	T118	Unit 9	TEC	18/08/96	Trib. to Fulton R	93 M 007	9	6409000	610100	1	SE	Dn	Ch		Downstream view.
T	7	3	0038900000000000000000	TD HK	T118	Unit 9	TEC	18/08/96	Trib. to Fulton R	93 M 007	9	6409000	610100	1	SE	Up	Ch		Upstream view.
T	7	1	0038900000000000000000	TD HK	T118	Unit 9	TEC	18/08/96	Trib. to Fulton R	93 M 007	9	6409000	610100	1	SE	Bd	Fi		Fish caught by electrofishing.
T	7	4	0804400000000000000000	TD HS	T119	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6475000	609170	1	E	Up	Ch		Upstream view with two culverts.
T	7	5	0804400000000000000000	TD HS	T119	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6475000	609170	1	E	Dn	Ch		Downstream view.

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T	7	6	080400000000000000000	TD HS	T120	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6475000	609130	1	E	Up	Ch		Upstream view towards culvert.
T	7	7	080400000000000000000	TD HS	T120	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6475000	609130	1	E	Dn	Ch		Downstream view.
T	7	10	480697200000000000000	TD HS	T123	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6484000	608900	1	N	Dn	Ch		Downstream view towards bridge.
T	7	11	480697200000000000000	TD HS	T123	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6484000	608900	1	N	Up	Ch		Upstream view.
T	7	12	080320000000000000000	TD HS	T124	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6490000	608760	1	E	Up	Ch		Upstream view.
T	7	13	080320000000000000000	TD HS	T124	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6490000	608760	1	E	Dn	Ch		Downstream view.
T	7	14	080310000000000000000	TD HS	T125	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6495000	608660	1	NE		Ch		Channel.
T	7	15	080310000000000000000	TD HS	T125	Unit 9	TEC	18/08/96	Trib. to Chapman L	93 L 097	9	6495000	608660	1	NE		Ch		Channel.
T	8B	4	480697252800000000000	HK GM	T145	Unit 9	TEC	22/08/96	Hagarty Cr	93 M 097	9	6427000	609380	1	E	Up	Ch		Upstream view, culvert on Hagarty C.
T	8B	3	480697252800000000000	HK GM	T145	Unit 9	TEC	22/08/96	Hagarty Cr	93 M 097	9	6427000	609380	1	E	Dn	Ch		Downstream view, Hagarty C.
T	8B	5	480697247200000000000	GM HK	T146	Unit 9	TEC	22/08/96	Fulton R.	93 L 097	9	6481000	609340	3	S	Up	Ch		Upstream view, Fulton R.
T	8B	6	480697247200000000000	GM HK	T146	Unit 9	TEC	22/08/96	Fulton R.	93 L 097	9	6481000	609340	3	S	Dn	Ch		Downstream view taken from road.
T	8B	7	480697252800000000000	HK GM	T147	Unit 9	TEC	22/08/96	Hagarty Cr.	93 L 097	9	6455000	609280	1	NE	Dn	Ch		Downstream view, culvert on Hay C.
T	8B	8	480697252800000000000	HK GM	T147	Unit 9	TEC	22/08/96	Hagarty Cr.	93 L 097	9	6455000	609280	1	NE	Dn	Ch		Downstream view, taken from culvert.
T	8B	11	480697200000000000000	GM HK	T148	Unit 9	TEC	22/08/96	Trib. to Fulton R.	93 L 097	9	6432000	609600	2	SE	Dn	Ch		Downstream view.
T	8B	12	480697200000000000000	GM HK	T148	Unit 9	TEC	22/08/96	Trib. to Fulton R.	93 L 097	9	6432000	609600	2	SE	Up	Ch		Upstream view.
T	8B	13	080730000000000000000	GM HK	T149	Unit 9	TEC	22/08/96	Trib. to Fulton R.	93 L 097	9	6438000	609590	1	SE	Dn	Ch		Downstream view.
T	8B	17	080910000000000000000	GM HK	T151	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6466000	608830	1	SE	Up	Ch		Upstream view, steep banks.
T	8B	18	080910000000000000000	GM HK	T151	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6466000	608830	1	SE		Fi		Fish caught by electrofishing.
T	8B	19	080910000000000000000	GM HK	T151	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6466000	608830	1	SE		Fi		Fish caught by electrofishing.
T	8B	20	080910000000000000000	GM HK	T151	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6466000	608830	1	SE		Fi		Cutthroat trout caught by electrofishing.
T	8B	16	080910000000000000000	GM HK	T151	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6466000	608830	1	SE	Up	Ch		Upstream view.
T	8B	21	480697247200000000000	GM HK	T152	Unit 9	TEC	23/08/96	Cronin Cr.	93 L 097	9	6454000	608760	2	E	Up	Ch		Upstream view.
T	8B	22	480697247200000000000	GM HK	T152	Unit 9	TEC	23/08/96	Cronin Cr.	93 L 097	9	6454000	608760	2	E	Dn	Ch		Downstream view, cascade.
T	8B	23	080990000000000000000	GM HK	T153	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6455000	608790	1	SE	Up	Ch		Upstream view, small channel through grass.
T	8B	24	080920000000000000000	GM HK	T154	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6460000	608830	1	NE	Dn	Ch		Downstream view.
T	8B	25	080920000000000000000	GM HK	T154	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6460000	608830	1	NE	Up	Ch		Upstream view.
T	9	2	080940000000000000000	GM HK	T155	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6456500	608907	2	E	Dn	Ch		Downstream view.
T	9	1	080940000000000000000	GM HK	T155	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6456500	608907	2	E	Up	Ch		Upstream view.
T	9	4	080950000000000000000	GM HK	T156	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6456000	608870	1	E	Up	Ch		Upstream view from road.
T	9	3	080950000000000000000	GM HK	T156	Unit 9	TEC	23/08/96	Trib. to Cronin Cr.	93 L 097	9	6456000	608870	1	E	Dn	Ch		Downstream view.
T	9	11	080760000000000000000	GM HK	T161	Unit 9	TEC	25/08/96	Not a creek	93 L 097	9	6422000	609650	0	W	Up	Ch		Upstream view from road.
T	9	10	080760000000000000000	GM HK	T161	Unit 9	TEC	25/08/96	Not a creek	93 L 097	9	6422000	609650	0	W	Dn	Ch		Downstream view from road.
T	5	19	003790000000000000000	TD HS	T98	Unit 9	TEC	14/08/96	Not a creek	93 M 007	9	6458000	610200	0	S		Ve		Not a creek.
T	5	21	003800000000000000000	TD HS	T100	Unit 9	TEC	14/08/96	Not a creek	93 M 007	9	6449000	610120	0	SE		Ve		Not a creek.
T	5	22	003750000000000000000	HS TD	T101	Unit 9	TEC	15/08/96	Not a creek	93 M 007	9	6466000	610290	0			O		Cut block.
T	5	24	003750000000000000000	HS TD	T101	Unit 9	TEC	15/08/96	Not a creek	93 M 007	9	6466000	610290	0			Ch		Channel.
T	5	23	003750000000000000000	HS TD	T101	Unit 9	TEC	15/08/96	Not a creek	93 M 007	9	6466000	610290	0			Ch		Dry channel, isolated pools.
T	7	8	080380000000000000000	TD HS	T121	Unit 9	TEC	18/08/96	Not a creek	93 L 097	9	6483000	608940	0			Ve		Not a creek, dogwood and willows.
T	7	9	080350000000000000000	TDHS	T122	Unit 9	TEC	18/08/96	Not a creek	93 L 097	9	6483000	608920	0			Ch		Dry channel.

Group	Roll	Frame	Watershed Code	Survey Crew	Site Number	Unit Number	Agency	Survey Date	Stream "Local"	Map #	UTM Zone	UTM Northing	UTM Easting	Reach Number	Aspect	Photo Direction	Photo Type	Scale Item	Comments
T	8B	14	08034000000000000000	GM HK	T150	Unit 9	TEC	23/08/96	Not a creek	93 L 097	9	6486000	608880	0			O		Not a creek, culvert at road.
T	8B	15	08034000000000000000	GM HK	T150	Unit 9	TEC	23/08/96	Not a creek	93 L 097	9	6486000	608880	0			O		Not a creek, taken from road.
W	O	17	00387000000000000000	DD JP	W250	Unit 9	TEC	09/09/97	Trib to Fulton R.	93 M 006	9	6405000	610290	1	NE	Dn	Ch	fieldbook	Looking downstream at the channel
W	O	16	00387000000000000000	DD JP	W250	Unit 9	TEC	09/09/97	Trib to Fulton R.	93 M 006	9	6405000	610290	1	SW	Up	Ch	fieldbook	Looking upstream at the channel
W	O	18	00390000000000000000	DD JP	W252	Unit 9	TEC	09/09/97	Trib to Fulton R.	93 M 007	9	6410000	610070	1	SW	Up	Ch	fieldbook	Looking upstream at the channel
W	O	19	00390000000000000000	DD JP	W252	Unit 9	TEC	09/09/97	Trib to Fulton R.	93 M 007	9	6410000	610070	1	NE	Dn	Ch	fieldbook	Looking downstream at the channel
W	O	14	00388000000000000000	DD JP	W251	Unit 9	TEC	09/09/97	Not a creek	93 M 007	9	6410000	610180	0	E	Dn	Ch	crew member	Looking downstream at the channel
W	O	15	00388000000000000000	DD JP	W251	Unit 9	TEC	09/09/97	Not a creek	93 M 007	9	6410000	610180	0	W	Up	Ch	fieldbook	Looking upstream at the channel
W	O	20	00391000000000000000	DD JP	W253	Unit 9	TEC	09/09/97	Trib to Fulton R.	93 M 007	9	6420000	609880	1	S	Up	Ch	meterstick	Looking upstream at the channel
W	O	21	00391000000000000000	DD JP	W253	Unit 9	TEC	09/09/97	Trib to Fulton R.	93 M 007	9	6420000	609880	1	N	Dn	Ch	fieldbook	Looking downstream at the channel, note the organic debris
W	O	23	00369000000000000000	JP DD	W254	Unit 9	TEC	09/09/97	Trib to Fulton R.	93 M 007	9	6440000	609970	2	NE	Dn	Ch	hand	Looking downstream at the channel
W	O	22	00369000000000000000	JP DD	W254	Unit 9	TEC	09/09/97	Trib to Fulton R.	93 M 007	9	6440000	609970	2	SW	Up	Ch	crew member	Looking upstream at the channel, note the dense shrub cover
W	O	25	00365000000000000000	DD JP	W256	Unit 9	TEC	10/09/97	Trib to Fulton R.	93 L 097	9	6445000	609660	1	NW	Dn	Ch	anode pole and ring	Looking downstream at the channel
W	P	1	00365000000000000000	DD JP	W256	Unit 9	TEC	10/09/97	Trib to Fulton R.	93 L 097	9	6445000	609660	1	SE	Up	O	NA	Looking upstream at a beaver dam
W	P	2	00368000000000000000	DD JP	W257	Unit 9	TEC	10/09/97	Trib to Fulton R.	93 M 007	9	6450000	609770	1	SE	Dn	Ch	electroshocker	Looking downstream at the channel
W	P	3	00368000000000000000	DD JP	W257	Unit 9	TEC	10/09/97	Trib to Fulton R.	93 M 007	9	6450000	609770	1	NW	Up	Ch	meterstick	Looking upstream at the channel
W	P	4	08089000000000000000	DD JP	W258	Unit 9	TEC	10/09/97	Trib to Hagarty Cr.	93 L 097	9	6436000	609180	2	NW	Up	Ch	fieldbook	Looking upstream at the channel, note the instream LOD
W	P	5	08089000000000000000	DD JP	W258	Unit 9	TEC	10/09/97	Trib to Hagarty Cr.	93 L 097	9	6436000	609180	2	NW	Dn	Ch	fieldbook	Looking downstream at the channel
W	Q	7	00293000000000000000	DD JP	W269	Unit 9	TEC	12/09/97	Trib. to Fulton R.	93 M 006	9	6393000	609910	1	NW	Up	Ch	pilot	Looking upstream at a channel flowing through a meadow
W	Q	8	00293000000000000000	DD JP	W269	Unit 9	TEC	12/09/97	Trib. to Fulton R.	93 M 006	9	6393000	609910	1	SE	Dn	Ch	pilot	Looking downstream at the channel
W	Q	9	08079000000000000000	DD JP	W270	Unit 9	TEC	13/09/97	Not a creek	93 L 097	9	6540000	609540	0	NA	NA	O	hat on log	Looking at an "NC"
W	Q	13	08082000000000000000	DD JP	W271	Unit 9	TEC	13/09/97	Trib. to Haystack Cr.	93 L 097	9	6475000	609280	1	NA	NA	Fi	meterstick	Measuring fish with the meterstick
W	Q	12	08082000000000000000	DD JP	W271	Unit 9	TEC	13/09/97	Trib. to Haystack Cr.	93 L 097	9	6475000	609280	1	NA	NA	Fi	meterstick	Measuring fish with the meterstick
W	Q	11	08082000000000000000	DD JP	W271	Unit 9	TEC	13/09/97	Trib. to Haystack Cr.	93 L 097	9	6475000	609280	1	N	Dn	Ch	hand	Looking downstream at the channel
W	Q	10	08082000000000000000	DD JP	W271	Unit 9	TEC	13/09/97	Trib. to Haystack Cr.	93 L 097	9	6475000	609280	1	S	Up	Ch	water sample bottle	Looking upstream at the channel, note the mosses on the substrate
W	Q	14	08082000000000000000	DD JP	W271	Unit 9	TEC	13/09/97	Trib. to Haystack Cr.	93 L 097	9	6475000	609280	1	NA	NA	Fi	meterstick	Measuring fish with the meterstick
W	Q	15	08089000000000000000	DD JP	W272	Unit 9	TEC	13/09/97	Trib. to Hagarty Cr.	93 L 097	9	6448000	609170	1	NW	Dn	Ch	NA	Looking across stream at the channel
W	Q	16	08089000000000000000	DD JP	W272	Unit 9	TEC	13/09/97	Trib. to Hagarty Cr.	93 L 097	9	6448000	609170	1	SE	Up	Ch	meterstick	Looking upstream at the channel
W	Q	17	08089000000000000000	DD JP	W272	Unit 9	TEC	13/09/97	Trib. to Hagarty Cr.	93 L 097	9	6448000	609170	1	NA	Dn	Ch	hand	Looking downstream at the channel
W	Q	18	08089000000000000000	DD JP	W272	Unit 9	TEC	13/09/97	Trib. to Hagarty Cr.	93 L 097	9	6448000	609170	1	NA	NA	Fi	meterstick	Measuring fish with the meterstick

Group	Roll	Frame	Watershed Code	Survey Crew	Site Number	Unit Number	Agency	Survey Date	Stream "Local"	Map #	UTM Zone	UTM Northing	UTM Easting	Reach Number	Aspect	Photo Direction	Photo Type	Scale Item	Comments
W	Q	19	080890000000000000000000	DD JP	W272	Unit 9	TEC	13/09/97	Trib. to Hagarty Cr.	93 L 097	9	6448000	609170	1	NA	NA	Fi	meterstick	Measuring fish with the meterstick
W	Q	20	080890000000000000000000	DD JP	W272	Unit 9	TEC	13/09/97	Trib. to Hagarty Cr.	93 L 097	9	6448000	609170	1	NA	NA	Ch	meterstick	Measuring fish with the meterstick
W	Q	22	080960000000000000000000	DD JP	W273	Unit 9	TEC	13/09/97	Trib. to Cronin Cr.	93 L 097	9	6469000	608750	2	NA	NA	Fi	meterstick	Measuring fish with the meterstick
W	Q	23	080960000000000000000000	DD JP	W273	Unit 9	TEC	13/09/97	Trib. to Cronin Cr.	93 L 097	9	6469000	608750	2	NA	NA	Fi	meterstick	Measuring fish with the meterstick
W	Q	21A	080960000000000000000000	DD JP	W273	Unit 9	TEC	13/09/97	Trib. to Cronin Cr.	93 L 097	9	6469000	608750	2	NA	X	Ch	NA	Looking across stream at the channel
W	Q	21	080960000000000000000000	DD JP	W273	Unit 9	TEC	13/09/97	Trib. to Cronin Cr.	93 L 097	9	6469000	608750	2	NA	X	Ch	NA	Looking at a beaver pond
Y	7	7	080630000000000000000000	DD SJ	Y49	Unit 9	TEC	18/07/97	Trib to Fulton R.	93 L 097	9	6517000	609460	2	N	Dn	Ch	photoboard	Looking downstream at the channel.
Y	7	6	080630000000000000000000	DD SJ	Y49	Unit 9	TEC	18/07/97	Trib to Fulton R.	93 L 097	9	6517000	609460	2	S	Up	Ch	photoboard	Looking upstream at the channel.
Y	7	9	080500000000000000000000	DD SJ	Y50	Unit 9	TEC	18/07/97	Not a creek	93 L 097	9	6503000	609300	0	E	Dn	Ch	photoboard, crew member	Looking downslope at the channel, note the condition of the culvert.
Y	7	8	080500000000000000000000	DD SJ	Y50	Unit 9	TEC	18/07/97	Not a creek	93 L 097	9	6503000	609300	0	W	Up	Ch	photoboard, crew member	Looking upslope at the channel.
Y	7	12	080500000000000000000000	DD SJ	Y51	Unit 9	TEC	18/07/97	Trib to Chapman Lk.	93 L 097	9	6496000	609010	1	NA	NA	Fi	photoboard, fish board	CT on the fish board.
Y	7	13	080500000000000000000000	DD SJ	Y51	Unit 9	TEC	18/07/97	Trib to Chapman Lk.	93 L 097	9	6496000	609010	1	NA	NA	Fi	photoboard, fish board	CT on the fish board.
Y	7	10	080500000000000000000000	DD SJ	Y51	Unit 9	TEC	18/07/97	Trib to Chapman Lk.	93 L 097	9	6496000	609010	1	SW	Dn	Ch	photoboard, crew member	Looking downstream at the channel.
Y	7	11	080500000000000000000000	DD SJ	Y51	Unit 9	TEC	18/07/97	Trib to Chapman Lk.	93 L 097	9	6496000	609010	1	NE	Up	Ch	photoboard	Looking upstream at the channel.
Y	7	14	080540000000000000000000	DD SJ	Y52	Unit 9	TEC	18/07/97	Not a creek	93 L 097	9	6495000	609680	0	NA	NA	O	TRITON flagging tape	An NC, with culvert, fireweed, alder and grasses.
Y	7	15	480697254400000000000000	SJ DD	Y53	Unit 9	TEC	18/07/97	Nata Cr.	93 L 097	9	6472000	609520	1	N	Up	Ch	crew member	Looking upstream at the channel, with crew member electrofishing.
Y	7	19	480697254400000000000000	SJ DD	Y53	Unit 9	TEC	18/07/97	Nata Cr.	93 L 097	9	6472000	609520	1	NA	NA	Fi	photoboard, fishboard	Fish on the fish board.
Y	7	18	480697254400000000000000	SJ DD	Y53	Unit 9	TEC	18/07/97	Nata Cr.	93 L 097	9	6472000	609520	1	NA	NA	Fi	photoboard, fishboard	Fish on the fish board.
Y	7	16	480697254400000000000000	SJ DD	Y53	Unit 9	TEC	18/07/97	Nata Cr.	93 L 097	9	6472000	609520	1	S	Dn	Ch	photoboard	Looking downstream at the channel, note the debris jam in the foreground.
Y	7	17	480697254400000000000000	SJ DD	Y53	Unit 9	TEC	18/07/97	Nata Cr.	93 L 097	9	6472000	609520	1	NA	NA	Fi	photoboard, fishboard	Fish on the fish board.
Y	7	20	080590000000000000000000	DD SJ	Y54	Unit 9	TEC	18/07/97	Not a creek	93 L 097	9	6470000	609430	0	NA	NA	O	NA	An NC, with woody debris, grasses and willow.
Y	25	1	480697234126700000000000	JL JP	Y211	Unit 9	TEC	05/09/97	Fink Cr.	93 L 087	9	6468720	607917	4	SW	Up	Ch	photoboard , meterstick	Looking upstream at the channel, note boulder cover
Y	25	2	480697234126700000000000	JL JP	Y211	Unit 9	TEC	05/09/97	Fink Cr.	93 L 087	9	6468720	607917	4	NE	Dn	Ch	photoboard	Looking downstream at the channel
Y	25	3	480467234126700000000000	JP FC	Y212	Unit 9	TEC	05/09/97	Fink Cr.	93 L 087	9	6484000	608060	3	SW	Up	Ch	photoboard , meterstick	Looking upstream at the channel, note sm. cascade and pool

Group	Roll	Frame	Watershed Code	Survey Crew	Site Number	Unit Number	Agency	Survey Date	Stream "Local"	Map #	UTM Zone	UTM Northing	UTM Easting	Reach Number	Aspect	Photo Direction	Photo Type	Scale Item	Comments
Y	25	5	48046723412670000000000	JP FC	Y212	Unit 9	TEC	05/09/97	Fink Cr.	93 L 087	9	6484000	608060	3	SW	Up	Ch	photoboard , meterstick	Looking upstream at the channel, note 2m cascade
Y	25	6	48046723412670000000000	JP FC	Y212	Unit 9	TEC	05/09/97	Fink Cr.	93 L 087	9	6484000	608060	3	NE	Dn	Ch	NA	Looking downstream at the channel
Y	25	4	48046723412670000000000	JP FC	Y212	Unit 9	TEC	05/09/97	Fink Cr.	93 L 087	9	6484000	608060	3	NE	Dn	Ch	photoboard	Looking downstream at the channel
Y	25	7	07948000000000000000000	JP FC	Y213	Unit 9	TEC	05/09/97	Trib to Little Joe Cr.	93 L 087	9	6441000	608120	1	NW	Up	Ch	photoboard	Looking upstream at the channel, sm. cascade over LOD , pool
Y	25	8	07948000000000000000000	JP FC	Y213	Unit 9	TEC	05/09/97	Trib to Little Joe Cr.	93 L 087	9	6441000	608120	1	SE	Dn	Ch	photoboard	Looking downstream at the channel
Y	25	10	07901000000000000000000	JP FC	Y214	Unit 9	TEC	05/09/97	Trib to McKendrick Cr.	93 L 087	9	6454700	608061	1	SW	Up	Ch	photoboard, crew member	Looking upstream at the channel
Y	25	12	07901000000000000000000	JP FC	Y214	Unit 9	TEC	05/09/97	Trib to McKendrick Cr.	93 L 087	9	6454700	608061	1	NA	NA	Fi	photoboard, fishboard	Measuring Dolly Varden on the fishboard
Y	25	9	07901000000000000000000	JP FC	Y214	Unit 9	TEC	05/09/97	Trib to McKendrick Cr.	93 L 087	9	6454700	608061	1	NE	Dn	Ch	photoboard, meterstick, book	Looking downstream at the channel
Y	25	11	07901000000000000000000	JP FC	Y214	Unit 9	TEC	05/09/97	Trib to McKendrick Cr.	93 L 087	9	6454700	608061	1	NA	NA	Fi	photoboard, fishboard	Measuring Dolly Varden on the fishboard
Y	25	13	07938000000000000000000	JP FC	Y215	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6425740	607621	3	SW	Up	Ch	photoboard	Looking upstream at the channel
Y	25	14	07938000000000000000000	JP FC	Y215	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6425740	607621	3	NE	Dn	Ch	photoboard	Looking downstream at the channel
Y	25	15	07937000000000000000000	JP FC	Y216	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6427450	607642	1	E	Up	Ch	photoboard	Looking upstream at the channel
Y	25	16	07937000000000000000000	JP FC	Y216	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6427450	607642	1	W	Dn	Ch	photoboard	Looking downstream at the channel
Y	25	22	48069724270000000000000	JP FC	Y218	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6423000	607640	4	NA	NA	Fi	photoboard, fishboard	Measuring Dolly Varden on the fishboard
Y	25	21	48069724270000000000000	JP FC	Y218	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6423000	607640	4	N	Dn	Ch	photoboard, meterstick	Looking downstream at the channel
Y	25	20	48069724270000000000000	JP FC	Y218	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6423000	607640	4	S	Up	Ch	photoboard, meterstick	Looking upstream at the channel, note overveg and LOD
Y	26	1	07942000000000000000000	JP FC	Y219	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6427000	607540	1	NA	NA	Fi	photoboard, fishboard	Dolly Varden on fishboard
Y	25	23	07942000000000000000000	JP FC	Y219	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6427000	607540	1	NA	NA	Fi	photoboard, fishboard	Measuring Dolly Varden on the fishboard
Y	25	24	07942000000000000000000	JP FC	Y219	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6427000	607540	1	NA	NA	Fi	photoboard, fishboard	Measuring Dolly Varden on the fishboard
Y	25	25	07942000000000000000000	JP FC	Y219	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6427000	607540	1	NW	Dn	Ch	photoboard, meterstick	Looking downstream at the channel, note boulder cover
Y	26	2	07942000000000000000000	JP FC	Y219	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6427000	607540	1	SE	Up	Ch	photoboard	Looking upstream at the channel

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Y	26	3	07942000000000000000	JP FC	Y219	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6427000	607540	1	NW	Dn	Ch	photoboard	Looking downstream at the channel, note blowdown
Y	26	10	07944000000000000000	JP FC	Y220	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6435000	607570	1	SW	Dn	Ch	photoboard, meterstick, book	Looking downstream at the channel
Y	26	9	07944000000000000000	JP FC	Y220	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6435000	607570	1	NE	Up	Ch	photoboard, meterstick	Looking upstream at the channel, note boulder habitat
Y	26	4	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	NE	Up	Ch	crew member	Looking upstream at the channel, note 3m cascade and pool
Y	26	6	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	NE	Up	Ch	NA	Looking upstream at the channel
Y	26	13	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	NE	Up	Ch	NA	Looking upstream at the channel
Y	26	7	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	NE	Up	Ch	crew member	Looking upstream at the channel
Y	26	8	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	NE	Up	Ch	crew member	Looking upstream at the channel, 4m falls
Y	26	11	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	NE	Up	Ch	photoboard	Looking upstream at the channel
Y	26	12	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	SW	Dn	Ch	photoboard, crew member	Looking downstream at the channel
Y	26	15	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	SW	Dn	Ch	NA	Looking downstream at the channel
Y	26	14	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	SW	Dn	Ch	crew member	Looking downstream at the channel
Y	26	5	48069724270000000000	JP FC	Y221	Unit 9	TEC	06/09/97	McKendrick Cr.	93 L 087	9	6434430	607560	5	NE	Up	Ch	crew member	Looking upstream at the channel, note debris jam
Y	26	17	08023000000000000000	JP FC	Y222	Unit 9	TEC	07/09/97	Trib to Fulton R.	93 L 088	9	6554830	608410	1	NE	Dn	Ch	photoboard	Looking downstream at the channel
Y	26	16	08023000000000000000	JP FC	Y222	Unit 9	TEC	07/09/97	Trib to Fulton R.	93 L 088	9	6554830	608410	1	SW	Up	Ch	photoboard	Looking upstream at the channel
Y	26	18	4806972341000000000000	JP FC	Y223	Unit 9	TEC	07/09/97	Bristow Cr.	93 L 088	9	6554770	608450	1	E	Dn	Ch	photoboard, meterstick	Looking downstream at the channel
Y	26	19	4806972341000000000000	JP FC	Y223	Unit 9	TEC	07/09/97	Bristow Cr.	93 L 088	9	6554770	608450	1	W	Up	Ch	photoboard, meterstick	Looking upstream at the channel
Y	26	25	4806972341000000000000	JP FC	Y223	Unit 9	TEC	07/09/97	Bristow Cr.	93 L 088	9	6554770	608450	1	NA	NA	Fi	photoboard, fishboard	Measuring fish on the fish board
Y	26	24	4806972341000000000000	JP FC	Y223	Unit 9	TEC	07/09/97	Bristow Cr.	93 L 088	9	6554770	608450	1	NA	NA	Fi	photoboard, fishboard	Measuring fish on the fish board
Y	26	23	4806972341000000000000	JP FC	Y223	Unit 9	TEC	07/09/97	Bristow Cr.	93 L 088	9	6554770	608450	1	NA	NA	Fi	photoboard, fishboard	Measuring fish on the fish board
Y	26	22	4806972341000000000000	JP FC	Y223	Unit 9	TEC	07/09/97	Bristow Cr.	93 L 088	9	6554770	608450	1	NA	NA	Fi	photoboard, fishboard	Measuring Dolly Varden on the fishboard
Y	26	20	4806972341000000000000	JP FC	Y223	Unit 9	TEC	07/09/97	Bristow Cr.	93 L 088	9	6554770	608450	1	NA	NA	Fi	photoboard, fishboard	Measuring Dolly Varden on the fishboard
Y	26	21	4806972341000000000000	JP FC	Y223	Unit 9	TEC	07/09/97	Bristow Cr.	93 L 088	9	6554770	608450	1	NA	NA	Fi	photoboard, fishboard	Measuring Dolly Varden on the fishboard
Y	27	3	08029000000000000000	JP FC	Y224	Unit 9	TEC	07/09/97	Trib to Bristow Cr.	93 L 088	9	6548000	608440	1	NA	NA	Fi	photoboard, fishboard	Measuring fish on the fish board

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Y	27	4	080290000000000000000	JP FC	Y224	Unit 9	TEC	07/09/97	Trib to Bristow Cr.	93 L 088	9	6548000	608440	1	N	Dn	Ch	photoboard, meterstick, book	Looking downstream at the channel
Y	27	1	080290000000000000000	JP FC	Y224	Unit 9	TEC	07/09/97	Trib to Bristow Cr.	93 L 088	9	6548000	608440	1	S	Up	Ch	photoboard	Looking upstream at the channel
Y	27	2	080290000000000000000	JP FC	Y224	Unit 9	TEC	07/09/97	Trib to Bristow Cr.	93 L 088	9	6548000	608440	1	NA	NA	Fi	photoboard, fishboard	Measuring fish on the fish board
Y	27	5	080220000000000000000	JP FC	Y225	Unit 9	TEC	07/09/97	Not a creek	93 L 088	9	6550760	608500	0	E	Dn	Ch	photoboard	Looking downstream at the channel, note thick overveg
Y	27	8	080270000000000000000	JP FC	Y226	Unit 9	TEC	07/09/97	Not a creek	93 L 088	9	6547610	608219	0	E	NA	NA	photoboard	Culvert at road crossing - NC
Y	27	10	48069724275410000000000	JP FC	Y227	Unit 9	TEC	08/09/97	Little Joe Cr.	93 L 086	9	6402000	608260	5	W	Up	Ch	NA	Looking upstream at the channel and cascade/step pool habitat
Y	27	9	48069724275410000000000	JP FC	Y227	Unit 9	TEC	08/09/97	Little Joe Cr.	93 L 086	9	6402000	608260	5	W	Up	Ch	NA	Looking upstream at the waterfall
Y	27	11	48069724275410000000000	JP FC	Y227	Unit 9	TEC	08/09/97	Little Joe Cr.	93 L 086	9	6402000	608260	5	E	Dn	Ch	photoboard	Looking downstream at the channel
Y	27	14	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	NW	Up	Ch	photoboard, meterstick	Looking upstream at the channel
Y	27	13	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	SE	Dn	Ch	photoboard	Looking downstream at the channel
Y	27	16	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	NA	BD	Ch	NA	NA
Y	27	15	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	NW	Up	Ch	photoboard, meterstick	Looking upstream at the channel
Y	27	21	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	NW	Up	Ch	NA	Looking upstream at the channel
Y	27	20	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	NW	Up	Ch	NA	Looking upstream at the channel
Y	27	19	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	NW	Up	Ch	NA	NA
Y	27	18	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	NW	Up	Ch	NA	NA
Y	27	17	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	NW	Up	Ch	NA	Aerial photo of waterfall in avalanche area
Y	27	12	48069724275415010000000	JP FC	Y228	Unit 9	TEC	08/09/97	Four Cr.	93 L 086	9	6406000	608120	5	NW	Up	Ch	photoboard, crew member	Looking upstream at the channel
Y	27	23	079470000000000000000	JP FC	Y229	Unit 9	TEC	08/09/97	Trib to McKendrick Cr.	93 L 087	9	6455560	607548	1	E	Up	Ch	photoboard	Looking upstream at the channel
Y	27	22	079470000000000000000	JP FC	Y229	Unit 9	TEC	08/09/97	Trib to McKendrick Cr.	93 L 087	9	6455560	607548	1	W	Dn	Ch	photoboard	Looking downstream at the channel
Y	27	25	48069724270000000000000	JP FC	Y230	Unit 9	TEC	08/09/97	McKendrick Cr.	93 L 087	9	6463650	607568	6	SW	Dn	Ch	photoboard, crew member	Looking downstream at the channel, note the thick willow cover
Y	27	24	48069724270000000000000	JP FC	Y230	Unit 9	TEC	08/09/97	McKendrick Cr.	93 L 087	9	6463650	607568	6	NE	Up	Ch	photoboard, crew member	Looking upstream at the channel
Y	28	2	48069723410000000000000	JP FC	Y231	Unit 9	TEC	08/09/97	Bristow Cr.	93 L 087	9	6481850	607730	2	NE	Dn	Ch	photoboard	Looking downstream at the channel
Y	28	1	48069723410000000000000	JP FC	Y231	Unit 9	TEC	08/09/97	Bristow Cr.	93 L 087	9	6481850	607730	2	SW	Up	Ch	photoboard, meterstick	Looking upstream at the channel
Y	28	4	079740000000000000000	JP FC	Y232	Unit 9	TEC	08/09/97	Trib to Bristow Cr.	93 L 087	9	6479930	607810	1	E	Dn	Ch	photoboard, crew member	Looking downstream at the channel
Y	28	7	079740000000000000000	JP FC	Y232	Unit 9	TEC	08/09/97	Trib to Bristow Cr.	93 L 087	9	6479930	607810	1	S	Up	Ch	NA	Looking upstream at the channel

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Y	28	3	07974000000000000000	JP FC	Y232	Unit 9	TEC	08/09/97	Trib to Bristow Cr.	93 L 087	9	6479930	607810	1	W	Up	Ch	photoboard	Looking upstream at the channel
Y	28	8	07974000000000000000	JP FC	Y232	Unit 9	TEC	08/09/97	Trib to Bristow Cr.	93 L 087	9	6479930	607810	1	S	Up	Ch	NA	Looking upstream at the channel
Y	28	14	07928000000000000000	JP FC	Y234	Unit 9	TEC	08/09/97	Trib to McKendrick Cr.	93 L 086	9	6397410	607900	3	W	Up	Ch	photoboard	Looking upstream at the channel
Y	28	13	07928000000000000000	JP FC	Y234	Unit 9	TEC	08/09/97	Trib to McKendrick Cr.	93 L 086	9	6397410	607900	3	E	Dn	Ch	photoboard, crew member	Looking downstream at the channel, note boulder cover
Y	28	11	07928000000000000000	JP FC	Y234	Unit 9	TEC	08/09/97	Trib to McKendrick Cr.	93 L 086	9	6397410	607900	3	W	Up	Ch	NA	Looking upstream at the channel
Y	28	9	07928000000000000000	JP FC	Y234	Unit 9	TEC	08/09/97	Trib to McKendrick Cr.	93 L 086	9	6397410	607900	3	W	Up	Ch	NA	Looking upstream at the channel
Y	28	10	07928000000000000000	JP FC	Y234	Unit 9	TEC	08/09/97	Trib to McKendrick Cr.	93 L 086	9	6397410	607900	3	W	Up	Ch	NA	Looking upstream at the channel
Y	28	12	07928000000000000000	JP FC	Y234	Unit 9	TEC	08/09/97	Trib to McKendrick Cr.	93 L 086	9	6397410	607900	3	W	Up	Ch	photoboard, crew member	Looking upstream at the channel, debris jam and cascade
Y	29	14	08025000000000000000	JP FC	Y242	Unit 9	TEC	10/09/97	Trib to Fulton R.	93 L 088	9	6561970	608268	2	NE	Dn	Ch	photoboard	Looking downstream at the channel
Y	29	11	08025000000000000000	JP FC	Y242	Unit 9	TEC	10/09/97	Trib to Fulton R.	93 L 088	9	6561970	608268	2	SW	Up	Ch	photoboard, crew member	Looking upstream at the channel
Y	29	12	08025000000000000000	JP FC	Y242	Unit 9	TEC	10/09/97	Trib to Fulton R.	93 L 088	9	6561970	608268	2	NA	NA	Fi	photoboard, fishboard	Measuring fish on the fish board
Y	29	13	08025000000000000000	JP FC	Y242	Unit 9	TEC	10/09/97	Trib to Fulton R.	93 L 088	9	6561970	608268	2	NA	NA	Fi	photoboard, fishboard	Measuring fish on the fish board
Y	29	16	07892000000000000000	JP FC	Y243	Unit 9	TEC	10/09/97	Trib to McKendrick Cr.	93 L 087	9	6451840	608273	2	E	Dn	Ch	photoboard	Looking downstream at the channel
Y	29	15	07892000000000000000	JP FC	Y243	Unit 9	TEC	10/09/97	Trib to McKendrick Cr.	93 L 087	9	6451840	608273	2	W	Up	Ch	photoboard	Looking upstream at the channel, cascade/step pool habitat
Y	29	18	07893000000000000000	JP FC	Y244	Unit 9	TEC	10/09/97	Trib to McKendrick Cr.	93 L 087	9	6481840	606730	1	S	Dn	Ch	photoboard	Looking downstream at the channel
Y	29	17	07893000000000000000	JP FC	Y244	Unit 9	TEC	10/09/97	Trib to McKendrick Cr.	93 L 087	9	6481840	606730	1	N	Up	Ch	photoboard	Looking upstream at the channel, note abundant debris
Y	27	6	08022000000000000000	JP FC	Y279	Unit 9	TEC	07/09/97	Trib. to Fulton R.	93 L 088	9	6546890	608497	2	W	Up	Ch	photoboard	Looking upstream at the channel
Y	27	7	08022000000000000000	JP FC	Y279	Unit 9	TEC	07/09/97	Trib. to Fulton R.	93 L 088	9	6546890	608497	2	E	Dn	Ch	photoboard	Looking downstream at the channel
Y	25	19	07937000000000000000	JP FC	Y217	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6423200	607630	1	NA	NA	Fi	photoboard, fishboard	Measuring Dolly Varden on the fishboard
Y	25	17	07937000000000000000	JP FC	Y217	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6423200	607630	1	E	Up	Ch	photoboard, meterstick	Looking upstream at the channel
Y	25	18	07937000000000000000	JP FC	Y217	Unit 9	TEC	06/09/97	Trib to McKendrick Cr.	93 L 087	9	6423200	607630	1	W	Dn	Ch	photoboard, meterstick	Looking downstream at the channel
Y	28	5	07973000000000000000	JP FC	Y233	Unit 9	TEC	08/09/97	Trib to Bristow Cr.	93 L 087	9	6482200	607790	1	SW	Up	Ch	photoboard	Looking upstream at the channel

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Y	28	6	07973000000000000000000	JP FC	Y233	Unit 9	TEC	08/09/97	Trib to Bristow Cr.	93 L 087	9	6482200	607790	1	NE	Dn	Ch	photoboard, notebook	Looking downstream at the channel, note boulder cover
Z	2	25	08045000000000000000000	JP KG	Z16	Unit 9	TEC	10/07/97	Trib. to Chapman Lk.	93 L 097	9	6474900	609263	2	E	Dn	Ch	fieldbook	Looking upstream at the channel
Z	2	24	08045000000000000000000	JP KG	Z16	Unit 9	TEC	10/07/97	Trib. to Chapman Lk.	93 L 097	9	6474900	609263	2	E	Up	Ch	NA	Looking downstream at a mostly dry channel
Z	2	26	08045000000000000000000	JP KG	Z16	Unit 9	TEC	10/07/97	Trib. to Chapman Lk.	93 L 097	9	6474900	609263	2	W	Up	Ch	crew member	Looking upstream at the channel, note the dense understory
Z	3	3	08045000000000000000000	JP KG	Z17	Unit 9	TEC	10/07/97	Trib. to Chapman Lk.	93 L 097	9	6477000	609280	1	NW	Up	Ch	NA	Looking upstream at the channel, note down wood across channel
Z	3	1A	08045000000000000000000	JP KG	Z17	Unit 9	TEC	10/07/97	Trib. to Chapman Lk.	93 L 097	9	6477000	609280	1	NW	Up	Ch	culvert	Looking upstream at the channel, note the small culvert drop
Z	3	2	08045000000000000000000	JP KG	Z17	Unit 9	TEC	10/07/97	Trib. to Chapman Lk.	93 L 097	9	6477000	609280	1	SE	Dn	Ch	flagging	Looking downstream at the channel, note heavy brush cover
Z	3	6	08093000000000000000000	JP KG	Z18	Unit 9	TEC	10/07/97	Trib. to Chapman Lk.	93 L 097	9	6478890	609002	1	NE	Dn	Ch	NA	Looking downstream at the channel
Z	3	4	08093000000000000000000	JP KG	Z18	Unit 9	TEC	10/07/97	Trib. to Chapman Lk.	93 L 097	9	6478890	609002	1	SW	Up	Ch	meterstick	Looking upstream at the channel and a small falls
Z	3	5	08093000000000000000000	JP KG	Z18	Unit 9	TEC	10/07/97	Trib. to Chapman Lk.	93 L 097	9	6478890	609002	1	NE	Dn	Ch	flagging	Looking downstream at the channel
Z	3	7	08093000000000000000000	JP KG	Z18	Unit 9	TEC	11/08/97	Trib. to Chapman Lk.	93 L 097	9	6478890	609002	1	NA	NA	Fi	fishboard	Measuring fish on the fishboard