

**STREAM INVENTORY**  
**FENTON CREEK AND ADJACENT**  
**TRIBUTARIES**  
**1997**

**WATERSHED CODE: 460-6006-266**

**Prepared by**

**DAVID BUSTARD AND ASSOCIATES LTD.**

**for**

**HOUSTON FOREST PRODUCTS LTD.**  
**(Funded by Forest Renewal BC)**

**February 1998**

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## BACKGROUND

An aquatic stream inventory was conducted in Fenton Creek and adjacent tributaries located in the Morice Watershed approximately 25 km southwest of Houston, BC (Figure 1). These studies were a continuation of an aquatic inventory program initiated in the Thautil and Owen Operating Areas (Morice TSA 20) during the summer and fall of 1996 (Bustard 1997).

The specific objectives of the program were as follows:

- to identify the known watershed distributions of fish presence/absence based on existing information;
- to identify stream gradients and potential obstructions to fish passage within the study streams;
- to identify stream reaches for all study streams;
- to delineate the distributions of fish and fish habitat throughout the study streams to allow for the identification and classification of fish-bearing streams under the Forest Practices Code (FPC) at a mapping scale of 1:20,000;
- to provide FPC riparian classification for stream reaches sampled during watershed inventory;
- to identify key habitat features/sites requiring special management attention during watershed inventory, including whether bull trout (*Salvelinus confluentus*) were present in the watersheds;
- to provide baseline distributions of stream-dependent amphibian species and life-history stages.

The major emphasis of the study was to undertake a broad-based aquatic inventory at an operational and landscape level to facilitate planning for forest development that minimizes impacts on the aquatic resources of the watersheds. Emphasis was placed on accurately describing the distribution of fish within the study streams and establishing a riparian classification for all stream sections.

The report is separated into three sections:

**SECTION 1** presents an overview of the key results of the fish and habitat sampling including fish distribution, relative abundance, and a comparison to historical data where available. Recommendations concerning habitat restoration (mainly stream crossing concerns) are included in this section. A 1:50,000 map showing the location of the study

streams, fish distribution and main barriers is included at the back of this report. This map also shows the main roads and logging history of the study area.

**SECTION 2** presents the detailed results of sampling. A summary of all fish sampled and the stream survey card information for each tributary are presented in this section. These summaries are intended for use with the two 1:20,000 maps accompanying this report (mapsheets 093L015 and 093L016).

Photodocumentation information is presented in **SECTION 3**.

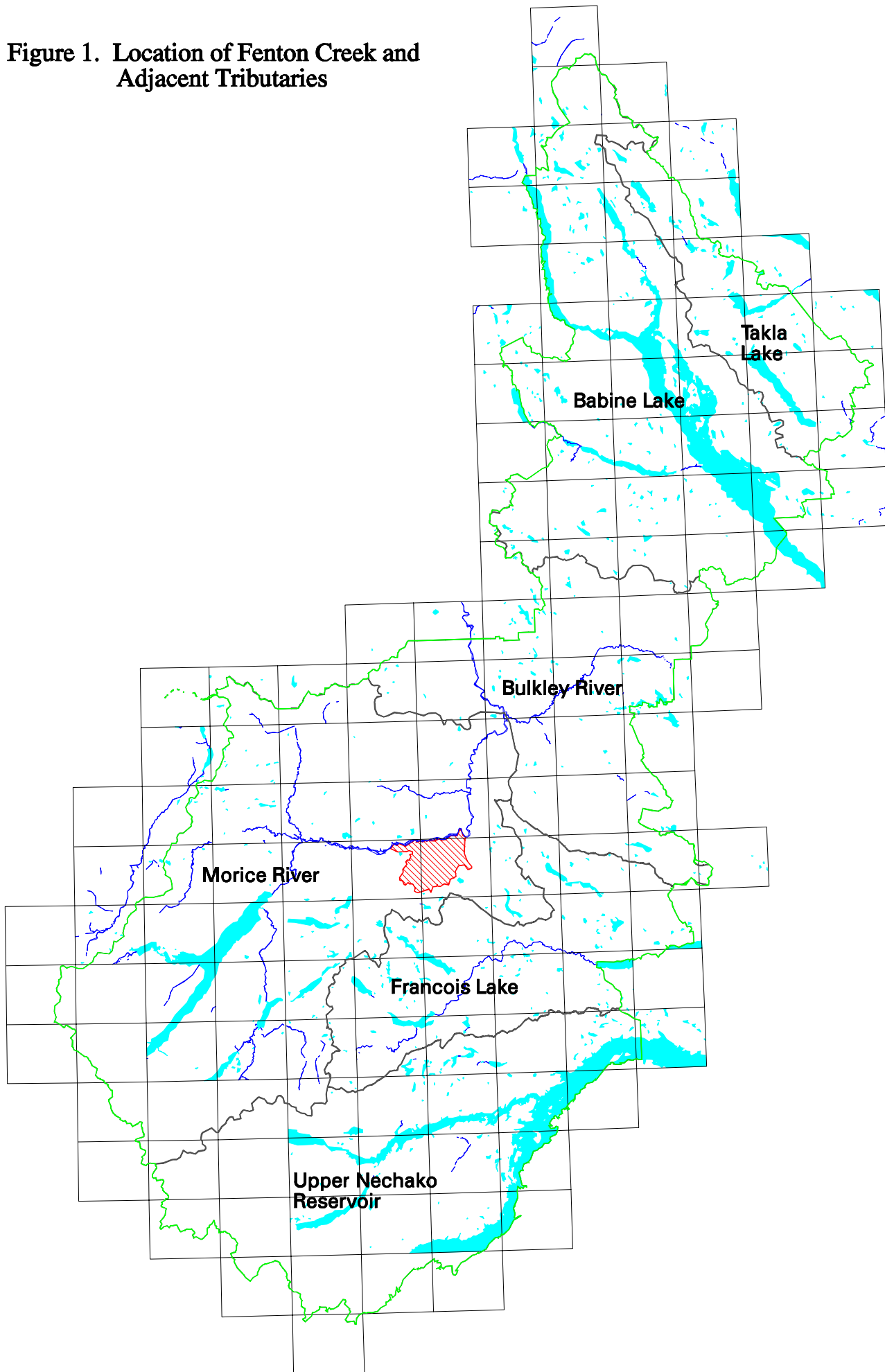
## **ACKNOWLEDGMENTS**

The studies were funded by the Operational Inventory Program of Forest Renewal BC, with Houston Forest Products (HFP) as the project proponent. The overall inventory program was coordinated by Melissa Todd of HFP. Andy Witt was the contract monitor. The field surveys were conducted by Rob Dams, Kate Portman, Dave Bustard, Jordan Beblow, and Ian Fuhr. Kate Portman and Rob Dams were responsible for all data compilation and draft map preparations. Western Geographic Information Systems Inc. was responsible for GIS digital mapping.

### **Provincial Disclaimer**

*The Province has not accepted the contents of this product for the purposes of the Forest Practices Code, and reserves the right to dispute the validity of the summarized results. The Province does not necessarily agree with the classification assigned to any individual stream reach, for use in logging plans, silviculture prescriptions or any other application.*

**Figure 1. Location of Fenton Creek and Adjacent Tributaries**



## SECTION 1

### 1.1 STUDY AREA

The study area is located on the south side of the Morice River between Owen and Lamprey creeks. The three main streams in the study area are Fenton, Km 36 and Mile 24.5<sup>1</sup> creeks, each approximately 10 km in length. Six smaller drainages were also located in the study area including the Km 29 Ponds, an area subject to off-channel habitat development for coho salmon.

The study area is located in the Sub-boreal Spruce biogeoclimatic zone. The streams drain moderately steep forested hillsides interspersed with wetlands and small ponds at elevations mainly from 700-1500 m. The upper portions of the Fenton creek arise on the northeast slopes of Nadina Mountain, while upper Mile 24.5 Creek drains the north slopes of Pimpinel Mountain. The lower 1-3 km of the main creeks in the study area drop off from gentle bench areas through canyon sections onto the Morice River floodplain.

These creeks typically experience highest flows during the snowmelt period in May and early June. Low flows occur during both the late summer and winter periods. Water temperatures ranging from 5-13°C were recorded in the three streams during the period June through mid-July. Fenton Creek temperatures tended to be several degrees Centigrade cooler than the other two streams on any given day.

The Morice mainline logging road follows along the south side of the Morice River adjacent to the floodplain in this section and crosses the lower ends of all of the study streams. This road was built in the 1950's, and the original wooden culverts are still present at crossing sites on the main study streams. Spur roads and extensive logging has occurred throughout the study area, particularly in Km 24.5 Creek. Proposed cutblocks are planned throughout the area during the next decade (see 1:50,000 map).

The northern boundary of the study area borders on the Morice River, an outstanding salmon and steelhead river offering a provincially significant sport fishery. The streams flow directly into river sections utilized by coho (*Oncorhynchus kisutch*) and pink (*Oncorhynchus gorbuscha*) salmon and steelhead (*Oncorhynchus mykiss*) trout for spawning and rearing. Chinook (*Oncorhynchus tshawytscha*) salmon rearing also occurs throughout this reach<sup>2</sup>. Both water quality and viewscape are important features associated with land-use activities along the Morice River.

Some background fisheries information was collected on lower Fenton and Km 24.5 Creek during the Kemano Completion studies on the Morice River (Envirocon Ltd. 1984).

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<sup>1</sup> These refer to distances on the Morice Forest Service Road. Mile 24.5 Creek has not been changed to km to keep a consistent reference to that used for this stream by Morris and Eccles (1975) and in the Kemano Completion Studies (Envirocon Ltd. 1984).

<sup>2</sup> See Envirocon Ltd. (1984) for detailed information describing fish utilization of this section of the Morice River.



Electrofishing was conducted at sites in the vicinity of the road crossings, and juvenile steelhead, coho and Dolly Varden (*Salvelinus malma*) were sampled in both systems. Both steelhead fry and parr were present in the lower ends of these creeks, with greatest abundance in lower Fenton Creek.

These same two creeks were sampled at the road crossings in 1975 (Morris and Eccles 1975). Steelhead juveniles and Dolly Varden were sampled in both systems. As well, coho fry were present in Km 24.5 Creek. The 1975 report identified the main road culvert on Fenton Creek as a probable barrier to anadromous fish based on sampling above and below the road. Shepard and Algard (1977) also conducted sampling at the Fenton Creek road crossing and captured Dolly Varden and a single sucker (*Catostomus sp.*).

Radio telemetry studies conducted during 1979 indicated that one of 23 steelhead tagged in the Morice spawned either in a Morice sidechannel just below Fenton Creek or in the lower end of Fenton Creek downstream from the road culvert (Lough 1980).

Several related fisheries studies were conducted either in or adjacent to the study area and have some relevance to land-use activities in the study area.

A study of overwinter survival of juvenile salmon and steelhead was conducted on Morice River sidechannels, including one site located a few km upstream from Fenton Creek. Groundwater seepages from the adjacent slopes on the south side of the Morice were important for keeping a large sidechannel wetted throughout the winter, and lead to higher overwinter survival than sidechannels without similar inflows (Bustard 1984).

A second study was undertaken at the Km 29 Ponds (see 1:50,000 mapsheet). The movement of coho fry and yearlings into off-channel pond habitat and subsequent downstream movements were studied in this area (Bustard 1984). Construction at the pond complex, including redirection of inlet flows, was undertaken by the Department of Fisheries and Oceans during the late 1980's in an effort to increase coho production from these ponds. To date this project has not been successful, either a result of coho recruitment problems into the ponds during the May-June migration period or poor water quality during the late summer or winter period.

The area has also been subject to assessments for potential watershed restoration opportunities. These studies are in progress (G. Wadley, pers. communication).

All of the previous fisheries studies have been restricted to the lower portions of the mainstem creeks. No fisheries surveys to date have included the extensive upper reaches of the streams present in the study area.

## **1.2 METHODS**

### **1.2.1 TIMING**

Mapping and air photo studies to identify preliminary reach breaks and sample site locations were conducted during April and May 1997. The field studies were undertaken from the last week of May through until mid-July. The early portion of the study period concentrated on the small tributaries and lake-headed areas. The downstream sections of the larger tributaries were not sampled until early July due to high flow conditions making sampling difficult.

### **1.2.2 LOGISTICS**

Road access (truck and ATV) combined with walking was used to access all sample sites in the study area. A small amount of helicopter time was used to examine the mainstem creeks locating barriers and reach breaks. The field surveys were conducted by a crew of two or three persons.

### **1.2.3 STREAM IDENTIFIERS**

Watershed codes were available from the MELP office in Smithers from maps at a 1:50,000 scale. These were transferred to 1:20,000 base maps. Since many of the smaller tributaries do not appear on the larger scale map and did not have a map designation at the 1:20,000 scale, we developed an interim location point identifier consisting of a mix of letters (first letter of tributary) and the number (n<sup>th</sup> tributary upstream from the mouth of the main tributary). Each stream has this unique designation, while only some have the official watershed code as digitized by MELP.

### **1.2.4 HABITAT AND FISH SAMPLING**

Resources Inventory Committee (RIC) Standard Reconnaissance Level Stream Inventory (MELP, Draft 1995) and Forest Practices Code guidebooks provided the framework for conducting the fish and habitat surveys. The details of the sampling procedure are laid out in the *Schedule A Streams* accompanying stream survey contracts prepared in 1996. These surveys were a continuation of the 1996 contract.

Several modifications were made to methodologies in consultation with the project monitor to allow for a more realistic achievement of program objectives. These are outlined below:

- The stream surveys emphasized distribution information. Considerable effort was directed at establishing the upstream barriers to fish distribution. In areas with poor access, an estimate of the upper extent of fish access based on ground and aerial reconnaissance observations of barriers has been made. These sections have been delineated as suspected fish habitat on the accompanying aquatic maps (dashed red

lines). Generally, there is very little suspected habitat denoted in this study area due to location of definite barriers on most systems.

- Fish sampling was conducted above and below potential barriers. If extensive areas of potential fish habitat were identified as barren due to downstream barriers, between three and ten sites were established to confirm the barren designation. The main fish species present in the upper reaches of study streams were Dolly Varden. This species is present in these tributaries year-round, making it unnecessary to repeat fish sampling in these creeks during a different season to confirm that they are barren.

Although an effort was made to examine the barriers from the ground, we did not conduct detailed habitat assessments along the entire length of larger channels similar to those conducted in the Thautil River. None of these streams were utilized by bull trout, and although they are utilized by coho and steelhead, use is restricted to the lower sections accessible from the Morice River.

Electrofishing was the main method of fish sampling in the study area. A lower stopnet was used at the main road crossing sites where access was good. A single pass was made up and back down to the net. Stopnets were not used where access was poor and hiking was required. Overnight minnow trap sets were used in some deep slow-flowing stream and pond habitats. Fish index sites assessing fish densities using multiple pass removal were not established at sites in this study area.

All fish captured were separated by species, counted and measured to the nearest mm fork length. Branchiostegal ray counts were conducted on all char larger than 50 mm fork length. These counts, in conjunction with head shape, were used to separate Dolly Varden and bull trout in this study.

### **1.2.5 AMPHIBIAN DISTRIBUTION**

Amphibian presence/absence information was recorded during the reconnaissance inventory. Electrofishing and minnow trapping, particularly in pond and small headwater lake areas, provided special opportunities for amphibian observations. Care was taken to look for Tailed Frogs (*Ascaphus truei*) in steeper tributaries.

## **1.3 RESULTS AND DISCUSSION**

Habitat descriptions were undertaken at 48 sites in the study area. Fish sampling was conducted at 39 of these locations including 15 sites in Fenton Creek, and 11 sites in both Km 36 and Mile 24.5 creeks (Table 1). Fish were present at 12 of these locations, mainly in Fenton Creek.

**Table 1. Summary of Number of Sites Sampled and Breakdown of Fish Species Present in the Fenton Study Area.**

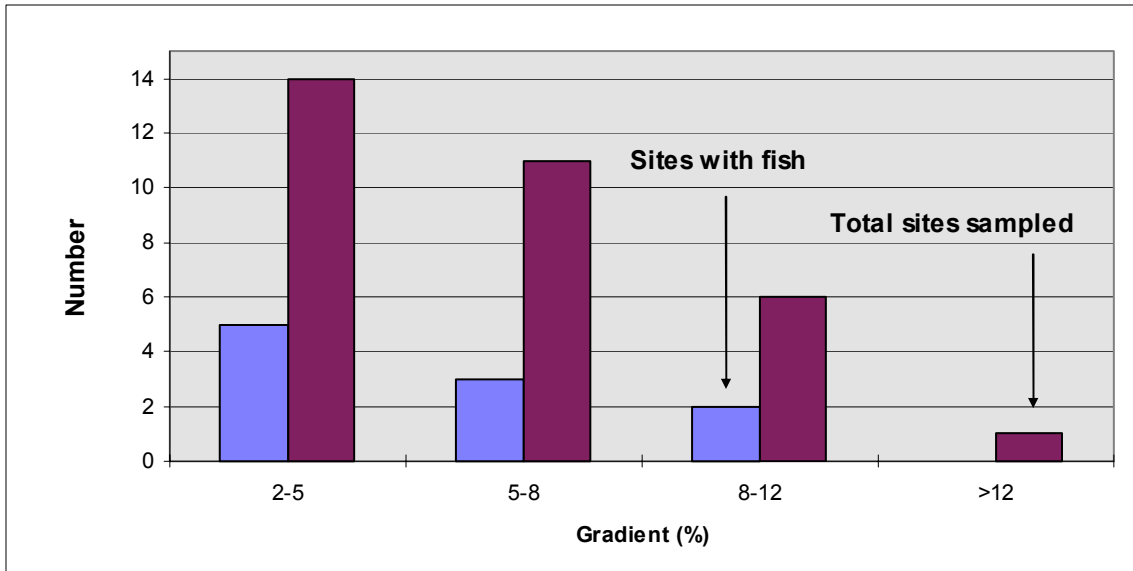
	Number of sites sampled for fish	Fish present	Dolly Varden	Cutthroat Trout	Coho	Steelhead	Rainbow <sup>3</sup>
<b>Fenton</b>	15	8	8	0	1	1	1
<b>Km 36</b>	11	1	0	0	1	0	0
<b>Mile 24.5</b>	11	2	2	2	1	2	0
<b>Other<sup>4</sup></b>	2	1	0	0	1	0	0
<b>Total</b>	39	12	10	2	4	3	1

Figure 2 summarizes the fish sample sites by gradient characteristics. The figure indicates that most of the sites sampled were barren of fish. There were extensive low gradient areas in upper Km 36 and Mile 24.5 creeks that did have potential for fish use, but did not have fish present. Presumably fish have been unable to colonize these areas due to barrier falls located in the lower reaches of these creeks. The steepest sample site with fish present was 9% at a site in upper Fenton Creek. Only one site >12% was sampled in the study area. Fish presence tended to end before the streams achieved higher gradients.

**Figure 2. Summary of Fish Sample Sites by Gradient.**

<sup>3</sup> Resident rainbow were present upstream from an impassable barrier. Rainbow sampled in sections accessible from the Morice River are assumed to be steelhead trout.

<sup>4</sup> Includes past sampling at Km 29 Ponds (coho present some years) and sampling at Km 34 tributary.



### 1.3.1 DISTRIBUTION AND ABUNDANCE BY SYSTEM

#### 1.3.1.1 Fenton Creek (WS Code 460-6006-266)

A culvert located at the mainline road crossing 500 m upstream from the Morice River was the upper extent of anadromous fish access in Fenton Creek (Photo 10). Juvenile steelhead and coho were present in lower Fenton below the culvert, but not upstream. This culvert was identified as a potential barrier to fish by Morris and Eccles (1975). We suspect that the outlet drop combined with the length and slope of this culvert makes it impassable to steelhead and coho salmon. During high flow conditions, water velocities are very fast through this culvert.

Several age classes of steelhead were present at the sample site in lower Fenton Creek (Figure 3). Steelhead fry had not emerged at the time of the sampling. It is not clear whether steelhead spawn in lower Fenton Creek or whether juveniles move upstream from the Morice River after emergence. However, the presence of numerous steelhead fry at this sample site in 1979 (Envirocon Ltd. 1984) suggests that steelhead spawning may occur in lower Fenton Creek, at least during some years.

Coho salmon juveniles were also present in significant numbers at the lower sample site in Fenton Creek (Figure 3 and Table 2). Coho fry emergence in the Morice begins in mid-May, peaks in June, and continues into early July (Envirocon Ltd. 1984). The lack of coho fry in the sample suggests that no coho spawning occurred in Fenton Creek in 1996, and that fry recruitment upstream was minimal.

**Figure 3. Inserted here.**

**Table 2. Fish Species Composition by Study Stream.**

Stream		Steelhead	Coho	Dolly Varden	Cutthroat Trout	Resident Rainbow	TOTAL
<b>Fenton</b>	#	28	32	61	0	2	123
	%	22.8	26.0	49.6	0.0	1.6	
<b>Km 36</b>	#	0	44	0	0	0	44
	%	0.0	100.0	0.0	0.0	0.0	
<b>Mile 24.5</b>	#	21	5	12	49	0	87
	%	24.1	5.7	13.8	56.3	0.0	
<b>TOTAL</b>	#	49	81	73	49	2	254
	%	19.3	31.9	28.7	19.3	0.8	

Only resident fish species were captured at sample sites in Fenton Creek located upstream from the mainline road. Dolly Varden were the most common resident fish present above the culvert and this species occurs throughout Fenton Creek to the headwaters. We assume these fish were able to access Fenton Creek prior to the culvert installation. Dolly Varden did not exceed 15 cm fork length (Figure 3), similar to other resident populations in the Morice (Bustard 1997 and 1998).

Two resident rainbow trout were also sampled at Site 4<sup>5</sup> located 6 km upstream in Fenton Creek (Photo 19). This is an interesting observation, since resident rainbow are generally not present in Morice tributaries. We suspect that these rainbow may have residualized from a population of steelhead that was present in Fenton Creek prior to the culvert installation in the 1950's.

Fenton Creek does not have any barriers other than the road culvert up to a series of beaver dams located between 6 and 7 kms upstream in Reach 5. The mainstem creek has potential spawning and rearing areas suited for steelhead use. As well, the lower 900 m of Tributary F5 (up to a 3.5 m falls) offers potential use. In total, nearly 7 km of stream length has been cut off from steelhead and coho use by the lower road culvert.

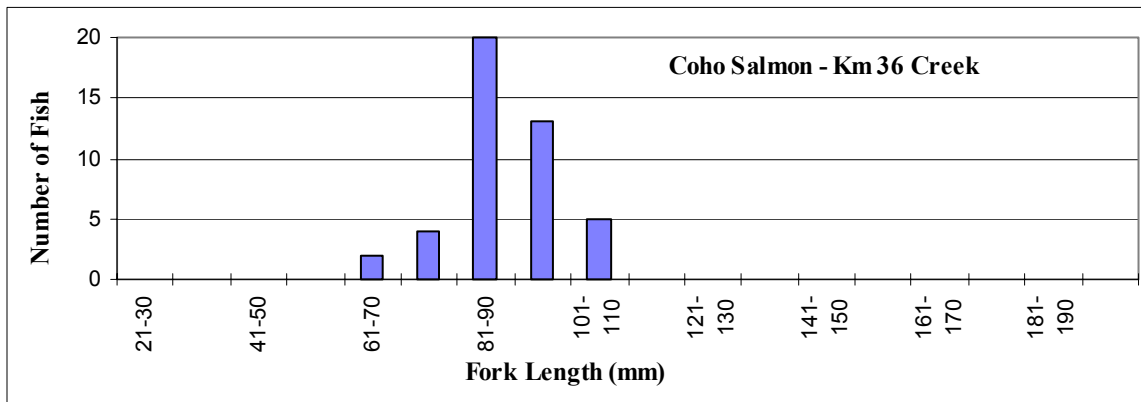
<sup>5</sup> See 1:20,000 map sheets for site locations.

### 1.3.1.2 Km 36 Creek (WS Code 460-6006-313)

Km 36 Creek was barren of fish upstream from a 10 m falls located approximately 1 km above the mainline road. A plugged culvert and beaver dam located below the old wooden culvert have led to ponding in the vicinity of the road crossing (Photo 45). Juvenile coho (yearlings) were present in this section (Figure 4 and Table 2). A metal culvert at a second road crossing site is passable to fish (Photo 49). An 800 m long seasonally-wetted flood channel is located between the road and the Morice River.

The falls in Reach 2 is a total barrier and no fish were captured upstream from this point. Electrofishing at 10 sites upstream from the falls<sup>6</sup> confirmed this.

**Figure 4. Length Frequency of Fish Sampled in Km 36 Creek.**



### 1.3.1.3 Miles 24.5 Creek (WS Code 460-6006-328)

The mainstem of Mile 24.5 Creek was accessible to anadromous fish upstream to a 40 m falls located approximately 2 km upstream. A large tributary in the lower end of Mile 24.5 Creek (Trib M1) was accessible to a 10 m falls located 1.5 km upstream (Photo 93).

Juvenile rainbow (assumed to be the progeny of steelhead), coho, cutthroat trout and Dolly Varden char were present at sample sites located downstream from these barriers (Table 2 and Photo 97). Coho numbers were low compared to the other streams in the study area, and were only present at Site 1 located near the Morice River.

The mainline road culvert (Photo 102), located 300 m upstream from the Morice River, is probably passable to adult steelhead and coho during certain flow conditions. However, it was judged to be a barrier to juvenile fish movements upstream out of the Morice River.

<sup>6</sup> See 1:20,000 mapsheets for site locations.



Figure 5 inserted here.

Cutthroat trout were the dominant fish species at the sample sites, especially at the upper site in Trib M1 (Table 2). The largest cutthroat sampled was a 17 cm spent male sampled on June 13, suggesting that this cutthroat population is a resident stream population maturing at a small size similar to populations in other Morice tributaries not associated with lakes (Bustard 1998). The largest Dolly Varden was 16 cm fork length.

A total of 9 sites were sampled upstream from the barriers confirming that Mile 24.5 Creek was barren of fish in its upper reaches.

### 1.3.2 AMPHIBIAN OBSERVATIONS

Amphibian observations were relatively infrequent during the study period. In all there were three observations of Western Spotted Frogs (*Rana pretiosa*) in tributaries to Km 36 and Mile 24.5 creeks and at Km 34.5 (Section 2 Table 2). A single Long-toed Salamander (*Ambystoma macrodactylum*) was captured in a minnow trap at Site 4 in Km 36 Creek. Past sampling at the Km 29 Ponds has indicated that Long-toed Salamanders are abundant in these off-channel ponds<sup>7</sup>. No Tailed Frogs were observed in the study area.

### 1.3.3 STREAM CROSSINGS - POTENTIAL RESTORATION SITES

The following sites associated with road crossings were identified as potential areas for restoration. The site references should be used in conjunction with the 1:20,000 mapping:

#### **Fenton Creek**

- Mainline road crossing at Site 1 - This old wooden culvert is impassable to anadromous fish. A steep gradient combined with high water velocities during the migration period prevents fish passage. Steelhead and coho juveniles are present up to the culvert, but only resident species are present above. Resident rainbow are present 6 km upstream suggesting that steelhead were able to access this system prior to the culvert installation. There is an estimated 7 km of potential habitat upstream. This is a high priority site to replace the old culvert with a bridge structure allowing both adult and juvenile fish to access extensive areas upstream.
- Trib F10 Site 16 - The culvert on this small creek should be removed. Low densities of Dolly Varden are present below the culvert and there is potential use for 100 m upstream. This is a low priority project.

#### **Km 36 Creek**

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<sup>7</sup> D. Bustard - notes on file.

- Mainline road crossing - The two culverts present at the road crossing are not impassable to fish based on the presence of juvenile coho upstream. The combination of beaver dams and a blocked culvert may lead to future road washouts. This crossing may lend itself to a box culvert structure similar to the Telkwa site described in Finnigan and Marshall (1997).
- Reach 3 Site 4 - No fish are present at this site but a collapsed bridge should be removed and the approaches pulled back to reduce erosion.
- Reach 6 Site 5 - A culvert has been left in the stream channel and has filled with sediment causing the stream to flow over the road. This culvert should be removed if there are no future plans for this road. There are no fish present at this site.
- Trib 5 Site 13 - This is an incised gully with dirt fill over logs. This fill material should be removed before the logs rot and the stream erodes the fill.

### **Mile 24.5 Creek**

- Mainline road crossing - A large wooden culvert at the crossing site has a 15 cm drop at the outlet. Coho juveniles were not present above the culvert. We suspect this culvert is passable to adults at certain flows but is a barrier to juvenile upstream movements from the Morice River. This culvert should be replaced with a structure that ensures juvenile migration upstream from the Morice River.
- Reach 4 Site 4 - No fish are present at this site. A log bridge is close to collapsing causing sediment problems.
- Trib M1 Site 7 - No fish are present at this site. The road culvert is partially filled with bed material. A large pile of material has recently been excavated at this crossing site and has been placed below the road along the streambank. This material should be removed so that it does not re-enter the stream leading to downstream sedimentation.
- Trib M5 Site 9 - This is an incised gully with a 30 m high road fill placed over logs. This material will enter the stream when the logs decompose. The fill material should be removed.

## **1.4 CONCLUSIONS**

The fish distribution and riparian classification based on the surveys are presented on the 1:20,000 maps accompanying this report.

Fenton Creek has the broadest fish distribution of the three main streams in the study area. Steelhead and coho were present up to the mainline road culvert, while resident species were present upstream. The road culvert is a barrier and we strongly recommend that it be replaced with a bridge structure that allows for both adult and juvenile fish movements upstream out of the Morice River. We estimate that approximately 7 km of potential steelhead habitat is present in Fenton Creek above the road crossing.

Mile 24.5 Creek is utilized by steelhead, coho, cutthroat and Dolly Varden. No fish were present above impassable falls on this creek and its main tributary. The culvert on Mile 24.5 Creek also poses difficulties for juvenile fish movements into stream sections above the road. While steelhead juveniles were present above the road, coho were not. We recommend the replacement of this culvert by a structure that enables both adult and juvenile fish to move into upstream habitats over a range of flow conditions.

Km 36 Creek is utilized by coho salmon in the lower 1 km section. No fish are present in the upper reaches of this creek. Priority should be given to ensuring juvenile fish passage at the mainline road crossing.

A number of sites were identified in Km 36 and Mile 24.5 creeks where poor stream crossing procedures have been used. These include placing fills over logs in gullies that will lead to future erosion problems. A priority in the upper barren sections of these watersheds should be minimizing sediment inputs to downstream fish sections.

## **1.5 LITERATURE CITED**

- Bustard, D. 1984. Some differences between coastal and interior stream ecosystems and the implications to juvenile fish production. In: J.H. Patterson (ed.) Proceedings of the Workshop on Habitat Improvements, Whistler, BC. 8-10 May 1984. Can. Tech. Report of Fisheries and Aquatic Sciences. No. 1483.
- Bustard, D. 1997. Stream inventory Thautil River Watershed 1996. Prepared for Houston Forest Products Ltd. and Forest Renewal BC.
- Bustard, D. 1998. Stream inventory Tagit Creek and adjacent tributaries 1997. Prepared for Houston Forest Products Ltd. and Forest Renewal BC.
- Envirocon Ltd. 1984. Environmental studies associated with the proposed Kemano Completion Hydroelectric Development. Vol. 4. Fish Resources of the Morice River System: Baseline Information. Prepared for the Aluminum Company of Canada.

- Finnigan, R. and D.E. Marshall. 1997. Managing beaver habitats for salmonids: working with beavers. In: P. Slaney and D. Zaldokas (eds.) Fish Rehabilitation Procedures. Watershed Restoration Technical Circular No. 9. MOELP, Vancouver, BC.
- Lough, M. 1980. Radio telemetry studies of summer run steelhead trout in the Skeena River drainage, 1979 with particular reference to Morice, Suskwa, Kispiox and Zymoetz River stocks. Skeena Fisheries Report No. 79-05 (S.E.P.) Fisheries Section, Smithers.
- MELP. 1995 (Draft). Lake and stream inventory standards and procedures. Fisheries Branch Inventory Unit.
- Morris, M. and B. Eccles. 1977. Morice River stream survey. Man. report for Ministry of Environment, Smithers, BC.
- Shepard, C. and J. Algard. 1977. A preliminary survey of juvenile steelhead/rainbow trout distribution and rearing habitat in the Morice River system. Man. report for Ministry of Environment, Smithers, BC.

Table 1. Fenton Creek and Adjacent Tributaries Fish Collection Data Form - 1997

Stream Name	Watershed Code	Date	Survey Crew	UTM	Reach #	Site #	Area (m <sup>2</sup> m)	Water Temp (°C)	Cond. (µS)	Capture Method	Pass/Trap #	Spp.	Maturity	FL (mm)	Activity	Comments
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	66	R	Lower net.
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	66	R	SST/DV/CO: Photo A9/9.
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	68	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	69	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	71	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	72	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	72	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	73	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	73	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	73	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	73	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	77	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	79	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	79	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	79	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	80	R	Mort.
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	80	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	80	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	81	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	82	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	83	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	83	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	83	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	85	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	86	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	87	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	87	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	87	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	CO	IM	92	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	50	R	Mort.
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	57	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	59	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	59	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	60	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	60	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	61	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	62	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	62	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	63	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	63	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	65	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	66	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	66	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	67	R	Mort.
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	67	R	

Table 1. Fenton Creek and Adjacent Tributaries Fish Collection Data Form - 1997

Stream Name	Watershed Code	Date	Survey Crew	UTM	Reach #	Site #	Area (m <sup>2</sup> m)	Water Temp (°C)	Cond. (µS)	Capture Method	Pass/Trap #	Spp.	Maturity	FL (mm)	Activity	Comments
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	67	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	68	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	69	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	72	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	75	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	75	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	77	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	81	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	81	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	83	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	91	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	SST	IM	103	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	61	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	63	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	64	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	67	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	67	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	68	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	68	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	70	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	75	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	88	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	90	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	97	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	100	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	109	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	113	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	113	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	114	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	114	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	116	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	118	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	129	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	1	1	184.2	10	150	EL	1	DV	IM	147	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	67	R	Lower net.
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	70	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	71	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	72	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	73	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	74	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	78	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	104	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	113	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	118	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	130	R	
Fenton C.	460-6006-266-000-000-000-000	97/07/07	CP/RD/IF	9.6375.60082	2	2	275.0	10	150	EL	1	DV	IM	143	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/IB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	53	R	Lower net.
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/IB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	62	R	Observed newly-emerged fry along the

Table 1. Fenton Creek and Adjacent Tributaries Fish Collection Data Form - 1997

Stream Name	Watershed Code	Date	Survey Crew	UTM	Reach #	Site #	Area (m²)	Water Temp (°C)	Cond. (µS)	Capture Method	Pass/Trap #	Spp.	Maturity	FL (mm)	Activity	Comments
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	63	R	creek margins.
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	69	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	70	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	77	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	79	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	89	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	97	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	102	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	103	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	105	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	110	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	130	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	3	3	155.8	11	40	EL	1	DV	IM	137	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/15	CP/RD/JB	9.6375.60082	4	4	290.0	10	20	EL	1	DV	IM	72	R	Lower net.
Fenton C.	460-6006-266-000-000-000-000	97/06/15	CP/RD/JB	9.6375.60082	4	4	290.0	10	20	EL	1	DV	IM	100	R	Photo A6/16: DV and resident RB.
Fenton C.	460-6006-266-000-000-000-000	97/06/15	CP/RD/JB	9.6375.60082	4	4	290.0	10	20	EL	1	DV	IM	122	R	4 juv. fish were observed but not caught.
Fenton C.	460-6006-266-000-000-000-000	97/06/15	CP/RD/JB	9.6375.60082	4	4	290.0	10	20	EL	1	RB	IM	125	R	Resident RB: heavy spotting.
Fenton C.	460-6006-266-000-000-000-000	97/06/15	CP/RD/JB	9.6375.60082	4	4	290.0	10	20	EL	1	RB	IM	152	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/16	CP/RD/JB	9.6375.60082	6	7	223.3	5.5	10	EL	1	DV	F	47	R	Lower net.
Fenton C.	460-6006-266-000-000-000-000	97/06/16	CP/RD/JB	9.6375.60082	6	7	223.3	5.5	10	EL	1	DV	IM	60	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/16	CP/RD/JB	9.6375.60082	6	7	223.3	5.5	10	EL	1	DV	IM	67	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/16	CP/RD/JB	9.6375.60082	6	7	223.3	5.5	10	EL	1	DV	IM	87	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/16	CP/RD/JB	9.6375.60082	6	7	223.3	5.5	10	EL	1	DV	IM	98	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/16	CP/RD/JB	9.6375.60082	6	7	223.3	5.5	10	EL	1	DV	IM	109	R	
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	7	8	203.3	6	20	EL	1	DV	IM	59	R	Lower net. Observed 2 other DV with
Fenton C.	460-6006-266-000-000-000-000	97/06/17	CP/RD/JB	9.6375.60082	7	8	203.3	6	20	EL	1	DV	IM	82	R	FL's ~120 and 100 mm.
Fenton C. Tributary F5A	460-6006-266-F5A-000-000-000	97/06/17	CP/RD/JB	9.6354.60052	1	14	78.0	10	20	EL	1	DV	IM	65	R	Spot shocked.
Fenton C. Tributary F5A	460-6006-266-F5A-000-000-000	97/06/17	CP/RD/JB	9.6354.60052	1	14	78.0	10	20	EL	1	DV	IM	72	R	DV were caught in the lower 50 m, d/s
Fenton C. Tributary F5A	460-6006-266-F5A-000-000-000	97/06/17	CP/RD/JB	9.6354.60052	1	14	78.0	10	20	EL	1	DV	IM	80	R	from the 0.6 m high drop.
Fenton C. Tributary F5A	460-6006-266-F5A-000-000-000	97/06/17	CP/RD/JB	9.6354.60052	1	14	78.0	10	20	EL	1	DV	IM	100	R	
Fenton C. Tributary F10	460-6006-266-F10-000-000-000	97/06/16	CP/RD/JB	9.6367.60014	1	16	120.8	7.5	70	EL	1	DV	IM	76	R	No lower net.
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	63	R	Set 15 traps above the road and 8 traps
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	65	R	below the road for a 24 h. period.
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	72	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	78	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	79	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	79	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	81	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	81	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	82	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	83	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	83	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	84	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	86	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	86	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	87	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	87	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	87	R	



Table 1. Fenton Creek and Adjacent Tributaries Fish Collection Data Form - 1997

Stream Name	Watershed Code	Date	Survey Crew	UTM	Reach #	Site #	Area (m <sup>2</sup> m)	Water Temp (°C)	Cond. (µS)	Capture Method	Pass/Trap #	Spp.	Maturity	FL (mm)	Activity	Comments
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	87	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	88	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	88	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	88	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	88	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	88	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	88	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	90	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	90	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	91	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	92	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	92	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	92	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	93	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	93	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	93	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	93	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	95	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	95	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	97	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	98	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	100	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	102	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	103	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	103	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	106	R	
Km 36 C.	460-6006-313-000-000-000-000	97/07/10	CP	9.6314.60072	1	1	nm	11	60	MT	nm	CO	IM	110	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	CO	IM	72	R	Lower net.
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	CO	IM	78	R	Shocked 40 m length below culvert and
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	CO	IM	79	R	70 m length above culvert; no CO were
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	CO	IM	87	R	caught above the culvert.
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	CO	IM	87	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	47	R	CT/RB mix; difficult to separate the small
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	51	R	juveniles and fry. Suspect RB/CT hybrids
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	52	R	are present.
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	53	R	Easy access from the Morice R.; suspect
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	55	R	RB are progeny of SST.
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	56	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	56	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	57	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	57	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	58	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	58	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	60	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	60	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	61	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	61	R	
24.5 Mile C.	460-6006-328-000-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	TR	J	62	R	



Table 1. Fenton Creek and Adjacent Tributaries Fish Collection Data Form - 1997

Stream Name	Watershed Code	Date	Survey Crew	UTM	Reach #	Site #	Area (m²)	Water Temp (°C)	Cond. (µS)	Capture Method	Pass/Trap #	Spp.	Maturity	FL (mm)	Activity	Comments
24.5 Mile C.	460-6006-328-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	DV	IM	126	R	
24.5 Mile C.	460-6006-328-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	DV	IM	134	R	
24.5 Mile C.	460-6006-328-000-000-000	97/07/07	CP/RD/IF	9.6294.60072	2	1	341.0	10.5	130	EL	1	DV	IM	138	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	DV	IM	90	R	Lower net.
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	DV	IM	161	R	Suspect a CT/RB mix.
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	TR	IM	47	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	TR	IM	49	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	TR	IM	53	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	RB	IM	70	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	RB	IM	73	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	57	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	80	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	81	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	84	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	87	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	88	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	89	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	92	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	97	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	IM	112	R	
24.5 Mile C. Tributary 24.5M1	460-6006-328-155-000-000-000	97/06/13	CP/RD/JB	9.6298.60057	1	5	174.0	13	80	EL	1	CT	ST	170	S/M	Mort; mature male with spent gonads.
<p><b>Notes:</b> - Sampling was conducted by Dave Bustard and Associates (C87).                      - nm = not measured                      - Area sampled was not available for the minnow trapping sites.</p>										<p><b>Crew Summary:</b> Dave Bustard                      Rob Dams                      Catherine Portman                      Jordan Beblow                      Ian Fuhr</p>						

Table 2. Summary of Fenton Creek and Adjacent Tributaries Amphibian Observations, May - July, 1997.

Stream Name	Date	Reach #	Site #	Species	Number	Comments
Tiny pond at Km 34.5 on the main haul road.	10/07/1997	na	na	Western Spotted Frog	2	
				tadpoles	100's	
Km 36 Creek.	05/06/1997	3	4	Long-toed Salamander	1	Caught in trap set in pond above the bridge.
Km 36 C. Tributary Km36-1.1	19/06/1997	2	9	Western Spotted Frog	1	
24.5 Mile C. Tributary 24.5M5	12/06/1997	4	10	Western Spotted Frog	1	Located within electrofishing site.

EQUIPMENT DETAILS

PHOTO SURVEY FORM 1 - Equipment Details

Survey start date (yyyy/mm/dd): 1997/05/28  
 Survey end date: 1997/07/11

Agency: C087  
 Crew: DB/RD/CP/JB/IF

**CAMERA A:**

Make and model: Pentax Zoom 90-WR Multi-AF	Lens: 38-90 mm zoom
Format: 35 mm film	(focal length, mm)
Resolution (for digital and video cameras): n/a	
Output file type (for digital and video cameras): n/a	

**CAMERA B:**

Make and model: Pentax Zoom 90-WR Multi-AF	Lens: 38-90 mm zoom
Format: 35 mm film	(focal length, mm)
Resolution (for digital and video cameras): n/a	
Output file type (for digital and video cameras): n/a	

**ROLL DETAILS:**

Roll #'s	Camera #	Output Medium	For film cameras:	
			Film Type	ISO
A2 - A5, A10	A	negative	color	200
A6, A7, A9	A	negative	color	400
B1	B	negative	color	400

FENTON CREEK AND ADJACENT TRIBUTARIES STREAM INVENTORY PHOTODOCUMENTATION - 1997

Photo #	Survey start date	Stream name (gaz.)	Stream name (loc.)	Watershed code	Agency	Crew (run #)	Crew (run #)	Crew (run #)	Reach site (Y/N)	Fish cards (Y/N)	Roll/Batch #	Counter #	Negative #	Date of photo	Reach #	Site #	Map # NTS/TRIM	UTM grid E/W	Zone	E(Refld)	N(Refld)	E(correct)	N(correct)	Stream photo dir.	Picture type	Photo direction	Focal length (mm)	Focal range	Scale	Item	Comments
1	1997/05/28	Unnamed Creek	Km33 Creek	460-6006-KM-33-C-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A5	7	10	1997/06/13	1	1	093.016	Map	9	n/a	n/a	6352	60074	Up	Ch	S	38	38-90			
2	1997/05/28	Unnamed Creek	Km33 Creek	460-6006-KM-33-C-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A5	8	11	1997/06/13	1	1	093.016	Map	9	n/a	n/a	6352	60074	Up	Ch	N	38	38-90			
3	1997/05/28	Unnamed Creek	Km34 Creek	460-6006-KM-34-C-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A5	5	8	1997/06/13	1	1	093.016	Map	9	n/a	n/a	6346	60074	Up	Ch	S	38	38-90			
4	1997/05/28	Unnamed Creek	Km34 Creek	460-6006-KM-34-C-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A5	6	9	1997/06/13	1	1	093.016	Map	9	n/a	n/a	6348	60074	Up	Ch	N	38	38-90			
5	1997/05/28	Unnamed Creek	Km41 Creek	460-6006-KM-41-C-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A4	5	8	1997/06/13	1	1	093.016	Map	9	n/a	n/a	6281	60054	Up	Ch	S	38	38-90			
6	1997/05/28	Unnamed Creek	Km41 Creek	460-6006-KM-41-C-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A4	13	12	1997/06/13	1	1	093.016	Map	9	n/a	n/a	6281	60054	Up	Ch	NW	38	38-90			
7	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	CP	RD	IF	Y	Y	A9	7	7	1997/07/07	1	1	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	S	38	38-90			
8	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	CP	RD	IF	Y	Y	A9	8	8	1997/07/07	1	1	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	N	38	38-90			
9	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	CP	RD	IF	Y	Y	A9	9	9	1997/07/07	1	1	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	NW	38	38-90		fy board SST, DV and Co samples.	
10	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	CP	RD	IF	Y	Y	A9	10	11	1997/07/07	1	1	093.016	Map	9	n/a	n/a	6375	60082	Up	O	S	38	38-90		Road culvert.	
11	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	CP	RD	IF	Y	Y	A9	11	12	1997/07/07	2	2	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	S	38	38-90			
12	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	CP	RD	IF	Y	Y	A9	12	12	1997/07/07	2	2	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	N	38	38-90			
13	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	7	7	1997/06/17	3	3	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	SW	38	38-90			
14	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	8	8	1997/06/17	3	3	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	NE	38	38-90			
15	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	9	9	1997/06/17	3	3	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	SE	38	38-90			
16	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A2	21	21	1997/06/06	4	4	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	SE	38	38-90		Creek at high flows.	
17	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A2	22	22	1997/06/06	4	4	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	NW	38	38-90		Creek at high flows.	
18	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	13	12	1997/06/15	4	4	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	NW	38	38-90		Creek at medium flows.	
19	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	13	12	1997/06/15	4	4	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	NW	38	38-90		Creek at medium flows.	
20	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	15	15	1997/06/15	4	4	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	NW	38	38-90		fy board DV and resident RB.	
21	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	14	13	1997/06/15	5	5	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	SE	38	38-90			
22	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	15	14	1997/06/15	5	5	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	NW	38	38-90			
23	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	23	22	1997/06/16	5	5	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	S	38	38-90			
24	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	24	23	1997/06/16	5	5	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	N	38	38-90			
25	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	19	18	1997/06/16	6	6	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	S	38	38-90			
26	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	20	19	1997/06/16	6	6	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	N	38	38-90			
27	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	2	2	1997/06/17	7	7	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	SW	38	38-90			
28	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	3	3	1997/06/17	7	7	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	SE	38	38-90			
29	1997/05/28	Fenton Creek	Fenton Creek	460-6006-266-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	4	4	1997/06/17	7	7	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	SW	38	38-90		Proposed road site.	
30	1997/05/28	Fenton Creek Tributary	F1	460-6006-266-F1-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	5	5	1997/06/17	7	7	093.016	Map	9	n/a	n/a	6375	60082	Up	Ch	NE	38	38-90			
31	1997/05/28	Fenton Creek Tributary	F1	460-6006-266-F1-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	6	6	1997/06/17	7	7	093.016	Map	9	n/a	n/a	6377	60075	Up	Ch	NE	38	38-90			
32	1997/05/28	Fenton Creek Tributary	F1	460-6006-266-F1-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	1	0	1997/06/15	2	11	093.016	Map	9	n/a	n/a	6377	60075	Up	Ch	SW	38	38-90			
33	1997/05/28	Fenton Creek Tributary	F1	460-6006-266-F1-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	2	1	1997/06/15	1	13	093.016	Map	9	n/a	n/a	6377	60075	Up	Ch	NW	38	38-90			
34	1997/05/28	Fenton Creek Tributary	F5.1	460-6006-266-F5.1-000-000-000-000-000-000-000	C87	RD	CP	IF	Y	N	A9	15	15	1997/07/07	1	12	093.016	Map	9	n/a	n/a	6388	60049	Up	Ch	SE	38	38-90			
35	1997/05/28	Fenton Creek Tributary	F5	460-6006-266-F5-000-000-000-000-000-000-000	C87	RD	CP	IF	Y	N	A9	13	13	1997/07/07	1	13	093.016	Map	9	n/a	n/a	6388	60049	Up	Ch	SE	38	38-90			
36	1997/05/28	Fenton Creek Tributary	F5	460-6006-266-F5-000-000-000-000-000-000-000	C87	RD	CP	IF	Y	N	A9	14	14	1997/07/07	1	14	093.016	Map	9	n/a	n/a	6388	60049	Up	Ch	SE	38	38-90			
37	1997/05/28	Fenton Creek Tributary	F5a	460-6006-266-F5a-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	9	9	1997/06/17	1	14	093.016	Map	9	n/a	n/a	6384	60052	Up	Ch	SW	38	38-90			
38	1997/05/28	Fenton Creek Tributary	F5a	460-6006-266-F5a-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A7	10	10	1997/06/17	1	14	093.016	Map	9	n/a	n/a	6384	60052	Up	Ch	NE	38	38-90			
39	1997/05/28	Fenton Creek Tributary	F8	460-6006-266-F8-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	22	22	1997/06/16	1	17	093.016	Map	9	n/a	n/a	6387	60014	Up	Ch	NE	38	38-90			
40	1997/05/28	Fenton Creek Tributary	F8	460-6006-266-F8-000-000-000-000-000-000-000	C87	RD	CP	JB	Y	N	A6	17	17	1997/06/16	1	15	093.016	Map	9	n/a	n/a	6387									