

**UPPER BULKLEY RIVER COHO  
CARCASS RECOVERY PROGRAM : 2001**



**Prepared for Brian Pearce  
Strategic Stock Enhancement Program**

**Prepared by  
Brenda Donas, Community Advisor, Smithers**

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## **1.0 Executive Summary**

The Upper Bulkley Coho Carcass Recovery Program was a feasibility study to determine if carcass recovery could be used to recover marked coho in the 2002 return year (1999 brood coho). There were two marked groups of 1999 brood year coho released. One group of coho were released as Ad/CWT fry into Buck Creek and the second group of coho were released as Ad/CWT yearlings into Buck Creek. Unfortunately, the smolt group was not differentially marked (with a Right Maxillary clip) so it will not be possible to visually differentiate returning adults at the Upper Bulkley River fence.

This carcass recovery program evaluated the feasibility of conducting carcass recovery on the spawning grounds in the Upper Bulkley River mainstem and tributaries.

## **Acknowledgements**

The carcass recovery program involved walking long distances in the Upper Bulkley River, Buck Creek, Dungate Creek and Byman Creek. Thanks go to Elaine Hougen and Fiona Andruchow, the primary carcass recovery crew, for their enthusiastic efforts at carcass recovery. Elaine and Fiona braved the elements and the potential for running into predators such as bears during the recovery period.

Thanks also go to Trace Joe and Jim and Tracy De La Mare for assisting with the carcass recovery program. Thanks to Trace Joe for assisting with editing this report.

Thanks also to Alan Korolik, an Integrated Resource Management Program student, who also participated in the carcass recovery program.

Thanks also to Georgie Watts and her Youth Program crew (Northwest Community College) for assisting with the carcass recovery program. The students walked Buck Creek from the confluence to the CNR crossing and also walked Buck Creek near Butler Avenue.

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## 2.0 Background Information

The carcass recovery program was initiated as a feasibility study to determine if an adequate number of marked heads for tag de-coding could be recovered from the spawning grounds.

In 1999, approximately 140,000 Upper Bulkley River coho eggs were incubated at the Toboggan Creek Hatchery. In the spring of 2000, two groups of coho were adipose clipped and coded wire tagged. A group of 69,720 marked fry were released at a size of 3 grams to under-utilized habitat in Buck Creek i.e. upstream of Bridge #2 on the Buck Creek Forest Service Road. These fry were released between August 1<sup>st</sup> and 8<sup>th</sup>, 2000.

A second group of 33,350 coho were released as coded wire tagged yearlings on May 16<sup>th</sup> and 17<sup>th</sup>, 2001. Those coho were released into the Release Ponds at Buck Creek just downstream of Bridge #1 on the Buck Cr. Forest Service Road.

The adults resulting from 1999 brood year coho will be returning mostly as three year old coho in the fall of 2002. Returning adults will be counted at the Upper Bulkley River Coho Assessment Fence however, adults returning from fry versus yearling releases will not be differentiated at the fence as there is no different visual mark. (In the past, the yearling marked release group was right maxillary clipped). Therefore, a carcass recovery program will be necessary to collect heads from marked fish so that the proportion of adults returning from fry and yearling releases can be determined. This data will be extrapolated to determine the total number of adults from fry versus yearling releases, in the fence count. The fence count data will then be used to calculate total survival of fry and yearling released groups of coho.

The fry versus yearling survival comparisons are a component of the Strategic Stock Enhancement Program on Upper Bulkley River Coho.

## 2.1 Carcass Recovery Program Procedure

The carcass recovery program involved conducting regular streamwalks, only during daylight hours, to count number of coho observed, number of redds observed and then heads were recovered from any marked coho that were dead or live but spawned out.

Observations were made on water level (low/moderate/high), visibility (poor/fair/good) and predation (presence of eagles, bears, wolves, otter etc...). Water temperature was recorded at each site and on every inspection date.

Heads were removed from marked dead coho and any marked coho that were spawned out were sacrificed for head recovery. All heads were labelled with E-tags and date, location, sex and mark type were recorded. All heads with E-tags were placed into sealable plastic bags. All bags of heads were stored at the Smithers DFO office.



The carcass recovery crews carried a cellular telephone and bear spray for safety. Only areas that had safe access were designated as carcass recovery areas. Only areas that could be safely waded were designated as carcass recovery areas. The carcass recovery crew members wore PFD's whenever conducting streamwalks and used wading sticks as well.

Carcass recovery was conducted at the following locations, based on safe access and ease of instream walking and carcass recovery :

- Upper Bulkley River Fence
- Buck Creek from the confluence to the CNR crossing bridge (750 –1000m)
- Buck Creek near Butler Avenue behind the Catholic Church(500-750 m)
- Buck Creek near Dungate Creek(u/s about 500m and d/s about 500 m)
- Dungate Creek(confluence with Buck Creek to about 500 m u/s)
- Upper Bulkley River mainstem near McKilligan Road Bridge(u/s by about 500 m and d/s about 300 m)
- Upper Bulkley River at the confluence with MacQuarrie Creek (300m d/s of MacQuarrie Cr.)
- Confluence of MacQuarrie Creek to confluence of Byman Creek (1500 –2000m)
- Byman Creek (confluence with UBR to HWY 16 crossing = about 1000 m)
- Upper Bulkley River u/s of Byman Creek (500 m)
- Upper Bulkley River at Richfield Creek confluence(d/s 300 m)
- Richfield Creek from confluence to HWY 16 crossing(600 m)

Carcass recovery locations are shown on Maps I and II.

Carcass recovery streamwalks were conducted every second to third day with most of the streamwalks being conducted by the same two people. The majority of the streamwalks were focused on Buck Creek locations. Locations of redds were noted and some of the redds were flagged using pink survey tape in the event that hydraulic sampling be conducted between the eyed and hatch stages.

### 3.0 Results and Discussion

Carcass recovery at the Upper Bulkley River Coho Assessment Fence commenced on September 23<sup>rd</sup> when an injured, marked coho was observed near the fence. Any marked coho that were injured and not expected to live to spawn, were sacrificed at the fence. Carcass recovery streamwalks commenced on October 5<sup>th</sup> and continued to November 16, 2001.

The Upper Bulkley River Coho Head Recovery data is summarized in Appendix I. Daily Carcass Recovery Inspection data is shown in Appendix II.

The total number of heads recovered was 80. Head recovery by date is shown in Table I and Figure I.

?

Of the 80 heads collected, 44 or 55% were collected from adipose clipped coho and 36 or 45% of the heads were from adipose and right maxillary clipped coho. In comparison, at the Upper Bulkley River Coho Assessment Fence, 61% of the coho counted were adipose clipped and 39% were adipose and right maxillary clipped. (Table II, Figures II and III).

? ( Of the 80 heads recovered 29 heads were from Buck Creek, 30 heads were from Dungate Creek, 20 heads were from the UBR fence and 1 head was collected in the UBR mainstem. Of the total number of heads recovered, 74% were recovered from the Buck Creek system.

← Of the coho heads recovered, 58 heads were from females (73%) and 22 (27%) were from males. At the Upper Bulkley River Coho Assessment Fence 1,140 females (51.9% of the run) and 1,057 males (48.1% of the run) were counted.

The proportion of heads from females in the carcass recovery program is greater than the total proportion of females enumerated at the fence. This may be due to the females remaining near the redds after spawning while the males are more transient.

Carcass recovery this season may not have been representative of a typical carcass recovery program due to the unusually low water levels. It wasn't until the weekend of November 10'th and 11'th, 2001 that water levels increased. Heavy rains resulted in rising water levels and increasing turbidity which made observing coho and recovering carcasses very difficult.

The final stream inspection was conducted on November 16'th, 2001 at which time no coho were observed. Water levels had increased to the point that any carcasses that may have been in the streams would have washed out.

During the carcass recovery program, there was a 5.2% recovery rate on adipose clipped coho and a 6.7% recovery rate on adipose and right maxillary clipped coho.

Carcass recovery is very difficult to conduct in the Upper Bulkley River watershed due to its large size and the manner in which coho widely distribute themselves. Usually, there is a high water event between October 15'th and 31'st which would cause carcasses to wash out of the system. This would have made carcass recovery even more difficult. Predation was also a significant factor in carcass recovery ie. unless the crew was present when a coho died, the predators would eat the coho before head recovery was possible. Many of the carcasses could not be identified as having an adipose clip because the carcasses were partially eaten.

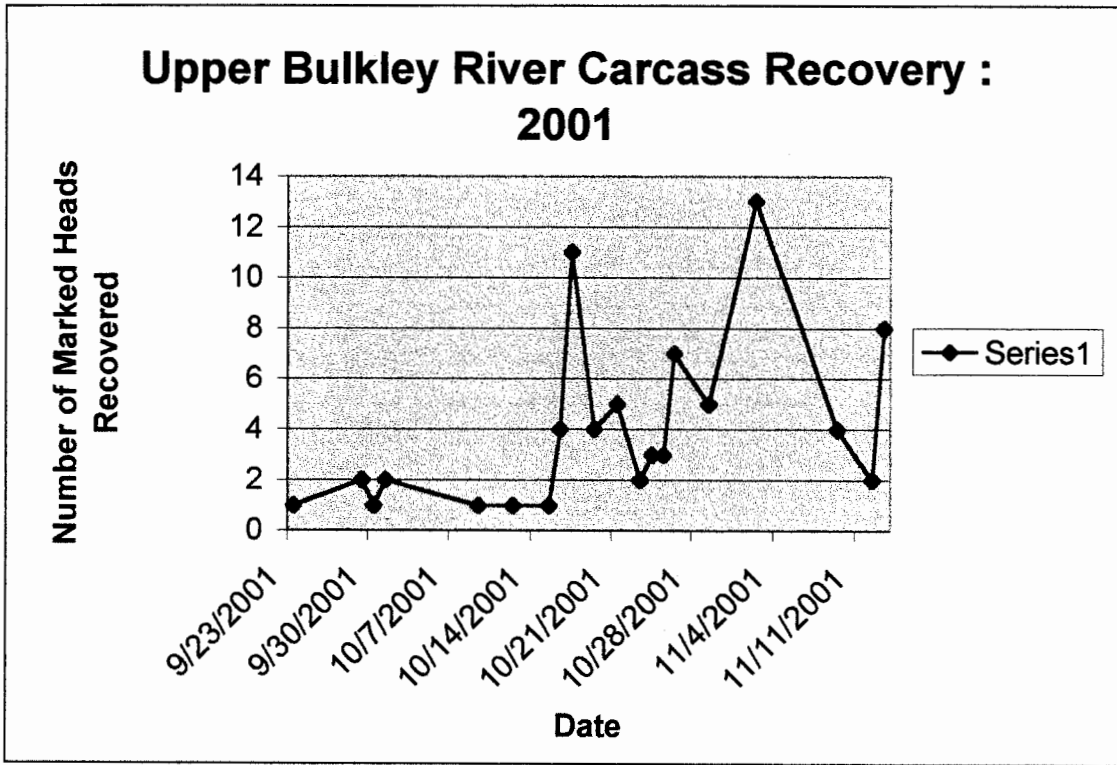
Carcass fences ?

**TABLE I**

**UPPER BULKLEY RIVER HEAD RECOVERY DATA : 2001**

<u>Date</u>	<u>Number of Heads Recovered</u>
23-Sep	1
29-Sep	2
30-Sep	1
1-Oct	2
9-Oct	1
12-Oct	1
15-Oct	1
16-Oct	4
17-Oct	11
19-Oct	4
21-Oct	5
23-Oct	2
24-Oct	3
25-Oct	3
26-Oct	7
29-Oct	5
2-Nov	13
9-Nov	4
12-Nov	2
13-Nov	8
Total	80

**Figure I**





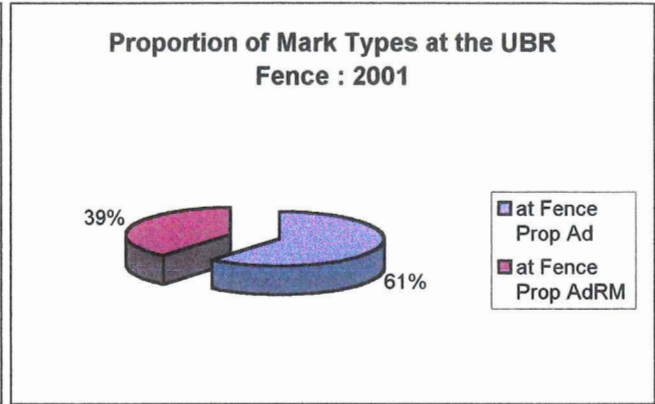
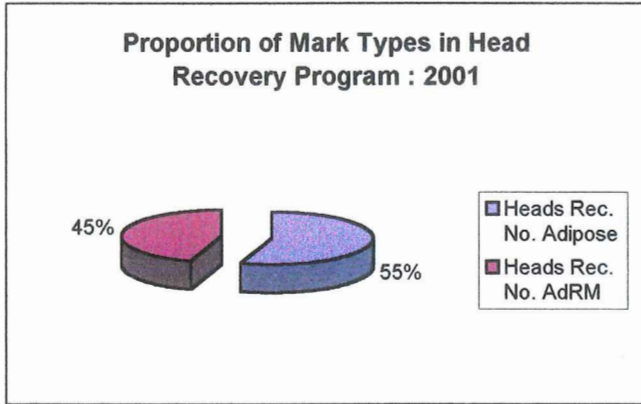
**TABLE II**

**UPPER BULKLEY RIVER HEAD RECOVERY DATA : 2001**

No. Adipose Heads Rec.	No. AdRM Heads Rec.	Prop Ad at Fence	Prop Ad Heads Rec	Prop AdRM at Fence	Prop AdRM Heads Rec.
44	36	0.61	0.55	0.39	0.45

**Figure II**

**Figure III**



**Note :**

The number of Adipose clipped coho captured at the Upper Bulkley River fence was 839 coho. There was a 5.20% recovery rate on Adipose clipped coho.

The number of Adipose/Right Maxillary clipped coho captured at the Upper Bulkley River fence was 539 coho. There was a 6.7% recovery rate on Ad/RM clipped coho.

*explain purpose of marks in intro?*

## 4.0 Recommendations

**Recommendation #1 : In future brood years where Upper Bulkley River fry and yearling coho releases occur, ensure that the two groups are differentially marked so that they can be identified separately in the adult return to the Upper Bulkley River Coho Assessment Fence.**

Without the presence of a differential mark on coho returning to the Upper Bulkley River Fence, and in light of the fact that carcass recovery programs provide an insufficient number of marked heads, the only way to differentiate between fry and yearling released coho is to sacrifice coho at the pre-spawning stage. There are three options for head recovery at the pre-spawning stage :

- Moricetown fishery : during the dorsal fin tagging program and at the First Nations food fishery, kill marked coho for tag de-coding. Other marked coho stocks are also adipose clipped and coded wire tagged, therefore not all coho sacrificed will be Upper Bulkley River coho.
- Upper Bulkley River Coho Assessment Fence : kill an appropriate number of marked coho at the fence for tag de-coding . Sacrificing coho at the Upper Bulkley River Coho Assessment Fence ensures that the appropriate number of marked heads are recovered.
- Conduct a carcass recovery program and sacrifice some coho at the fence. If coho continue to spawn in areas like Dungate Creek and Byman Creek, where carcass recovery is relatively easy, this would reduce the number of coho that would have to be sacrificed at the pre-spawning stage.

Sacrificing coho at the Upper Bulkley River Coho Assessment Fence may be viewed as unfavourable in the local community as people are aware that this stock of coho is a conservation concern. However, the predicted return to the Upper Bulkley River is 1,158 hatchery coho and 1,940 unmarked coho. If 500 marked heads were necessary for recovery , Table III shows the projected loss in natural egg deposition and the subsequent loss in escapement to the Upper Bulkley River in the 2005 return year. Table III illustrates some of the options available if 500 marked heads are to be recovered at the UBR fence.

**Table III : Effect of Removing Females for Head De-coding at the Pre-spawning stage for the 2002 Return Year**

<u>Number of Females Removed</u>	<u>Number of Males Removed</u>	<u>Lost Natural Egg Deposition</u>	<u>Lost Adult Production (Escapement)</u>
250	250	728,750	942 (471 females)
200	300	583,000	753 (377 females)
150	350	437,250	565 (283 females)
100	400	291,500	377 (188 females)
50	450	145,750	188 (94 females)
0	500	0	0

Note : A biostandard egg to fry survival rate of 0.15, a biostandard fry to adult survival rate of 0.012 and an exploitation rate of 0.282 were used to estimate the number of adults in the escapement. The sex ratio is assumed to be 50/50.

*So, the rule of thumb could be stated as : for every 50 females sacrificed for head de-coding (pre-spawn) there would be an egg loss of 150,000 eggs or 200 resultant adults.*

**Recommendation #2 : If head recovery is to be conducted at the Moricetown fishery, hire an aboriginal technician to collect and collate heads. Store heads at DFO Smithers office.**

Head recovery at the Moricetown fishery could be done by a Wet'suwet'en Fisheries Program technician funded by DFO. Head recovery programs have been attempted in the past and Barry Finnegan (StAD) conducted a marked head recovery program in the 2001 season. This program was successful at recovering marked heads.

For the 2002 season, an agreement would have to be reached with the Wet'suwet'en Fisheries Program regarding head collection and hopefully any coho that are sacrificed can become part of the food fishery at the Moricetown canyon.

A head recovery program at Moricetown should be conducted throughout the coho run timing to ensure representative distribution of marked heads over time. The number of heads in total to be collected at Moricetown canyon would have to be calculated taking into consideration that there are marked coho from Toboggan Creek and Owen Creek also migrating through Moricetown canyon.

Data from the Alaskan fishery and the data collected at the Moricetown canyon would be used to determine survival rates on fry versus yearling release strategies.



**APPENDIX I**  
**UPPER BULKLEY RIVER COHO HEAD RECOVERY DATA**  
**2001 PROGRAM**

**APPENDIX I****UPPER BULKLEY RIVER COHO HEAD RECOVERY DATA : 2001**

Date	Location	Species	Sex	Mark Type	E-Tag Number	Comments
23-Sep	UBR Fence	Coho	F	Adipose	440253E	Dead on fence
29-Sep	UBR Fence	Coho	F	AdRM	440256E	Dead on fence
29-Sep	UBR Fence	Coho	M	AdRM	440254E	Dead on fence
30-Sep	UBR Fence	Coho	F	Adipose	440101E	killed - rough shape
1-Oct	UBR Fence	Coho	F	AdRM	440200E	Dead on fence
1-Oct	UBR Fence	Coho	F	AdRM	440199E	Dead on fence
9-Oct	UBR Fence	Coho	M	Adipose	440102E	Dead on fence
12-Oct	Buck Cr.	Coho	F	AdRM	440181E	Spawned out
15-Oct	Buck Cr.	Coho	F	AdRM	440175E	Spawned out
16-Oct	UBR Fence	Coho	F	Adipose	440106E	Dead on fence
16-Oct	UBR Fence	Coho	F	Adipose	440105E	Dead on fence
16-Oct	UBR Fence	Coho	M	AdRM	440104E	Dead on fence
16-Oct	UBR Fence	Coho	F	AdRM	440103E	Dead on fence
17-Oct	Buck@Church	Coho	F	AdRM	440211E	Spawned out
17-Oct	Buck@Church	Coho	F	Adipose	440210E	Spawned out
17-Oct	Buck d/s Dun	Coho	M	Adipose	440209E	Spawned out
17-Oct	Buck d/s Dun	Coho	M	AdRM	440208E	Spawned out
17-Oct	Buck d/s Dun	Coho	F	AdRM	440207E	Spawned out
17-Oct	Buck d/s Dun	Coho	F	AdRM	440206E	Spawned out
17-Oct	Dungate Cr.	Coho	M	AdRM	440205E	Spawned out
17-Oct	Dungate Cr.	Coho	F	Adipose	440204E	Spawned out
17-Oct	Dungate Cr.	Coho	M	Adipose	440203E	Spawned out
17-Oct	Buck d/s Dun	Coho	F	Adipose	440202E	Spawned out
17-Oct	Buck d/s Dun	Coho	F	Adipose	440201E	Spawned out
19-Oct	Buck d/s Dun	Coho	F	Adipose	440216E	Spawned out
19-Oct	Dungate Cr	Coho	F	AdRM	440214E	Spawned out
19-Oct	Dungate Cr	Coho	M	AdRM	440213E	Spawned out
19-Oct	Buck d/s Dun	Coho	F	Adipose	440212E	Spawned out
21-Oct	Dungate Cr	Coho	F	Adipose	440220E	Spawned out
21-Oct	Dungate Cr	Coho	F	AdRM	440219E	Spawned out
21-Oct	Dungate Cr	Coho	F	AdRM	440218E	Spawned out
21-Oct	Dungate Cr	Coho	F	AdRM	440217E	Spawned out
21-Oct	Dungate Cr	Coho	F	Adipose	440215E	Spawned out
23-Oct	Dungate Cr	Coho	M	Adipose	440108E	Spawned out
23-Oct	Dungate Cr	Coho	M	AdRM	440107E	Spawned out
24-Oct	UBR Fence	Coho	F	AdRM	440170E	Dead on fence
24-Oct	UBR Fence	Coho	F	Adipose	440169E	Dead on fence
24-Oct	UBR Fence	Coho	F	Adipose	440168E	Dead on fence
25-Oct	UBR Fence	Coho	F	AdRM	440223E	Dead on fence
25-Oct	Buck Creek	Coho	F	Adipose	440222E	Spawned out
25-Oct	Buck Creek	Coho	F	AdRM	440221E	Spawned out
26-Oct	Buck Cr.	Coho	M	AdRM	440115E	Spawned out
26-Oct	Dungate Cr.	Coho	F	Adipose	440114E	Spawned out
26-Oct	Dungate Cr.	Coho	F	Adipose	440113E	Spawned out
26-Oct	Dungate Cr.	Coho	F	Adipose	440112E	Spawned out
26-Oct	Dungate Cr.	Coho	F	AdRM	440111E	Spawned out

**APPENDIX I Cont'd****UPPER BULKLEY RIVER COHO HEAD RECOVERY DATA : 2001**

Date	Location	Species	Sex	Mark Type	E-Tag		Comments
					Number		
26-Oct	Dungate Cr.	Coho	M	AdRM	440110E	Spawned out	
26-Oct	Dungate Cr.	Coho	M	AdRM	440109E	Spawned out	
29-Oct	UBR Fence	Coho	F	AdRM	440258E	Dead on fence	
29-Oct	UBR Fence	Coho	F	Adipose	440257E	Dead on fence	
29-Oct	UBR Fence	Coho	F	Adipose	440255E	Dead on fence	
29-Oct	UBR Fence	Coho	F	Adipose	440252E	Dead on fence	
29-Oct	UBR Fence	Coho	F	AdRM	440251E	Dead on fence	
2-Nov	UBR u/s Mac	Coho	F	Adipose	440236E	Spawned out	
2-Nov	Buck Cr.	Coho	M	Adipose	440235E	Spawned out	
2-Nov	Buck Cr.	Coho	F	Adipose	440234E	Spawned out	
2-Nov	Dungate Cr.	Coho	M	AdRM	440233E	Spawned out	
2-Nov	Dungate Cr.	Coho	F	Adipose	440232E	Spawned out	
2-Nov	Dungate Cr.	Coho	F	Adipose	440231E	Spawned out	
2-Nov	Buck Cr.	Coho	F	Adipose	440230E	Spawned out	
2-Nov	Buck Cr.	Coho	M	AdRM	440229E	Spawned out	
2-Nov	Buck Cr.	Coho	F	AdRM	440228E	Spawned out	
2-Nov	Buck Cr.	Coho	F	Adipose	440227E	Spawned out	
2-Nov	Buck Cr.	Coho	F	AdRM	440226E	Spawned out	
2-Nov	Buck Cr.	Coho	F	Adipose	440225E	Spawned out	
2-Nov	Buck Cr.	Coho	M	AdRM	440224E	Spawned out	
9-Nov	Buck Cr.	Coho	M	Adipose	440240E	Spawned out	
9-Nov	Buck Cr.	Coho	M	Adipose	440239E	Spawned out	
9-Nov	Dungate Cr.	Coho	F	Adipose	440238E	Spawned out	
9-Nov	Buck Cr.	Coho	F	Adipose	440237E	Spawned out	
12-Nov	Buck Cr.	Coho	F	Adipose	440242E	Not spawned out	
12-Nov	Buck Cr.	Coho	F	AdRM	440241E	Not spawned out	
13-Nov	Dungate Cr.	Coho	F	Adipose	440250E	Spawned out	
13-Nov	Dungate Cr.	Coho	F	Adipose	440249E	Spawned out	
13-Nov	Dungate Cr.	Coho	M	AdRM	440248E	Spawned out	
13-Nov	Dungate Cr.	Coho	M	Adipose	440247E	Spawned out	
13-Nov	Dungate Cr.	Coho	M	Adipose	440246E	Spawned out	
13-Nov	Dungate Cr.	Coho	F	Adipose	440245E	Spawned out	
13-Nov	Dungate Cr.	Coho	F	AdRM	440244E	Spawned out	
13-Nov	Dungate Cr.	Coho	F	Adipose	440243E	Spawned out	



**APPENDIX II**  
**UPPER BULKLEY RIVER CARCASS RECOVERY**  
**PROGRAM DATA : 2001**

**APPENDIX II**  
**UPPER BULKLEY RIVER CARCASS RECOVERY**  
**PROGRAM DATA : 2001**  
**STREAM : BUCK CREEK**

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :** 12-Oct-01

**Water Temp** 5 C

**Water Level** Low

(Good, Fair, Poor)

**Visibility( G, F, P)** Good

<u>Stream Section</u>	<u>No. Coho Observed</u>	<u>No. Ad Sampled</u>	<u>No. Ad/RM Sampled</u>	<u>Comments</u>
Confluence to Railway Crossing	3	0	1	One female sampled
Railway Crossing to Hwy. 16 crossing	0	0	0	
Catholic Church on Butler Ave.	26	0	0	All good condition

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

15-Oct-01

**Water Temp**

3 C

**Water Level**

Med

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave. to the hydro line	13	0	1	4 redds obs.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

17-Oct-01

**Water Temp**

5 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<u>Stream Section</u>	<u>No. Coho Observed</u>	<u>No. Ad Sampled</u>	<u>No. Ad/RM Sampled</u>	<u>Comments</u>
Confluence to Railway Crossing	Not walked			
Railway Crossing to Hwy. 16 crossing	Not walked			
Catholic Church on Butler Ave.	14	1	1	Spawnd
Dungate Creek(coho spawning in the creek)	40	2	0	Lots of redds
Upstream of Dungate Confluence to cliff	43	0	0	Spawnd
Dungate confluence to Proctors in Buck	6	2	1	Spawnd
Proctors to 500 m downstream in Buck	27	1	3	Spawnd



**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

19-Oct-01

**Water Temp**

4 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave.	1	0	0	
Buck Cr. u/s of Proctor's	57	2	0	
Buck Cr. just d/s of Dungate confluence	27	0	2	
Dungate Creek proper	5	0	0	
Buck Cr. u/s of Dungate confluence	8	0	0	
Buck Creek d/s of Proctor's	1	0	0	

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

21-Oct-01

**Water Temp**

3 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave.				not walked
Dungate Cr. proper	67	0	2	
Buck Cr. u/s of Dungate Cr. confluence	75	0	1	
Buck Cr. d/s of Dungate Cr. confluence	19	2	0	

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

23-Oct-01

**Water Temp**

3 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave.				not walked
Dungate Cr. proper	36	0	0	Bear sign, partially eaten carcasses
Buck Cr. u/s of Dungate confluence	56	0	1	
Buck Cr. d/s of Dungate confluence	6	1	0	wolf and eagle predation is evident

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

25-Oct-01

**Water Temp**

2 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				
Railway Crossing to Hwy. 16 crossing				
Catholic Church on Butler Ave.	8	1	1	multiple redds obs.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream : Buck Creek**

**Inspection Date :**

26-Oct-01

**Water Temp**

2 C

**Water Level**

low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave.				not walked
Dungate Creek	34	4	3	
Buck Cr. u/s of Dungate Creek	2	0	0	
Buck Cr. d/s of Dungate Creek	3	0	1	



**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

30-Oct-01

**Water Temp**

2.5 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	0	0	0	Redds at confluence
Railway Crossing to Hwy. 16 crossing	0	0	0	No redds obs.
Catholic Church on Butler Ave.				not walked

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

2-Nov-01

**Water Temp**

1.0 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave.				not walked
Buck Cr. d/s of Dungate Creek	17	3	4	Obs. 6 redds
Dungate Creek	27	2	1	Lots of redds
Buck Cr. u/s of Dungate Creek	71	2	0	Lots of redds

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

4-Nov-01

**Water Temp**

1.5 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave.	14	0	0	multiple redds

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

5-Nov-01

**Water Temp**

1.5 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave.				not walked
Buck Cr. d/s of Dungate Creek	11	0	0	eagles present



**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

7-Nov-01

**Water Temp**

1.0 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				
Railway Crossing to Hwy. 16 crossing				
Catholic Church on Butler Ave.				
Dungate Creek	24	0	0	26 redds
Buck Cr. d/s of Dungate Creek	5	0	0	4 redds. Eagles.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

9-Nov-01

**Water Temp**

1.0 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Poor

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				
Railway Crossing to Hwy. 16 crossing				
Catholic Church on Butler Ave.	4	1	0	Bear tracks, eagles
Dungate Creek	34	1	0	26 redds
Buck Cr. d/s of Dungate Creek	1	1	0	15 redds
Buck Cr. u/s of Dungate Creek	11	1	0	4 redds obs.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :**

12-Nov-01

**Water Temp**

1.0 C

**Water Level**

Moderate

(Good, Fair, Poor)

**Visibility( G, F, P)**

Poor

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave.	5	1	1	10 redds obs.
Dungate Creek				not walked
Buck Cr. d/s of Dungate Creek				not walked
Buck Cr. u/s of Dungate Creek				not walked

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Buck Creek

**Inspection Date :** 13-Nov-01

**Water Temp** 1.0 C

**Water Level** Moderate

(Good, Fair, Poor)

**Visibility( G, F, P)** Poor

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing				not walked
Railway Crossing to Hwy. 16 crossing				not walked
Catholic Church on Butler Ave.				not walked
Dungate Creek	19	6	1	water level is up
Buck Cr. d/s of Dungate Creek				not walked
Buck Cr. u/s of Dungate Creek	2	0	0	no fish where there were 30 to 40 before

**APPENDIX II**  
**UPPER BULKLEY RIVER CARCASS RECOVERY**  
**PROGRAM DATA : 2001**  
**STREAM : BYMAN CREEK**

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Byman Creek

**Inspection Date :**

5-Oct-01

**Water Temp**

N/A

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<u>Stream Section</u>	<u>No. Coho Observed</u>	<u>No. Ad Sampled</u>	<u>No. Ad/RM Sampled</u>	<u>Comments</u>
Confluence to Railway Crossing	0	0	0	Level very low for fish passage in some riffles.
Railway Crossing to Fence across creek	0	0	0	Lots of fry seen. Good spawning area. Some good holding pools.
Fence to culvert at HWY 16 crossing	0	0	0	Started the walk at about 300 m d/s from the culvert pool.

**Notes :**

There is lots of good spawning gravel from d/s of the culvert pool all the way to the confluence. Water level over some of the riffles is quite low and fish passage may be a problem at these low water levels. Flow was good on date of inspection. This stream is more sloped than Richfield Cr. and the UBR mainstem. However, slope in general would be 2% to 3%.

The UBR mainstem has changed around the log jam at the confluence. The UBR channel that used to flow on the left side of the log jam (looking upstream) is now dry and quite built up with gravel. The river flows only on the other side of the log jam. At present there is not a lot of attraction flow at the Byman Creek confluence. However, when flow and water level increase with fall rains, there should sufficient attraction flow.

In 1999, (coho escapement through the UBR fence was 1170), about 20 coho were observed spawning just below the railway crossing at Perow Station Road. (One stream check conducted in early November 1999).



**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Byman Creek

**Inspection Date :**

10-Oct-01

**Water Temp**

5 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	0	0	0	lots of fry obs.
Railway Crossing to Fence across creek	0	0	0	
Fence to culvert at HWY 16 crossing	0	0	0	

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Byman Creek

**Inspection Date :**

18-Oct-01

**Water Temp**

3 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	0	0	0	
Railway Crossing to Fence across creek	0	0	0	
Fence to culvert at HWY 16 crossing	0	0	0	

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Byman Creek

**Inspection Date :**

24-Oct-01

**Water Temp**

3 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	0	0	0	
Railway Crossing to Fence across creek				not walked
Fence to culvert at HWY 16 crossing				not walked

**Helicopter flight revealed an impassable beaver dam d/s of Byman Creek in the UBR mainstem. This dam was breached on October 26/01**

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Byman Creek

**Inspection Date :**

25-Oct-01

**Water Temp**

2 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Poor

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	0	0	0	Ice present
Railway Crossing to Fence across creek	0	0	0	
Fence to culvert at HWY 16 crossing	0	0	0	

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Byman Creek

**Inspection Date :**

2-Nov-01

**Water Temp**

1.5 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	2	0	0	d/s of railway bridge
Railway Crossing to Fence across creek	0	0	0	
Fence to culvert at HWY 16 crossing	0	0	0	

**Note :**

There was a beaver dam impeding fish passage upstream of MacQuarrie Creek but downstream of Byman Creek. Dam was breached a few days ago and about 30 coho were observed at the dam.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Byman Creek

**Inspection Date :**

5-Nov-01

**Water Temp**

1 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	0	0	0	
Railway Crossing to Fence across creek	0	0	0	
Fence to culvert at HWY 16 crossing	0	0	0	

**Note :**

**Coho are spawning in the Upper Bulkley mainstem from the confluence of Byman Creek to upstream. Predators such as eagles and bears present.**

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Byman Creek

**Inspection Date :**

7-Nov-01

**Water Temp**

1.0 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	2	0	0	2 redds near the confluence in Byman
Railway Crossing to Fence across creek				
Fence to culvert at HWY 16 crossing				



**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Byman Creek

**Inspection Date :**

12-Nov-01

**Water Temp**

1.0 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Poor

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	6	0	0	2 redds near the confluence in Byman
Railway Crossing to Fence across creek	0	0	0	
Fence to culvert at HWY 16 crossing				not walked

**APPENDIX II**  
**UPPER BULKLEY RIVER CARCASS RECOVERY**  
**PROGRAM DATA : 2001**  
**STREAM : UPPER BULKLEY RIVER MAINSTEM**

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

Stream : Upper Bulkley Mainstem      Inspection Date : 5-Oct-01

Water Temp : N/A      Water Level : Low

(Good, Fair, Poor)

Visibility( G, F, P) : Good

<u>Stream Section</u>	<u>No. Coho Observed</u>	<u>No. Ad Sampled</u>	<u>No. Ad/RM Sampled</u>	<u>Comments</u>
From confluence of Byman Creek to approx. 750m upstream in UBR	0	0	0	Some chinook redds observed. Identified some good carcass recovery areas.
From confluence of Richfield Creek downstream in UBR mainstem about 400 m.	0	0	0	Identified a carcass recovery area. Some chinook carcasses present.

**Notes :**

There is a lot of good spawning gravel from the confluence of Byman Creek to about 750 m upstream of Byman. There are a few deep holding pools along cutbanks for adult holding as well. Bear sign evident. Chinook carcasses observed.

At the confluence of Richfield Creek there is a gravel fan. Most of the area from the confluence to about 400 m downstream is muddy bottom. However, this is a deeper, meandering area and should be a good carcass recovery location. Chinook carcasses observed. Bear sign evident.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Upper Bulkley Mainstem

**Inspection Date :**

12-Oct-01

**Water Temp**

5 C

**Water Level**

low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<u>Stream Section</u>	<u>No. Coho Observed</u>	<u>No. Ad Sampled</u>	<u>No. Ad/RM Sampled</u>	<u>Comments</u>
McKilligan Rd. u/s of bridge	5	0	0	5 redds observed
McKilligan Rd. d/s of bridge	2	0	0	1 redd observed
MacQuarrie Cr.- to 1km u/s of hwy 16	0	0	0	0 redds observed
UBR mainstem - 1 km d/s of MacQuarrie confluence	1	0	0	1 redd observed
UBR mainstem @ Richfield Cr. confluence	0	0	0	no coho observed

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Upper Bulkley Mainstem

**Inspection Date :**

18-Oct-01

**Water Temp**

3 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<u>Stream Section</u>	<u>No. Coho Observed</u>	<u>No. Ad Sampled</u>	<u>No. Ad/RM Sampled</u>	<u>Comments</u>
McKilligan Rd. u/s of bridge( 500 m)	3	0	0	12 redds observed
McKilligan Rd. d/s of bridge (500m)	2	0	0	2 redds observed
UBR mainstem d/s of MacQuarrie confluence	0	0	0	
UBR mainstem about 2 km u/s from the McKilligan Rd. Crossing	1	0	0	1 redd observed
UBR mainstem d/s of Byman confluence (500m)	0	0	0	

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Upper Bulkley Mainstem

**Inspection Date :**

24-Oct-01

**Water Temp**

1.5 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<u>Stream Section</u>	<u>No. Coho Observed</u>	<u>No. Ad Sampled</u>	<u>No. Ad/RM Sampled</u>	<u>Comments</u>
UBR mainstem d/s of MacQuarrie confluence	7	0	0	passable beaver dam observed.
UBR mainstem u/s of MacQuarrie Cr. confluence	16	0	0	0 redds evident but not counted. 1 wild carcass found.
UBR mainstem u/s of McKilligan Rd.(500m)	3	0	0	0 Redds evident but not counted.
UBR mainstem d/s of McKilligan Rd.(500m)	2	0	0	0 Redds evident but not counted.
UBR mainstem d/s of Byman confluence	0	0	0	0 Redds evident but not counted.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Upper Bulkley Mainstem

**Inspection Date :**

26-Oct-01

**Water Temp**

N/A

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<u>Stream Section</u>	<u>No. Coho Observed</u>	<u>No. Ad Sampled</u>	<u>No. Ad/RM Sampled</u>	<u>Comments</u>
UBR mainstem u/s of MacQuarrie Creek to the confluence of Byman Creek	19	0	0	22 redds observed from MacQuarrie Cr. to the beaver dam about 1 km upstream
	9	0	0	3 redds observed u/s of the beaver dam but d/s of the Byman confluence

Note : found one impassable beaver dam about 1 km u/s of MacQuarrie Creek in the UBR mainstem. Observed several coho tucked into the bottom of the dam. Breached the river right side (looking downstream) to allow passage. Will check Byman Creek for presence of spawners on October 29'th or 30'th.



**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Upper Bulkley Mainstem

**Inspection Date :**

2-Nov-01

**Water Temp**

2 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fiar

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
u/s of MacQuarrie Creek	17	1	0	multiple redds

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Upper Bulkley Mainstem

**Inspection Date :**

4-Nov-01

**Water Temp**

2 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
u/s of McKilligan Rd. bridge	0	0	0	4 redds obs.
d/s of McKilligan Rd. bridge	2	0	0	1 redd obs.
u/s of McQuarrie Creek	9	0	0	
Richfield confluence	0	0	0	no signs of fish

**Note :** There are two beaver dams downstream of Richfield Creek but upstream of Byman Cr. An attempt was made to find these beaver dams but we could not locate them on foot. Therefore, coho may not be able to enter into Richfield Creek as a result of these barriers.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Upper Bulkley Mainstem

**Inspection Date :**

5-Nov-01

**Water Temp**

1 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence of Byman Creek with the UBR	56	0	0	Lots of redds. Bear sign evident. Eagles present.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Upper Bulkley Mainstem

**Inspection Date :**

7-Nov-01

**Water Temp**

1.5 C

**Water Level**

Low

(Good, Fair, Poor)

**Visibility( G, F, P)**

Fair

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
D/S of Byman Creek	3	0	0	
Confluence of Byman to beaver dam approx. 750m upstream of confluence	7	0	0	5 redds obs.
Beaver dam to farm ( 1.5 kms from Byman confluence	80	0	0	30 redds
Confluence of MacQuarrie Cr. to dam on mainstem	15	0	0	20 redds

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Upper Bulkley Mainstem

**Inspection Date :**

12-Nov-01

**Water Temp**

1.0 C

**Water Level**

Moderate

(Good, Fair, Poor)

**Visibility( G, F, P)**

Poor

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
McKilligan Rd bridge to about 250m u/s	0	0	0	15 redds
Confluence of Byman to beaver dam approx. 750m upstream of confluence	58	0	0	20 redds obs.
Beaver dam to farm ( 1.5 kms from Byman confluence				not walked
Confluence of MacQuarrie Cr. to dam on mainstem	7	0	0	20 redds

**APPENDIX II**  
**UPPER BULKLEY RIVER CARCASS RECOVERY**  
**PROGRAM DATA : 2001**  
**STREAM : RICHFIELD CREEK**

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

Stream : Richfield Creek

Inspection Date :

5-Oct-01

Water Temp

N/A

(Good, Fair, Poor)

Water Level

Low

Visibility( G, F, P)

Good

<u>Stream Section</u>	<u>No. Coho Observed</u>	<u>No. Ad Sampled</u>	<u>No. Ad/RM Sampled</u>	<u>Comments</u>
Confluence to Railway Crossing	0	0	0	Good spawning gravel in this section and some holding pools. Chinook carcasses present
Railway Crossing to Hwy. 16 crossing				Not walked today.
HWY 16 crossing to McCracken's	0	0	0	Didn't walk entire section. Walked from McCracken's fence d/s to beaver dam which is about 500-600 m u/s from hwy 16 crossing. Breached one side of the beaver dam.

**Notes :**

Good spawning gravel throughout this stream and some deep holding pools. There is woody debris for adults to hide in. Flow is good and although water level is low, adult passage is possible.

In 1999 (1,170 coho counted at UBR Fence), coho were observed spawning from the hwy 16 crossing to 600 m. upstream of the hwy 16 crossing - this was one inspection in early November 1999.

There is an impassable falls about 4 kms upstream from the hwy 16 crossing.

There are a few beaver dams from the falls downstream to the hwy 16 crossing.

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Richfield Creek

**Inspection Date :**

10-Oct-01

**Water Temp**

5 C

(Good, Fair, Poor)

**Water Level**

Low

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	0	0	0	
Railway Crossing to Hwy. 16 crossing	0	0	0	
HWY 16 crossing to McCracken's	0	0	0	
Upstream of McCracken's	Not walked			



**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Richfield Creek

**Inspection Date :**

12-Oct-01

**Water Temp**

5 C

(Good, Fair, Poor)

**Visibility( G, F, P)**

Good

**Water Level**

Low

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	0	0	0	
Railway Crossing to Hwy. 16 crossing				not walked
HWY 16 crossing to McCracken's				not walked
Upstream of McCracken's				not walked

**UPPER BULKLEY RIVER CARCASS RECOVERY PROGRAM : 2001**

**Stream :** Richfield Creek

**Inspection Date :**

19-Oct-01

**Water Temp**

3 C

(Good, Fair, Poor)

**Water Level**

Low

**Visibility( G, F, P)**

Good

<b>Stream Section</b>	<b>No. Coho Observed</b>	<b>No. Ad Sampled</b>	<b>No. Ad/RM Sampled</b>	<b>Comments</b>
Confluence to Railway Crossing	0	0	0	
Railway Crossing to Hwy. 16 crossing	0	0	0	

**Note :** Helicopter flight performed the week of October 22'nd revealed three impassable beaver dams between MacQuarrie Creek and Richfield Creek. The dam between MacQuarrie and Byman Creeks was breached on Oct. 26/01. However, the other dams were not found and therefore were not breached. This may prohibit coho from entering Richfield Creek.



# MAP II UPPER BULKLEY RIVER AND TRIBUTARIES CARCASS RECOVERY LOCATIONS

Carcass Recovery Locations



Observed Coho Distribution

