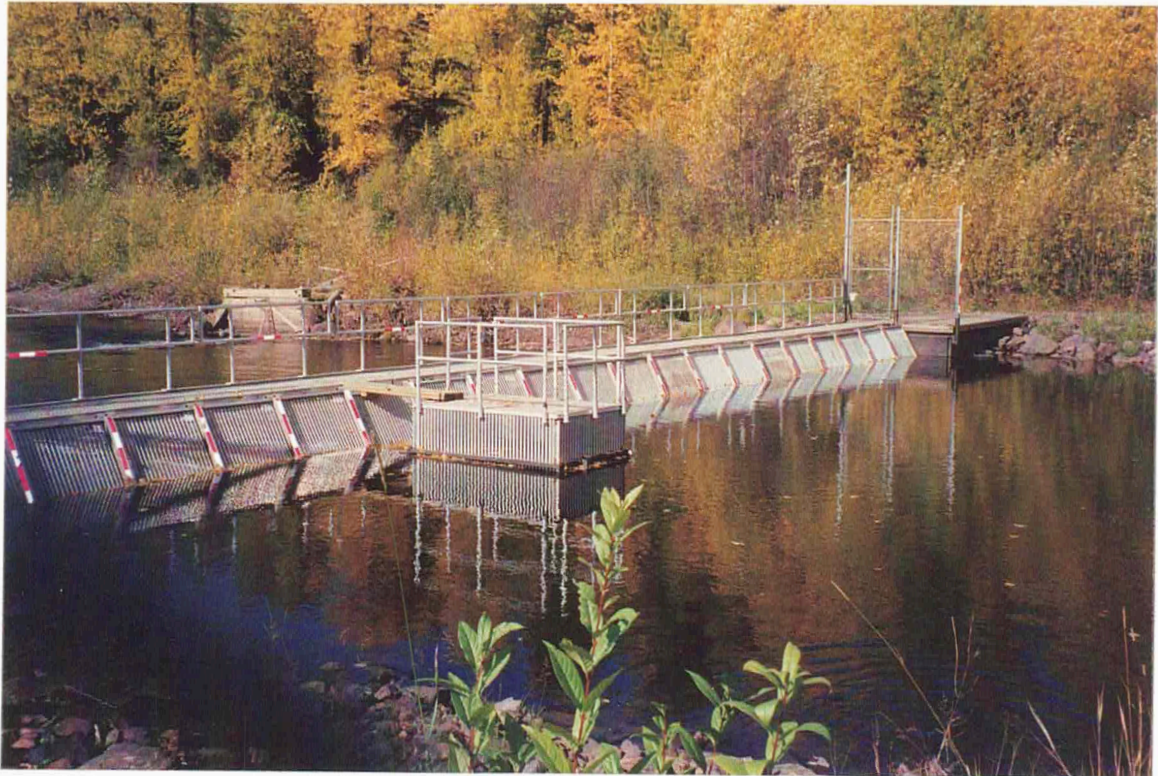


**Upper Bulkley River Coho Assessment Fence
Program Report for 2002**



**By
Brenda G. Donas, Community Advisor
Oceans and Community Stewardship Branch, Smithers
Fisheries and Oceans Canada**

December 2002

1.0 Executive Summary

The Upper Bulkley River Coho Assessment Fence was funded by the Strategic Stock Enhancement Program. The fence was installed on August 28th and 29th, 2002 but was not fishing properly until August 31, 2002. A live box extension was constructed but required modifications before it could be installed and this deferred fence operations to August 31, 2002. The fence was operated daily, 24 hours per day, until October 31st, 2002.

The purpose of this assessment fence is to conduct a total enumeration of upstream migrating coho by sex and mark type. Incidental catches of steelhead, bull trout, whitefish, chinook and other species were recorded as part of the daily catch data.

Dorsal fin tagged coho were enumerated and dorsal fin tags were removed and tag color and number were recorded as part of the daily catch data.

Approximately 30% of the return were marked coho from the 1998 brood fry and 1999 brood fry and smolt releases. The 1998 brood fry released returning adults comprised 34% of the total marked(CWT) return and this was based on CWT recoveries from the Moricetown Canyon Fishery and from UBR fence and carcass program recoveries.

The timing of hatchery coho was almost identical to the timing of unmarked coho through the fence.

The number of steelhead migrating through the fence was notably increased as compared to most of the previous years with a total of 69 steelhead enumerated.

Acknowledgements

The Upper Bulkley River Coho Assessment Fence was installed by Elaine Hougen, Eddie Young, Gavin Grubb, Chrissy Stoner, Vesna Kontic and Brenda Donas. The fence operation crew consisted of Leaf Thunderstorm, Eddie Young, Elaine Hougen and Chrissy Stoner. Thanks to the fence operations crew for their hard work and enthusiasm especially during those long night shifts when leaf loads were heavy. Thanks also go to Gavin Grubb, a Work Experience student from Smithers Secondary School. Gavin assisted with the fence installation and operation.

The fence was de-mobilized by Elaine Hougen, Eddie Young, Leaf Thunderstorm, Chrissy Stoner and Brenda Donas.

Thanks to the District of Houston for permitting the storage of the fence components in the District of Houston Works Yard.

Thanks to Walter Joseph and the Wet'suwet'en Fisheries staff for conducting coho tag recoveries at the Moricetown Food Fishery. This allowed in-season tag de-coding and allowed the minimum number of coho to be sacrificed at the UBR fence site.

Table of Contents

1.0	Executive Summary	i
	Table of Contents	iii
2.0	Background Information	1
2.1	Fence Operations	2
3.0	Results and Discussion	3
3.1	Coho Migration Timing	6
3.2	Coho Escapement Comparisons	6
3.3	Habitat Issues and Limiting Factors	15
4.0	Recommendations	18
5.0	Literature Cited	20

Appendices

Appendix A : Fence Mobilization Procedures	
Appendix B : Fence De-mobilization Procedures	
Appendix C : Moricetown Canyon Coded Wire Tag Recovery Data	
Appendix D : UBR Fence and Carcass Recovery Program CWT Recovery Data	
Appendix E : Dorsal Fin Tag Recovery Data	
Appendix F : UBR Fence Daily Capture Records	
Appendix G : Steelhead Counts at the UBR Fence : 1998 - 2002	

List of Tables

Table I : Cumulative Proportion Timing : 1998 to 2002	6
Table II : Cumulative Timing Through the UBR Fence	11
Table III : Peak Timing for Coho at the UBR Fence : 1998 – 2002	15
Table IV : Estimated Egg Deposition and Adult Production : 1999 – 2002	16
Table V : Estimated Escapement and Actual Escapement	16
Table VI : Predicted Returns from 2002 Brood Coho	15

List of Figures

Figure I : UBR Coho Fence 2002 : Timing of Marked and Unmarked Coho	5
Figure II : UBR Fence 2002 : Coho Count	7
Figure III : UBR Fence 1998 – 2002 : Cumulative Proportion of Run	8
Figure IV : UBR Coho Fence Counts 1996 – 2002	9
Figure V : UBR Coho Fence 1996-2002 : Prop of Females and Males	10
Figure VI : UBR Coho Fence 2002 : Male and Female Timing	11
Figure VII : UBR Fence 1997 to 2002 : Prop of Wild vs Hatchery Coho	13
Figure VIII : UBR Coho Fence 2002 : Coho Capture vs Water Level(cms)	14

2.0 Background Information

The Upper Bulkley River Coho Assessment Fence is located approximately 6 kms upstream from the confluence of the Morice and Upper Bulkley Rivers. Funding for fence design, construction and operation has been provided by the Strategic Stock Enhancement(SSE) Program.

The fence spans an 80 foot(24.5 m) width of the Upper Bulkley River and allows a fairly complete enumeration of upstream migrating coho adults. (Approximately 15 redds were observed downstream of the fence in 2002). All upstream migrating adults must enter the live trap. Once captured, all adults are examined for external marks(adipose, right maxillary and ventral clips and presence of dorsal fin tags), species and sex.

The objective of the SSE program was to protect salmon stocks that were at risk of extirpation. The Upper Bulkley River (UBR) coho stock was a conservation concern as escapements in the early to mid 1990's were as low as 100 spawners. The purpose of the SSE program on Upper Bulkley River coho was to maintain the genetic integrity of that stock by increasing the number of spawners. To increase the number of spawners, two types of enhanced releases were conducted ; enhanced fry and smolt releases. The fry were released into under-utilized habitat in Buck Creek. The fry would be subjected to natural selection pressures that the smolt group would not be subjected to. Due to these natural selection pressures, it was thought that a "fitter" fish would result i.e. the spawning success of the progeny of the fry released coho would be greater. Each of the fry and smolt release groups were coded wire tagged and in some years, the smolt release group also received a right maxillary clip. The presence of the right maxillary clip allows for visual differentiation of fry and smolt returning adults at the UBR fence so that coho do not have to be sacrificed for tag decoding.

The 1999 brood fry and smolt releases were not differentially marked therefore visual identification of the two release groups was not possible. Therefore, a number of adipose clipped coho adults were sacrificed at the UBR fence for purposes of coded wire tag decoding. Adipose clipped coho were also sacrificed at the Moricetown Food Fishery as part of the Wet'suwet'en food fish allocation. This was of great assistance to the Upper Bulkley River coho assessment program as in-season tag decoding was accomplished. The in-season tag decoding allowed for fine tuning of the number of coho that had to be sacrificed at the UBR fence for tag decoding.

2.1 Fence Operations

The Upper Bulkley River Coho Assessment Fence was installed on August 28th and 29th, 2002. However, the fence was not fully operational until the evening of August 30th, 2002 due to the new live box extension not fitting onto the trap box properly. Once modifications were made to the live box extension, fence operations commenced.

The fence was installed as per previous years procedures. (Refer to Appendix A for mobilization procedures). Tarps were placed along the bottom panels so that flow was forced upwards and through the space between the top and bottom panels. This made the fence somewhat self-cleaning which reduced the amount of labour required during periods of heavy debris load on the fence. The tarps were placed in such a way that most of the flow was forced through the "V" lead-in to the live trap. This assisted in attracting fish into the live trap. Four sheets of plywood were floated from the downstream side of the "V" lead-in to act as cover for the fish as they entered the lead-in area. This worked well in attracting coho towards the live trap lead-in.

Daily fence operations included taking a water level and water temperature measurement from an established limnology station. Fence panels were cleaned of debris as required. All coho trapped in the live box were enumerated and sampled for mark type and sex. All coho released upstream of the fence were opercular punched. A portion of the captured coho were transported to the Toboggan Creek hatchery for use as broodstock.

Any dorsal fin tagged coho that were captured were sampled for sex and mark type and the dorsal fin tags were removed. Removal of the dorsal fin tags allowed for re-examination of the fin tag color and number for quality control purposes.

During times of heavy debris load, the fence was attended between 8:00 p.m. and 2:00 a.m.. The top fence panels were pulled one at a time to allow for debris cleaning. Fence panels were replaced once cleaning was complete. No fish were observed migrating past the fence during panel cleaning.

Any adipose clipped coho carcasses that floated against the fence were checked for the presence of an opercular punch and the heads were removed. All heads were numbered using E-tags and recovery date was recorded.

The fence was demobilized on October 31st and November 1st, 2002. Fence components are in storage at the District of Houston Works Yard on Nadina Ave, Houston, BC. (Refer to Appendix B for fence demobilization procedures).

3.0 Results and Discussion

The 2002 coho return consisted of four year old returns from the 1998 brood year and three year old returns from the 1999 brood year. The hatchery contribution resulted from marked releases of 69,720 fry and 33,350 yearlings from the 1999 brood and four year old returns from a marked fry release of 80,452 fry from the 1998 brood.

A total of 465 (47%) females and 525 (53%) males were enumerated at the fence for a total count of 990 coho. Of those 990 coho, 296 (29.9%) were adipose clipped, 1 (0.1 %) was Ad/Rmax clipped and 693 (70%) were unmarked coho.

A total of 17 females and 35 males were removed for use as broodstock. These eggs will become the marked smolt production group for the Upper Bulkley River.

The escapement in 1999, as enumerated through the UBR fence, was 1,073 coho. Of those 1,073 coho, 851 coho were enumerated as being hatchery coho i.e. approximately 79.8% of the coho enumerated were of hatchery origin.

Approximately 528 females spawned naturally in 1999 which would have resulted in an estimated natural egg deposition of 1.32 million eggs. Using biostandard survival rates, the estimated natural production is estimated at 2,376 coho. Assuming an exploitation rate of 29%, approximately 1,687 unmarked coho should have entered the Upper Bulkley River based on biostandard survival rate calculations. However, based on the coded wire tag data from the 2002 return year, approximately 34% of the run were 4 year old coho. The number of unmarked(wild) three year old coho returning could therefore be adjusted to 1,113 coho. The unmarked coho count at the UBR fence was 693 coho and that would have included three and four year old returning coho.

Adipose/CWT Coho

The 1999 brood enhanced fry and smolt releases were not differentially marked i.e. both release groups were marked with an adipose clip only. The total number of adipose clips in the return was 296 fish of which 146 (49%) were females and 150 (51%) were males. Adipose clipped coho made up 29.9% of the total escapement.

The Adipose/CWT return consisted of four year old adipose clipped fish from the 1998 brood enhanced fry release and three year old coho from the 1999 brood enhanced fry and smolt releases.

Adipose clipped coho were sacrificed at the Moricetown Canyon Wet'suwet'en Food Fishery and at the Upper Bulkley River Fence.

The Moricetown coded wire tag data showed that 32.8% of the recoveries were from 1998 brood fry releases, 39.3% of the recoveries were from 1999 brood fry releases and 27.9% of the recoveries were from 1999 brood smolt releases. There were no recoveries from 1998 brood smolt releases.

Upper Bulkley River fence recoveries showed that 37.1 % of the recoveries were from 1998 brood fry releases, 41.4 % of the recoveries were from 1999 brood fry releases and 21.4 % of the recoveries were from 1999 brood smolt releases. Refer to Appendix C for Moricetown CWT recovery data. Refer to Appendix D for UBR CWT recovery data.

Timing of adipose clipped coho through the fence was identical to the timing of the unmarked coho through the fence. (Figure 1). Timing of the various tag codes through the Moricetown Canyon is shown in Appendix C.

Adipose/Right Maxillary/CWT Coho

Only one Adipose/Right maxillary clipped coho was enumerated at the fence. There were no 1998 brood smolt recoveries in the Moricetown Coded Wire Tag sampling program.

There were no marked coho recovered at the Moricetown Canyon fishery, dead on the UBR fence or in the carcass recovery program whose tag codes designated a four year old coho from the 1998 brood smolt release group.

Unmarked Coho

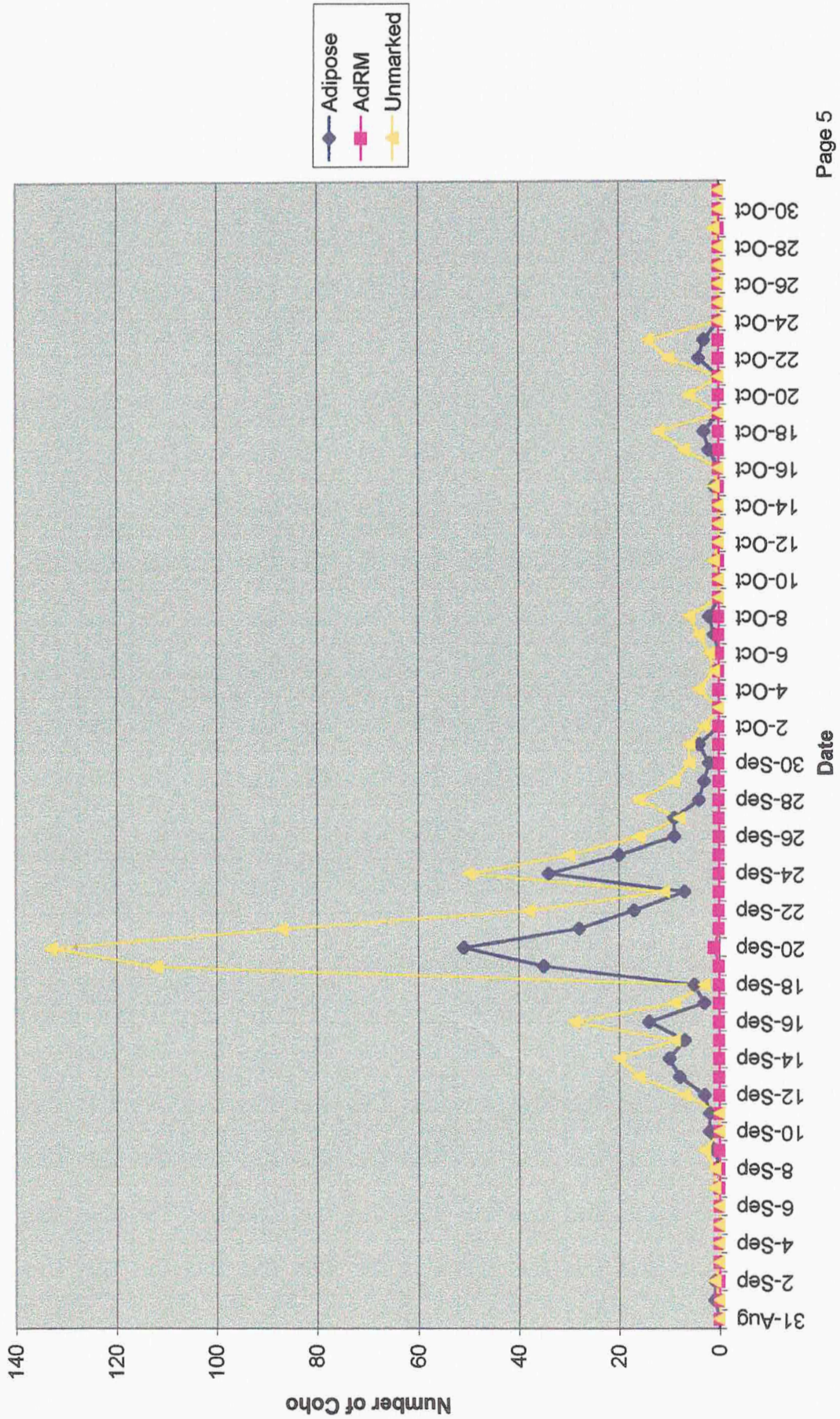
A total of 693 coho enumerated at the fence were unmarked. Of the unmarked coho, 318(45.9 %) were females and 375(54.1%) were males.

Dorsal Fin Tagged Coho

A total of 8,038 dorsal fin tagged coho were estimated to be upstream of the Moricetown Canyon. The dorsal fin tagging program was conducted in order to conduct a coho population estimate for the Bulkley/Morice. A preliminary Petersen Estimate was conducted that estimated the Bulkley/Morice coho population at 33,707 coho(personal communication with Regina Saimoto, SKR Consultants Ltd).

Dorsal fin tagged coho were recovered at the Toboggan Creek coho fence and at the Upper Bulkley River coho fence. A total of 498 dorsal fin tagged coho were captured at the Toboggan Creek fence (498 coho were dorsal fin tagged out of 2548 coho counted at the fence i.e. 19.5% were dorsal fin tagged).

Figure 1 : Upper Bulkley River Coho Fence 2002 : Timing of Marked and Unmarked Coho



A total of 223 dorsal fin tags were recovered at the Upper Bulkley River fence therefore 22.6 % of the coho enumerated at the fence were dorsal fin tagged. This represents 2.77% of the total number of dorsal fin tagged coho upstream of Moricetown Canyon. Therefore, it is estimated that the Upper Bulkley River coho population comprises approximately 2.8% of the total Bulkley/Morice coho population.

Refer to Appendix E for Dorsal Fin Tag Data.

Steelhead Capture

A total of 69 Steelhead were captured at the Upper Bulkley River fence over the duration of the program. Refer to Appendix G for Steelhead Enumeration at the UBR fence from 1998 to 2002.

3.1 Coho Migration Timing

Coho began entering the live trap on September 1st, 2002. Peak migration occurred from September 19th to 21st with a total of 447 coho migrating through the fence on those dates (Figure II). This represents 45.2% of the escapement enumerated through the fence. Peak timing in 2001 was September 24th to 26th with 33.7% of the escapement counted through the fence on those dates.

The cumulative frequency curve for coho migration timing for 1998 to 2002 is shown in Figure III and Table I.

Table I

Date	Cumulative Proportion of Run
Sept 6	0.055
Sept 12	0.098
Sept 18	0.256
Sept 23	0.492
Sept 25	0.602
Oct 11	0.737
Oct 27	0.911
Oct 29	1.00

3.2 Coho Escapement Comparisons

Coho counts at the Upper Bulkley River fence range from a low of 22 adults enumerated in 1997 to 2,197 adults enumerated in 2001. Escapement counts through the Upper Bulkley River fence for 1997 to 2002 are shown in Figure IV.

Figure II : Upper Bulkley River Fence 2002 : Coho Count

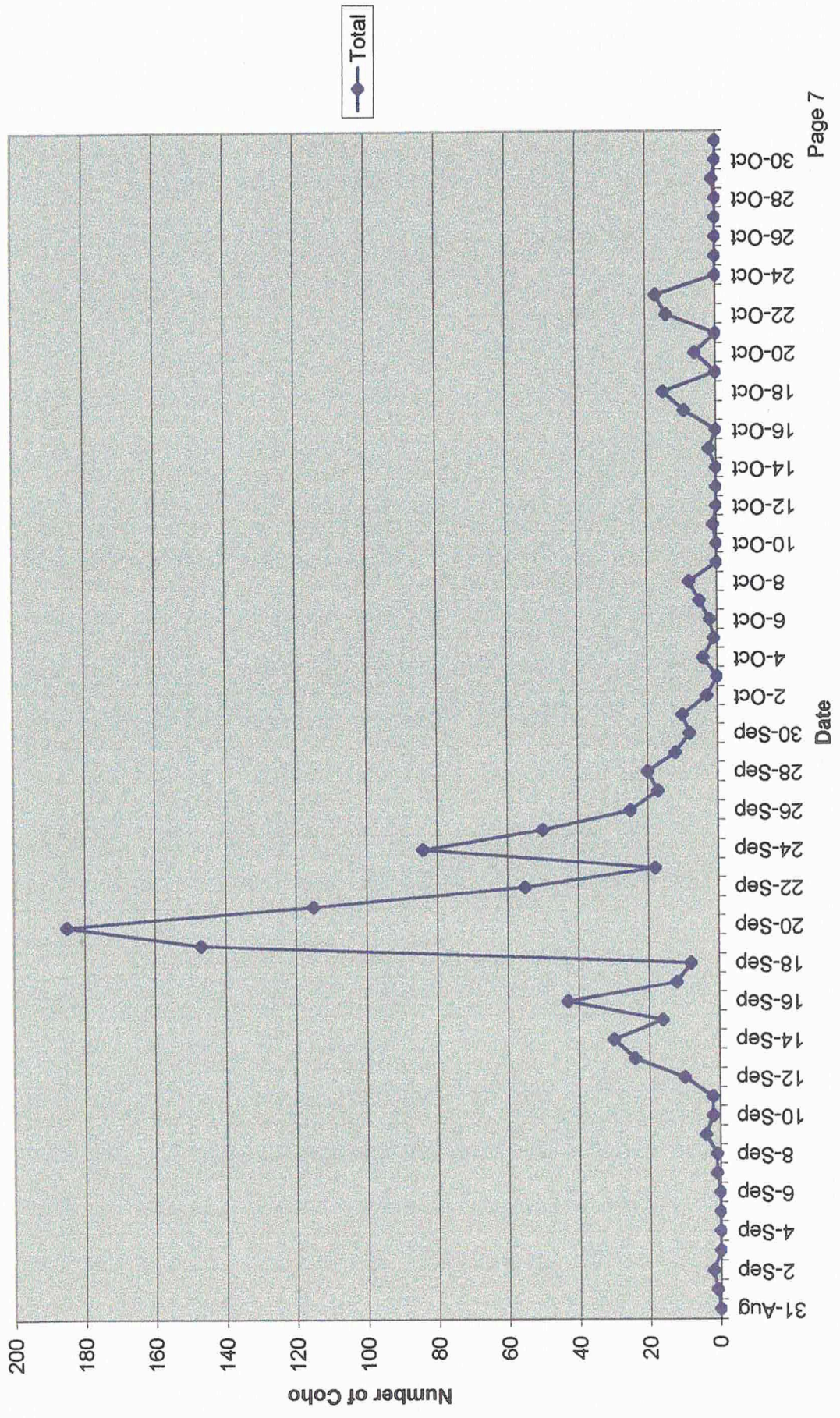


Figure III : UBR Fence 1998 - 2002: Cumulative Proportion of Run

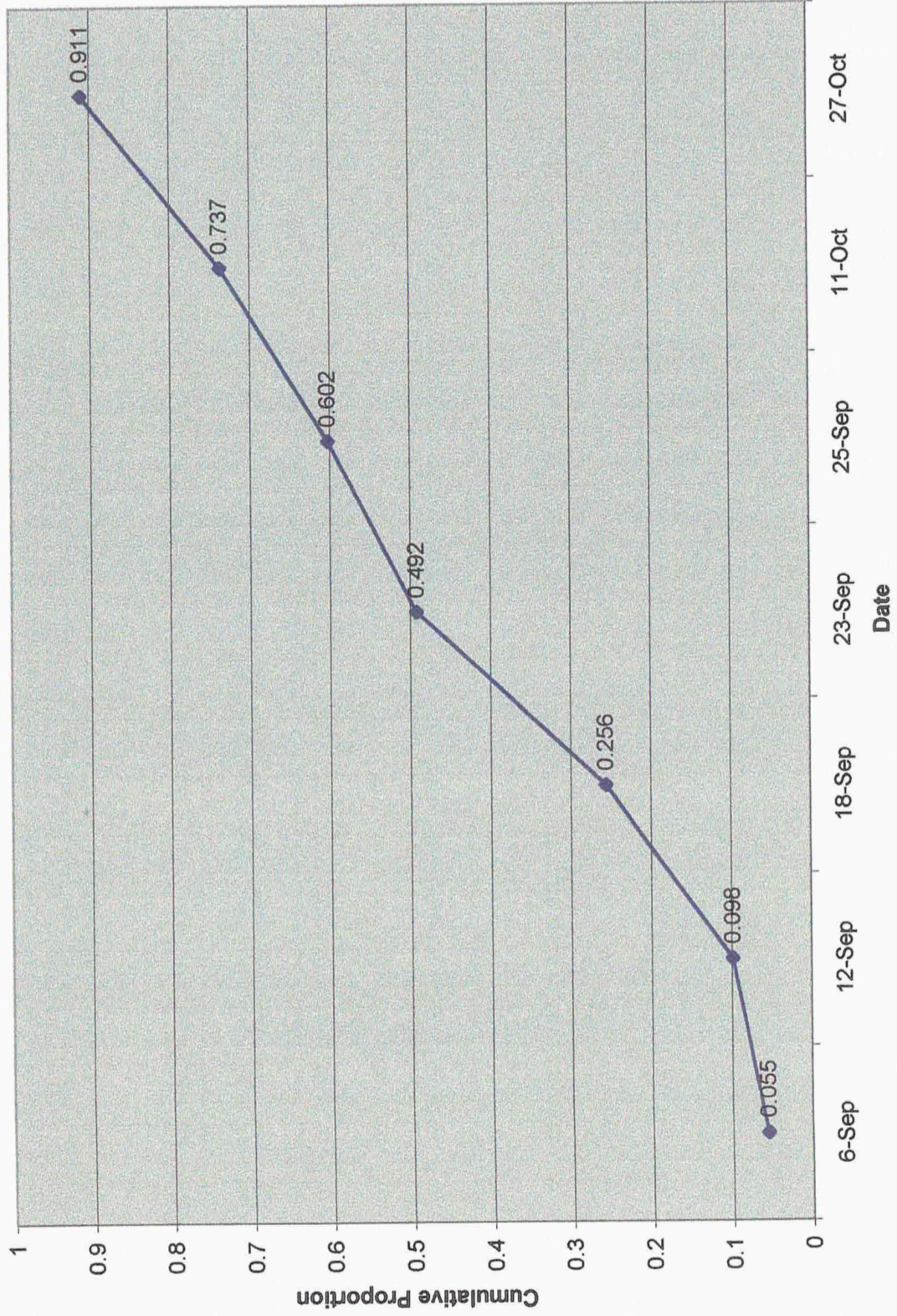


Figure IV : UBR Fence Coho Counts by Return Year

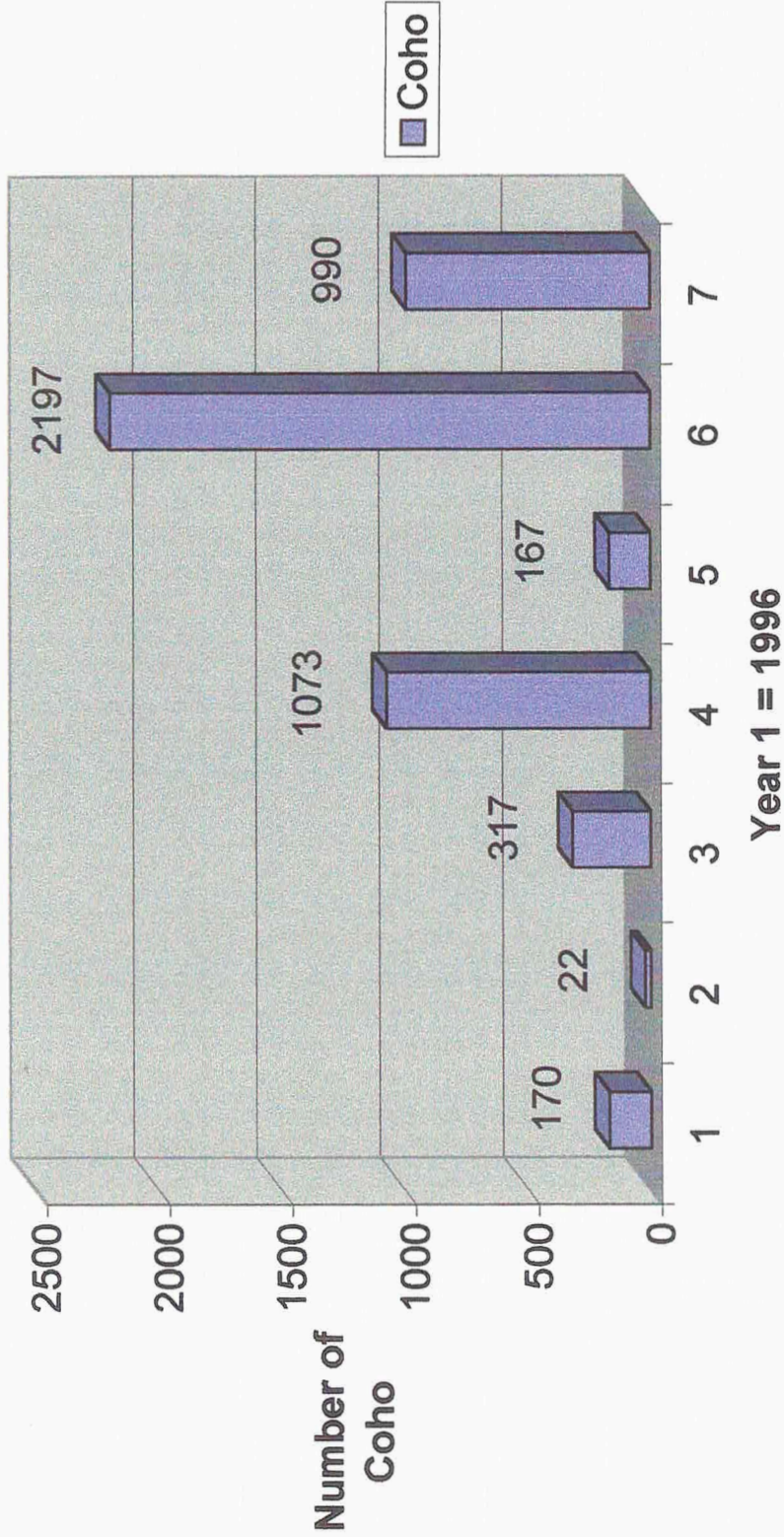
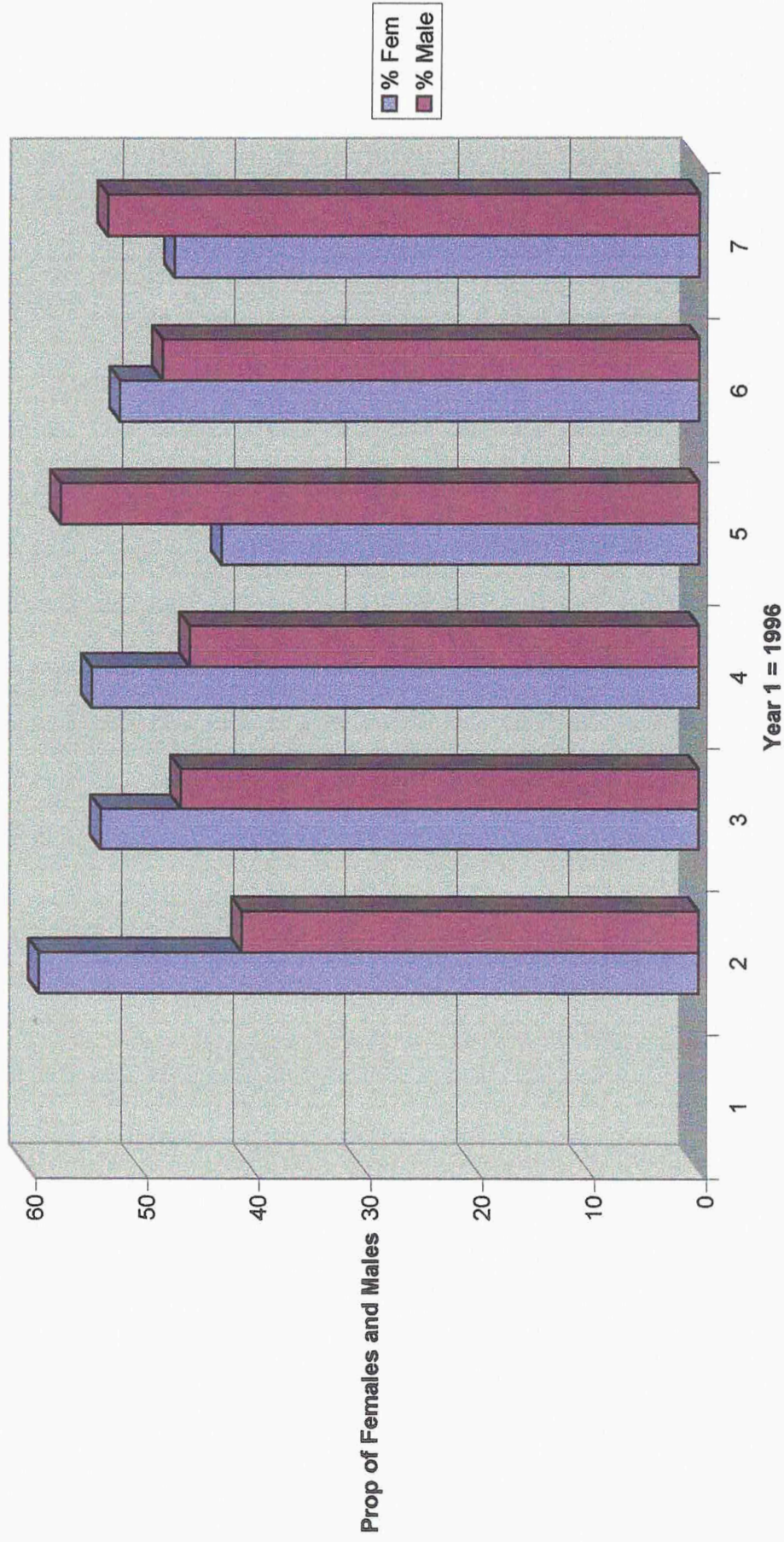


Figure V : UBR Coho Fence 1996-2002 : Prop of Females and Males



The proportion of females to males is shown in Figure V. From 1996 to 2002, on average the proportion of females in the escapement has been 52% and proportion of males has been 48%.

The timing of females and males through the fence was similar as shown in Figure VI.

The proportion of unmarked(wild) to hatchery coho for 1997 to 2002 is shown in Figure VII. In past years, the proportion of hatchery coho in the escapement has been as high as 80%. On average, from 1997 to 2002, hatchery coho have comprised 64% of the escapement and unmarked(wild) coho have comprised 36% of the escapement. In 2002, the hatchery component comprised 30% of the run which is within the acceptable limit of 50% hatchery contribution.

Peak coho migration through the fence coincided with an increase in water level around September 19th, 2002, (Figure VIII). During the 2001 fence program, water level remained constant for the duration of the program, however, there was a very small increase in water level around Sept 25, 2001 which corresponded to peak migration.

The cumulative timing curve for 1998 to 2002 in Figure III shows that 25% of the run is through by September 18th, 50% of the run is through by September 23rd and 75% of the run is through the fence by October 11th. The cumulative timing curve for the 2002 run showed that 25% of the run was through by Sept 19th, 50% of the run was through by Sept 20th and 75% of the run was through the fence by September 24th, 2002. Cumulative timing is summarized in Table II below.

Table II Cumulative Timing Through the UBR Fence

	25% Migration	50% Migration	75% Migration
1998-2002 Cumulative Timing	September 18	September 23	October 11
2002 Cumulative Timing	September 19	September 20	September 24

Within the last five years, it appears that the number of coho comprising the late timing peak, which historically occurs in mid to late October, is decreasing. (Table III). On average, from 1998 to 2002, the early timing peak comprises 42.8% of the run and the late timing peak comprises 21.4% of the run. In 2002, the late timing peak comprised 5.3% of the run.

Figure VI : Upper Bulkley River Coho Fence 2002 : Male and Female Timing

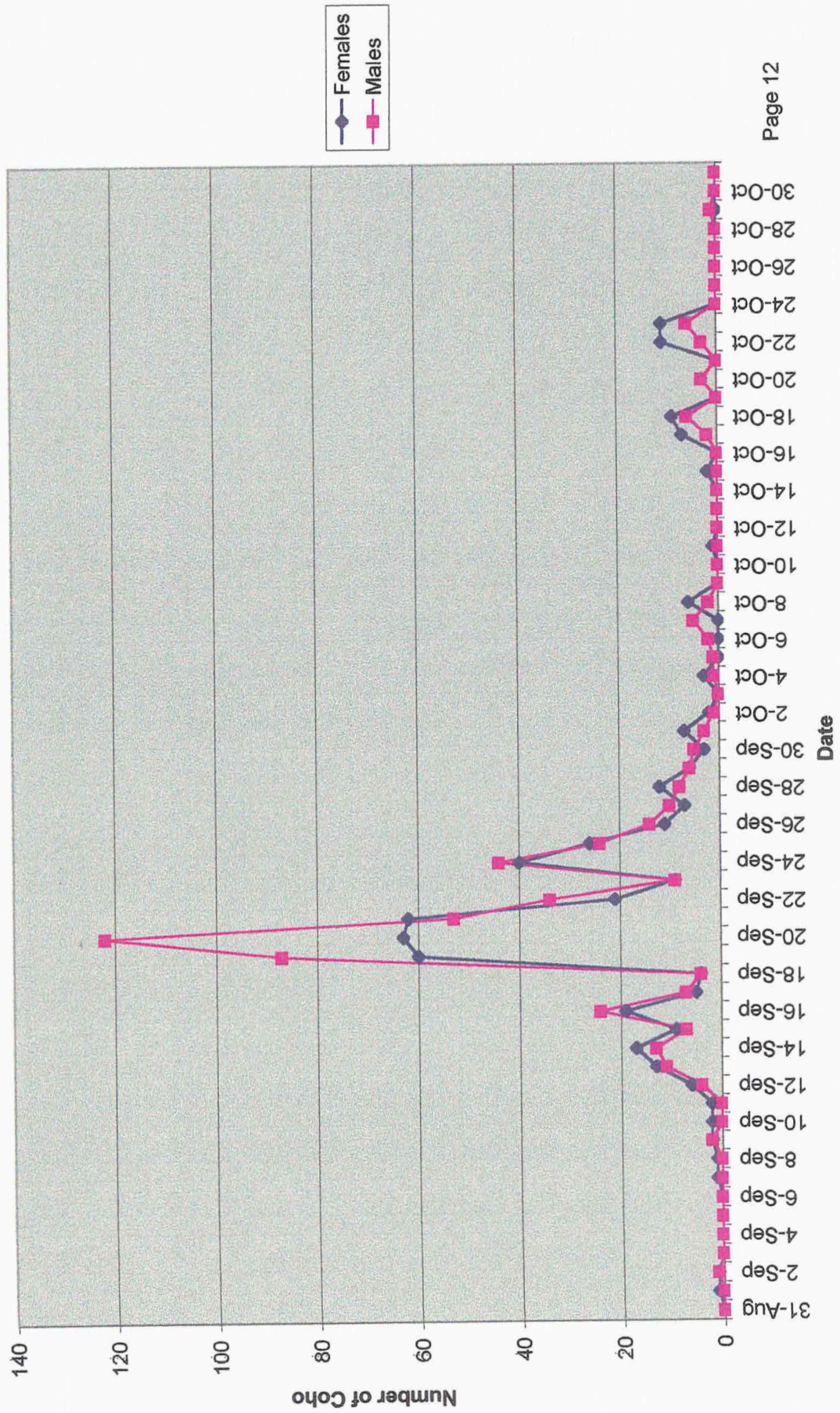


Figure VII : UBR Fence 1997 to 2002 : Prop of Unmark vs Hatchery Coho

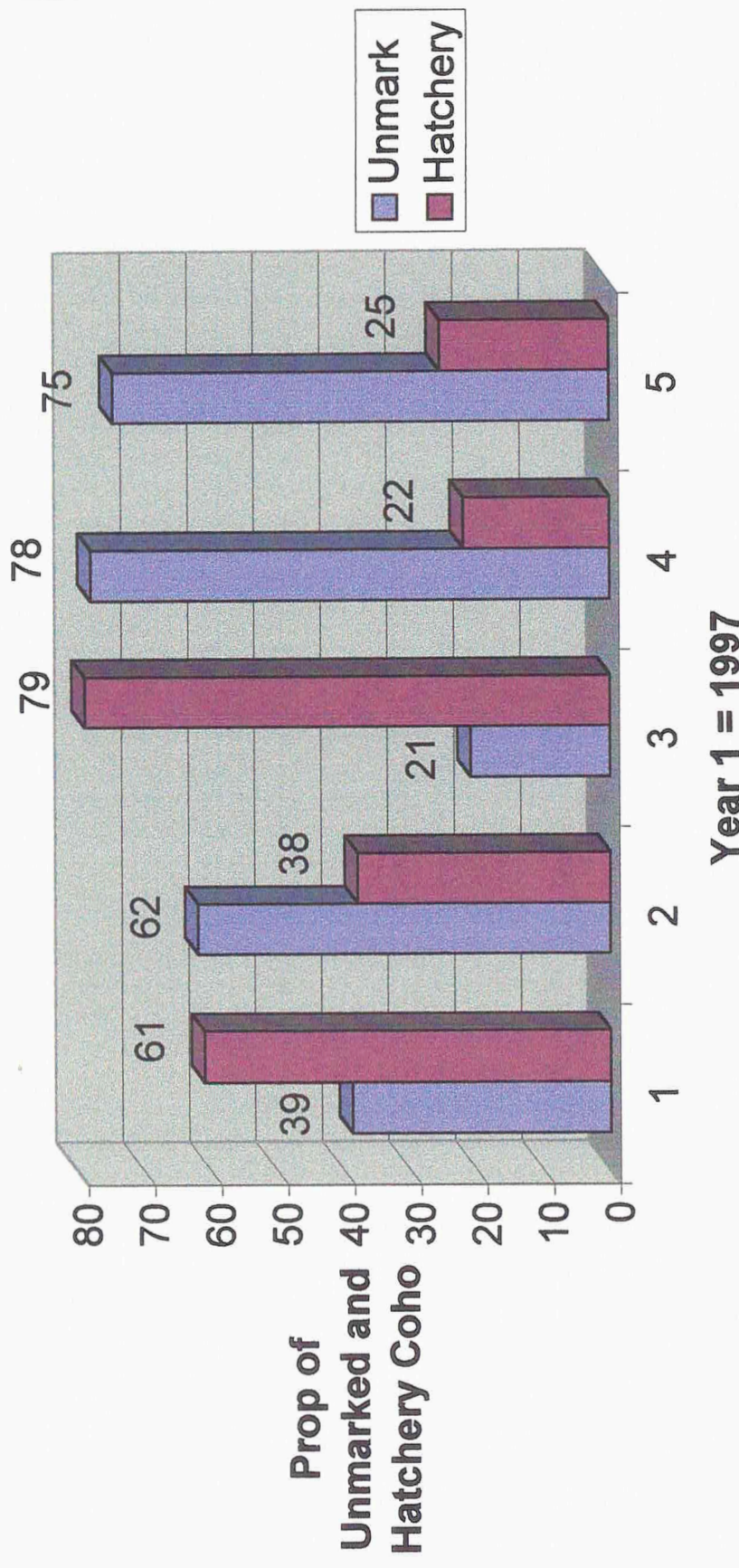


Figure VIII : Upper Bulkley River Coho Fence 2002 : Coho Capture vs Water Level(cms)

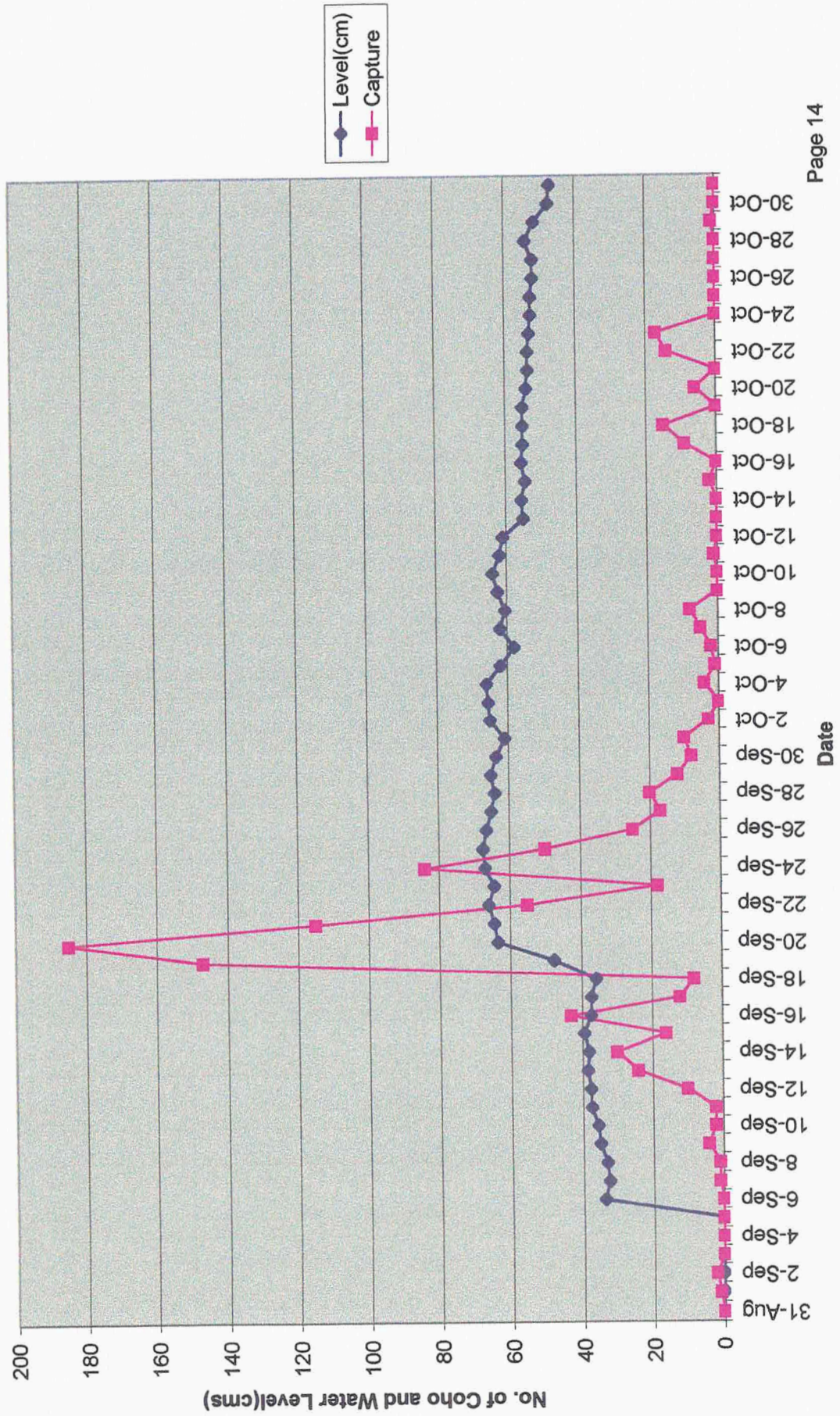


Table III Peak Timing for UBR Coho at the Fence : 1998 to 2002

Year	Early Peak(Prop of Run)	Late Peak(Prop of Run)
1998	Oct 6'th to 9'th(28.8%)	Oct 27'th – 28'th(43.6%)
1999	Sept 14'th to 24'th(58.4%)	Oct 18'th to 22'nd(14.6%)
2000	Sept 14'th to 20'th(49.4%)	Oct 14'th – 18'th(30.4%)
2001	Sept 24'th to 25'th(32.2%)	Oct 11'th – 22'nd(13.0%)
2002	Sept 19'th to 21'st(45.2%)	Oct 18'th to 23'rd(5.3%)

Table IV shows the Estimated Egg Deposition and Adult Production for 1999 to 2002 brood years. Estimated Escapement and Actual Escapements are shown in Table V.

Predicted Returns from 2002 Brood Coho

A total of 448 females were released upstream of the counting fence. Estimated egg deposition and subsequent adult production are listed in Table VI. Approximately 30,000 hatchery coho smolts will be released in the spring of 2004. Production from the enhanced coho is also included in Table VI. Exploitation rate has been set at 29 % (personal communication with Don Bailey, DFO Biologist) and fecundity has been estimated at 2500 eggs per female.

Table VI Predicted Returns from 2002 Brood Coho

No. Females	Egg Deposition	Fry Production	Smolt Prod	Est. Total Adult Production	Est Hatchery Escap.	Est. Wild Escap.
448	1,120,000	168,000		2016		1431
17	42,500		30,000	687	488	

Total escapement for 2005, using biostandard survival rates and an exploitation rate of 29%, is estimated at 1,918 coho adults. However, if the four year old component is similar to the 2002 brood, then approximately 34 % of the wild production will return as four year old coho. Therefore the estimated wild escapement would be 944 adults and the total estimated escapement for 2005 would be 1,432 coho adults.

3.3 Habitat Issues and Limiting Factors

Several habitat factors have been earmarked as limiting factors that contribute to reduced salmonid survival rates. Some of these limiting factors are : quality and quantity of overwintering habitat(Donas and Saimoto 1999, 2000, 2001), water levels and flows(Brocklehurst 1996), water quality during crucial times of the year (Donas and

Table IV

Upper Bulkley River Coho Estimated Egg Deposition and Production

Brood Year	Number of Estimated Est. Fry		Est. Adult Est Unmark		Escapement		Est. Hatch		Percent	
	Females	Egg Dep. Prod.	Prod.	Prod.	Escapement	Unmark	Escapement	Unmark	Unmark	Hatchery
1998	170	636650	95498	1098	788	1236	39	61		
1999	515	1501225	225184	2702	1940	1184	62	38		
2000	49	152292	22844	274	197	741	21	79		
2001	1087	3378396	506759	6081	4366	1219	78	22		
2002	448	1120000	168000	2016	1431	488	75	25		

Table V Estimated Escapements and Actual Escapements

Year of Return	Total Est.		Percent		Actual		Actual %	
	Escape.	Unmark	Unmark	Hatchery	Escap	Unmark	Unmark	Hatchery
2001	2024	39	61	2197	35	65		
2002	1367	62	38	990	70	30		
2003	938	21	79					
2004	5585	78	22					

Remington 2000), habitat accessibility issues such as cascades and beaver dams as barriers during low water levels(R.S. and R.K. Saimoto 2001), damage to spawning grounds by sedimentation and possibly due to increased periphyton growth(Donas and Remington 2000).

Streamwalks were conducted between October 15 and 30'th in the Upper Bulkley River system to determine spawner distribution and for recovery of marked heads. The Upper Bulkley River mainstem was surveyed in the following areas :

- McKilligan Road bridge crossing
- Confluence of MacQuarrie Creek
- Confluence of Byman Creek
- Confluence of Richfield Creek
- UBR mainstem d/s of the assessment fence

Portions of the following tributaries were surveyed for adults as well :

- Buck Creek
- Byman Creek
- Richfield Creek
- Johnny David Creek

The habitat in all areas surveyed appeared to have changed significantly after the 2002 spring freshet. Dungate Creek, a tributary of Buck Creek, supported a large number of spawning coho in the fall of 2001. In 2002, Dungate Creek was not accessible to adult coho, had sub-surface flow in areas and was completely blocked by woody debris jams in several locations only 25 metres upstream from the confluence.

Buck Creek mainstem, downstream of the confluence of Dungate Creek, consisted of mainly cobble that was too large for spawning coho to utilize. (In the 2001 year, there was considerably more spawning gravel in this area). There were large areas of bank erosion on agricultural lands and several of the deeper pools had in-filled with large cobble and sediment. Algae growth on the cobble also appeared to be heavier in 2002 as compared to 2001.

Due to relatively high flows through most of the summer and into fall, beaver dams were not as serious as an impediment to upstream migrating coho as compared to 2001. Coho seemed to be widely distributed throughout those areas where streamwalks were conducted.

The Buck Creek Release Pond was destroyed during the 2002 spring freshet and has now been partially decommissioned. Future hatchery smolt releases will occur in a small off-channel area east of Houston. This will make marked adult recovery more difficult as the majority of hatchery adults will not be imprinted on Buck Creek which has good accessibility for spawner counts and marked head recovery.

4.0 Recommendations

Recommendation #1 : To determine the contribution of naturally spawning hatchery coho, continue to operate the Upper Bulkley River Coho Assessment Fence.

The Upper Bulkley River Coho Assessment Fence is the principle means of determining the outcome of hatchery enhancement on Upper Bulkley River coho. The fence allows monitoring of the proportions of wild(unmarked) and hatchery(marked) coho in the system. If naturally spawning hatchery coho are successful, then the proportion of wild(unmarked) coho in the escapement should continue to increase.

Recommendation #2 : To complete the fry vs smolt release survival rate study, continue to operate the Upper Bulkley River Coho Assessment Fence in 2003, 2004 and 2005.

The fry vs smolt release survival study was conducted from the 1998 to 2001 brood years. Coho from the 2001 brood year will be returning in the 2004 and 2005 return years. Data to date has shown that the four year old component from the 1998 enhanced fry release is significant ie. 34% of the escapement and therefore to completely assess the 2001 brood, the fence must operate during the 2005 return year.

UBR Fence enumeration results from the 2000 and 2001 brood years will be necessary in order to complete the fry vs smolt release survival study. Results will assist in determining if enhancement strategy should be adjusted towards conducting fry releases.

Recommendation #3 : Continue to sacrifice adipose clipped coho at the UBR fence during the 2003 return.

The 2002 return data showed that the 1998 brood fry release consisted of a 34% four year component. In the 2003 return year, there will be coho returning from both the brood 1999 and brood 2000 enhanced fry releases. Since those returning coho are adipose clipped and cannot be visually differentiated at the fence, some coded wire tag recovery will be necessary.

Recommendation #4 : Continue to work with the Wet'suwet'en Fisheries Program on CWT head recovery and continue with in-season tag decoding.

The Wet'suwet'en Fisheries Program collected CWT coho heads during their Moricetown Canyon Food Fishery. This allowed greater tag recovery than would have been possible or feasible by sacrificing coho at the UBR fence or by recovery in a carcass recovery program. In-season decoding of adipose clipped coho ensured that the appropriate number of tags were decoded to allow for data analysis.

Also, by knowing the numbers of tags being recovered at the Moricetown Fishery, this allowed us to sacrifice the minimum number of coho at the UBR fence.

The Wet'suwet'en sampling program will require input from Enhancement Support and Assessment Unit as well as from Stock Assessment Division. (The Smithers Area Community Advisor will be available to transport heads from the Head Recovery Depots to the DFO office).

Recommendation #5 : Fence sill repairs will be necessary prior to fence installation in 2003.

The UBR fence sustained some minor damage during the 2002 freshet. Some of the shoes that hold the support "A" frames in place were bent and require straightening. Also, some of the wooden planking has begun to lift (sediment is collecting under the planks) which makes installation of the "A" frames difficult.

A budget will have to be identified for these repairs.

Recommendation #6 : Funding needs to be identified in the 2003/2004 work planning process so that the UBR fence can be repaired in the summer of 2003 and operated in the fall of 2003.

To date Northcoast BC area has not committed to providing funding for the UBR fence operations in 2003 and neither has Enhancement Operations in HQ Vancouver. The Strategic Stock Enhancement Program will sunset March 2003 and there will be no future funding from this program. Discussions should be initiated to determine where funding will come from for fence installation, operation and maintenance and repairs for 2003 through to 2005.

5.0 Literature Cited

Brocklehurst, S.J. 1998. Historical Review on the Upper Bulkley Watershed

Donas, B. and D. Remington. 2000. Nutrients and algae in the Upper Bulkley River Watershed 1997-2000.

Donas, B. and R.K. Saimoto, 2001. Upper Bulkley River and Toboggan Creek Overwintering Study

Saimoto, R.S. and R.K. Saimoto, 2001. Coho Salmon in the Upper Bulkley River Watershed

Appendix A

Upper Bulkley River Coho Assessment Fence Mobilization Procedures

The Upper Bulkley River fence spans about 80 feet of the river. The fence sill is surfaced with wood planking which is permanent. Protruding through the wood sill are a series of tabs which the fence "A" frames are bolted to. The "A" frames are held together by a series of "I" beam supports on which a walkway safety railing and walkway grates sit. The "A" frames, once connected by the "I" beams, provide support for the fence panels which are of aluminum broomstick construction. The fence panels are in two sections and slide down guides on the "A" frames. There is a live box panel which connects to the live box lead-in, and this panel also slides down the "A" frames to fit in place. Once all of the panels and the live box with lead-in are in place, upstream migrating coho are blocked off by the fence and can only enter the "V" lead-in to the live box.

Prior to installation ensure that all appropriate warning signs are installed in locations that are visible to people/craft navigating in this waterway. Ensure that reflective tape on all fence components is in good repair and is visible.

Installation

Fence Components

- Broomstick panels
- "A" frames with 1 and 1/8 inch diameter bolts/nuts/washers/cauder pins
- "I" support beams with 19 mm diameter bolts/nuts/washers
- walkway safety railings with 19 mm diameter bolts/nuts/washers
- walkway grating with "S" clips and 9/16 inch diameter bolts/nuts/washers
- live box (assembled)
- live box lid
- live box "V" lead-in
- live box fence panel (to attach live box to)
- Storage shed

Tools and Equipment Required

- 1 and 1/8 inch socket wrench and a 1 and 1/8 inch open end wrench
- 19mm socket and open end wrench
- 9/16 wrenches (socket and open end)
- hammer
- sledge hammer
- electrical tie straps (heavy gauge)
- locks and keys (5 locks with keys)
- screw driver set

- chest waders
- dry suit
- PFD's
- Tarps
- Four plywood sheets (4 by 8 feet)
- rope

All fence components are currently stored at the District of Houston Works Yard. A flat deck truck or large trailer is required to transport fence components from the Works Yard to the fence site. All fence components are numerically labelled with the number one pieces being those against river left (looking downstream).

Prior to installing the fence, sweep the wood sill off as the surface of the sill is very slippery.

All of the "A" frames should be installed first. Ensure that the appropriate washers are used and that cauder pins are also installed. Installation and de-mobilization are much easier if bolts are installed with nuts and cauder pins all facing the same way.

Once "A" frames have been installed, install the support "I" beams with safety railings. This will stabilize the "A" frames.

Walkway grates can then be installed using the "S" clips and bolts.

The fence panels can then be slid into place. The tabs on the bottom panels should face up and the tabs on the top panels should also face up. The result should be that there is a space between top and bottom panels that allows debris to flow through the fence along the middle, rather than plug the broomsticks.

Install the live box connector panel, and lift live box into place. The live box sits on a series of pins on the live box connector panel. Install the live box lid and the locks.

An extension should be built to fit onto the "V" lead-in. This can be constructed of two by fours and should lengthen the lead-in by 18 to 24 inches. This extension makes it much more difficult for coho to find their way out of the trap i.e. they swim back downstream and out of the trap.

Install a series of tarps along all of the bottom panels so that all of the water is forced to flow over the bottom panel but inbetween the bottom and top panels. This will also force more attraction water through the live box lead-in. Make sure the gate on the upstream side of the live box is bolted in place otherwise fish will escape through that opening.

Connect four by eight foot sheets of $\frac{1}{4}$ inch plywood, lengthwise, and float this plywood cover from the lead-in towards the old fence sill. Try to float the plywood in such a manner that the majority of flow is going under the plywood cover.

Appendix B

Upper Bulkley River Coho Assessment Fence De-mobilization Procedures

Fence components have been stored at the District of Houston Works Yard which is only 0.5 kms away from the fence site. Annual permission is required to store the fence components at the Works Yard.

A flat deck 5 ton truck with crane was used to assist with fence de-mobilization.

Remove all fence panels except for the live trap connector panel.

Walkway grating can be loosened (loosen "S" clips/bolts/nuts) while the walkway safety railings are being loosened. Walkway grating can be removed starting at the river right side (looking downstream). If walkway grating is piled on two by fours, then it can be chained together and lifted by crane onto a flat deck truck.

Once walkway grating and safety railings have been removed, the "I" beams can be removed next. These are easy to hand load onto the truck so do not need to be chained together.

"A" frames should be removed last. Often, water conditions are a little higher at time of de-mobilization than at time of installation. A person in scuba gear is an asset when removing bolts/nuts and cauder pins from the "A" frames to detach them from the fence sill. The "A" frames holding the live box in place can be removed and the connector panel can also be removed. The live box can be chained in such a way that the crane can lift the box out of the water and onto the truck. (Store the connector panel inside the live box).

All bolts/nuts/washers/cauder pins should be kept in separate, labelled, storage containers. This makes installation much easier as it is extremely time consuming trying to separate a mass of bolts/nuts and washers.

All fence components can be loaded onto a 5 ton flatdeck truck and it takes about 3 trips to transfer all fence components and storage shed to the District of Houston Works Yard.

APPENDIX C
MORICETOWN CANYON CODED WIRE TAG RECOVERY DATA
2002

CODED WIRE TAG DATA FROM MORICETOWN FISHERY : 2002

Sample Date(2002)	Species	Tag Code	Release Group	Brood Year
8-Aug	Coho	80247	TC wild sm	
13-Sep	Coho	80247	TC wild sm	
19-Aug	Coho	80249	TC wild sm	
22-Aug	Coho	80249	TC wild sm	
29-Aug	Coho	80249	TC wild sm	
28-Aug	Coho	80250	TC wild sm	
28-Aug	Coho	80250	TC wild sm	
29-Aug	Coho	80250	TC wild sm	
29-Aug	Coho	80250	TC wild sm	
3-Sep	Coho	80250	TC wild sm	
4-Sep	Coho	80250	TC wild sm	
13-Sep	Coho	80250	TC wild sm	
17-Sep	Coho	80250	TC wild sm	
14-Aug	Coho	183018	UBR fry	1999
15-Aug	Coho	183018	UBR fry	1999
16-Aug	Coho	183018	UBR fry	1999
16-Aug	Coho	183018	UBR fry	1999
21-Aug	Coho	183018	UBR fry	1999
21-Aug	Coho	183018	UBR fry	1999
26-Aug	Coho	183018	UBR fry	1999
28-Aug	Coho	183018	UBR fry	1999
28-Aug	Coho	183018	UBR fry	1999
29-Aug	Coho	183018	UBR fry	1999
29-Aug	Coho	183018	UBR fry	1999
29-Aug	Coho	183018	UBR fry	1999
30-Aug	Coho	183018	UBR fry	1999
3-Sep	Coho	183018	UBR fry	1999
3-Sep	Coho	183018	UBR fry	1999
19-Sep	Coho	183018	UBR fry	1999
13-Aug	Coho	183019	UBR fry	1999
14-Aug	Coho	183019	UBR fry	1999
16-Aug	Coho	183019	UBR fry	1999
19-Aug	Coho	183019	UBR fry	1999
22-Aug	Coho	183019	UBR fry	1999
23-Aug	Coho	183019	UBR fry	1999
26-Aug	Coho	183019	UBR fry	1999
26-Aug	Coho	183019	UBR fry	1999
27-Aug	Coho	183019	UBR fry	1999
27-Aug	Coho	183019	UBR fry	1999
27-Aug	Coho	183019	UBR fry	1999
28-Aug	Coho	183019	UBR fry	1999
29-Aug	Coho	183019	UBR fry	1999
29-Aug	Coho	183019	UBR fry	1999
29-Aug	Coho	183019	UBR fry	1999
29-Aug	Coho	183019	UBR fry	1999
30-Aug	Coho	183019	UBR fry	1999

Sample Date(2002)	Species	Tag Code	Release Group	Brood Year
4-Sep	Coho	183019	UBR fry	1999
4-Sep	Coho	183019	UBR fry	1999
8-Aug	Coho	183020	UBR fry	1999
13-Aug	Coho	183020	UBR fry	1999
14-Aug	Coho	183020	UBR fry	1999
14-Aug	Coho	183020	UBR fry	1999
16-Aug	Coho	183020	UBR fry	1999
20-Aug	Coho	183020	UBR fry	1999
22-Aug	Coho	183020	UBR fry	1999
26-Aug	Coho	183020	UBR fry	1999
26-Aug	Coho	183020	UBR fry	1999
29-Aug	Coho	183020	UBR fry	1999
29-Aug	Coho	183020	UBR fry	1999
30-Aug	Coho	183020	UBR fry	1999
8-Aug	Coho	183021	Morice fry	1999
14-Aug	Coho	183021	Morice fry	1999
15-Aug	Coho	183021	Morice fry	1999
16-Aug	Coho	183021	Morice fry	1999
19-Aug	Coho	183021	Morice fry	1999
20-Aug	Coho	183021	Morice fry	1999
20-Aug	Coho	183021	Morice fry	1999
22-Aug	Coho	183021	Morice fry	1999
23-Aug	Coho	183021	Morice fry	1999
26-Aug	Coho	183021	Morice fry	1999
26-Aug	Coho	183021	Morice fry	1999
27-Aug	Coho	183021	Morice fry	1999
27-Aug	Coho	183021	Morice fry	1999
27-Aug	Coho	183021	Morice fry	1999
27-Aug	Coho	183021	Morice fry	1999
28-Aug	Coho	183021	Morice fry	1999
28-Aug	Coho	183021	Morice fry	1999
28-Aug	Coho	183021	Morice fry	1999
29-Aug	Coho	183021	Morice fry	1999
29-Aug	Coho	183021	Morice fry	1999
4-Sep	Coho	183021	Morice fry	1999
3-Sep	Coho	183230		chinook?
3-Sep	Coho	183244		chinook?
8-Aug	Coho	183430	UBR fry	1998
15-Aug	Coho	183430	UBR fry	1998
19-Aug	Coho	183430	UBR fry	1998
22-Aug	Coho	183430	UBR fry	1998
27-Aug	Coho	183430	UBR fry	1998
27-Aug	Coho	183430	UBR fry	1998
28-Aug	Coho	183430	UBR fry	1998
28-Aug	Coho	183430	UBR fry	1998
28-Aug	Coho	183430	UBR fry	1998
29-Aug	Coho	183430	UBR fry	1998

Sample Date(2002)	Species	Tag Code	Release Group	Brood Year
29-Aug	Coho	183430	UBR fry	1998
29-Aug	Coho	183430	UBR fry	1998
30-Aug	Coho	183430	UBR fry	1998
2-Sep	Coho	183430	UBR fry	1998
16-Sep	Coho	183430	UBR fry	1998
8-Aug	Coho	183431	UBR fry	1998
15-Aug	Coho	183431	UBR fry	1998
19-Aug	Coho	183431	UBR fry	1998
19-Aug	Coho	183431	UBR fry	1998
20-Aug	Coho	183431	UBR fry	1998
22-Aug	Coho	183431	UBR fry	1998
22-Aug	Coho	183431	UBR fry	1998
22-Aug	Coho	183431	UBR fry	1998
22-Aug	Coho	183431	UBR fry	1998
23-Aug	Coho	183431	UBR fry	1998
27-Aug	Coho	183431	UBR fry	1998
27-Aug	Coho	183431	UBR fry	1998
27-Aug	Coho	183431	UBR fry	1998
27-Aug	Coho	183431	UBR fry	1998
28-Aug	Coho	183431	UBR fry	1998
28-Aug	Coho	183431	UBR fry	1998
29-Aug	Coho	183431	UBR fry	1998
29-Aug	Coho	183431	UBR fry	1998
29-Aug	Coho	183431	UBR fry	1998
29-Aug	Coho	183431	UBR fry	1998
29-Aug	Coho	183431	UBR fry	1998
29-Aug	Coho	183431	UBR fry	1998
3-Sep	Coho	183431	UBR fry	1998
3-Sep	Coho	183431	UBR fry	1998
16-Sep	Coho	183431	UBR fry	1998
8-Aug	Coho	183539	UBR smolt	1999
15-Aug	Coho	183539	UBR smolt	1999
22-Aug	Coho	183539	UBR smolt	1999
23-Aug	Coho	183539	UBR smolt	1999
28-Aug	Coho	183539	UBR smolt	1999
29-Aug	Coho	183539	UBR smolt	1999
29-Aug	Coho	183539	UBR smolt	1999
29-Aug	Coho	183539	UBR smolt	1999
30-Aug	Coho	183539	UBR smolt	1999
30-Aug	Coho	183539	UBR smolt	1999
30-Aug	Coho	183539	UBR smolt	1999
9-Sep	Coho	183539	UBR smolt	1999
12-Sep	Coho	183539	UBR smolt	1999
15-Aug	Coho	183540	UBR smolt	1999
16-Aug	Coho	183540	UBR smolt	1999
19-Aug	Coho	183540	UBR smolt	1999
23-Aug	Coho	183540	UBR smolt	1999

Sample Date(2002)	Species	Tag Code	Release Group	Brood Year
28-Aug	Coho	183540	UBR smolt	1999
28-Aug	Coho	183540	UBR smolt	1999
29-Aug	Coho	183540	UBR smolt	1999
29-Aug	Coho	183540	UBR smolt	1999
30-Aug	Coho	183540	UBR smolt	1999
8-Aug	Coho	183541	UBR smolt	1999
14-Aug	Coho	183541	UBR smolt	1999
19-Aug	Coho	183541	UBR smolt	1999
22-Aug	Coho	183541	UBR smolt	1999
26-Aug	Coho	183541	UBR smolt	1999
28-Aug	Coho	183541	UBR smolt	1999
29-Aug	Coho	183541	UBR smolt	1999
29-Aug	Coho	183541	UBR smolt	1999
5-Sep	Coho	183541	UBR smolt	1999
5-Sep	Coho	183541	UBR smolt	1999
9-Sep	Coho	183541	UBR smolt	1999
11-Sep	Coho	183541	UBR smolt	1999
8-Aug	Coho	183542	TC smolt	1999
19-Aug	Coho	183542	TC smolt	1999
19-Aug	Coho	183542	TC smolt	1999
20-Aug	Coho	183542	TC smolt	1999
20-Aug	Coho	183542	TC smolt	1999
21-Aug	Coho	183542	TC smolt	1999
22-Aug	Coho	183542	TC smolt	1999
23-Aug	Coho	183542	TC smolt	1999
23-Aug	Coho	183542	TC smolt	1999
26-Aug	Coho	183542	TC smolt	1999
26-Aug	Coho	183542	TC smolt	1999
26-Aug	Coho	183542	TC smolt	1999
26-Aug	Coho	183542	TC smolt	1999
26-Aug	Coho	183542	TC smolt	1999
26-Aug	Coho	183542	TC smolt	1999
27-Aug	Coho	183542	TC smolt	1999
27-Aug	Coho	183542	TC smolt	1999
27-Aug	Coho	183542	TC smolt	1999
27-Aug	Coho	183542	TC smolt	1999
27-Aug	Coho	183542	TC smolt	1999
27-Aug	Coho	183542	TC smolt	1999
28-Aug	Coho	183542	TC smolt	1999
28-Aug	Coho	183542	TC smolt	1999
29-Aug	Coho	183542	TC smolt	1999
29-Aug	Coho	183542	TC smolt	1999
29-Aug	Coho	183542	TC smolt	1999
29-Aug	Coho	183542	TC smolt	1999
29-Aug	Coho	183542	TC smolt	1999
29-Aug	Coho	183542	TC smolt	1999
29-Aug	Coho	183542	TC smolt	1999
30-Aug	Coho	183542	TC smolt	1999
30-Aug	Coho	183542	TC smolt	1999

Sample Date(2002)	Species	Tag Code	Release Group	Brood Year
3-Sep	Coho	183542	TC smolt	1999
3-Sep	Coho	183542	TC smolt	1999
4-Sep	Coho	183542	TC smolt	1999
13-Sep	Coho	183542	TC smolt	1999
19-Sep	Coho	183542	TC smolt	1999
19-Sep	Coho	183542	TC smolt	1999
3-Aug	Coho	183543	TC smolt	1999
8-Aug	Coho	183543	TC smolt	1999
19-Aug	Coho	183543	TC smolt	1999
22-Aug	Coho	183543	TC smolt	1999
22-Aug	Coho	183543	TC smolt	1999
26-Aug	Coho	183543	TC smolt	1999
26-Aug	Coho	183543	TC smolt	1999
26-Aug	Coho	183543	TC smolt	1999
26-Aug	Coho	183543	TC smolt	1999
26-Aug	Coho	183543	TC smolt	1999
26-Aug	Coho	183543	TC smolt	1999
26-Aug	Coho	183543	TC smolt	1999
27-Aug	Coho	183543	TC smolt	1999
27-Aug	Coho	183543	TC smolt	1999
27-Aug	Coho	183543	TC smolt	1999
27-Aug	Coho	183543	TC smolt	1999
27-Aug	Coho	183543	TC smolt	1999
27-Aug	Coho	183543	TC smolt	1999
27-Aug	Coho	183543	TC smolt	1999
27-Aug	Coho	183543	TC smolt	1999
28-Aug	Coho	183543	TC smolt	1999
28-Aug	Coho	183543	TC smolt	1999
28-Aug	Coho	183543	TC smolt	1999
28-Aug	Coho	183543	TC smolt	1999
28-Aug	Coho	183543	TC smolt	1999
28-Aug	Coho	183543	TC smolt	1999
28-Aug	Coho	183543	TC smolt	1999
28-Aug	Coho	183543	TC smolt	1999
28-Aug	Coho	183543	TC smolt	1999
29-Aug	Coho	183543	TC smolt	1999
29-Aug	Coho	183543	TC smolt	1999
29-Aug	Coho	183543	TC smolt	1999
29-Aug	Coho	183543	TC smolt	1999
30-Aug	Coho	183543	TC smolt	1999
3-Sep	Coho	183543	TC smolt	1999
3-Sep	Coho	183543	TC smolt	1999
3-Sep	Coho	183543	TC smolt	1999
3-Sep	Coho	183543	TC smolt	1999
3-Sep	Coho	183543	TC smolt	1999
4-Sep	Coho	183543	TC smolt	1999
4-Sep	Coho	183543	TC smolt	1999
4-Sep	Coho	183543	TC smolt	1999
13-Sep	Coho	183543	TC smolt	1999
13-Sep	Coho	183543	TC smolt	1999
3-Aug	Coho	183544	TC smolt	1999
8-Aug	Coho	183544	TC smolt	1999
8-Aug	Coho	183544	TC smolt	1999

Sample Date(2002)	Species	Tag Code	Release Group	Brood Year
8-Aug	Coho	183544	TC smolt	1999
14-Aug	Coho	183544	TC smolt	1999
15-Aug	Coho	183544	TC smolt	1999
19-Aug	Coho	183544	TC smolt	1999
21-Aug	Coho	183544	TC smolt	1999
22-Aug	Coho	183544	TC smolt	1999
23-Aug	Coho	183544	TC smolt	1999
23-Aug	Coho	183544	TC smolt	1999
26-Aug	Coho	183544	TC smolt	1999
26-Aug	Coho	183544	TC smolt	1999
26-Aug	Coho	183544	TC smolt	1999
27-Aug	Coho	183544	TC smolt	1999
28-Aug	Coho	183544	TC smolt	1999
28-Aug	Coho	183544	TC smolt	1999
28-Aug	Coho	183544	TC smolt	1999
28-Aug	Coho	183544	TC smolt	1999
29-Aug	Coho	183544	TC smolt	1999
29-Aug	Coho	183544	TC smolt	1999
29-Aug	Coho	183544	TC smolt	1999
29-Aug	Coho	183544	TC smolt	1999
29-Aug	Coho	183544	TC smolt	1999
29-Aug	Coho	183544	TC smolt	1999
29-Aug	Coho	183544	TC smolt	1999
29-Aug	Coho	183544	TC smolt	1999
30-Aug	Coho	183544	TC smolt	1999
30-Aug	Coho	183544	TC smolt	1999
30-Aug	Coho	183544	TC smolt	1999
30-Aug	Coho	183544	TC smolt	1999
30-Aug	Coho	183544	TC smolt	1999
3-Sep	Coho	183544	TC smolt	1999
3-Sep	Coho	183544	TC smolt	1999
3-Sep	Coho	183544	TC smolt	1999
3-Sep	Coho	183544	TC smolt	1999
3-Sep	Coho	183544	TC smolt	1999
5-Sep	Coho	183544	TC smolt	1999
5-Sep	Coho	183544	TC smolt	1999
6-Sep	Coho	183544	TC smolt	1999
6-Sep	Coho	183544	TC smolt	1999
19-Sep	Coho	183544	TC smolt	1999
19-Sep	Coho	183544	TC smolt	1999
19-Sep	Coho	183544	TC smolt	1999
27-Sep	Coho	183544	TC smolt	1999
27-Aug	Coho	184316	UBR fry	1999
13-Aug	Coho	Lost pin		
16-Aug	Coho	no pin		
23-Aug	Coho	no pin		
23-Aug	Coho	no pin		
26-Aug	Coho	no pin		
26-Aug	Coho	no pin		

Sample Date(2002)	Species	Tag Code	Release Group	Brood Year
27-Aug	Coho	no pin		
27-Aug	Coho	no pin		
27-Aug	Coho	no pin		
28-Aug	Coho	no pin		
28-Aug	Coho	(No) pin		
29-Aug	Coho	no pin		
29-Aug	Coho	no pin		
29-Aug	Coho	no pin		
29-Aug	Coho	no pin		

Summary of Coho Tags Recovered at Moricetown in 2002 Fishing Season

Tag Code	Species	Release Group	Brood Yr	No Tags Rec
80247	Coho	TC wild smolt	na	2
80249	Coho	TC wild smolt	na	3
80250	Coho	TC wild smolt	na	8
Total				13

183018	Coho	UBR fry	1999	16
183019	Coho	UBR fry	1999	19
183020	Coho	UBR fry	1999	12
184316	Coho	UBR fry	1999	1
Total				48

183021	Coho	Morice fry	1999	21
--------	------	------------	------	----

183430	Coho	UBR fry	1998	15
183431	Coho	UBR fry	1998	25
Total				40

183539	Coho	UBR smolt	1999	13
183540	Coho	UBR smolt	1999	9
183541	Coho	UBR smolt	1999	12
Total				34

183542	Coho	TC smolt	1999	36
183543	Coho	TC smolt	1999	38
183544	Coho	TC smolt	1999	43
Total				117

No pin	Coho			14
Lost pin	Coho			1

Total tags read				273
-----------------	--	--	--	-----

Proportion that were Toboggan Creek Wild Coho	0.05
Proportion that were Toboggan Creek Smolt(99 brood)	0.429
Proportion that were UBR fry(1998 brood)	0.15
Proportion that were UBR fry(1999 brood)	0.18
Proportion that were UBR smolts(1999 brood)	0.125
Proportion that were UBR smolts(1998 brood)	0
Proportion that were Morice fry(1999 brood)	0.077

APPENDIX D
UPPER BULKLEY RIVER FENCE AND CARCASS RECOVERY
PROGRAM
CODED WIRE TAG RECOVERY DATA
2002

**Coded Wire Tags From Coho Sacrificed
at the Fence and from Carcass Recovery Program : 2002**

Sample Date(2002)	Species	Tag Code	Release Group	Brood Year
19-Sep	Coho	183018	UBR fry	1999
20-Sep	Coho	183018	UBR fry	1999
22-Sep	Coho	183018	UBR fry	1999
24-Sep	Coho	183018	UBR fry	1999
24-Sep	Coho	183018	UBR fry	1999
9-Oct	Coho	183018	UBR fry	1999
24-Oct	Coho	183018	UBR fry	1999
25-Oct	Coho	183018	UBR fry	1999
29-Oct	Coho	183018	UBR fry	1999
2-Sep	Coho	183019	UBR fry	1999
16-Sep	Coho	183019	UBR fry	1999
19-Sep	Coho	183019	UBR fry	1999
20-Sep	Coho	183019	UBR fry	1999
21-Sep	Coho	183019	UBR fry	1999
24-Sep	Coho	183019	UBR fry	1999
17-Oct	Coho	183019	UBR fry	1999
23-Oct	Coho	183019	UBR fry	1999
29-Oct	Coho	183019	UBR fry	1998
14-Sep	Coho	183020	UBR fry	1998
16-Sep	Coho	183020	UBR fry	1998
19-Sep	Coho	183020	UBR fry	1998
19-Sep	Coho	183020	UBR fry	1998
21-Sep	Coho	183020	UBR fry	1998
24-Sep	Coho	183020	UBR fry	1998
25-Sep	Coho	183020	UBR fry	1998
25-Oct	Coho	183020	UBR fry	1998
29-Oct	Coho	183020	UBR fry	1999
14-Sep	Coho	183430	UBR fry	1999
15-Sep	Coho	183430	UBR fry	1999
25-Sep	Coho	183430	UBR fry	1999
20-Oct	Coho	183430	UBR fry	1999
29-Oct	Coho	183430	UBR fry	1999
29-Oct	Coho	183430	UBR fry	1999
29-Oct	Coho	183430	UBR fry	1999
29-Oct	Coho	183430	UBR fry	1999
29-Oct	Coho	183430	UBR fry	1999
na	Coho	183430	UBR fry	1999
19-Sep	Coho	183431	UBR fry	1999
19-Sep	Coho	183431	UBR fry	1999
20-Sep	Coho	183431	UBR fry	1999
20-Sep	Coho	183431	UBR fry	1999
21-Sep	Coho	183431	UBR fry	1999
24-Sep	Coho	183431	UBR fry	1999
9-Oct	Coho	183431	UBR fry	1999
17-Oct	Coho	183431	UBR fry	1999

Sample Date(2002)	Species	Tag Code	Release Group	Brood Year
24-Oct	Coho	183431	UBR fry	1999
29-Oct	Coho	183431	UBR fry	1999
29-Oct	Coho	183431	UBR fry	1999
29-Oct	Coho	183431	UBR fry	1999
29-Oct	Coho	183431	UBR fry	1999
29-Oct	Coho	183431	UBR fry	1999
29-Oct	Coho	183431	UBR fry	1999
na	Coho	183431	UBR fry	1999
29-Sep	Coho	183539	UBR smolt	1999
9-Oct	Coho	183539	UBR smolt	1999
na	Coho	183539	UBR smolt	1999
20-Sep	Coho	183540	UBR smolt	1999
20-Sep	Coho	183540	UBR smolt	1999
23-Sep	Coho	183540	UBR smolt	1999
26-Sep	Coho	183540	UBR smolt	1999
15-Oct	Coho	183540	UBR smolt	1999
24-Oct	Coho	183540	UBR smolt	1999
29-Oct	Coho	183540	UBR smolt	1999
29-Oct	Coho	183540	UBR smolt	1999
na	Coho	183540	UBR smolt	1999
20-Sep	Coho	183541	UBR smolt	1999
21-Sep	Coho	183541	UBR smolt	1999
22-Sep	Coho	183541	UBR smolt	1999
27-Sep	Coho	184316	UBR fry	1999
9-Oct	Coho	184316	UBR fry	1999
25-Sep	Coho	no pin		
29-Oct	Coho	no pin		

Summary of Tag Codes Recovered at the UBR Fence/Carcass Rec : 2002

Tag Code	Species	Release Group	Brood Yr	No Tags Rec	Prop'n of Total
183430	Coho	Fry	1998	10	0.143
183431	Coho	Fry	1998	16	0.229
183018	Coho	Fry	1999	9	0.129
183019	Coho	Fry	1999	9	0.129
183020	Coho	Fry	1999	9	0.129
184316	Coho	Fry	1999	2	0.029
183539	Coho	Smolt	1999	3	0.043
183540	Coho	Smolt	1999	9	0.129
183541	Coho	Smolt	1999	3	0.043

MORICETOWN

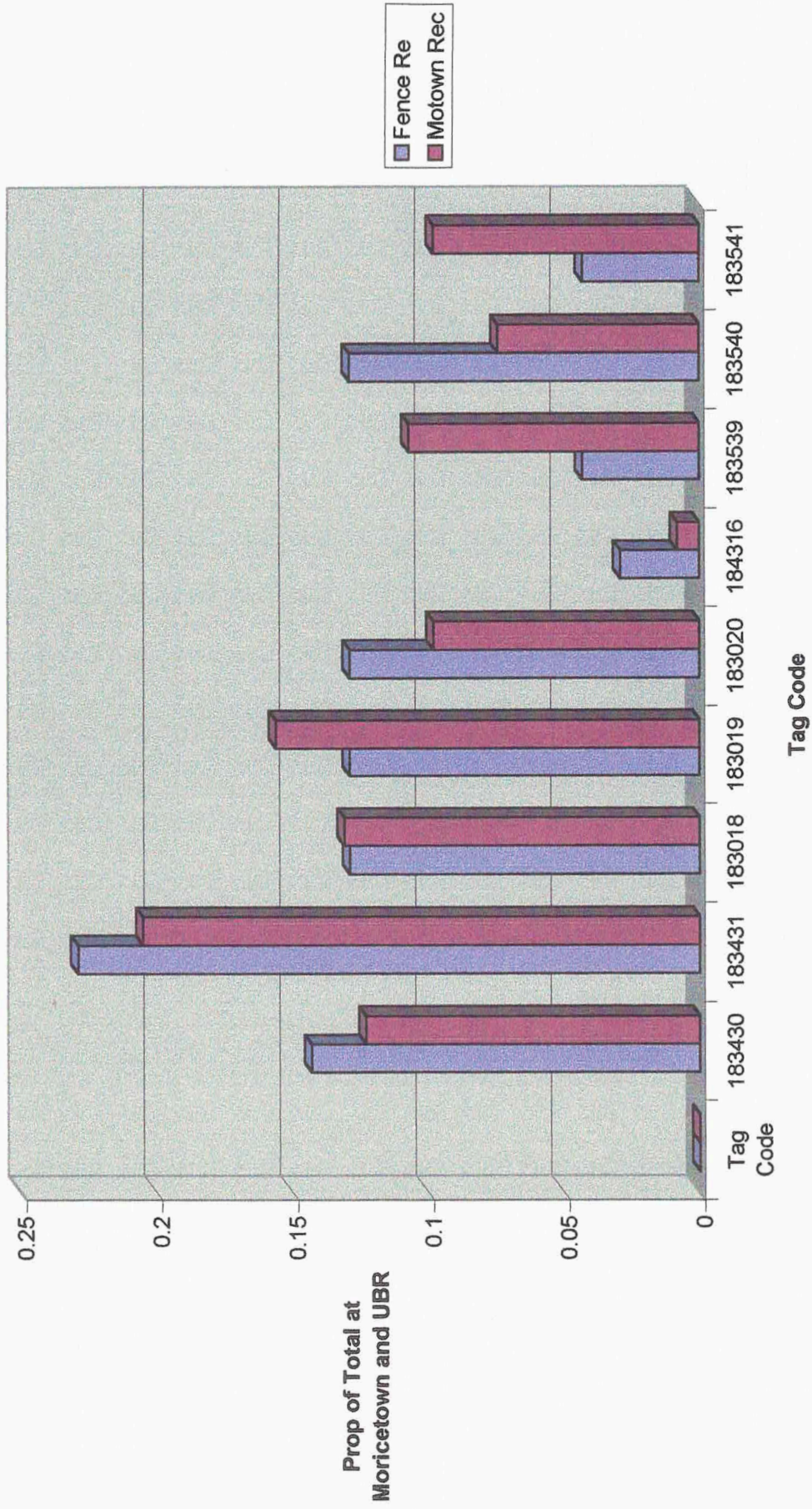
15
25
16
19
12
1
13
9
12

Total tags	70
------------	----

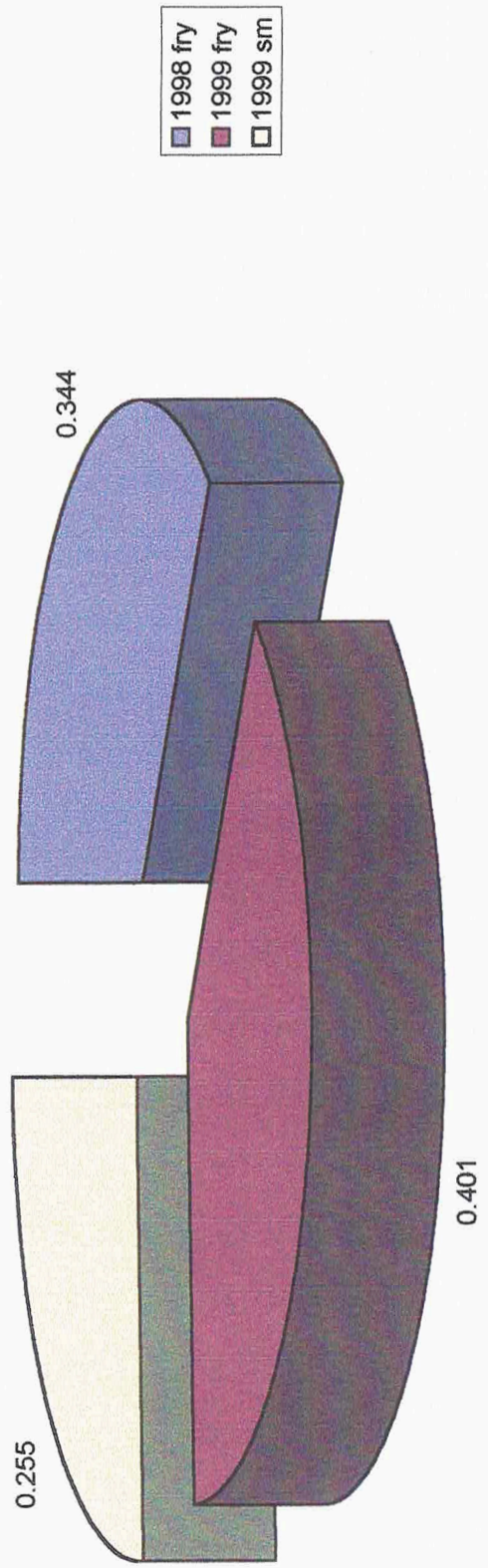
122

Tag Code	Fence Re Prop	Motown Rec Prop
183430	0.143	0.123
183431	0.229	0.205
183018	0.129	0.131
183019	0.129	0.156
183020	0.129	0.098
184316	0.029	0.008
183539	0.043	0.107
183540	0.129	0.074
183541	0.043	0.098

CWT Recovery Comparison : Moricetown Fishery vs UBR Fence/Carcass Recovery 2002



CWT Recoveries of UBR Coho : 2002



Timing of UBR Tag Codes through Moricetown Fishery

Number of Tags Recovered

Dates	99 Br fry 183018	99 Br fry 183019	99 Br fry 183020	99 Br fry 184316	98 Br fry 183430	98 Br fry 183431	99 Br sm 183539	99 Br sm 183540	99 Br sm 183541
Aug 14-21	4	6	0	0	3	5	2	3	3
Aug 22-28	8	3	1	6	11		3	3	3
Aug 29-Sep 4	7	3	0	5	8		6	3	2
Sep 5-11	0	0	0	0	0		2	0	4
Sep 12-18	0	0	0	0	1		0	0	0
Sep 19-25	1	0	0	0	0		0	0	0
Totals	16	19	12	1	15	25	13	9	12

Proportion of Total Tags Recovered

Dates	99 Br fry 183018	99 Br fry 183019	99 Br fry 183020	99 Br fry 184316	98 Br fry 183430	98 Br fry 183431	99 Br sm 183539	99 Br sm 183540	99 Br sm 183541
Aug 14-21	0.049	0.033	0.049	0.000	0.025	0.041	0.016	0.025	0.025
Aug 22-28	0.025	0.066	0.025	0.008	0.049	0.090	0.025	0.025	0.025
Aug 29-Sep 4	0.049	0.057	0.025	0.000	0.041	0.066	0.049	0.025	0.016
Sep 5-11	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.033
Sep 12-18	0.000	0.000	0.000	0.000	0.008	0.008	0.000	0.000	0.000
Sep 19-25	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Proportion of Tags Recovered by Tag Code

Dates	99 Br fry All Codes	99 Br sm All Codes	98 Br fry All Codes
Aug 14-21	0.333	0.235	0.200
Aug 22-28	0.313	0.265	0.425
Aug 29-Sep 4	0.333	0.324	0.325
Sep 5-11	0.000	0.176	0.000
Sep 12-18	0.000	0	0.050
Sep 19-25	0.021	0	0.000

APPENDIX E
DORSAL FIN TAG RECOVERY DATA
2002

Upper Bulkley River Coho Assessment Fence 2002 : Dorsal Fin Tag Recoveries

Date	Sex	Tag Color	Number	
9-Sep	Female	Blue	50195 MF	Blue and Green Lacmach = Dipnet fishery
9-Sep	Male	Blue	50402 MF	
13-Sep	Female	Blue	50257 MF	
13-Sep	Female	Blue	50283 MF	
13-Sep	Male	Blue	51381 MF	
14-Sep	Male	Blue	50889 MF	
15-Sep	Female	Blue	50115 MF	
15-Sep	Female	Blue	51022 MF	
16-Sep	Male	Blue	51141 MF	
16-Sep	Female	Blue	52065 MF	
17-Oct	Female	Blue	0832 DFO	
17-Oct	Female	Blue	51008 MF	
17-Sep	Male	Blue	51064 MF	
17-Sep	Female	Blue	51259 MF	
18-Sep	Male	Blue	50499 MF	
18-Sep	Female	Blue	51346 MF	
18-Oct	Male	Blue	52952 MF	
19-Sep	Male	Blue	50015 MF	
19-Sep	Male	Blue	50026 MF	
19-Sep	Male	Blue	50091 MF	
19-Sep	Female	Blue	50093 MF	
19-Sep	Male	Blue	50154 MF	
19-Sep	Male	Blue	50202 MF	
19-Sep	Male	Blue	50363 MF	
19-Sep	Male	Blue	50537 MF	
19-Sep	Male	Blue	50649 MF	
19-Sep	Female	Blue	50674 MF	
19-Sep	Male	Blue	50951 MF	
19-Sep	Female	Blue	51189 MF	
19-Sep	Male	Blue	51545 MF	
19-Sep	Male	Blue	51710 MF	
20-Sep	Male	Blue	50203 MF	
20-Sep	Male	Blue	50582 MF	
20-Sep	Male	Blue	50816 MF	
20-Sep	Male	Blue	50859 MF	
20-Sep	Male	Blue	51171 MF	
20-Sep	Male	Blue	51224 MF	
20-Sep	Male	Blue	51289 MF	
20-Sep	Male	Blue	51311 MF	
20-Sep	Male	Blue	51395 MF	
20-Sep	Female	Blue	51625 MF	
20-Sep	Male	Blue	51639 MF	
20-Sep	Female	Blue	51753 MF	
20-Sep	Male	Blue	51940 MF	

Seine Fishery Dorsal Fin Tag Applications
 Yellow 1000- 1500 = July 22-28
 White 3000-3999 = July 29 - Aug 4
 White 3000-3999 = Aug 5 - 11
 Yellow 1000- 1500 = Aug 12-18
 Pink 4000-4999 = Aug 19-25
 Red 5000-5999 = Aug 26-Sep 1
 Lime Green 7000-7500 and 7750-7999 = Sep 2-8
 Light Blue 6000-6999 and 601-1000PR = Sep 9-15
 Grey 8000-8500 = Sep 16-22
 Purple 9000-9500 = Sep 23-29

Upper Bulkley River Coho Assessment Fence 2002 : Dorsal Fin Tag Recoveries

Date	Sex	Tag Color	Number
20-Sep	Female	Blue	52476 MF
20-Sep	Male	Blue	52781 MF
21-Sep	Male	Blue	50176 MF
21-Sep	Male	Blue	50213 MF
21-Sep	Male	Blue	50251 MF
21-Sep	Male	Blue	50319 MF
21-Sep	Female	Blue	50427 MF
21-Sep	Male	Blue	50570 MF
21-Sep	Female	Blue	50740 MF
21-Sep	Female	Blue	50950 MF
21-Sep	Female	Blue	51327 MF
21-Sep	Female	Blue	51435 MF
21-Sep	Female	Blue	51796 MF
21-Sep	Female	Blue	51996 MF
21-Sep	Female	Blue	52116 MF
21-Sep		Blue	52205 MF
21-Sep	Female	Blue	52550 MF
21-Sep	Female	Blue	6165 MS
22-Sep	Male	Blue	50290 MF
22-Sep	Male	Blue	50561 MF
22-Sep	Male	Blue	50671 MF
22-Sep	Male	Blue	50899 MF
22-Sep	Female	Blue	51895 MF
22-Sep	Male	Blue	52088 MF
23-Sep	Female	Blue	52233 MF
23-Sep	Female	Blue	52463 MF
24-Sep	Female	Blue	50745 MF
24-Sep	Female	Blue	50835 MF
24-Sep	Male	Blue	51389 MF
24-Sep	Female	Blue	51406 MF
24-Sep	Male	Blue	51407 MF
24-Sep	Male	Blue	51486 MF
24-Sep	Male	Blue	52073 MF
24-Sep	Female	Blue	52315 MF
24-Sep	Female	Blue	52737 MF
24-Sep	Male	Blue	52875 MF
24-Sep		Blue	6028 MS
24-Sep	Male	Blue	6242 MS
24-Sep	Male	Blue	6867 MS
25-Sep	Male	Blue	51364 MF
25-Sep	Male	Blue	51567 MF
25-Sep	Female	Blue	51630 MF
25-Sep	Female	Blue	51907 MF
25-Sep	Female	Blue	52260 MF
25-Sep	Female	Blue	52435 MF

Upper Bulkley River Coho Assessment Fence 2002 : Dorsal Fin Tag Recoveries

Date	Sex	Tag Color	Number
25-Sep	Female	Blue	52664 MF
25-Sep	Female	Blue	52670 MF
25-Sep	Male	Blue	52743 MF
25-Sep	Male	Blue	6208 MS
26-Sep	Female	Blue	51925 MF
26-Sep	Male	Blue	52796 MF
26-Sep	Female	Blue	52858 MF
27-Sep	Female	Blue	51904 MF
27-Sep	Female	Blue	6271 MS
28-Sep	Male	Blue	52481 MF
28-Sep	Female	Blue	6124 MS
1-Oct	Female	Blue	52982 MF
7-Oct	Male	Blue	52595 MF
20-Oct	Male	Blue	52724 MF
22-Oct	Female	Blue	0833 DFO PR
22-Oct	Female	Blue	50997 MF
22-Oct	Male	Blue	52747 MF
23-Oct	Female	Blue	6089 MS
23-Oct	Female	Blue	6380 MS
16-Sep	Male	Green	7997 MS
17-Oct	Female	Green	7949 MS
19-Sep	Male	Green	7317 MS
20-Sep	Male	Green	7220 MS
20-Sep	Female	Green	7716 MS
20-Sep	Female	Green	7749 MS
20-Sep	Female	Green	7775 MS
20-Sep	Female	Green	7835 MS
20-Sep	Female	Green	7857 MS
20-Sep	Male	Green	7903 MS
21-Sep	Female	Green	7901 MS
22-Sep	Female	Green	7105 MS
23-Sep	Male	Green	7876 MS
24-Sep	Female	Green	7345 MS
24-Sep	Male	Green	7367 MS
24-Sep	Female	Green	7981 MS
24-Sep	Female	Green	8065 MS
25-Sep	Male	Green	7477 MS
25-Sep	Female	Green	7733 MS
25-Sep	Female	Green	7914 MS
26-Sep	Female	Green	3030 Lachmach R.
27-Sep	Female	Green	7935 MS
28-Sep	Male	Green	7391 MS
29-Sep	Male	Green	7122 MS
30-Sep	Female	Green	3097 Lachmach R.
30-Sep	Male	Green	3387 Lachmach R.

Upper Bulkley River Coho Assessment Fence 2002 : Dorsal Fin Tag Recoveries

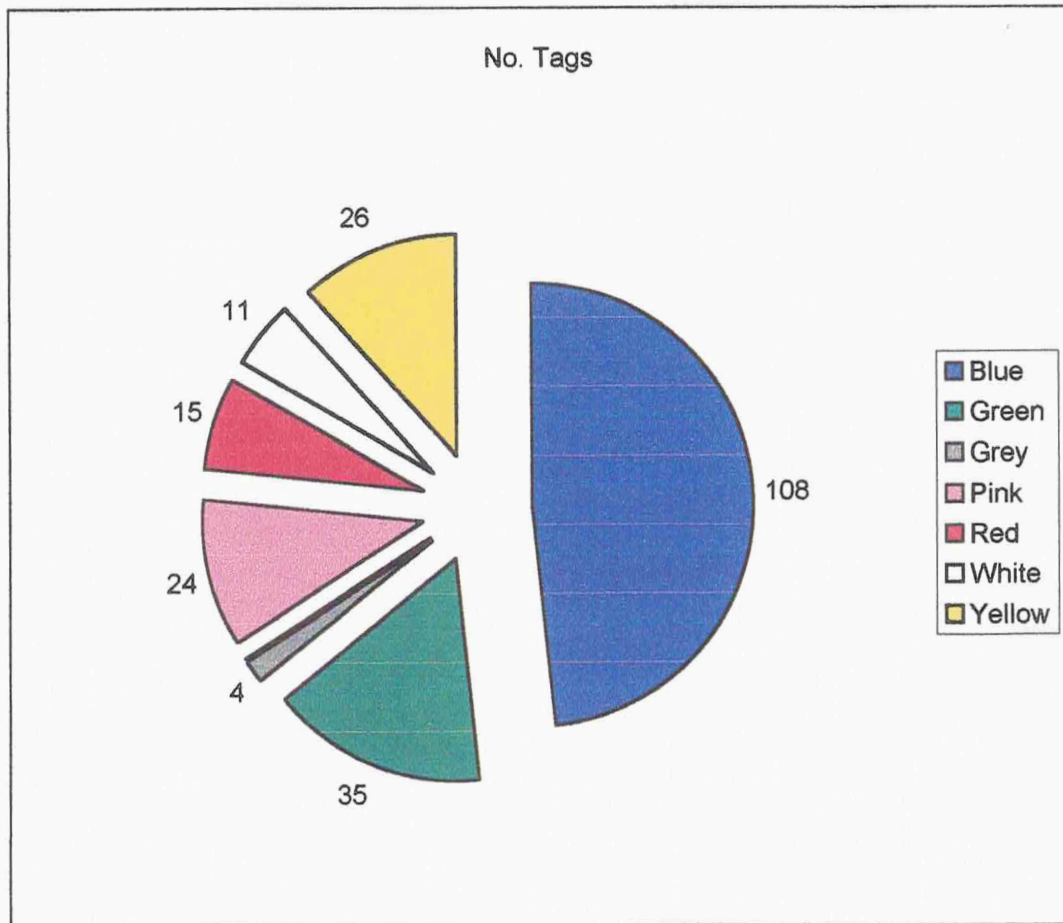
<u>Date</u>	<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
30-Sep	Male	Green	7248 MS
8-Oct	Female	Green	3571 Lachmach River
8-Oct	Male	Green	3593 Lachmach River
22-Oct	Male	Green	3181 Lachmach R
23-Oct	Male	Green	3089 Lachmach River
23-Oct	Female	Green	3550 Lachmach R
23-Oct	Female	Green	7016 MS
23-Oct	Female	Green	7218 MS
24-Oct	Female	Green	7727 MS
27-Sep	Male	Grey	8062 MS
27-Sep	Male	Grey	8292 MS
1-Oct	Female	Grey	8427 MS
23-Oct	Female	Grey	8440 MS
13-Sep	Female	Pink	4525 MS
14-Sep	Female	Pink	4035 MS
15-Sep	Female	Pink	4335 MS
19-Sep	Male	Pink	4200 MS
19-Sep	Female	Pink	4323 MS
19-Sep	Male	Pink	4470 MS
19-Sep	Male	Pink	4534 MS
19-Sep	Female	Pink	4551 MS
19-Sep	Male	Pink	4606 MS
20-Sep	Female	Pink	4396 MS
20-Sep	Male	Pink	4602 MS
20-Sep	Male	Pink	4861 MS
20-Sep	Male	Pink	4921 MS
21-Sep	Male	Pink	4189 MS
21-Sep	Male	Pink	4310 MS
21-Sep	Male	Pink	4572 MS
21-Sep	Male	Pink	4913 MS
22-Sep	Male	Pink	4770 MS
22-Sep	Female	Pink	4950 MS
24-Sep	Male	Pink	4118 MS
25-Sep	Male	Pink	4707 MS
28-Sep	Male	Pink	4947 MS
29-Sep	Male	Pink	4953 MS
23-Oct	Male	Pink	4299 MS
14-Sep	Female	Red	5165 MS
16-Sep	Female	Red	5990 MS
19-Sep	Male	Red	5415 MS
19-Sep	Female	Red	5685 MS
20-Sep	Female	Red	5670 MS
20-Sep	Female	Red	5716 MS
20-Sep	Male	Red	5917 MS
23-Sep	Female	Red	5322 MS

Upper Bulkley River Coho Assessment Fence 2002 : Dorsal Fin Tag Recoveries

Date	Sex	Tag Color	Number
23-Sep	Female	Red	5932 MS
24-Sep	Male	Red	5498 MS
24-Sep	Male	Red	5606 MS
26-Sep	Female	Red	5075 MS
26-Sep	Female	Red	5930 MS
18-Oct	Male	Red	5642 MS
22-Oct	Female	Red	5057 MS
18-Sep	Male	White	3420 MS
20-Sep	Male	White	3205 MS
20-Sep	Male	White	3266 MS
20-Sep	Male	White	3332 MS
20-Sep	Male	White	3430 MS
21-Sep	Male	White	3015 MS
21-Sep	Female	White	3152 MS
21-Sep	Male	White	3177 MS
23-Sep	Male	White	3213 MS
25-Sep	Male	White	3221 MS
29-Sep	Female	White	3417 MS
13-Sep	Female	Yellow	1072 MS
13-Sep	Male	Yellow	1183 MS
14-Sep	Female	Yellow	1018 MS
14-Sep	Female	Yellow	1049 MS
14-Sep	Female	Yellow	1171 MS
16-Sep	Male	Yellow	1201 MS
17-Sep	Male	Yellow	1033 MS
19-Sep	Male	Yellow	1004 MS
19-Sep	Male	Yellow	1039 MS
19-Sep	Male	Yellow	1363 MS
19-Sep	Male	Yellow	1374 MS
19-Sep	Male	Yellow	1488 MS
20-Sep	Female	Yellow	1096 MS
20-Sep	Male	Yellow	1117 MS
20-Sep	Female	Yellow	1137 MS
20-Sep	Male	Yellow	1175 MS
20-Sep	Female	Yellow	1299 MS
20-Sep	Female	Yellow	1310 MS
20-Sep	Female	Yellow	1479 MS
20-Sep	Female	Yellow	3001 MS
21-Sep	Male	Yellow	1377 MS
21-Sep	Male	Yellow	1459 MS
22-Sep	Male	Yellow	1365 MS
24-Sep	Male	Yellow	1217 MS
24-Sep	Female	Yellow	1395 MS
25-Sep	Male	Yellow	1008 MS

Summary of Dorsal Fin Tag Recoveries at the UBR Fence : 2002

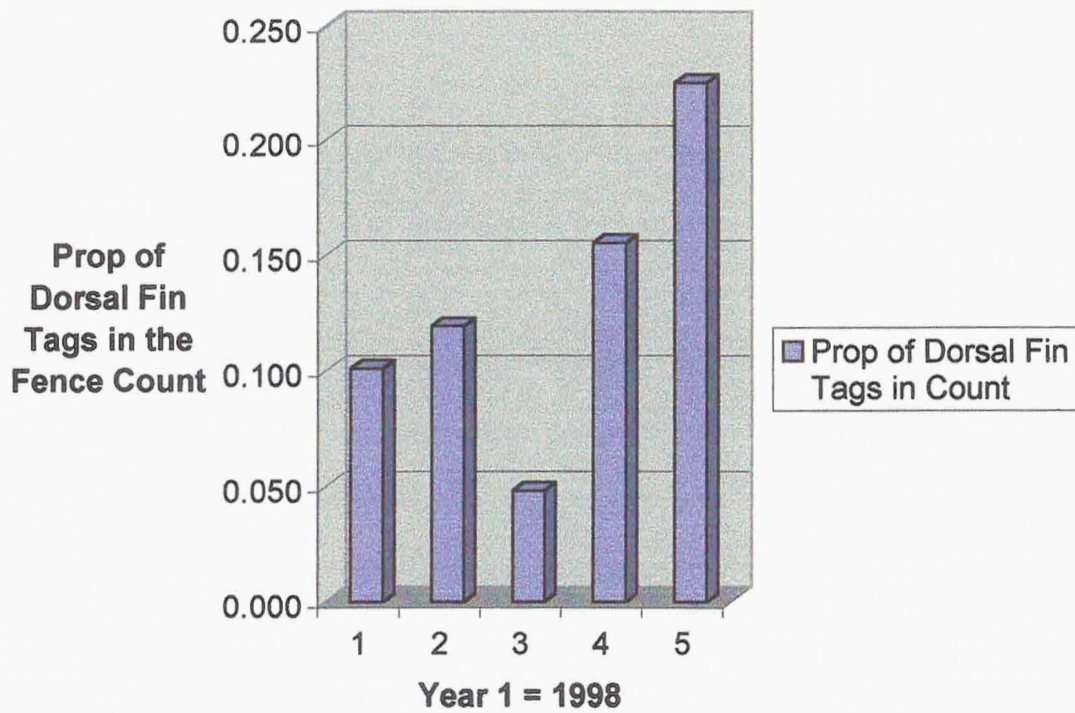
Color	No. Tags
Blue	108
Green	35
Grey	4
Pink	24
Red	15
White	11
Yellow	26
Total	223



Upper Bulkley River Coho Assessment Fence : Dorsal Fin Tag Summary 1998 - 2002

Return Year	No. Dorsal Tags Rec	Total Fence Count	Prop of Dorsal Fin Tags in Count
1998	32	317	0.101
1999	128	1073	0.119
2000	8	166	0.048
2001	341	2197	0.155
2002	223	990	0.225

Prop of Dorsal Fin Tags in Fence Count



APPENDIX F
UPPER BULKLEY RIVER FENCE DAILY CAPTURE RECORDS
2002

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

8-Sep-02

Water Temp

10 C

Water level(cms)

33 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	1

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
1 unmarked male chinook

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
4	4

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
7	9

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Female	Pink	4525 MS
Female	Yellow	1072 MS
Female	Blue	50257 MF
Female	Blue	50283 MF
Male	Yellow	1783 MS
Male	Blue	51381 MF

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
4	4

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
9	11

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Female	Yellow	1049 MS
Male	Blue	50889 MF
Female	Yellow	1171 MS
Female	Red	5165 MS
Female	Yellow	1018 MS
Female	Pink	4035 MS

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 Captured 1 whitefish.
 1 sthd dead on the fence.
 2 Adipose clips taken for heads with
 E-tags 455700E and 455699E

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 15-Sep-02

Water Temp 11 C

Water level(cms) 39.3 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
1	6

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
6	3

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Female	Blue	50115 MF
Female	Pink	4335 MS
Female	Blue	51022 MF

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
 1 adipose female taken for the head.
 E tag number is 455602E

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

16-Sep-02

Water Temp

10 C

Water level(cms)

37.3 cms

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
6	8

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
18	11

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Female	Orange	5990 MS
Male	Blue	51141 MF
Male	Green	7997 MS
Male	Yellow	1201 MS
Female	Blue	52065 MF

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 2 Adipose males sacrificed for heads with E-tag numbers : 455603E and 455604E

 5 whitefish

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 18-Sep-02

Water Temp 9.2 C

Water level(cms) 35.8 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
2	3

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
2	1

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Male	White	3420 MS
Female	Blue	51346 MF
Male	Blue	50499 MF

Number of Coho Removed for Broodstock			
Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
19	16

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
68	44

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Male	Yellow	1374 MS
Female	Orange	4323 MS
Male	Green	7317 MS
Male	Yellow	1363 MS
Female	Pink	4551 MS
Male	Yellow	1488 MS
Female	Orange	5685 MS
Male	Blue	50154 MF
Male	Blue	50951 MF
Male	Orange	5415 MS
Male	Yellow	1004 MS
Female	Blue	50093 MF
Female	Blue	50674 MF
Male	Blue	50537 MF
Male	Blue	50015 MF
Female	Blue	51189 MF
Male	Blue	50026 MF

Number of Coho Removed for Broodstock
 Ad Males Ad Female Wild Male Wild Female

<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
--------------------------------	--------------------------------	--------------------------------	--------------------------------

see next page for remainder of Dorsal Fin Tagged Coho

Comments
 11 whitefish
 5 adipose coho sacrificed for the heads
 E-tag numbers as follows :
 Female : 455606E
 Female : 455607E
 Female : 455608E
 Male : 455609E
 Male : 455610E

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

19-Sep-02 continued

Water Temp

Water level(cms)

Coho CaptureTally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>

Wild Coho	
<u>Males</u>	<u>Females</u>

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	Yellow	1039 MS
Male	Orange	4534 MS
Male	Blue	51545 MF
Male	Pink	4606 MS
Male	Blue	50649 MF
Male	Orange	4200 MS
Male	Blue	50202 MF
Male	Blue	51710 MF
Male	Blue	50363 MF
Male	Pink	4470 MS
Male	Blue	50091 MF

Number of Coho Removed for Broodstock
Ad Males Ad Female Wild Male Wild Female

0	0	0	0

Comments

<div style="border: 1px solid black; min-height: 100px;"></div>

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 20-Sep-02

Water Temp 8 C

Water level(cms) 63.5 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
26	25

Ad/Rmax Clipped Coho	
Males	Females
0	1

Wild Coho	
Males	Females
96	37

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Male	Yellow	7117 MS
Male	Blue	50203 MF
Male	White	3332 MS
Male	Blue	52781 MF
Female	Orange	5670 MS
Male	Yellow	1175 MS
Female	Yellow	3001 MS
Male	Blue	51940 MF
Female	Green	7857 MS
Female	Orange	4396 MS
Male	Orange	4921 MS
Male	Green	7220 MS
Male	White	3266 MS
Female	Green	7835 MS
Male	Blue	50816 MF
Female	Blue	52476 MF
Female	Yellow	1137 MS
Male	Blue	50859 MF
Male	Blue	51311 MF
Female	Orange	5716 MS
Female	Yellow	1479 MS

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

see next page for more dorsal tag info

Comments	
41 whitefish, 2 bull trout, 1 sthd	
7 coho sacrificed for heads - tags as follow:	
Male : 455611E	
Male : 455612E	Male : 455616E
Female : 455613E	Female : 455617E
Female : 455614E	
Male : 455615E	

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

20-Sep-02 continued

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
Males	Females

Wild Coho	
Males	Females

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Ad/Rmax Clipped Coho	
Males	Females

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Female	Green	7775 MS
Male	Green	7903 MS
Female	Yellow	1096 MS
Female	Green	7749 MS
Female	Green	7716 MS
Female	Yellow	1299 MS
Male	Blue	51395 MF
Male	Blue	51289 MF
Male	Blue	51171 MF
Male	Pink	4602 MS
Male	White	3430 MS
Male	Pink	4861 MS
Female	Blue	51753 MF
Female	Blue	51625 MF
Male	Blue	51224 MF
Male	Blue	50582 MF
Male	White	3205 MS
Female	Yellow	1310 MS
Male	Blue	51639 MF
Male	Red	5917 MS

Comments

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

21-Sep-02

Water Temp

8 C

Water level(cms)

64.5 cms

Coho CaptureTally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
16	12

Wild Coho	
<u>Males</u>	<u>Females</u>
36	50

Number of Coho Removed for Broodstock
Ad Males Ad Female Wild Male Wild Female

5	1	8	11
---	---	---	----

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Female	Blue	5176 MS
Male	Green	27005 SFWF
Male	White	3171 MS
Male	Yellow	1459 MS
Female	Blue	50740 MF
Male	Pink	4189 MS
Male	Blue	50176 MF
Female	Blue	50950 MF
Female	Blue	51435 MF
Female	Blue	51996 MF
Male	White	3015 MS
Male	Pink	4310 MS
Male	Blue	50319 MF
Female	Blue	50427 MF
Male	Blue	50213 MF
Female	Blue	51327 MF
	Blue	52205 MF
Female	White	3152 MS
Female	Blue	52116 MF
Male	Pink	4913 MS
Male	Blue	50251 MF

see next page for more dorsal tag data

Comments
17 Bull Trout
8 whitefish
23 Steelhead
Sthd tag : Female # SH30006

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

21-Sep-02 continued

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
Males	Females

Ad/Rmax Clipped Coho	
Males	Females

Wild Coho	
Males	Females

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Female	Blue	6165 MS
Male	Yellow	1377 MS
Female	Blue	52550 MF
Male	Pink	4572 MS
Male	Blue	50570 MF
Female	Green	7901 MS

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
 E-tag information is as follows :
 Female : 455619E
 Female : 455620E
 Male : 455621E
 Male : 455622E

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
12	7

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
28	15

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	Blue	50290 MF
Male	Pink	4770 MS
Male	Blue	52083 MF
Male	Blue	50899 MF
Male	Blue	50561 MF
Male	Blue	50671 MF
Female	Blue	51895 MF
Male	Yellow	1365 MS
Female	Green	7105 MS
Female	Pink	4950 MS

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
5	1	4	2

Comments
 6 steelhead
 1 whitefish

 Coho E-tag information is as follows :
 Male : 455623E
 Female : 455624E

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
2	5

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
7	4

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	White	3213 MS
Male	Green	7876 MS
Female	Orange	5932 MS
Female	Orange	5322 MS
Female	Blue	52233 MF
Female	Blue	52463 MF

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 6 whitefish

 E-tag information is as follows :
 Female : 455625E

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
21	13

Wild Coho	
<u>Males</u>	<u>Females</u>
23	27

Number of Coho Removed for Broodstock			
<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	Pink	4118 MS
Male	Blue	52073 MF
Female	Green	8065 MS
Male	Blue	52875 MF
Female	Green	7981 MS
Male	Blue	6867 MS
Male	Orange	5606 MS
Male	Blue	51407 MF
Male	Orange	5498 MS
Male	Yellow	1217 MS
Male	Green	7367 MS
	Blue	6028 MS
Female	Blue	51406 MF
Male	Blue	51486 MF
Female	Green	7345 MS
Male	Blue	6242 MS
Female	Yellow	1395 MS
Female	Blue	50745 MF
Female	Blue	52737 MF
Female	Blue	50835 MF
Female	Blue	52315 MF
Male	Blue	51389 MF

Comments
 8 steelhead
 2 bull trout
 E-Tag information is as follows :
 Male : 455626E Female : 455630E
 Male : 455627E Male : 455629E
 Male : 455628E

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
13	7

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
11	19

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	White	3221 MS
Male	Yellow	1008 MS
Female	Blue	52435 MF
Male	Pink	4707 MS
Male	Blue	52743 MF
Female	Blue	52670 MF
Female	Blue	52260 MF
Male	Green	7477 MS
Female	Green	7733 MS
Female	Blue	51630 MF
Male	Blue	51364 MF
Male	Blue	51567 MF
Female	Green	7914 MS
Female	Blue	51907 MF
Male	Blue	6208 MS
Female	Blue	52664 MF

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
7	3	5	5

Comments
 4 steelhead
 1 whitefish
 E-tag information is as follows :
 Male : 455631E
 Male : 455632E
 Female : 455633E

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho CaptureTally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
7	2

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
7	9

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Female	Green	3030 Lachmach R.
Female	Blue	51925 MF
Female	Orange	5930 MS
Female	Orange	5075 MS
Female	Blue	52858 MF
Male	Blue	52796 MF

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 4 steelhead
 2 whitefish
 1 bull trout
 E-tag information is as follows :
 Male : 455634E

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
6	3

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
4	4

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	Grey	8292 MS
Male	Grey	8062 MS
Female	Blue	6271 MS
Female	Green	7935 MS
Female	Blue	51904 MF

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 Adipose coho sacrificed as follows :
 Female : 455635E

 Captured 5 steelhead, 1 whitefish and 1 bull trout.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 28-Sep-02

Water Temp 9 C

Water level(cms) 64 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
2	2

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
6	10

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Male	Blue	52481 MF
Male	Green	7391 MS
Male	Pink	4947 MS
Female	Blue	6124 MS

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
10 steelhead and 11 bull trout captured.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
1	2

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
5	4

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	Green	7122 MS
Male	Pink	4953 MS
Female	White	3417 MS

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 One adipose coho sacrificed as follows :
 Female : 455698E

 Captured 2 whitefish, 1 bull trout, 5 Sthd
 Two Sthd dorsal fin tags as follows :
 Grey 27235 and Grey 28314

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 30-Sep-02

Water Temp 6.2 C

Water level(cms) 63.5 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
1	1

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
5	2

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Male	Green	3387 Lachmach R.
Male	Green	7248 MS
Female	Green	3097 Lachmach R.

Number of Coho Removed for Broodstock			
Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
Captured 5 bull trout

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 1-Oct-02

Water Temp 5 C

Water level(cms) 61 cms

Coho CaptureTally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
2	2

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
1	5

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Female	Grey	8427 MS
Male	Blue	52982 MF

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 Captured 1 bull trout and 2 steelhead

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
1	2

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock
Ad Males Ad Female Wild Male Wild Female

<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
--------------------------------	--------------------------------	--------------------------------	--------------------------------

Comments
 Captured 1 whitefish.
 Leaves really coming down now and plugging fence panels.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
0	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 Captured 1 whitefish and 1 bull trout.

 Leaf load on fence is increasing.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 4-Oct-02

Water Temp 5 C

Water level(cms) 66 cms

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
1	3

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 1 whitefish captured today.

 Leaf load is decreasing.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 5-Oct-02

Water Temp 7 C

Water level(cms) 62 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
1	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
 1 sockeye
 2 Bull trout
 1 whitefish

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho CaptureTally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
2	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
 1 Bull trout
 1 steelhead

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
1	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
4	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	Blue	52595 MF

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
1	1

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
1	2

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Female	Green	3571 Lachmach River
Male	Green	3593 Lachmach River

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho CaptureTally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock			
Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
Still fighting with heavy leaf loads so fence is being attended at night for a cleaning.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
0	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 Heavy leaf loads so cleaning fence at night. Coho visible at night just below the fence, however, they are reluctant to enter the live trap.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 11-Oct-02

Water Temp 2.5 C

Water level(cms) 62 cms

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
0	1

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
Four coho returned to the river from TC hatchery ie. they weren't ripening at the hatchery therefore were released u/s of the fence. (2 unmarked females and 2 unmarked males).

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 12-Oct-02

Water Temp 3 C

Water level(cms) 61 cms

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
0	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 13-Oct-02

Water Temp 4 C

Water level(cms) 55 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
7 whitefish

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 14-Oct-02

Water Temp 5 C

Water level(cms) 55.5 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock			
Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
19 whitefish captured today.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 15-Oct-02

Water Temp 4 C

Water level(cms) 54.5 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	1

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	1

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
 12 Whitefish, 2 bull trout.
 Leaf load is minimal.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 16-Oct-02

Water Temp 5 C

Water level(cms) 55.5 cms

Coho CaptureTally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock			
Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
5 whitefish

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	2

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
2	5

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number
Female	Blue	0832 DFO PR
Female	Green	7949 MS
Female	Blue	51008 MF

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	2	2

Comments
1 bull trout captured today.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
1	2

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
5	7

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	Orange	5642 MS
Male	Blue	52952 MF

Number of Coho Removed for Broodstock			
<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 1 steelhead
 1 whitefish
 2 bull trout
NOTE : TC hatchery staff returned 18 unmarked males, 5 unmarked females and 1 adipose female to upstream of the fence

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho CaptureTally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
0	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock			
<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
1 bull trout captured today

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
3	3

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	Blue	52724 MF

Number of Coho Removed for Broodstock			
<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
1 bull trout

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 21-Oct-02

Water Temp 4 C

Water level(cms) 53.5 cms

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
0	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock			
<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	4

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
3	7

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Female	Blue	0833 DFO PR
Female	Orange	5057 MS
Male	Green	3181 Lachmach R
Male	Blue	52747 MF
Female	Blue	50997 MF

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 1 Bull Trout
 1 Whitefish

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	3

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
6	8

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Male	Green	3089 Lachmach River
Female	Blue	6089 MS
Male	Pink	4299 MS
Female	Green	7218 MS
Female	Blue	6380 MS
Female	Green	7016 MS
Female	Green	3550 Lachmach R
Female	Grey	8440 MS

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 Beach seined downstream of old fence sill in the morning. All fish entered on capture sheet were beach seined and moved upstream of the fence.
 Captured 1 male and 1 female bull trout and approx. 150 whitefish.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
0	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock			
<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
1 female coho recovered dead off the fence with a green dorsal fin tag No. 7727 MS and also was not opercular punched. Four coho were dropped over the fence prior to opercular punching and this could have been one of those coho.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

25-Oct-02

Water Temp

3.5 C

Water level(cms)

52.5 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock

Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
No fish captured today.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
0	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 27-Oct-02

Water Temp 2 C

Water level(cms) 52 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock			
Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
5 cms of snow today

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock			
Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
 snow melting - raining again.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho Capture Tally

Adipose Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Ad/Rmax Clipped Coho	
<u>Males</u>	<u>Females</u>
0	0

Wild Coho	
<u>Males</u>	<u>Females</u>
1	0

Dorsal Fin Tagged Coho		
<u>Sex</u>	<u>Tag Color</u>	<u>Number</u>
Female	Green	7954 MS

Number of Coho Removed for Broodstock

<u>Ad Males</u>	<u>Ad Female</u>	<u>Wild Male</u>	<u>Wild Female</u>
0	0	0	0

Comments
 One female coho found dead on fence with a green dorsal fin tag.

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date : 30-Oct-02

Water Temp 1.0 C

Water level(cms) 47.5 cms

Coho Capture Tally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock			
Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
Ice beginning to form in the river. Fence panels starting to ice up.

Atm temp is -10 C

UPPER BULKLEY RIVER COHO ASSESSMENT FENCE : 2002

Daily Coho Capture Records

Date :

Water Temp

Water level(cms)

Coho CaptureTally

Adipose Clipped Coho	
Males	Females
0	0

Ad/Rmax Clipped Coho	
Males	Females
0	0

Wild Coho	
Males	Females
0	0

Dorsal Fin Tagged Coho		
Sex	Tag Color	Number

Number of Coho Removed for Broodstock			
Ad Males	Ad Female	Wild Male	Wild Female
0	0	0	0

Comments
 All fence panels pulled in late afternoon in preparation for fence de-mobilization on Nov 1, 2002 ie. fence not fishing tonight. Panels had to be chopped out of the river ice.

APPENDIX G

Steelhead Enumeration at the Upper Bulkley River Fence : 1998 - 2002

Return Year	Number of Steelhead
1998	14
1999	80
2000	1
2001	20
2002	69

