# 2010 Stream Assessment

for Select Areas and Road Crossings within Nadina Forest District

> Prepared for: **Ministry of Forests British Columbia Timber Sales Office Babine Business Area** 185 Yellowhead Highway Burns Lake, BC V0J 1E0

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### 1. Introduction

On July 26, 2010, FINS Consulting Ltd. was retained by the Burns Lake British Columbia Timber Sales Office (BCTS) in the Nadina Forest District to conduct operational level stream assessments for several areas of interest undergoing and/or proposed multi-phase layout in the Babine Business Area.

This report summarizes the results of the stream assessments, which were completed between September 6 - 26, 2010. All evaluated drainages are within the Babine Lake (BABL), Babine River (BABR), and Bulkley River (BULK) high level watershed groups in the Nadina Forest District.

Fish habitat and fish presence/absence was evaluated in drainages within or adjacent to 6 selected areas and 6 proposed and existing road crossings, and appropriate riparian classifications were subsequently assigned to alleviate planned timber resource management.

### **1.1 Location and Access**

The project area is located approximately 350 km west of Prince George. The location map (Figure 1) on the following page provides the general location of the study area. The specific areas were reached by 4x4 vehicle and individual streams were accessed on foot.

### 2. Historical Information

An abundance of historic fish information was generally available for the entire project area. Numerous operational and reconnaissance fish and fish habitat inventories had been conducted in the past 14 years by Triton Environmental Consultants Ltd. and FINS Consulting Ltd. within Babine Lake, Babine River, and Bulkley River tributaries.

However, due to the different purposes of these inventories, stream assessments at these times were conducted to various degrees of intensity and standards in order to satisfy particular needs of the clients. Nevertheless, the data obtained during those surveys provided invaluable information and helped with current stream assessments. All historic information relevant to the study area has been incorporated into this report.





Figure 1: Location of Project Area.



### 3. Methods

Methodology used throughout this project was consistent with the Forest and Range Practices Act (FRPA) (former Forest Practices Code (FPC)) standards and methods outlined in the following publications:

- Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Standards and Procedures. Version 2.0. (RIC, 2001)
- Fish-stream Identification Guidebook, Second Edition (FSID) (FPC, 1998)
- Riparian Management Area Guidebook (FPC, 1995)

Areas of interest requiring stream assessments were identified and named by BCTS personnel prior to the field trips and were marked on hard copy or digital maps.

### 3.1 Air Photo Interpretation

Air photo/ortho photo interpretation was completed to:

- delineate stream reaches for all drainages where reaches were missing,
- identify relevant barriers to fish migration, which would be later verified in field,
- assess if potential overwintering habitat is present above these obstructions.

## 3.2 Field Data Collection

Field data were collected on Site Cards and Fish Collection Forms, which are the current accepted method of collecting data for fish sampling and stream classification. Supporting documentation regarding terminology and use of these forms is available in publications listed in the Bibliography section. Collected field data are provided in the Field Forms arranged by site number and which are available in Appendix I.

## 3.3 Fish Sampling

Electrofishing, minnow traps and dip netting, supplemented by visual observation, were the methods used for fish sampling for this project.

### 3.4 Measurements and Calculations

Stream channel and wetted widths were determined using a meter tape. A minimum of six channel width measurements were made along each site at a distance of approximately 15-20m apart. For crossings assessments additional channel measurements were taken on downstream and upstream side of the crossing. Residual pool and bankfull depth measurements were determined using a meter stick. Stream gradient was measured using Abney level along several sections of the site. Site lengths were determined by ground estimate, hip chain or by GPS unit. Stream water temperatures were measured using an alcohol thermometer while conductivity and pH measurements were made using LaMotte Tracer portable multi-meter, which was calibrated using standardized solutions.

Measurements of falls were based on ground estimates or calculated using the following formula:

H=Ho \* (gradient (%) to top of falls)/ (gradient (%) to bottom of falls) + Ho



H = Height of falls (in m) Ho = Eye height of observer (in m)

The above formula is accurate provided the observer is at the same elevation as the base of the falls (i.e., standing at the edge of the plunge pool).

Heights and lengths of linear obstructions (cascades, velocity barriers, etc.) were determined using a hip chain and Abney level and then applying slope/distance tables to verify the vertical height.

100 years flood discharge (Q100) was calculated using modified California method and the Manning formula (<u>www.culvertbc.com</u>). Roughness coefficients were derived from Manning's and Cowan's coefficients (McCuen, R. H., 1989), which were modified through the analysis of stream morphology data collected by FINS during the past 15 years.

### 3.5 Stream and Site Referencing

Drainages without a gazetted name or watershed code were assigned unique five digit stream ID (also known as Interim Location Points (ILP) - as recommended in the FSID) in each proposed development area to provide reference for other interested parties working within the same area. Otherwise, gazetted, local or already existing BCTS identifiers were used or watershed codes were attached to the relevant stream, if available.

Site numbers for this project have been assigned in an ascending order based on the sequence of survey.

As per request by Smithers office staff, site locations were marked in the field by yellow ribbon with written information containing site and stream ID, riparian classification, fish species present and date of visit. Additionally, ribbons with relevant information were also placed at the transitions of riparian classifications.

### 3.6 Mapping

Mapping convention for this project generally follows the standards as are recommended in the FSID. Using GIS software 1:20,000 scale maps have been produced for this project, and are included in Appendix III at the end of this report.

Each map depicts the stream network; base coordinates from the UTM grid and mapping symbols, as recommended in the standards. The fish presence/absence in specific streams is represented on the maps using colour line work. Solid red lines indicate confirmed fish presence while dashed red lines indicate that fish presence is inferred, but has not been confirmed. Solid blue lines show confirmed fish absence, solid green lines indicate presence of non classified drainage (NCD) reaches and dashed blue lines depict streams with suspected fish absence.

Unmapped or mismapped streams on TRIM coverage, which were encountered during survey, were also mapped with the aid of professional GPS unit, ortho photos and GIS software.



Current sites locations on the map are depicted by a black site symbol with attached black site summary label (sampling results, gradient, channel width, and riparian classification). Site ID is represented by a red label placed beside the site symbol.

Historic sampling sites are indicated by a purple site symbol with attached purple site summary label (sampling results, gradient, channel width and riparian classification, if was available) and information by whom and when the stream was visited. Historic site ID is represented by a purple label placed beside the site symbol.

All additional fisheries features which were encountered during assessment or found during historic data review, and that provide significant information for the final assessment, were also depicted on the maps using appropriate symbols as indicated in the standards.

### 3.7 Photographs

Representative photographs of sites and any significant features are presented in Appendix II. Photos have been reduced in size so that multiple photos can be presented with relevant site cards. Each photo is labeled with the site number, and direction in which the photo was taken.

Some sites do not have any photographs as they would not have provided any useful information due to the lack of good visibility (dense vegetation), or because there was no drainage present at all.

### 3.8 Field Equipment

All sampling equipment specifications are listed below:

- 1 Smith-Root model 12B P.O.W. Backpack Electrofisher
- 1 Pentax Optio W80 digital camera
- 1 Professional GPS (Ashtech MM100) unit with differential correction
- assorted other equipment including meter tape, hip chain, magnifying lens, meter stick, dip net, LaMotte Tracer portable multi-meter, Abney level, alcohol thermometer, Silva compass and oil spill kit
- 2 personal First Aid kits, as per WorkSafe BC requirements

### 4. Determining Fish-bearing Status

The following section summarizes the information collected and conclusions reached for each sample site within the general project area. This has been based both on interpretations and conclusions from the synthesis of data collected during previous inventories (Lakes/Nadina Forest District 1996 through 2009 Reconnaissance and Operational Inventories) and from new information collected as part of this project.

Determining whether or not any fish use occurs in a specific reach is a complex process, involving much more than applying fish sampling results on a site-specific basis. Specifically, in applying a non fish-bearing status to a reach when fish are not captured in a sampling event, a more systematic process is required in order to provide an adequate rationale to support a conclusion of fish absence. Biological evaluation is used which factors in such considerations as historical sampling information, known fish distributions and behavior, barriers, gradients, invertebrate presence, habitat quality, and presence/absence of headwater lakes.



As a general rule, two conditions must usually exist in order for fish to inhabit a specific stream reach; 1) presence of fish habitat and 2) accessibility to that habitat. There are exceptions to this, such as presence of resident or adfluvial populations above barriers which otherwise block access, but these situations are considered on an individual basis when appropriate sampling can be undertaken to accurately determine fish presence under these circumstances.

Determining presence of fish habitat requires biological judgment that is based on many tangible factors. A "snapshot" method is used to determine presence of fish habitat at the time of sampling, but this is not sufficient when lack of water limits available habitat. Under these circumstances, a temporal approach is required which factors in the potential for fish habitat presence during a different flow period. In this manner, different habitat requirements for suspected fish species are also considered, such as potential seasonal use for rearing (i.e., higher flow rearing or refuge habitat) or spawning (i.e., suitable gravels, gradient and potential flow). Again, biological judgment is required to recognize this potential habitat. Moreover, the presence of potential overwintering or perennial habitat upstream in the watershed (i.e., lakes, wetlands, pools >0.5m deep) is also taken into account and has influence on the fish-bearing status of a specific reach. Existence of habitat or potential habitat, if present, is noted and described in the comments on the site cards.

Once presence of fish habitat has been established, it must be determined whether the fish are capable of accessing this habitat. The presence of obstructions to fish in the form of falls, cascades, impassable gradients and lack of connectivity within a watershed may limit fish distribution within a watershed and must be evaluated. When questionable obstructions or soft barriers (i.e., beaver dams, wetlands, and NVC reaches) are present, the process for determining the presence of fish habitat upstream must be undertaken and combined with adequate sampling in order to determine fish use.

The fish-bearing status of a specific reach is dependent on the presence of fish habitat, the accessibility to that habitat and is supported by the results of fish sampling. The above process for determining fish presence is an overview of the variables evaluated before fish-bearing status can be accurately ascertained. This entire process is always supplemented by existing fisheries information and interpretations from map and air photo analysis.

Once a non-fish bearing conclusion has been established for a sampled reach, all reaches located upstream from that location are considered to be non fish-bearing and no further sampling is required to confirm this conclusion. This is inherent in the process used to determine the non fish-bearing status.

### 5. Fish Habitat Value Rating

Habitat value rating was introduced in 2002 in order to protect fish and fish habitat and provide proper fish passage. The decision making process in selecting an appropriate stream crossing installation was simplified and depended on the fish habitat evaluation.

In the Fish-stream Crossing Guidebook habitat value was distinguished in three ratings:

• **Critical** (CR) – where extremely abundant or important fish and/or fish habitat are present, habitat is critical in sustaining a subsistence, commercial, or recreational fishery, or species at risk.



- **Important** (IM) where moderately abundant fish and/or fish habitat are present, but deemed to be not critical; contains similar habitat readily available to the stock elsewhere within a particular watershed.
- **Marginal** (MG) where sparse fish and/or fish habitat are present (i.e. low value habitat or under/non utilized habitat); habitat that marginally contributes to fish production.

These ratings were applied to assessed stream reaches and are provided in the "Stream summary tables" in Section 6 below.

Confirmed non-fish bearing drainages have no ratings (NA), regardless of potential fish habitat quality. However, any possible introduction of harmful substances to such watercourses during in-stream work may negatively affect existing fish habitat downstream of non-fish bearing waters.



### 6. Results

The following tables within sections 6.1 and 6.2 provide the fish-bearing status for all surveyed drainage reaches and present information for all non fish-bearing reaches, however these tables do not include data for the Granisle Connector Road.

The first, "Stream summary table", provides basic physical information and brief comments for all surveyed reaches and incorporates historic site data pertinent to this project.

The second, "Non-fish bearing stream table", provides justifications for all non fish-bearing reaches and includes pertinent physical site-specific data, sampling method and effort, relevant historical information and comments that provide a rationale to support derived riparian classification for non-fish bearing drainages.

Two reaches of stream WSC 480-525800-41873 were identified for follow-up sampling during this assessment. These were indicated and commented in the respective columns of the "Stream summary table".

Abbreviations used in all tables are located at the end of the report.

Site details can be found in the field forms provided in the Appendix I.



## 6.1 Summary of all Surveyed Reaches

AREA	BCTS Stream ID	Stream ILP or WSC	Мар	Reach #	Site #	UTM zone	Easting	Northing	Rip Class	Habitat Value Rating	Grad (%)	Cw (m)	Wb (m)	Q100 (m³)	Samp. Res.	Site Length (m)	Follow- up Sampl.	Comments
A58048-1 and BAB-1		480- 280900	1	3	1	9	634237	6160947	NA	UNK	*	*	*	*	RB	2	Ν	Sampled to establish fish status. RB present in stream.
BAB-1	BAB1-B-R1	480- 280900- 59517	1	1	2 xing	9 9	633740 634050	6158660 6158450	S6	NA	4.38	2.60	0.47	4.54	NFC	400	Ν	Confirmed non-fish bearing. Existing 600mm CMP barely accomodates high flows.
A58048-1	048-A-R1	480- 280900	1	4.1 & 4.2	3	9	633940	6160830	S2/ S5	MG/NA	7.67	7.38	1.13	62.75	RB/ NFC	2500	Ν	Overall fish habitat in R4.1 is negatively affected by the frequent land slides occuring within steep gully and consequently resulting debris torrents. 2m falls at UTM 9.633773.6160448 mark EFU and riparian class transition from S2 to S5.
BAB-1	BAB1-A-R1	480- 280900	1	5	4	9	634343	6157244	S5/ S6	NA	4.50	2.40	0.53	3.55	NS	200	Ν	Confirmed non-fish bearing. Riparian class transition from S5 to S6 at UTM 9.634347.6157214.
BAB-1	BAB1-B-R1	480- 280900- 59517	1	4	5	9	635142	6156647	S6	NA	0.53	1.88	0.65	1.50	NS	150	Ν	Confirmed non-fish bearing.
BAB-1	BAB1-G-R1	56001	1	1	6	9	635361	6156376	S6	NA	9.25	0.83	0.20	0.58	NS	200	Ν	Confirmed non-fish bearing.
BAB-1	BAB1-B-R2	480- 280900- 59517	1	5	7	9	635202	6156215	S6	NA	2.00	1.67	0.30	0.47	NS	200	Ν	Confirmed non-fish bearing.
BAB-9	B09-A-R2	57001	2	2	8	9	647000	6160822	NCD	NA	*	*	*	*	NS	100	Ν	Not a stream.
BAB-9	B09-A-R1	57001	2	3	9	9	646840	6160758	NCD	NA	*	*	*	*	NS	100	Ν	Not a stream.

#### Table 1: Summary of data of all surveyed drainages.



AREA	BCTS Stream ID	Stream ILP or WSC	Мар	Reach #	Site #	UTM zone	Easting	Northing	Rip Class	Habitat Value Rating	Grad (%)	Cw (m)	Wb (m)	Q100 (m³)	Samp. Res.	Site Length (m)	Follow- up Sampl.	Comments
TORK11	T11-A-R1	480- 525800- 41873	3	1&2	10	9	653040	6104510	UND	UNK	3.50	2.10	0.38	3.47	NS	1250	Y	Stream is seasonal and may contain only very poor rearing habitat. It was dry from the mouth up to the crossing during assessment. Reach 1 has not preferable RB habitat. Stream bed contains mixed organics and fines with cobbles - not suitable for spawning. Slow flows and decaying organic matter may cause oxygen deficiency when watered, further inhibiting access and seasonal use of stream. Within 100m section from mouth channel is not well defined - shallow ponds (dry now) which are passable only at high flows during freshet or soon after. Very few pools were noted further upstream. Reach 2 has fast flows during watered periods due to insignificant in- stream cover (scarce LWD and boulders); no pools were observed over the entire (700m) length of reach, therefore there is very little resting places for fish. Bed is composed almost entirely of cobbles, compacted hard and with no aggraded deposits. It is suggested that stream will be re-sampled next season shortly after freshet (second half of June) to determine fish use or defaulted as a fish bearing with S3 riparian classification without second visit.
		67001	4	1 &2	11	9	647292	6056810	S6	NA	17.7	0.68	0.12	0.14	NS	640	N	Confirmed non-fish bearing. Riparian class transition from S6 to
		07001	4	2	xing	9	647650	6057025	NCD	NA	*	*	*	*	NS	040	IN	NCD at UTM 9.647580.6056916.
SFU2008-		460-	4	3.1	10	0	( 171 ( )	(057151	S5	NA	9.3	3.17	0.38	4.33	NFC	(70	N	Confirmed non-fish bearing upstream of 1.5m high falls at UTM 9.647159.6057128 followed by numerous chutes, falls and cascades.
DK11		496100- 69000	4	3.2	12	9	647162	6057151	S6	NA	8.5	2.52	0.38	3.17	NFC	670	N	This falls marks EFU and riparian class transition from S3 to S5. Riparian class transition from S5 to S6 at UTM 9.647386.6057234.
		460- 496100- 69000-	4	1, 2, 3	13	9	647356	6057207	S6/ NCD	NA	8.1	1.01	0.23	0.30	NS	820	N	Confirmed non-fish bearing. UTM 9.647947.6057392 - marks riparian class transition from S6 to NCD.
		07900		2	xing	9	647685	6057302	S6	NA	3.8	0.93	0.28	0.26	NS			

### Table 1: Summary of data of all surveyed drainages.



AREA	BCTS Stream ID	Stream ILP or WSC	Мар	Reach #	Site #	UTM zone	Easting	Northing	Rip Class	Habitat Value Rating	Grad (%)	Cw (m)	Wb (m)	Q100 (m³)	Samp. Res.	Site Length (m)	Follow- up Sampl.	Comments
		67005	4	1&2	14	9	644753	6059266	S4/ NCD	MG/ NA	6.7	0.70	0.35	0.31	NS (DV)	140	Ν	Moderately steep, tiny and seasonal stream with accessible rearing habitat for DV only within 80m from mouth. At UTM 9.644768.6059330 channel becomes discontinuous and drainage becomes a seepage - marks riparian class transition from S4 to NCD. DV is a Blue listed species - sensitive to sedimentation and water temperatue increase.
		460- 496100- 59500	4	3	15	9	644347	6058814	S3	MG	5.7	2.88	0.50	5.45	DV	530		Overall good rearing habitat during low to moderate flows. No spawning or overwintering habitat noted. DV is a Blue listed species - sensitive to sedimentation and water temperatue increase.
SFU2008- DK4		(7000	4	1	16	9	644488	6058713	NOD		*	*	*	*	NG		N	Not a stream as per definition. Lower 50m long section is
DK4		67002	4	I	xing	9	644568	6058899	NCD	NA					NS	460		mismapped on TRIM.
		67006	4	3	17	9	644341	6058972	NCD	NA	*	*	*	*	NS	230	Ν	Not a stream. Unmapped drainage on TRIM.
		67003	4	1.1	18 @	9	644456	6059055	S3	MG	4.8	1.82	0.33	1.34	NFC (DV)	970		Overall excellent rearing habitat present for DV and RB. Suitable spawning habitat for RB. Too shallow for overwintering. Stream easily accessible from the parent stream and likely populated during summer
		07003	4	1.2	xing	9	044450	0034022	S4	MG	7.9	1.47	*	*	NFC (DV)	970	IN	months. Riparian class transition from S3 to S4 at UTM 9.644621.6059160. DV is a Blue listed species - sensitive to sedimentation and water temperatue increase.
		67004	4	1	19	9	644466	6059103	NCD	NA	*	*	*	*	NS	270	N	Not a stream.
					xing	9	644521	6059252										

### Table 1: Summary of data of all surveyed drainages.



## 6.2 Non-fish Bearing Reaches

#### Table 2: Summary of data of non-fish bearing drainages.

Area	Map	Stream Name (BCTS ID, ILP or WSC)	Reach #	Site #	Date	Rip Class	Grad (%)	CW (m)	Wb (m)	Flow Stage	Water Temp (°C)	Cond. (µS/cm)	Turb.	Samp. Meth.	Samp. Res.	Effort (EF - sec/ dist.)	EF Specs (V/ Hz/ µs)	Comments
BAB-1	1	BAB1-B-R1 480-280900- 59517	R1	2	4- Sep- 10	S6	4.38	2.60	0.47	L	9	133	С	EF	NFC	137/400	400/70/4	No fish habitat - flows into confirmed this year NFB stream. No any isolated fish population in stream.
A58048-1	1	048-A-R1 480-280900	R4.2	3	4- Sep- 10	S5	7.67	7.38	1.13	L	9	134	С	EF	NFC	599/2000	400/80/4	No fish habitat. No isolated fish population present. Second sampling. Stream was extensively sampled by Triton in 1996 and no fish was captured 2m falls at UTM 9.633773.6160448 mark EFU and riparian class transition from S2 to S5.
BAB-1	1	BAB1-A-R1 480-280900	R5	4	5- Sep- 10	S6	4.50	2.40	0.53	L	9	111	С	*	NS	*	*	No fish habitat - stream is inaccessible to fish d/t falls barrier in R4.1. No isolated fish population present. Stream was extensively sampled by Triton in 1996 and no fish was captured. Riparian class transition from S5 to S6 at UTM 9.634347.6157214.
BAB-1	1	BAB1-B-R1 480-280900- 59517	R4	5	6- Sep- 10	S6	0.53	1.88	0.65	L	8	126	L	*	NS	*	*	No fish habitat - stream is inaccessible to fish d/t falls barrier in R4.1 of parent stream No isolated fish population present. Stream was extensively sampled by Triton in 1996 and no fish was captured.
BAB-1	1	BAB1-G-R1 56001	R1	6	6- Sep- 10	S6	9.25	0.83	0.20	DRY	*	*	*	*	NS	*	*	No fish habitat - seasonal trickle, flows into confirmed this year NFB stream.
BAB-1	1	480-280900- 59517	R5	7	6- Sep- 10	S6	2.00	1.67	0.30	L	8	121	С	*	NS	*	*	No fish habitat - stream is inaccessible to fish d/t falls barrier in R4.1 of parent stream No isolated fish population present. Stream was extensively sampled by Triton in 1996 and no fish was captured.
BAB-9	2	B09-A-R2 57001	R2	8	6- Sep- 10	NCD	*	*	*	*	*	*	*	*	NS	*	*	No fish habitat - ~10m long channelized sections, otherwise isolated puddles within swampy corridor; no continuous scoured channel bed, no fluvium - not a stream.
BAB-9	2	B09-A-R1 57001	R3	9	6- Sep- 10	NCD	*	*	*	*	*	*	*	*	NS	*	*	No fish habitat - tiny drainage isolated from FB waters. At crossing vicinity 10-30m long scoured sections alternate with overland flows/seepage. No continuous scoured channel bed, no fluvium - not a stream.



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Area	Map	Stream Name (BCTS ID, ILP or WSC)	Reach #	Site #	Date	Rip Class	Grad (%)	CW (m)	(m) dW	Flow Stage	Water Temp (°C)	Cond. (µS/cm)	Turb.	Samp. Meth.	Samp. Res.	Effort (EF - sec/ dist.)	EF Specs (V/ Hz/ µs)	Comments
	4	67001	R1	11	25- Sep- 10	S6	17.70	0.68	0.12	L	6	121	С	*	NS	*	*	No fish habitat - seasonal stream, which disperses 10m from mouth - the only habitable section near mouth during freshet, however is too steep and contains no
	4	07001	R2	11 at xing	25- Sep- 10	NCD	*	*	*	*	*	*	*	*	NS	*	*	instream cover to be inhabited beyond valley. Riparian class transition from S6 to NCD at UTM 9.647580.6056916.
	4	460-496100-	R3.1	12	25- Sep-	S5	9.30	3.17	0.38	Μ	6	162	С	EF	NFC	440/400	500/80/4	No fish habitat - stream inaccessible to fish due to the presence of 1.5m high falls at UTM 9.647159.6057128 followed by numerous chutes, falls and cascades. This falls marks EFU and riparian class transition from S3 to S5. Overall the stream contains suitable perennial habitat to support fish use, however no isolated fish
SFU2008- DK11	•	69000	R3.2	12	10	S6	8.50	2.52	0.38		0	102	0	21		110/100	000/00/1	population is present upstream of the first barrier. Second visit - stream sampled in 1997 by Triton in R4 and no fish was captured at that time. <b>Riparian class transition</b> from S5 to S6 at UTM 9.647386.6057234.
			R1	13	25- Sep- 10	S6	8.10	1.01	0.23	М	7	112	С	*	NS	*	*	
	4	460-496100- 69000-07900	R2	13 at xing	25- Sep- 10	S6	3.80	0.93	0.28	IVI	7	112	C		NS			No fish habitat - stream flows into the confirmed non-fish bearing stream. Channel becomes discontinuous with no alluvial deposits at UTM 9.647947.6057392 - marks riparian class transition from S6 to NCD.
			R3	13	25- Sep- 10	NCD	*	*	*	*	*	*	*	*	NS	*	*	

### Table 2: Summary of data of non-fish bearing drainages.



Area	Map	Stream Name (BCTS ID, ILP or WSC)	Reach #	Site #	Date	Rip Class	Grad (%)	CW (m)	Wb (m)	Flow Stage	Water Temp (°C)	Cond. (µS/cm)	Turb.	Samp. Meth.	Samp. Res.	Effort (EF - sec/ dist.)	EF Specs (V/ Hz/ µs)	Comments
	4	67005	R2	14	26- Sep- 10	NCD	*	*	*	*	*	*	*	*	NS	*		No fish habitat - at UTM 9.644768.6059330 channel becomes discontinuous and drainage becomes a seepage - marks riparian class transition from S4 to NCD.
	4	67002	R1	16	26- Sep- 10	NCD	*	*	*	*	*	*	*	*	NS	*	*	No fish habitat - mostly seepage in lower 50m, than some isolated and 5-10m long scoured sections with alluvial deposits. Lower 50m long section is mismapped on TRIM. Not a stream as per definition.
SFU2008- DK4	4	67006	R3	17	26- Sep- 10	NCD	*	*	*	*	*	*	*	*	NS	*	*	No fish habitat - discontinuously scoured channel segments <5m in lengths with some fluvial material, drains small alder patch - not a stream. Unmapped drainage on TRIM.
	4	67004	R1	19	26- Sep- 10	NCD	*	*	*	*	*	*	*	*	NS	*		No fish habitat - alternating sections of seepage and scoured channel ~20m in lengths, no continuous fluvial deposits - not a stream.

### Table 2: Summary of data of non-fish bearing drainages.



## 7. List of Abbreviations

Avg	Average	LSU	Longnose sucker (Catostomus catostomus)
BCTS	British Columbia Timber Sales	m	Meter
С	Clear (not turbid)	М	Moderate flow or moderate turbid
BR	Bridge	min	Minutes
C.	Creek	mm	Millimeter
CCG	Slimy sculpin (Cottus cognatus)	MG	Marginal (habitat value rating)
cm	Centimeter	MT	Minnow trap
CMP	Corrugated Metal Pipe	MW	Mountain whitefish (Prosopium williamsonii)
Confl.	Confluence	N	No
CR	Critical (habitat value rating)	NA	Not applicable
СТ	Cutthroat trout (Oncorhynchus clarki)	NCD	Not classified drainage
CV	Culvert(s)	ND	No drainage present
CW	Channel width	NFC	No fish captured
DFO	Department of Fisheries and Oceans	NS	Not sampled
DN	Dip net	NSC	Northern pike minnow (Ptychocheilus oregonensis)
d/s	Downstream	NTS	National Topographic Survey
DV	Dolly Varden char (Salvelinus malma)	NVC	No visible channel
Ecofor	Ecofor Consulting Ltd.	OLF	Overland flow
EF	Electrofishing	PVCP	Polyvinyl Chloride Pipe
EFU	End of Fish Use	R.	River
FB	Fish-bearing	Rd	Road
FINS	FINS Consulting Ltd.	Rip.	Riparian
FISS	Fisheries Information Summary System	RIC	Resource Information Committee
FPC	Forest Practices Code	sec	Seconds
FSID	Fish-stream Identification Guidebook	SKR	SKR Consultants Ltd.
FSR	Forest Service Road	S1 - S6	Riparian classes (streams)
FSZ	Fisheries Sensitive Zone	Т	Turbid
GF	Ground flow	Temp	Temperature
Grad	Slope gradient	TRIM	Terrain Resource Information Management
GPS	Global Positioning System	Triton	Triton Environmental Consultants Ltd.
h	Hours	UGF	Undrground flow
Н	High flow	u/s	Upstream
HF	High flows	UTM	Universal Transverse Mercator coordinates
Hz	Hertz	V	Volt
HIST	Historic	W1 - W5	Riparian classes (wetlands)
ID	Identifier	Wb	Bankfull depth
ILP	Interim Locatinal Point (Stream ID)	WSBC	Work Safe BC
IM	Important (habitat value rating)	WSC	Watershed code
infer	Inferred	X-ing	Crossing
INT	Intermittent	Y	Yes
km	Kilometer	μsec	Microseconds
L	Low flow or lightly turbid	μS	Microsiemens
L.	Lake	°C	Temperature
LKC	Lake chub (Couesius plumbeus)	%	Slope gradient
LNC	Longnose dace ( <i>Rhinichthys cataractae</i> )		



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- 9. List of Appendices
- Appendix I: Site Forms
- Appendix II: Photographs
- Appendix III: Maps



# Appendix I: Site Forms

						SITE	REFE	RENO	CE						
Gazettee	d Name:	Unname	ed			WSC: 48	0-280900							<b>Map:</b> 09	3M.056
Local Na	ame:					ILP:	Rea	<b>ich:</b> 3				Site L	<b>g:</b> 2	Access:	FT
UTM Z.E	<b>E.N</b> : 9	634237	6160947	Metho	d: GIS	Survey D	ate: 04/0	19/201	Time:	12.55	Agency		-	ew: MJ/DJ	
		004201	0100041	metrio		HANNE		50/201		12.00	Agene			WATE	D
		-					1				Ι		1.	]	
	sureme		1 2	3	4	5 6	7	8	9	10	11	12	Avg:	Temp:	9
	el Width		2										2	pH:	
	ed Width Pool Dp	. ,	2										2	Cond:	141
	ull Depti													Turbidity:	С
	Gradien														
						Fig. 1 O									
Flow S	tage:	C	hannel Co	nditions		Flood Sig									
							COVE	R							
Cov	erTotal:	SWD LV	ND B	CB DP	ov ov	IV Can	ору:		LW	D Fund	tion & E	Distr:		IV Type:	
LB	Shape:		LB Text	ure:		LB Ripa	arian Veg	etation	:		LB Ripa	arian Ve	egetatio	n Stage:	
RE	3 Shape	:	<b>RB</b> Text	ure:		RB Ripa	arian Veg	etation	:		RB Ripa	arian V	egetatio	n Stage:	
					С	HANNE	-			Y			-	-	
Dom S	Substrat	e:	D95 (cm):		Morph			m Patt:		Confn	mnt:	Co	upling:	Islands:	
	om Subs		D (cm):		Bars		01.	iii i utti			ance In			lolandoi	
Subuc	Suns and	<b>.</b>	D (cm).		Ddis					Disturt	ancem	uicator	5.		
		T T				F	EATUF	RES						T	
Feature	e H (m)	L (m)					Comm	ent						UTM Z.E	.N
						1	AMPL						1		
Meth		EF sec	EF Lg		EF Volt	EF freq		se Tra	ps Ne	ets	Durati	on	Net/T	rap Depth (m)	Hab
EF		8	2		400	70	4								
Species	-			Max L					5	Samplir	ng Comr	nents			
RB	J	2	88	101	R										
						_									
						_									
							OMME	NTC							
	0		ish Cabata					NIS							
Lomm	Sampled	to estadi	ish fish sta	us. кв р	oresent in s	stream.									
Comm 2															
- Comm															
3															
Comm 4															
Comm															
5 Comm															
6															
6 Comm 7															
Comm															

						SITE	REFE	RENC	E						
Gazette	d Name:	Unnamed				<b>WSC:</b> 48	0-280900-	59517						<b>Map:</b> 09	3M.056
Local Na	ame: BA	B1-B-R1				ILP:	Rea	<b>ch:</b> 1				Site L	<b>g:</b> 400	Access	FT
UTM Z.E	<b>E.N</b> : 9	633740 61	58660	Metho	d: GIS	Survey D	<b>ate:</b> 04/0	9/201 .	Time: 1	3:40	Agency	: C016	6 Crev	<b>v:</b> MJ/DJ	
					C	HANNE	L							WATE	R
Mea	surement	1	2	3	4	5 6	7	8	9	10	11	12	Avg:	Temp:	9
	nel Width (		2.8	2.9	2.5	2.4 2.1	-	0	•				2.6	pH:	7.9
Wett	ed Width (	<b>m):</b> 0.4	0.6	0.3	0.7	0 1.1							0.52	•	
Res.	Pool Dp (c	<b>m):</b> 0.08	0.12	0.07									0.09	Cond:	133
Bankf	ull Depth (	<b>m):</b> 0.5	0.5	0.5	0.4	0.4 0.5							0.47	Turbidity:	С
Chan.	Gradient	( <b>%):</b> 3.5	3	5	6								4.38		
Flow S	stage: ∟	Chan	nel Con	ditions:	INT	Flood Sig	gns: Non	Э							
							COVE	R							
Cov	rerTotal: S	SWD LWD		CB DP	ov S	IV N Can	<b>opy:</b> 41-	70%	LW	D Fund	tion & D	listr:	F/E	IV Type: N	1
LE	3 Shape:	VI	LB Textu	ure: F	GCB	LB Rip	arian Vege	tation:	С		LB Ripa	rian Ve	getation	Stage: M	F
RI	B Shape:	V	RB Text	ure: F	GCB	RB Rip	arian Veg	etation:	С		RB Ripa	arian Ve	egetation	Stage: M	F
					C	HANNE	L MOR	PHO	LOGY	,					
Dom	Substrate	C D9	95 (cm):	60	Morph	nology:	CP Stri	n Patt:	SI	Confn	mnt: C	Ο <b>Co</b> ι	pling: (	CO Islands:	N
Subd	om Substi	: G	D (cm):	12	Bar	s: SIDE DI	AG		[	Disturb	ance Ind	dicators	s: B2 D	02 S3	
						F	EATUR	ES							
Feature	e H (m)	L (m)					Comme	ent						UTM Z.E	.N
		. ,													
						S	AMPLI	NG							
Meth	bod		EE L ~	1											
		EF sec	EF Lg	( )	EF Volt	EF freq		e Trap	s Ne	ts	Duratio	on	Net/Tra	p Depth (m)	Hab
EF	-	137	400	)	400	EF freq	EF puls 4	e Trap				-	Net/Tra	p Depth (m)	Hab
Species	-	137 <b>Total #</b>	-	( )		70	4	•	S	amplir	ng Comn	nents			
	-	137	400	)	400	70 Not many	4	•	S	amplir	ng Comn	nents		p Depth (m)	
Species	-	137 <b>Total #</b>	400	)	400	70 Not many	4 v places for	•	S	amplir	ng Comn	nents			
Species	-	137 <b>Total #</b>	400	)	400	70 Not many	4 v places for	•	S	amplir	ng Comn	nents			
Species	-	137 <b>Total #</b>	400	)	400	Not many between	4 v places for substrate.	fish to r	S	amplir	ng Comn	nents			
Species	-	137 <b>Total #</b>	400	)	400	Not many between	4 v places for	fish to r	S	amplir	ng Comn	nents			
Species NFC	S Stage	137 Total # 0 	400 Min L	Max L	400 Act	Not many between	4 v places for substrate.	fish to r	sear. V.	amplir shallow	ng Comn v within w	nents			
Species NFC	S Stage	137 Total # 0 	400 Min L	Max L	400 Act	Not many between C	4 v places for substrate.	fish to r	sear. V.	amplir shallow	ng Comn v within w	nents			
Species NFC Comm 1 Comm	s Stage	137 Total # 0 bitat - flows	400 Min L s into cor	firmed the accomod	400 Act	Not many between C	4 v places for substrate.	fish to r	sear. V.	amplir shallow	ng Comn v within w	nents			
Species NFC	S Stage Stage No fish ha Existing 6 Very shall	137 Total # 0 bitat - flows 00mm CMF bow with DW	400 Min L s into cor barely a / section	Max L Max L	400 Act	Not many between C	4       y places for substrate.       0 M M E N       No any isc	fish to r	sear. V.	amplir shallow	ng Comn v within w	nents			
Species NFC Comm Comm 2 Comm 3 Comm	S Stage	137 Total # 0 bitat - flows 00mm CMF bow with DW	400 Min L B into cor D barely a V section	Max L Max L firmed th accomod s ovide sor	400 Act	TO       Not many between       D       Vot many between       Vot many between    <	4       y places for substrate.       0 M M E N       No any isc	fish to r	sear. V.	amplir shallow	ng Comn v within w	nents			
Species NFC Comm Comm 2 Comm 3 Comm 4 Comm	Shab - no	137 Total # 0 bitat - flows 00mm CMF pw with DW ry shallow, o	400 Min L s into cor barely a / section ponly B pr able subs	Max L Max L firmed th accomod s ovide sor	400 Act	TO       Not many between       D       Vot many between       Vot many between    <	4       y places for substrate.       0 M M E N       No any isc	fish to r	sear. V.	amplir shallow	ng Comn v within w	nents			
Species NFC Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm	Shab - no	137 Total # 0 bitat - flows D0mm CMF D0mm CMF D0mm CMF D0mm CMF D0mm CMF D0mm CMF D0mm CMF	400 Min L s into cor barely a / section ponly B pr able subs	Max L Max L firmed th accomod s ovide sor	400 Act	TO       Not many between       D       Vot many between       Vot many between    <	4       y places for substrate.       0 M M E N       No any isc	fish to r	sear. V.	amplir shallow	ng Comn v within w	nents			

							SIT	E I	REFE	REN	CE						
Gazette	d Name	: Unr	named				WSC:	480-2	280900							<b>Map:</b> 09	93M.056
Local Na	ame:	048-A-I	R1				ILP:		Rea	<b>ch:</b> 4.1	&4.2			Site L	<b>g:</b> 2500	Access	: FT
UTM Z.E	E.N: 9	633	946 61	60835	Metho	od: GIS	Surve	v Dat	e: 04/0	9/201	Time:	14:30	Agency	: C01	S Crev	w: MJ/DJ	
		1000					HAN	-					Jigeney			WATE	R
Маа			4	2	2	4			7	0	9	10	11	10	A		
	isurem nel Wid		1 8.1	2 6.1	3 7.1	7.5	5 6.9	6 8.6	1	8	9	10	11	12	Avg: 7.38	Temp:	9
	ed Wid	• •		1.5	0.7	0.3	0.0	0.0							0.65	pH:	7.9
	Pool D	• •		0.71	0.49	0.64	-	-							0.64	Cond:	134
	ull Dep			0.8	1.1										1.13	Turbidity:	С
Chan.	Gradie	nt (%):	6	8	9										7.67		
Flow S	stage:	L	Char	nel Cor	nditions	S: DW	Flood	Sign	s: Leve	es, sus	spended	l debris,	, debris pi	les			
								C	OVE	R							
Cov	verTota	I: SWI	D LWD	В	CB D	P OV	IV o	Canor	<b>by:</b> 21	-40%	IW	D Fund	ction & D	istr <sup>.</sup>	F/C	IV Type: 1	N
	Μ	Ν	S	D	N S	5 T	N	Junop	<b>y</b> . 21	4070		Drun			170	it iype. i	•
LE	3 Shap	e: V	I	B Text	ure: (	CBR	LB F	Ripari	an Veg	etation	: C	;	LB Ripa	rian Ve	egetation	Stage: N	1F
RI	B Shap	e: V	I	RB Text	ure: (	CBR	RBI	Ripari	ian Veg	etation	: C	;	RB Ripa	rian Ve	egetation	N Stage: N	1F
						C	HANN	NEL	MOF	РНО	LOG	Y					
Dom	Substr	ate:	C D9	95 (cm):	400	Morph	nology:	CF	Str	m Patt:	SI	Confn	mnt: CC	) <b>Co</b> i	upling:	CO Islands	: 0
Subd	om Sul	ostr:	в	D (cm):	50	Bar	s: MID S	SPAN	BR			Disturb	bance Ind	licators	s: B1 E	32 B3 D2 S3 S	64
				. ,				FE	ATUR	ES							
Feature	e H (m	) L (n	n)						Comm							UTM Z.E	F.N
DW	, (ii	/ = (		edes fisł	n passa	ge season	ally		Comm							9 633820 6	
F	2				· ·	90m u/s fr		st fish	n capture	Э.						9 633773 6	
			-					S A	MPLI	NG							
Meth	nod	EF	sec	EF Lg	ı (m)	EF Volt	EF f	req	EF puls	e Tra	ps Ne	ets	Duratio	on	Net/Tra	ap Depth (m)	Hab
EF1/E	EF2	47/5	599	400/2		400/400	70/8	30	4/4							,	
Species	s Sta	ge To	otal #	Min L	Max I	L Act					(	Samplii	ng Comm	nents			
RB	J		4	77	127	R	EF1 -	spot I	EF, sam	pled pc	ols only	; EF2 -	sampled o	only de	ep pools		
NFC			0														
								<u> </u>	ммеі	NTS							
Comm	Overal	fish ha	abitat in	R41 is	negative	elv affecte	h by the f				ccuring	within s	teen aully	and co	nsequen	tly resulting de	bris
1	torrent				nogunt						ooumg		icop ganj				
Comm	2m fall	s mark	EFU ar	nd riparia	an class	transition	from S2	to S5									
2																	
Comm 3	Rhab -	overall	good d	uring L t	to M flov	VS.											
Comm 4	Shab -	none.															
Comm 5	Ohab -	excelle	ent in se	everal po	ols.												
Comm 6	Landsl	des oc	cur bet	ween 1s	t and se	cond falls	(1.5m hi	gh, U⁻	TM 9.63	34 <mark>21.6</mark>	159530)	- three	occurred	this ye	ar.		
Comm 7	Stream	survey	/ed by S	Silvicon i	n Sept 2	26, 2006 b	ut no offi	cial re	ference	found.							
'																	

						SIT	ER	REFE	RENC	E						
Gazette	d Name: ເ	Jnnamed				WSC:	480-2	280900							<b>Map:</b> 093	3M.056
Local Na	ame: BAE	81-A-R1				ILP:		Rea	<b>ch:</b> 5				Site L	<b>g:</b> 200	Access:	FT
UTM Z.E	<b>E.N</b> : 9 6	34343 61	157244	Method	I: GIS	Surve	y Date	e: 05/0	9/201	Time: <sup>2</sup>	15:30	Agency	y: C016	6 <b>Cre</b>	w: MJ/DJ	
					С	HANN	NEL						-		WATE	R
Mea	surement	1	2	3	4	5	6	7	8	9	10	11	12	Avg:	Temp:	9
	nel Width (r		2.2	2.6	2.7	2.3	0		0	•				2.4	pH:	7.9
	ed Width (r		1.8	1.1	1	1.1	1	1.2						1.29	•	
Res.	Pool Dp (cr	<b>m):</b> 0.31	0.22	0.17										0.23	Cond:	111
	ull Depth (r	-	0.8	0.5	0.6	0.5	0.5							0.58	Turbidity:	С
Chan.	Gradient (	<b>%):</b> 6.5	5	4	3	4								4.5		
Flow S	tage: ∟	Chan	nel Con	ditions:		Flood	Signs	s: Non	е							
							С	OVE	R							
Cov	erTotal: S	WD LWD	BC	B DP	OV	IV C			700/	1 14/		tion & E	Note.	<b>F</b> / <b>F</b>	N/ Turney M	
	А	ТТ	D	S T	S	N	Janop	y: 41-	70%		Drund		JStr:	F/E	IV Type: M	I
LE	3 Shape:	UL	LB Textu	ure: G	СВ	LB F	Riparia	an Vege	etation:	С		LB Ripa	arian Ve	getatior	n Stage: Mi	F
RE	3 Shape:	V F	RB Text	ure: G	СВ	RB F	Ripari	an Veg	etation	c c		RB Ripa	arian Ve	egetatio	n Stage: Mi	F
					С	HANN	NEL	MOR	PHO	LOGY	1					
Dom	Substrate:	G <b>D</b> 9	95 (cm):	60	Morph	ology:	СР	B Str	m Patt:	SI	Confn	mnt: O	С <b>Со</b> і	upling:	DC Islands:	N
	om Substr		D (cm):		-	5: N						ance In				
Cubu							EE	ATUR	ES							
Feeture		(m)							-							N
Feature	e H (m) L	_ (m)						Comme	ent						UTM Z.E	.N
							SA	MPLI	NG							
Meth	od E	F sec	EF La	(m)	EF Volt	EF fr		M P L I EF puls		os Ne	ts	Durati	on	Net/Tr	ap Depth (m)	Hab
Meth		EF sec	EF Lg	(m)	EF Volt	EF fr		M P L I EF puls		os Ne	ts	Durati	on	Net/Tra	ap Depth (m)	Hab
NS	\$		EF Lg Min L	(m) Max L	EF Volt	EF fr								Net/Tr	ap Depth (m)	Hab
	\$					EF fr						Durati g Comr		Net/Tr	ap Depth (m)	Hab
NS	\$					EF fr								Net/Tr	ap Depth (m)	Hab
NS	\$					EF fr								Net/Tr	ap Depth (m)	Hab
NS	\$													Net/Tr	ap Depth (m)	Hab
NS	\$					EF fr	req I	EF puls	e Tra					Net/Tr	ap Depth (m)	Hab
Species	S Stage	Total #	Min L	Max L	Act			EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Comm	\$	Total #	Min L	Max L	Act			EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Comm 1	S Stage	Total #	Min L	Max L inaccess	Act	alls barrie	COI cor	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Comm 1	S Stage	Total #	Min L	Max L inaccess	Act	alls barrie	COI cor	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Species Comm 1 Comm 2	S Stage	Total #	Min L	Max L inaccess	Act ible d/t fa	alls barrie	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Species Comm 1 Comm 2	S Stage	Total #	Min L	Max L inaccess	Act ible d/t fa	alls barrie	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 3 Comm	S Stage	Total #	Min L bitat but al habitat n 1996 b	Max L inaccess t to suppo	Act ble d/t fa	all sites.	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 3 Comm 4	S Stage	Total #	Min L bitat but al habitat n 1996 b	Max L inaccess t to suppo	Act ble d/t fa	all sites.	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 3 Comm 4 Comm	S Stage	Total #	Min L bitat but al habitat n 1996 b	Max L inaccess t to suppo	Act ble d/t fa	all sites.	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5	S Stage	Total #	Min L bitat but al habitat n 1996 b	Max L inaccess t to suppo	Act ble d/t fa	all sites.	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 3 Comm 4 Comm	S Stage	Total #	Min L bitat but al habitat n 1996 b	Max L inaccess t to suppo	Act ble d/t fa	all sites.	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
NS Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm	S Stage	Total #	Min L bitat but al habitat n 1996 b	Max L inaccess t to suppo	Act ble d/t fa	all sites.	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6	S Stage	Total #	Min L bitat but al habitat n 1996 b	Max L inaccess t to suppo	Act ble d/t fa	all sites.	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	S Stage	Total #	Min L bitat but al habitat n 1996 b	Max L inaccess t to suppo	Act ble d/t fa	all sites.	COI er pres	EF puls	e Tra	S	amplir			Net/Tr	ap Depth (m)	Hab

						S	ITE I	REFE	RENO	CE						
Gazette	<b>d Name</b> : ເ	Jnnamed				wso	<b>:</b> 480-2	280900-	59517						<b>Map:</b> 09	3M.056
Local N	ame: BAE	81-B-R1				ILP:		Rea	<b>ch:</b> 4				Site L	<b>g:</b> 150	Access:	FT
UTM Z.I	<b>E.N</b> : 9 6	635142 61	56647	Metho	d: GIS	Sur	vey Dat	<b>e:</b> 06/0	9/201	Time:	10:20	Agency	: C016	- 6 <b>Cr</b>	ew: MJ/DJ	
-							NNEL			-		J			WATE	R
Moa	surement	1	2	3	4	5	6	7	8	9	10	11	12	Avg:	Temp:	8
	nel Width (r		2	2	1.6	2	1.9	1	0	9	10	11	12	1.88		
	ed Width (r		1.7	1.2	0.6	0.6	0.5							0.92	pH:	7.8
	Pool Dp (cr		0.21											0.33	Cond:	126
	ull Depth (r	-	0.7	0.7	0.7									0.65	Turbidity:	L
	Gradient (	-	0.2	0.4										0.53		
Flow S	Stage: ∟	Chan	nel Cor	ditions		Flo	od Sign	s: Non	е						-	
							C	COVE	R							
Cov	verTotal: S	מש ו שמ	в (	CB DP	vov	IV										
		T N			S	N	Canop	<b>by:</b> 1-3	20%	LW	D Func	tion & D	Distr:	Ν	IV Type: N	l
A I N N D I S N															n Stage: N	Δ
															-	
	b Shape.	V I	Diex	ure. r								кыкіра		gelalio	n Stage. N	•
							NNEL									
Dom	Substrate:	F <b>D</b> 9	95 (cm):	25	Morp	holog	y: RF	S Str	m Patt:	SI	Confn	mnt: U	Ν <b>Co</b> ι	pling:	DC Islands:	Ν
Subd	om Substr	: C	D (cm):	1	Ba	<b>rs</b> : N				I	Disturb	ance In	dicators	s: No	ne	
							FE	ATUR	ES							
Feature	e H(m) L	_ (m)						Comme	ent						UTM Z.E	.N
							S A	MPLI	NG							
Meth		EF sec	EF Lg	(m)	EF Volt	EF	freq	EF puls	e Tra	ps Ne	ts	Durati	on	Net/T	rap Depth (m)	Hab
NS	5															
				1												
Species		Total #	Min L	Max L	Act					S	amplin	g Comr	nents			
Species		Total #	Min L	Max L	Act					S	amplin	g Comr	nents			
Species		Total #	Min L	Max L	Act		ł			S	amplin	g Comr	nents			
Species		Total #	Min L	Max L	Act					S	amplin	g Comr	nents			
Species		Total #	Min L	Max L	Act					S	amplin	g Comr	nents			
Species		Total #	Min L	Max L	Act		CO	MMEI	NTS	S	amplin	g Comr	nents			
Species	s Stage							M M E I and occ				-				
												-				
Comm 1 Comm	s Stage	ential in inc	ised cha	annel, mo								-				
Comm 1	s Stage	ential in inc	ised cha	annel, mo								-				
Comm 1 Comm 2 Comm	s Stage	ential in inc	ised cha	annel, mo	Dostly run							-				
Comm 1 Comm 2 Comm 3	s Stage Rhab - pote Shab - non Ohab - non	ential in inc ie - no suita ne - too sta	ised cha able sub: gnant an	annel, mo strate. d too sh	Dostly run	type w	ith fines	and occ	asional			-				
Comm 1 Comm 2 Comm 3 Comm	s Stage	ential in inc ie - no suita ne - too sta	ised cha able sub: gnant an	annel, mo strate. d too sh	Dostly run	type w	ith fines	and occ	asional			-				
Comm 1 Comm 2 Comm 3 Comm 4	s Stage	ential in inc ne - no suita ne - too sta bitat - habit	ised cha able sub gnant an at isolate	annel, mo strate. d too sh ed d/t fall	Dostly run	type w	ith fines	and occ	asional			-				
Comm 1 Comm 2 Comm 3 Comm	s Stage Rhab - pote Shab - non Ohab - non	ential in inc ne - no suita ne - too sta bitat - habit	ised cha able sub gnant an at isolate	annel, mo strate. d too sh ed d/t fall	Dostly run	type w	ith fines	and occ	asional			-				
Comm 1 Comm 2 Comm 4 Comm	s Stage	ential in inc ne - no suita ne - too sta bitat - habit	ised cha able sub gnant an at isolate	annel, mo strate. d too sh ed d/t fall	Dostly run	type w	ith fines	and occ	asional			-				
Comm 1 Comm 2 Comm 3 Comm 4 Comm 5	s Stage	ential in inc ne - no suita ne - too sta bitat - habit	ised cha able sub gnant an at isolate	annel, mo strate. d too sh ed d/t fall	Dostly run	type w	ith fines	and occ	asional			-				
Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	s Stage	ential in inc ne - no suita ne - too sta bitat - habit	ised cha able sub gnant an at isolate	annel, mo strate. d too sh ed d/t fall	Dostly run	type w	ith fines	and occ	asional			-				
Comm 1 Comm 2 Comm 4 Comm 5 Comm 6	s Stage	ential in inc ne - no suita ne - too sta bitat - habit	ised cha able sub gnant an at isolate	annel, mo strate. d too sh ed d/t fall	Dostly run	type w	ith fines	and occ	asional			-				
Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	s Stage	ential in inc ne - no suita ne - too sta bitat - habit	ised cha able sub gnant an at isolate	annel, mo strate. d too sh ed d/t fall	Dostly run	type w	ith fines	and occ	asional			-				

						5	ITE R	REFE	REN	CE						
	<b>d Name</b> : ા	Jnnamed				wsc	:								<b>Map:</b> 0	93M.056
LOCALIN	ame: BAE	31-G-R1				ILP:	56001	Rea	i <b>ch:</b> 1				Site L	<b>g:</b> 200	Access	S: FT
UTM Z.	E.N: 9 6	635361 61	156376	Metho	: GIS	Sur	vey Date	e: 06/0	09/201	Time: 1	1:20	Agency	<b>y:</b> C01	6 <b>Cr</b>	ew: MJ/DJ	
					C	СНАМ	NNEL								WATI	ER
Меа	surement	1	2	3	4	5	6	7	8	9	10	11	12	Avg:	Temp:	
Chan	nel Width (I	<b>m):</b> 0.8	1.1	0.7	0.9	0.8	0.7							0.83	pH:	
Wett	ed Width (I	<b>m):</b> 0	0	0	0	0	0							0	Cond:	
	Pool Dp (cı	-												0		_
	ull Depth (I		0.2	0.2	0.3	0.1								0.2	Turbidity	
	Gradient (	<b>%):</b> 10.5	13	7.5	6									9.25		
Flow S	stage: ∟	Char	nnel Cor	nditions:	DRY	Floo	od Signs	s: Non	e							
							С	OVE	R							
	verTotal: S	<b>WD LWD</b> (S) (T)		<b>CB DP</b> (D) (T)	<b>OV</b> (S)	IV N	Canop	<b>y:</b> 21	-40%	LWI	) Fu	nction & E	Distr:	F/E	IV Type:	N
LI	3 Shape:	V	LB Text	ure: F	GC	LE	3 Riparia	an Veg	etation	C		LB Ripa	arian Ve	egetatio	on Stage: N	ИF
R	B Shape:	UI	RB Text	ure: F	GC	R	B Ripari	an Veg	etation	: C		RB Ripa	arian V	egetatio	on Stage: N	ИF
					C		NNEL	MOF	RPHO	LOGY	,					
Dom	Substrate:	G D9	95 (cm):	15	Morpl	hology	: CP	Str	m Patt:	SI	Con	fnmnt: C	0 <b>Co</b> i	upling:	CO Islands	s: N
Subd	om Substr	: F	D (cm):	8	Bar	's: N				0	Distu	rbance In	dicator	s: No	one	
							FE/	ATUF	RES							
Featur	e H (m) L	_ (m)						Comm	ent						UTM Z.	E.N
		- ()														
							S A	MPLI	NG							
Meth	nod E	EF sec	EF Lg	(m)	EF Volt	EF	T	M P L I EF puls		ps Net	s	Durati	on	Net/T	rap Depth (m)	Hab
Meth		EF sec	EF Lg	(m)	EF Volt	EF	T			ps Net	s	Durati	on	Net/T	rap Depth (m)	Hab
	8	EF sec Total #	EF Lg Min L	(m) Max L	EF Volt		T			-		Durati ling Comr		Net/T	rap Depth (m)	Hab
N	8						T			-				Net/T	rap Depth (m)	Hab
N	8						T			-				Net/T	rap Depth (m)	Hab
N	8						T			-				Net/T	rap Depth (m)	Hab
N	8						T			-				Net/T	rap Depth (m)	Hab
N	8						freq I		se Tra	-				Net/T	rap Depth (m)	Hab
Specie Comm	8	Total #	Min L	Max L	Act		COI	EF puls	se Tra	S				Net/T	rap Depth (m)	Hab
Specie Comm Comm	S Stage	Total #	Min L	Max L	Act		COI	EF puls	se Tra	S				Net/T	rap Depth (m)	Hab
Specie Specie Comm 1 Comm 2	S Stage	Total #	Min L	Max L	Act		COI	EF puls	se Tra	S				Net/T	rap Depth (m)	Hab
Specie Comm Comm	S Stage	Total #	Min L	Max L	Act		COI	EF puls	se Tra	S				Net/T	rap Depth (m)	Hab
Specie Specie Comm 1 Comm 2 Comm 3 Comm	S Stage	Total #	Min L	Max L	Act		COI	EF puls	se Tra	S				Net/T	rap Depth (m)	Hab
Specie Specie Comm Comm 2 Comm 4 Comm	S Stage	Total #	Min L	Max L	Act		COI	EF puls	se Tra	S				Net/T	rap Depth (m)	Hab
Specie Specie Comm 1 Comm 2 Comm 3 Comm 4 Comm 5	S Stage	Total #	Min L	Max L	Act		COI	EF puls	se Tra	S				Net/T	rap Depth (m)	Hab
Specie Specie Comm Comm 2 Comm 4 Comm	S Stage	Total #	Min L	Max L	Act		COI	EF puls	se Tra	S				Net/T	rap Depth (m)	Hab
Specie Specie Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm	S Stage	Total #	Min L	Max L	Act		COI	EF puls	se Tra	S				Net/T	irap Depth (m)	Hab

						S	ITE	REFE	RENO	CE						
Gazette	<b>d Name</b> : ປ	Innamed				wso	<b>:</b> 480-2	280900-	59517						<b>Map:</b> 0	93M.056
Local N	ame: BAB	1-G-R1				ILP:		Rea	<b>ch:</b> 5				Site L	<b>g:</b> 200	Access	: FT
UTM Z.I	<b>E.N</b> : 9 6	35202 61	56215	Metho	d: GIS	Sur	vev Dat	te: 06/0	9/201	Time:	12:10	Agenc	<b>v</b> : C010	6 <b>Cr</b>	ew: MJ/DJ	
		00202   01	002.0				NNEL					, gene	<b>,</b>		WATE	R
Mor	surement	1	2	2	4	5	6	7	8	9	10	11	12	Ava	Temp:	8
	nel Width (r		1.7	3 1.6	4 1.6	5 1.8	0 1.8	1	0	9	10	11	12	Avg: 1.67	· ·	-
	ed Width (r		0.3	0	0	0.8	0.6							0.33	pH:	7.6
	Pool Dp (cr	,	0.26	0.19	0.14	0.0	0.0							0.00	Cond:	121
	ull Depth (r		0.3	0.3										0.3	Turbidity:	С
	Gradient (9		2	2	3									2	-	
Flow S	Stage: L	Chan	nel Con	ditions	INT	Flo	od Sign	s: Non	е		1	1			_	
						-		COVE								
Car	verTotal: S		вС	B DP		IV/			N							
COV		T T	-	D S	ov S	IV N	Canop	<b>py:</b> 21-	-40%	LW	D Func	tion & [	Distr:	F/E	IV Type:	M
				-	-			,					,		<b>e</b> /	-
	LB Shape:       U       LB Texture:       FG       LB Riparian Vegetation:       C       LB Riparian Vegetation Stage:       MF         RB Shape:       U       RB Texture:       FG       RB Riparian Vegetation:       C       RB Riparian Vegetation Stage:       MF															1F
R	B Shape:	UF	RB Texti	ure: F	G	R	B Ripar	ian Veg	etation	: C		RB Rip	arian Ve	egetatio	on Stage: N	1F
						СНАІ	NNEL	MOF	РНО	LOG	Y					
Dom	Substrate:	G <b>D9</b>	5 (cm):	5	Morp	hology	y: RF	P Str	m Patt:	IR	Confn	mnt: U	Ν <b>Co</b> ι	upling:	DC Islands	: N
Subd	om Substr:	NA	D (cm):	5	Ва	rs: SI		3			Disturb	ance In	dicators	s: No	one	
			· ,				FF	ATUR	FS							
Feature	e H(m) L	. (m)						Comme							UTM Z.	E N
reature	е п (III) L	. (11)						Comme	ent						01111 2.1	E.IN
							S A	MPLI	NG							
Meth	od F	Fsec	FELa	(m)	EE Volt	F F		MPLI		ns Ne	ts	Durati	on	Net/T	ran Denth (m)	Hab
Meth		F sec	EF Lg	(m)	EF Vol	t EF		M P L I EF puls		ps Ne	ts	Durati	on	Net/T	rap Depth (m)	Hab
NS	S													Net/T	rap Depth (m)	Hab
	S	F sec Total #	EF Lg Min L	(m) Max L								Durati ng Comr		Net/T	rap Depth (m)	Hab
NS	S													Net/T	rap Depth (m)	Hab
NS	S													Net/T	rap Depth (m)	Hab
NS	S													Net/T	rap Depth (m)	Hab
NS	S													Net/T	rap Depth (m)	Hab
NS	S						<sup>-</sup> freq		se Tra					Net/T	rap Depth (m)	Hab
Species	S	Total #	Min L				<sup>-</sup> freq	EF puls	se Tra					Net/T	rap Depth (m)	Hab
Species	S Stage	Total #	Min L				<sup>-</sup> freq	EF puls	se Tra					Net/T	rap Depth (m)	Hab
Species Comm Comm	S Stage	Total #	Min L				<sup>-</sup> freq	EF puls	se Tra					Net/T	rap Depth (m)	Hab
Species Species Comm 1 Comm 2	S Stage	Total #	Min L				<sup>-</sup> freq	EF puls	se Tra					Net/T	rap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm	S Stage	Total #	Min L				<sup>-</sup> freq	EF puls	se Tra					Net/T	rap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 3	S Stage Stage Shab - goo Ohab - non Rhab - goo	Total #	Min L	Max L			Freq CO	EF puls	NTS	5 5	Samplir	ng Comr	nents			
Species Species Comm 1 Comm 2 Comm 3 Comm	S Stage S Stage Shab - goo Ohab - non Rhab - goo No fish hab	Total #	Min L	Max L	Act	d/t falls	Freq CO	EF puls	NTS	5 5	Samplir	ng Comr	nents		rap Depth (m)	
Species Species Comm 1 Comm 2 Comm 3 Comm 4	S Stage Stage Shab - goo Ohab - non Rhab - goo	Total #	Min L	Max L	Act	d/t falls	Freq CO	EF puls	NTS	5 5	Samplir	ng Comr	nents			
Species Species Comm 1 Comm 2 Comm 3 Comm	S Stage S Stage Shab - goo Ohab - non Rhab - goo No fish hab	Total #	Min L	Max L	Act	d/t falls	Freq CO	EF puls	NTS	5 5	Samplir	ng Comr	nents			
Species Species Comm 1 Comm 2 Comm 4 Comm	S Stage S Stage Shab - goo Ohab - non Rhab - goo No fish hab	Total #	Min L	Max L	Act	d/t falls	Freq CO	EF puls	NTS	5 5	Samplir	ng Comr	nents			
Species Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5	S Stage S Stage Shab - goo Ohab - non Rhab - goo No fish hab	Total #	Min L	Max L	Act	d/t falls	Freq CO	EF puls	NTS	5 5	Samplir	ng Comr	nents			
Species Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm	S Stage S Stage Shab - goo Ohab - non Rhab - goo No fish hab	Total #	Min L	Max L	Act	d/t falls	Freq CO	EF puls	NTS	5 5	Samplir	ng Comr	nents			
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6	S Stage S Stage Shab - goo Ohab - non Rhab - goo No fish hab	Total #	Min L	Max L	Act	d/t falls	Freq CO	EF puls	NTS	5 5	Samplir	ng Comr	nents			
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	S Stage S Stage Shab - goo Ohab - non Rhab - goo No fish hab	Total #	Min L	Max L	Act	d/t falls	Freq CO	EF puls	NTS	5 5	Samplir	ng Comr	nents			

						SIT	ERE	FER	RENC	E						
Gazette	d Name:	Unnan	ned			WSC:									Map: 093N	Л.057
Local Na	ame: B	09-A-R2				ILP: 57	001	Reacl	<b>h:</b> 2				Site L	<b>g:</b> 100	Access:	FT
UTM Z.E			0 6160822	Metho	d: GIS	Surve	y Date:	06/09	/201	Time <sup>, ,</sup>	15.20	Agency		-	ew: MJ/DJ	
		04100	0100022				-	00/00/			10.00	Agene			WATER	
					<u>г г</u>	CHANN			-			1				
	suremer		1 2	3	4	5	6	7	8	9	10	11	12	Avg:	Temp:	
	nel Width														pH:	
	ed Width Pool Dp														Cond:	
	ull Depth														Turbidity:	
	Gradien															
							<u>a:</u>									
Flow S	tage:	(	Channel Co	nditions	: NVC	Flood	Signs:									
							CO	VER	2							
Cov	erTotal:	SWDL	WD B	CB DF	P 0V	IV C	anopy:			LW	D Fund	tion & D	)istr:		IV Туре:	
LE	B Shape:	1 1	LB Tex	ture:		LB F	Riparian	Veget	ation:			LB Ripa	arian Ve	egetatio	n Stage: W	
RI	3 Shape:	:	RB Tex	ture:		RBI	Riparian	Veget	tation:			RB Ripa	arian Ve	egetatio	n Stage: W	
					(	CHANN	IEL M	IORI	РНО	LOG	(					
Dom	Substrat	e:	D95 (cm):		Morp	hology:		Strm	n Patt:		Confn	mnt:	Соц	upling:	Islands:	
Subd	om Subs	tr.	D (cm)		Ba							ance In				
Oubu	omouba			·	Da						Jistuit		licator			
	1	1					FEAT									
Feature	e H (m)	L (m)					Co	mmer	nt						UTM Z.E.N	l
			T				SAM							1	1	
Meth		EF see	EF L	g (m)	EF Volt	EF f	req EF	pulse	Trap	os Ne	ts	Durati	on	Net/Tr	ap Depth (m)	Hab
NS	S															
Species	s Stage	e Tota	I # Min L	Max L	- Act					S	amplir	ig Comr	nents			
							COMM		TS							
																ed,
Comm 1			~10m long c a stream.	hanneliz	ed sectio	ns, otherw				within sv	vampy	corridor;	no conti	inuous s	coured channel be	
			•	hanneliz	ed sectio	ns, otherw				within sv	vampy	corridor;	no conti	inuous s	coured channel be	
1 Comm 2			•	hanneliz	ed sectio	ns, otherw				within sv	vampy	corridor;	no conti	inuous s	coured channel be	
1 Comm			•	hanneliz	ed sectio	ns, otherw				within sv	vampy	corridor;	no conti	inuous s	coured channel be	
1 Comm 2 Comm			•	hanneliz	ed sectio	ns, otherw				within sv	vampy	corridor;	no conti	inuous s	coured channel be	
1 Comm 2 Comm 3			•	hanneliz	ed sectio	ns, otherw				within sv	vampy	corridor;	no conti	inuous s	coured channel be	
1 Comm 2 Comm 3 Comm			•	hanneliz	ed sectio	ns, otherw				within sv	vampy	corridor;	no conti	inuous s	coured channel be	
1 Comm 2 Comm 4 Comm 5 Comm			•	hannelizo	ed sectio	ns, otherw				within sv	vampy	corridor;	no conti	inuous s	coured channel be	
1 Comm 2 Comm 4 Comm 5 Comm 6			•	hanneliz	ed sectio	ns, otherw				within sv	vampy	corridor;	no conti	inuous s	coured channel be	
1 Comm 2 Comm 3 Comm 5 Comm			•	hanneliz	ed sectio	ns, otherw				within sv	vampy	corridor;		inuous s	coured channel be	

						SITE	REFER	ENCE						
Gazette	d Name	Unnar	ned		N	NSC:							Map: (	093M.057
Local N	ame: E	09-A-R1			I	LP: 57001	Reach	: 3			Site L	<b>g:</b> 100	Acces	s: FT
UTM Z.I	<b>E.N</b> : 9	64684	0 6160758	Metho	d: GIS	Survey Da	ite: 06/09/2	201 <b>Tim</b>	<b>16:</b> 1	5 Agend	<b>y:</b> C010	6 <b>Cre</b>	ew: MJ/DJ	
					CH	IANNEL	-						WAT	ER
Mea	sureme	nt	1 2	3	4 4	5 6	7	8 9	9 1	0 11	12	Avg:	Temp:	
	nel Widt												pH:	
	ed Widt												Cond:	
	Pool Dp												Turbidity	:
	ull Dept Gradier													
Flow S		. ,	Channel Cor	nditions	: NVC	Flood Sig	ns:							
							COVER							
Cov	erTotal	SWD L	WD B	CB DP	2 OV IV		00121	_	_		_	_		
	orrotan					Cano	ру:		LWD F	unction &	Distr:		IV Type:	
LE	3 Shape	:	LB Text	ure:		LB Ripa	rian Vegeta	tion:		LB Rip	arian Ve	egetatio	n Stage:	
RI	B Shape	:	RB Text	ure:		RB Ripa	rian Vegeta	ation:		RB Rip	arian Ve	egetatio	n Stage:	
					CH	IANNEL	. MORP	HOLO	GY					
Dom	Substra	te:	D95 (cm):		Morpho	logy:	Strm	Patt:	Со	nfnmnt:	Cou	upling:	Island	s:
Subd	om Sub	str:	D (cm):		Bars:				Dist	urbance Ir	dicator	S:		
						FE	EATURE	S						
Feature	e H (m)	L (m)					Comment	:					UTM Z	.E.N
							AMPLIN					I		
Meth		EF se	c EF Lg	ı (m)	EF Volt	S / EF freq	A M P L I N EF pulse	G Traps	Nets	Durat	ion	Net/Tr	rap Depth (m)	Hab
NS	S						1					Net/Tr	rap Depth (m)	Hab
	S			(m) Max L			1			Durat pling Com		Net/Tr	rap Depth (m)	Hab
NS	S						1					Net/Tı	rap Depth (m)	Hab
NS	S						1					Net/Tr	rap Depth (m)	Hab
NS	S						1					Net/Tr	rap Depth (m)	Hab
NS	S					EF freq	EF pulse	Traps				Net/Ti	rap Depth (m)	Hab
Species	S Stag	e Tota	I # Min L	Max L	. Act	EF freq	EF pulse	Traps	Sam	pling Com	ments			Hab
Species	3 Stag	e Tota		Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab
Species Species Comm 1 Comm	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab
Species Comm 1 Comm 2	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab
Species Species Comm 1 Comm	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab
Species Species Comm 1 Comm 2 Comm	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab
Species Species Comm 1 Comm 2 Comm 3 Comm 4	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab
Species Species Comm Comm 2 Comm 4 Comm	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab           Image: Im
Species Species Comm Comm 2 Comm 3 Comm 4	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab
NS Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6	3 Stag	e Tota	I # Min L	Max L	. Act	EF freq C O	EF pulse	Traps Traps	Sam	pling Com	ments			Hab

						SITE	REFE	RENO	E						
Gazette	d Name:	Unnamed				WSC: 48	0-525800	41873						Map: 09	93M.007
Local N	ame: T11	-A-R1				ILP:	Rea	<b>ich:</b> 1&	2			Site L	<b>g:</b> 1250	Access	: FT
UTM Z.I	<b>E.N</b> : 9	653040 6	104510	Method	: GIS	Survey D	ate: 06/0	09/201	Time: <sup>2</sup>	16:15	Agency	v: C01	5 <b>Cre</b>	w: MJ/DJ	
-						HANNE			-		<b>J</b> * 1	,		WATE	R
Mea	surement	1	2	3	4	5 6	- 7	8	9	10	11	12	Avg:	Temp:	
	nel Width (		2.1	2.1		2.1 2.2	1	0	9	10	11	12	2.1		
	ed Width (		0	0	0	0 0							0	pH:	
	Pool Dp (c			-	-								0	Cond:	
	ull Depth (	-	0.4	0.4	0.3	0.3							0.38	Turbidity:	
	Gradient		4	2	5								3.5		
Flow S	tage: L	Chai	nnel Cor	ditions:	DRY	Flood Sig	<b>ns:</b> Nor	ne							
	-						COVE	R							
Cov	erTotal:	מש ו משי	в	B DP	ονι	V		IX .							
	N(A)	(S) (T)		T) N		V Can	<b>opy:</b> 41	-70%	LW	D Fund	ction & D	Distr:	F/E	IV Type: 1	N
	3 Shape:		LB Text				arian Veg	otation	С			orion Va	antatio	n Stage: M	1F
	•			-	-	-	-				-		-	-	
	3 Shape:	V	RB Text	ure: G			arian Veg				кв кіра	arian Ve	egetatio	n Stage: N	1F
					C	HANNE	L MOI	RPHO							
Dom	Substrate:	C D9	95 (cm):	20	Morpho	ology:	RP Sti	m Patt:	SI	Confn	mnt: O	С <b>Со</b> і	ıpling:	PC Islands	: N
Subd	om Substi	: G	D (cm):	10	Bars	: N			[	Distur	bance In	dicators	s: C2		
						F	EATUR	RES							
Feature	e H (m)	L (m)					Comm	ent						UTM Z.	E.N
		. ,													
						S	AMPL	I N G							
Meth	od	EF sec	EF Lg	(m)	EF Volt	EF freq	EF puls	se Tra	ps Ne	ts	Durati	on	Net/Tr	ap Depth (m)	Hab
NS	6														
Species	s Stage	Total #	Min L	Max L	Act				S	amplii	ng Comr	nents			
-						_									
						_									
							ОММЕ								
Comm 1		ntains v. po by RB fron			iffles over	compacted	d cobbles	with insi	gnifican	t ISC. I	Dewaters	soon al	ter fresh	et and unlikely	is being
Comm	No Shab -	large subs	strate, de	waters; N	lo Ohab -	dry.									
2															
Comm	Stream dr	y up to the	mouth - r	no pools (	observed i	n R2and o	nly few in	R1 (120	0 m surv	/eyed).					
3															
Comm 4	Not prefer	able habita	t for RB i	n R1 - sl	ow, mucky	with cobb	es alterna	iting with	i muddy	ponds	near mo	uth. No	Shab an	d Ohab observe	ed.
Comm 5	Needs to I	be resampl	ed in the	first half	of July to	determine f	ish status	•							
Comm 6	Xing UTM	9.652063.	6104828	at prop r	d stn=0+5	526									
Comm															
7															
Comm	-	-	-	-	-		-		-		-		-	-	

1						S	ITE I	REFE	RENO	E						
Gazette	d Name: U	nnamed				wso	:								<b>Map:</b> 09	3L.067
Local Na	ame:					ILP:	67001	Rea	<b>ch:</b> 1&2	2			Site Le	<b>g:</b> 640	Access:	FT
UTM Z.E	<b>E.N:</b> 9 64	7292 60	56810	Metho	d: GIS	Sur	vey Dat	<b>e:</b> 25/0	9/201	Time: <sup>2</sup>	0:18	Agency	: C016	6 Cre	w: MJ/RC	
						СНА	NNEL								WATE	R
Mea	surement	1	2	3	4	5	6	7	8	9	10	11	12	Avg:	Temp:	6
	nel Width (m		0.59	1.21	0.78	0.53	0.62	0.49	0	5	10		12	0.68	pH:	
	ed Width (m		0.59	1.21	0.78	0.53	0.62	0.49						0.68	•	7.8
	Pool Dp (cm													0.03	Cond:	121
Bankf	ull Depth (m	): 0.13	0.11	0.11										0.12	Turbidity:	С
Chan.	Gradient (%	<b>):</b> 18	19	16										17.67		
Flow S	stage: L	Chan	nel Cor	ditions		Floo	od Sign	s: Non	е							
							C	OVE	R							
Cov	verTotal: S	מש ו מע	в (	CB DF	vov	IV										
		Г Т		D T	S	N	Canop	<b>by:</b> 21-	40%	LW	) Fund	ction & D	istr:	F/E	IV Type: N	
LE	3 Shape:	UL	.B Texti	ıre <sup>.</sup> F	G	IF	3 Rinari	an Vege	etation.	с		LB Ripa	rian Ve	detation	Stage: M	F
	B Shape:		RB Text		G		•	•				-		getation	-	
	s Shape.		Diex	ure. r	-			ian Veg		-		кыкіра		gelation	i Staye. IVI	
								MOR								
	Substrate:	C <b>D9</b>	5 (cm):	17	Morp	hology	/: CF	Str	m Patt:	SI	Confn	mnt: C	) Cou	ipling:	CO Islands:	Ν
Subd	om Substr:	G I	D (cm):	12	Ba	rs: N				I	Distur	bance Ind	dicators	s: C1		
							FE	ATUR	ES							
Feature	e H (m) L	(m)						Comme	ent						UTM Z.E	.N
FSB		10 Loca	ited neai	r mouth											9 647292 6	056810
							S A	MPLI	NG							
Meth	od E	F sec	EF Lg	(m)	EF Volt	EF	freq	EF puls	e Tra	os Ne	ts	Duratio	on	Net/Tra	ap Depth (m)	Hab
NS	6															
Species	s Stage	Total #	Min L	Max L	Act					S	amplii	ng Comn	nonte			
												ig comi	lents			
												ig com				
											<u> </u>		lients			
											<u> </u>					
											<u> </u>					
							0.0	MMEN								
Comm	No fich hob							MMEN		habitab	•			uing free		
Comm 1	No fish hab						m from I	mouth -		habitab	•			uring fres	shet, however is	too
1	steep and c	ontains no	instrea	m cover	to be inh	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too
1		ontains no	instrea	m cover	to be inh	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring free	shet, however is	too
1 Comm 2 Comm	steep and c	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too
1 Comm 2	steep and c Riparian cla	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too
1 Comm 2 Comm 3 Comm	steep and c Riparian cla	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too
1 Comm 2 Comm 3 Comm 4	steep and c Riparian cla	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too
1 Comm 2 Comm 3 Comm	steep and c Riparian cla	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too
1 Comm 2 Comm 3 Comm 4 Comm 5	steep and c Riparian cla	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too
1 Comm 2 Comm 3 Comm 4 Comm	steep and c Riparian cla	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too
1 Comm 2 Comm 4 Comm 5 Comm	steep and c Riparian cla	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too
1 Comm 2 Comm 4 Comm 5 Comm 6	steep and c Riparian cla	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring free	shet, however is	
1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	steep and c Riparian cla	ontains no ss transiti	o instrea	m cover S6 to N	to be inh CD at U1	abited I	m from I beyond \	mouth - /alley.		habitab	•			uring fres	shet, however is	too

#### 2010 Stream Assessment in Nadina Forest District

						S	SITE	REFE	REN	CE						
Gazetted Na	ame: Unn	amed				ws	<b>C</b> : 460-	496100	-69000						<b>Map:</b> 09	93L.067
Local Name	:					ILP	:	Rea	ach: 3.4	1&3.2			Site Lg	<b>g:</b> 670	Access	: FT
UTM Z.E.N:	9 647	162 60	57151	Metho	d: GIS	Su	rvey Dat	t <b>e:</b> 25/	09/201	Time:	13:03	Agency	: C016	6 Cre	w: MJ/RC	
						СНА	NNEL								WATE	R
Measure	ement	1	2	3	4	5	6	7	8	9	10	11	12	Avg:	Temp:	6
Channel V		4.4	3.1	2.7	2.9	3.8	2.1	-	-					3.17	pH:	8.1
Wetted V	Vidth (m):	1.9	3.1	2.5	2.9	1.3	2.1							2.3	Cond:	162
Res. Pool	I Dp (cm):	0.35	0.33	0.35	0.6	0.59								0.44		-
Bankfull D			0.45	0.39										0.38	Turbidity:	С
Chan. Gra	. ,		11	14	5									9.25		
Flow Stage	e: M	Chan	nel Con	ditions		Flo	ood Sign			5						
							(	СОУЕ	R							
	otal: SWD			B DP		IV	Cano	<b>py:</b> 21	-40%	LW	/D Fun	ction & Di	istr:	A/C	IV Type: N	Л
A	T	S .		N S	Т	N .	-	-					<b>.</b>	, . <b>-</b>	•	-
LB Sh	•		B Textu		GCBR		_B Ripar	-				LB Ripa		•	•	IF
RB Sh	ape: V	R	RB Text	ure: F	GCBR		RB Ripar					RB Ripa	rian Ve	egetatior	n Stage: N	IF
						СНА	NNEL	MO	RPHO	LOG	Y					
Dom Sub	strate:	G <b>D9</b>	5 (cm):	400	Morp	pholog	gy: Cl	⊃ St	m Patt	: SI	Confr	nmnt: EN	Cou	pling:	CO Islands	: 0
Subdom S	Substr:	в	D (cm):	33	Ba	rs: SI	IDE DIAC	3			Distur	bance Ind	icators	<b>s:</b> B2 [	D2 C4 S3	
							FE	ATU	RES							
Feature H	(m) L (m	ו)						Comm	ent						UTM Z.E	E.N
	1.5		•	ge pool											9 647159 6	
C	5 20	2 cor	nsecutiv	e falls ar	nd bedro	ck chu									9 647444 6	6057171
		T					1	MPL								1
Method EF	EF		EF Lg		EF Vol	t E	•	EF pul: 4	se Tra	ips N	ets	Duratio	n	Net/Tra	ap Depth (m)	Hab
	44	-	400		500		80	4								
Species S	Stage To	otal #	Min L	Max L	Act						Sampii	ng Comm	ents			
		0														
							CO	MME	NTS							
Comm Moo	derately ste	ep strea	am with	many ca	scades,	chytes	s and fall	s. Over	all suffic	cient ha	bitat to	support pe	rennial	fish use.		
Comm Due	e to many c	bstructi	ons stre	am is in:	accessil	ole to fi	ish from l	Deep C	reek. Fir	st falls	mark El	FU and rip	arian cl	ass trans	sition from S3 t	o S5.
Comm Noi 3	isolated fis	h u/s of	1st falls	. Stream	sample	ed u/s i	in 1997 b	y Triton	at the e	existing	king wit	h NFC.				
Comm Ripa	arian class	transitio	on from	S5 to S6	at UTN	19.647	7386.605	7234. C	W=2.6;	2.9; 2.′	l; 2.3; 2	2.7m; Grad	lient = 9	9, 7, 6, ar	nd 12%.	
Comm 5																
Comm 6																
Comm 7																
Comm 8																
<u> </u>												an Class:			\$3/\$5/\$6	

Riparian Class:

#### 2010 Stream Assessment in Nadina Forest District

						S	ITE I	REFE	RENC	E								
Gazette	d Name: Unr	named				wsc	: 460-4	496100-	69000-0	7900						Map: (	)93L	067
Local N	ame:					ILP:		Rea	<b>ch:</b> 1÷3	3			Site L	<b>g:</b> 820		Acces	s:	FT
UTM Z.I	<b>E.N:</b> 9 647	356 60	57207	Metho	d: GIS	Sur	vev Dat	e: 25/0	9/201	Time: <sup>•</sup>	14:21	Agency		-		MJ/RC		
							NNEL					g,				WAT	FR	
Moa	surement	1	2	3	4	5	6	7	8	9	10	11	12	Avg:		Temp:		6.5
	nel Width (m):		2	0.9	4	0.7	1	1.2	0	9	10	11	12	1.01	_	•	,	
	ed Width (m):		0.9	0.9	1.1	0.7	1	1.1						0.94		pH:		8
	Pool Dp (cm):		0.24	0.34	0.21	0.17	0.24	0.27						0.24		Cond:		112
	ull Depth (m):		0.3	0.2	-	-		_						0.23		Turbidity	:	С
	Gradient (%):		8	6	6.5									8.13				
Flow S	tage: M	Chan	nel Con	ditions		Floo	od Sign	s: Non	е			1						
	•							OVE										
Cov	verTotal: SWI	חשור	вс	B DP	v ov	IV												
000	A S	S		S D	T	N	Canop	<b>by:</b> 21-	40%	LW	D Func	tion & D	)istr:	A/E	I	V Type:	М	
1.6	B Shape: U	_	.B Textu		G		3 Rinari	ian Vege	etation	с		LB Ripa	rian Ve	netatio	on St	ade.	MF	
	B Shape: U		RB Text		G		•	ian Veg				RB Ripa		•		•	MF	
	b Shape. U	г 	Diexu	ure. r	-		•					кыкіра		egelatio	511 31	aye.		
_				_				MOR										
Dom	Substrate:		5 (cm):		•	phology	/: CF	S Str	m Patt:			mnt: C			CO	Island	s:	Ν
Subd	om Substr:	CI	D (cm):	2	Ba	rs: N				I	Disturb	ance Ind	dicator	s: No	one			
							FE	ATUR	ES									
Feature	e H(m) L(n	n)						Comme	ent							UTM Z	.E.N	1
							r	MPLI						1				
Meth		sec	EF Lg	(m)	EF Vol	t EF	r	M P L I EF puls		os Ne	ts	Durati	on	Net/T	rap [	Depth (m)		Hab
NS	8						r							Net/T	rap [	Depth (m)		Hab
	8		EF Lg Min L	(m) Max L			r					Duration of Comm		Net/T	rap [	Depth (m)		Hab
NS	8						r							Net/T	rap [	Depth (m)		Hab
NS	8						r							Net/T	rap [	Depth (m)		Hab
NS	8						r							Net/T	rap [	Depth (m)		Hab
NS	8						r							Net/T	rap [	Depth (m)		Hab
NS	8						freq		e Traj					Net/T	rap [	Depth (m)		Hab
Species	8	otal #	Min L	Max L	Act		freq CO	EF puls	e Tra	S	amplin	ig Comr	nents			Depth (m)		Hab
Species	S Stage To	otal #	Min L	Max L	Act		freq CO	EF puls	e Tra	S	amplin	ig Comr	nents			Depth (m)		Hab
Species Comm 1 Comm	S Stage To	t - stream	Min L	Max L	Act		freq CO	EF puls	e Tra	S	amplin	ig Comr	nents			Depth (m)		Hab
Species Comm 1 Comm 2	S Stage To S Stage To D D D D D D No fish habita Rd xing at UT	t - stream	Min L	Max L	Act	ab but is	freq C O solated fr	EF puls	NTS waters -	drains t	co confir	g Comn	nents B paren	t strean	n.			Hab
Species Species Comm 1 Comm 2 Comm	S Stage To S Stage To No fish habita	t - stream	Min L	Max L	Act	ab but is	freq C O solated fr	EF puls	NTS waters -	drains t	co confir	g Comn	nents B paren	t strean	n.			Hab
Species Species Comm 1 Comm 2 Comm 3	S Stage To S Stage To D	t - stream M 9.647		Max L Max L ice poter i7302.	Act	ab but is	freq C O solated fi	EF puls	NTS Waters -	drains t	cover=,	g Comn med NF	nents B paren	t stream	n.	sturbances	<u> </u>	
Species Species Comm 1 Comm 2 Comm 3	S         Stage         To           s         Stage         To           a         -         -           a         -         -           a         -         -           b         -         -           b         -         -           b         -         -           b         -         -           b         -         -           c         -         -           b         -         -           c         -         -           b         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -      c         -         -	t - stream M 9.647 =0.9; 0.4		Max L Max L ice poter i7302.	Act	ab but is	freq C O solated fi	EF puls	NTS Waters -	drains t	cover=,	g Comn med NF	nents B paren	t stream	n.	sturbances	<u> </u>	
Species Species Comm 1 Comm 2 Comm 3 Comm 4	S Stage To S Stage To D	t - stream M 9.647 =0.9; 0.4		Max L Max L ice poter i7302.	Act	ab but is	freq C O solated fi	EF puls	NTS Waters -	drains t	cover=,	g Comn med NF	nents B paren	t stream	n.	sturbances	<u> </u>	
Species Species Comm 1 Comm 2 Comm 3 Comm	S         Stage         To           s         Stage         To           a         -         -           a         -         -           a         -         -           b         -         -           b         -         -           b         -         -           b         -         -           b         -         -           c         -         -           b         -         -           c         -         -           b         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -      c         -         -	t - stream M 9.647 =0.9; 0.4		Max L Max L ice poter i7302.	Act	ab but is	freq C O solated fi	EF puls	NTS Waters -	drains t	cover=,	g Comn med NF	nents B paren	t stream	n.	sturbances	<u> </u>	
NS Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm	S         Stage         To           s         Stage         To           a         -         -           a         -         -           a         -         -           b         -         -           b         -         -           b         -         -           b         -         -           b         -         -           c         -         -           b         -         -           c         -         -           b         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -      c         -         -	t - stream M 9.647 =0.9; 0.4		Max L Max L ice poter i7302.	Act	ab but is	freq C O solated fi	EF puls	NTS Waters -	drains t	cover=,	g Comn med NF	nents B paren	t stream	n.	sturbances	<u> </u>	
NS Species Comm Comm 2 Comm 3 Comm 4 Comm 5 Comm 6	S         Stage         To           s         Stage         To           a         -         -           a         -         -           a         -         -           b         -         -           b         -         -           b         -         -           b         -         -           b         -         -           c         -         -           b         -         -           c         -         -           b         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -      c         -         -	t - stream M 9.647 =0.9; 0.4		Max L Max L ice poter i7302.	Act	ab but is	freq C O solated fi	EF puls	NTS Waters -	drains t	cover=,	g Comn med NF	nents B paren	t stream	n.	sturbances	<u> </u>	
NS Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm	S         Stage         To           s         Stage         To           a         -         -           a         -         -           a         -         -           b         -         -           b         -         -           b         -         -           b         -         -           b         -         -           c         -         -           b         -         -           c         -         -           b         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -      c         -         -	t - stream M 9.647 =0.9; 0.4		Max L Max L ice poter i7302. 0m; Wb	Act	ab but is	freq C O solated fi	EF puls	NTS Waters -	drains t	cover=,	g Comn med NF	nents B paren	t stream	n.	sturbances	<u> </u>	
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	S         Stage         To           s         Stage         To           a         -         -           a         -         -           a         -         -           b         -         -           b         -         -           b         -         -           b         -         -           b         -         -           c         -         -           b         -         -           c         -         -           b         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -           c         -         -      c         -         -	t - stream M 9.647 =0.9; 0.4		Max L Max L ice poter i7302. 0m; Wb	Act	ab but is	freq C O solated fi	EF puls	NTS Waters -	drains t	cover=,	g Comn med NF	nents B paren	t stream	n.	sturbances	<u> </u>	

S6/S6/NCD

#### 2010 Stream Assessment in Nadina Forest District

							S	ITE	REFE	RENO	CE								
Gazette	d Name:	Unna	amed				wso	):									Map: (	)93L	.067
Local N	ame:						ILP:	67005	Rea	i <b>ch:</b> 1&	2			Site L	<b>g:</b> 1	40	Acces	s: F	FT
UTM Z.	<b>E.N:</b> 9	6447	53 60	59266	Metho	d: GIS	Sur	vey Dat	te: 26/0	09/201	Time:	9:13	Agency	y: C01	6	Crew	: MJ/RC		
							СНАІ	NNEL									WAT	ER	
Mea	suremen	t	1	2	3	4	5	6	7	8	9	10	11	12	Av	/g:	Temp:		
Chanı	nel Width	(m):	0.9	0.6	0.8	0.6	0.6									.7	pH:		
Wett	ed Width	(m):	0.3	0	0	0.1	0.4								0.	16	Cond:		
Res.	Pool Dp (	cm):	0												(	)			~
	ull Depth		0.4	0.3											-	35	Turbidity	:	С
Chan.	Gradient	(%):	9	7	4										6.	67			
Flow S	Stage: ∟		Chan	nel Con	ditions	INT	Flo	od Sign	<b>s:</b> Nor	e									
								(	COVE	R									
	verTotal:				B DP	-	IV	Cano	<b>py:</b> 21	-40%	LW	D Fund	tion & E	Distr:	F/E	:	IV Type:	N	
L	T(A)	Т	Т		DT	Ν	Ν	-											
	3 Shape:	U	L	B Textu	ure: F	С		-	ian Veg				LB Ripa		-		-	MF	
R	B Shape:	U	R	BText	ure: F	С	R	B Ripar	ian Veg	etation	: C		RB Ripa	arian V	eget	ation	Stage:	MF	
							СНАІ	NNEL	MOF	RPHO	LOGY	ſ							
Dom	Substrate	: (	C D9	5 (cm):	20	Morp	hology	<b>/:</b> CI	P Str	m Patt:	SI	Confn	mnt: C	0 <b>Co</b> i	uplir	ng: C	O Island	s:	Ν
Subd	om Subst	r:	F [	D (cm):	6	Ba	rs: N				I	Disturk	bance In	dicator	s:	None			
								FE	ATUF	RES									
Feature	e H(m)	L (m	)						Comm	ent							UTM Z	.E.N	I
			1					S A	MPL	NG									
Meth		EF s	ec	EF Lg	(m)	EF Vol	t EF	r	M P L I		ps Ne	ts	Durati	on	Ne	et/Traj	o Depth (m)		Hab
NS	S	EF s	ec	EF Lg		EF Vol	t EF	r			ps Ne	ts	Durati	on	Ne	et/Traj	o Depth (m)		Hab
	S			EF Lg Min L	(m) Max L	EF Volt		r					Durati ng Comr		Ne	et/Tra	o Depth (m)		Hab
NS	S							r							Ne	et/Tra	o Depth (m)		Hab
NS	S							r							Ne	et/Trap	o Depth (m)		Hab
NS	S							r							Ne	et/Trap	o Depth (m)		Hab
NS	S							r							Ne	et/Trap	o Depth (m)		Hab
NS	S							freq		se Tra					Ne	et/Tra	o Depth (m)		Hab
Specie:	S		tal #	Min L	Max L	Act		freq C O	EF puls	Se Tra						et/Trap	o Depth (m)		Hab
Specie: Comm 1	S Stage	To	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm 1 Comm	S Stage	To	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents			Depth (m)		
NS Specie: Comm 1 Comm 2	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm 1 Comm	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm 1 Comm 2 Comm	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm Comm 2 Comm 3	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm 1 Comm 2 Comm 4 Comm	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm 1 Comm 2 Comm 4 Comm 5	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm 1 Comm 2 Comm 4 Comm	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm 7	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	S Stage	<b>To</b>	tal #	Min L	Max L	Act	80 m, n	freq CO o barrie	EF puls	NTS	5	Samplin	ng Comr	nents					

Riparian Class:

						SII	TE I	REFE	RENO	E							
Gazette	<b>d Name</b> : ປ	Innamed				WSC:	460-4	496100-	59500							Map: 09	93L.067
Local N	ame:					ILP:		Rea	<b>ch:</b> 3				Access: FT				
UTM Z.I	<b>E.N</b> : 9 6	44347 6	6058814	Method	I: GIS	Surve	ey Dat	e: 26/0	9/201	Time:	10:44	Agency	: C016	<b>w</b> : N	IJ/RC		
					С	HANI	NEL									WATE	R
Mea	surement	1	2	3	4	5	6	7	8	9	10	11	12	Avg:		Temp:	6.2
-	nel Width (r		3.8	3			2.4	-		-				2.88		pH:	8.2
	ed Width (r		1.8	2.6	1.4	1.2	1.6							1.7		-	
Res.	Pool Dp (cr	n): 0.09	0.32											0.21		Cond:	200
Bankf	ull Depth (r	<b>n):</b> 0.5	0.5	0.5										0.5	T	urbidity:	С
Chan.	Gradient (	<b>/</b> 6	5	6										5.67			
Flow S	stage: ∟	Cha	nnel Cor	nditions:	·	Flood	I Sign	s: Non	е								
Flow Stage:     L     Channel Conditions:     Flood Signs:     None																	
Cov	erTotal: S		р в (	CB DP	ov	IV											
		T S	D	S T		N C	Canop	<b>by:</b> 21-	-40%	LW	D Fui	nction & D	istr:	F/E	IV	Туре:	Г
LE	3 Shape:	V	LB Text	ure: G	СВ	LBI	Ripari	ian Veg	etation:	С		LB Ripa	rian Ve	getation	Stac	ae: N	1F
	B Shape:	v	RB Text		СВ		-	ian Veg				-		getation	-		 1F
	b Shape.	v	KB Text				-			-		КВКІра		gelation	i Staț		
_								MOF									
	Substrate:		95 (cm):	30	Morph	ology:	CP_	_B Str	m Patt:			<b>inmnt:</b> FO			PC	Islands	: N
Subd	om Substr:	G	D (cm):	16	Bars	SIDE	DIAG	6		I	Distu	rbance Ind	dicators	s: C1			
							FE	ATUR	ES								
Feature	e H (m) L	(m)						Comme	ent							UTM Z.	E.N
							S A	MPLI	NG								
Meth	nod E	F sec	EF Lg	(m)	EF Volt	EF f	req	EF puls	e Tra	ps Ne	ts	Durati	on	Net/Tra	ap De	epth (m)	Hab
EF	-	5	1		400	80	0	4									
Species	s Stage	Total #	Min L	Max L	Act					S	Samp	ling Comr	nents				
DV	J	1	56	56	R												
						_											
						_											
						-											
							CO	ммеі	NTS								
Comm	Rhab - goo	d at low t	o modera	te flows													
1			00														
	Shab - non	e - subst	rate too la	rge.													
2																	
Comm	Ohab - non	e - too sł	nallow.														
3																	
Comm 4																	
Comm																	
5																	
Comm																	
6																	
Comm 7																	
, Comm																	
8																	
L																	

							S	ITE I	REFE	RENO	E						
Gazette	d Name:	Unnam	ned				wso	):								Map: 09	93L.067
Local Na	ame:						ILP:	67002	Rea	<b>ch</b> : 1				Site L	<b>g:</b> 460	Access	: FT
UTM Z.E	<b>E.N</b> : 9	644488	3 605	8713	Metho	d: GIS		vey Dat			Time <sup>.</sup>	11.33	Agency		-	ew: MJ/RC	
0		011100						NNEL	.0. 20/0	0/201			/igenej			WATE	D
Maa			4	0	0	4		1	7	0	0	40	44	40	A	1	<b>.</b> N
	suremer nel Width		1	2	3	4	5	6	7	8	9	10	11	12	Avg:	Temp:	
	ed Width															pH:	
	Pool Dp															Cond:	
	ull Depth															Turbidity:	
	Gradien															-	
Flow S	tage:		Chann	el Con	ditions	: NVC	Flo	od Sian	s:							1	
	Flow Stage: Channel Conditions: NVC Flood Signs: COVER																
	-							Ľ	JUVE	ĸ							
Cov	erTotal:	SWDL	.wd	ВС	B DF	ov ov	IV	Canop	by:		LW	D Funct	tion & D	)istr:		IV Type:	
																_	
LE	8 Shape:		LE	3 Textu	ire:		L	B Ripari	ian Veg	etation:			LB Ripa	arian Ve	getatio	n Stage:	
RE	3 Shape:		RI	B Text	ure:		R	B Ripar	ian Veg	etation			RB Ripa	arian Ve	egetatio	on Stage:	
							CHAI	NNEL	MOF	PHO	LOGN	(					
Dom \$	Substrat	e:	D95	(cm):		Mor	phology	/:	Str	m Patt:		Confnr	nnt:	Cou	pling:	Islands	:
Subd	om Subs	tr:		(cm):		-	irs:				I	Disturb	ance Ind	dicators			
				(0).					ATUR		-						
Feetune		1 (m)															
Feature	e H (m)	L (m)							Comm	ent						UTM Z.I	E.N
								S۵	MPLI	NG							
Math		EE aar			(100)		4   Fr		MPLI			to	Durati		Net/T	ren Denth (m)	Lieb
Meth		EF sec	;	EF Lg	(m)	EF Vol	t EF		M P L I EF puls		os Ne	ts	Durati	on	Net/T	rap Depth (m)	Hab
NS	6													-	Net/T	rap Depth (m)	Hab
	6			EF Lg Ain L	(m) Max L								Duration g Comm	-	Net/T	rap Depth (m)	Hab
NS	6													-	Net/T	rap Depth (m)	Hab
NS	6													-	Net/T	rap Depth (m)	Hab
NS	6													-	Net/T	rap Depth (m)	Hab
NS	6													-	Net/T	rap Depth (m)	Hab
NS	6							freq		e Tra				-	Net/T	rap Depth (m)	Hab
Species Comm	6	e Tota		Ain L	Max L		E	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
Species Comm 1	S Stage	e Tota	I # N	Min L	Max L	. Act	E	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
Species Comm 1	S Stage	e Tota	I # N	Min L	Max L	. Act	E	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
NS Species Comm 1 Comm 2 Comm	S Stage	a Tota	I # N mostly	<b>/in L</b> 7 seepa 9.6445	Max L ge; 50m 68.6058	Act	t n site st	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 3	S Stage	a Tota	I # N mostly	<b>/in L</b> 7 seepa 9.6445	Max L ge; 50m 68.6058	Act	t n site st	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
NS Species Comm 1 Comm 2 Comm	S Stage	a Tota	I # N mostly	<b>/in L</b> 7 seepa 9.6445	Max L ge; 50m 68.6058	Act	t n site st	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 4 Comm	S Stage	a Tota	I # N mostly	<b>/in L</b> 7 seepa 9.6445	Max L ge; 50m 68.6058	Act	t n site st	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
NS Species Comm Comm 2 Comm 3 Comm 4 Comm 5	S Stage	a Tota	I # N mostly	<b>/in L</b> 7 seepa 9.6445	Max L ge; 50m 68.6058	Act	t n site st	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 4 Comm	S Stage	a Tota	I # N mostly	<b>/in L</b> 7 seepa 9.6445	Max L ge; 50m 68.6058	Act	t n site st	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	S Stage	a Tota	I # N mostly	<b>/in L</b> 7 seepa 9.6445	Max L ge; 50m 68.6058	Act	t n site st	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab
Species Species Comm 1 Comm 2 Comm 4 Comm 5 Comm 6	S Stage	a Tota	I # N mostly	<b>/in L</b> 7 seepa 9.6445	Max L ge; 50m 68.6058	Act	t n site st	Freq CO	EF puls	NTS	S			-	Net/T	rap Depth (m)	Hab

						S	ITE	REFE	RENO	СE						
Gazette	d Name:	Unname	d			wso	:								<b>Map:</b> 09	93L.067
Local Na	ame:					ILP: 67006 Reach: 3 Site Lg: 2								<b>g:</b> 230	Access	
UTM Z.E	<b>E.N</b> : 9	644341	6058972	Metho	d: GIS	-								-	w: MJ/RC	
		011011	0000012				NNEL						,		WATE	R
Maa			2	2	<u>г</u>			7	0	0	10	4.4	10	A	Temp:	•1\
	surement		2	3	4	5	6	1	8	9	10	11	12	Avg:	•	
	ed Width	. ,													pH:	
-	Pool Dp (d														Cond:	
	ull Depth														Turbidity:	
	Gradient															
			annel Co	nditions	• NVC	Flor	od Sign	s.						11		
	Flow Stage: Channel Conditions: NVC Flood Signs: COVER															
								JOVE	ĸ							
Cov	erTotal:	SWD LW	D B	CB DF	ov ov	IV	Cano	py:		LW	D Func	tion & I	Distr:		IV Type:	
LE	3 Shape:		LB Text	ure:		LI	B Ripar	ian Veg	etation:			LB Ripa	arian Ve	egetation	n Stage:	
RE	3 Shape:		<b>RB</b> Text	ure:		R	B Ripar	ian Veg	etation	:		RB Rip	arian V	egetatio	n Stage:	
					1	СНАМ	NNEL	MOF	PHO	LOG	ſ					
Dom \$	Substrate	:	D95 (cm):		Morp	hology	/:	Str	m Patt:		Confn	mnt:	Со	upling:	Islands	:
Subde	om Subst	r:	D (cm):		Ba	rs:				1	Disturb	ance In	dicator	S:		
			. ,				FE	ATUF	RES							
Feature	e H (m)	L (m)						Comm	ent						UTM Z.E	E.N
. outure	,,	- (,														
							S A	MPLI	NG							
Meth NS		EF sec	EF Lg	ı (m)	EF Vol	EF	freq	EF puls	e Tra	ps Ne	ts	Durati	on	Net/Tr	ap Depth (m)	Hab
Species	s Stage	Total #	# Min L	Max L	. Act					S	Samplin	g Com	nents			
				<u> </u>			6.0	MME								
Comm	No fich be	bitot di	antinuci		rod char	nologa				ith com	ofluric	motorial	draina	omoli ol-	ler patch - not a	otroom
1	NO IISH Ha	aditat - dis	scontinuou	Siy Scoul	reu chan	nei seg	ments <	SIN IN IE	nguns w	ith some	enuviai	material	, urains	smail alo	ier patch - not a	a stream.
Comm 2	Unmappe	d drainag	ge on TRIM	1.												
Comm 3																
Comm 4																
Comm 5																
Comm 6																
Comm																
7																

						S	SITE	REFE	REN	CE						
Gazette	<b>d Name</b> : ເ	Jnnamed				ws	C:								Map: 09	93L.067
Local Na	ame:					ILP:	: 67003	Rea	i <b>ch:</b> 1.1	1&1.2		Site Lg: 970 Access: FT				
UTM Z.E	E.N: 9 6	44456 60	159055	Method	1. CIS	Su		ato: 26/(	26/09/201 Time: 13:17			Agenc		-	ew: MJ/RC	
011012.1			,55055	Method					0,201	Time.	10.17	Agene	y. 001			-0
		1			1		NNEL		-	-			1		WATE	
	surement	1	2	3	4	5	6	7	8	9	10	11	12	Avg:	Temp:	5
	nel Width (I	,	1.9 1.4	2	1.8	1.8	1.8							1.82	pH:	8.8
	ed Width (I Pool Dp (ci	-	0.12	0.16	1.6	1.3	0.6							1.23 0.14	Cond:	241
	ull Depth (i	-	0.12	0.10										0.14	Turbidity:	С
	Gradient (		5	3	6									4.75	-	
			_	_		Flo	od Sig	ns: Nor			1					
FIOW 3	Flow Stage:     L     Channel Conditions:     Flood Signs:     None       COVER															
Cov	verTotal: S	S S		T S	<b>OV</b> T	IV N	Cano	<b>ppy:</b> 1-	20%	LW	D Fun	nction & E	Distr:	F/E	IV Type: 1	N
LE	3 Shape:	V I	LB Textu	ire: G	СВ	L	.B Ripa	rian Veg	etation	: C	;	LB Ripa	arian Ve	getatio	n Stage: N	1F
RI	B Shape:	U	RB Texti	ure: G	СВ	F	RB Ripa	rian Veg	etation	: C	;	<b>RB</b> Rip	arian V	egetatio	n Stage: N	1F
	•						-	. MOF			Y	•		<u> </u>		
Dom	Substrate:	G D9	95 (cm):	31		holog			m Patt:			nmnt: C		unling:	CO Islands	- N
			• •			-	-		III Fall.							- IN
Subd	om Substr	C	D (cm):	14	Ва	rs: SI	IDE DIA				Distur	bance In	dicator	s: Nor	ne	
							FE	EATUF	RES							
Feature	e H (m) L	. (m)						Comm	ent						UTM Z.I	E.N
							S /	AMPL	NG							
Meth		EF sec	EF Lg	• •	EF Volt	t E	F freq	EF puls	-	ips Ne	ets	Durati	on	Net/Tr	rap Depth (m)	Hab
Meth		E <b>F sec</b> 299	<b>EF Lg</b> 970	• •	EF Volt 400	t E		T	-	ips Ne	ets	Durati	on	Net/Tr	rap Depth (m)	Hab
EF Species	-			• •			F freq	EF puls	-			Durati ing Comr		Net/Tr	rap Depth (m)	Hab
EF		299	970		400		F freq	EF puls	-					Net/Tr	ap Depth (m)	Hab
EF Species		299 Total #	970		400		F freq	EF puls	-					Net/Tr	ap Depth (m)	Hab
EF Species		299 Total #	970		400		F freq	EF puls	-					Net/Tr	ap Depth (m)	Hab
EF Species		299 Total #	970		400		F freq	EF puls	-					Net/Tr	rap Depth (m)	Hab
EF Species		299 Total #	970		400		F freq 80	EF puls	se Tra					Net/Tr	ap Depth (m)	Hab
Species NFC	s Stage	299 <b>Total #</b> 0 1 1 1 1 1 1 1 1 1 1 1 1 1	970 Min L	Max L	400 Act		F freq 80	EF puls	se Tra					Net/Tr	ap Depth (m)	Hab
EF Species NFC	s Stage	299 <b>Total #</b> 0 1 1 1 1 1 1 1 1 1 1 1 1 1	970 Min L	Max L	400 Act		F freq 80	EF puls	se Tra					Net/Tr	ap Depth (m)	Hab
EF Species NFC	s Stage	299 Total # 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0	970 Min L	d abunda	400 Act	r	F freq 80 C C	EF puls 4	SE Tra		Sampli	ing Comr	nents	Net/Tr	ap Depth (m)	Hab
EF Species NFC	s Stage	299 Total # 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0	970 Min L	d abunda	400 Act	r	F freq 80 C C	EF puls 4	SE Tra		Sampli	ing Comr	nents	Net/Tr	ap Depth (m)	Hab
EF Species NFC Comm 1 Comm 2 Comm	s Stage	299 Total # 0 d - very div RB: plenty	970 Min L verse and	d abunda	400 Act	r	F freq 80 C C	EF puls 4	SE Tra		Sampli	ing Comr	nents	Net/Tr	ap Depth (m)	Hab
EF Species NFC Comm 1 Comm 2 Comm 3	s Stage Rhab - goo Shab - for Ohab - no	299 Total # 0 d - very div RB: plenty ne - too sh	970 Min L verse and of small allow.	d abunda	400 Act a	r and goo	F freq 80 C C	EF puls 4	NTS	/: poor -	Sampli	temp too o	nents			
EF Species NFC Comm 1 Comm 2 Comm 3 Comm	s Stage Rhab - goo Shab - for Ohab - no	299 Total # 0 d - very div RB: plenty ne - too sh	970 Min L verse and of small allow.	d abunda	400 Act a	r and goo	F freq 80 C C	EF puls 4	NTS	/: poor -	Sampli	temp too o	nents		rap Depth (m)	
EF Species NFC Comm 1 Comm 2 Comm 3 Comm 4	s Stage Rhab - goo Shab - for Ohab - no	299 Total # 0 d - very div RB: plenty ne - too sh	970 Min L verse and of small allow.	d abunda	400 Act a	r and goo	F freq 80 C C	EF puls 4	NTS	/: poor -	Sampli	temp too o	nents			
EF Species NFC Comm 1 Comm 2 Comm 3 Comm	s Stage Rhab - goo Shab - for Ohab - no	299 Total # 0 d - very div RB: plenty ne - too sh	970 Min L verse and of small allow.	d abunda	400 Act a	r and goo	F freq 80 C C	EF puls 4	NTS	/: poor -	Sampli	temp too o	nents			
EF Species NFC Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm	s Stage Rhab - goo Shab - for Ohab - no	299 Total # 0 d - very div RB: plenty ne - too sh	970 Min L verse and of small allow.	d abunda	400 Act a	r and goo	F freq 80 C C	EF puls 4	NTS	/: poor -	Sampli	temp too o	nents			
EF Species NFC Comm 1 Comm 2 Comm 3 Comm 4 Comm 5	s Stage Rhab - goo Shab - for Ohab - no	299 Total # 0 d - very div RB: plenty ne - too sh	970 Min L verse and of small allow.	d abunda	400 Act a	r and goo	F freq 80 C C	EF puls 4	NTS	/: poor -	Sampli	temp too o	nents			
EF Species NFC Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm	s Stage Rhab - goo Shab - for Ohab - no	299 Total # 0 d - very div RB: plenty ne - too sh	970 Min L verse and of small allow.	d abunda	400 Act a	r and goo	F freq 80 C C	EF puls 4	NTS	/: poor -	Sampli	temp too o	nents			
EF Species NFC Comm 1 Comm 2 Comm 4 Comm 5 Comm 6 Comm	s Stage Rhab - goo Shab - for Ohab - no	299 Total # 0 d - very div RB: plenty ne - too sh	970 Min L verse and of small allow.	d abunda	400 Act a	r and goo	F freq 80 C C	EF puls 4	NTS	/: poor -	Sampli	temp too o	nents			

						S	ITE	REFE	RENO	E								
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LB	Shape:		LB Text	ure:		LI	B Ripari	ian Veg	etation:			LB Ripa	arian Ve	getatio	n Stage:			
RE	3 Shape:		RB Text	ure:		R	B Ripar	ian Veg	etation	:		RB Ripa	arian Ve	egetatio	n Stage:			
	-					СНА	NNEL	MOF	РНО	LOGY				-	-			
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Feature	H (m)	L (m)						Comm	ent						UTM Z.E	.N		
		I					S A	MPLI	NG									
Meth	od	EF sec	EF Lg	(m)	EF Vol	t EF		M P L I EF puls		os Ne	ts	Durati	on	Net/Ti	rap Depth (m)	Hab		
Meth NS		EF sec	EF Lg	(m)	EF Vol	t EF				os Ne	ts	Durati	on	Net/T	rap Depth (m)	Hab		
	;	EF sec	EF Lg	(m) Max L								Durati g Comr		Net/Ti	ap Depth (m)	Hab		
NS	;	T												Net/Ti	rap Depth (m)	Hab		
NS	;	T												Net/Ti	rap Depth (m)	Hab		
NS	;	T												Net/Tı	rap Depth (m)	Hab		
NS	;	T												Net/Ti	rap Depth (m)	Hab		
NS	;	T												Net/Ti	ap Depth (m)	Hab		
NS	;	T					freq		e Tra					Net/Ti	rap Depth (m)	Hab		
NS Species	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents		rap Depth (m)	Hab		
Species Comm 1	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		
Species Species Comm 1 Comm 2	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		
Species Comm 1 Comm	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		
Species Species Comm 1 Comm 2 Comm 3	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		
NS Species Comm 1 Comm 2 Comm	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		
Species Species Comm 1 Comm 2 Comm 3 Comm	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		
NS Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		
Species Species Comm 1 Comm 2 Comm 3 Comm 4 Comm	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		
NS Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		
NS Species Comm 1 Comm 2 Comm 3 Comm 4 Comm 5 Comm 6	Stage	Total #	Min L	Max L	Act		freq C O	EF puls	NTS	S	amplin	g Comr	nents			Hab		

# **Appendix II: Photographs**

# Appendix III: Maps