Table - 01: Summary of Aquatic Habitats Assessed in Project Area, 2011-2012

	UTM (NAI	D83, 14U)		Water Ph	ysioche	mistry		Morphology	/				(	Cover (%	)		
Location ID	Northing	Easting	Dates of Investigation	Water Temp. (°C)	рН	Cond. (µS/cm)	Channel Width (m)	Wetted Width (m)	Water Depth (m)	Substrate	SWD	LWD	ону	UCB	IV	Во	Со
LR01*	6080710	427784	04-Jun-11	6.58	7.45	161	5.0	5.0	0.5	Or	10	0	0	10	0	0	0
LR02*	6080558	428726	04-Jun-11	4.44	6.83	293	0.5 - 1.75	0.5 - 1.75	0.32	Or	10	0	10	10	0	0	0
PL01	6079644	429637	3-Jun-11, 19-Oct-11	-	-	-	1.5	5.0	0.3	Or	5	0	5	0	10	0	0
LP01	6079593	429653	20-Jun-12	12	7.32	175	0.52	0.52	0.2	Or	10	0	20	0	0	0	
RB01	6078705	429230	3-Jun-11, 20-Jun-12	dry	dry	dry	dry	dry	-	Or	0	0	0	0	0	0	0
RB02*	6078695	429705	3-Jun-11, 20-Jun-12	13.8	7.45	98	7.0	5.0	1	Or	20	0	5	0	20	0	0
RB03*	6078839	430451	3-Jun-11, 19-Oct-11, 20-Jun-12	12.7	7.14	60	3.0 - 5.0	3.0 - 5.0	1.5	Or	20	0	10	5	0	0	0
RB04	6078774	430660	3-Jun-11, 19-Oct-11, 20-Jun-12	8	7.47	215	2.5	2.5	1	Or	10	0	20	0	0	0	0
RB05	6078575	431295	3-Jun-11, 19-Oct-11, 20-Jun-12	10	7.28	108	0.2 - 0.25	0.2 - 0.25	0.2	Or	20	0	50	0	0	0	0
RB06	6078345	431746	3-Jun-11, 19-Oct-11, 20-Jun-12	13.3	7.12	36	2.0 - 2.5	2.0 - 2.5	1	Or	50	0	20	0	0	0	0
RB07*	6078280	432437	3-Jun-11, 19-Oct-11, 20-Jun-12	6.7	7.14	222	0.5 - 1.75	0.5 - 1.75	0.32	Or	0	5	30	0	0	0	0
RB08	6078152	432753	19-Oct-11, 20-Jun-12	dry	dry	dry	dry	dry	-	Or	0	0	0	0	0	0	0
RB09	6078054	433070	3-Jun-11, 19-Oct-11, 20-Jun-12	8.1	6.72	56	1.0 - 1.5	1.0 - 1.5	0.29	Or	20	0	30	0	0	0	0
RB10	6078044	433334	3-Jun-11, 19-Oct-11, 20-Jun-12	6.9	6.58	35	0.2 - 0.8	0.2 - 0.8	0.15	Or	20	0	0	0	0	0	0
RB11	6078018	433502	3-Jun-11, 19-Oct-11, 20-Jun-12	dry	dry	dry	dry	dry	-	Or	-	-	-	-	-	0	0
RB12	6077999	434227	3-Jun-11, 19-Oct-11, 20-Jun-12	11.3	6.81	46	2.4	2.4	0.7	Or	15	5	10	0	5	0	0
RB13	6078089	434336	3-Jun-11, 19-Oct-11, 20-Jun-12	8.2	6.86	96	0.4 - 1.3	0.4 - 1.3	0.25	Or	30	10	20	0	0	0	0
RB14	6078142	434414	3-Jun-11, 19-Oct-11, 20-Jun-12	7.7	7.28	101	1.5	1.5	0.25	Or	30	5	10	0	0	0	0
RB15*	6078916	435053	3-Jun-11, 19-Oct-11, 20-Jun-12	9	7.53	339	3	0.5 - 1.5	0.25	Or	30	0	30	0	0	0	0
RB16*	6079369	435448	3-Jun-11, 19-Oct-11	16.1	7.82	136	1.0 - 5.0	1.0 - 5.0	1	Or	10	30	5	0	20	0	0
RB17	6078616	434842	3-Jun-11, 19-Oct-11	frozen	frozen	frozen	0.5	0.5	0.25	Or	40	5	20	0	0	0	0
AD02*	6079726	437077	20-Jun-12	6.7	7.75	306	5	0.25 - 2.00	0.02 - 0.5	Si, Sa, Or	5	5	0	10	0	0	0
AD03*	6080094	439068	20-Jun-12	15.6	7.46	223	5	5	0.26	Or	5	5	5	0	5	0	0
Existing pumphouse	6079923	434156	02-Jun-11	11.6	8.3	126	n/a	n/a	n/a	Bd, Bo, blast rock	0	0	0	0	0	5	0
Alternate pumphouse	6082487	429346	02-Jun-11	13.3	8.4	105	n/a	n/a	n/a	Bd, Bo	0	10	20	0	0	5	0
HWYAN* Notes:	6077613	439109	04-Jun-11	11.96	7.55	543	1.5	1.5	0.34 - 1.5	Or	5	0	10	5	5	0	0

Measurements collected at first date of investigation, except for RB17.

Water Temp. (°C) = water temperature in degrees Celsius; Cond. ( $\mu$ S/cm) = specific conductance in microSiemens per centimetre; m = metre; Or = organic; SWD = small woody debris; LWD = large woody debris; OHV = overhanging vegetation; UCB = undercut banks; IV = instream vegetation; IV = instre

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<sup>\*</sup> Site card created

Table - 01: Summary of Aquatic Habitats Assessed in Project Area, 2011-2012

				Culvert				
Location ID	Number	Diameter (m)	Downstream Water Depth (m)	Upstream Water Depth (m)	Embedded?	Perched?	Overgrown?	Comments
LR01*	2	0.9	0.06	0.11	No	Yes	No	
LR02*	1	0.6	0.04	0.05	No	Yes	No	
PL01	-	1	-	-	ı	-	-	Ghost Creek crossing under the powerlines.
LP01	-	ı	-	-	ı	-	-	Located in the wooded area to the west of the powerline clearing.
RB01	1	0.77	dry	dry	No	Yes	No	
RB02*	2	1.63	0.24	0.25	No	Yes	No	
RB03*	2	1.95	1.56	1.5	-	Yes	No	
RB04	1	Buried	-	-	Yes	-	Yes	
RB05	1	0.8	0.06	0.2	No	Yes	No	
RB06	1	0.7	1	1	Yes	-	No	Water over the culverts; no flow.
RB07*	1	0.86	0.2	Buried	Yes	No	Yes	
RB08	1	0.75	dry	dry	Yes	No	Yes	
RB09	1	0.56	0.14	Buried	Yes	No	Yes	
RB10	1	0.6	0.33	0.24	Yes	No	Yes	
RB11	1	0.62	dry	dry	-	-	No	
RB12	1	0.8	0.5	0.38	Yes	Yes	Yes	
RB13	1	0.6	0.12	0.06	Yes	No	No	
RB14	1	0.55	0.38	0.3	Yes	-	Yes	
RB15*	-	-	-	-	-	-	No	Beaver impoundment.
RB16*	1	0.95	-	-	-	-	Yes	Beaver impoundment on north side of road. Culvert observed in October on south side of road, buried or underwater on the north side of the road.
RB17	1	0.7	frozen	frozen	Yes	-	Yes	No defined channel.
AD02*	1	0.9	0.02 - 0.5	0.02 - 0.5	Yes	No	No	Larger culvert ~150m upstream. Anderson TIA ~25m downstream of
AD02	2	0.60, 0.40	0.02 - 0.5	0.02 - 0.5	Yes	No	Yes	lower set of culverts.
AD03*	-	-	-	-	-	-	-	
Existing pumphouse	0	-	-	-	-	-	-	Adjacent shoreline cover is composed of large woody debris, boulder, overhanging vegetation; at pumphouse location cover is composed of boulder, large woody debris. Steep shore.
Alternate pumphouse	0	-	-	-	-	-	-	Steep shore. Tern Creek inflow nearby.
HWYAN*	1	1.2	0.8	0.65	Yes	No	No	

Notes:

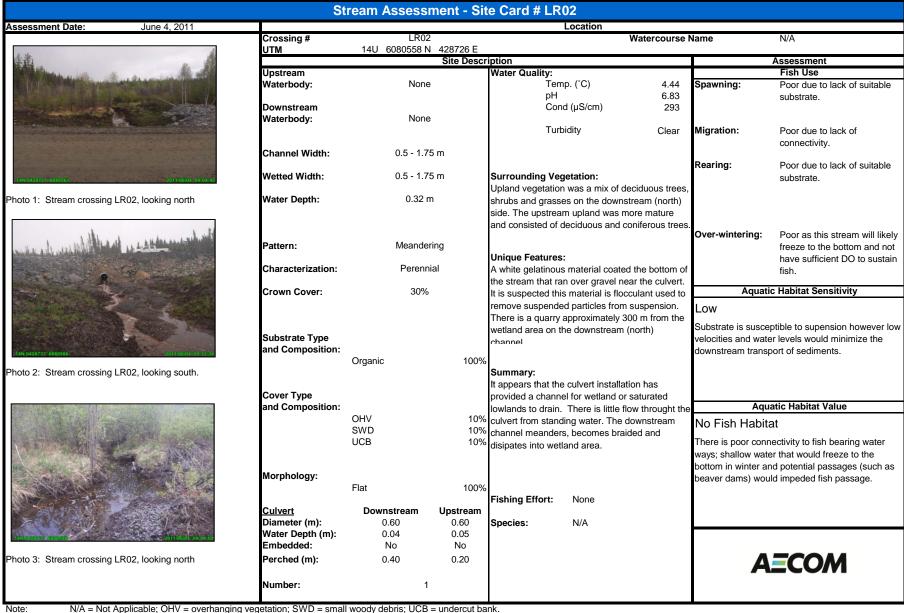
Measurements collected at first date of investigation, except for RB17.

Water Temp. (°C) = water temperature in degrees Celsius; Cond. ( $\mu$ S/cm) = specific conductance in microSiemens per centimetre; m = metre; Or = organic; SWD = small woody debris; LWD = large woody debris; OHV = overhanging vegetation; UCB = undercut banks; IV = large woody debris; IV = large woody de

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<sup>\*</sup> Site card created

Assessment Date:	June 4, 2011					Location			
ASSESSMENT Date.	Julie 4, 2011	Crossing #	LR(				atercourse l	Name	Tern Ditch
		UTM	14U 6080710	Site Descr	intion				Assessment
		Upstream		Oile Desci	Water Quality:				Fish Use
A LAND SHAPE	Andrew M. J. Marketon	Waterbody:	Tern Ditc	ch Pond		np. (°C)	6.58 7.45	Spawning:	Poor due to lack of suitable substrate for large-bodied fi
THE PARTY OF THE P		Downstream Waterbody:	Snow	Lake	Cor	nd (µS/cm) bidity	161 Clear		but may provide limited habitat for forage species.
a with the		Channel Width:	5 r	m		·		Migration:	Marginal due good connectivity to upstream habitat but low water levels
14N 0427812 6080691	2011/06/04 08:40/20	Wetted Width:	5 r	m					may impeded passage.
Photo 1: Stream crossing libition in the background	LR01, looking south with Tern	Water Depth:	0.5	m				Rearing:	Poor due to lack of suitable substrate.
	Pattern:	Strai	ight				Over-wintering:	Poor as this stream will like freeze to bottom.	
	Characterization:	Perer	nnial						
		Crown Cover:	0%	6	Surrounding Ve	<b>getation:</b> n includes grasses	and mixed		c Habitat Sensitivity
	3					ed with wetland area		Low	darataly avacantible to areais
	4	Substrate Type and Composition:						and downstream s	derately susceptible to erosion edimentation due to the soft lible banks. However, the ent
Photo 2: Stream crossing I	RO1, looking north		Organic	100%	Unique Features The channel has	s: 1 m vertical banks	and		s composed of fines, therefore eam sedimentation would have habitat
To the second	A.W.	Cover Type and Composition:			therefore no ripar	ian habitat.			atic Habitat Value
Add Add	My MI		SWD UCB			e of the road, the ch		Marginal	
		Manuska da man	FI .	4000/	channel itself was but with little habi	s found to support fitat or cover it is un	orage fish	e The cover and water depth may provide habi small-bodied species. Fish utilization of the is limited by low water levels and fish passag	
	A (18 20 )	Morphology:	Flat	100%	support anything	larger.		through a perched	culvert.
		<u>Culvert</u>	Downstream	Upstream					
		Diameter (m): Water Depth (m):	0.9 0.06	0.9 0.11	Fishing Effect:	Minnow trans	) ook ook		
PAIN DEVIANDE CONTRACT	2011/06/04 318-16:06	Embedded:	0.06 No	No	Fishing Effort:	Minnow traps, B electrofishing	васкраск		
hoto 3: Stream crossing I	LR01, looking south	Perched (m):	0.16	0.2	Species:	Brook Stickleba	ck	A	<b>ECOM</b>
		Number:	2				, ·		



		ા ગ	ream Assess	ment - Sit	e Card # RB	5UZ			
Assessment Date:	June 3, 2011					Location			
		Crossing #	RB02	2			Watercourse I	Name	Ghost Creek
Men in the		UTM	14U 6078695 N	√ 429705 E					
	11.1.1.			Site Descr	iption				Assessment
The second	Maria Laboration	Upstream			Water Quality:				Fish Use
		Waterbody:	Ghost L	.ake		np. (°C)	13.8	Spawning:	Poor due to lack of suitable
					pH		7.45		substrate.
A STATE OF THE STA		Downstream			Con	nd (µS/cm)	98		
<b>"大工"的"大"的"大"</b>		Waterbody:	Tern La	ake					
是"多"在" <b>是"</b> "我们们是					l urt	bidity	Tea coloured	Migration:	Moderate due to good
<b>三人</b> 工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工工		Ob an mal Wildle	7 m						connectivity to upstream
A STATE OF THE PARTY OF THE PAR	The second second	Channel Width:	/ III						habitat but shallow water at
PARTY OF BUILDING	School Street Street	Wetted Width:	5 m						times
State displayers increasing	personal comments	welled width.	3 111					Rearing:	Poor due to lack of cover and
Photo 1: Stream crossing RI	B02 looking north	Water Depth:	~ 1 n	n				itearing.	suitable substrate.
Thora 1. Officially Clossing N	.Doz, looking north	Tater Deptil.	111	•					suitable substitute.
The second second									
<b>建筑等</b>	* 1							Over-wintering:	Poor as this stream will likely
	A Chief	Pattern:	Sinuo	us					freeze to the bottom and not
	The state of the s								have sufficient DO to sustain
	The state of the s	Characterization:	Perenr	nial					fish
(5)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)									
	Control of the last of the las	Crown Cover:	0%		Surrounding Ve	-			ic Habitat Sensitivity
					Grass and shrubs	•		Low	
					forest of aspen, s	pruce and mos	ss on the banks.		
	OSE WITH THE STATE OF	Cubatrata Tura							ptible to suspension however,
	<b>一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个</b>	Substrate Type and Composition:							ld minimize the downstream
14N 0420686-6078692	The spinots town	and Composition.	Organic					•	ents. The entire stream
1			Organic		Unique Features				osed of fines, therefore,
Photo 2: Stream crossing RI	B02, looking south.				This is an engine			little effect on fish	eam sedimention would have
1		Cover Type			lo io a origino	0.00 0.100		illue effect on fish i	nabitat.
- 40		and Composition:						Aqu	atic Habitat Value
		·	SWD	20%	Summary:			Marginal	
Access to Contille of the	THE REAL PROPERTY OF THE PARTY		OHV	5%	Water was stagna	ant in and arou	ind the culverts.	, and the second	
THE REAL PROPERTY.	THE RESERVE OF THE PERSON NAMED IN		IV	20%	The current chan	nel appears to	be a diversion	The limited cover a	and water depth may provide
					from the main cha	annel to faciliat	te development		odied species but it is unlikely
					of the rail bed. Th	ne channel prov	vides ubiquitous,	that large bodied s	species utilize this waterway.
		Morphology:	<b>-</b> 1 .	40001	uniform habitat.				
	Section Date 1		Flat	100%					
		Culvert	Downstream	Upstream					
		Diameter (m):	1.63	1.63					
	MANAGEMENT OF THE STATE OF THE	Water Depth (m):	0.24	0.24					
SAN GORDEN BUTTON	Condition Service	Embedded:	No	No	Fishing Effort:	Minnow trap	os		
Photo 3: Stream crossing RI	B02, looking south	Perched (m):	~ 0.05	~ 0.05			- <del>-</del>		<b>-</b> CO44
	. •	. ,			Species:	Brook Stick	leback	ı A	<b>ECOM</b>
1			2	2	DIOON OHONIGHACK				
i									

Note: SWD = small woody debris; OHV = overhanging vegetation; IV = instream vegetation.

		Stream Asses	ssment - S	ite Card # RB03				
Assessment Date: June 3, 2011				Locat	ion			
	Crossing #	RB0			Watercourse	Name	Threehouse Creek	
	UTM	14U 6078839 I		!		1	A	
FINE STATE OF THE	Upstream		Site Descr	Water Quality*:			Assessment Fish Use	
	Waterbody:	Threehous	se Lake	Temp. (°C pH	7.14	Spawning:	Poor for large bodied fish due to lack of suitable substrate.	
	Downstream Waterbody:	Arm La	ake	Cond (μS/ Turbidity	cm) 60 Tea-coloured	Migration:	Good due to connectivity to	
	Channel Width:	3-5 r	m	*Taken June 3, ice covered	Oct 19	Rearing:	upstream habitat.  Poor due to lack of suitable	
14W043840 602847 2011/06/03 10-47-02	Wetted Width:	3-5 r	m			itearing.	substrate.	
Figure 1: Stream crossing LR02, looking north	Water Depth:	1.5 r	n					
	Pattern:	Straig	ght	Surrounding Vegetation Riparian vegetation con- shrubs. There are some	sists of grasses and	Over-wintering:	Poor as this stream will likely freeze to the bottom and not have sufficient DO to sustain	
	Characterization:	Pereni	nial		niferous forest with some		fish.	
	Crown Cover:	10%	6		Ü	Aquati	ic Habitat Sensitivity	
Figure 2: Stream crossing LR02, looking south.	Substrate Type and Composition:  Cover Type	Organic	100%	There are two runs that	ext to the creek. On the of 5 m by 5 m that is nel leading to grown over beaver dam. may provide passage for			
Pt.	and Composition:			an engineered channel	gh water periods. This is	Aqu	atic Habitat Value	
	Morphology:	SWD OHV UCB	5%	Summary: The creek is a uniform of substrate and little cover roadway. The channel let lake is a straight channel to the channel let a see it a straight channel let a see it a see it as a straight channel let a see it as a sec	r on either side of the eading to Threehouse	habitat for small-be	and water depth may provide odied species but it is unlikely species utlize this waterway.	
	Culvert Diameter (m): Water Depth (m): Embedded:	Plat  Downstream 1.95 1.56 No	100%  Upstream 1.95 1.5 No					
Figure 3: Stream crossing LR02, looking south.	Perched (m): Number:	0.05	0.05		now traps ok Stickleback	AECOM		

	St	ream Assessr	nent - <u>Si</u> t	e Card	07					
Assessment Date: June 3, 2011					Location					
	Crossing #	RB07				Watercourse I	Name	Gaspard Creek		
	UTM	14U 6078280 N		intion			•	Accessment		
	l In a tra a m		Site Desci				Assessment Fish Use			
	Upstream	None		Water Quality*:	p. (°C)	6.7	Carana in an			
	Waterbody:	None		pH	p. ( C)	7.14	Spawning:	Poor for large bodied fish due to lack of suitable substrate.		
	Downstream				d (µS/cm)	222		to lack of suitable substrate.		
	Waterbody:	Gaspard I	_ake		- (					
		·		Turb	oidity	Clear	Migration:	Good due to connectivity to		
								upstream wetland.		
	Channel Width:	0.5 - 1.75	5 m	*Taken June 3, ice co	overed Oct 19					
			_				Rearing:	Poor due to lack of suitable		
Company to the Company of the Compan	Wetted Width:	0.5 - 1.7	o m					substrate.		
Figure 1: Stream crossing RB07, looking north	Water Depth:	0.32 n	n							
rigule 1. Stream crossing KDU7, looking north	water Depth:	0.32 11	1							
				Surrounding Veg	etation:					
				Riparian vegetatio		d by grasses	Over-wintering:	Poor as this stream will likely		
NIV /	Pattern:	Straigh	nt	and deciduous shr	rubs. Upland v	egetation is		freeze to the bottom and not		
				coniferous forest of	on the north sid	de and a		have sufficient DO to sustain		
	Characterization:	Perenn	ial	gradual transition i	into wetland or	n the south.		fish.		
A	Crown Cover:	10%					Aquati	c Habitat Sensitivity		
							Low			
				Unique Features:						
						•		derately susceptible to erosion		
	Substrate Type and Composition:							sedimentation due to the soft		
specimens in chief	and Composition.	Organic	100%	culvert at the edge some water bypas				dible banks. However, the entire s composed of organic fines,		
Figure 2: Stream crossing RB07, looking east, the channel		Organio	10070	across the low lyin				te downstream sedimentation		
follows the road until dispersing into wetland.				channel is used as	0		,	ffect on fish habitat.		
	Cover Type			The culvert on the						
The state of the s	and Composition:			longer connected t			Aqu	atic Habitat Value		
		LWD OHV	5% 30%	build up infront of t	the opening.		No Fish Habita	at		
			5570				The limited cover	and water depth and lack of		
是自然的方式。全型的小位置							connection to Gas	pard Lake prevent fish from		
ALL SECTION AND THE SECTION AN							utlizing this watery	vay.		
	Morphology:	F		Summary:						
The state of the s		Flat	100%	The channel to Ga	•	•				
The second secon	Culvert	Downstream	Upstream	cover and substrate						
<b>《</b> 100 100 100 100 100 100 100 100 100 10	Diameter (m):	0.86	0.86	dispersing into we		u until				
(A)	Water Depth (m):	0.2	N/A	dispersing into we	dana.					
CONTRACTOR OFFICE OF SECURITION OF SECURITIO	Embedded:	Yes	Yes	Fishing Effort:	None					
Figure 3: Stream crossing RB07 looking southwest with	Perched (m):	No	No	_			Λ	<b>ECOM</b>		
some water bypassing the partially blocked culvert and	L			Species:	N/A		A			
crossing the road.	Number:	1								

Note: N/A = Not Applicable, LWD = large woody debris, OHV = overhanging vegetation

		S	tream Assessme	nt - Si	te Card # RB1	5			
Assessment Date:	June 3, 2011				Lo	cation			
	•	Crossing #	RB15			W	atercourse l	Name	Unnamed Creek 1
		UTM	14U 6078916 N 43						
			S	ite Descr					Assessment
	THE YEAR TO	Upstream			Water Quality*:	"••	_		Fish Use
1 信息製造工工		Waterbody:	None		Temp.	(°C)	9	Spawning:	Poor for large bodied fish due
		Downstream			pH Cond (j	uS/om)	7.53 339		to lack of suitable substrate.
		Waterbody:	None		Cona ()	μο/σπ)	339		
14年,14年,14年,14年,14年,14年,14年,14年,14年,14年,		waterbody.	None		Turbidi	tv	Clear	Migration:	Poor due to lack of
					Tarbian	•9	Clear	migration.	connectivity.
No. of the last of		Channel Width:	0.5 - 1.5 m		*Taken June 3, ice cove	ered Oct 19			conficetivity.
	NAME OF THE PARTY				, , , , , , , , , , , , , , , , , , , ,			Rearing:	Poor due to lack of suitable
A STATE OF THE STA		Wetted Width:	0.5 - 1.5 m						substrate.
YOU DESCRIBE STYTEM	PENDONS SAME								
Figure 1: Stream crossing RB15	looking north into beaver	Water Depth:	0.25 m						
impoundment.									
	THE PARTY OF THE P				Surrounding Vegeta				
		<b>-</b>	0.		The creek is surroun	ded almost enti	rely by	Over-wintering:	Poor as this stream will likely
<b>学生的人们的人们的</b> 自己是		Pattern:	Sinuous		deciduous forest.				freeze to the bottom and not
		Characterization:	Intermittent						have sufficient DO to sustain
	West Asi	Characterization:	memmen		Unique Features:				fish.
	47	Crown Cover:	90%		A beaver has created	d a dam along tl	he north side	Aguati	c Habitat Sensitivity
		orown cover.	0070		of the road creating a				<u> </u>
					stretches for several			Low	
					south side of the road	d there is a sma	aller 5 m by 5	The substrate of th	e channel is dominated by faller
		Substrate Type			m impoundment which			leaves which are d	ecomposing. Downstream
		and Composition:			No culvert was found			appears to be simi	lar substrate and therefore
14N 0435045 (0X690)	NO HOME THAT Y		Organic*	100%	or blocked by the bea	•		disturbance would	not affect any potential fish
Figure 2: Stream crossing RB15,	looking north with road in		*Mostly leaf litter					habitat.	
the background.									
		Cover Type						Agu	atic Habitat Value
		and Composition:	SWD	200/	Summary:				
10000000000000000000000000000000000000	Halliett Apple		OHV		Water in the beaver i	impoundments	was verv	No Fish Habita	at
金 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	图和通道人名		OHV	30 /6	turbid and unlikely to	•	•	The limited cover a	and very low water depth does
	世 经 企				creek had little flow b	•		not provide suitable	
					matter which does no		,	not provide editable	o Habitat for hori.
		Morphology:			or habitat for fish.	or provide editar	oio oubotrato		
			Flat	100%	or nabitat for fion.				
	1								
		<u>Culvert</u>	Downstream Up	ostream					
		Diameter (m):	-	-					
		Water Depth (m):	=	-	Fishing F# :	\ 4: · · · · ·			
Figure 2: Stroom grooping DD45	looking couth	Embedded:	-	-	Fishing Effort:	Minnow traps		_	
Figure 3: Stream crossing RB15	looking South.	Perched (m):	-	-	Species:	None		Δ.	<b>ECOM</b>
		Number:	_		opecies.	NOTE			
		raniber.	-						
Note: N/A = Not Applica	able, SWD = small woody	debris. OHV = overhar	nging vegetation						

	S	tream Assessment	t - Site	Card # RB	16				
Assessment Date: June 3, 2011					Location				
	Crossing # UTM	RB16 14U 6079369 N 4354	447 E			Watercourse	Name	N/A	
			e Descrip	tion				Assessment	
	Upstream		1	Water Quality*:				Fish Use	
	Waterbody:	None		рН	np. (°C)	16.1 7.82	Spawning:	Poor for large bodied fish due to lack of suitable substrate.	
	Downstream Waterbody:	None			id (µS/cm) pidity	136 Clear	Migration:	Poor due to lack of	
	Channel Width:	1.0 - 5.0 m	,	Taken June 3, ice c	overed Oct 19		Booring	connectivity.	
	Wetted Width:	1.0 - 5.0 m					Rearing:	Poor due to lack of suitable substrate.	
Figure 1: Stream crossing RB16 looking north into beaver impoundment.	Water Depth:	1.0 m							
	Pattern:	Straight	-	Surrounding Veg The creek is surro mixed forest.	-	erous and	Over-wintering:	Poor as this stream will likely freeze to the bottom and not have sufficient DO to sustain	
	Characterization:	Intermittent		Unique Features: A beaver has created a dam along the north				fish.	
	Crown Cover:	90%	:	side of the road c	reating a beave	r	Aquatio	c Habitat Sensitivity	
	Substrate Type and Composition:	Organic*	100%	impoundment that stretches for several hundred meters. On the south side of the road there is a smaller 5 m by 5 m impoundment which then feeds a small creek. No culvert was found on June 3 but the south side of the			Downstream appears to be similar substra		
Figure 2: Stream crossing RB16, culvert on the south side		*Mostly leaf litter		culvert was found side of the culver			potential fish habit	nce would not affect any	
of the road	_			and not observed		underwater	poternaa non nabit	au.	
	Cover Type and Composition:			ana not 0200. rod	•		Agus	atic Habitat Value	
	and Composition:	SWD	10%	Summary:					
		OHV		Water in the beav	er impoundmer	nts was verv	No Fish Habita	at	
		LWD IV	30%	turbid and unlikely	to provide fish	habitat. The	The limited cover a not provide suitable	and very low water depth does	
		IV		creek had little flo matter which doe			not provide suitable	e nabitat for fish.	
	Morphology:	Flat		substrate or habit		inabic			
	Culvert Diameter (m):	Upstream Downs	95						
The same of the sa	Water Depth (m):	Frozen Froz	-	Flatina F#a f	N1/A				
Figure 3: Stream crossing RB16 looking south.	Embedded: Perched (m):		<u> </u>	Fishing Effort:	N/A		_	<b>-6014</b>	
inguite of citizani crossing indirectioning south.	Number:	1	;	Species:	N/A		A	ECOM	
Note: N/A = Not Applicable, SWD = small woody d	ehrie OHV – ovorbor	nging vegetation LMD Iss	rae wood	v dehrie IV – inn	tream vogototic	n			

	5	Stream Assessme	ent - Sit	e Card # AD02			
Assessment Date: June 20, 2012				Location	1		
	Crossing #	AD02			Watercourse I	Name	N/A
	UTM	14 U 437077 607					
			Site Descri				Assessment
	Upstream	N/A	Water Quality:			0	Fish Use
	Waterbody:	N/A		Temp. (°C) pH	6.7 7.75	Spawning:	Poor for large bodied fish due
	Downstream			Cond (µS/cn			to lack of suitable substrate
	Waterbody:			σοιία (μο/οιί	11) 300		and connectivity.
	ratorbouy.	Anderson TIA	4	Turbidity	Clear		
				Í			
	Channel Width:	5 m				Migration:	Poor due to lack of
							connectivity.
	Wetted Width:	0.25 - 2.0 m					
And the state of the format of the state of	l.,	0.00 0.7				Rearing:	Poor due to lack of suitable
Figure 1: Stream crossing AD02, overgrown culvert.	Water Depth:	0.02 - 0.5 m		Surrounding Vegetation:			substrate.
				The creek is surrounded b	by coniferous and		
Charles All Land Control of the Cont				mixed forest.		Over-wintering:	Poor as this stream will likely
	Pattern:	Sinuous		Unique Features:		Over wintering.	freeze to the bottom and not
				There are two culverts (0.6	6 m and 0.4 m		have sufficient DO to sustain
	Characterization:	Perennial		diameter) crossing the roa			fish.
AND THE RESERVE OF THE PERSON				An additional culvert (0.9 r			
	Crown Cover:	100%		upstream crossing the form	mer rail bed. Further	Aquati	c Habitat Sensitivity
	0.1.4.4.7			investigation found that up	ostream is an	High	
	Substrate Type and Composition:			engineered drainage chan			a high due to the highly mobile
1000	and Composition.	Silt	40%	this creek. There does not	t appear to be a		s high due to the highly mobile rate. However, given that the
		Sand	20%	waterbody upstream.			and downstream substrate is
		Organic	40%			•	ion the aquatic habitat in this
Figure 2: Stream crossing AD02, discharging into Anderson		· ·				area is not limiting	•
TIA	Cover Type			Summary:			
	and Composition:			The creek cuts through the			
The Market Market		SWD		substrate in the covered for			atic Habitat Value
		LWD UCB	5% 10%	cover and unsuitable subs	strate for fish in this	No Fish Habita	at
	Morphology:	OOD	10%	area.		While the water is	flowing to a waterbody likely to
		Pool	20%				reek is unlikely to provide fish
ALL CONTRACTOR OF THE PARTY OF		Riffle	40%				died fish due to poor connectivity
		Run	30%				e water to freeze to the bottom
		Flat	10%			in winter.	
			B				
	Culvert	Anderson Mine	Railbed				
25 27 28 28 28 28 28 28 28 28 28 28 28 28 28	Diameter (m): Water Depth (m):	0.4 and 0.6 0.02 - 0.5	0.9 0.02 - 0.5				
	Embedded:	0.02 - 0.5 Yes	No	Fishing Effort: N/A			
Figure 3: Stream crossing AD02 eroding channel	Perched (m):	No	No				COM
	` '		-	Species: N/A		A=	COM
	Number:	2	1				
Note: TIA = Tailings Impoundment Area, N/A = No	t Applicable, SWD = s	small woody debris, LWD	= large woo	ody debris, UCB = undercu	ıt bank		

			Stream Assessment - Sit	e Card # AD03			
Assessment Date:	June 20, 2012			Location			
		Crossing #	AD03		Watercourse I	Name	N/A
NATIONS.		UTM	14 U 437068 608094				
			Site Descr				Assessment
		Upstream	N/A	Water Quality*: Temp. (°C)	15.6	Consumin au	Fish Use
	195	Waterbody:	IN/A	pH	7.46	Spawning:	Poor for large bodied fish due to lack of suitable substrate
	Abba amarine	Downstream		Cond (µS/cm)	223		and connectivity.
	The same of the sa	Waterbody:	Anderson TIA	,			and connectivity.
	NE WHAT PARTY		Anderson TIA	Turbidity	Clear		
					(darkly stained)		
1		Channel Width:	5 m	L		Migration:	Poor due to lack of
	ALL LINE CO.	Wetted Width:	5 m	Surrounding Vegetation:			connectivity.
AND DESCRIPTION OF THE PARTY OF		vvettea vviatn:	5 111	The south bank is dominated by r coniferous forest while the north b		Rearing:	Poor due to lack of suitable
		Water Depth:	0.26 m	evidence of an old burn with regro		rtcaring.	substrate.
Figure 1: Stream crossing A	D03 looking south west.		(at left downstream bank)	wetland with grasses and mixed for			oubolitato.
				Woulding Willing Guodoo and Mixed I	01001.		
of the control of the	1 例如					Over-wintering:	Poor as this stream will likely
		Pattern:	Straight	Unique Features:			freeze to the bottom and not
		Characterization:	Perennial	This appears to be an engineered	•		have sufficient DO to sustain
			retetitilat	channel with uniform width and de	•		fish.
* 92 1		Crown Cover:	5%	channels are common in the area upstream finds that there is no up	•	Aguati	c Habitat Sensitivity
	-35			draining waterbody. Downstream			·
		Substrate Type		through culverts at two locations (		Low	
7	2/2	and Composition:		before entering Anderson TIA.	, ,		derately susceptible to erosion
100	V) KAN		Fines 100%				edimentation due to the soft
AV W	10 miles	Cover Type					lible banks. However, the entire
Figure 2: Stream crossing A	D03 looking south, fine organic	and Composition:					s composed of organic fines,
substrate visible.	Doe looking doubt, line organic		SWD 5%	Summary:		,	e downstream sedimentation fect on fish habitat.
	CONTRACTOR AND ADDRESS OF THE		LWD 5%	The creek cuts through the soft si	Ity, sandy	would have little el	lect on han habitat.
				substrate in the covered forest. The		Aqu	atic Habitat Value
		L	OHV 5%	cover and unsuitable substrate fo	r fish in this	Marginal	
10.00		Morphology:		area.		· ·	and water depth may provide
		worphology.	Flat 100%				odied species but it is unlikely
	10000000000000000000000000000000000000						species utlize this waterway.
						and large searce	poolee amze ame matermay.
<b>国际</b>		0.14	5				
12- 13- 14- 14- 14- 14- 14- 14- 14- 14- 14- 14	M. Z	Culvert Diameter (m):	Downstream Upstream				
		Water Depth (m):					
		Embedded:	- -	Fishing Effort: None			
Figure 3: Stream crossing Al	ND03 looking north east	Perched (m):				_	<b>-</b> 6044
				Species: N/A		ı A	<b>ECOM</b>
		Number:					
Note: TIA = Tailing	gs Impoundment Area, N/A = No	t Applicable, SWD = :	small woody debris, LWD = large wo	ody debris, IV = instream vegetation	n, OHV = overh	nanging vegetation	

	St	ream Assessment -	Site (	Card # HWYA	M			
Assessment Date: June 4, 2011				Lo	cation			
	Crossing #	HWYAN				Watercourse	Name	Anderson Creek
	UTM	14U 6077613 N 43910						
<b>国际科学院 罗马斯斯人 不</b> 使		Site	Descrip					Assessment
	Upstream			Water Quality:	p. (°C)	44.00	Consumina	Fish Use
	Waterbody:	Anderson Tailing Impoundme	ent Area	pH	p. ( C)	11.96 7.55	Spawning:	Moderate due to instream
	Downstream				d (µS/cm)	7.55 543		vegetation but lacks a
	Waterbody:	Anderson Bay, Wekusko	Lake	Conc	α (μο/οπή)	343		floodplain.
	viacorbouy.	, maereen zay, rrenaene		Turb	iditv	Clear	Migration:	Poor due to lack of any
					. ,	0.00.	9	upstream habitat.
	Channel Width:	1.5 m						aponoam nasnan
							Rearing:	Good due to slow moving
	Wetted Width:	1.5 m					_	backwater habitats and
Tigg occupied (movies) sociations to accur.								abundant cover.
Photo 1: Stream crossing HWYAN, looking west.	Water Depth:	0.55 - 1.50 m						
M. A. T.								
The land of the la	Pattern:	Meandering					Over-wintering:	Moderate due to continuous
THE RESERVE AND ADDRESS OF THE PARTY OF THE	Pattern:	Meandening						discharge from the TIA water
10 10 10 10 10 10 10 10 10 10 10 10 10 1	Characterization:	Perennial						is not likely to freeze to the
	Onaracterization.	rotomia						bottom.
THE RESERVE OF THE PARTY OF THE	Crown Cover:	0%		Surrounding Veg	etation:		Aguati	c Habitat Sensitivity
				Riparian habitat is		grasses. Bank	Low	•
			and upland habitat	t is almost enti	rely old growth	LOW		
				coniferous forest v	vith thick moss	covering the	This stream is mod	derately susceptible to erosion
	Substrate Type			forest floor everyw	here.		and downstream s	edimentation due to the soft
900 000130 0077000 20150000 20150000 10-30-20	and Composition:						substrate and eroc	lible banks. However, the
Dhata O. Otaana amarina IIIA/VANI Isaliina asat		Organic	100%	Unimus Factures				am substrate is composed of
Photo 2: Stream crossing HWYAN, looking east				Unique Features: The stream is regu		a wair from the		oderate downstream
(downstream).	Cover Type			Anderson Tailings	•			ıld have little effect on fish
	and Composition:			Anderson railings	impoundment	Alea. A	hahitat Agui	atic Habitat Value
	and compectation	SWD	5%					
		Во	5%				Marginal	
		OHV		Summary:			The abundant instr	ream vegetaton provides cover
		IV	5%	Water flow in Ande	erson Creek is	stronger than	for small-bodied sp	pecies for spawning and
								equate water levels exist. The
	Morphology:	5	40001	as such it may pro			creek is connected	I to Wekusko Lake and large
		Run	100%	Approximately 300			•	igrate upstream in spring.
	Culvert	Downstream Upstr	oam	significant set of ra		boulders that		mpedes fish passage into the
4 3 4	Diameter (m):	1.2 1.3		may impede fish p	assage.		Anderson Tailings	Impoundment Area.
	Water Depth (m):	0.65						
14N(039)08 6077645	Embedded:	Yes Ye		Fishing Effort:	Minnow traps	s, Backpack		
Photo 3: Stream crossing HWYAN, looking downstream.	Perched (m):	No No			electrofishing			ECOM
				Species:	Pearl Dace,			
	Number:	1			Stickleback,	Fathead		
L					Minnow low	a Darter		
Note: SWB = small woody debris; Bo = boulder; O	HV = overhanging vege	etation; IV = instream vegetation	า					