

Schaft Creek Fisheries Baseline 2007







DRAFT

Prepared by: March 2008

Rescan Tahltan Environmental Consultants Vancouver, British Columbia





EXECUTIVE SUMMARY



Executive Summary

Copper Fox Metals' proposed Schaft Creek Project has mineral claims situated within the Cassiar Iskut-Stikine Land and Resource Management area which encompasses a total of 5.2 million hectares. The mineral claims of interest are situated near the headwaters of Schaft Creek, a tributary of Mess Creek, which flows into the Stikine River downstream of the community of Telegraph Creek. This report presents the results of field studies conducted between June and September 2007 on the morphology, habitat quality, and fish community of the Schaft Creek Project Area.

The main components of the field program plan in 2007 were:

- To assess fish community and habitat along the proposed road, including potential harmful alterations, disruptions or destruction (HADD) of fish habitat;
- To assess fish and fish habitat at sites within the mine receiving environment (the area directly downstream of mine facilities) and at reference sites;
- To confirm the impassability of fish-barriers that limit fish distribution in the Project area; and,
- To collect baseline information on tissue metals, fish health, and fish energy and reproductive investment at potential long-term monitoring sites as per the Metal Mining and Effluent Regulations (MMER).

Along the proposed road route, 197 sites were assessed, 131 of which were classified as streams, while the rest were designated as "non-classified drainages" (NCDs - 63) and "fisheries sensitive zones" (FSZs - 3). Fisheries sensitive zones are areas that do not fit under the classifications of stream, lake or wetland, but which do provide important fish habitat at certain times of the year. Examples include backwater areas and flooded depressions. The majority of sites were classified as non-fish bearing due to fish passage barriers and/or poor habitat. A total of 28 sites were designated as fish-bearing or potentially fish-bearing based on a combination of sampling, absence of barriers and good habitat quality. Among fish-bearing and potentially fish-bearing sites, habitat importance ranged from marginal (defined as habitat that could support fish, but is unlikely to provide important habitat features) to critical (defined as habitat that is extremely important for fish development and rare in the Project area). Sites were only electrofished if non-fish bearing status could not be confirmed due to the absence of barriers or presence of upstream habitat refuges. A total of 18 stream crossing sites were electrofished in 2007, with two fish being captured. Sites were not electrofished if the habitat quality was fair to good, and there were no permanent barriers to fish migration located between the stream crossing and the nearest fish-bearing waterbody.

A total of 23 receiving environment stream sites were surveyed in 8 watersheds: Hickman, Mess, Schaft, Stikine, Skeeter, Tailings C, Walkout and Yehiniko. Walkout and Yehiniko creeks served as reference sites. In general, sites were similar with respect to channel morphology and

size. Stream sites in the Skeeter Creek watershed generally had smaller bankfull widths and higher gradients, while sites on the Stikine River had larger bankfull widths and lower gradients.

Habitat quality was assessed in terms of its value to rainbow trout (*Oncorhynchus mykiss*), the dominant fish species in the Project area. Spawning habitat for rainbow trout was poor throughout all of the receiving environment watersheds. Spawning habitat quality differed between reference sites, with Walkout Creek having poor spawning habitat, and Yehiniko Creek having good quality spawning habitat. Rearing habitat was also poor throughout most of the receiving environment watersheds except the Mess and Schaft watersheds, where rearing habitat quality was fair. The reference environment watersheds possessed rearing habitat suitability of poor (*i.e.*, Walkout) and fair (*i.e.*, Yehiniko). Over-wintering habitat quality was poor within all receiving environment watersheds except Mess Watershed, where over-wintering habitat quality was fair. The reference environment watersheds possessed poor over-wintering habitat.

Fish distribution in the receiving environment watersheds is limited by a collection of confirmed and suspected fish-passage barriers. These barriers are located on Mess Creek, Skeeter Creek, Schaft Creek and Tailings C Creek. The barrier on Mess Creek was thought to prevent Pacific salmon migration into the upper Mess Creek and Schaft Creek watersheds; however, the capture of a suspected Chinook salmon in Mess Lake in 2007 has resulted in some uncertainty with regards to the passability of this barrier. Further investigation into the passability of these barriers will be conducted in 2008.

Wetlands ranged from bogs laced with small, poorly defined stream channels to large ponds with multiple inlets and outlets. Some wetlands included swift, glacial-fed stream channels. Rearing habitat quality was fair to good in most wetlands surveyed, while habitat for overwintering was mostly poor to fair. Spawning habitat quality was poor in most wetlands; however, some fair to good quality spawning habitat was present in streams that flowed through wetlands. Habitat quality for migration was fair to good in most wetlands.

Rainbow trout were the only species captured in receiving environment wetlands in 2007. Trout were captured in six wetlands out of eleven by electrofishing and minnow trapping and were generally healthy and abundant, especially in wetlands that were clear and deep.

Habitat in lakes within the Project area was generally fair to good. Several lakes were very turbid, limiting the habitat quality; however, fair to good quality habitat was available along the margins of most lakes where large woody debris (LWD) cover was moderately abundant. Good quality habitat was also available in some of the non-fish bearing lakes.

Fish presence was limited to four of the seven lakes, and did not seem to be related to lake size. Rather, fish presence was likely determined by the presence of downstream barriers to fish migration. Fish density in most lakes was low, but captured fish were healthy.

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1. INTRODUCTION



1. Introduction

1.1 Background

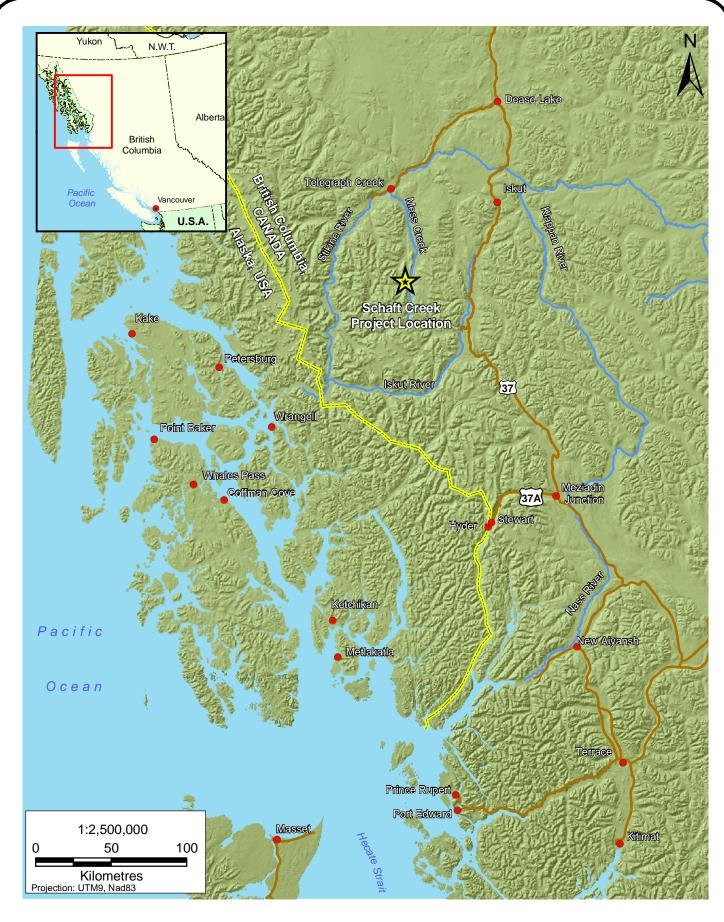
Copper Fox Metals Inc. (Copper Fox) is a Canadian mineral exploration and development company focused on developing the Schaft Creek deposit located in north-western British Columbia, approximately 60 km south of the village of Telegraph Creek (Figure 1.1-1). The Schaft Creek deposit is a polymetallic (copper-gold-silver-molybdenum) deposit located in the Liard District of north-western British Columbia (Latitude 57o 22' 4.2''; Longitude 130o, 58' 48.9"). The property is comprised of 40 mineral claims covering an area totalling approximately 20,932 ha within the Cassiar Iskut-Stikine Land and Resource Management Plan (Figure 1.1-2).

The Schaft Creek Project is located within the traditional territory of the Tahltan Nation. Copper Fox has been in discussions with the Tahltan Central Council (TCC) and the Tahltan Heritage Resources Environmental Assessment Team (THREAT) since initiating exploration activities in 2005. Copper Fox has engaged in numerous agreements with the TCC including a Communications Agreement, Traditional Knowledge Agreement, Letter of Understanding with the Tahltan Nation Development Corporation (TNDC) and a THREAT Agreement. Copper Fox will continue to work together with the Tahltan Nation as work on the Schaft Creek Project continues.

The Schaft Creek deposit was discovered in 1957 and has since been investigated by prospecting, geological mapping, geophysical surveys as well as diamond and percussion drilling. Over 65,000 meters of drilling has been completed on the property as of end of 2007. Additional drilling is planned for 2008 to support future economic assessments of the property and an environmental assessment application.

The Schaft Creek Project entered the British Columbia environmental assessment process in August 2006. Although a formal federal decision has not yet been made, the Project will likely require federal approval as per the Canadian Environmental Assessment Act. Copper Fox has targeted the end of 2008 for submission of their Schaft Creek Environmental Assessment Application.

Copper Fox has recently released a scoping level engineering and economic report for Schaft Creek. The mine and associated infrastructure are presented in Figure 1.1-3. The current mine plan has ore milled from an open pit at a rate of 65,000 tonnes/day. The Schaft deposit will be mined with large truck/shovel operations and typical drill and blast techniques. An explosives manufacturing facility will be constructed on-site to support blasting activities. The mine plan includes 719 million tonnes of minable ore over a 31 year mine life. The Project is estimated to generate up to 1,200 jobs during the construction phase of the Project and approximately 500 permanent jobs during the life of the mine.

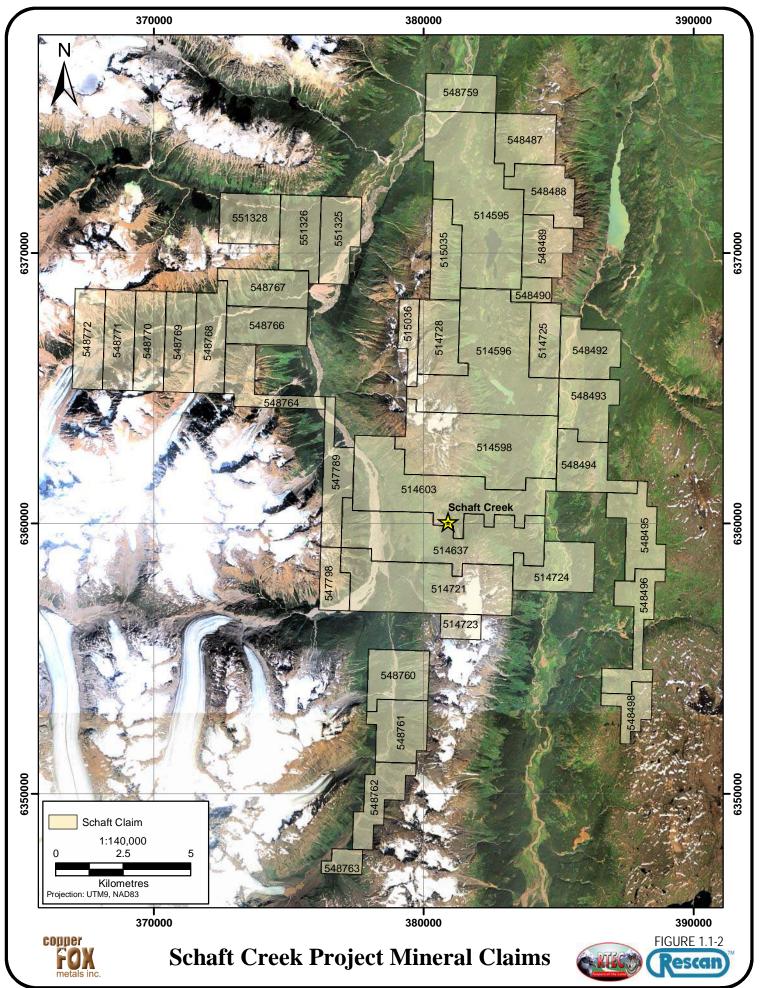


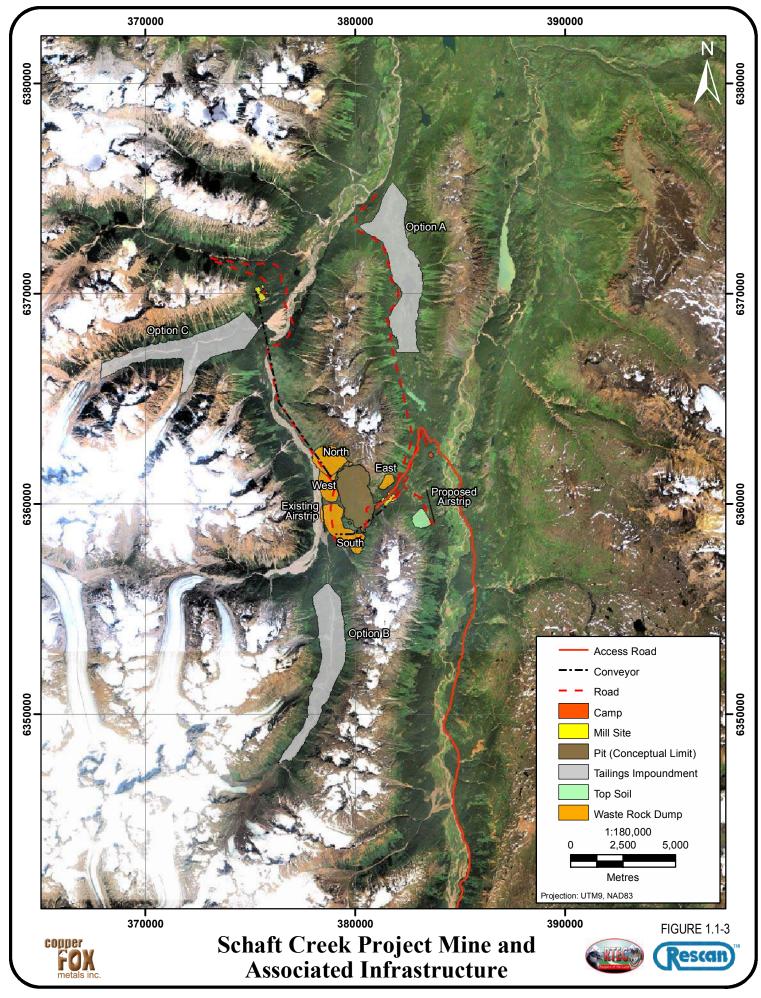


Location Map for Schaft Creek Project









Ore will be crushed, milled and filtered on-site to produce copper and molybdenum concentrates. The mill will include a typical comminution circuit (Semi-Autogenous Mill, Ball Mill and Pebble Crusher) followed by a flotation circuit and a copper circuit with thickener, filtration and concentrate loadout and shipping. The mill includes a designated molybdenum circuit with thickener, filtration circuit, drying and bagging. The filter plant will be located at the plant site. A tailings thickener and water reclaim system will be used to recycle process water. The circuit will have a design capacity of 70,652 tonnes per day and a nominal capacity of 65,000 tonnes per day (23,400,000 tonnes per year). The copper and molybdenum concentrates will be shipped via truck from the mill to the port of Stewart, BC.

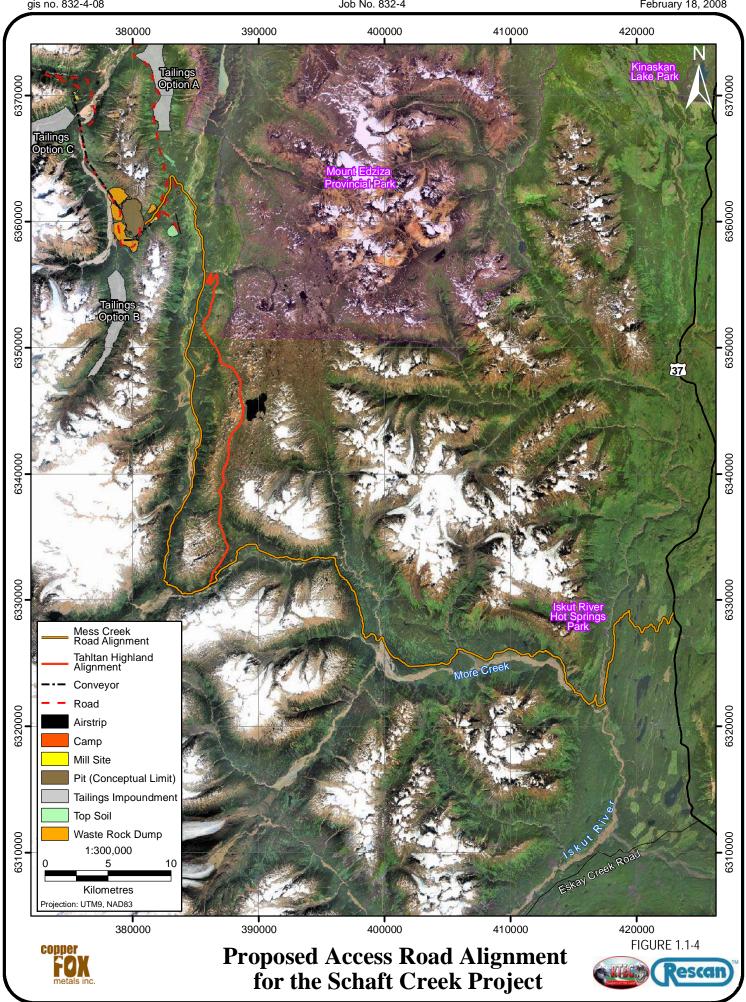
Copper Fox will construct an access road from Highway 37 to the Schaft Creek property. Access to the property from Highway 37 will require approximately 105 km of new road. The first 65 km of the access road to the Schaft Creek property corresponds to the Galore Creek access road. NovaGold and Teck Cominco have currently put a hold on future construction efforts along their access road and the overall Galore Creek Project. Copper Fox will seek approval from the provincial government and NovaGold/Teck Cominco to construct the first 65 km of the Galore Creek access road should the status of the Project not change.

The route of the final 40 km of access road has not been finalized. Copper Fox has completed initial investigations of a route along Mess Creek. An alternative route is also being considered that utilizes the plateau to the east of Mess Creek. Copper Fox is currently investigating the feasibility, as it relates to geohazards, of the two alignments. Both alignments include a 30 m bridge on Mess Creek. Mess Creek is considered navigable as per Transportation Canada criteria. Figure 1.1-4 presents the access road alignment that follows the Galore Creek road (65 km from Highway 37) and the Mess Creek alignment (40 km) to the Schaft Creek property.

Over the life of the mine, the Schaft Creek Project will generate over 700 million tonnes of tailings. There are three tailings facilities being considered (Figure 1.1-3). The three options will undergo an alternatives assessment that will include engineering, construction and operating costs, geotechnical, geohazards, environmental and social considerations. The Project will generate over a billion tonnes of waste rock. Waste rock dumps are proposed around the perimeter of the pit (Figure 1.1-3). This includes the flat area between the proposed pit and Schaft Creek.

A detailed water management plan has yet to be developed for the Project. A water management plan will be included in the next level of economic assessment (pre-feasibility) and the next Project description update. A waste water discharge is expected from the tailings facility, waste rock dumps and domestic waste water treatment plant. The management plan will detail the plans to minimize natural drainage into the tailings facility, the pit and the waste rock dumps. Pit water will be pumped to the tailings facility.

A new airfield will be constructed to the east of the pit (Figure 1.1-3). The Project will be a flyin, fly-out operation. The new landing strip will be capable of handling a Boeing 737. Other facilities include a terminal building, fuelling, maintenance and control facilities.



A permanent camp will be constructed to support a staff of approximately 500 employees. Other facilities include truck shop, warehouse, administration, maintenance laboratory, explosives storage, water treatment facilities and potable water storage.

Copper Fox has targeted the end of 2008 for submission of their Environmental Assessment Application and full Feasibility Report. Screening of the EA Application plus the 180 day review period will result in Project approval as early as July 2009. Copper Fox will likely seek concurrent permitting for strategic permits to facility the timely construction of key Project components. Construction is estimated to take two and half years. Thus, production could begin by early 2012.

1.2 Objectives

The objectives of the 2007 Schaft Creek Fisheries Baseline Program were to provide background information on fish and fish habitat that may be impacted by mine facilities, including the pit, waste rock facilities, tailings facilities and access road. The 2007 program expands on information collected during 2006 and will aid in the assessment of potential impacts that will be completed in 2008. The main components of the 2007 baseline program were:

- To assess fish and fish habitat at sites within the mine receiving environment (the area directly downstream of mine facilities) and at reference sites;
- To assess fish community and habitat along the proposed road, including potential harmful alterations, disruptions or destruction (HADD) of fish habitat;
- To confirm the impassability of fish-barriers that limit fish distribution in the Project area; and,
- To collect baseline information on tissue metals, fish health, and fish energy and reproductive investment at potential long-term monitoring sites as per the Metal Mining and Effluent Regulations (MMER).

2. METHODS



2. Methods

2.1 Site Selection

For the purpose of this study, survey sites were divided into two categories: 1) receiving environment, and 2) the proposed access road route. Receiving environment sites are those that may be directly influenced by mine development, and are located at streams, lakes and wetlands downstream of proposed mine features. Reference sites were also selected and will be used in the future to determine if any changes observed at sites downstream of the mine are due to mining activities, or due to natural changes in the environment.

Sites along the proposed road route consist of streams and waterbodies that may potentially be affected by road development.

At all sites, habitat quality was assessed in terms of its value to rainbow trout (*Oncorhynchus mykiss*), the dominant fish species in the Project area.

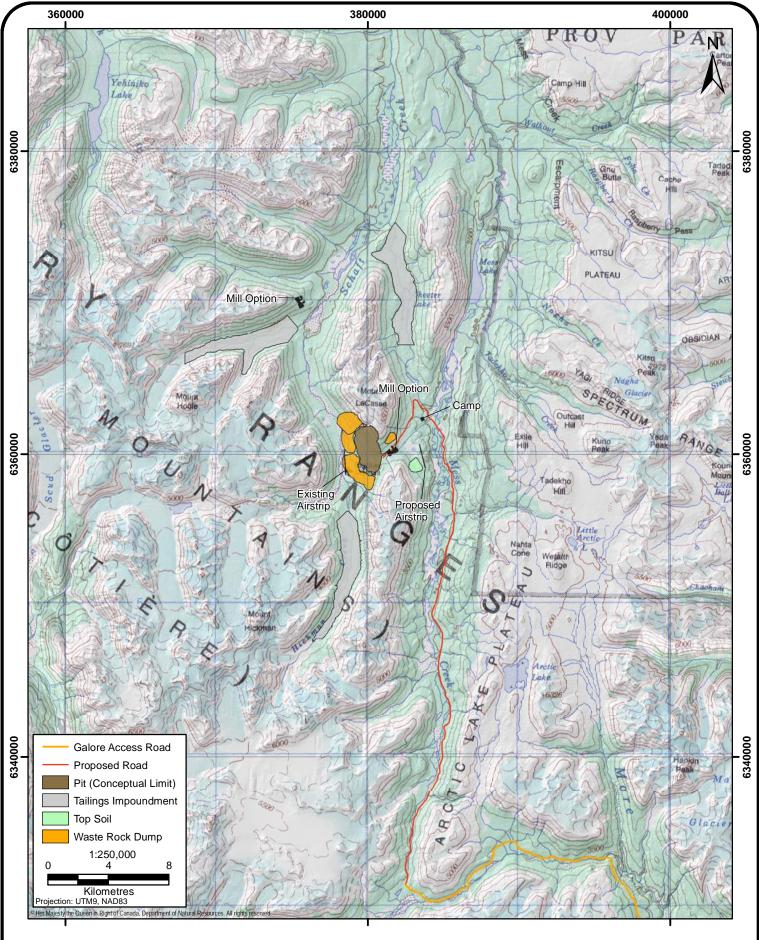
2.2 Access Road

2.2.1 Fish Habitat

The proposed Schaft Creek Access Road begins at kilometer 65 of the proposed Galore Creek Access Road. From there, it crosses the watershed divide between More Creek and Mess Creek, and follows Mess Creek approximately 35 km north, were it crosses Mess Creek and approaches the proposed mine site on Schaft Creek (Figure 2.2-1). Streams and waterbodies crossing or in the vicinity of the proposed road route were surveyed between August 7th and 23rd. Road crossing surveys began at the 0 km mark and progressed north towards the Schaft Creek mine site. Crews walked the proposed road route, classifying all drainages encountered. Sites were classified as "true" streams if they had a continuous, defined channel for at least 100 m. Sites with partial or discontinuous channelization were categorized as "non-classified drainages" (NCDs).

Site surveys were conducted according to Reconnaissance 1:20,000 Fish and Fish Habitat Inventory: Standards and Procedures (RISC, 2001) and the Reconnaissance 1:20,000 Fish and Fish Habitat Inventory: Site Card Field Guide (RISC, 1999). The site survey is a comprehensive biophysical inventory documenting channel measurements, cover inventory, features identification, description of water conditions, morphology characterization, habitat quality assessment, wildlife observations, photography, and fish sampling. Table 2.2-1 presents a summary of physical variables measured at each stream crossing along the proposed road route. The standard survey site length was 100 m: 50 m upstream and downstream of the road crossing.

At sites with average channel width greater than 3.0 m, additional information was gathered to satisfy Transport Canada requirements. For each Transport Canada site, pictures of the road crossing were taken from eight equally spaced sites around a 360° circumference, with the crossing at the centre. Transport Canada photo series were catalogued and indexed for an application regarding the Navigable Waters Act.





Overview Map of the Proposed Schaft Creek Access Road



Table 2.2-1
Habitat Variables Measured at Stream Crossing Sites

Substrate Type	Physical Measurements	Habitat	Cover
Dominant Substrate	Bankfull width (m)	Stream morphology	Deep pool
Subdominant Substrate	Wetted width (m)	Confinement	Boulder
D	Bankfull depth (m)	Hillslope coupling	Instream vegetation
D95	Residual Pool Depth (m)	Stream pattern	Overhanging vegetation
Bank texture	Gradient (%)	Islands/Bars	Undercut bank
	Temperature (°C)		LWD
	Transparency		SWD
	рН		Canopy closure (%)
	Conductivity (uS/cm)		Riparian vegetation

2.2.2 Fish Community

Streams were classified according to the Forest Practices Code of British Columbia Fish-stream Identification Guidebook (BCMOF, 1998). Under this procedure, streams are classified based on mean channel width (m) and fish-bearing status. A summary of stream classes is presented in Table 2.2-2.

Most of the streams along the road route are direct tributaries of Mess Creek, a large, fish-bearing river that has been sampled in previous years; therefore, it is probable that any streams feeding into Mess Creek that provide fish habitat and do not contain barriers to fish migration are fish-bearing as well. In addition, the slopes of the valley walls surrounding Mess Creek frequently exceed 20%, which is considered the limit of fish passability (BCMOF, 1998). Using this reasoning, fish sampling was not conducted at most stream crossings. Instead, habitat was assessed at each crossing. If the habitat assessment did not identify any barriers to fish migration, and habitat quality was assessed as fair to good, the stream was given a default classification of fish-bearing and was not revisited. If the habitat assessment identified marginal to fair habitat quality but no definitive barriers to migration were identified, the stream was given a default classification of fish-bearing and was flagged for further fish sampling. If the stream had definitive barriers to fish migration and was not fed by an upstream lake or pond, it was classified as non-fish-bearing.

Streams that were flagged for fish sampling were revisited in late August or early September, 2007. Beginning at the stream crossing location, the stream was electrofished in a downstream direction until a fish was captured or a definitive barrier was identified. If fish were captured, the stream was given a classification of fish-bearing. If a definitive barrier was identified and no fish were captured above the barrier, the stream was given a classification of non-fish-bearing. If sampling did not result in fish-capture or barrier identification, the default classification of fish-bearing remained. Fish sampling will be conducted a second time during a different season before the classification will be changed.

Table 2.2-2
Stream Classification Categories

Classification	Channel Width	Fish Present?
S1	>20.0 m	Υ
S2	5.0 to 20.0 m	Υ
S3	1.5 to 5.0 m	Υ
S4	<1.5 m	Υ
S5	>3.0 m	N
S6	<3.0 m	N

From Forest Practices Code of British Columbia Fish-stream Identification Guidebook (BCMOF, 1998)

2.3 Receiving Environment

2.3.1 Streams

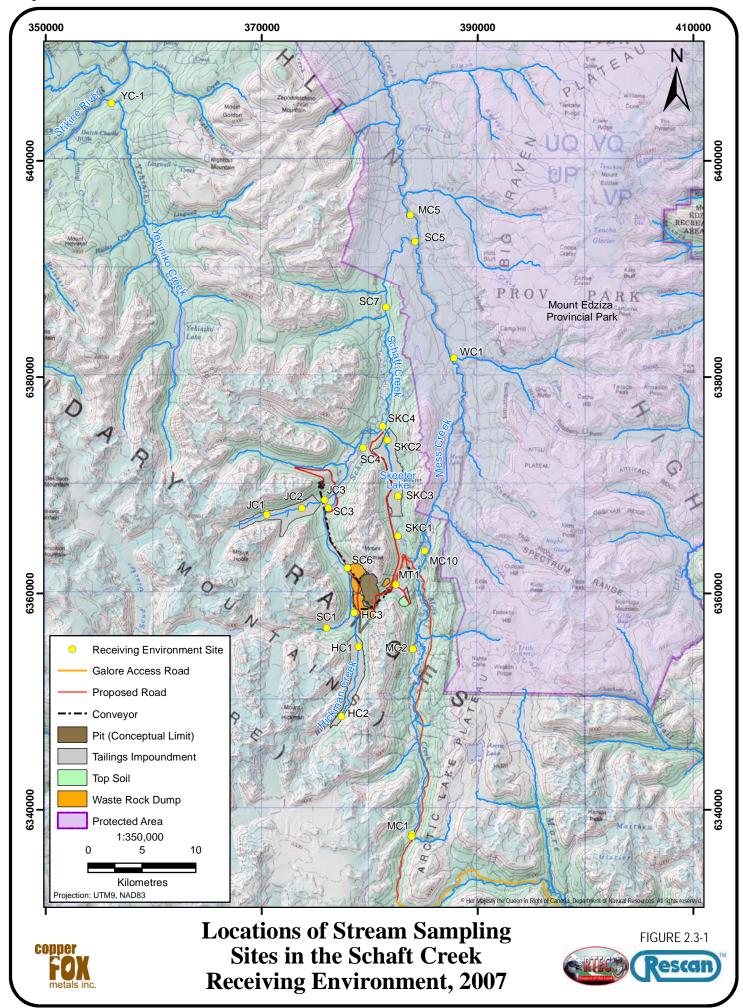
Fish habitat assessments were based on the Reconnaissance (1:20,000) Fish and Fish Habitat Inventory Program (RISC, 2001) and the Fish Habitat Assessment Protocol (Johnston and Slaney, 1996).

An overview fish habitat assessment was conducted at 23 receiving environment reaches (39 sites) within the Hickman, Mess, Schaft, Skeeter, Tailings C Creeks and Stikine River watersheds in June and September 2007. In addition, overview fish habitat assessments were conducted at two reference environment reaches (two sites) within Walkout and Yehiniko Creek watersheds in June and September 2007. Overview fish habitat assessments were conducted in accordance with the *Reconnaissance 1:20,000 Fish and Fish Habitat Inventory Protocol* (RISC, 2001) and the *Reconnaissance 1:20,000 Fish and Fish Habitat Inventory: Site Card Field Guide* (RISC, 1999). Figure 2.3-1 shows the location of the overview fish habitat assessment locations.

Detailed fish habitat assessments were conducted at 19 of the above receiving environment reaches within the Hickman, Mess, Schaft, Skeeter, and Tailings C Creek watersheds in September 2007. Overview fish habitat assessments were conducted in accordance with the *Fish Habitat Assessment Procedures* (Johnston and Slaney, 1996).

Detailed surveys of fish habitat were conducted for nineteen, 200 m-long stream sites. At each site, UTM coordinates were recorded at the beginning and end of each site with a hand-held Global Positioning System (GPS) receiver. Temperature, pH and conductivity were recorded using electronic meters.

Physical features of the stream were assessed within each habitat. Detailed fish habitat assessments (FHAP) were also conducted at sites within the proposed mine site and receiving environment following the methods of Johnston and Slaney (1996). FHAP surveys involved differentiating the stream into separate habitat units such as riffles, cascades, glides and pools, then recording an array of habitat variables for each unit. These features included data on stream morphology, substrate, cover for fish and fish habitat type.



Stream habitat within these sites was separated into the following habitat units:

- pool low velocity area with smooth, non-turbulent flow, low gradient (near 0%), and a concave bottom;
- glide an area of smooth, non-turbulent flowing water with moderate velocity and gradient less than 4%;
- riffle an area of turbulent, fast-flowing water with a gradient less than 4%; and,
- cascade high gradient (>4%) area of turbulent, fast-flowing water.

Data were collected with a measuring tape, meter stick, clinometer (for gradient measurement), or visual estimation. A complete list of the variables measured is presented in Table 2.3-1.

Table 2.3-1
Fish Habitat Variables Measured at Receiving Environment Sites

Substrate Type	Physical Measurements	Habitat	Cover
% Sand	Length (m)	Habitat type	% Deep pool
% Gravel	Mean depth (m)	Pool type	% Boulder
% Cobble	Bankfull depth (m)	Pool residual depth (m)	% Instream vegetation
% Boulder	Wetted width (m)	Fish passage barriers	% Overhanging vegetation
% Bedrock	Bankfull width (m)	Bank stability	% Undercut bank
Bank texture	Gradient (%)	Confinement	% LWD
	Bank height (m)	Hillslope coupling	% SWD
	Temperature (°C)	Stream pattern	Canopy closure (%)
	Transparency	Islands/Bars	Riparian vegetation

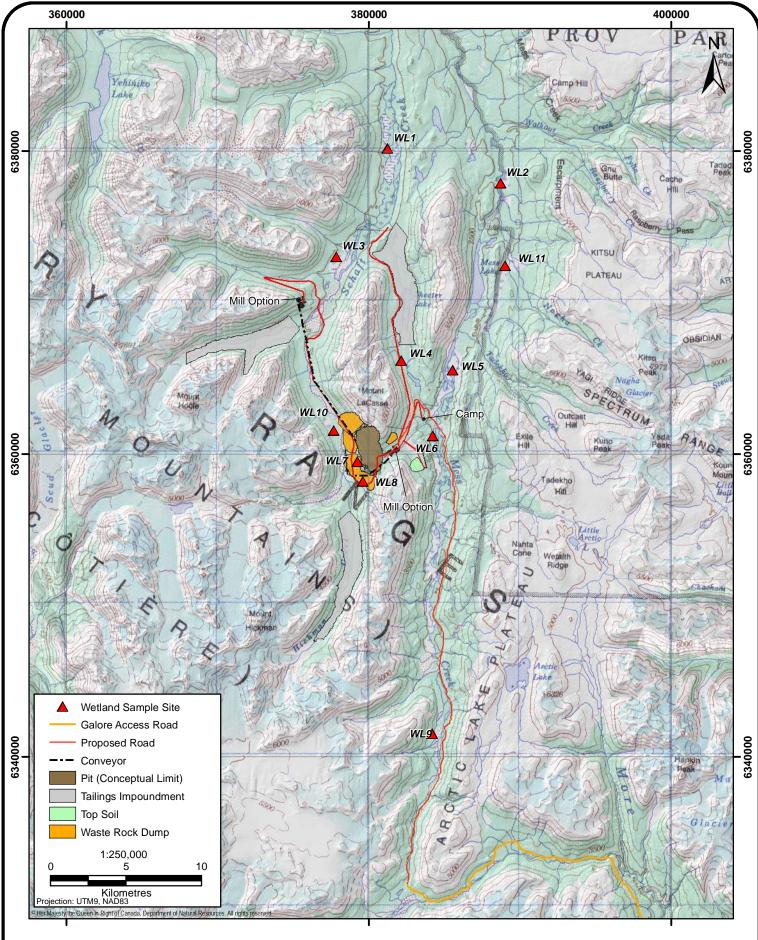
2.3.2 Wetlands

2.3.2.1 Study Design

In 2006, 11 wetlands in the receiving environment were surveyed for fish habitat and community (Figure 2.3-2). Sampling occurred in July and September, with most sites being visited on both occasions to confirm fish presence or absence. The objective of this sampling was to quantify fish habitat in receiving environment wetlands that will be directly impacted, or potentially receive discharge during mine operations.

2.3.2.2 Fish Habitat

Wetland fish habitat was quantified using a combination of transects and point measurements of open-water habitat. Channels within each wetland were mapped using a handheld GPS unit. Average channel width and depth were measured and dominant cover type and amount was estimated every 20 to 30 m. Small ponds within wetlands were surveyed with a single point. The width and length of the ponds were estimated and the amount of cover and dominant cover type were recorded.





Locations of Wetland Sampling Sites in the Schaft Creek Receiving Environment, 2007



For large ponds, several GPS points were taken around the perimeter so that area estimates could be obtained using geographical information systems (GIS), and the habitat characteristics were noted. In addition, for wetland and lake sites the general quality of habitat for rearing, overwintering, spawning and migration was noted.

2.3.2.3 Fish Community

The fish community of wetlands and lakes were sampled using a combination of electrofishing and minnow traps. Electrofishing was conducted in narrow or shallow channels found in the wetlands, while minnow traps were set in deeper water habitats and ponds within the wetland. Information on fish species richness, size distribution, fish condition and relative abundance was obtained. Captured fish were identified, measured, and weighed before being release back into their habitat. Pelvic fin clips and/or scales were collected from fish for aging purposes.

2.3.3 Lakes

2.3.3.1 Study Design

Seven lakes were surveyed in 2006 as part of the receiving environment studies (Figure 2.3-3). Lakes were chosen for their proximity to mine features and the proposed road, and a reference lake (Lake 4) was added for comparison. Sampling occurred from late August to early September. The objective of the lake survey was to identify important fish rearing and overwintering habitat, and to further determine the extent of fish distribution in the Project area.

2.3.3.2 Fish Habitat

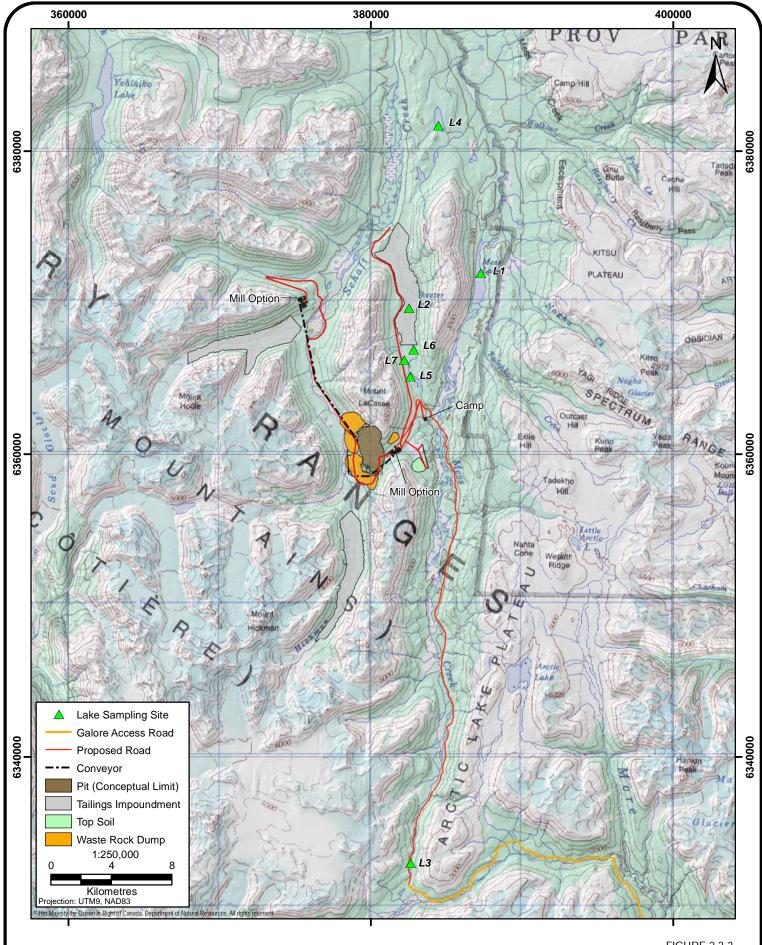
Fish habitat was characterized using a combination of methods. First, an aerial survey was conducted using a helicopter at low altitude. Areas with different substrate types were delineated from the air on a map of the lake or wetland and substrate zones were identified. Once zones of substrate were delineated, emergent vegetation and other cover types were noted and recorded on the map. Spot measurements of depth were also taken, as well as surface temperature, pH and conductivity. Inlets and outlets were mapped, photographed, and described.

2.3.3.3 Fish Community

The experimental gillnets consisted of three panels each (1", 1.5" and 2" stretched mesh size), and measured approximately 183 m². Gillnets were set for one hour to minimize mortality, and if no fish were captured, sets were extended up to 2 hours in duration. The location and set times were recorded.

2.4 Data Analysis

SYSTAT statistics software (SYSTAT, 2004) was used for all statistical analyses. Normal probability plots were employed to test for normality among variables. Data were transformed with natural logarithms to meet assumptions of normality. Analyses of variance (ANOVA) and analyses of covariance (ANCOVA) were used to test for differences among means.





Locations of Lake Sampling Sites in the Schaft Creek Receiving Environment, 2007



Fish communities were characterized using relative abundance, catch-per-unit-effort (CPUE), length-frequency distributions, weight-length regressions, age-frequency distributions, and condition factor.

Catch-per-unit-effort is an index of relative abundance that can be used to compare fish populations among different areas. It is defined as the number of fish captured per sampling device per unit time. For electrofishing, CPUE was calculated as:

(1)
$$CPUE = \frac{\text{number of fish caught}}{100 \, s}$$

where seconds (s) refers to the amount of time electricity was applied to the water. For minnow trapping, CPUE is calculated as the number of fish captured per trap hour in a standard minnow trap, and for gillnetting, CPUE is calculated as the number of fish captured per 100 m² of gillnet area per hour.

A general linear model (GLM) was used to test for equality in the slopes of the length-weight regressions among receiving environment streams. If the slopes were equal (*i.e.* there was no significant effect of the interaction between length and stream on the weight of fish tested), then analysis of covariance (ANCOVA), with length as the covariate, was used to test for differences in weight (*i.e.* the y-intercepts of the regressions) among sites. If the slopes of the regressions were not equal, this indicated that the relationship between length and weight differed among sites and the y-intercepts of the regressions could not be compared.

Condition is an index of the relative health of fish. It was calculated for all fish for which length and weight data were obtained, and was based on the following formula from Ricker (1975):

(2)
$$Condition = \frac{weight(g) \times 10^5}{length(mm)^3}$$

Von Bertalanffy growth models were fit to length-age data using SigmaPlot's non-linear regression function. The equation for this model is:

(3)
$$L_{t} = L_{\infty} (1 - e^{(-K(t - t_{0}))})$$

where L_t is the length (mm) at age t (years), L_{∞} is the length (mm) that the fish would attain if it were allowed to grow for an infinitely long time, K is a growth coefficient (year ⁻¹), and t_0 is the age (years) at zero length.

Length-frequency distributions were constructed to visualize the distribution of fish among size classes. Age-frequency distributions were also used to present the distribution of fish by age. These plots are useful in looking for differences in population structure among sites.

Frequency distributions were also used to visualize the distribution of various habitat types throughout the receiving environment.

3. RESULTS AND DISCUSSION



3. Results and Discussion

3.1 Access Corridor

3.1.1 Introduction

All fish habitat site cards are presented in Appendix 3.1-1 and fish sampling cards in Appendix 3.1-2. 1:20,000 scale maps of fish habitat and data are in Appendix 3.1-3 and a summary of site classifications is presented in Appendix 3.1-4.

3.1.2 Stream Crossings

3.1.2.1 Fish Habitat

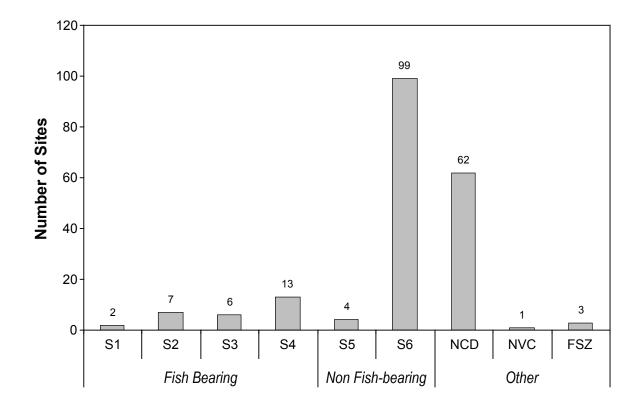
Site Classification

Figure 3.1-1 provides a summary of site classifications assigned along the proposed access road. Overall, 197 sites were assessed, 131 (66%) conformed to the definition of "stream" according to the Fish Forest Practices Code Fish-Stream Identification Guidebook (BCMOF, 1998). Of the remaining 66 sites, 62 (31%) were classified as NCD, 1 site as "no visible channel" (NVC) and 3 as "fisheries sensitive zones" (FSZ). Fisheries sensitive zones are areas that do not fit under the classifications of stream, lake or wetland, but which do provide important fish habitat at certain times of the year. Examples include backwater areas and flooded depressions.

Channel width and gradient, fish presence and various habitat criteria were used to determine individual stream classes for the 131 sites classified as streams. The majority of sites were classified as non fish-bearing with 99 sites (76%) classed as S6 and four sites (3%) as S5. The remaining 28 (21%) sites were classified as fish-bearing. Unless there was sufficient evidence to confirm a site as non fish-bearing it was defaulted as fish-bearing. Only two sites were confirmed as fish-bearing due to sampling in 2007. Seventeen sites were given a default classification of fish-bearing and nine sites were confirmed as fish-bearing for reasons other than current fish capture. Table 3.1-1 summarizes these reasons.

Channel Measurements

Figure 3.1-2 illustrates percent frequencies for average channel width and bankfull depth for all assessed classified streams. Most streams (71%) possessed an average channel width of less than 2 m, with 43% measuring between one and two meters. Only six sites (4.5%) had a width greater than 10 m, two of which were Mess Creek survey sites. Fish-bearing streams generally have larger average bankfull widths and depths than non-fish bearing streams. Within the fish-bearing streams, the majority of sites (46%) were less than two meters wide; however, 36% were wider than 10 m. Of all streams, 109 sites (83%) had an average bankfull depth of less than 0.5 m, with nearly half (47%) being between 0.25 m and 0.5 m deep. Of the fish-bearing streams, 17 (60%) were less than 0.5 m deep, but 18% were greater than 1 m deep indicating that the fish-bearing streams were generally deeper.



Site Classification





Table 3.1-1
Summary of Fish-bearing and Default Fish-Bearing Site
Classifications along Proposed Access Road

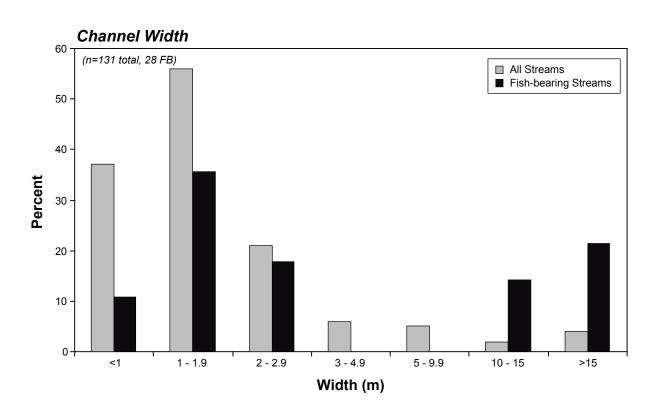
Site	ILP	Date	Temperature (°C)	Conductivity (µS/cm)	Turbidity	Electrofishing Seconds	RB	CPUE (fish/100 s)
105	1004	2007/08/25	6	180	С	229	NFC	0
139	1038	2007/08/21	7	250	С	157	NFC	0
141	1040	2007/08/21	-	-	С	31	NFC	0
143	1042	2007/08/21	-	-	С	87	NFC	0
153	1052	2007/08/21	6	210	С	31	NFC	0
159	1058	2007/08/14	5	378	С	366	NFC	0
161	1060	2007/08/14	5	424	С	198	NFC	0
165	1064	2007/08/14	6.5	387	С	219	1	0.46
194	1093	2007/08/25	5	180	С	86	NFC	0
195	1094	2007/08/26	5	170	С	664	NFC	0
204	1103	2007/08/26	6	190	С	160	NFC	0
207	1106	2007/08/27	6	120	С	180	NFC	0
211	1110	2007/08/27	6.5	150	С	65	NFC	0
233	1130	2007/08/27	6.5	150	С	260	1	0.38
237	1133	2007/08/27	5	100	С	98	NFC	0
239	1135	2007/08/27	5.5	110	С	18	NFC	0
300	2000	2007/08/10	4	50	С	540	NFC	0
312	1111	2007/08/27	6	160	С	37	NFC	0

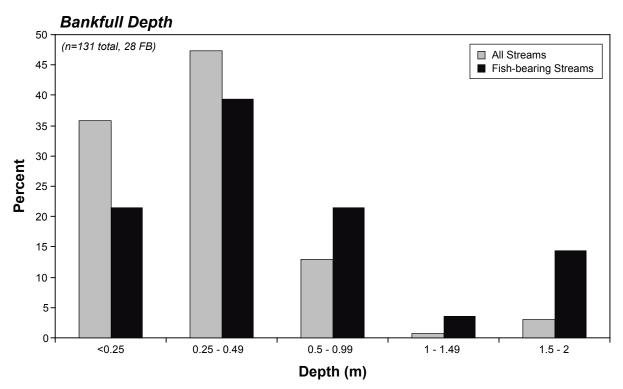
RB = rainbow trout

CPUE = catch per unit effort
Dashes indicate no data available

Gradient

Figure 3.1-3 illustrates the average gradient in all assessed classified streams. A total of 111 streams (85%) had gradients lower than 40%. Of the 28 fish-bearing streams, 55% had gradients between 10 and 20%. Twelve sites were found to have gradients greater than 20%, which is considered to be a potential barrier to fish migration (BCMOF, 1998). For various reasons, such as good step-pool morphology, these sites were given default classifications of fish-bearing because sufficient sampling was not undertaken to confirm non-fish bearing status. Further sampling of these streams will be conducted in 2008 in order to confirm the status of these streams. The 11 sites that were confirmed as being fish-bearing all had gradients between 10 and 20%.



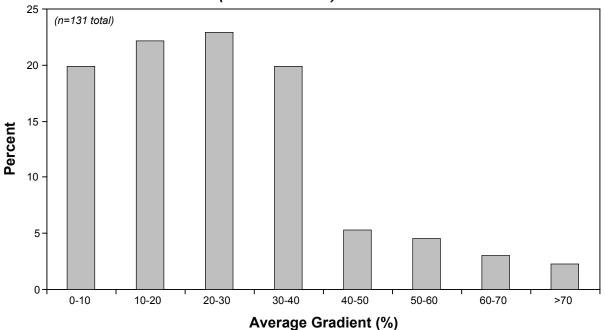


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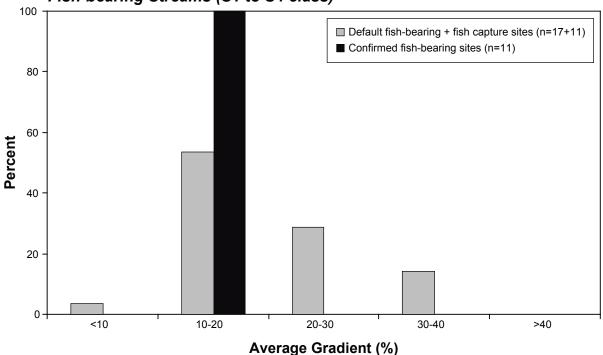
Average Channel Width and Bankfull Depth for Classified Streams Along the Proposed Access Road



All Classified Streams (S1 to S6 class)



Fish-bearing Streams (S1 to S4 class)



Average Gradient (%)



Rescan

FIGURE 3.1-3

Average Gradient for Classified Streams and Fish-bearing Streams Along the Proposed Access Road

Navigability

Streams with an average bankfull width greater than 3 m are considered to be potentially navigable and construction over them is governed by the Navigable Waters Protection Act and Regulations administered by Transport Canada. In the study area, 17 streams had bankfull widths greater than 3 m. At these sites additional photos were taken to assist in determining if any streams need to be assessed further for navigability. Appendix 3.1-5 presents additional information and photos of these sites.

Channel Morphology and Disturbance

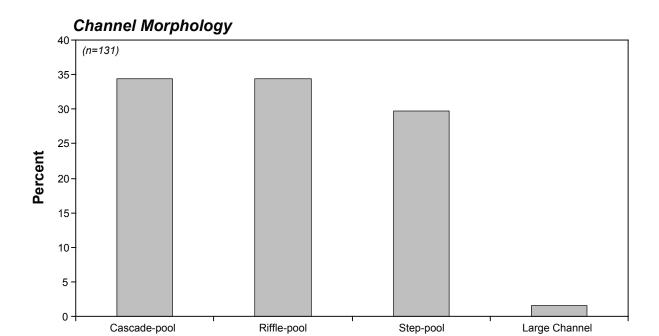
Channel morphology is determined by in part by gradient, substrate composition and stream discharge levels. Figure 3.1-4 illustrates the channel morphologies which occurred in the study area. Streams in the study area showed all morphologies, although only the two Mess Creek sites exhibited large channel morphology. The remaining 129 sites were distributed evenly between step-pool, cascade-pool and riffle-pool morphologies.

Stream substrate was classified according to size classes (*i.e.*, fines, gravel, cobble, *etc.*) and recorded as either dominant (most common) or sub-dominant (second most common). Figure 3.1-4 shows the distribution of substrate types in the assessed streams. Dominant and sub-dominant substrates showed similar patterns. Gravel was the most common substrate type, dominating 44% of sites. An additional 43% of sites had gravel as a sub-dominant substrate. Cobble was the next most common substrate type, with 32% of sites having it as the dominant substrate and 24% of sites as the sub-dominant substrate. Fines were the next most common substrate, followed by boulder. Only one site was recorded with bedrock as a sub-dominant substrate.

Channel disturbances can affect the quality and quantity of available fish habitat. Streams in the study area exhibited a wide range of disturbances (Figure 3.1-5). The four most common disturbances were "multiple channels/braids" occurring at 11 sites (8.4%), "eroded banks" at 9 sites (6.9%), "excessive small woody debris" at 8 sites (6%) and "abandoned channel" at 7 sites (5.3%). These indicators are consistent with flooding and the resulting increased current, which could cause major impacts to fish habitat during peak flow. Excessive small woody debris is also consistent with avalanche debris, which was common in streams that flowed down avalanche chutes.

Channel pattern is the path of the channel banks in relation to a straight line. Figure 3.1-5 shows the relative frequency of different channel patterns within the study area. Straight and sinuous patterns occurred at almost the same frequency at 49 (38%) and 48 (37%) sites respectively, while irregular wandering channels occurred at 26 sites (20%). Regular meanders, tortuous meanders and irregular meanders were rare, occurring at only 6 sites (4.7%).

Confinement is defined as the ability of the channel to migrate laterally within a valley between the surrounding slopes. The majority of sites (39.7%) were completely unconfined and able to frequently move laterally (Figure 3.1-6).



Dominant and Sub-dominant Substrates

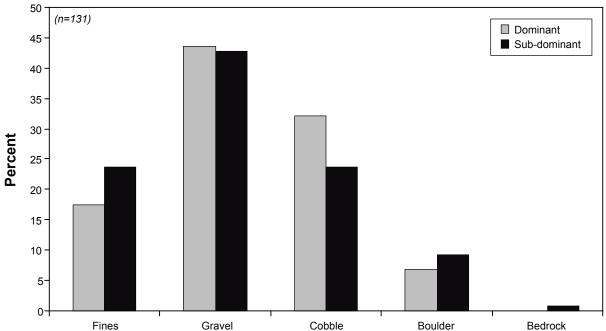
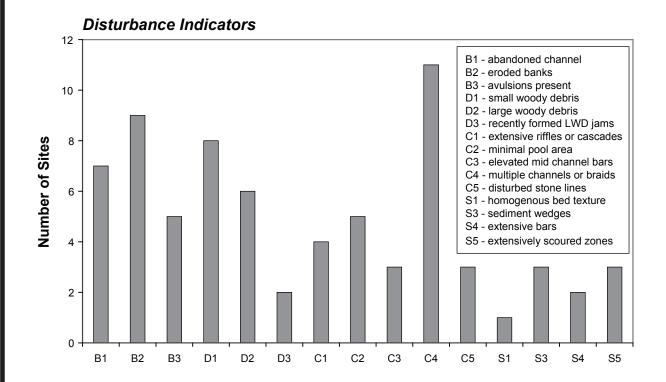


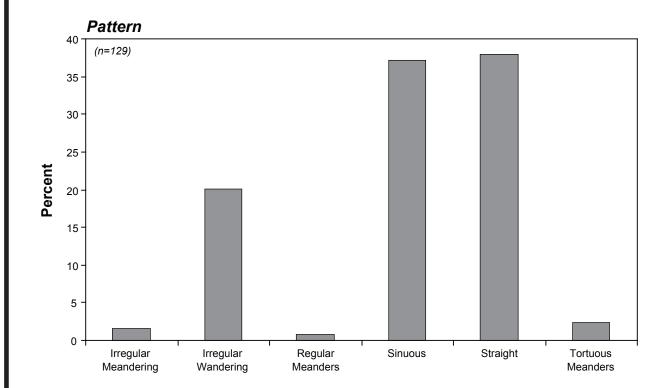
FIGURE 3.1-4



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Channel Morphology and Dominant/Sub-dominant Substrates for Classified Streams Along the Proposed Access Road

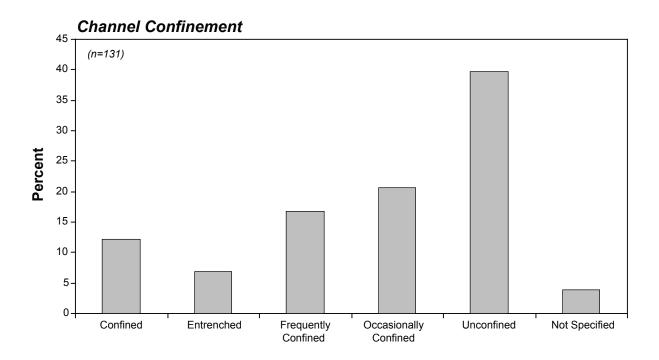


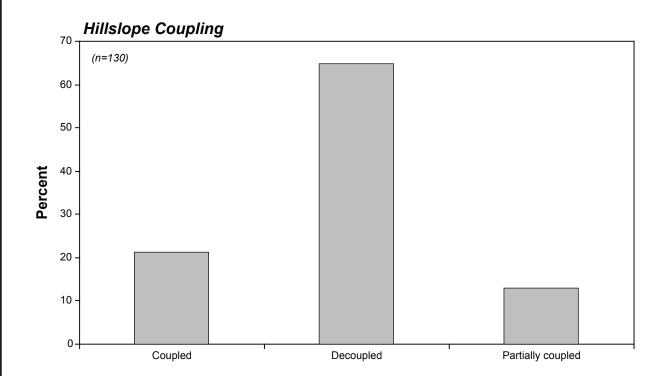


copper FOX

Channel Disturbance Indicators and Stream Pattern for Classified Streams Along the Proposed Access Road









Rescan

Some degree of confinement was exhibited at 49.6% of sites, with 16 sites (12%) being fully confined, 22 sites (17%) frequently confined and 27 sites (21%) occasionally confined. In addition, nine sites were entrenched (occurring in canyons), and five sites were recorded as "not applicable" as they were located on alluvial fans.

Hillslope coupling is the ability of mobilized sediment to enter the stream channel. Of the 131 sites, 85 (65%) were decoupled (Figure 3.1-6). The remaining sites were either coupled (28 sites (21%)) or partially coupled (17 sites (13%)). The strong dominance of decoupled sites means that the risk of sediment entering these streams from slope failures is very low, and indicates that much of the habitat along the proposed road route is stable.

Water Quality

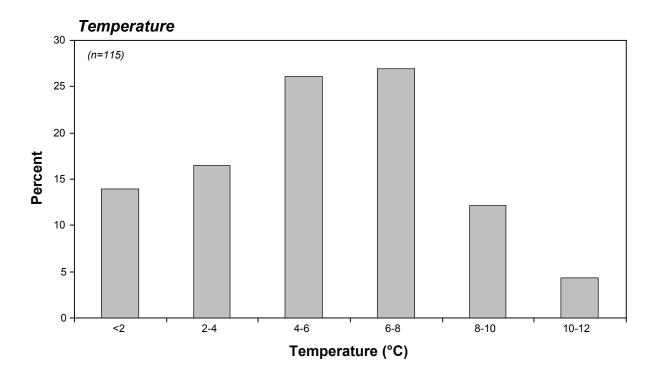
Figure 3.1-7 shows average stream temperature and conductivity in streams along the proposed road route. Temperatures ranged from 0°C to 12°C, most sites (53%) were between 4°C and 8°C. Sampling was conducted in August and October which is reflected in the wide range of temperatures, with the majority near the median. The study area showed a wide range of conductivity from 10 to 480 μ S/cm. Most sites (69%) ranged between 100 and 300 μ S/cm, although 20 sites (17%) had conductivity greater than 300 μ S/cm.

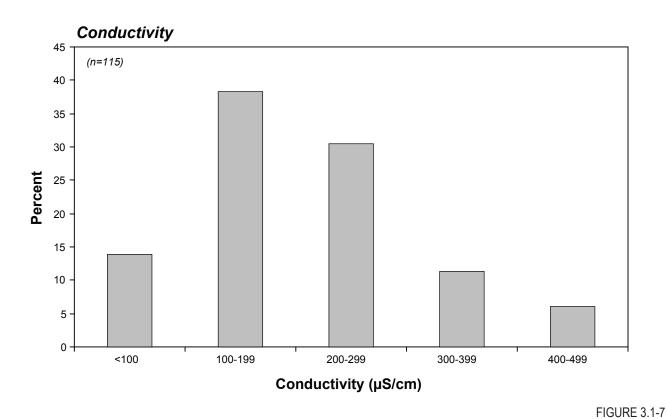
Fish Habitat Quality

Cover is a very important aspect of fish habitat because it provides protection from predators and from the elements, influencing habitat quality at every life stage. Cover was divided into seven types including small woody debris, large woody debris, boulder/cobble, undercut banks, deep pools, overhanging vegetation and in-stream vegetation. Cover was abundant at 87 sites (66%), followed by equal distributions of low and moderate cover, at 16% of sites for each (Figure 3.1-8). Only one site had no cover.

Cover type was recorded as dominant and sub-dominant. Sites could only have one type listed as dominant, but several cover types could be sub-dominant if they were present in relatively equal amounts. Figure 3.1-8 illustrates the occurrences of dominant and sub-dominant cover types. Overhanging vegetation occurred most frequently, dominating 64 sites (48%) and occurring as a sub-dominant cover type at 37 sites (17%). Small woody debris, large woody debris, boulder/cobble and undercut banks were all recorded frequently; however, deep pools and in-stream vegetation were rare as cover types.

Functional large woody debris (LWD) is that which is attached or embedded in the streambed and directly influences channel morphology by affecting sediment deposition. Functional LWD often creates habitat units such as step-pools, which provide refuge or resting habitat for fish. LWD abundance was distributed fairly evenly among the three classes with 49 sites (42%) having "few", 37 sites (32%) having "none" and 30 sites (26%) having "abundant" LWD (Figure 3.1-9). Of the 79 sites with functional LWD present, the distribution of LWD in the channel was even at 69 sites and clumped at 10 sites. Clumped distribution may be indicative of large floods or debris flows which deposit LWD in jams.

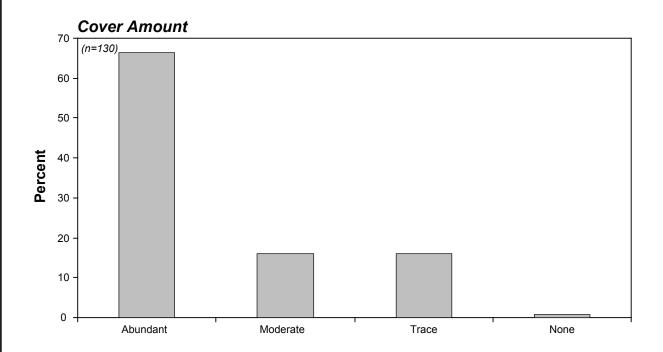


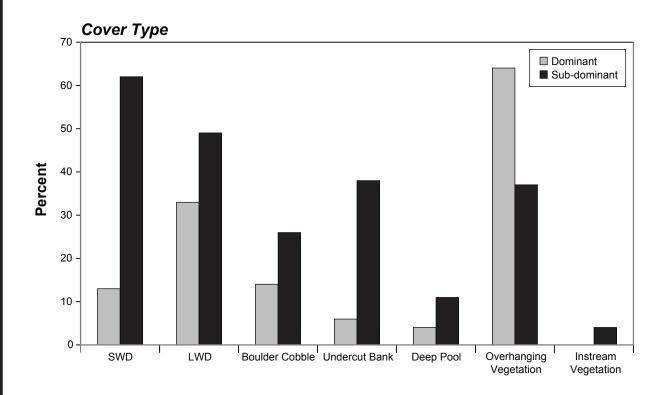




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Average Temperature and Conductivity for Classified Streams Along the Proposed Access Road

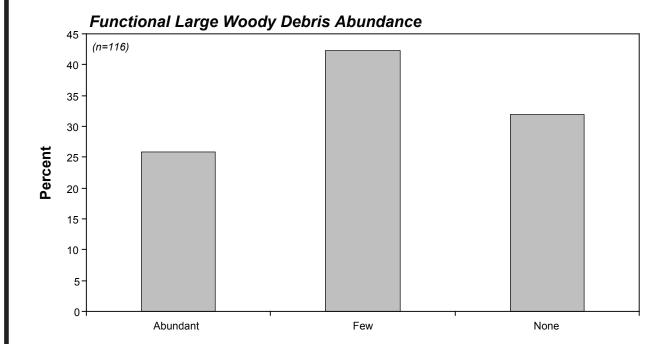


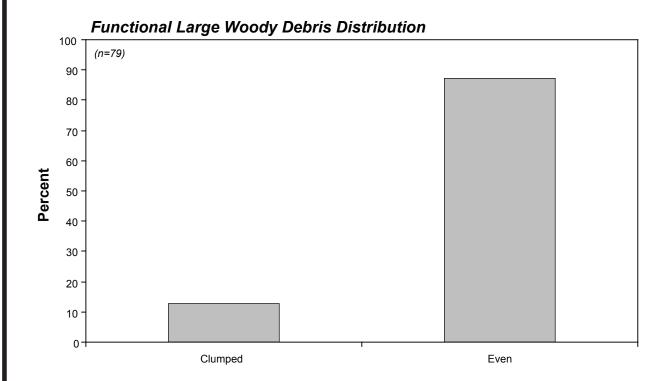


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Cover Type and Amount for Classified Streams Along the Proposed Access Road









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FIGURE 3.1-9

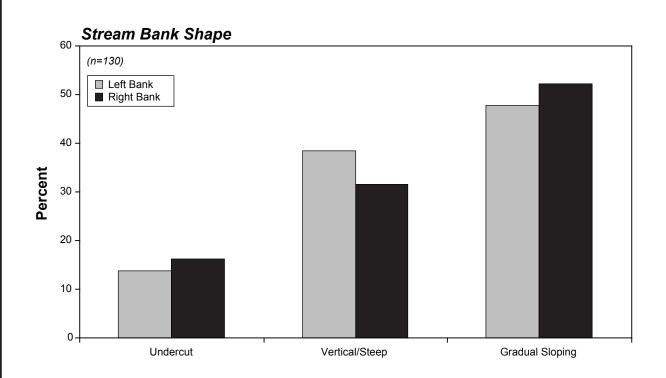
Stream bank shape directly affects the amount of cover, sedimentation and current velocity in streams. There are four categories for shape: undercut, vertical (45° to 90° gradient), sloping (less than 45° gradient) and overhanging (where the top of the bank extends out over a dry portion of the streambed). Left and right bank shapes were similar with approximately 50% of sites showing sloped banks, 35% showing vertical banks and 15% showing undercut banks (Figure 3.1-10). No streams contained overhanging banks. Bank texture is a description of the predominant substrate forming the streams banks. It is recorded as the one or two most dominant size classes of substrate, from fines to bedrock. Texture was also nearly the same for both banks, with the majority of streams (79%) having fines as the predominant size class and 39% having gravel (Figure 3.1-10). Only four sites had bedrock recorded as the predominant size class.

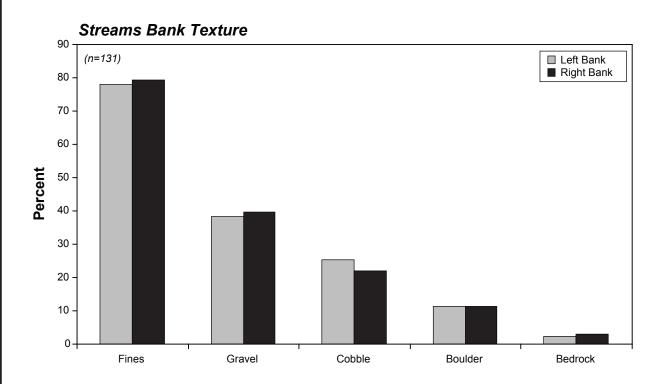
Riparian vegetation provides cover and shade to fish habitat, and may vary significantly depending on the type of vegetation and the season. Vegetation type was assessed on both banks of the streams. Coniferous forests occurred most frequently at approximately 62% of sites, with mixed forest as the next most common at 21% of sites (Figure 3.1-11). Shrub, deciduous forest and wetland surrounded the remaining sites. The stage of the riparian vegetation was also assessed and classified according to maturity and structure of the dominant cover. The majority of sites, approximately 70%, exhibited mature forest, while the remaining sites were distributed evenly among the remaining five categories (Figure 3.1-11).

3.1.2.2 Fish Community

Table 3.1-2 presents fish catch data, effort and CPUE for all fish sampling locations along the proposed road route. Because of the low number of samples, no summary statistics could be compiled on fish communities along the road route.

The fish community in the study area was assessed using electrofishing gear, and biological data (e.g., length, weight, age) were obtained from all fish caught. A total of 3,426 seconds of electrofishing effort was expended over 18 sites. Two rainbow trout (*Oncorhynchus mykiss*) were caught at sites 165 and 233, both juveniles. The fish from site 165 was 132 mm long, weighed 33.9 g and was aged to be two years old. The site 233 fish was 132 mm long and weighed 33.6 g. This fish could not be aged due to the similarity in length and weight to the site 165 fish; it was likely two years as well. The small number of fish is due to the lack of available fish habitat and the low sampling effort. Of the 197 sites only 28 were actually considered capable of supporting fish populations. Sampling was concentrated among sites where fish presence was questionable due to high gradients or poor habitat quality; whereas, sites known to provide fish habitat and sites with low gradients and good quality habitat were not sampled.

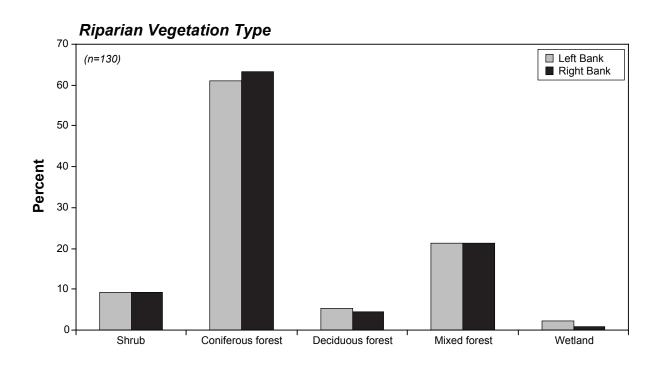




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Stream Bank Shape and Texture for Classified Streams Along the Proposed Access Road





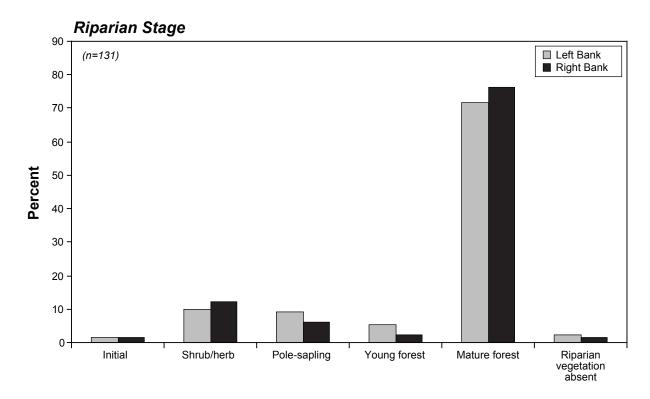


FIGURE 3.1-11





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Riparian Vegetation and Stage for Classified Streams Along the Proposed Access Road

Table 3.1-2
Electrofishing Effort, Catch and CPUE of Streams along the Proposed
Road Route

Site	ILP	Date	Temperature	Conductivity	Turbidity	EF Seconds	RB	CPUE (fish/100 sec)
105	1004	2007/08/25	6	180	С	229	NFC	0
139	1038	2007/08/21	7	250	С	157	NFC	0
141	1040	2007/08/21	-	-	С	31	NFC	0
143	1042	2007/08/21	-	-	С	87	NFC	0
153	1052	2007/08/21	6	210	С	31	NFC	0
159	1058	2007/08/14	5	378	С	366	NFC	0
161	1060	2007/08/14	5	424	С	198	NFC	0
165	1064	2007/08/14	6.5	387	С	219	1	0.46
194	1093	2007/08/25	5	180	С	86	NFC	0
195	1094	2007/08/26	5	170	С	664	NFC	0
204	1103	2007/08/26	6	190	С	160	NFC	0
207	1106	2007/08/27	6	120	С	180	NFC	0
211	1110	2007/08/27	6.5	150	С	65	NFC	0
233	1130	2007/08/27	6.5	150	С	260	1	0.38
237	1133	2007/08/27	5	100	С	98	NFC	0
239	1135	2007/08/27	5.5	110	С	18	NFC	0
300	2000	2007/08/10	4	50	С	540	NFC	0
312	1111	2007/08/27	6	160	С	37	NFC	0

RB = rainbow trout
CPUE = catch per unit effort
Dashes indicate no data available

3.2 Receiving Environment

3.2.1 Streams

3.2.1.1 Fish Habitat

Stream Setting

The receiving environment streams were separated into six distinct watersheds for data analysis and comparison. The watersheds are as follows: Hickman, Mess, Schaft, Stikine, Skeeter and Tailings. Mess Creek is a major tributary of the Stikine River and flows northwards from its headwaters near the Spectrum Range to its confluence with the Stikine River near Telegraph Creek. Schaft Creek is a tributary of Mess Creek, and flows northeast from its headwaters near Mount Hickman to its confluence with Mess Creek, which is located approximately 33 km south of the Stikine River. The Skeeter Creek watershed is located in a small valley between Schaft Creek and Mess Creek near the proposed Schaft Creek Project location. A height of land divides the watershed such that the northern half (which includes Skeeter Lake) flows north to Schaft Creek, while the southern half (which includes an unnamed lake nicknamed "Start Lake") flows south to Mess Creek. Hickman Creek is a tributary of Schaft Creek that is located south of the Schaft Creek Project location. The confluence of Hickman Creek and Schaft Creek is located approximately 0.5 km south of Schaft Creek camp. It is also an option for a tailings facility

(Tailings Option "B"). Tailings C Creek is a tributary of Schaft Creek that originates near Mount Hoole and flows east, joining Schaft Creek approximately 10 km downstream of the Schaft Creek camp. It is also an option for a tailings facility (Tailings Option "C").

The reference environment streams were separated into two distinct watersheds for data analysis and comparison. The watersheds are as follows: Walkout and Yehiniko. Walkout Creek arises on the Edziza Plateau and flows west, emptying into Mess Creek approximately 8 km downstream from Mess Lake. Yehiniko Creek is a tributary of the Stikine River, and is located west of Mess Creek in the next major watershed. The sampling site on Yehiniko Creek is located near the mouth.

Barriers to Fish Migration

A number of confirmed and suspected barriers to fish migration are present in the Schaft Creek Project area. These barriers limit the distribution of fish within the Mess Creek watershed. One of the most important barriers in the Project area is a moderate-sized waterfall on Mess Creek approximately 11 km upstream from the Stikine River (Plate 3.2-1). FishWizard (Freshwater Fisheries Society of BC, 2005) lists the waterfall as being 6 m high and a total block to salmon; however, the capture of a suspected Chinook salmon smolt (Plate 3.2-2) in Mess Lake has raised uncertainty about the passability of this barrier. It may be possible that the waterfall becomes passable during certain times of the year when flows are lower.

A second potential barrier is located on Mess Creek at the outlet of Mess Lake. This short canyon features fast, turbulent flow and may limit fish movement between the upstream and downstream areas of Mess Creek. It does not appear to be a total block to migration since fish are present on both sides of the barrier; however, it is not known if fish are able to freely pass through the canyon at all times of the year.

A cascade and waterfall are present in the lower reaches of Skeeter Creek, preventing fish migration into the Skeeter Valley and Skeeter Lake (Plate 3.2-3). The waterfall on this stream measures at least 30 m high and flows directly into a steep cascade that features several 1 to 2 m drops. Flow through this section is very turbulent, even at low flows. No fish have been captured upstream of this barrier, despite numerous sampling attempts in both stream and lake habitats, and overnight gillnet sets in Skeeter Lake. Habitat in the Skeeter Valley is exceptionally good for salmonids; thus, if fish were present in the upper reaches of the creek, it is expected that they would be numerous enough to capture during regular sampling events.

A cascade barrier is present on Schaft Creek approximately 10 km north of the Project site (Plate 3.2-4). This cascade features numerous drops of 1 to 2 m and turbulent flow. No fish have been captured in wetlands or streams upstream of this barrier (including at SC-6, which is located just upstream of the cascade) during numerous sampling attempts. Continued sampling above this feature will aid in confirming the status of the upstream reach of Schaft Creek; however, it is most likely not fish-bearing.

A potential fish barrier was located on Tailings C Creek in 2007. This barrier consists of a bedrock chute, approximately 80 m long, with numerous 1 to 2 m drops (Plate 3.2-5). Flow is fast and turbulent through this stream section. The bankfull width of this area was much wider

than the wetted width at the time of the survey, and it was obvious that water occasionally flows around this chute. Fish density on this stream, even below the barrier, is low due to poor habitat and cold water temperature, and fish sampling has only been conducted at two locations above this reach twice in 2007. Therefore, it is not possible at this time to confirm that this chute acts as a true barrier to fish migration. Other factors, which include habitat quality and water temperature, may also play a role in limiting fish distribution in this watershed. Continued sampling in 2008 will aid in confirming the fish-bearing status of the upper reaches of Tailings C Creek.

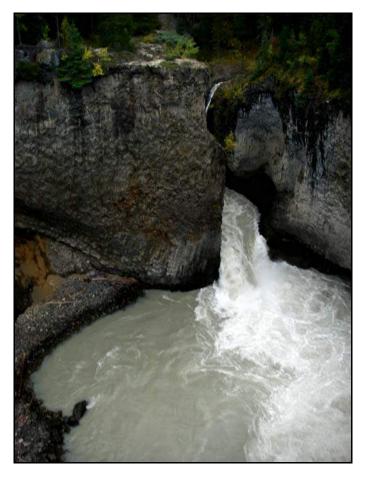


Plate 3.2-1. 6 m waterfall on Mess Creek, looking upstream.



Plate 3.2-2. Suspected Chinook salmon smolt captured in Mess Lake, July 2007.



Plate 3.2-3. 30 m waterfall on Skeeter Creek near the outlet to Schaft Creek.



Plate 3.2-4. Cascade barrier on Schaft Creek, near the confluence with Tailings C Creek.

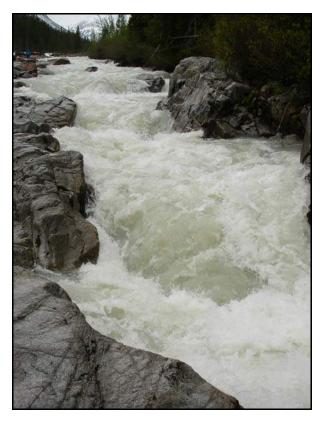


Plate 3.2-5. Possible cascade barrier on Tailings C Creek.

Stream Channel Measurements

An overview fish habitat assessment was conducted at 23 receiving environment reaches (39 sites) within the Hickman, Mess, Schaft, Skeeter, Tailings C Creeks and Stikine River watersheds in June and September 2007. In addition, overview fish habitat assessments were conducted at two reference environment reaches (two sites) within Walkout and Yehiniko Creek watersheds in June and September 2007. Overview fish habitat assessments were conducted in accordance with the *Reconnaissance 1:20,000 Fish and Fish Habitat Inventory Protocol* (RISC, 2001) and the *Reconnaissance 1:20,000 Fish and Fish Habitat Inventory: Site Card Field Guide* (RISC, 1999). Site and stream habitat details are presented in the form of completed site cards in Appendix 3.2-1.

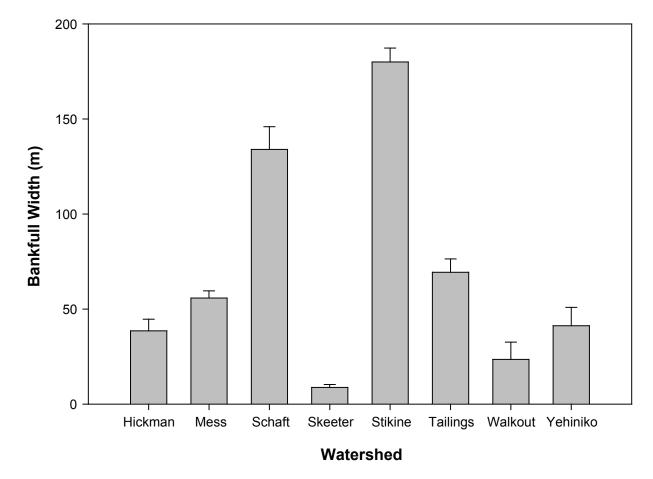
Figures 3.2-1 to 3.2-3 and Figures 3.2-4a, 3.2-4b presents a summary of stream channel measurements for each watershed. Average bankfull width for streams within the receiving environment watersheds varied significantly (ANOVA, F $_{7,155} = 64.46$, P < 0.001) between watersheds. The Skeeter Watershed had the lowest average bankfull width. Hickman and Mess watersheds were similar in average bankfull width and were significantly larger than Skeeter Watershed. The Schaft and Stikine watersheds were similar in average bankfull width and had the highest average bankfull widths compared to the other watersheds. The reference watersheds had average bankfull widths similar to the Hickman Watershed.

Average bankfull depths for streams within the receiving environment watersheds were relatively similar throughout all of the watersheds, except for the Stikine Watershed, which was significantly (ANOVA, F $_{7,71}$ = 25.60, P < 0.001) larger than the other watersheds. Reference environment watersheds had average bankfull depths similar to the receiving environment watersheds, except the Stikine Watershed.

The average gradient for streams within the receiving environment watersheds ranged from 0.3% to 8.7% and were not significantly different (ANOVA, F $_{7,47}$ = 1.89, P = 0.092). Average gradients for streams within the receiving environment watersheds were low and relatively similar. However, the Skeeter Watershed had a higher gradient (8.7%) than the other receiving environment watersheds. Reference environment watersheds had average gradients similar to the receiving environment watersheds.

Channel Morphology and Disturbance

Figures 3.2-5a and 3.2-5b shows the frequency of stream channel morphologies encountered by watershed. Channel morphology is determined by gradient, substrate composition and discharge. Large channels typically display the lowest gradient (less than 0.5%) with consistent depth and fine bed material. All morphology types were observed within receiving environment watersheds. Step-pool morphology was only present within the Skeeter Watershed. Step-pool morphology is typically found where channel gradients exceed 20%, which was present at one site within the Skeeter Watershed and not present within other receiving environment watersheds. The majority of streams possessed riffle-pool morphology, followed by cascade-pool morphology in each watershed. Reference environment watersheds were dominated by cascade-pool morphology. Riffle-pool morphology was not present in reference environment watersheds.



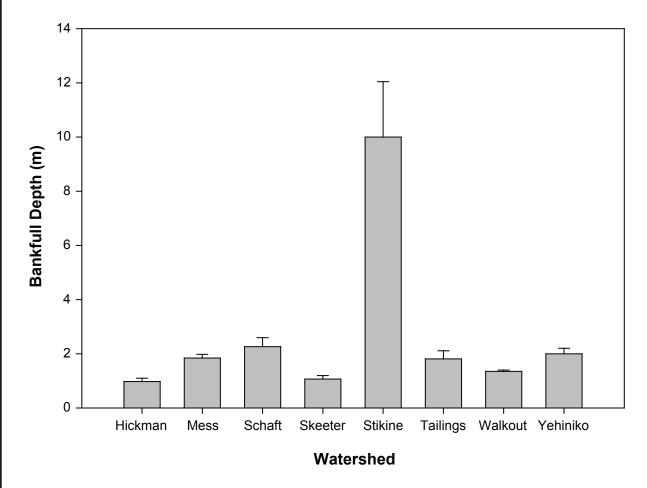
Note: Error bars represent standard error of the mean.



Rescan

Rescan

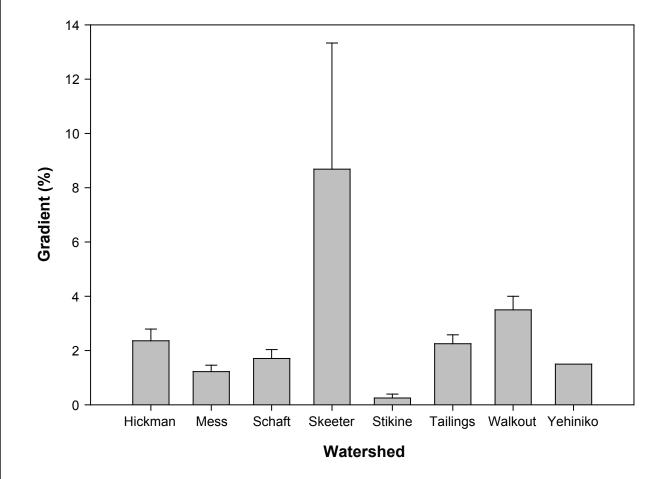
Mean Bankfull Widths of Streams in the Receiving and Reference Environment Watersheds, 2007



Note: Error bars represent standard error of the mean.



Mean Bankfull Depths of Streams in the Receiving and Reference Environment Watersheds, 2007

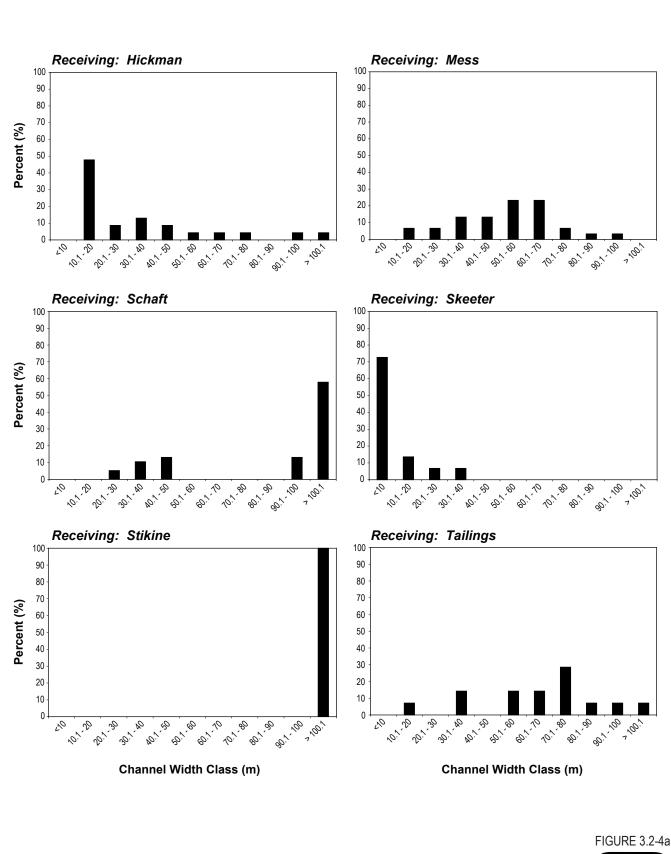


Note: Error bars represent standard error of the mean.



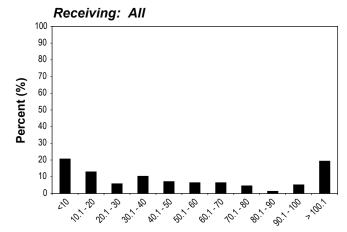
Rescan

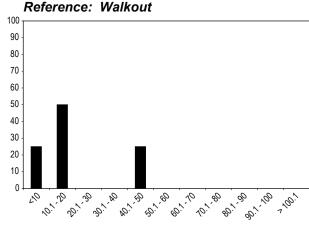
Mean Channel Gradients of Streams in the Receiving and Reference Environment Watersheds, 2007

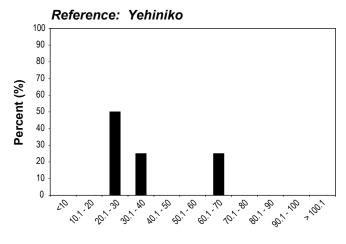


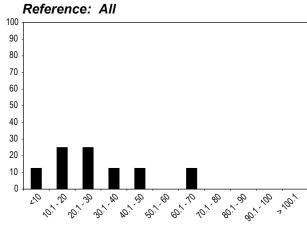
copper FOX metals inc. Summary of Bankfull Widths for all Streams in the Receiving and Reference Environment Watersheds, 2007











Channel Width Class (m)

Channel Width Class (m)



Summary of Bankfull Widths for all Streams in the Receiving and Reference Environment Watersheds, 2007



Cascade-pool streams often have larger substrate classes than riffle-pool streams due to steeper gradient. Of the three primary morphology types, riffle-pool channels have the highest likelihood for supporting stream resident salmonids. In gravel bed channels, riffle-pool morphology generally meets all the life-history requirements for spawning, rearing, overwintering and migration habitat. Cascade-pool reaches with cobble, gravel and boulder substrates provided rearing and overwintering habitat for juvenile salmonids. Spawning habitat in cascade-pool reaches is generally not abundant due to the predominance of cobble substrates. In cascade-pool reaches spawning habitat is primarily restricted to small patches of gravel and sand in pool tailout areas.

Figures 3.2-6a and 3.2-6b show a dominant channel substrate histogram for all streams by watershed. All dominant substrate types were observed within receiving environment watersheds. Dominant bedrock substrate was only present within the Skeeter Watershed. The majority of streams possessed cobble, followed by gravel as the dominant substrate in each receiving environment watershed. Reference environment watersheds only possessed cobble as the dominant substrate.

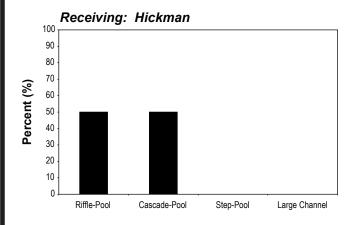
All sub-dominant substrate types were also observed within receiving environment watersheds (Figures 3.2-7a and 3.2-7b). Sub-dominant bedrock substrate was only present within the Tailings C Watershed. The majority of streams had gravel as a sub-dominant substrate in each receiving environment watershed. Reference environment watersheds possessed boulders (*i.e.*, Walkout Watershed) and gravel (*i.e.*, Yehiniko Watershed) as the sub-dominant substrate.

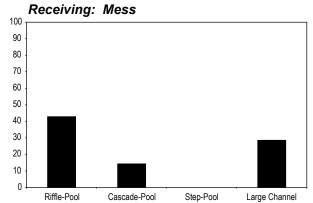
Channel disturbances from sediment inputs, obstructions and erosion can affect fish habitat quality. Figures 3.2-8a and 3.2-8b show a channel disturbance histogram for all streams by watershed. Channel disturbances were pooled into four categories: banks, large woody debris (LWD), morphology and sedimentation. Within each category the following disturbances could be present:

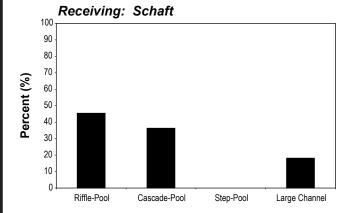
- Banks abandoned channels, eroding banks, avulsions;
- LWD small woody debris, large woody debris, recently formed debris jams;
- Morphology extensive riffle or cascades, minimal pool area, elevated mid-channel bars, multiple channels or braids, disturbed stone-lines; and
- Sedimentation homogeneous bed texture, sediment fingers, sediment wedges, extensive bars, extensively scoured zones.

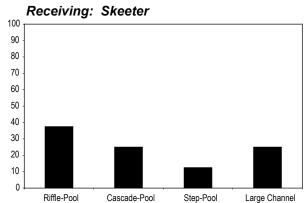
Morphology was the most frequently recorded disturbance category in the receiving environment watersheds, except the Mess Watershed. Bank disturbances were the second most frequently recorded disturbance category in the receiving environment watersheds. Sedimentation was the least recorded disturbance category in the receiving environment watersheds. Bank disturbances were the most frequently recorded disturbance category in the reference watersheds.

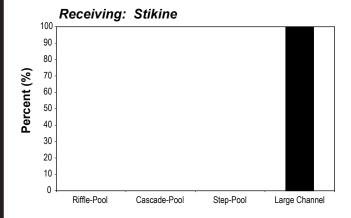
Channel pattern describes the degree to which the channel deviates from a straight line. Figures 3.2-9a and 3.2-9b show channel pattern frequency for all streams by watershed. All channel pattern types were observed within receiving environment watersheds.

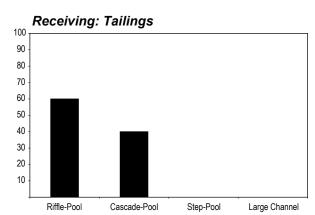












Channel Morphology Class

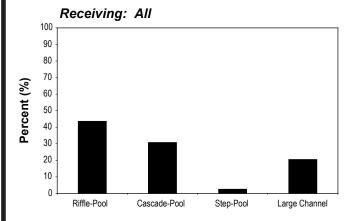
Channel Morphology Class

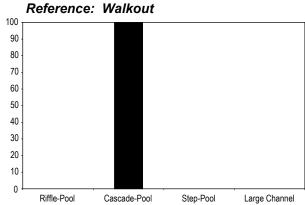


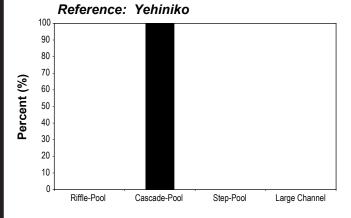
Summary of Channel Morphology Classifications for all Streams in the Receiving and Reference Environment Watersheds, 2007 FIGURE 3.2-5a











Reference: All

100
90
80
70
60
50
40
30
20
10
Riffle-Pool Cascade-Pool Step-Pool Large Channel

Channel Morphology Class

Channel Morphology Class

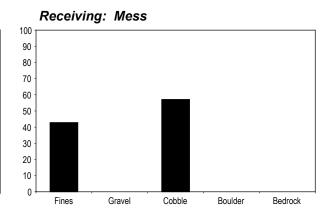


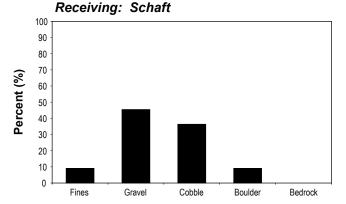
Summary of Channel Morphology Classifications for all Streams in the Receiving and Reference Environment Watersheds, 2007 FIGURE 3.2-5b

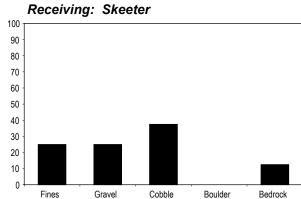


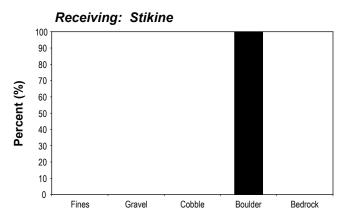


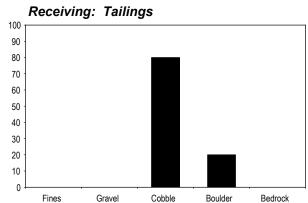
Receiving: Hickman 100 90 80 70 Percent (%) 60 50 40 30 20 10 0 Fines Gravel Cobble Boulder Bedrock











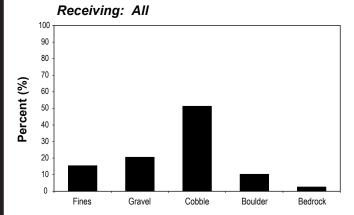
Dominant Channel Substrate Class

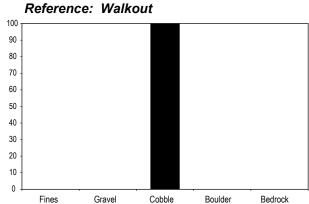
Dominant Channel Substrate Class

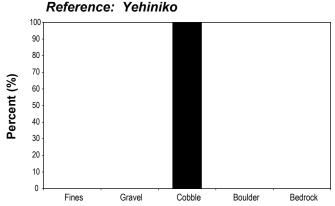


Summary of Dominant Substrates for all Streams in the Receiving and Reference Environment Watersheds, 2007









80 -70 -60 -50 -40 -30 -20 -10 -0

Gravel

Reference: All

Fines

90

Dominant Channel Substrate Class

Dominant Channel Substrate Class

Cobble

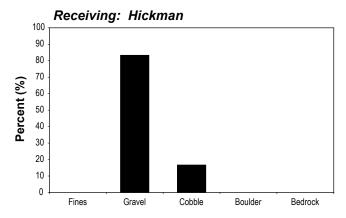
Boulder

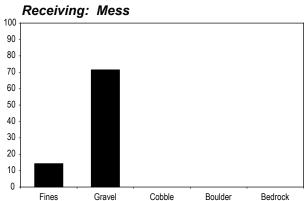


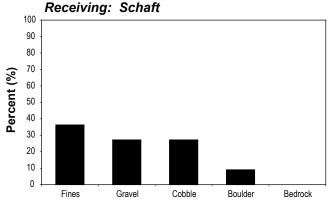
Summary of Dominant Substrates for all Streams in the Receiving and Reference Environment Watersheds, 2007

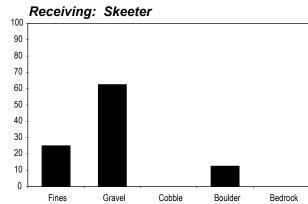


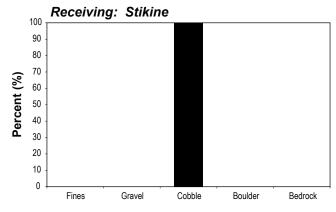
Bedrock

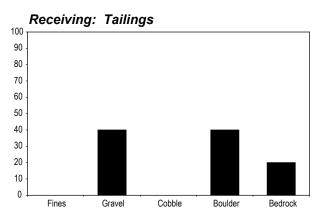












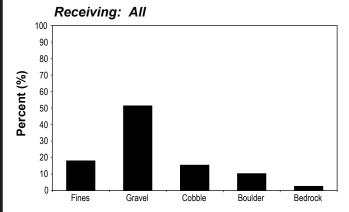
Sub-dominant Channel Substrate Class

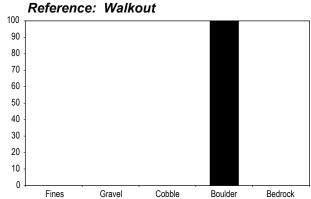
Sub-dominant Channel Substrate Class

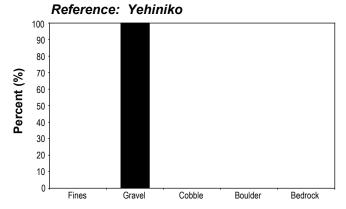


Summary of Sub-Dominant Substrates for all Streams in the Receiving and Reference Environment Watersheds, 2007

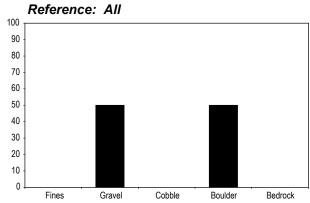










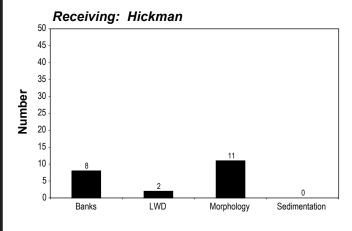


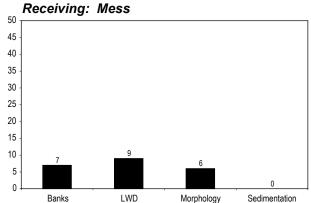
Sub-dominant Channel Substrate Class

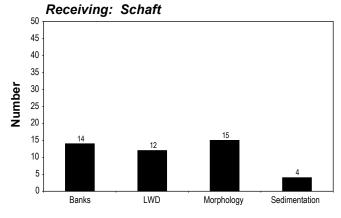


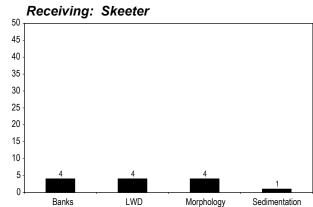
Summary of Sub-Dominant Substrates for all Streams in the Receiving and Reference Environment Watersheds, 2007

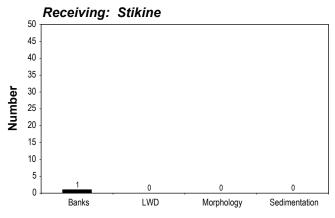




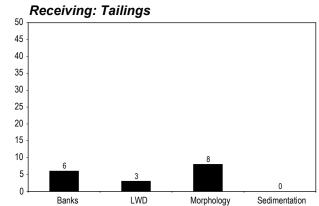








Channel Disturbance Category

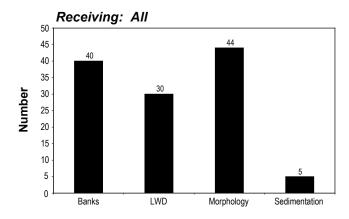


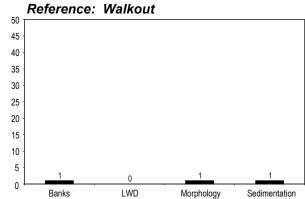
Channel Disturbance Category

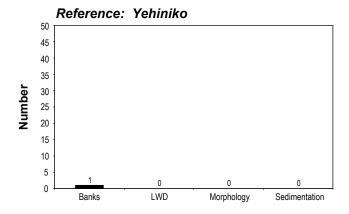


Summary of Channel Disturbance Categories for all Streams in the Receiving and Reference Environment Watersheds, 2007









Reference: All

50
45
40
35
30
25
20
15
10
5
0
Banks
LWD
Morphology
Sedimentation

Channel Disturbance Category

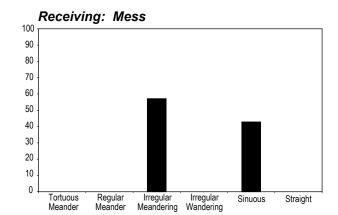
Channel Disturbance Category

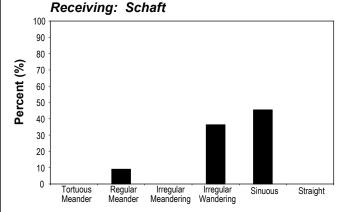


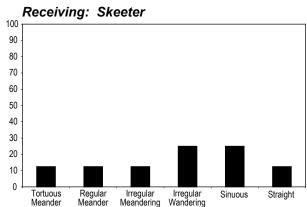
Summary of Channel Disturbance Categories for all Streams in the Receiving and Reference Environment Watersheds, 2007

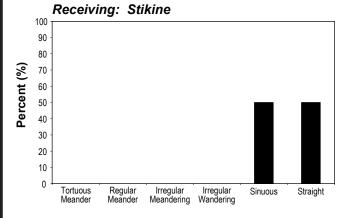


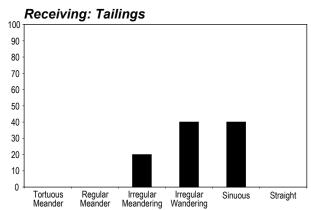
Receiving: Hickman 100 90 80 Percent (%) 70 60 50 40 30 20 10 Tortuous Regular Irregular Irregular Straight Sinuous Meander Meander Meandering Wandering











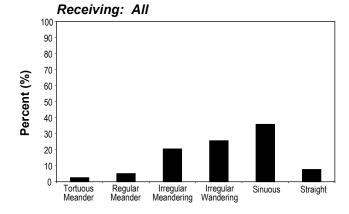
Channel Pattern Classification

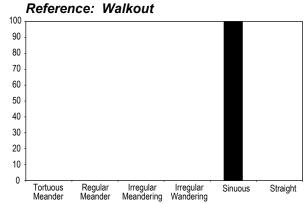
Channel Pattern Classification

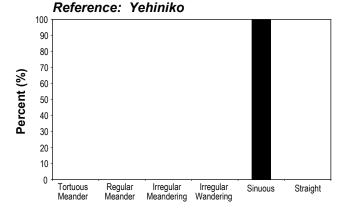


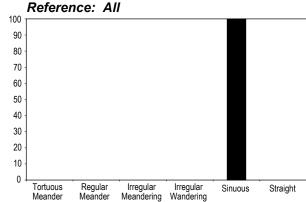
Summary of Channel Pattern Classifications for all Streams in the Receiving and Reference Environment Watersheds, 2007











Channel Pattern Classification

Channel Pattern Classification



Summary of Channel Pattern Classifications for all Streams in the Receiving and Reference Environment Watersheds, 2007



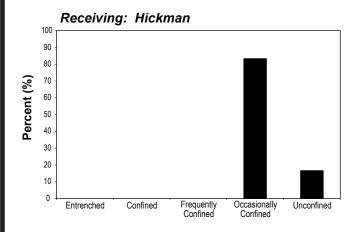
The majority of streams possessed a sinuous channel pattern as the dominant pattern in each receiving environment watershed; however, Hickman and Mess watersheds were dominated by an irregular meandering channel pattern. Tortuous meanders were only present within the Skeeter Watershed. Reference environment watersheds were dominated by a sinuous channel pattern similar to that of the receiving environment watersheds.

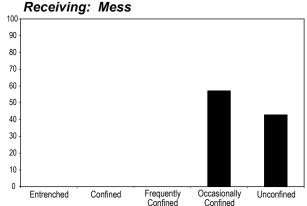
Confinement refers to the ability of a channel to migrate laterally between adjacent slopes. Unconfined channels are not limited by valley walls and can migrate across adjacent flat ground, whereas confined channels are constrained by valley walls and can not migrate. Figures 3.2-10a and 3.2-10b show a channel confinement histogram for all streams by watershed. All channel confinement types were observed within receiving environment watersheds. The majority of streams in each receiving environment watershed possessed an occasionally confined channel. Entrenched reaches were only present within the Skeeter Watershed. The reference environment watersheds were dominated by unconfined channels, thus, differing from the receiving environment watersheds.

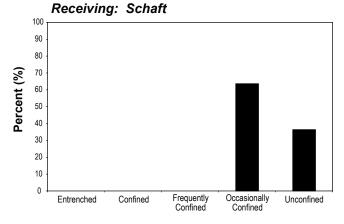
Coupling describes the likelihood that sediment could enter stream channels from adjacent hillslopes, and is rated as one of the following: coupled (high likelihood that sediment could enter the stream channel), partially coupled (moderate likelihood) or decoupled (low likelihood). Figures 3.2-11a and 3.2-11b show a hillside coupling histogram for all streams by watershed. All channel coupling types were observed within receiving environment watersheds. The majority of streams were decoupled from the hillside, including those in the reference watersheds.

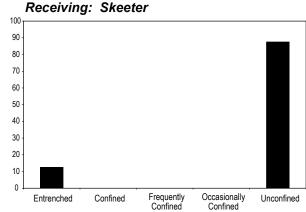
Water Quality Parameters

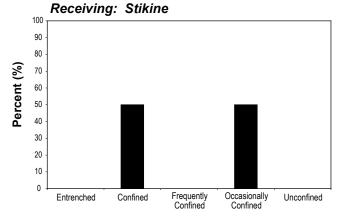
Table 3.2-2 shows a summary of water quality characteristics for all streams by watershed. Average June water temperatures varied between 4.3 and 8.0°C within receiving environment watersheds. The Stikine Watershed had the highest average temperature of 8.0°C. Reference environment watersheds possessed average water temperatures similar to those of receiving environment watersheds. Average water temperatures were slightly cooler in September than June for receiving and reference environment watersheds, which is to be expected due to cooling air temperatures. Average June conductivity varied between 40.0 and 140.0 µs/cm within receiving environment watersheds. Tailings C Watershed had the lowest average conductivity, while Skeeter Watershed had the highest average conductivity. Reference environment watersheds possessed lower average conductivities than those of receiving environment watersheds. Average conductivities were lower in September than in June for receiving and reference environment watersheds. Average stream pH ranged from relatively neutral (i.e., 7.07) to slightly alkaline (i.e., 7.90) within receiving environment watersheds. Reference environment watersheds possessed a similar range of average pH to receiving environment watersheds.

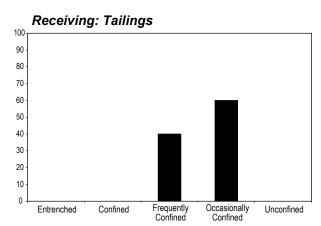












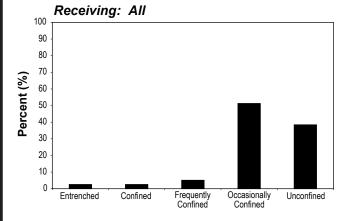
Channel Confinement Classification

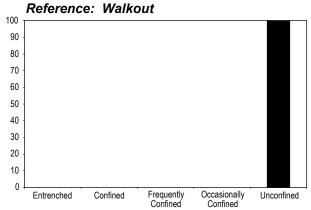
Channel Confinement Classification

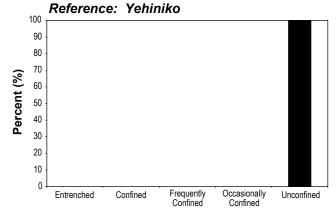


Summary of Channel Confinement Classifications for all Streams in the Receiving and Reference Environment Watersheds, 2007 Rescan

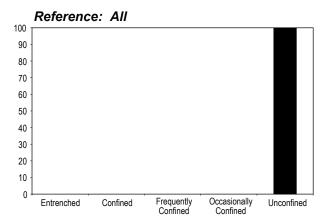
Rescan







Channel Confinement Classification

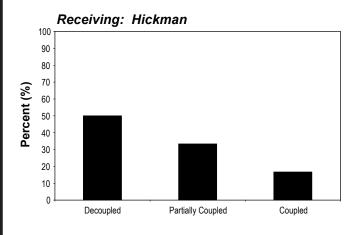


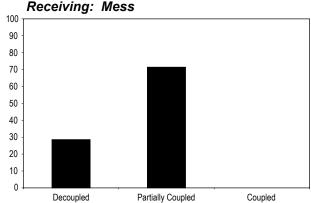
Channel Confinement Classification

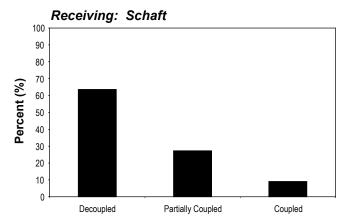


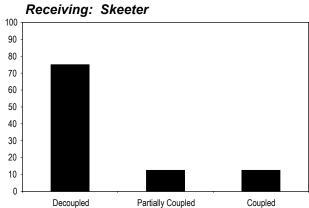
Summary of Channel Confinement Classifications for all Streams in the Receiving and Reference Environment Watersheds, 2007

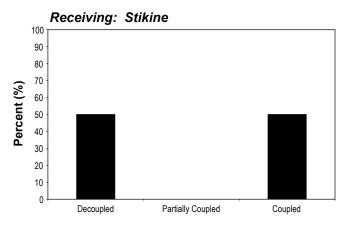


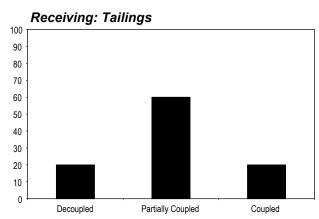










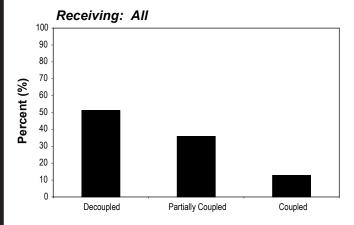


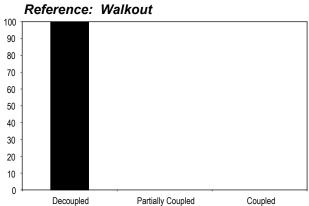
Channel Coupling Classification

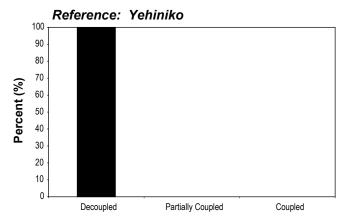
Channel Coupling Classification

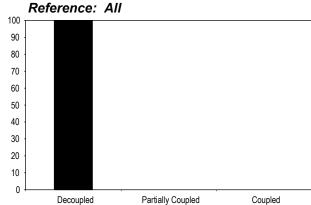


Summary of Hillside Coupling Classifications for all Streams in the Receiving and Reference Environment Watersheds, 2007 Rescan TECO









Channel Coupling Classification

Channel Coupling Classification



Summary of Hillside Coupling Classifications for all Streams in the Receiving and Reference Environment Watersheds, 2007



Table 3.2-2
Summary of Water Quality Characteristics for all Streams in the Receiving and Reference Environment Watersheds, 2007

			June			•	•	v		
Watershed	Total Number of Sites	Average Temperature (°C)	SE	n	Average Conductivity (µS/cm)	SE	n	Average pH	SE	n
Receiving Environment										
Hickman	6	4.3	0.33	3	120.0	0.00	3	7.47	0.17	3
Mess	7	6.5	1.19	4	135.0	25.98	4	7.30	0.11	4
Schaft	11	5.2	0.92	5	96.0	8.72	5	7.36	0.05	5
Skeeter	8	6.5	2.47	4	140.0	20.41	4	7.30	0.09	4
Stikine	2	8.0	0.00	2	100.0	0.00	2	7.90	0.00	2
Tailings	5	4.3	0.33	3	40.0	5.77	3	7.07	0.09	3
All (Receiving)	39	5.7	0.57	21	103.5	9.38	21	7.36	0.06	2
Reference Environment										
Walkout	1	5.0	-	1	50.0	-	1	7.00	-	•
Yehiniko	1	6.0	-	1	90.0	-	1	7.50	-	1
All (Reference)	2	5.5	0.50	2	70.0	20.00	2	7.25	0.25	2
		Se	eptemb	er		-		·		
Receiving Environment										
Hickman	6	4.3	1.20	3	60.0	0.00	3	-	-	
Mess	7	3.3	0.88	3	136.7	38.44	3	-	-	-
Schaft	11	4.2	0.75	6	58.3	4.01	6	-	-	
Skeeter	8	6.0	1.00	4	127.0	13.13	4	7.90	-	•
Stikine	2	-	-	-	-	-	-	-	-	
Tailings	5	2.0	1.00	2	15.0	5.00	2	-	-	
All (Receiving)	39	4.2	0.48	18	82.1	11.76	18	7.90	-	•
Reference Environment										
Walkout	1	-	-	-	-	-	-	-	-	-
Yehiniko	1	-	-	-	-	-	-	-	-	
All (Reference)	2	-	-	-	-	-	-	-	-	

Dashes indicate no data available

Fish Habitat Characteristics

Functional LWD abundance, type, and distribution influence fish habitat quality for all life stages. Figures 3.2-12a and 3.2-12b show a histogram of functional LWD abundance for all streams by watershed. Figures 3.2-13a and 3.2-13b show a histogram of functional LWD distribution for all streams by watershed. The majority of streams possessed "none" to "few" pieces of functional LWD within receiving environment watersheds. Functional LWD distribution varied depending upon the receiving environment watershed. Functional LWD abundance and distribution in the Reference environment watersheds was similar to that in the receiving environment watersheds.

The stream bank is that part of the channel which contains the flow, and stream banks influence fish habitat quality by providing cover and regulating stream sedimentation. Stream banks are

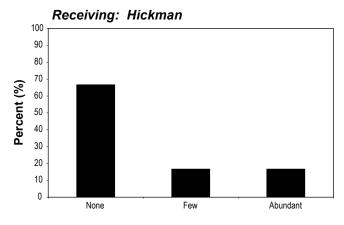
classified by shape: undercut (bank extends out over the wetted channel, overhanging (bank extends out over the non-wetted part of the channel), vertical (45° to 90° gradient away from the channel), and sloping (less than 45° gradient away from the channel). Of the four types, undercut banks generally provide the greatest fish habitat and cover. Figures 3.2-14a and 3.2-14b present a histogram of bank shape for all streams by watershed. No streams in the study area had overhanging banks. The majority of streams within receiving environment watersheds possessed sloping or vertical banks. Some undercut banks were present in the Hickman and Schaft watersheds. Similar to receiving environment watersheds, the Reference environment streams were dominated by vertical banks.

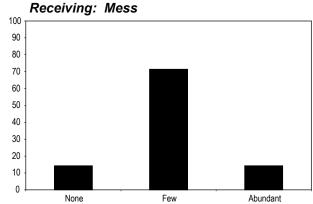
Bank texture refers to the substrate materials that compose the banks of the stream, and is an indicator of stream power and erosional processes. Figures 3.2.-15a and 3.2-15b present a stream bank texture histogram for all streams by watershed. Fines were the most frequently recorded bank texture in the receiving environment watersheds, except in Tailings C Watershed where cobble was the most commonly recorded bank texture. Gravel was the second most frequently recorded bank texture in the receiving environment watersheds. Bedrock was the least recorded bank texture in the receiving environment watersheds. In the Reference watersheds, cobble was the most frequently recorded bank texture.

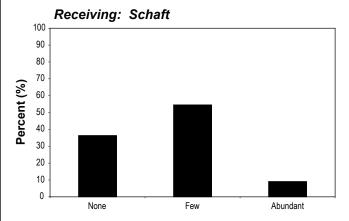
Figures 3.2-16a and 3.2-16b show a histogram of total cover abundance for all streams by watershed. The majority of receiving environment watersheds possessed a trace amount of cover, except in the Skeeter Watershed where total cover was abundant. The reference environment watersheds possessed trace to moderate amounts of total cover.

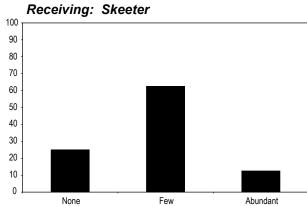
Figures 3.2-17a and 3.2-17b show the frequency of dominant cover types recorded for all streams by watershed. Cover was divided into seven types: small woody debris (SWD), LWD, boulders, undercut banks, deep pools, overhanging vegetation and instream vegetation. Overhanging vegetation was the dominant cover type for all receiving environment watersheds except the Schaft Watershed, where LWD was dominant. Deep pools and instream vegetation were the least dominant cover types across all receiving environment watersheds. Reference environment watersheds were similar to receiving environment watersheds with overhanging vegetation and LWD dominating the cover types. Figures 3.2-18a and 3.2-18b show the frequency of sub-dominant cover types recorded for all streams by watershed. LWD and SWD were the most prevalent sub-dominant cover types in all receiving environment watersheds. Sub-dominant cover in the Reference environment watersheds varied between watersheds.

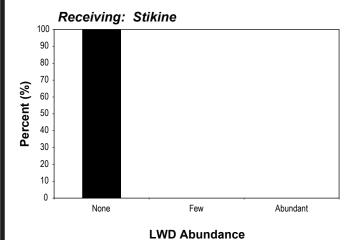
Riparian vegetation serves many functions as a component of fish habitat, including providing cover and shade, large and small organic debris and food. Figures 3.2-19a and 3.2-19b show the dominant riparian vegetation recorded for all streams by watershed. Riparian vegetation was divided into seven categories: none, grass, shrub, deciduous forest, coniferous forest, mixed forest and wetland. Mixed forest was the dominant riparian vegetation type in all receiving environment watersheds except Stikine and Tailings C watersheds where deciduous forest and coniferous forest dominated the riparian vegetation. Grass and "none" were the least recorded riparian types among all receiving environment watersheds. The dominant riparian vegetation types in the Reference environment watersheds were mixed and deciduous forests.

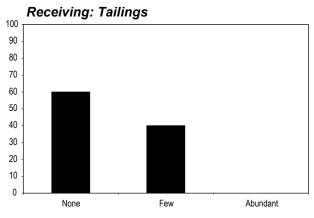








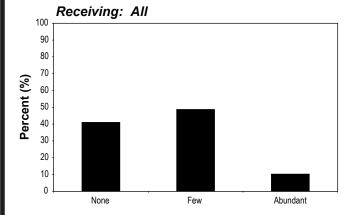


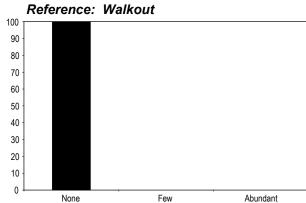


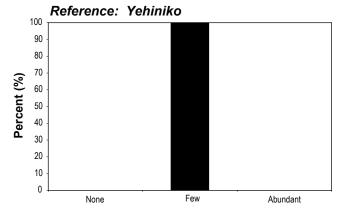
LWD Abundance

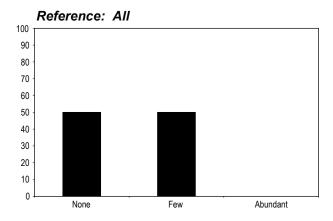
COPPET FOX metals inc.

Summary of Functional LWD Abundance for all Streams in the Receiving and Reference Environment Watersheds, 2007 Rescan Rescan









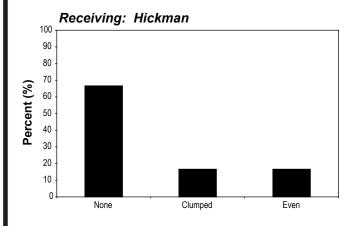
LWD Abundance

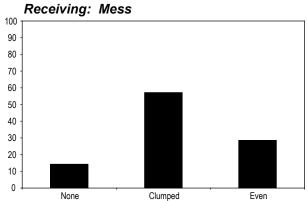
LWD Abundance

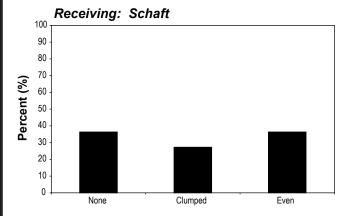


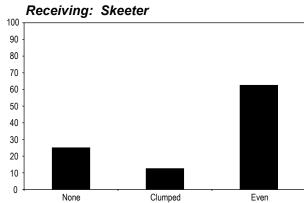
Summary of Functional LWD Abundance for all Streams in the Receiving and Reference Environment Watersheds, 2007

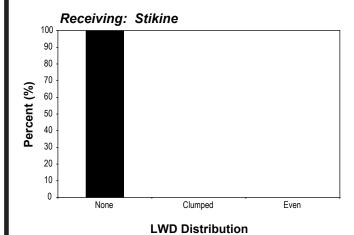


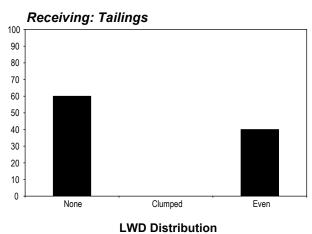










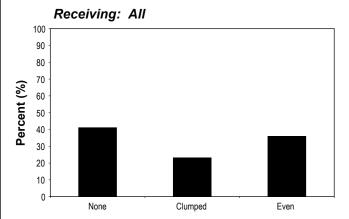


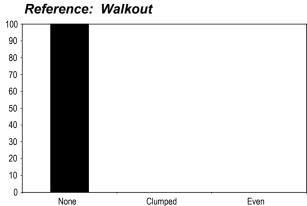
COPPER FOX

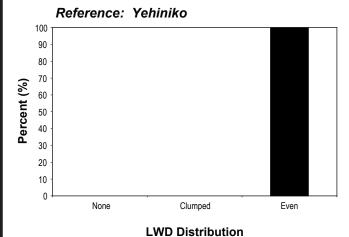
Summary of Functional LWD Distribution for all Streams in the Receiving and Reference Environment Watersheds, 2007 FIGURE 3.2-13a

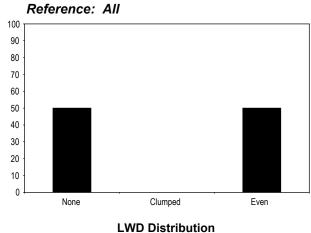










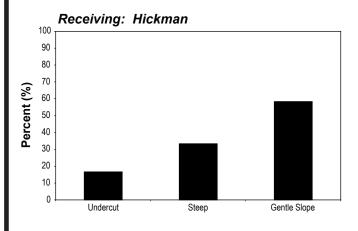


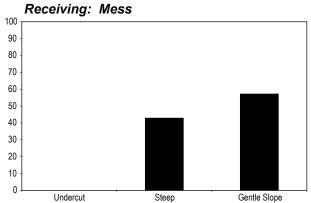
COPPER FOX metals inc.

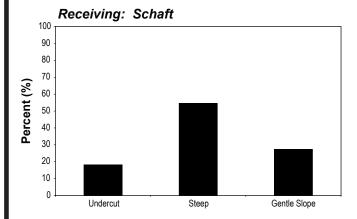
Summary of Functional LWD Distribution for all Streams in the Receiving and Reference Environment Watersheds, 2007 FIGURE 3.2-13b

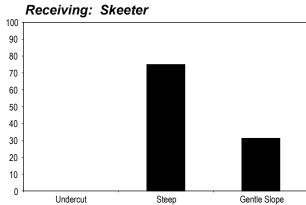


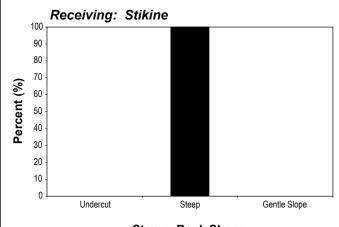


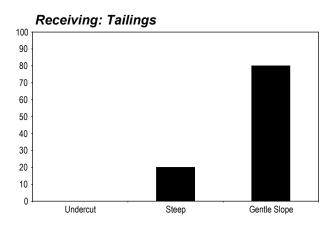












Stream Bank Shape

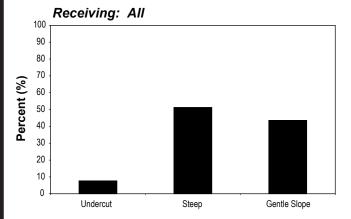
Stream Bank Shape



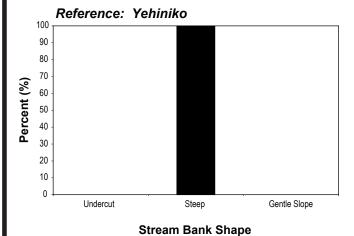
Summary of Bank Shape for all Streams in the Receiving and Reference Environment Watersheds, 2007 FIGURE 3.2-14a

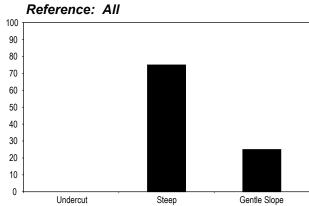












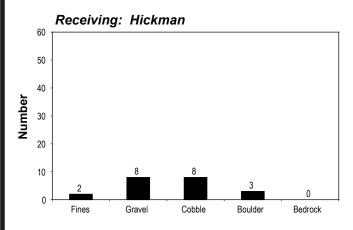
Stream Bank Shape

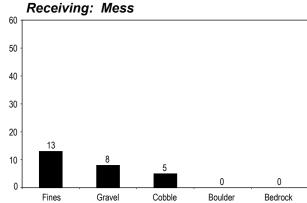


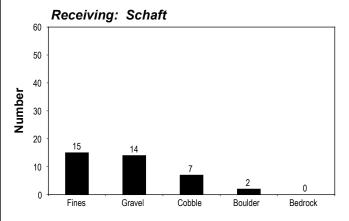
Summary of Bank Shape for all Streams in the Receiving and Reference Environment Watersheds, 2007

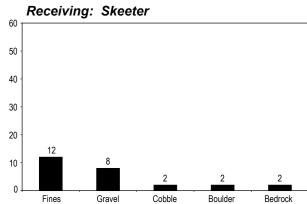


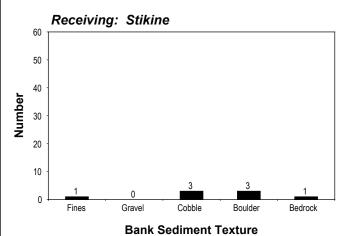


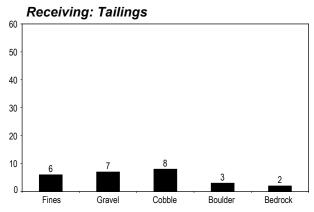












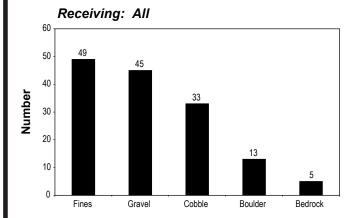
Bank Sediment Texture

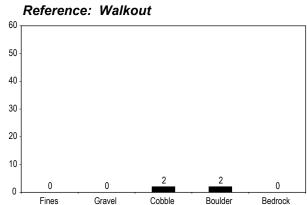


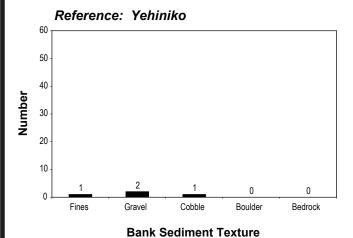
Summary of Bank Textures for all Streams in the Receiving and Reference Environment Watersheds, 2007

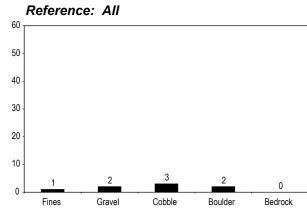
FIGURE 3.2-15a











Bank Sediment Texture

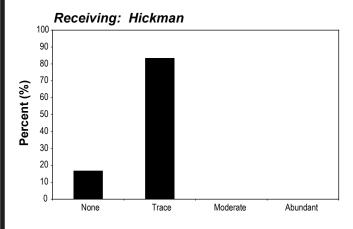


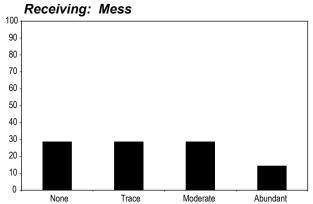
Summary of Bank Textures for all Streams in the Receiving and Reference Environment Watersheds, 2007

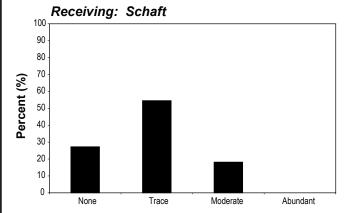
FIGURE 3.2-15b

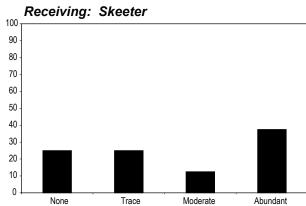


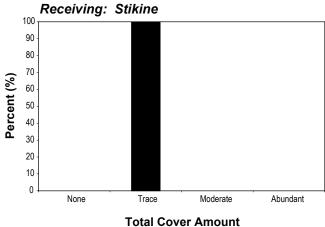


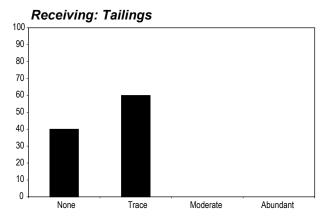












Total Cover Amount

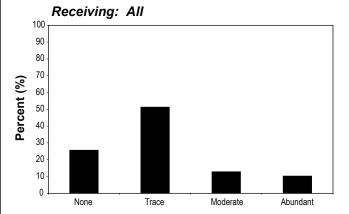


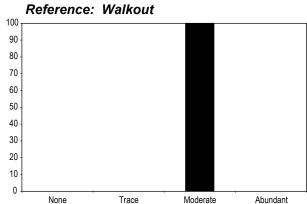
Summary of Total Cover Amounts for all Streams in the Receiving and Reference Environment Watersheds, 2007 FIGURE 3.2-16a

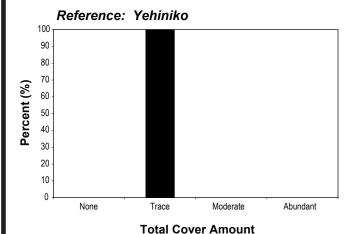
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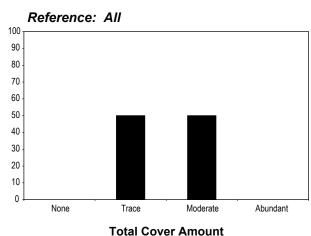
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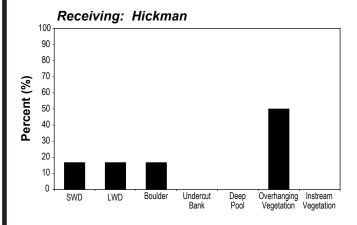


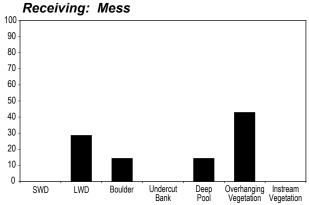


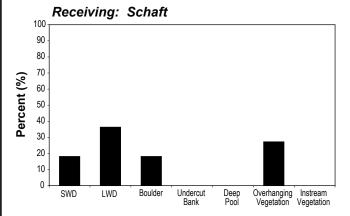


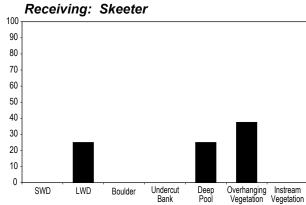
Summary of Total Cover Amounts for all Streams in the Receiving and Reference Environment Watersheds, 2007 FIGURE 3.2-16b

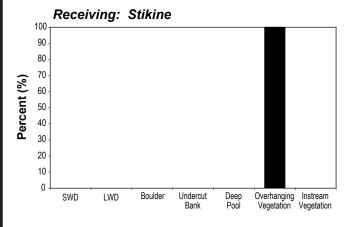


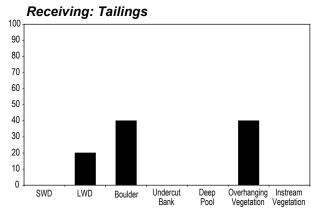












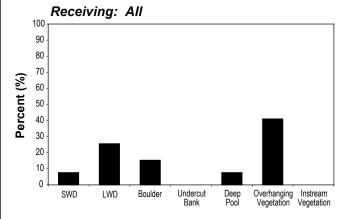
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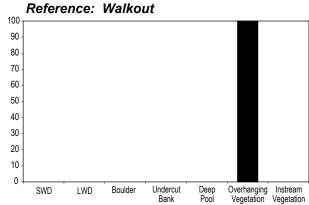
Dominant Cover Type

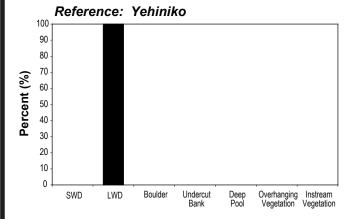


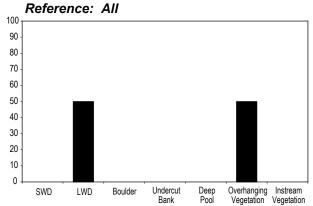
Summary of Dominant Cover Type for all Streams in the Receiving and Reference Environment Watersheds, 2007











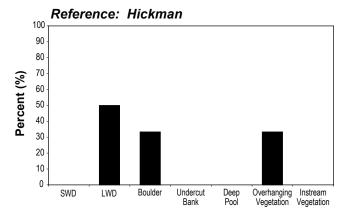
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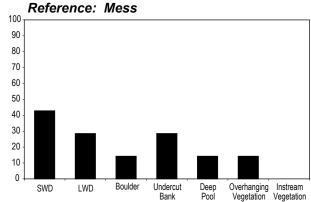
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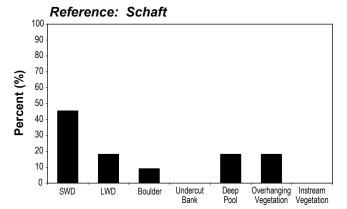


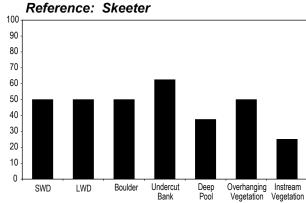
Summary of Dominant Cover Type for all Streams in the Receiving and Reference Environment Watersheds, 2007

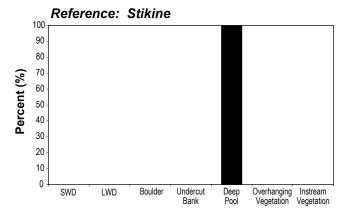


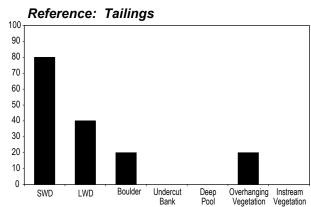












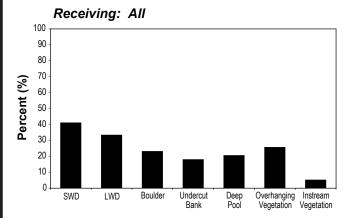
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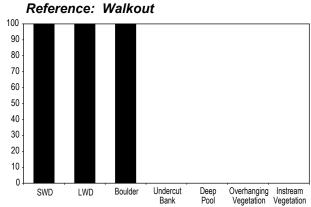
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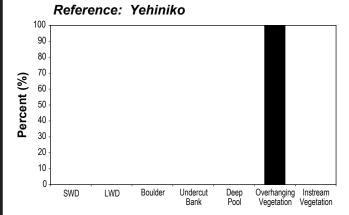


Summary of Sub-Dominant Cover Type for all Streams in the Receiving and Reference Environment Watersheds, 2007

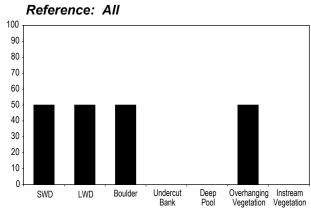








Sub-dominant Cover Type

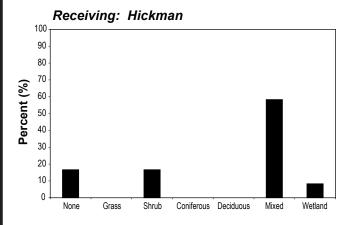


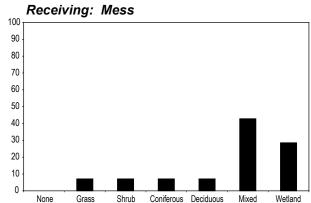
Sub-dominant Cover Type

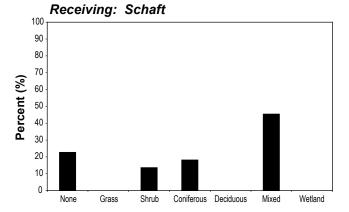


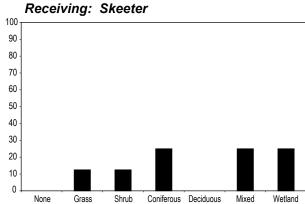
Summary of Sub-Dominant Cover Type for all Streams in the Receiving and Reference Environment Watersheds, 2007

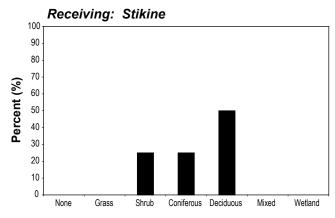


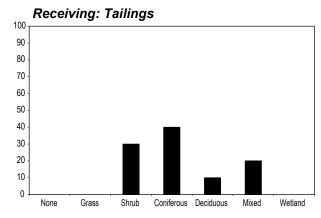










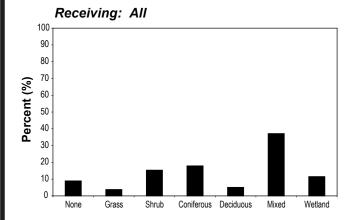


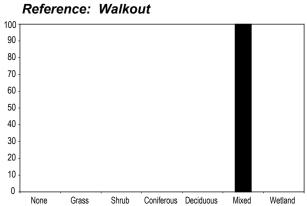
Dominant Riparian Vegetation Dominant Riparian Vegetation

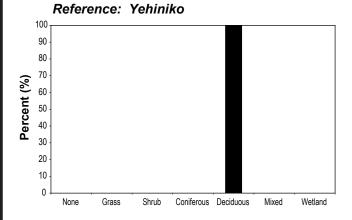


Summary of Dominant Riparian Vegetation Types for all Streams in the Receiving and Reference Environment Watersheds, 2007

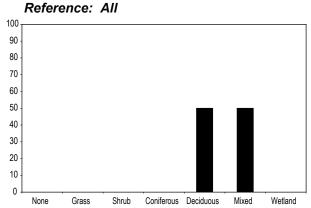








Dominant Riparian Vegetation Type



Dominant Riparian Vegetation Type



Summary of Dominant Riparian Vegetation Types for all Streams in the Receiving and Reference Environment Watersheds, 2007



Fish Habitat Suitability

While various species have widely differing habitat requirements, field crews focused on the general habitat requirements of juvenile and adult salmonids because of their abundance in the Project area and their importance to local user groups. Figures 3.2-20a to 3.2-22b present habitat suitability rankings for spawning, rearing and over-wintering habitat for all streams by watershed. Spawning habitat was poor throughout all of the receiving environment watersheds. Spawning habitat quality differed between Reference sites, with Walkout Creek having poor spawning habitat, and Yehiniko Creek having good quality spawning habitat. Rearing habitat was also poor throughout most of the receiving environment watersheds except the Mess and Schaft watersheds, where rearing habitat quality was fair. The reference environment watersheds possessed rearing habitat suitability of poor (*i.e.*, Walkout) and fair (*i.e.*, Yehiniko). Overwintering habitat quality was poor within all receiving environment watersheds except Mess Watershed, where over-wintering habitat quality was fair. The reference environment watersheds possessed poor over-wintering habitat.

3.2.1.2 Fish Habitat - Detailed

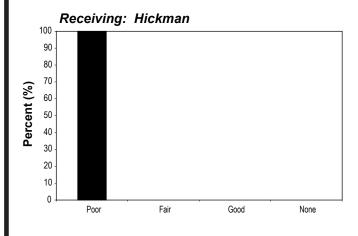
Stream Channel Measurements

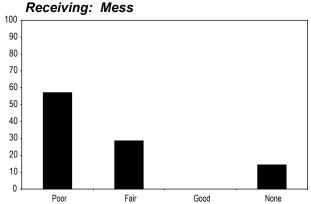
Detailed fish habitat assessments were conducted at 19 receiving environment reaches within the Hickman, Mess, Schaft, Skeeter, and Tailings C Creek watersheds in September 2007. Overview fish habitat assessments were conducted in accordance with the *Fish Habitat Assessment Procedures* (Johnston and Slaney, 1996). Detailed fish habitat assessment locations are shown in Figure 2.3-1. Detailed fish habitat assessment details for receiving and reference watershed sites are presented in Appendix 3.2-2. Table 3.2-3 presents a comparison of channel characteristics for all streams by watershed.

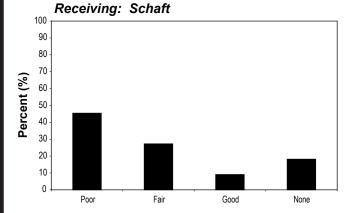
Table 3.2-3
Summary of Channel Characteristics for all Streams in the Receiving
Environment Watersheds, 2007

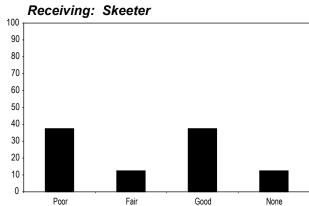
Characteristic	Receiving Environment							
	Hickman	Mess	Schaft	Skeeter	Tailings			
	(n = 5)	(n = 23)	(n = 19)	(n = 30)	(n = 7)			
Gradient (%)								
Mean	3.0	1.5	1.5	1.7	2.2			
Min	1.5	0.2	0.2	0.0	1.0			
Max	4.0	5.5	4.0	5.0	4.0			
Wetted Depth (m)								
Mean	0.4	0.4	0.5	0.2	0.5			
Min	0.2	0.1	0.1	0.1	0.2			
Max	0.6	1.0	1.2	1.1	8.0			
Bankfull Depth (m)								
Mean	0.8	1.2	1.4	0.8	1.3			
Min	0.6	0.6	0.2	0.3	0.5			
Max	1.2	2.5	4.0	2.0	3.0			
Wetted Width (m)								
Mean	17.3	7.7	15.8	3.7	12.3			
Min	10.2	1.0	3.0	1.0	3.0			
Max	28.8	40.0	70.0	12.0	30.0			
Bankfull Width (m)								
Mean	21.2	28.0	104.6	11.1	38.2			
Min	10.4	8.4	8.0	1.5	6.0			
Max	33.0	80.0	220.0	30.0	80.0			

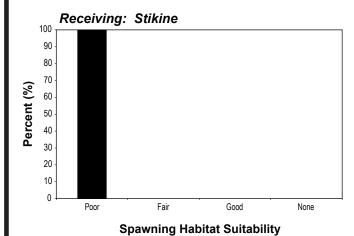
March 2008

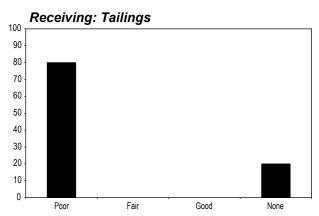








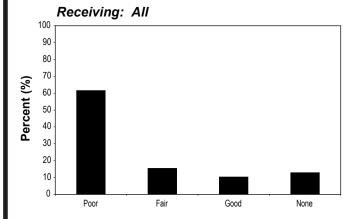


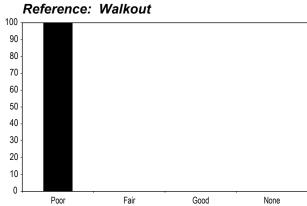


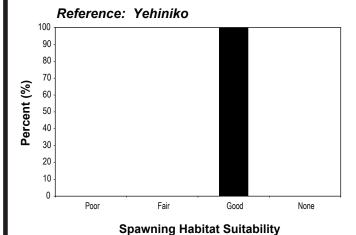
Spawning Habitat Suitability

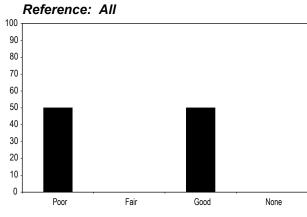


Summary of Spawning Habitat Suitability for all Streams in the Receiving and Reference Environment Watersheds, 2007 Rescan TECO







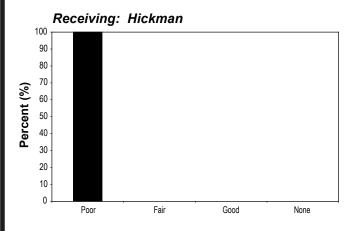


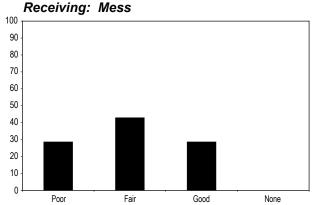
Spawning Habitat Suitability

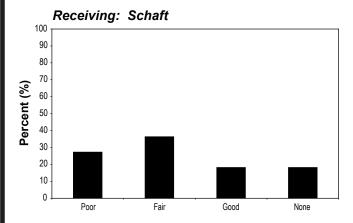


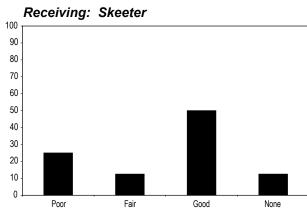
Summary of Spawning Habitat Suitability for all Streams in the Receiving and Reference Environment Watersheds, 2007

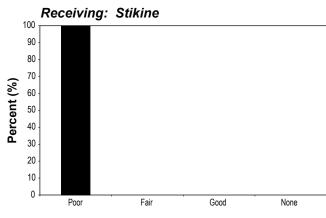


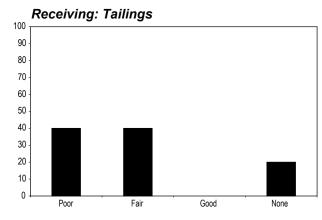












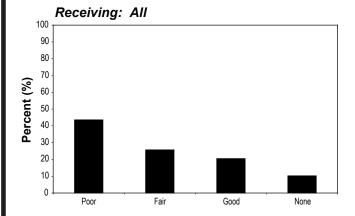
Rearing Habitat Suitability

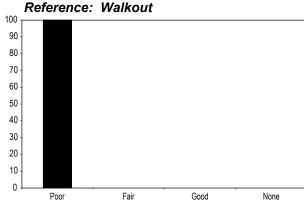
Rearing Habitat Suitability

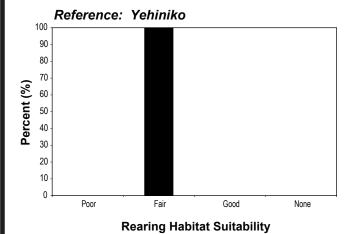


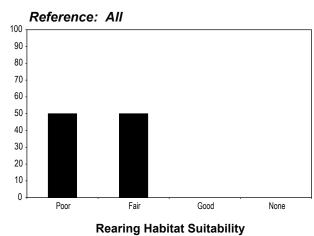
Summary of Rearing Habitat Suitability for all Streams in the Receiving and Reference Environment Watersheds, 2007









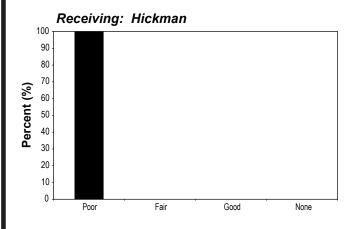


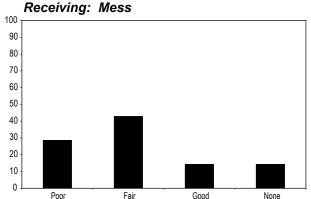


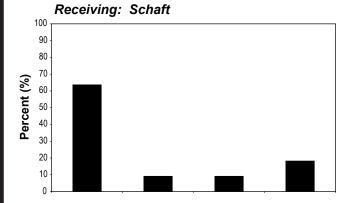
Summary of Rearing Habitat Suitability for all Streams in the Receiving and Reference Environment Watersheds, 2007

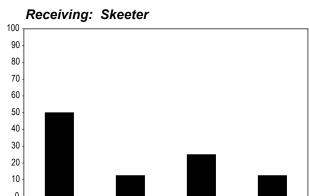


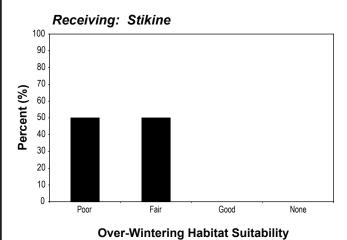


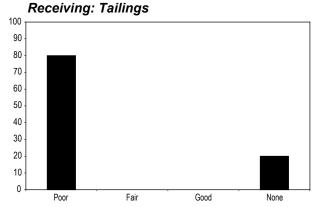










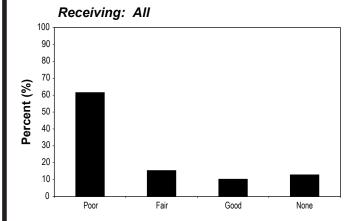


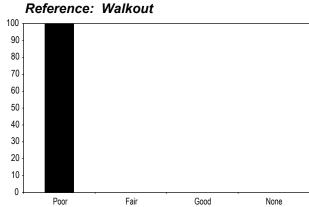
Over-Wintering Habitat Suitability

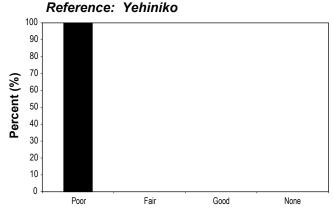


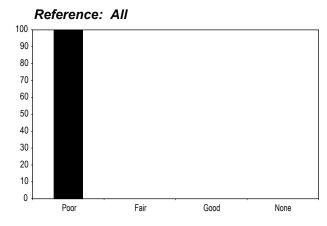
Summary of Over-Wintering Habitat Suitability for all Streams in the Receiving and Reference Environment Watersheds, 2007











Over-Wintering Habitat Suitability

Over-Wintering Habitat Suitability



Summary of Over-Wintering Habitat Suitability for all Streams in the Receiving and Reference Environment Watersheds, 2007



Habitat and Cover

Table 3.2-4 presents a comparison of habitat characteristics for all streams by watershed. Cascades were the most common habitat unit within all receiving environment watershed, except the Skeeter Watershed, where pools were the most common habitat unit. The dominance of cascade habitat units is expected since the most dominant or prevalent bed substrate was cobble. Sand was the most dominant substrate in the Schaft Watershed because of its glacial origin. The dominance of pool habitat units is expected in the Skeeter Watershed because it is a smaller watershed, with low gradient and gravel dominated channels. The least common substrate was bedrock in all watersheds.

Overhanging vegetation was the dominant cover type, followed by boulders and pools in the Hickman Watershed. Pools were the most common cover in the Mess, Schaft and Skeeter watersheds. Boulders were the most common cover in the Tailings C Watershed. The least common cover type was instream vegetation in all watersheds, which reflects the cold turbid nature of these watersheds. LWD cover was low within all watersheds, which reflects the low abundance present within the watersheds (Figures 3.2-9a and 3.2-9b). Riparian canopy cover was low in all watersheds (i.e., < 8%), except in the Mess Watershed (24%). Riparian bank cover varied between watersheds (i.e., 18% to 87%). Skeeter Watershed had the highest riparian cover and Hickman Watershed had the lowest riparian cover.

Table 3.2-4
Summary of Habitat Characteristics for all Streams in the Receiving
Environment Watersheds, 2007

	Receiving Environment								
Characteristic	Hickman (n = 5)	Mess (n = 23)	Schaft (n = 19)	Skeeter (n = 30)	Tailings (n = 7)				
Habitat Units									
% Cascade	88.8	45.1	50.4	29.1	90.1				
% Glide	0.0	32.7	24.3	1.4	0.0				
% Pool	0.0	16.6	7.3	42.0	9.9				
% Riffle	11.2	13.4	17.6	29.7	0.0				
Bed Material									
% Sand	13.0	32.3	33.6	14.1	15.0				
% Gravel	38.0	23.1	29.7	50.4	14.2				
% Cobble	41.0	35.6	28.8	24.2	32.5				
% Boulder	8.0	11.1	7.4	11.3	38.3				
% Bedrock	0.0	0.0	0.0	0.0	0.0				
Cover									
% Pool	4.0	36.1	27.4	33.0	0.0				
% Boulder	10.0	13.5	0.2	11.3	90.0				
% Instream Vegetation	0.0	0.2	0.0	2.0	0.0				
% Overhanging Vegetation	63.4	14.4	5.4	13.8	0.0				
% Undercut Bank	0.0	1.3	0.8	4.5	0.0				
% LWD	1.0	5.6	2.5	3.2	5.0				
% SWD	1.0	7.7	9.0	2.2	5.0				
Riparian Cover									
% Canopy Cover	8.2	23.6	4.3	5.6	2.0				
% Left Bank Cover	18.0	85.2	46.0	83.4	70.0				
% Right Bank Cover	50.2	70.0	26.7	87.4	20.0				

3.2.1.3 Fish Community

Species Composition and CPUE

Fish sampling was conducted at 15 receiving environment reaches (25 sites) within the Hickman, Mess, Schaft, Skeeter, Tailings C Creek watersheds in June and September 2007. In addition, fish sampling was conducted at two reference environment reaches (two sites) within Walkout and Yehiniko Creek watersheds in June and September 2007.

Sampling effort and fish catch data is presented in Appendix 3.2-3 for receiving and reference environment watersheds. Fish biological data for receiving and reference environment watersheds are presented in Appendix 3.2-4. Individual FDIS fish sampling site cards are presented in Appendix 3.2-5.

Table 3.2-5 presents the known fish species presence/distribution for all streams by watershed. Rainbow trout was the only fish species captured, indicating low species richness for the receiving environment watersheds. Species composition and geographic distribution is likely limited in these watersheds due to an 11.7 km long canyon and a 6 m falls, both located on the mainstem of Mess Creek. It is not known whether the rainbow trout in the watershed are native or introduced, but it is likely that the barriers on Mess Creek prevent other fish species from accessing the area. In contrast, reference environment watersheds (*i.e.*, Yehiniko Watershed) possessed a more diverse species composition.

Table 3.2-6 summarizes known fish bearing reaches for all streams by watershed. All reaches in the Mess Watershed were fish bearing. All reaches in the Hickman Watershed were non-fish bearing. The upper reaches of Schaft Creek, upstream of SC3, were non-fish bearing. Only SKC1 reach of Skeeter Watershed was fish bearing. The upper reaches of Tailings C Creek upstream of site TC1, were non-fish bearing. All reference environment watershed reaches are fish bearing.

Table 3.2-5
Fish Species Present within Receiving and Reference Environment
Watersheds, 2007

	Species						
Stream Name	Rainbow Trout	Coho Salmon	Slimy Sculpin	Dolly Varden	Mountain Whitefish		
Receiving Environment							
Hickman Creek	-	-	-	-	-		
Mess Creek	Χ	-	-	-	-		
Schaft Creek	X	-	-	-	-		
Skeeter Creek	Χ	-	-	-	-		
Tailings C Creek	Χ	-	-	-	-		
Reference Environment							
Walkout Creek	Χ	-	-	-	-		
Yehiniko Creek	X	Χ	X	X	Χ		

Dashes indicate no data available X' indicates capture of fish species in 2007

March 2008

Table 3.2-6
Fish Bearing Reach Summary within Receiving and Reference
Environment Watersheds, 2007

			n Bearing Reaches	Non-Fish Bearing Reaches		
Watershed	of Reaches	Number	Number Site Names		Site Names	
Receiving Environment						
Hickman Creek	3	0	-	3	HC1, HC2, HC3	
Mess Creek	4	4	MC1, MC2, MC5, MC10	0	-	
Schaft Creek	6	3	SC4, SC7, SC5	3	SC1, SC6, SC3	
Skeeter Creek	4	1	SKC1	3	SKC2, SKC3, MT1	
Tailings C Creek	3	2	TC3	1	TC1, TC2	
Reference Environment						
Walkout Creek	1	1	W2	0	-	
Yehiniko Creek	1	1	Y1	0	-	

Dashes indicate no data available

Table 3.2-7 and Figure 3.2-23 summarize sampling effort, catch and CPUE for all streams by watershed. In total, 16,882 seconds of electrofishing effort was exerted on streams within receiving environment watersheds, and a total of 93 rainbow trout were captured. Eight fish were captured within reference environment watersheds. No fish were captured in the Hickman Watershed. The overall mean rainbow trout CPUE for all sites (with fish caught) in receiving environment watersheds was 0.55 fish/100 s. The overall mean rainbow trout CPUE for all sites (with fish caught) in reference environment watersheds was 0.71 fish/100 s.

Mean rainbow trout CPUE differed significantly between sites (ANOVA, F $_{5,15}$ = 3.52, P < 0.05) (Table 3.2-7). Rainbow trout CPUE was significantly higher in the Schaft Watershed than in the Tailings C Watershed. However, Skeeter Watershed had the greatest rainbow trout CPUE at 1.25 fish/100 s, while Schaft Watershed had the second largest rainbow trout CPUE at 1.16 fish/100 s between all receiving environment watersheds. Reference environment watershed, Walkout Watershed, rainbow trout CPUE was greater than any of the receiving environment watersheds.

Length, Weight and Condition

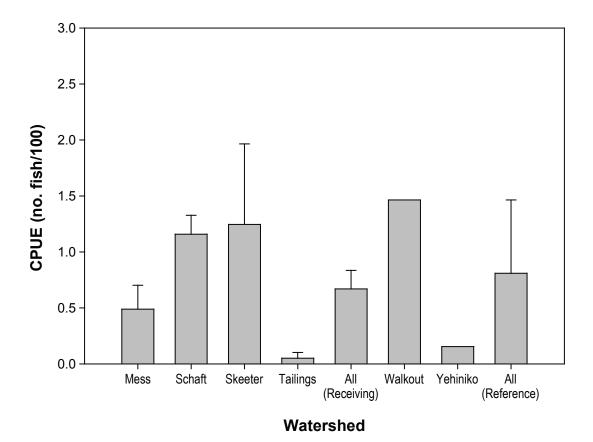
Table 3.2-8 summarizes length, weight and condition data for fish captured in the receiving and reference environment watersheds. Rainbow trout length and weight data from the Walkout and Yehiniko reference environment watersheds were pooled for statistical analysis due to low sample size.

There was a significant difference in rainbow trout length between Skeeter Watershed and all other receiving and reference environment watersheds. Rainbow trout from Skeeter Watershed were significantly shorter than rainbow trout from all other receiving and reference environment watersheds (ANOVA; $F_{4.94} = 6.35$, P < 0.0001).

Table 3.2-7
Summary Statistics of Electrofishing Effort, Catch and CPUE in Receiving and Reference Environment Streams, 2007

	Number	Total	Rainbow Trout			Slir	ny Sculpin	Co	ho Salmon		Dolly Varden			Mount	tain Whitefish		All Species			
Watershed	of Sites	Effort (s)	No. of Fish	Mean CPUE	SE	No. of Fish	Mean CPUE	SE	No. of Fish	Mean CPUE	SE	No. of Fish	Mean CPUE	SE	No. of Fish	Mean CPUE	SE	No. of Fish	Mean CPUI	SE
Receiving Environment																				
Hickman Creek	6	3686	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-
Mess Creek	6	4312	23	0.49	0.21	0	-	-	0	-	-	0	-	-	0	-	-	0	0.49	0.21
Schaft Creek	5	3326	45	1.16	0.17	0	-	-	0	-	-	0	-	-	0	-	-	0	1.16	0.17
Skeeter Creek	3	2445	23	1.25	0.72	0	-	-	0	-	-	0	-	-	0	-	-	0	1.25	0.72
Tailings Creek	5	3113	2	0.05	0.05	0	-	-	0	-	-	0	-	-	0	-	-	0	0.05	0.05
All (Receiving)	25	16882	93	0.55	0.14	0	-	-	0	-	-	0	-	-	0	-	-	0	0.55	0.14
Reference Environment																				
Walkout Creek	1	478	7	1.46	-	0	-	-	0	-	-	0	-	-	0	-	-	0	1.46	-
Yehiniko Creek	1	645	1	0.16	-	2	0.31	-	1	0.16	-	2	0.31	-	1	0.16	-	1	1.09	-
All (Reference)	2	1123	8	0.71	0.65	2	0.18	0.16	1	0.09	0.08	2	0.18	0.16	1	0.09	0.08	1	1.25	0.19

Dashes indicate no data available CPUE = catch-per-unit-effort SE = standard error



Note: Error bars represent standard error of the mean.



Mean Rainbow Trout Electrofishing CPUE in Receiving and Reference Environment Watersheds, 2007



Table 3.2-8

Mean Length, Weight, and Condition of Fish Captured in Receiving and Reference Environment Streams, 2007

Snacias	Length (mm)						\	Veight (g)		Condition (g/mm ³)					
opecies -	N	Mean	SE	Min	Max	N	Mean	SE	Min	Max	N	Mean	SE	Min	Max	
ent																
Rainbow Trout	22	144	14	35	280	22	60.8	15.2	0.4	200	22	1.24	0.10	0.91	3.06	
Rainbow Trout	45	139	5	71	220	45	34.4	3.8	4.7	119.1	45	1.09	0.02	0.64	1.31	
Rainbow Trout	23	99	7	51	175	23	15.4	3.3	2.1	59.6	23	1.18	0.03	1.00	1.58	
Rainbow Trout	2	202	31	171	233	2	111.6	46.9	64.7	158.5	2	1.27	0.02	1.25	1.29	
nent																
Rainbow Trout	7	164	18	123	243	7	65.4	22.3	22.2	173.9	7	1.21	0.03	1.11	1.35	
Slimy Sculpin	2	86	28	58	114	2	7.9	6.0	1.9	13.8	2	0.95	0.02	0.93	0.97	
Coho Salmon	1	37	-	37	37	1	0.5	-	0.5	0.5	1	0.99	-	0.99	0.99	
Dolly Varden	2	104	19	85	123	2	12.0	5.2	6.8	17.1	2	1.01	0.09	0.92	1.11	
Mountain Whitefish	1	55	-	55	55	1	1.6	-	1.6	1.6	1	0.96	-	0.96	0.96	
Rainbow Trout	1	92	-	92	92	1	7.9	-	7.9	7.9	1	1.01	-	1.01	1.01	
	Rainbow Trout Rainbow Trout Rainbow Trout Rainbow Trout Pent Rainbow Trout Slimy Sculpin Coho Salmon Dolly Varden Mountain Whitefish	N N Pent Pent	N Mean	N Mean SE	N Mean SE Min	N Mean SE Min Max	N Mean SE Min Max N	N Mean SE Min Max N Mean Mea	N Mean SE Min Max N Mean SE	N Mean SE Min Max N Mean SE Min Min	N Mean SE Min Max N Mean SE Min Max Max N Mean SE Min Max Max	N Mean SE Min Max N Mean SE Min Max N N Mean SE Min Max N N Mean Max N N Mean Max N N Mean Max N Mean Max N Mean Max N N Mean Max N Max N Mean Max N Max	N Mean SE Min Max N Mean SE Min Max N Mean SE Min Max N Mean Mea	N Mean SE Min Max N Mean SE Min Max N Mean SE Min Max N Mean SE	N Mean SE Min Max N Mean SE Min Min	

SE = standard error

Dashes indicate no data available

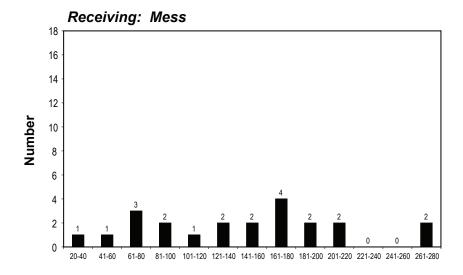
Tailings C Watershed had the greatest average rainbow trout fork length, while Mess Watershed had the second greatest average rainbow trout fork length between all receiving environment watersheds. For reference environment watersheds, average rainbow trout fork length was greater than any of the receiving environment watersheds, except Tailings C Watershed.

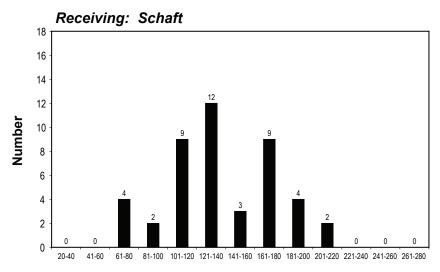
There was only a significant difference of rainbow trout weight between Skeeter Watershed and all other receiving and reference environment watersheds. Rainbow trout from Skeeter Watershed were significantly heavier than rainbow trout from all other receiving and reference environment watersheds (ANOVA; $F_{4,94} = 6.34$, P < 0.0001). Tailings C Watershed had the greatest rainbow trout weight, while Mess Watershed had the second greatest rainbow trout weight between all receiving environment watersheds. Rainbow trout from Walkout Watershed (one of the reference sites), were heavier than any of the receiving environment watersheds except Tailings C Watershed.

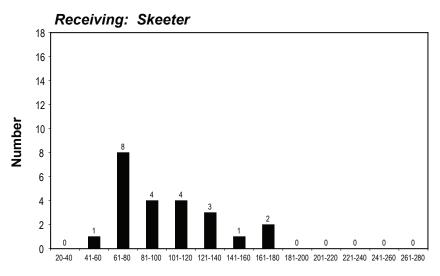
Length-frequency distributions were plotted for all rainbow trout caught in the receiving and reference environment watersheds (Figures 3.2-24a and 3.2-24b). Mess Creek had a flat distribution with a mode between 161 and 180 mm and possessed the widest size range of 20 to 280 mm among all watersheds. Schaft Watershed had a normal distribution with a mode of 121 to 140 mm and had a relatively limited range of 61 to 220 mm compared to other watersheds. The Skeeter Watershed had a mode of 61 to 80 mm and length was skewed to smaller rainbow trout in Skeeter Creek with a range of 41 to 180 mm. Tailings, Walkout and Yehiniko watershed possessed low sample sizes for biological comparisons between other watersheds.

Rainbow trout weight-length regressions (linearized by In-transformation of both variables) were conducted by watershed (Figures 3.2-25 and 3.2-26). Too few samples were collected from Tailings C Watershed to compare to other watersheds. Regressions of fish weight-length data for Mess, Schaft, Skeeter and reference environment watersheds were all highly significant (P < 0.001) and explained between 96 and 99% of the variation in ln(weight). The slope of regressions for rainbow trout sampled from these sites was close to the expected value of 3.0, typical for the length-weight geometry of fish. The slopes of weight-length regression lines were compared using the general linear model (GLM). The effect of the interaction between length and site on fish weight was significant, indicating that the slopes of the regressions were not equal; thus, length at weight could not be compared (GLM, F $_{4,93} = 1.60$, P < 0.01). Mean condition was therefore compared as a surrogate for weight-at-length.

Condition was calculated from length and weight data for all fish captured at receiving and reference environment watersheds (Table 3.2-8; Figure 3.2-27). Mean rainbow trout condition factor within receiving environment watersheds ranged from 1.09 g/mm³ in Schaft Watershed to 1.27 g/mm³ in the Tailings C Watershed. Mean rainbow trout condition factor within reference environment watersheds ranged from 1.01 g/mm³ in Yehiniko Watershed to 1.21 g/mm³ in the Walkout Watershed. A comparison of fish condition between watersheds indicated that rainbow trout condition was not significantly different (ANOVA, F $_{4,94}$ = 1.97, P = 0.104). A condition factor of 1.0 is considered normal, and is indicative of a healthy salmonid body shape. Out of 100 fish captured at receiving environment sites, 87% had a condition factor greater than 1.0.



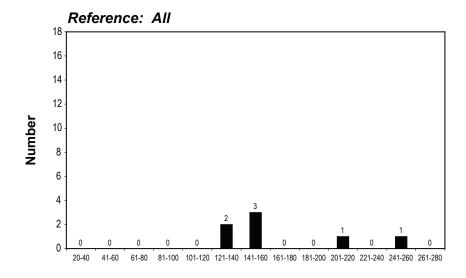


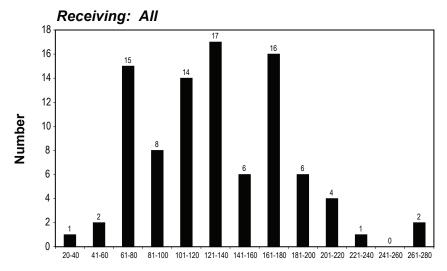


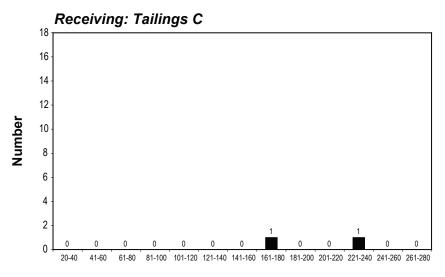
Fork Length Class (mm)

FOX metals inc Length-Frequency Distributions for Rainbow Trout Captured in the Receiving and Reference Environment Watersheds, 2007







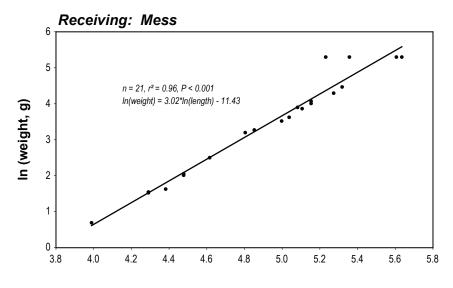


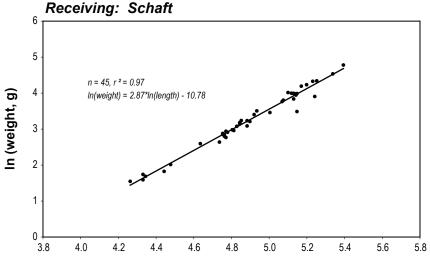
Fork Length Class (mm)

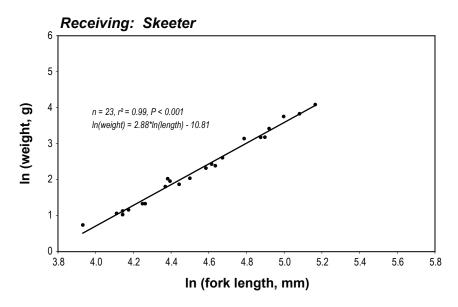
Length-Frequency Distributions for Rainbow Trout Captured in the Receiving and Reference Environment Watersheds, 2007







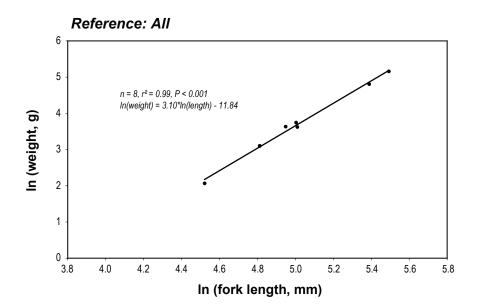






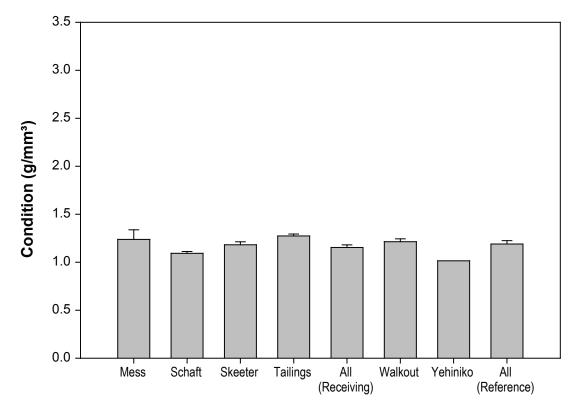
Weight-Length Regressions for Rainbow Trout Captured in the Receiving Environment Watersheds, 2007











Watershed

Note: Error bars represent standard error of the mean.



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Mean Rainbow Trout Condition in Receiving and Reference Environment Watersheds, 2007

Age and Growth

Age data for fish captured in the receiving and reference environment watersheds are summarized in Table 3.2-9 and Figure 3.2-28. Rainbow trout age data from Walkout and Yehiniko reference environment watersheds were pooled for statistical analysis due to low sample size. Rainbow trout from Skeeter Watershed were significantly younger than rainbow trout from all other receiving environment watersheds (ANOVA; $F_{4,87} = 6.16$, P < 0.000). Tailings C Watersheds had the oldest average age of 3.5 years, followed by Mess Watershed with an average age of 2.8 years.

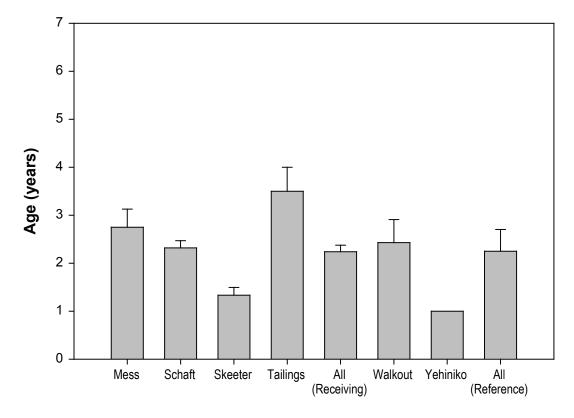
Age-frequency distributions were constructed for all rainbow trout aged from receiving and reference environment watersheds (Figures 3.2-29a and 3.2-29b). Age frequency at Mess Watershed displayed a flat distribution with a mode at age 3, and had the greatest range of 0 to 6 years compared to other watersheds. The age-frequency distribution from Schaft Watershed had a mode of age 2 and had an age range of 0 to 4 years. The Skeeter Watershed age-frequency distribution was skewed toward younger fish. Skeeter Creek had one mode at age-1, and ages ranged from 0 to 3 years. The Tailings C Watershed had a narrow age range of 3 to 4 years. The reference watersheds, Walkout and Yehiniko, had a mode age 1 and a range of 1 to 4 years. All 3 receiving watersheds, except Tailings C, had a similar range of age classes, indicating that the habitat is suitable for, but not necessarily preferred by all age-classes. Most of the fish from Mess and Schaft watersheds (75% and 84%, respectively) were above the age of 2, while only 33% of fish from Skeeter Creek were above the age of 2. These results indicate that juvenile rainbow trout may frequent the low velocity habitat and smaller streams located in the Skeeter Valley, while older fish congregate in the faster habitat of the mainstem rivers.

Table 3.2-9
Mean Age of Fish Captured in Receiving and Reference Environment
Watersheds, 2007

		Age (years)									
Watershed	Species	n	Mean	SE	Min	Max					
Receiving Environment											
Mess Creek	Rainbow Trout	20	2.8	0.4	0	6					
Schaft Creek	Rainbow Trout	44	2.3	0.2	0	4					
Skeeter Creek	Rainbow Trout	18	1.3	0.2	0	3					
Tailings C Creek	Rainbow Trout	2	3.5	0.5	3	4					
Reference Environment											
Walkout Creek	Rainbow Trout	7	2.4	0.5	1	4					
Yehiniko Creek	Dolly Varden	2	1.5	0.5	1	2					
Yehiniko Creek	Rainbow Trout	1	1.0	-	1	1					

SE = standard error
Dashes indicate no data available

Von Bertalanffy growth models were fit to the age and length data of fish from the three receiving environment watersheds and pooled reference environment watersheds (Figure 3.2-30). Rainbow trout age data from Walkout and Yehiniko reference environment watersheds were pooled for growth modeling due to low sample size. Age explained between 56 and 74% of the variation in fish length. The maximum attainable length was estimated at 576 mm for fish from Mess Watershed. The maximum attainable length was estimated at 510 mm for fish from Schaft Watershed.



Watershed

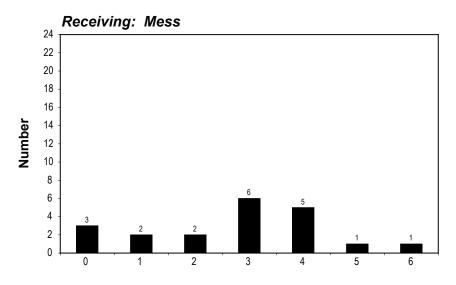
Note: Error bars represent standard error of the mean.

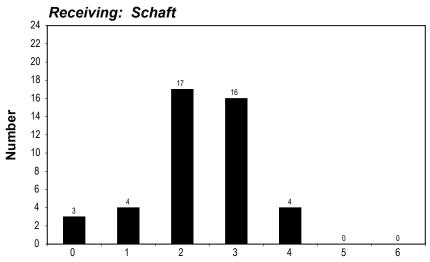


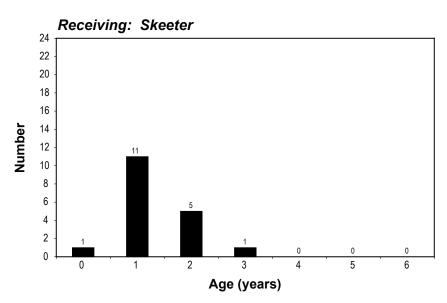
Rescan

Rescan

Mean Rainbow Trout Age in Receiving and Reference Environment Watersheds, 2007



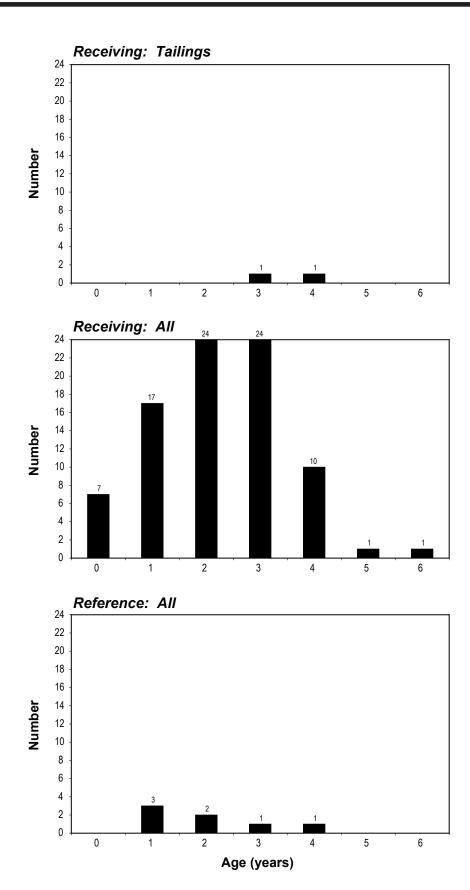






Age-Frequency Distributions for Rainbow Trout Captured in the Receiving and Reference Environment Watersheds, 2007

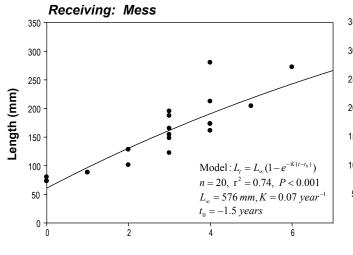


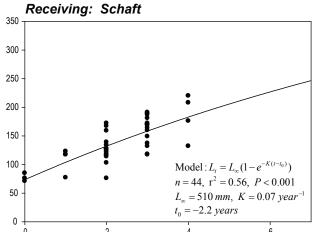


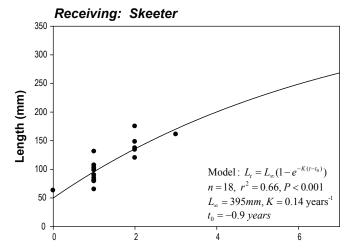


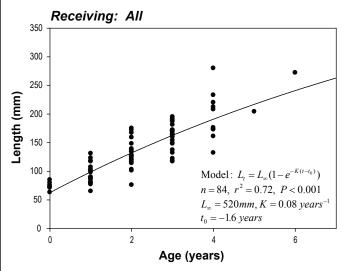
Age-Frequency Distributions for Rainbow Trout Captured in the Receiving and Reference Environment Watersheds, 2007

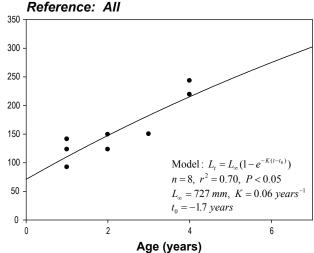












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Von Bertalanffy Growth Models for Rainbow Trout Captured in the Receiving and Reference Environment Watersheds, 2007 FIGURE 3.2-30





The model predicted a maximum length of 395 mm for fish from Skeeter Watershed. The model predicted a maximum length of 727 mm for fish from reference environment watersheds.

Diet

Mean rainbow trout stomach fullness ranged from 20% in Schaft Creek to 76% in Tailings C Creek, while mean percent digestion ranged from 68% in Walkout Creek to 95% in Yehiniko Creek (Table 3.2-10). Percent digestion is often influenced by the timing of sampling, since trout feeding often peaks at dawn and dusk. Fullness may be related to digestion, as well as food abundance. The low percent fullness of rainbow trout stomachs in Schaft Creek may be due to food scarcity or feeding inefficiency in the highly turbid water. The actual weight of stomach contents is related to the size of fish captured, the amount of food eaten and the percent digested.

Rainbow trout diet composition was analyzed by number and by weight for fish from five receiving environment streams. Diet varied widely among streams; however, numerically dominant prey items included adult Diptera (true flies), larval Chironomidae (midges) and Hymenoptera (wasps) (Figure 3.2-31). Diet composition of fish from Skeeter Creek was highly variable, but the most common prey items were chironomid larvae, adult Diptera, larval Plecoptera (stoneflies), Hemiptera (water striders), larval mayflies and larval Diptera. The large proportion of aquatic larvae indicates that fish feed primarily from the water column, selecting a few individuals from the surface.

Some fish were also sampled from Schaft Creek just downstream of the Skeeter Creek outlet. These fish ate mostly water striders and adult Diptera, indicating that they relied heavily on surface drift as a food source. This could be due to the high turbidity in Schaft Creek, which may prevent fish from seeing prey items in the water column.

In Walkout Creek, fish diet was dominated numerically by adult Diptera, followed by Hemiptera, larval stoneflies, larval Trichoptera (caddisflies) and wasps. Fish diet in this stream varied widely and included high numbers of both aquatic and terrestrial organisms. Walkout Creek, like Skeeter Creek, is clear and fish may have more opportunity to feed on prey items drifting in the water column than fish in turbid streams.

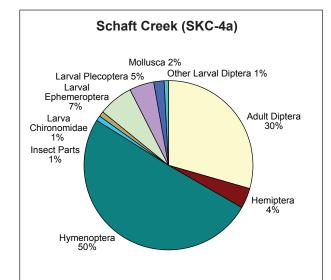
Fish in Tailings C Creek fed almost exclusively on chironomid larvae. While Tailings C Creek is moderately turbid, it is also very cold and invertebrate diversity may be lower in this creek than in other streams in the Project area.

Finally, the diet of fish from Yehiniko Creek was dominated by larval Diptera and Hymenoptera. Smaller numbers of larval mayflies, larval chironomids and larval Lepidoptera (caterpillars) were also eaten. Yehiniko Creek has low turbidity, and fish likely rely more heavily on prey items in the water column for food than fish in turbid rivers.

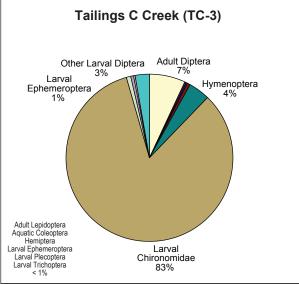
By weight, rainbow trout diet was also highly variable among streams; however, dominant prey groups included larval mayflies, larval Diptera, Hemiptera and larval chironomids (Figure 3.2-32). Unidentifiable insect parts and insect larvae also made up a large proportion of diet weight in fish from Yehiniko Creek and Walkout Creek.

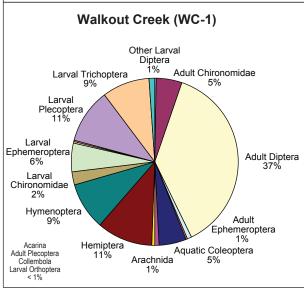
Table 3.2-10
Fullness, Digestion and Stomach Content Weight of Rainbow Trout from Receiving Environment Streams, 2007

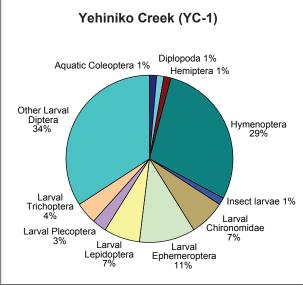
	Wal	kout C	reek (N=	:15)	Schaft Creek (N=4)				Skeeter Creek (N=9)				Tailings C Creek (N=14)				Yehiniko Creek (N=2)			
	Mean	Min	Max	SE	Mean	Min	Max	SE	Mean	Min	Max	SE	Mean	Min	Max	SE	Mean	Min	Max	SE
Fullness (%)	72	50	90	4	20	0	75	16	43	0	90	12	76	10	100	7	75	75	75	0
Digestion (%)	68	25	90	6	92	75	100	5	75	50	100	8	72	25	95	6	95	95	95	0
Actual Weight (mg)	793	216	1789	130	91	0	354	73	303	0	1740	183	1193	45	2942	249	511	479	543	32

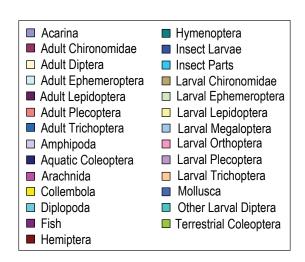


Skeeter Creek (SKC-4) Adult Diptera 13% Other Larval Diptera 6% Larval Trichoptera Adult Ephemeroptera 1% Adult Lepidoptera 1% Amphipoda 2% Larval Aquatic Plecoptera 22% Coleoptera 2% Collembola 1% Fish 1% Hemiptera 9% Larval Hymenoptera 2% Lepidoptera 1% Larval Ephemeroptera Larval Chironomidae







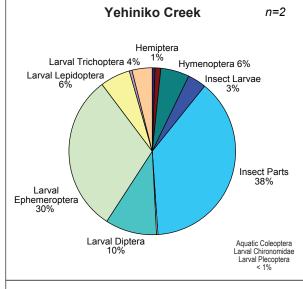


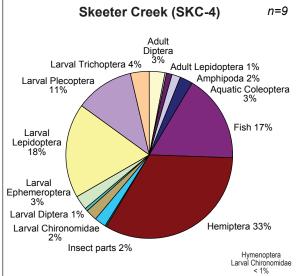


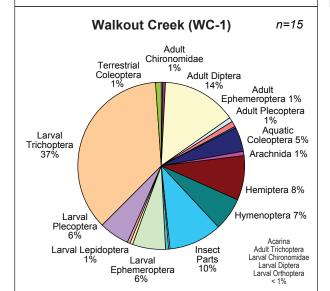
Percent Diet Composition (by Number) of Rainbow Trout Captured in Schaft Receiving Environment Streams

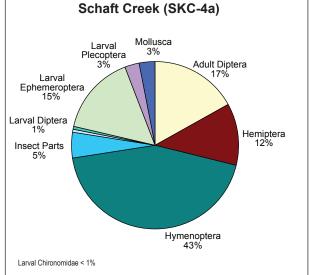


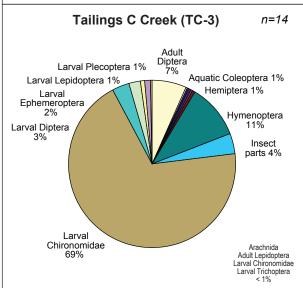


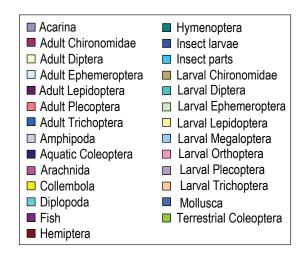














Percent Diet Composition (by Weight) of Rainbow Trout Captured in Schaft Receiving Environment Streams





In Skeeter Creek, the percentage of the diet weight made up by Hemiptera, larval Lepidoptera and fish was much higher than the percentage by number of these organisms, indicating that these organisms were significantly larger than other organisms in the diet. A large proportion of the diet weight was also made up by larval stoneflies.

In Schaft Creek, the largest proportion of the diet weight was made up by wasps, adult Diptera, water striders and larval mayflies. Over half of the diet weight was comprised of terrestrial insects floating on the water surface.

Larval chironomids made up over two thirds of the diet weight of fish from Tailings C Creek. This is similar to the numerical proportion of the diet made up by chironomids, and may indicate that larger prey items are not available for fish in this creek.

Larval Trichoptera (caddisflies) made up the largest proportion of the diet by weight of fish from Walkout Creek. The high ratio of weight to number of items indicates that these organisms are larger than most other prey items and may be preferentially selected by fish. Adult Diptera, Hemiptera and Hymenoptera also made up a large proportion of the diet weight in this stream.

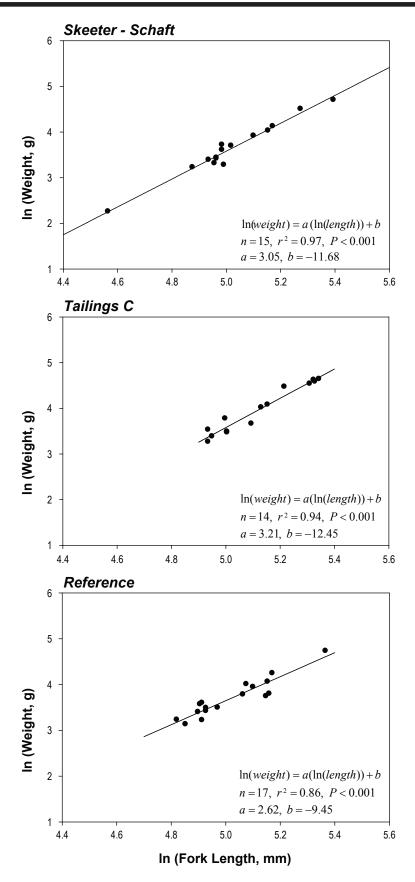
Finally, in Yehiniko Creek, unidentifiable insect parts made up a large part of the diet weight, followed by larval Ephemeroptera and larval Diptera. The large number of partially digested individuals may indicate that fish were not feeding at the time of their capture.

MMER Requirements

Rainbow trout from four receiving environment streams (Skeeter, Walkout, Yehiniko and Tailings C) were sampled in September 2007 for baseline conditions relating to the Metal Mining and Effluent Regulations (MMER). Samples from the two reference streams (Walkout and Yehiniko) were pooled due to the low number of samples from Yehiniko Creek. Also, samples from Skeeter Creek include fish captured in Schaft Creek just downstream of the Skeeter Creek confluence. These fish were included in the study in order to boost sample numbers for this site. Tissue metal concentrations of rainbow trout from these watersheds are presented in the Country Foods Baseline Report (Rescan, 2008).

Energy use by fish can be assessed using growth models (size at age, changes in length-frequency distributions over time) and reproductive investment (gonad weight relative to body length and weight, fecundity, sex steroid levels, young-of-year survival or percent composition of the young-of-the-year). The low numbers of fish captured during this sampling period was not sufficient to produce meaningful growth models for each watershed; however, growth models from other receiving environment sites may be used to represent baseline conditions since they cover a wide portion of the Project area.

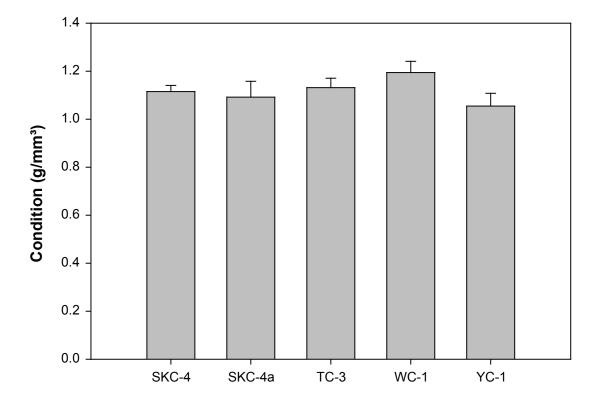
Energy storage was assessed using measures of fish condition. Figure 3.2-33 presents weight-length regressions for rainbow trout captured from the three MMER watersheds. The slopes of the weight-length regressions for fish sampled from the MMER watersheds were not significantly different among sites (GLM, F $_{2,44} = 1.81$, P = 0.18), and weight-at-length did not differ significantly (ANCOVA, F $_{2,42} = 0.72$, P = 0.50). Similarly, mean rainbow trout condition did not differ significantly among the three groups (ANOVA, F $_{2,43} = 0.75$, P = 0.48) (Figure 3.2-34).





Weight-Length Regressions for Rainbow Trout Captured from MMER Watersheds, September 2007





Note: Error bars represent standard error of the mean.



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Mean Condition of Rainbow Trout Sampled for Tissue Metals, 2007 Regressions of liver weight on total weight were also used to compare energy storage by fish in the MMER watersheds. The liver weight – total weight regressions were significant for all watersheds (P < 0.001), and total weight explained between 80 and 90% of the variation in liver weight (Figure 3.2-35). The slopes of the regressions were not significantly different among watersheds (GLM, F $_{2,42}$ = 1.38, P = 0.26); thus, the y-intercepts of the regressions could be compared. Liver weight, corrected for total weight, did not differ significantly among MMER watersheds (ANCOVA, F $_{2,40}$ = 2.53, P = 0.09).

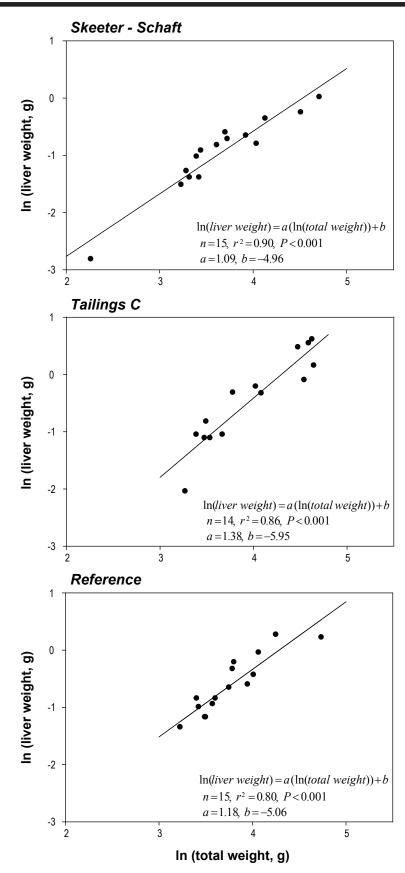
Reproductive investment was compared using regressions of gonad weight on total weight for the three watersheds (Figure 3.2-36). Fecundity (the number of eggs per female) was not compared among watersheds because of the low numbers of mature female fish captured. The gonad weight – total weight regressions were significant for all watersheds (P < 0.05), and total weight explained between 26 and 52% of the variation in gonad weight. The low proportion of variation in gonad weight that was explained by total weight is likely a result of some fish being immature at the time of sampling, and indicates that the size at which fish become sexually mature may differ within watersheds. The slopes of the gonad weight – total weight regressions did not differ significantly (GLM, F $_{2,31} = 0.55$, P = 0.58). Gonad weight, corrected for total weight, was significantly higher in Skeeter Creek than in Tailings C Creek, but did not differ from the Reference Creeks (ANCOVA, F $_{2,31} = 4.67$, P < 0.05).

3.2.2 Wetlands

3.2.2.1 Fish Habitat

Wetlands ranged from bogs laced with small, poorly defined stream channels like wetland 10 (Plate 3.2-6), to large ponds with multiple inlets and outlets like wetland 6 (Plate 3.2-7). Some wetlands included swift, glacial-fed stream channels (wetland 8 and wetland 1) (Plate 3.2-8). The amount of open water habitat surveyed ranged from 55 m² in wetland 10 to 16,900 m² in wetland 6. Most wetlands within the Schaft Creek Project area were large, poorly defined marshes and bogs; therefore, the area surveyed is not representative of the size of the wetlands or the amount of wetland habitat available to fish. Rather, it is meant to be a representative sample of open-water habitat in the area that can be used to estimate the relative abundance of good quality fish habitat in wetlands.

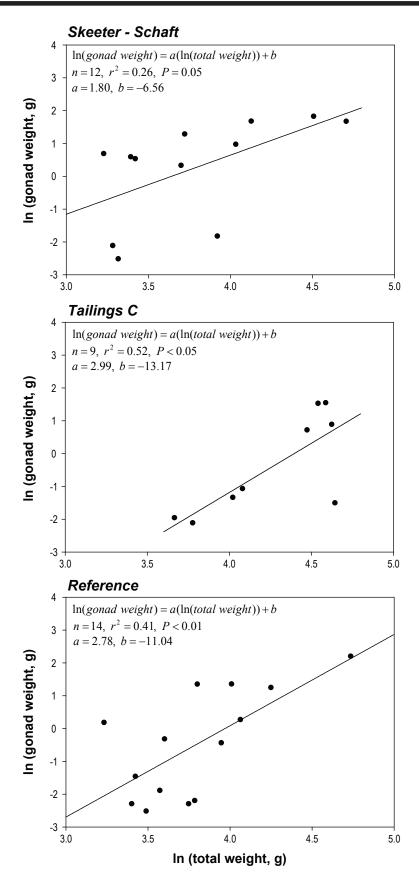
Habitat for salmonid rearing, overwintering, spawning and migration was rated as poor to good for each transect completed in a wetland. Good quality rearing habitat is that which has abundant cover, depth and flow to provide shelter from predators and to prevent stagnant conditions from forming (Plate 3.2-9). Overwintering requirements for most fish include deep water that will not freeze to the bottom, and abundant cover that will protect fish from predators (Plate 3.2-10). Spawning habitat for salmonids is usually scarce in wetlands as they require good flow and gravel substrates (Plate 3.2-11). Exceptions occur at wetland outlets or where streams flow through wetlands from other sources. Finally, migration habitat is classified as good if depth and flow are sufficient to pass fish, and if there are no barriers to migration such as seepages, jams or falls.





Regressions of Liver Weight on Total Weight for Rainbow Trout Captured from MMER Watersheds, September 2007







Regressions of Gonad Weight on Total Weight for Rainbow Trout Captured from MMER Watersheds, September 2007



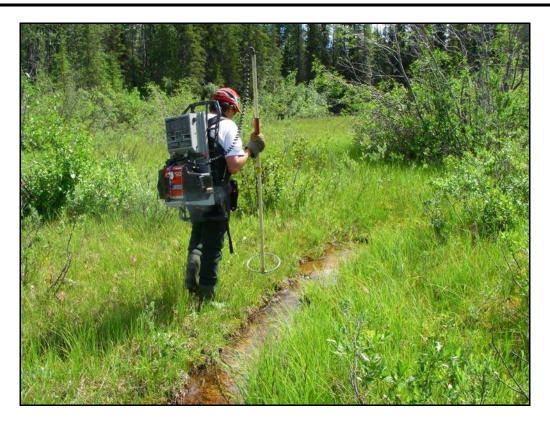


Plate 3.2-6. Electrofishing one of the poorly defined stream channels in wetland 10.



Plate 3.2-7. Aerial view of a flooded wetland 6 (foreground) and Mess Creek.



Plate 3.2-8. Stream channel running through wetland 8.



Plate 3.2-9. Example of good rearing habitat (abundant cover, good flow and depth) at wetland 9.



Plate 3.2-10. Deep overwintering habitat at wetland 2.



Plate 3.2-11. Excellent spawning habitat at the outlet of wetland 9.

Good quality rearing and overwintering habitat was abundant in wetlands 2, 9 and 11, while wetlands 3, 4 and 6 had mostly fair quality rearing habitat (Figure 3.2-37). Wetland 6 also had a significant amount of poor quality overwintering habitat. Poor quality rearing and overwintering habitat was present in wetlands 1, 5, 7, 8 and 10. Spawning habitat was mostly poor in all wetlands. Small amounts of fair to good spawning habitat were observed in wetlands 1, 4 and 9, mostly in streams that coursed through the wetlands from other areas. Habitat for migration was fair to good in many wetlands in the Schaft Creek Project area. Exceptions occurred in wetlands 5, 6, 7, 9 and 10, where open water habitat was either stagnant, shallow or choked with vegetation.

The dominant and subdominant substrate type in most wetlands was fine sediment, which is expected due to the low gradients and slow flow generally found in most wetlands (Figure 3.2-38). A small amount of gravel occasionally dominated wetland transects, usually in small riffle zone of streams running through wetlands. Gravel occurred as a subdominant substrate type in three wetlands. Only wetland 1 had cobble as a subdominant substrate. This was located in stream channels running through the wetland.

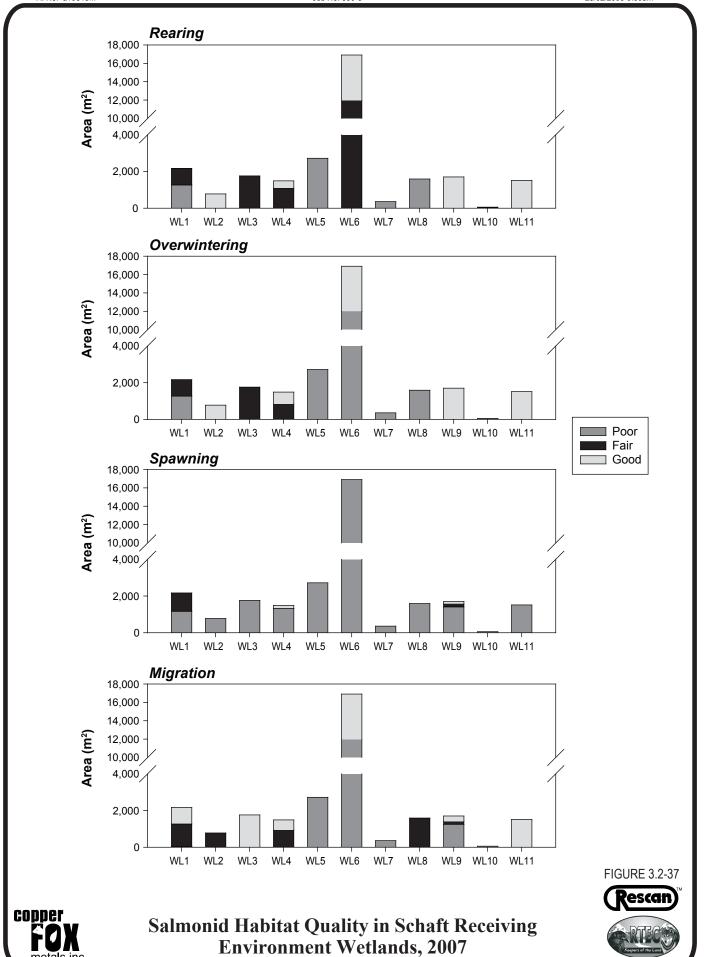
The dominant cover type for each transect was assessed, and the total area influenced by the dominant cover type was added up for each wetland in the study area (Figure 3.2-39). Wetlands where dominant cover was not reported for 100% of the study area had significant areas where no cover was present. Instream vegetation was the dominant cover type reported for wetlands 3, 5 and 6, and was also dominant in parts of wetlands 7, 8 and 9. Deep pools dominated wetlands 1, 2 and 11, and parts of wetlands 4 and 9. Overhanging vegetation was also reported as the dominant cover type in wetland 10, and in portions of wetlands 8 and 9. Small woody debris cover was dominant in parts of wetland 4, 7 and 9. Large woody debris was the least common dominant cover type, occurring only in portions of wetland 4.

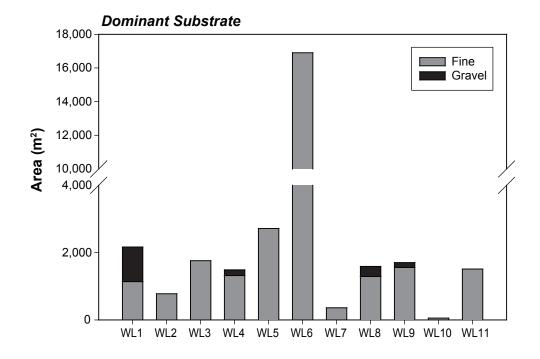
3.2.2.2 Fish Community

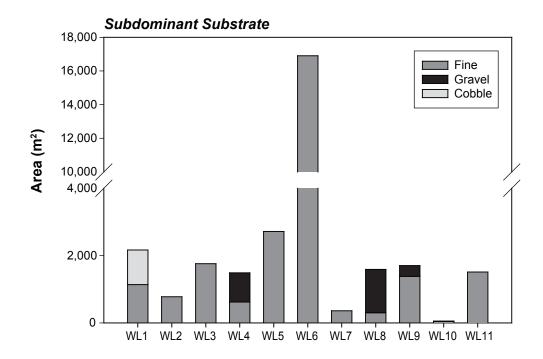
Rainbow trout were the only species captured in receiving environment wetlands in 2007. Trout were captured in six wetlands out of eleven: WL1, 2, 4, 6, 9 and 11. Wetlands 2, 6 and 9 are located adjacent to Mess Creek. Wetland 1 is located in lower Schaft Creek. Wetland 4 is located in the Skeeter Valley adjacent to Start Lake. Wetland 11 is located adjacent to Nagha Creek, which flows into Mess Creek just north of Mess Lake.

Fish were captured by electrofishing and minnow trapping. Electrofishing effort ranged from 113 electrofishing seconds in wetland 10 to 698 electrofishing seconds in wetland 3 (Figure 3.2-40). Electrofishing was no conducted in wetland 6 due to the absence of suitable habitat. Fish were only captured by electrofishing in wetlands 1, 9 and 11. Among wetlands where fish were captured, CPUE ranged from 0.23 fish/100 s in wetland 1 to 2.78 fish/100 s in wetland 9.

Minnow trap effort ranged from 1,457 trap hours in wetland 3 to 4,477 trap hours in wetland 5 (Figure 3.2-40). Minnow trapping was not conducted in wetlands 7, 8 or 10 due to the absence of suitable habitat for trapping. Fish were captured in minnow traps in wetlands 2, 4, 6, 9 and 11. Among wetlands where fish were captured, CPUE ranged from 0.02 fish/trap day in wetland 6 to 0.25 fish/trap day in wetland 9.



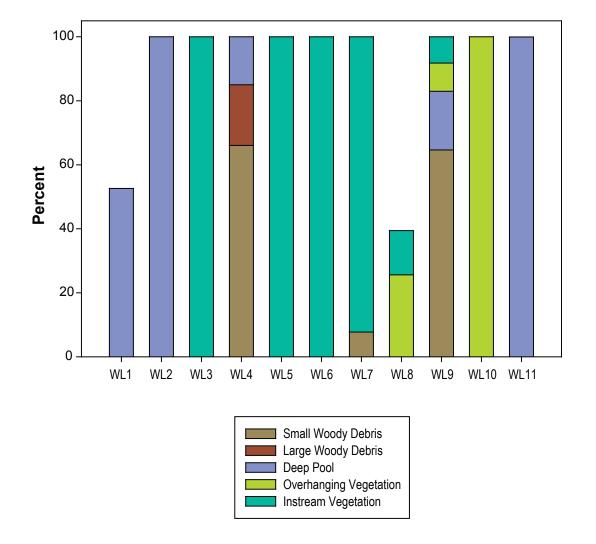






Dominant and Subdominant Substrate Types in Schaft Receiving Environment Wetlands, 2007

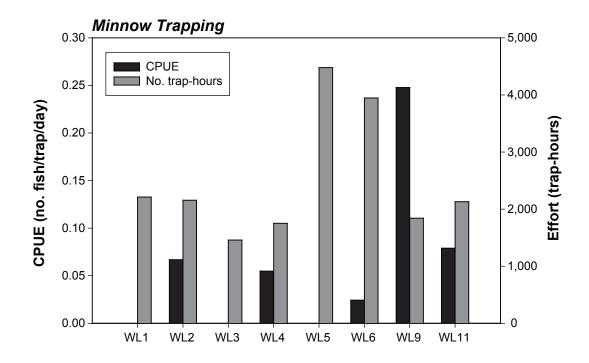


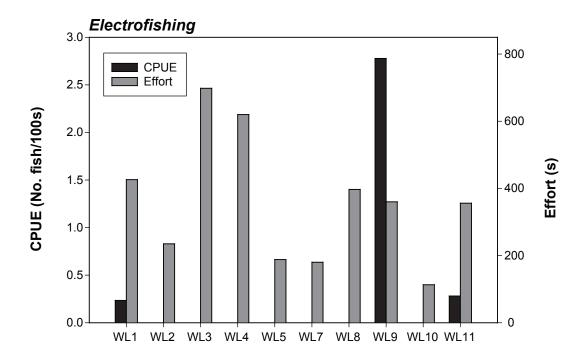






Dominant Cover Types in the Schaft Receiving Environment Wetlands







Sampling Effort and CPUE in Schaft Receiving Environment Wetlands, 2007



Wetland 9 had the highest CPUE for both sampling methods. This wetland is located adjacent to Mess Creek at the south end of the drainage. It is composed of a beaver-pond with a breached dam and an outflow stream that flows directly into Mess Creek. Water in both the pond and the outflow stream is clear, and the outflow stream has excellent habitat complexity and cover. These features make this waterbody ideal for rainbow trout.

Trout from five wetlands were measured and weighed in the field. Only one fish was captured in wetland 1, and it was lost before it could be measured. A scale malfunction resulted in inaccurate weights for fish from wetland 6; thus, these were deleted from the database. There was no significant difference in fish length between the receiving environment wetlands (ANOVA, F $_{4,47}$ = 1.27, P = 0.30) (Figure 3.2-41). Trout from wetland 11 were heavier than fish from wetland 9 (ANOVA, F $_{3,40}$ = 2.25, P < 0.10), while no significant differences in weight occurred among fish from the other wetlands.

There were not enough fish captured in each wetland to construct meaningful length-frequency distributions for each site; therefore, data was pooled to present a length-frequency distribution for all wetlands. The histogram was unimodal, with most fish measuring between 100 and 120 mm (Figure 3.2-42).

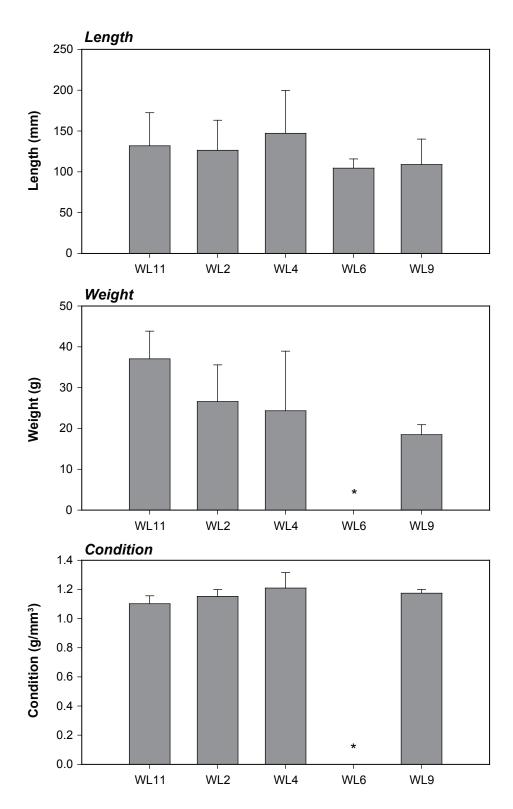
The slopes of the weight-length regressions for rainbow trout were tested among wetlands and did not differ significantly (GLM, F $_{2,42}$ = 2.06, P = 0.12); thus, weight (with length as a covariate) was compared among wetlands. There was no significant difference in weight at length among tested wetlands (ANCOVA, F $_{3,39}$ = 0.27, P = 0.84). To confirm these results, mean condition was compared among wetlands. Trout condition did not differ significantly among wetlands tested (ANOVA, F $_{3,40}$ = 0.62, P = 0.61).

Because the weight-length relationship did not differ among wetlands, all fish data were pooled to present a single regression for fish from Schaft Creek wetlands. The relationship between length and weight was highly significant (P < 0.001), and length explained 98% of the variation in fish weight (Figure 3.2-43).

Not enough fish were captured from each wetland to construct meaningful age-frequency distributions; thus, a single histogram was constructed for all fish captured in wetlands. The vast majority of fish captured in wetlands were aged at 0 years (Figure 3.2-44). Fewer than 10 fish were captured from each age class from 1 to 3.

A von Bertalanffy growth model was constructed for all fish captured in wetlands to relate age to growth. The resulting model was significant (P < 0.001); however, age only accounted for 29% of the variation in fish length (Figure 3.2-45). The model predicted a maximum fish length of 352 mm, with a growth coefficient of 0.09 years⁻¹.

In general, fish living in wetlands in the Schaft Creek Project area were healthy. Sites in the fish-bearing areas had a high abundance of fish, especially where the water was clear and deep.



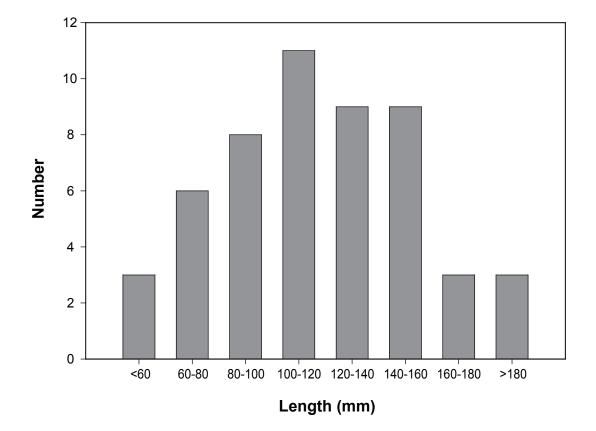
Notes: Error bars represent standard error of the mean.

* Scale malfunction prevented weights from being collected.

Mean Length, Weight and Condition of Rainbow Trout from Schaft Receiving Environment Wetlands, 2007



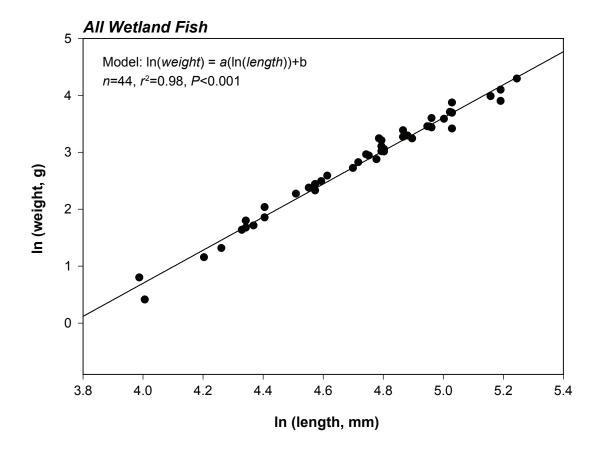






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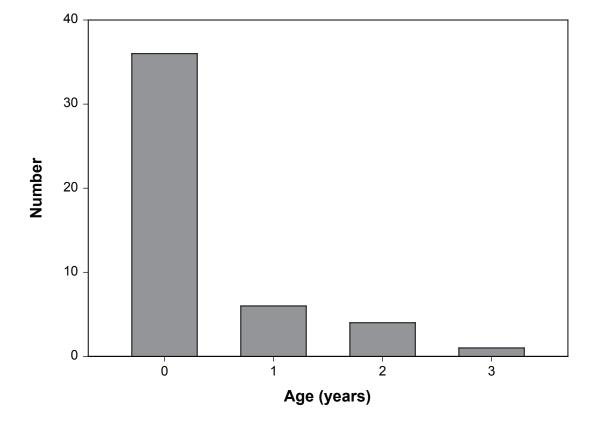
Length-Frequency Distribution of Rainbow Trout in Schaft Receiving Environment Wetlands, 2007





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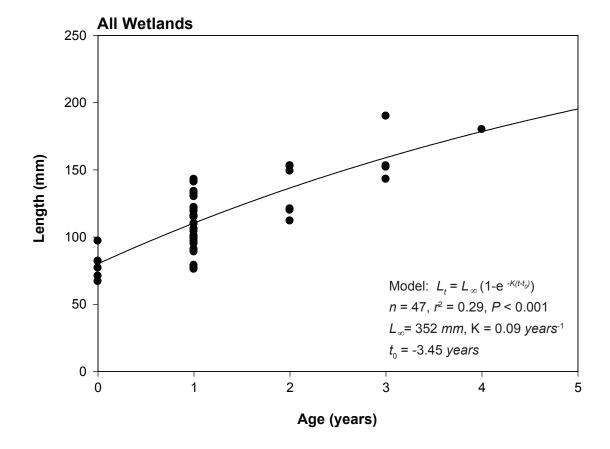
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Age Frequency Distribution of Rainbow Trout in Receiving Environment Wetlands





Von Bertalanffy Growth Model for Rainbow Trout from Schaft Receiving Environment Wetlands, 2007



3.2.3 Lakes

3.2.3.1 Fish Habitat

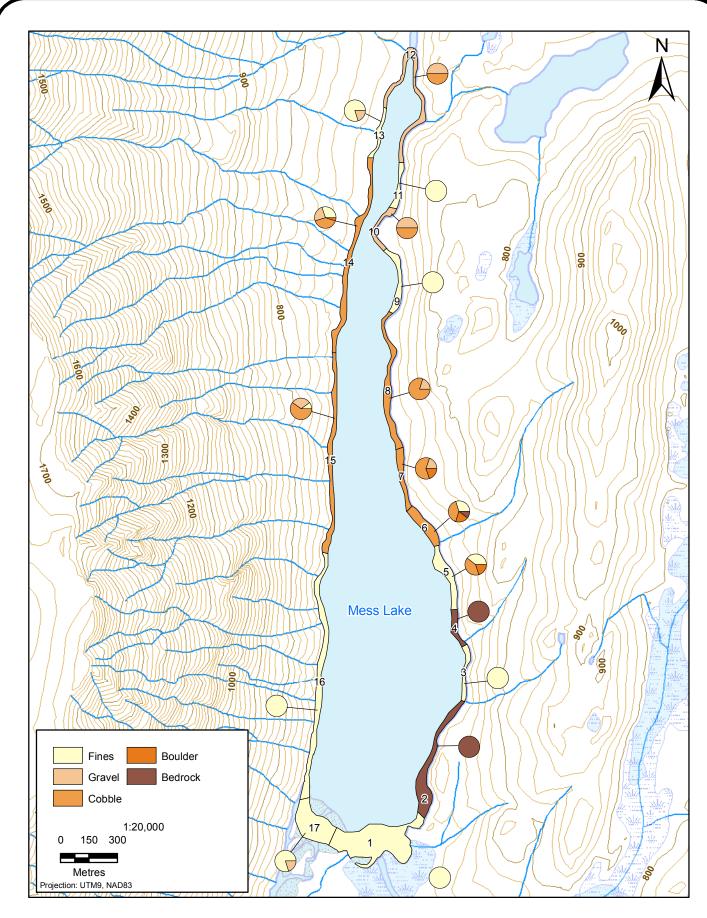
Lake 1 (Mess Lake)

Mess Lake is located on the mainstem of Mess Creek, approximately 55 km south of the Stikine River (Plate 3.2-12). It is a large, turbid lake bordered by steep talus slopes to the west and sloping shorelines to the east. The maximum depth of the lake was measured at 15 m; however, FishWizard lists the maximum depth as 19.1 m (Freshwater Fisheries Society of BC, 2005). The surface temperature at the time of sampling was 11°C, the surface conductivity was 120 μ S/cm and the pH was measured as 8.8. Boulder substrate dominated the shoreline around the northern parts of the lake, while fine sand dominated the shoreline along the south side (Figure 3.2-46). Some areas along the eastern shore were dominated by bedrock shores. Mess Creek is the main inlet and outlet of the lake; however, numerous small streams enter at various points along the shoreline, mostly in the northern parts of the lake. At the inlet, Mess Creek is wide and turbid, with a low gradient and fine substrate. A delta takes up most of the southern shore of the lake where the river enters. At the outlet, Mess Creek proceeds through a turbulent canyon which is too dangerous to survey or approach from a boat.

High turbidity provides most of the cover to fish in the lake. Occasional logs and boulders provide additional cover along the shoreline (Figure 3.2-47). Because of the high turbidity and low cover, habitat quality in the lake is generally poor to fair; however, it may provide important overwintering habitat to fish living in adjacent streams.



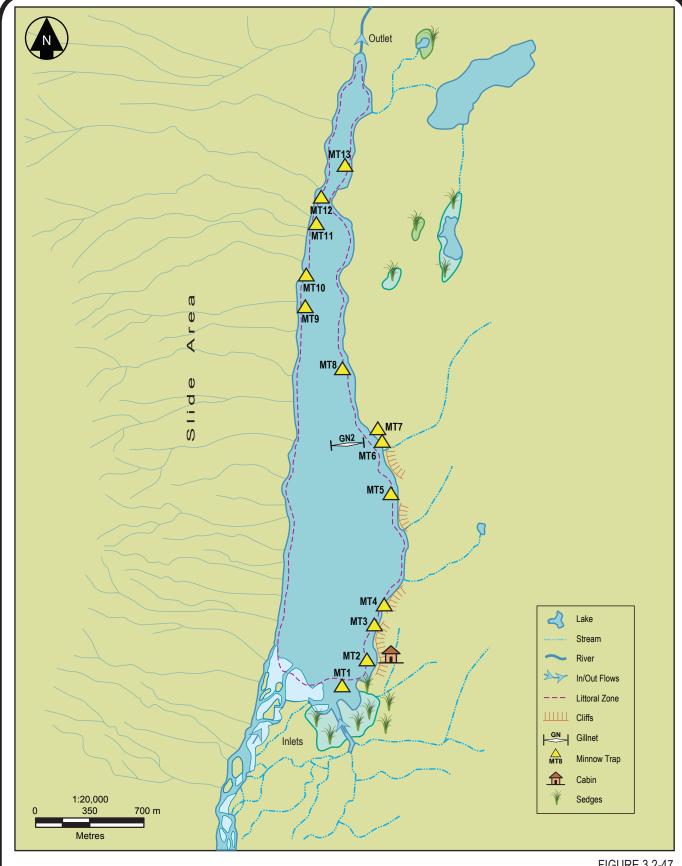
Plate 3.2-12. Mess Lake looking north towards the outlet.





Lake Habitat Units and Substrate Types in Mess Lake







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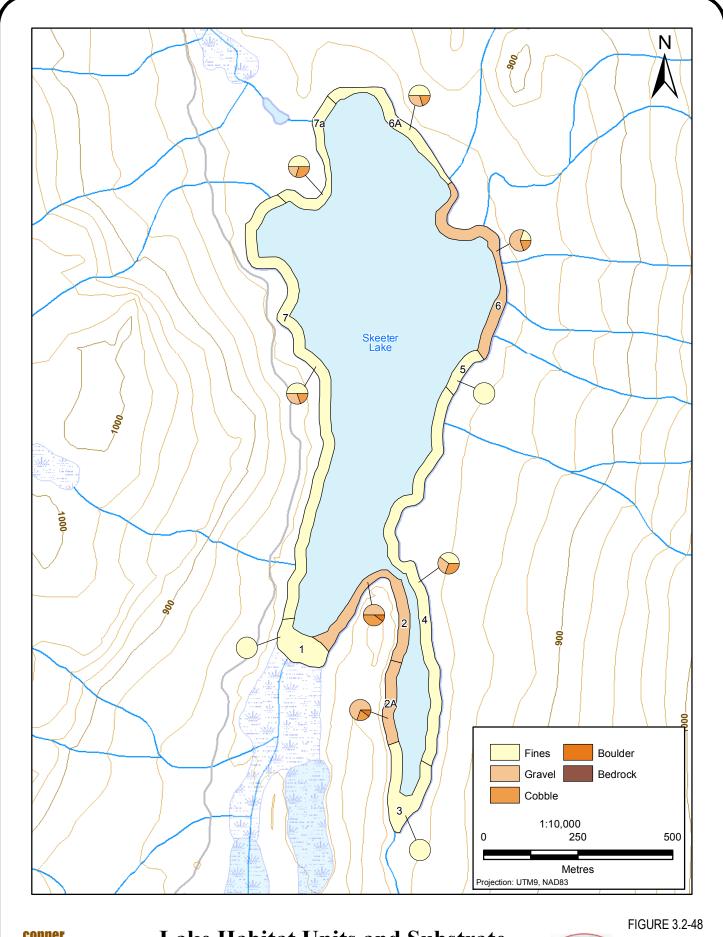
Lake 2 – Skeeter Lake

Skeeter Lake is a relatively deep, clear lake located on Skeeter Creek in a valley between Schaft Creek and Mess Creek (Plate 3.2-13). It falls within the footprint of one of the proposed tailings facility options. The maximum depth of the lake was measured at 40 m in July 2007. The surface temperature at the time of sampling was 12°C, the conductivity was 160 μS/cm and the pH was measured as 9.8. This is a very high value for pH and may have resulted from a malfunctioning meter. Fine substrates dominate the shoreline around most of the lake, with sporadic patches of gravel-dominated shoreline (Figure 3.2-48). A total of eight inlet streams were identified around Skeeter Lake, five of which contain habitat suitable for spawning and/or rearing salmonids. The main inlet and outlet is the mainstem of Skeeter Creek, which has been sampled as part of the receiving environment and contains excellent spawning, rearing and overwintering habitat. The outlet stream in particular flows at a low gradient through a wetland with abundant deep pools, gravel substrate and cover.

Cover in the lake is provided by large woody debris along the shoreline, as well as deep water and occasional boulders (Figure 3.2-49). Some aquatic vegetation is present near the inlet and outlet streams. Habitat quality in Skeeter Lake is good, with good cover and abundant spawning and rearing habitat in adjacent streams.



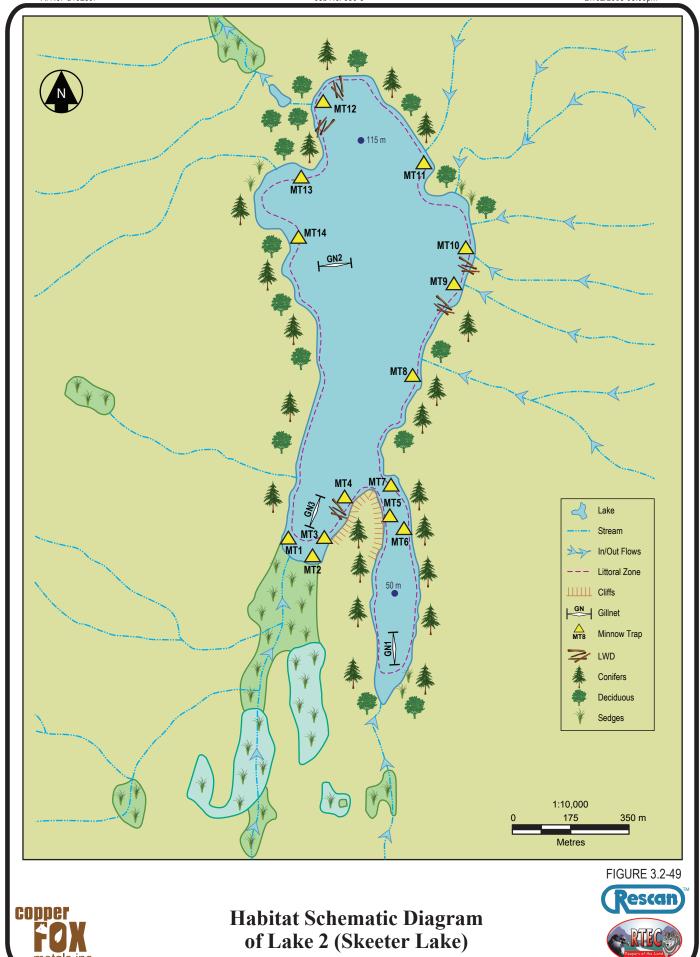
Plate 3.2-13. Aerial view of Skeeter Lake facing north.





Lake Habitat Units and Substrate Types in Skeeter Lake





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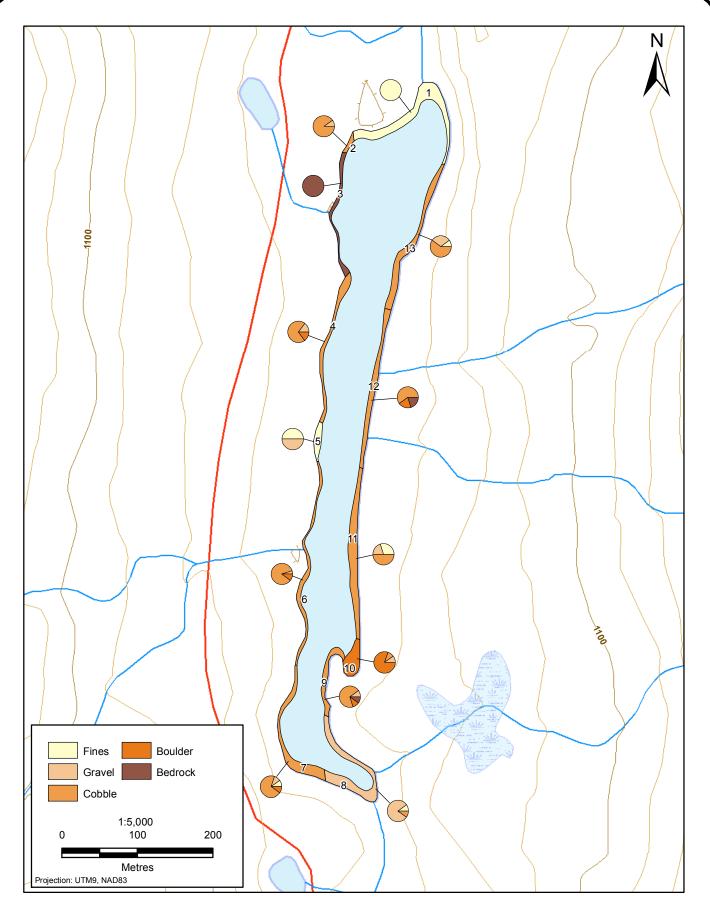
Lake 3

Lake 3 is a long, narrow lake at the headwaters of Mess Creek. It is located in the sub-alpine zone and is clouded by glacial sediment (Plate 3.2-14). The maximum depth measured in July 2007 was 12 m, the surface temperature was 6.5°C and the conductivity and pH were not recorded. Because of the steep shore and high turbidity, the amount of the littoral zone that was visible was very narrow. Shoreline substrates, where visible, were dominated by cobble substrate, followed by gravel and fine sediments (Figure 3.2-50). Some sections of the shoreline had a high abundance of bedrock substrate. Nine tributaries to Lake 3 were identified during the shoreline survey, three of which contained suitable spawning habitat for salmonids. The rest of the tributary streams were steep and rocky, containing no suitable habitat for any salmonid life stage.

The shoreline of the lake provides little cover due to the steeply sloping banks and low LWD abundance (Figure 3.2-51). Habitat quality in the lake is poor to fair due to the absence of cover and high turbidity; however, the presence of adjacent spawning habitat make it a possibility for fish rearing and overwintering.



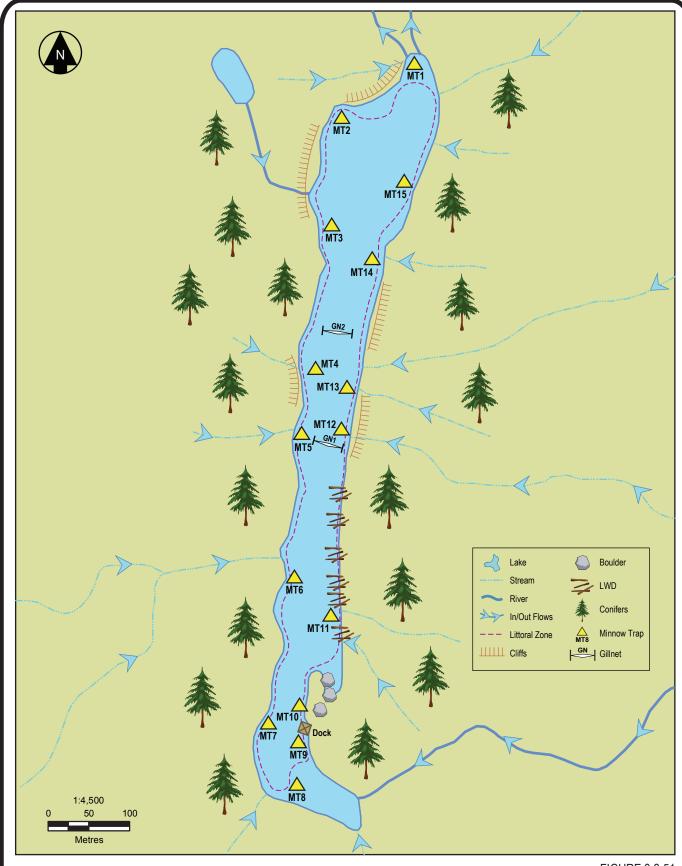
Plate 3.2-14. Aerial view of Lake 3 looking north.





Lake Habitat Units and Substrate Types in Lake 3







Habitat Schematic Diagram of Lake 3 (Upper Mess Lake)



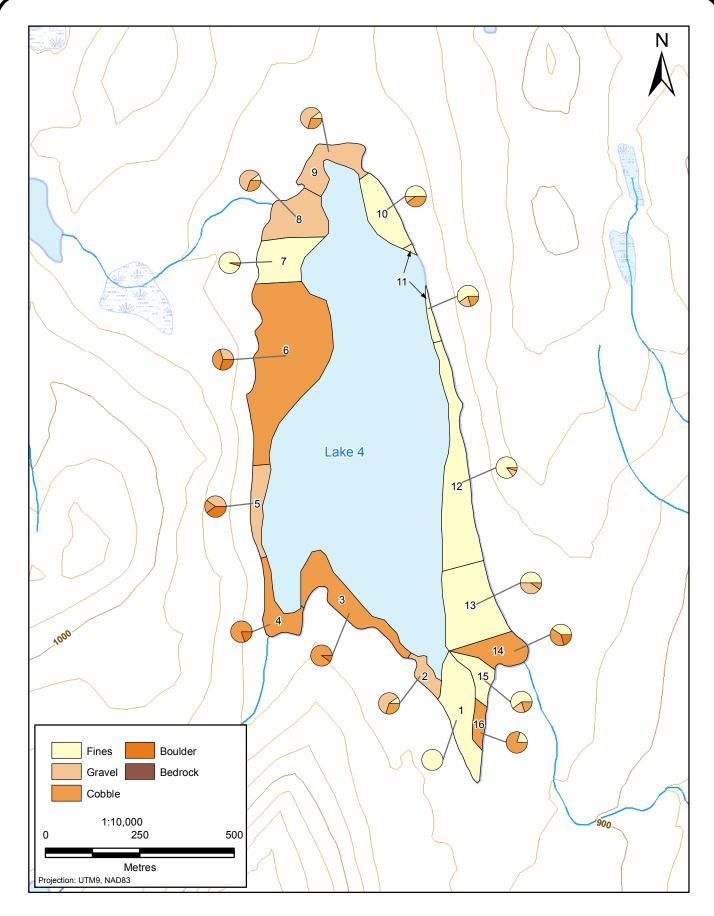
Lake 4

Lake 4 is a large, clear, relatively shallow lake that is located on the plateau between Schaft Creek and Mess Creek, approximately 22 km north of the Project site (Plate 3.2-15). It was surveyed as a reference lake in 2006 and 2007. The maximum depth of the lake was measured as 5.5 m in July 2007, the surface temperature was 15°C, the surface conductivity was 170 µS/cm and the pH was 9.1. The pH may have been overestimated due to a malfunctioning meter. The shoreline substrate of the lake varies widely. The eastern shore is dominated primarily by fine sediments, with smaller proportions of gravel and cobble (Figure 3.2-52). The northwestern section of the lake has cobble and gravel shoals that extend far from the shoreline. Cobble and gravel dominate the southwestern shoreline. Two inlet streams were identified during the shoreline survey. These were small streams with low flow, and may provide fair rearing habitat; however, no spawning habitat was observed. The outlet stream flows from the southeast corner of the lake and is dominated by cobble and fine sediment. It may provide fair to good rearing habitat, but poor spawning habitat.

Cover in the lake is provided by a small amount of aquatic vegetation, large woody debris and occasional boulders along the shoreline (Figure 3.2-53). Habitat quality is generally fair to good due to the size and depth of the lake; however, the lack of nearby spawning habitat may be limiting.



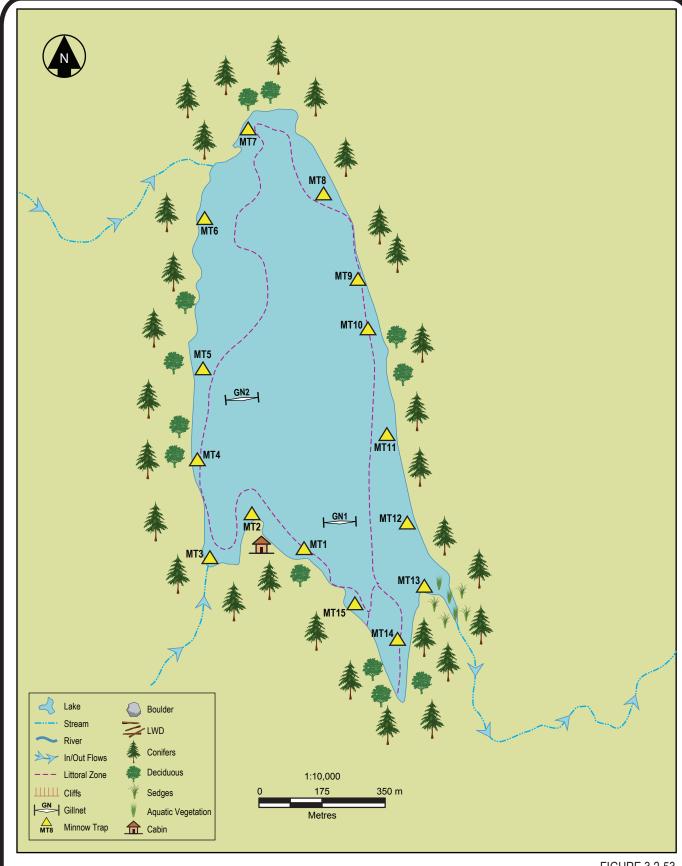
Plate 3.2-15. Aerial view of the northeast section of Lake 4.





Lake Habitat Units and Substrate Types in Lake 4









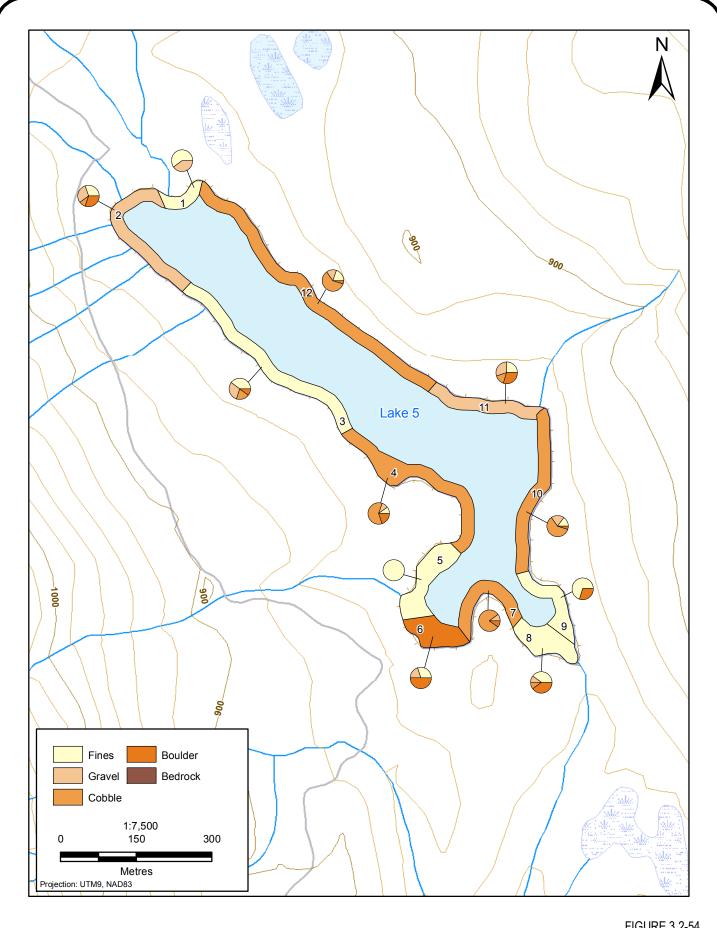
Lake 5 (Start Lake)

Start Lake is a moderately sized, deep, turbid lake located in the southern part of the Skeeter Valley, between Schaft Creek and Mess Creek (Plate 3.2-16). It empties to the south, eventually draining into Mess Creek. The maximum depth measured in July 2007 was 35 m, the surface temperature was 9°C, the conductivity was 140 µS/cm and the pH was not recorded. The shoreline substrate of the lake varied widely and included sections dominated by cobble, gravel and fine sediment (Figure 3.2-54). Most of the northeastern shore of the lake is dominated by cobble and fine sediment, with patches of boulder substrate. Eight inlet streams were identified, three of which contain habitat suitable for salmonid spawning. Some of the other inlets also have fair to good rearing habitat. The main inlet to the stream at the north end is turbid, and likely supplies most of the glacial sediments that cloud the lake; however, most of the other tributaries are clear.

Cover is provided by the high turbidity and depth, as well as by large woody debris and boulders along the shoreline (Figure 3.2-55). Some aquatic vegetation is present near the inlet streams. Habitat quality in the lake is fair to good due to the depth, abundant cover and presence of suitable spawning habitat in the tributary streams.



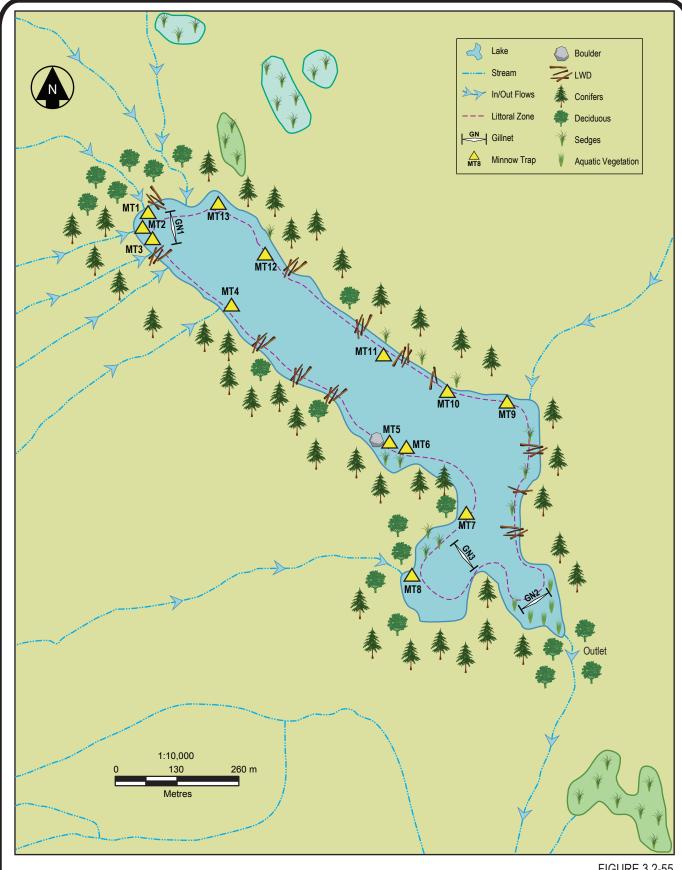
Plate 3.2-16. Aerial view of Start Lake looking towards the northwest.





Lake Habitat Units and Substrate Types in Lake 5







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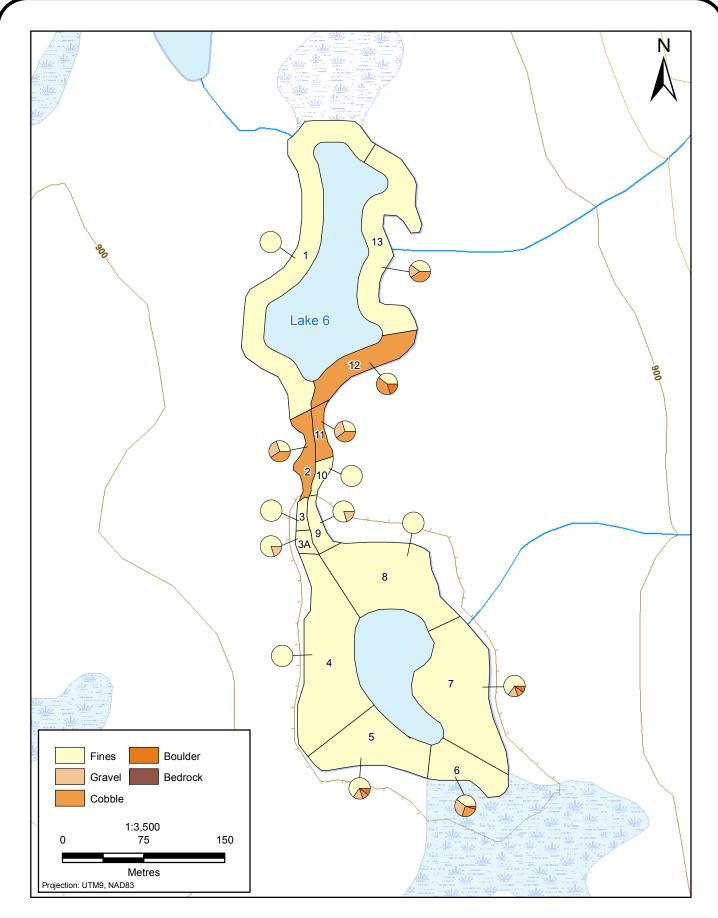
Lake 6

Lake 6 is a small, shallow, tannin-stained lake in the Skeeter Valley, located near the height of land that separates the northward-flowing waters from the southward-flowing waters (Plate 3.2-17). This lake drains south, eventually flowing into Start Lake, then into Mess Creek. The maximum depth measured in this lake was 1.7 m in 2007. The surface temperature in July 2007 was 16°C, the conductivity was 130 μ S/cm and the pH was 9.1. The pH may have been overestimated due to a malfunctioning meter. The lakeshore is dominated by fine substrates, as is the lake bottom. A small patch of cobble substrate is present on the west shore near the constriction (Figure 3.2-56). Only one inlet and one outlet stream was recorded during the shoreline survey. Both streams are dominated by fine sediment and low flow, and may provide poor to fair rearing habitat for salmonids.

Cover in the lake is provided by aquatic vegetation, large woody debris and occasional boulders (Figure 3.2-57). The shallow depth of the lake provides little cover for fish. Overall habitat quality is poor to fair due to the shallow depth and fine substrate.



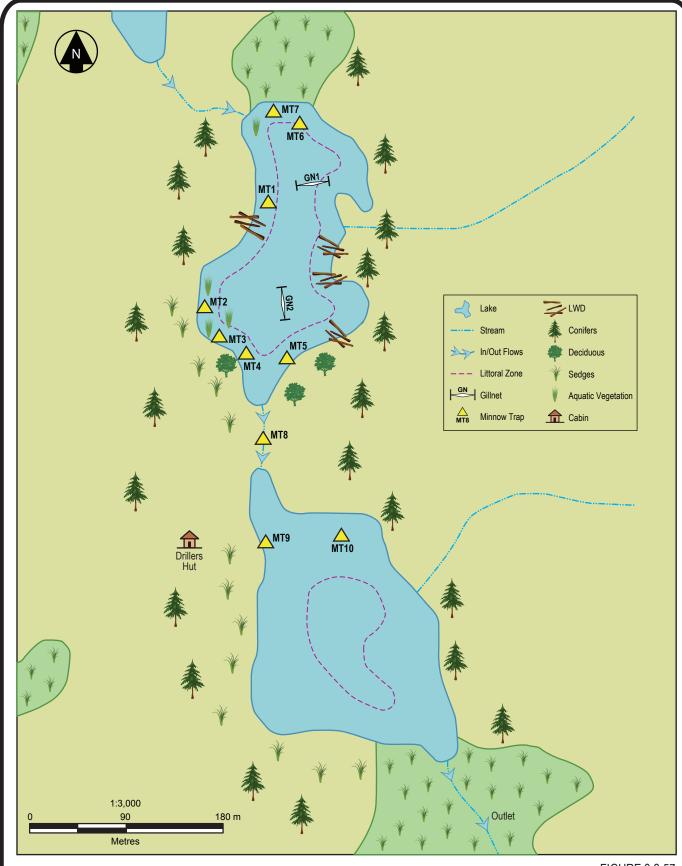
Plate 3.2-17. Lake 6 looking towards the northwest.





Lake Habitat Units and Substrate Types in Lake 6









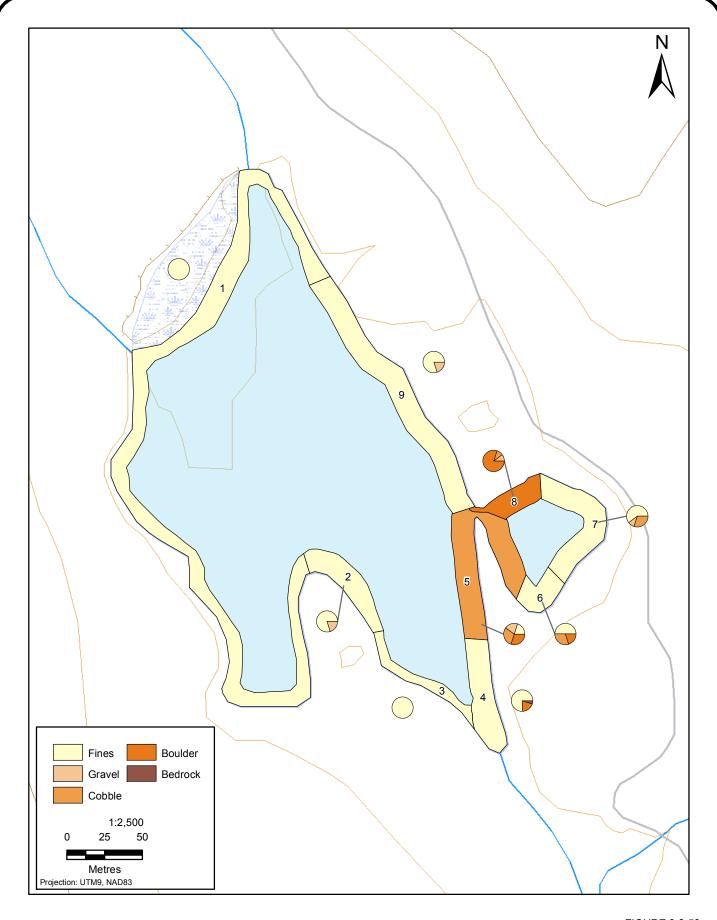
Lake 7

Lake 7 is a small, shallow pond located close to Start Lake (Plate 3.2-18). It drains south, flowing into Start Lake, then eventually into Mess Creek. The maximum depth of the lake was measured as 1.3 m in July 2007. The surface temperature at the times of sampling was 9° C, the conductivity was 130 μ S/cm and the pH was 8.9. The pH may have been overestimated due to a malfunctioning meter. Most of the lakeshore and bottom are dominated by fine substrates, with exceptions near the small lagoon at the east side of the lake, where cobble substrate was common (Figure 3.2-58). A sedge wetland occupies the north shore of the lake. Four tributaries were identified around the small lake, including one that contained suitable habitat for spawning.

The shallow depth and clarity of this lake do not provide much cover. Shelter is mainly provided by large woody debris along the shoreline (Figure 3.2-59). Habitat quality is fair to good along the margins where cover is abundant, but poor in the middle due to the shallow depth and lack of shelter.



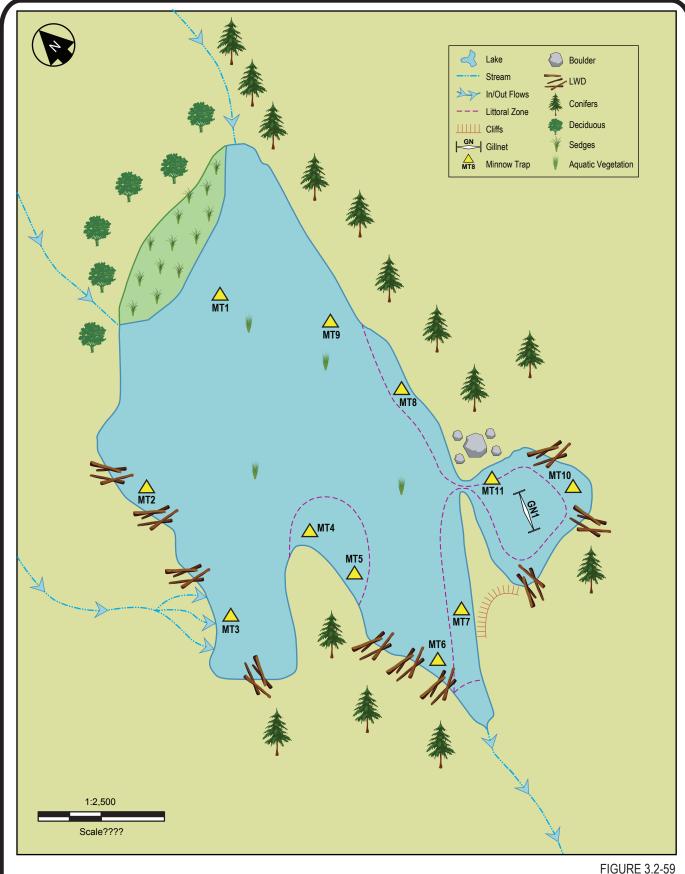
Plate 3.2-18. Aerial view of Lake 7 looking towards the northwest.





Lake Habitat Units and Substrate Types in Lake 7









3.2.3.2 Fish Community

Rainbow trout were captured in three lakes in the Schaft receiving environment in 2007: Lake 1 (Mess Lake), Lake 5 (Start Lake) and Lake 7 (Plate 3.2-19). One suspected Chinook salmon was also captured in Mess Lake. Descriptions of this fish and its implications for the Project are presented in section 3.2.1.1 under the heading "Barrier Assessment".



Plate 3.2-19. Rainbow trout captured in a gillnet in Lake 7.

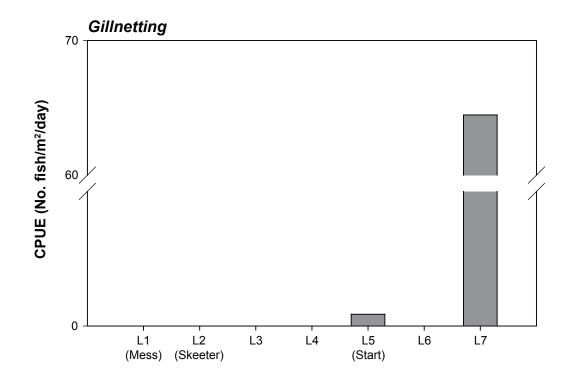
Total CPUE was calculated for minnow traps and gillnets. Minnow trapping was effective at catching fish in Lake 1 (Mess Lake) and Lake 5 (Start Lake), while gillnetting was effective in Lake 5 (Start Lake) and in Lake 7. Minnow trapping CPUE was similar in both lakes where fish were caught, and ranged from 0.032 to 0.034 fish/trap/day (Figure 3.2-60). Gillnetting CPUE was much higher in Lake 7 (64.47 fish/m²/day) than in Lake 5 (0.09 fish/m²/day). Lake 7 is much smaller, much shallower, and less turbid than Lake 5; therefore, it is possible that the fish in Lake 7 are more likely to use the open water areas than fish in Lake 5.

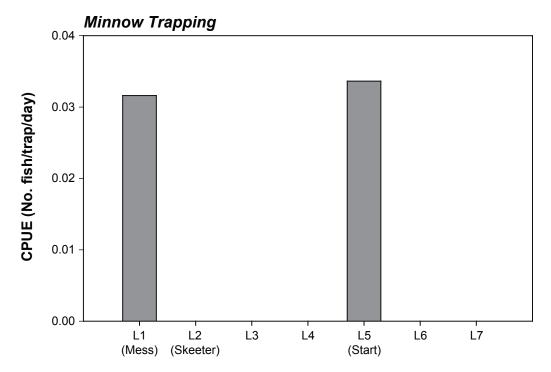
Rainbow trout from Lake 7 were significantly longer than fish from Start Lake and Mess Lake (ANOVA, F $_{2,37}$ = 16.49, P < 0.05) (Figure 3.2-61), despite the fact that this lake is much smaller. The recorded values for weight were incorrect for many of the larger fish due to a scale malfunction; therefore, mean weight could not be compared among lakes, and length-weight regressions were inaccurate.

Not enough fish were captured in lakes to construct meaningful length-frequency distributions for each lake, so data was pooled together. The length-frequency distribution for fish in the Schaft receiving environment lakes showed four modes: 60 to 80 mm, 100 to 120 mm, 160 to 180 mm, and over 220 mm (Figure 3.2-62). The distribution shows that in general, larger fish are abundant in the Project area lakes. This is to be expected since rainbow trout often migrate into lakes as they mature to take advantage of different food sources.

The age-frequency distribution constructed for the Schaft Project lakes showed that over half of the fish captured were 2 years of age or older (Figure 3.2-63). This is another indication of the shift in habitat use that occurs as rainbow trout age and start to make more use of lakes for feeding.

The von Bertalanffy distribution constructed for all lake-dwelling fish captured predicted a maximum length of 1,070 mm, with a growth coefficient of 0.06 years⁻¹ and an age at 0-length (t_0) of -0.82 years (Figure 3.2-64). This estimate likely exaggerates the maximum length attainable by fish in these lakes, and may be a result of the narrow age-range in the data.

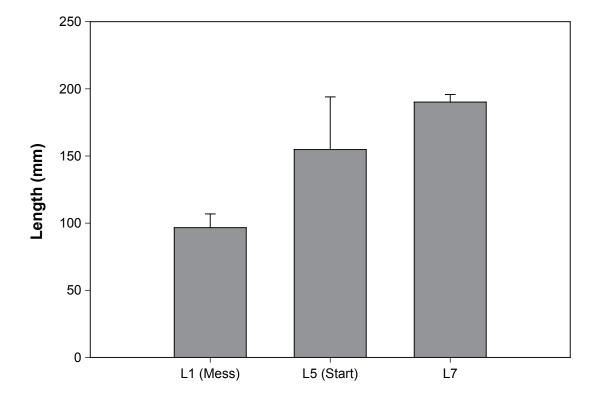






Gillnetting and Minnow Trapping CPUE in Schaft Receiving Environment Lakes, 2007





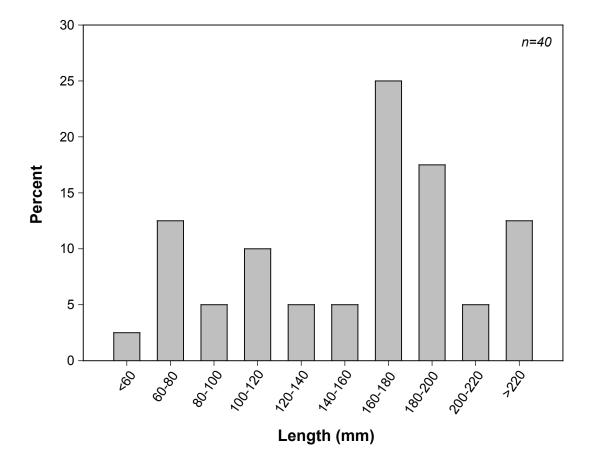
Note: Error bars represent standard error of the mean.



Rescan

Rescan

Mean Length of Rainbow Trout from Schaft Receiving Environment Lakes, 2007





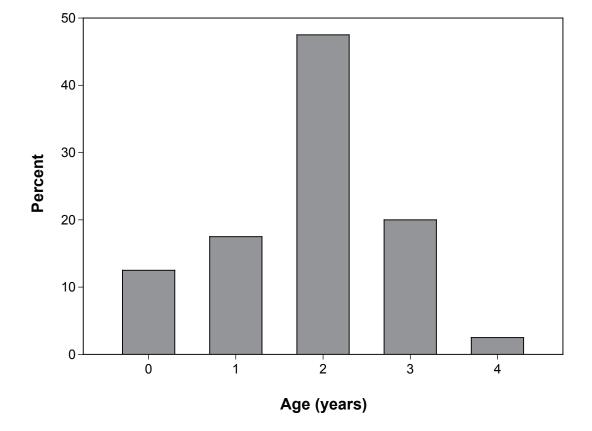


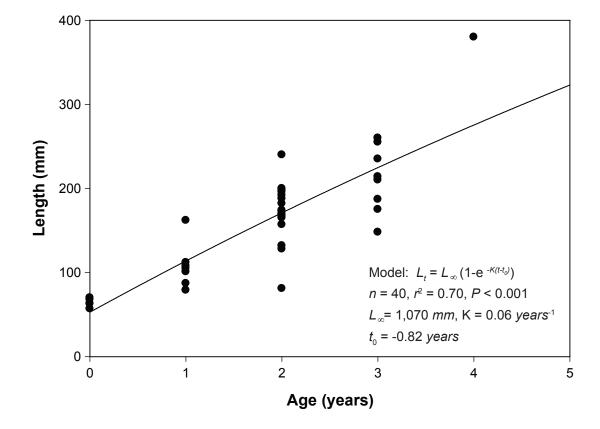


FIGURE 3.2-63

Rescan

™







Von Bertalanffy Growth Model for Rainbow Trout from Schaft Receiving Environment Lakes, 2007



REFERENCES



References

- BCMOF. 1998. Forest Practices Code of British Columbia Fish Stream Identification Guidebook, 2nd ed. Version 2.1. British Columbia Ministry of Forests. August, 1998.
- Freshwater Fisheries Society of BC (FFSBC). 2005. *FishWizard*. Freshwater Fisheries Society of B.C. http://www.fishwizard.com (accessed January 2007).
- Johnston, N.T. and P.A. Slaney. 1996. *Fish Habitat Assessment Procedures*. Watershed Restoration Technical Circular No. 8. Ministry of Environment, Lands and Parks and Ministry of Forests, Vancouver, BC.
- Resources Inventory Standards Committee (RISC). 1999. Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Site Card Field Guide. Victoria, B.C.

Resources Inventory Standards Committee (RISC). 2001. Reconnaissance (1:20,000) Fish and Fish Habitat Inventory: Standards and Procedures. Victoria, B.C.

APPENDIX 3.1-1 SITE CARDS COMPLETED FOR STREAM CROSSINGS ALONG THE PROPOSED SCHAFT ACCESS ROUTE



FDIS Site Card

Rearing Habitat

poor - no pools, primarily fines

Reach # ILP Map # ILP # Site

1.0 104G.016 1000 100 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M-1 ILP Map#: 104G.016 NID #: 10000 ILP #: 1000 1.0 NID Map #: 104G.016 Reach #: Site #: 100 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382752.6332127 Ref. Name: Incomplete: Date: 2007/08/09 Time: 10:00 Agency: C660 Crew: SH KM RD RS Fish Crd?: CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0 60 0.80 1 60 1.80 0.90 Method I: 7.00 2 50 1.37 7.0 С Wetted Width (m) MS 0.30 2 50 0.60 1.00 1.50 0.70 1.10 Method II: С Pool Depth (m) MS 0.16 0.15 0.13 0.10 0.13 No Vis.Ch.: Intermittent: Wb Depth .7 .6 .9 Avg: 0.73 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 21-40% Amount S Ν Ν Ν D S Loc: P/S/O: **V** INSTREAM VEG: N ☐ A ☐ M ☐ V ✔ LWD: N DIST: NA Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: S STG: MF STG: SHR WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 122 Method: S3 pH: 8.1 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: F Subdom: G D95: 5.00 D (cm): 2.00 Morph: RP DISTURBANCE **INDICATORS** Pattern: SI C1 C2 С3 C4 C5 S1 S3 S5 Islands: N Coupling: PC Confinement: OC DIAG Bars: N SIDE MID SPAN BR FSZ: FEATURES NID Map Method AirPhoto UTM (Z/E/N) NID Type Hgt Method Lg Photo Method 10001 104G.016 GE 9.382765.6332141 GP3 RB R: Comments HABITAT QUALITY Name Comments Spawning Habitat none OverWinter Habitat poor

FDIS Site Card

Reach # ILP Map # ILP# Site 1.0 104G.016 1000

100

PHOTOS							
Photo				Foc Lg	Dir	Comments	
R:	107	F:	3909	STD	D	looking ds to wetland	
R:	107	F:	3910	STD	U		
R:	107	F:	3911	STD	U	step pool at us end of reach	
WILDLIFE							
Group				Observations			
	MAM			bear scat			
COMMENTS							
Section					Comments		
CHANNEL				S6 - s	S6 - small channel with a gradient of 7% leading into a wetland. Gravel and step pool morph then unconfined, fines before wetland.		



Site 100 - Downstream view, looking to wetland



Site 100 – Upstream view



Site 100 – Upstream step pool at end of reach

Reach # ILP Map #

ILP#

Site

101

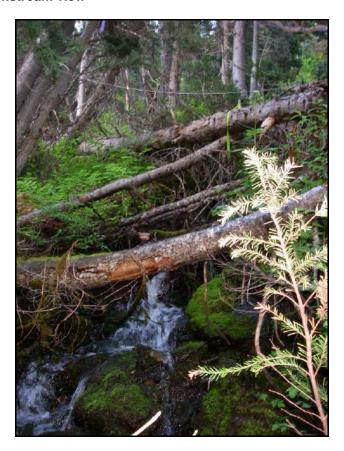
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Section CHANNEL Reach # ILP Map # ILP # Site
2.0 104G.016 1000 101

COMMENTS
Comments
S6 - high gradient stream leading into a wetland



Site 101 – Downstream view



Site 101 – Upstream view

Rearing Habitat

poor - no pools

ILP Map # Reach # ILP#

Site 1.0 104G.016 1001 102 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M3/M4 ILP #: 1001 NID #: 10003 1.0 ILP Map#: 104G.016 NID Map #: 104G.016 Reach # Site #: 102 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382787.6352249 Ref. Name: Incomplete: Date: 2007/08/09 Time: 10:50 Agency: C660 Crew: KM SH RS RD Fish Crd?: CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 2 40 0.90 2 40 Method I: 20.00 1 40 1 70 1.40 1.70 18.0 22.0 С Wetted Width (m) MS 1.30 0.80 1.40 0.90 0.80 2.20 1.23 Method II: С 0.00 Pool Depth (m) MS No Vis.Ch.: Intermittent: Wb Depth .2 .1 Avg: 0.15 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 71-90% Amount Ν Ν Ν D Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: A DIST: C Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ RIP: M RIP: M STG: PS STG: PS WATER EMS: Req#: Temp: 6 Method: T3 Cond.: 111 Method: S3 pH: 8.1 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 В3 D1 D2 D3 Bed Material: Dominant: G Subdom: F **V ~** D95: 10.0 D (cm): 8.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: IR C1 C2 С3 C4 S1 S3 S5 Islands: N Coupling: DC Confinement: UN DIAG Bars: N SIDE MID SPAN BR FSZ: FEATURES NID Map Method AirPhoto UTM (Z/E/N) NID Type Hgt Method Lg Photo Method 104G.016 10004 GE 107 F: 3916 9.382787.6352249 GP3 FLD R: Comments: dry channel on lb HABITAT QUALITY Name Comments Spawning Habitat poor - too steep OverWinter Habitat poor - no pools

Reach # ILP Map # ILP # Site

1.0 104G.016 1001 102

	PHOTOS									
Photo			Foc Lg	Dir	Comments					
R:	107	F:	3914	STD	U					
R:	107	F:	3915	STD	D					
R:	107	F:	3916	STD	D	feature dry channel				
						COMMENTS				
		Se	ction			Comments				
CHANNEL				S6						



Site 102 – Upstream view



Site 102 – Downstream view



Site 102 – Downstream dry channel

Reach # ILP Map # ILP #

Site

1.0 104G.016 1002 103 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M-5 NID #: 10005 ILP #: 1002 1.0 ILP Map#: 104G.016 NID Map #: 104G.016 Reach # Site #: 103 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382778.6332474 Ref. Name: Incomplete: Date: 2007/08/09 Time: 12:15 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) MS 1 20 1 40 1.10 Method I: 34.00 0.90 1.50 1.20 1.22 45.0 23.0 С Wetted Width (m) MS 0.85 0.70 1.20 1.10 1.10 1.10 1.01 Method II: С 0.16 Pool Depth (m) MS 0.16 No Vis.Ch.: Intermittent: Wb Depth .3 .3 Avg: 0.30 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 41-70% Amount Ν Ν Ν D Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: F DIST: C Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F G C B R A RIP: M RIP: M STG: PS STG: PS WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 259 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: G Subdom: B D95: 15.0 D (cm): 10.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: ST C2 С3 S1 S3 S5 Islands: N Coupling: DC Confinement: FC DIAG Bars: N SIDE MID SPAN BR FSZ: FEATURES NID Map Method AirPhoto UTM (Z/E/N) NID Type Hgt Method Lg Photo Method 104G.016 10006 GE 107 F: 3924 9.382742.6332475 GP3 120.0 100 R: Comments: steep cascade down to upper Mess Lake (45%) HABITAT QUALITY Name Comments Spawning Habitat none OverWinter Habitat none Rearing Habitat poor - no pools, fast steep

	PHOTOS									
	Ph	oto		Foc Lg	Dir	Comments				
R:	107	F:	3924	3924 STD NS feature - cascade						
R:	107	F:	3925	STD	U	sp morph ds of rc				
R:	107	F:	3926	STD	D					
						COMMENTS				
	Section Comments									
	CHANNEL S6 - sp channel through av chute. Mod gradient at rc but plunges off mountain ~50m ds of road.									



Site 103 – Feature cascade



Site 103 – Upstream step-pool morphology

Reach # ILP I

ILP Map#

ILP#

1.0 104G.016

1003

104

Site

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Projec	ct Name: Schaft Ci	eek				
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Pool Depth (m):	MS				0.00 No Vis.Ch.:	Intermittent:
Wb Depth:		Avg: 0.00	Method: MS	Stage: L M	H Dw:	Tribs.:
COVER		Total:				
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RIP:				RII		
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Temp:			Method: T3	Cond.:		Method: S3
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i lood Signs.						
			MORPHOLO	OG Y O1 B1	B2 B3 D1 D2	D3
Bed Material:	Dominant:	Subdom:			Б2 B3 D1 D2	
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Coupling:						
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FSZ:[Bar	s: N SI	DE DIAG MI	D SPAN BR
			рнотоs			
Photo	Foc Lg	Dir			Comments	
R: 107 F: 3927	STD	S	seepage wetland COMMEN			
04			CONINEN			
Section CHANNEL	NCD			Comments		
SITE CARD	NCD					
SITE CARD	NCD					



Site 104 – South view showing seepage wetland

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: Schaf	Creek			
Stream Name (gaz.): MESS			Project Code:	17415
Project Watershed Code: 630-0		000-000-000-000-000-000	· ·	17413
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		WATERSHED		
Gazetted Name:			Local Name:	
	00 00000 0000 0000 000 (200 000 000 000 000	Local Name:	
Watershed Code: 000-000000-000			NID #- 40000 - D	4.0
ILP Map#: 104G.016	ILP #: 1004 N	ID Map #: 104G.016	NID #: 10008 Reach #:	1.0 Site #: 105
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: 0	GE Access: H
GIS UTM (Z.E.N): 9.382790.63325	35		Ref. Name:	
D-t 2007/00/00	Ti 40-50	A 0000	Crew: SH KM RS RD Fish C	
Date: 2007/08/09	Time: 12:58	Agency: C660	Crew: SH KM RS RD Fish C	rd?: Incomplete:
		CHANNEL		
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Channel Width (m): MS 0.80	0.30 0.85 0.60 1	.20 0.90	0.78 Metho	d I: 5.0 C 5.00
Wetted Width (m): MS 0.70	0.35 0.70 0.50 1	.10 0.70	0.67 Method	d II: C
Pool Depth (m): MS 0.40	0.26 0.11 0.35 0	0.25 0.30	0.28	
			No Vis.	
Wb Depth: .2 .1	.2 Avg: 0.17	Method: MS	Stage: L M W H	Dw: Tribs.:
COVER	Total: A			
Type: SWD LW	D B U	DP OV IV	CROWN CLOSURE	
Amount:	S	D	0 0%	
Loc: P/S/O:			INSTREAM VEG: N ✓ A	\neg M \Box V \Box
			INSTREAM VEG. IN V	
LWD: NS	DIST: NS			
LB SHP: S			RB SHP: S	
	C _ B _ R _ A _	¬	Texture: F ✓ G ☐ C	
RIP: S			RIP: S	
STG: SHR			STG: SHR	
		WATER		
EMS:			Req #:	
Temp: 8	1	Method: T3	Cond.: 228	Method: S3
pH: 7.9	1	Method: P2	T . T - M	
Flood Signs:	1	Method: GE	Turb.: T M L	C Method: GE
		MORRHOLOG	V	
		MORPHOLOG		Do Do
Bed Material: Dominant	F Subdom: G	i	O1 B1 B2 B3 D1	D2 D3
D95: 0.01 D (cm)	0.01 Morph: R	P DISTURBANCI	_	
Pattern: ST		INDICATORS		S1 S2 S3 S4 S5
Islands: N				
Coupling: DC				
Confinement: UN				
FSZ:		Bars:	N✓ SIDE DIAG	MID SPAN BR
F3Z.				
		HABITAT QUAL	ITY	
Name			Comments	
	nadequate substrate			
OverWinter Habitat poor				
	ols, lots of cover			
		PHOTOS		
Photo Foc Lg	Dir	I	Comments	
R: 107 F: 3928 STD	D	1		
R: 107 F: 3929 STD	U			
<u> </u>		1		

COMMENTS					
Section	Comments				
CHANNEL	S6 - small stream, runs through wetland. High organic substrate				



Site 105 – Downstream view



Site 105 – Upstream view

Reach #

ILP Map#

ILP#

1.0 104G.016 1005

Site 106

		PROJE	СТ	
Stream Name (gaz.)	:: Schaft Creek :: MESS CREEK :: 630-000000-00000-00000-0	0000-0000-000-000-000-00	Project Code: 00-000-000	17415
		WATERS	HED	
Gazetted Name: Watershed Code: 000-000 ILP Map#: 104G.0 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.38279	Method	NID Map #: 104G.016	NID #: 10009 Reach #:	1.0 Site #: 106 od: GE Access: H
Date: 2007	7/08/09 Time: 13:20	Agency: C660	Crew: SH KM RS RD Fis	h Crd?: Incomplete: 🗸
		CHANN	EL	
Mtd Channel Width (m): MS Wetted Width (m): MS Pool Depth (m): MS Wb Depth:	width width width width width Avg: 0.0		0.00 Me	Gadient % Mtd Avg ethod I: C 0.00 thod II: C Vis.Ch.: Intermittent: Tribs.:
COVER Type: SWD Amount: Loc: P/S/O: LWD: LB SHP: Texture: F RIP: STG:	Total: LWD B		IV CROWN CLOSURE INSTREAM VEG: N RB SHP: Texture: F G G RIP: STG:	A
		WATE	R	
EMS: Temp: pH: Flood Signs:		Method: T3 Method: P2 Method: GE	Req #: Cond.: Turb.: T M L	Method: S3 C Method: GE
		MORPHOL	. O G Y	
D95: Pattern: Islands: Coupling: Confinement:	Dominant: Subd D (cm): Mo	orph: DISTUR INDICA	BANCE	D1 D2 D3 D5 S1 S2 S3 S4 S5 MID SPAN BR
FSZ:				
		PHOTO		
	c Lg Dir TD X	showing soonage	Comments	-
1. 10/ 1. 3833 3		showing seepage COMMEI	NTS	
Section		30 111 111 E1	Comments	
CHANNEL	NCD - seepage		Commonto	
SITE CARD	NCD - seepage			
	- -			



Site 106 – Across view, showing seepage

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: Schaft C Stream Name (gaz.): MESS C Project Watershed Code: 630-000	REEK	0000-000-000-000-000	Project Code: -000	17415
		WATERSHED)	
Gazetted Name:		WATERONEE	Local Name: M-7	
Watershed Code: 000-000000-00000)-00000-0000-0000-000-0	000-000-000-000	Local Name. Wi-7	
ILP Map#: 104G.016		ID Map #: 104G.016	NID #: 10018 Reach #:	1.0 Site #: 107
•		.5 map // 10 1010 10		
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: 0 Ref. Name:	GE Access: H
GIS UTM (Z.E.N): 9.382779.6332895			Rei. Name.	
Date: 2007/08/09	Time: 13:30	Agency: C660	Crew: KM RS SH Fish C	rd?: Incomplete:
		CHANNEL		
Mtd width w	idth width width w	idth width width widt	h width width Avg	Gadient % Mtd Avg
Channel Width (m): MS 1.40 0.9		.50 0.30	0.80 Metho	
	.10 0.70 1.20 0	.70 0.90	0.90 Method	d II: C
Pool Depth (m): MS 0.10 0	.10 0.11 0.13		0.11	
			No Vis	
Wb Depth: .2	Avg: 0.20	Method: MS	Stage: L M W H	Dw: Tribs.:
COVER	Total: A			
Type: SWD LWD	B U	DP OV IV	CROWN CLOSURE	
Amount: D S	N S	N S N	1 1-20%	
Loc: P/S/O:			INSTREAM VEG: N ✓ A	$\neg M \cap V \cap$
LWD: A	DIST: E			
LB SHP: V			RB SHP: S	
Texture: F 🗹 G 🗌 C	BRA		Texture: F ✓ G C	□ B □ R □ A □
RIP: C			RIP: C	
STG: YF			STG: MF	
		WATER		
EMS:			Req #:	
Temp: 5	1	Method: T3	Cond.: 187	Method: S3
pH: 8.2	ı	Method: P2	Turb.: T M L	C Method: GE
Flood Signs:	1	Method: GE	Tulb T Wi L	Wiethod. GE
		MORPHOLOG	Υ	
Bed Material: Dominant: F	Subdom: G		O1 B1 B2 B3 D1	D2 D3
D95: 20.0 D (cm):		Б		
(/	o.oo inoipii. ix	DISTURBANC INDICATORS	E	
Pattern: SI		II VDIO/ (TORC	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands: N				
Coupling: DC Confinement: OC				
FSZ:		Bars:	N SIDE DIAG	MID SPAN BR
1 32.				
		HABITAT QUAL	ITY	
Name			Comments	
	vel, but high gradient, fas	st flow		
OverWinter Habitat none				
Rearing Habitat poor - no	pools, shallow fast	DUCTOS		
		PHOTOS		
Photo Foc Lg	Dir		Comments	
R: 107 F: 3934 STD	D	ds of rc, steep (30%) secti	on	
R: 107 F: 3935 STD	U	swd at rc		

	COMMENTS
Section	Comments
CHANNEL	S6 - 30% gradient ~30m ds of road. Small clear stream through av chute and off.



Site 107 – Downstream view, steep section



Site 107 – Upstream view showing SWD

ILP Map# Reach #

1.0

104G.016

ILP# 1007

Site 108

PROJECT Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M-8 ILP Map#: 104G.016 ILP #: 1007 NID #: 10010 1.0 NID Map #: 104G.016 Reach # Site #: 108 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382810.6333022 Ref. Name: Incomplete: Date: 2007/08/09 Time: 13:55 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.90 Method I: 40.0 28.0 34.00 1.50 1 70 1 90 1.80 2.20 1.67 С Method II: Wetted Width (m) MS 1.00 1.60 1.80 2.00 1.60 2.00 1.67 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: .3 Avg: 0.30 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: T **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 41-70% D Ν Amount S Ν INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: F DIST: E RB SHP: U Texture: F ✓ G ☐ C ☐ B ☐ R ✓ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 207 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: B Subdom: R D95: 35.0 D (cm): 13.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: ST C1 C2 С3 C4 C5 S1 S3 S5 Islands: N Coupling: DC Confinement: OC DIAG Bars: N SIDE MID SPAN BR FSZ: FEATURES NID Map Method AirPhoto UTM (Z/E/N) NID Type Hgt Method Lg Photo Method 104G.016 10011 MS MS 107 F: 3936 9.382810.6333022 GP3 1.5 0 R: Comments: just ds at rc HABITAT QUALITY Name Comments Spawning Habitat none OverWinter Habitat none Rearing Habitat none

Reach # ILP Map # ILP # Site

1.0 104G.016 1007 108

	PHOTOS								
Photo			Foc Lg	Dir	Comments				
R:	107	F:	3936	STD	NS	feature - falls			
R:	107	F:	3937	STD	NS	feature - falls			
	COMMENTS								
Section Comments									
CHANNEL S6 - steep cascade (40%) at rc. No pools, no habitat.						c. No pools, no habitat.			



Site 108 – Feature falls



Site 108 – Feature falls

Name

OverWinter Habitat

Spawning Habitat

Rearing Habitat

none

none

none

Reach # ILP Map # ILP #

Site

1.0 104G.016 1008 109 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M-9 ILP Map#: 104G.016 NID #: 10012 ILP #: 1008 1.0 NID Map #: 104G.016 Reach # Site #: 109 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382843.6333214 Ref. Name: Incomplete: Date: 2007/08/09 Time: 12:35 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.90 0.30 1.00 0.69 Method I: 70.00 0.33 0.33 1.30 70.0 С Wetted Width (m) MS 0.33 0.48 0.70 1.00 0.90 1.20 0.77 Method II: С 0.80 Pool Depth (m) MS 0.18 0.14 0.10 0.40 0.60 0.37 No Vis.Ch.: Intermittent: Wb Depth: .2 .4 .4 Avg: 0.33 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 41-70% Amount D S S INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: LWD: N DIST: NA Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: M RIP: M STG: MF STG: MF WATER EMS: Req#: Temp: 6 Method: T3 Cond.: 245 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: F Subdom: G D95: 3.00 D (cm): 3.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: ST C2 С3 C4 C5 S1 S3 S5 Islands: N Coupling: PC Confinement: UN DIAG Bars: N SIDE MID SPAN BR FSZ: FEATURES NID Map Photo AirPhoto UTM (Z/E/N) NID Type Hgt Method Lg Method Method 104G.016 10013 GE 107 F: 3940 9.382822.6333232 GP3 200.0 GE 100 Comments: cascades all the way to the lake from 20m ds of road center marker.

HABITAT QUALITY

Comments

						PHOTOS				
	Photo			Foc Lg	Dir	Comments				
R:	107	F:	3938	STD	U					
R:	107	F:	3939	STD	D					
R:	107	F:	3940	STD	U	fish barrier, cascade				
R:	107	F:	3948	STD	U	showing unconfined area				
						COMMENTS				
	Section Comments									
		CHA	NNEL		S6 - high gradient small stream cascading down the mountain primarily undercut with extensive over veg and often covering stream. Almost flowing underground at parts.					



Site 109 – Upstream view



Site 109 - Upstream, cascade fish barrier



Site 109 – Downstream view



Site 109 – Upstream, showing unconfined area

Reach # ILP Map # ILP #

Site

Project Name	e: Schaft Creek										
Stream Name (gaz.				Project Code:	17415						
Project Watershed Code	e: 630-000000-000	00-0000-0000-0000-	000-000-000-000-000-	-000							
		,	WATERSHED								
Gazetted Name:				Local Name: M-10							
Watershed Code: 000-00	0000-00000-00000-	0000-0000-000-0	00-000-000								
ILP Map#: 104G.0)16 ILP	#: 1009 NID Ma	ap #: 104G.016	NID #: 10014 Reach #:	1.0 Site #: 110						
Field UTM (Z.E.N):	E.N): Method: Site Lg: 150 Method: GE Access: H										
GIS UTM (Z.E.N): 9.3828	83.6333497			Ref. Name:							
Date: 200	7/08/09 Tim	e: 15:30	Agency: C660	Crew: KM RS SH RD Fis	h Crd?: Incomplete:						
			CHANNEL								
Mtd	width width w	vidth width width	width width width	h width width Avg	Gadient % Mtd Avg						
Channel Width (m): MS		.60 0.60 1.40			ethod I: 80.0 4.0 C 30.33						
Wetted Width (m): MS		.80 1.10 1.50		1.26 Me	thod II: 7.0 C						
Pool Depth (m): MS	0.14			0.14 No.	Vis.Ch.: Intermittent:						
Wb Depth: .2	.2	Avg: 0.20 N	Method: MS	Stage: L ☐ M ✓ H ☐	Dw: Tribs.:						
COVER	Total:										
Type: SWI	D LWD B	U DP	OV IV	CROWN CLOSURE							
Amount: T	N N	S N	D N	3 41-70%							
Loc: P/S/O:				INSTREAM VEG: N ✓	A M V						
LWD: N	DIST	: NA									
LB SHP: U				RB SHP: U							
	G _ C _ B	\square R \square A \square		Texture: F 🗾 G 🦳	C B R A						
RIP: W				RIP: C							
STG: NA				STG: MF							
			WATER								
EMS:				Req #:							
Temp: 4		Metho	od: T3	Cond.: 212	Method: S3						
pH: 8.2			od: P2	Turb.: T M L	C Method: GE						
Flood Signs:		Metho	od: GE								
		N	IORPHOLOG	Υ							
Bed Material:	Dominant: G	Subdom: C		O1 B1 B2 B3 D	1 D2 D3						
D95: 18.0	D (cm): 5.00	Morph: RP	DISTURBANCE								
Pattern: IR			INDICATORS		5 S1 S2 S3 S4 S5						
Islands: N											
Coupling: PC											
Confinement: OC			Bars:	N √ SIDE DIAG	MID SPAN BR						
FSZ:											
F5Z:			FEATURES		J						
NID Map NID Type	Hgt Method	Lg Method	FEATURES Photo	AirPhoto	UTM (Z/E/N) Method						
NID Map	90.0 GE	Lg Method GE	FEATURES								
NID Map NID Type	90.0 GE	GE	Photo R: F:	AirPhoto L: #:	UTM (Z/E/N) Method						
NID Map NID Type 104G.016 10015 C Comments: 10m ds of rc, ma	90.0 GE	GE	FEATURES Photo	AirPhoto L: #:	UTM (Z/E/N) Method						
NID Map NID Type 104G.016 10015 C Comments: 10m ds of rc, ma	90.0 GE jjor cascade to lake	GE H A I	Photo R: F:	AirPhoto L: #:	UTM (Z/E/N) Method						
NID Map NID Type 104G.016 10015 C Comments: 10m ds of rc, ma	90.0 GE jor cascade to lake good - lots of nice	GE HAI	Photo R: F:	AirPhoto L: #:	UTM (Z/E/N) Method						
NID Map NID Type 104G.016 10015 C Comments: 10m ds of rc, ma	90.0 GE jjor cascade to lake	GE HAI	Photo R: F:	AirPhoto L: #:	UTM (Z/E/N) Method						

	PHOTOS											
	Photo Foo			Foc Lg	Dir	Comments						
R:	107	F:	3949	STD	U	good habitat at rc						
R:	107	F:	3950	STD	D							
R:	107	F:	3951	STD	D	cascade to lake						
	COMMENTS											
		Se	ection		Comments							
	CHANNEL S6 - nice stream with low gradient at rc. Drops off ~10m ds of rc to upper mess lake. Stream parallels road for ~100m us of rc. Recommend moving crossing us 100m to where it comes off of hillslope to avoid possible encroachment of road into stream.											



Site 110 – Upstream view



Site 110 – Downstream view

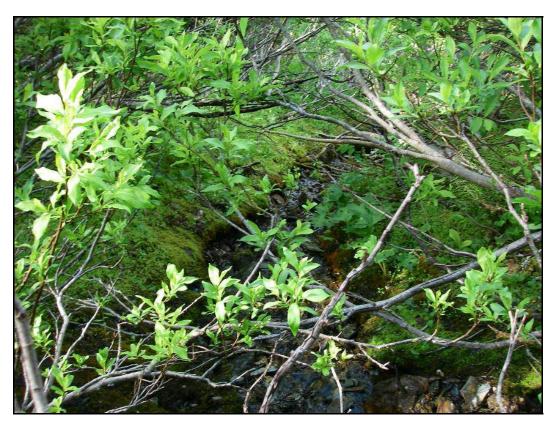


Site 110 – Downstream cascade to lake

Reach # ILP Map # ILP # Site

									PΕ	OJE	СТ								
	Pı	Project Name: Schaft Creek																	
					MESS CREEK							Project Code:				17415			
Р	Project Watershed Code: 630-000000-00000-00000-0000-000-000-000-																		
									W A T	ΓERS	HED								
G	azetted Na	me:										Loc	cal Nam	e: M-11					
Wa	atershed Co					000-0000 ILP #: 10						ID #. 40	0046	Dage	ala #1	1.0	C:4	e #: 11	4
Field	ILP Ma	•		10				INID IVI	ар #. т	04G.016) IN	ID#: 10		Read		1.0	Access		1
	UTM (Z.E UTM (Z.E			9.6333	585	IX	flethod:				Re	Site Lo ef. Name			Method:	GE	Access	П	
	•					Time: 10	.05		۸	" Ccco	,	Securi I/N	1 DC CII	DD.	Fiele :	O-40.	lnas		\square
Date: 2007/08/09 Time: 16:05 Agency: C660 Crew: KM RS SH RD Fish Crd?: Incomplete: CHANNEL										e:									
			Mtd	width	width	width	width	width	width			width	width	Ανα		Gadi	ent %	VItd	Avg
Chan	nel Width (ı				0.50 0.60		0.80	width	widti	Widti	II WIGHT	width	width	idth Avg 0.55				76.50	
	ted Width (ı	,	MS	0.20	0.15	0.10	0.20							0.16	Meth	С			
P	ool Depth (ı	m):	MS											0.00	No Vi	is.Ch.:	Intermitte	nt:	
	Wb Dep	oth:	.2	.1		Αν	g: 0.15	N	/lethod	: MS	St	tage: L	✓ M	□н□		Dw:	Trib	s.: 🗀	
	COVE	ER			То	tal: A													
		pe:	SWD	LV					DP OV				OWN CLOSURE						
-	Amount: S N						N N N D N 4 71-90% ■ ▼ ■ ▼ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■							\square M \square					
L		L		_			V	V				INS	IKEAIV	I VEG:	N 🗸 A		v 📙		
		VD: N			I	DIST: NA													
	LB S			C 🗔	c	D	D A						RB SHP				- B -		
		ure. RIP: C		V	○ 🗸	В	\ /	, <u> </u>					RIF		СВЕ		`	
		TG: S												: SHR					
										VATE	= D								
	FN	ИS:							•	1711	- IX	R	eq #:						
	Ter					Method: T3							ond.:			Method: S3			
pH:					Method: P2								Turb.: T ☐ M ☐ L ☐ C 🕡 Method: GE						
	Flood Signs. Wethod: 9E — — — —																		
								N	I O R	PHO	LOGY	0.4	D.4	D0 /	D0 D4		20		
	Bed Mater			ominan			Subdom					01	B1		B3 D1		03		
			(cm): 4.00 Morph: CP DISTURBA INDICATO							CE LLILLIAND							0-		
Pattern: ST Islands: N										,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	C1	C1 C2 C3 C4 C5 S1 S2 S3 S4 S5							
	Coupli																		
	Confineme										Bars:	N	SID	F	DIAG	MID	SPAN	_	BR
	FS	SZ:									Daio.		O.D		<i>5.,</i> (0		017.11		ъ
								HA	ВІТ	AT Q	UALI.	ΤΥ							
	Name										C	Commen	ts						
Spawning Habitat none OverWinter Habitat none																			
	earing Hab			none															
									Р	нот	o s								
	oto			c Lg)ir		Comments										
R: 107 R: 107	F: 3957 F: 3958	+	S1 S1		_		D D												
107		1	<u> </u>				_	1											

COMMENTS					
Section	Comments				
CHANNEL	S6 - very steep drainage through av chute. No fish habitat and not enough water.				



Site 111 - Downstream view



Site 111 – Downstream view

Section

ILP Map # Reach # ILP# Site

1.0 104G.016 1011 112 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M-12 ILP Map#: 104G.016 NID #: 10017 ILP #: 1011 1.0 NID Map #: 104G.016 Reach #: Site #: 112 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: FT GIS UTM (Z.E.N): 9.382936.6333596 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/09 Time: 16:20 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.50 0.60 0.40 0.43 Method I: 76.50 0.20 78.0 75.0 С Method II: Wetted Width (m) MS 0.20 0.10 0.30 0.20 0.20 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .1 .1 Avg: 0.10 Method: MS Stage: L ✓ M ☐ H ☐ Dw: COVER Total: M **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 21-40% Ν Amount S Ν Ν Ν Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: N DIST: NA Texture: F \checkmark G \checkmark C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: D RIP: D STG: SHR STG: SHR WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \checkmark Method: GE Flood Signs: Method: GE MORPHOLOGY D1 D2 Bed Material: Dominant: C Subdom: G D95: 15.0 D (cm): 5.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: ST C2 С3 S1 S3 S5 Islands: N Coupling: DC Confinement: UN Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name Spawning Habitat none OverWinter Habitat none Rearing Habitat none **PHOTOS** Foc Lg Photo Dir Comments R: 107 F: 3959 STD D COMMENTS

Comments

CHANNEL S6 - no fish habitat, very steep.



Site 112 – Downstream view

Reach # ILP Map # ILP #

Site

1.0 104G.016 1012 113 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.016 NID #: 10019 ILP #: 1012 NID Map #: 104G.016 1.0 Reach #: Site #: 113 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382931.6222844 Ref. Name: Incomplete: 🗹 Date: 2007/08/10 Time: 09:40 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL Mtd width width width width width Gadient % Mtd width width width width width Avg Avg 0.00 Channel Width (m) MS 0.00 Method I: С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ В U IV Type: 21-40% Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments R: 108 F: 3961 STD U flowing water out of alluvial fan COMMENTS Section Comments CHANNEL NCD - alluvial fan - water emerges and flows ~5m before seeping back into ground. SITE CARD NCD



Site 113 – Upstream, showing alluvial fan

ILP Map# ILP# Site Reach #

114 1.0 104G.016 1013

		PROJECT													
Project Name: Schaft C	eek														
Stream Name (gaz.): MESS C			Project Code:	17415											
Project Watershed Code: 630-0000		000 000 000 000 000 000 0		17415											
Project Watershed Code. 650-0000	00-0000-0000-0000-0	000-000-000-000-000-00	50												
		WATERCHER													
		WATERSHED													
Gazetted Name:			Local Name: M-13												
Watershed Code: 000-000000-00000	-00000-0000-0000-000-0	000-000-000-000													
ILP Map#: 104G.016	ILP #: 1013 N	D Map #: 104G.016 N	IID #: 10020 Reach #:	1.0 Site #: 114											
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: G	E Access: H											
GIS UTM (Z.E.N): 9.382931.6333893	ou.ou.	P	ef. Name:												
GIO OTIVI (Z.E.IV). 9.302931.0333093		TV	ei. Name.												
Date: 2007/08/10	Time: 09:50	Agency: C660	Crew: KM RS Fish Cre	d?: ☐ Incomplete: ✓											
		CHANNEL													
	dth width width w	dth width width width	width width Avg	Gadient % Mtd Avg											
Channel Width (m): MS			0.00 Method												
Wetted Width (m): MS 0.80 1	20 0.90 0.90 0	.80 0.80	0.90 Method	II: C											
Pool Depth (m): MS			0.00												
			No Vis.0	= =											
Wb Depth:	Avg: 0.00	Method: MS S	tage: L M 🗸 H 🗌	Dw: Tribs.:											
COVER	Total: T														
Times CWD LIWD		DD OV IV	CROWN CLOSURE												
Type: SWD LWD	B U	DP OV IV	CROWN CLOSURE												
Amount: T N	D N	N S N	0 0%												
Loc: P/S/O: V N A M V															
LWD: N DIST: NA															
	LB SHP: S RB SHP: S														
Texture: F G 🗸 C	✓ B \sqcap R \square A \square		Texture: F G 🗸 C	✓ B											
RIP: NS			RIP: NS												
STG: NA STG: NA															
		WATER													
EMS:			Req #:												
Temp: 6	1	Method: T3	Cond.: 222	Method: S3											
pH: 8.3	ľ	Method: P2	Turb.: T M L C	C Method: GE											
Flood Signs: none	ľ	Method: GE	Turb.: T M L	Wiethou. GE											
		MORPHOLOGY													
		OKT HOLOGI	O1 B1 B2 B3 D1	D2 D3											
Bed Material: Dominant: C	Subdom: G														
D95: 25.0 D (cm): 8	3.00 Morph: C	DISTURBANCE													
Pattern: ST		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5											
Islands: N															
Coupling: DC															
Coupling: DC Confinement: NA															
		Bars:	N✓ SIDE DIAG	MID SPAN BR											
FSZ:			•												
		ABITAT QUALI	ТҮ												
Name		(Comments												
Spawning Habitat none															
OverWinter Habitat none															
Rearing Habitat none															
		PHOTOS													
Photo Foc Lg	Dir		Comments												
R: 108 F: 3962 STD	D	cascade (80%) to main chan													
	U	looking towards rc	IIIGI												
R: 108 F: 3963 STD															

	COMMENTS
Section	Comments
SITE CARD	alluvial fan, channel widths not taken
CHANNEL	S6 - small stream down alluvial fan ~10m ds of road is an 80% cascade to Mess Cr. No fish habitat. 2 channels side by side. Same water source.



Site 114 - Downstream 80% cascade to main channel



Site 114 – Upstream view, towards proposed road

Reach # ILP Map # ILP # Site

								Project Name: Schaft Creek													
			Pro	niect Na	ame	Schaf	ft Creek														
		Str				: MESS										roject Co	de.		17415		
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	Ga	zette	ed Nan	ne:											Local Name	e: M-14					
	Wa	tersh	ed Cod	de: 000	-000	000-000	000-000	000-0000	-0000-00	0-000-0	00-000-	000-0	00								
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			idth (m		_	1.50	1.70	2.20	1.20	0.90	1.90					1.57	Method	d I: 43.0		43.00	
	Wette	ed W	idth (m	n): MS	S	1.50	1.50	2.00	1.20	0.80	1.80					1.47	Method	i II:	С		
	Po	ol De	epth (m	n): MS	S											0.00				1	
				_				7									No Vis.	\equiv	Intermittent:		
		WI	b Dept	:h: .8	}	.1		Avg	: 0.45	N	lethod:	MS	Si	tage:	L M	✓ H [Dw:	Tribs.:	J	
		(COVE	R			Tot	al: A								_					
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	LB SHP: S RB SHP: S																				
			Textu	ıre: F	V	G 🗸	с 🗌	В 🗌 І	R \square A						Texture	: F 🗸	G 🗌 C	□ B 🗸	R A		
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					3																
	STG: SHR STG: SHR																				
											W	ATI	E R								
			EM	S:											Req #:						
			Tem	p: 4						Metho	od: T3				Cond.: 48	0			Method: S3		
			р	H: 8.2						Metho	d: P2				Turk . T	_ M =		c —	Method: GE		
		Floo	d Sign	is:						Metho	d: GE				Turb.: T	☐ IVI	_ L _	✓	Method: GE		
										B.		э ц о	LOGY								
										IV	UKI	пυ	LUGY		4 5:	DC -		DC =			
		Bed I	Materia	al:	D	ominan	t: G		Subdom	: B				0	1 B1	B2 B	3 D1	D2 D:	3		
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			ouplin	•																	
		Confi	nemer										Bars:	N	الم الم	- ·		MID	SDAN	BP.□	
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			me			!							(Comm	nents						
			g Hab			none															
			er Hab			none															
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	Pho					c Lg		D								Commen	ts				
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	80	F:	3969		Sī	ΓD		ι	,												

COMMENTS												
Section	Section Comments											
CHANNEL	S6 - very steep, unconfined drainage through av chute. Very shallow, not really any defined banks. Marginal habitat.											



Site 115 – Downstream view



Site 115 – Upstream view

Reach # ILP Map # ILP # Site

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	=	ect Name										_):4 O			47445		
	Stream Nar Project Watersh	10	,			0000-000	0-0000-	000-000)-000-00	00-000-00	00	F	Project C	ode:		17415		
								WAT	ERS	HED								
	Gazetted Name	:									Loc	cal Name	e: M-15					
	Watershed Code																	
	ILP Map#)16	ı	ILP #: 10)15	NID Ma	ap #: 104	4G.016	N	ID #: 10	0022	Rea	ch #:	1.0	S	Site #: 1	16
	Field UTM (Z.E.N) GIS UTM (Z.E.N)		78.6335	103	N	fethod:				Re	Site Lo ef. Name	-		Metho	d: GE	Acces	s: H	
	Da	te: 200	7/08/10	-	Time: 14:	:45	,	Agency:	C660	C	Crew:	KM RS		Fish	Crd?:	Ind	complet	e: 🗌
								СН	ANN	EL				_				
_	01 1147 111 ()	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	l		adient %	Mtd C	Avg
-	Channel Width (m): Wetted Width (m):	MS MS	1.40	2.30	1.80 0.80	1.70 0.70	2.50 1.20	0.90					1.77		thod I: 58	3.0 58.0	С	58.00
	Pool Depth (m):	MS			1		0						0.00	<u> </u>				_
Ē	Wb Depth:	.2	.2		Avo	g: 0.20	N	Лethod:	MS	St	age: L	П М	V H [√is.Ch.: Dw:	Intermit	tent: ribs.:	
_	COVER	<u></u>		Tot	al: M													
	Туре	: SWE	LV	VD	В	U	DF)	OV	IV	CR	OWN CI	OSURE					
	Amount	1	-)	N	N	N		Т	N	4		1-90%					
Loc: P/S/O:																		
	LWD: A DIST: E																	
	LB SHP	: S										RB SHP						
	Texture	: F 🗸	G 🗆	С	В	R \square A						Texture	: F 🗸	G	С 🗌 В	\square R \square	Α 🗌	
	RIP	: C										RIP	: C					
	RIP: C STG: MF STG: MF																	
								W	ATE	R								
	EMS:											eq #:						
	Temp:	: 3 : 8.3						od: T3			C	ond.: 32				Meth	od: S	3
	рп. Flood Signs:							od: GE			7	Γurb.: T	M		_ C 🔽	Meth	od: G	≣
							N/) U () I	OGY								
								IOKF	пог	_001	O1	B1	B2	B3 D	1 D2	D3		
	Bed Material:		Dominar			Subdom												
		40.0	D (cm): 5.00		Morph	: 5P			BANCE								
	Pattern: Islands:								INDIO	TONO	C1	C2	C3	C4 C	5 S1	S2 S3	S4	S5
	Coupling:											Ш	Ш					
	Confinement:																	
	FSZ:								E	Bars:	N	SID	E	DIAG	MID	SPAN	1	BR
							HA	BITA	TQ	U A L I .	ГΥ							
	Name									C	commen	its						
	OverWinter Habita Spawning Habita		none															
	Rearing Habitat		none															
								PΗ	ОТС	S								
	Photo	Fo	oc Lg		D	ir							Comme	nts				
R:	108 F: 3971		TD			U												
R:	108 F: 3972	S	TD		ı	D												

	COMMENTS												
Section	Section Comments												
CHANNEL	S6 - small steep forested stream shallow, low banks. Unconfined												

Reach #

ILP Map#

ILP#

Site



Site 116 – Upstream view



Site 116 – Downstream view

SITE CARD

NCD

Reach #

ILP Map #

ILP#

Site

1.0 104G.016 1016 117 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M-16 NID #: 10023 ILP Map#: 104G.016 ILP #: 1016 NID Map #: 104G.016 Reach # 1.0 Site #: 117 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383168.6335243 Ref. Name: Incomplete: 🗹 Date: 2007/08/11 Time: 08:35 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL width width width width Gadient % Mtd Mtd width width width width width width Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: Avg: 0.00 Method: MS Stage: L M H H Dw: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: LB SHP: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \checkmark Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: DIAG Bars: N SIDE MID[SPAN BR FSZ: COMMENTS Section Comments CHANNEL NCD - section at rc (~20m) is channelized but us and ds of rc turns into seepage. Water flows over vegetation and swd and underground in sections. No fish value

Reach # ILP Map # ILP # Site

Project Names, Calcate Create															
Project Name Stream Name (gaz.) Project Watershed Code	: MESS CR	EEK	000-000	0-0000-	000-000	-000-00	00-000-00	00	F	roject C	ode:		17415		
				1	WAT	ERS	HED								
Gazetted Name:								Loc	al Name	o∙ M-17					
Watershed Code: 000-000	0000-00000-0	0000-0000	-0000-00	0-000-0	00-000-	000-000)	Loc	airiairi	5. IVI-1 <i>1</i>					
ILP Map#: 104G.0		ILP #: 10			ap #: 104			ID #: 10	024	Rea	ch #:	1.0	Site #: 11	8	
Field UTM (Z.E.N):			1ethod:					Site Lg			Method		Access: H		
GIS UTM (Z.E.N): 9.38314	17 6335405	iv	ieti iou.				Re	ef. Name			Method	. GL	Access. 11		
GIO 0 TW (2.E.IV). 0.0001-	77.0000-000						140	i. radino	•						
Date: 2007	7/08/10	Time: 09:	25	A	Agency:	C660	C	rew: Ł	KM RS		Fish	Crd?:	Incomplete	e:	
					СН	ANN	EL								
Mtd	width widt	th width	width	width	width	width	width	width	width	Avg		Gadi	ent % Mtd	Avg	
Channel Width (m): MS	2.00 1.90	1.20	1.50	1.20	1.00					1.47	Meth	nod I: 47.0		55.00	
Wetted Width (m): MS	2.00 1.9	0 1.10	1.00	1.20	1.00					1.37	Meth	od II:	С		
Pool Depth (m): MS										0.00	- N. V	. 0. 🗆		1	
Wb Depth: .1	.2	Δν.σ	ı: 0.15		Method:	MS	S+	age: L	М			is.Ch.: Dw:	Intermittent:]]	
	1		j. 0.15	IV	ieti iou.	IVIO	O.	age. L	IVI	□ н [Dw	11103	J	
COVER	T	otal: M						_							
Type: SWD		В	U	DP	, (VO T	IV N	CRO 2		OSURE					
Amount: D	S	N	N	N		1-40%									
Loc: P/S/O: V A M V A M V															
LWD: A DIST: E															
LB SHP: U RB SHP: S Texture: F G G C B R A T Texture: F G C B R A T															
Texture: F G C B R A Texture: F G C B R A R															
G 1 G 1 1 1 1 1	STG: MF STG: MF														
					W	ATE	R								
EMS:								R	eq #:						
Temp: 4					od: T3			C	ond.: 13	6			Method: S3		
pH: 8.2					od: P2 od: GE			Т	urb.: T	\square M		C 🗸	Method: GE		
Flood Signs: none				weinc	ou: GE										
				M	ORP	HOL	OGY								
Bed Material: D	ominant: G		Subdom	: C				01	B1	B2	B3 D1	D2 [03		
D95: 25.0	D (cm): 10.	00	Morph		-	ISTURI	DANCE								
Pattern: SI			•		L	INDICA		C1	C2	СЗ	C4 C5	S1 S	S2 S3 S4	S5	
Islands: O															
Coupling: DC															
Confinement: UN															
FSZ:						В	Bars:	N	SID	E	DIAG	MID	SPAN	BR	
					D T A	T 01		F \/							
				наі	ВПА	ı Q	J A L I 1								
Name							С	commen	ts						
Spawning Habitat OverWinter Habitat	none none														
Rearing Habitat	none														
	1				CON	IMEN	NTS								
Section	T							comment	s						
CHANNEL	S6 - small s	tream with	good flor	w Vonc	etaan an	d challa				sh value					
OHAMMEL	50 - Siliali S	u can Will	9000 1101	v. very s	veeh all	u si iailu	, vv. iviai yli	nai naull	at, HU II	value.					

Reach # ILP Map # ILP # Site

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Project Name Stream Name (gaz.) Project Watershed Code	: MESS CF	REEK	0000-000	00-0000-	000-000	-000-00	0-000-00	0	F	Project C	ode:		1	17415	
				1	WAT	ERSI	HED								
Gazetted Name:								Loc	al Name	e: M-18	Tish Cr				
Watershed Code: 000-000	0000-00000-	00000-0000	-0000-00	00-000-0	00-000-	000-000		200	ai i taiii	0. 111 10	11011 01.				
ILP Map#: 104G.0		ILP #: 10			ap #: 104			D#: 10	025	Rea	ch #:	1.0)	Site #: 11	9
Field UTM (Z.E.N):			/lethod:					Site Lo	·· 100		Metho	vd: GE		Access: H	
GIS UTM (Z.E.N): 9.38311	17 6335507	.,	netriou.				Re	ef. Name	•		Menio	u. OL		A00633.11	
G.G.G.T (2.121). 0.1000 1									•				_		
Date: 2007	7/08/11	Time: 10	:25	A	Agency:	C660	С	rew: I	KM RS		Fish	h Crd?:		Incomplete	∍:
					СН	ANN	EL								
Mtd	width wid	dth width	width	width	width	width	width	width	width	Avg			Gadier	nt % Mtd	Avg
Channel Width (m): MS	3.20 2.60	3.10	3.60	4.10	3.40					3.33	Me	ethod I:	37.0	40.0 C	38.50
Wetted Width (m): MS	0.00 0.0	00 1.40	1.10	0.70	1.00					0.70	Met	thod II:		С	
Pool Depth (m): MS	0.15									0.15	No	Vis.Ch.:	Π.	ntormittant.	1
Wb Depth: .7	.6	Δν.	g: 0.65	N.	Method:	MS	St	age: L	□ M	ПНГ		Dw:	=	ntermittent: Tribs.:]
· · ·			g. 0.00	.,	iouiou.	1110	O.	ago. L	V	Ш Г		D .	•	11100	,
COVER		Total: M						•							
Type: SWD		В	U	DP	, (VC	IV			LOSURE					
Amount: T	S	S	N	N		D	N	1		1-20%	N .	A			
Loc: P/S/O: V A M V INSTREAM VEG: N V A M V															
LWD: A DIST: E															
LWD: A DIST: E LB SHP: S RB SHP: V															
Texture: F G G C B R A Texture: F G C B R A R A RIP: C															
STG: MF									STG						
					W	ATE	R								
EMS:									eq #:						
Temp: 4					od: T3			C	ond.: 19	4				Method: S3	
pH: 8.4 Flood Signs:					od: P2 od: GE			Т	urb.: T	M		_ c 🗸		Method: GE	É
r lood olgris.															
				M	ORP	HOL	OGY								
Bed Material: D	Oominant: B		Subdom	n: C				01	B1	B2	B3 D	1 D2	. D3	<u> </u>	
D95: 40.0	D (cm): 18	3.00	Morph	n: SP	Г	ISTURE	BANCE								
Pattern: IR					_	INDICA		C1	C2	C3	C4 C	5 S1	S2	. S3 S4	S5
Islands: I															
Coupling: CO														, , , , ,	
Confinement: FC						В		N	CID		DIACE	¬		CDAN	DD
FSZ:						ь	ars:	N	SID	<u>- </u>	DIAG] IVII		SPAN	BR
				НΔΙ	RITA	T Q I	JALI1	ГΥ							
Name	1			,	J	. ~ `			·-						
Spawning Habitat	none							ommen	15						
OverWinter Habitat	none														
Rearing Habitat		gher flows s	ome poo	ols may b	e inhab	itable, b	ut very st	eep and	unconn	ected					
					CON	MEN	ITS								
Section	1						С	ommen	ts						
CHANNEL	S5 - large o	channel with	very low	flow, de	ewaters	~20m ds	s of rc. Lo	ots of be	dload m	ovemen	t possible	e and lot	s of LW	/D. Marginal ha	abitat.
			,	,											

Reach # ILP Map # ILP # Site

PROJECT														
Project Name Stream Name (gaz.): Project Watershed Code	MESS CRE	EK	0000-000	0-0000-	000-000	-000-000	0-000-00	00	P	Project C	ode:		17415	
				,	WAT	ERSH	HED							
Gazetted Name:								Loc	al Name	e: M-19				
Watershed Code: 000-000	000-00000-00	0000-0000	-0000-00	0-000-0	00-000-0	000-000								
ILP Map#: 104G.01	16	ILP #: 10)19	NID Ma	ap #: 104	G.016	NI	ID#: 10	026	Rea	ch #:	1.0	Site #:	120
Field UTM (Z.E.N):		N	/lethod:					Site Lg	j: 100		Method:	GE	Access: H	
GIS UTM (Z.E.N): 9.38313	9.6335753						Re	ef. Name):					
Date: 2007	/08/11	Time: 11:	.00	,	Agency:	C660	C	Crew: Ł	KM RS		Fish (Crd?·	Incomple	ete:
2007			.00	•		ANN								
Mtd	width width	width	width	width	width	width	width	width	width	Avg	1	Gadio	ent % Mtd	Avg
	1.00 1.40	1.40	1.20	1.00	0.60	widti	widti	width	width	1.10	Meth		41.0 C	37.50
Wetted Width (m): MS	0.60 0.70	0.80	0.90	0.80	0.90					0.78	Metho	od II:	С	<u> </u>
Pool Depth (m): MS										0.00] '	0		-
No Vis.Ch.: Intermittent:														\dashv
Wb Depth: .4 .3 Avg: 0.35 Method: MS Stage: L M ✓ H Dw: Tribs.: COVER Total: A														
	LWD	В	U	DP		OV	IV	1 CB(JWN CI	OSURE	:			
Type: SWD Amount: S	D	N	S	N		S	N	2		1-40%	-			
					INS			N 🕡 A	\square M \square	V 🖂				
LWD: A DIST: E														
LB SHP: V Texture: F														
	G C C] В [к 🗌 А	, <u> </u>								, [] _B [
RIP: C									RIP					
STG: MF									STG	: IVIF				
					W	ATE	R							
EMS:									eq #:					
Temp: 3					od: T3 od: P2			C	ond.: 309				Method: S	33
pH: 8.1 Flood Signs: deposite	d sand on rb				od: PZ			Т	urb.: T	M		C 🗸	Method: (GE .
							0.0.1/							
				IV	ORP	HUL	UGY	01	D4	DO	D2 D4	D2 D		
	ominant: G		Subdom					01	B1	B2	B3 D1	D2 D		
D95: 10.0	D (cm): 5.00)	Morph	: SP	D	ISTURE	BANCE							
Pattern: SI						INDICA ⁻	IORS	C1	C2	C3	C4 C5	S1 S	2 S3 S	4 S5
Islands: N														
Coupling: PC Confinement: OC														
FSZ:						В	ars:	N	SID	E	DIAG	MID	SPAN	BR
						T 01		- >/						
	<u> </u>			на	BIIA	ı QU	IALIT							
Name Spawning Habitat	none						C	commen	ts					
OverWinter Habitat	none													
Rearing Habitat	poor - shallov	w, no deep	o pools											
					COM	MEN	TS							
Section							С	comment	ts					
CHANNEL	S6 - small str	eam arise	es from s	eepage	~5m us	of rc, cha	annelizes	s at rc ar	nd becor	mes stre	am ds. Hig	h gradient,	shallow. Margi	nal habitat.

Reach # ILP Map # ILP # Site

	Project Name: Schaft Creek														
Project Name Stream Name (gaz.) Project Watershed Code	: MESS CRE	EEK	0000-000	0-0000-	000-000	-000-00	0-000-00	0	F	Project C	ode:			17415	
					WAT	ERSI	HED								
Gazetted Name:								Loc	al Name	≥· M-20					
Watershed Code: 000-000	0000-00000-0	0000-0000	-0000-00	0-000-0	00-000-	000-000			ai i taiii	J. IVI 20					
ILP Map#: 104G.0		ILP #: 10			ap #: 104			D#: 10	027	Rea	ch #:		1.0	Site #: 12	21
Field UTM (Z.E.N):		Λ.	/lethod:					Site Lg	ı: 100		Meth	nod: GE		Access: H	
GIS UTM (Z.E.N): 9.38320	06.6335929		iotriou.				Re	ef. Name			iviou	10u. OL		7100000.11	
Date: 2007	7/08/11	Time: 12	:10	,	Agency:	C660	С	rew: Ł	KM RS		F	ish Crd?	: 📙	Incomplet	e: 🔛
					СН	ANN	EL								
Mtd	width widt	h width	width	width	width	width	width	width	width	Avg			Gadie	ent % Mtd	Avg
Channel Width (m): MS	1.10 0.50	1.20	1.40	0.40						0.92	N	/lethod I:	39.0	С	39.00
Wetted Width (m): MS	0.60 0.60	0.60		1.00	0.30					0.62	M	lethod II:		С	
Pool Depth (m): MS										0.00] N	o Vis Ch		Intermittent:	7
Wb Depth: .1 .2 .1 Avg: 0.13 Method: MS Stage: L M ✓ H Dw: Tribs.:															า้
COVER		otal: A	,					- 3 -	Ш				_		_
<u> </u>				1 55		2) / I	N /	1 00/	3\4\4\ 01	OCUDE	_				
Type: SWD Amount: D	LWD	B N	U T	DP N		S S	IV N	3		_OSURE 1-70%	=				
					N 🗖	ΔΠ	м 🖂	v 🖂							
Loc: P/S/O: V A M V INSTREAM VEG: N A M V															
LWD: A DIST: E															
LWD: A DIST: E LB SHP: V RB SHP: V															
Texture: F 🗸	LB SHP: V RB SHP: V Texture: F ✓ G C B R A Texture: F ✓ G C Texture: F ✓ G T														
Texture: F ✓ G C B R A Texture: F ✓ G C B R A R															
STG: MF															
WATER															
EMS:									eq #:						
Temp: 5 pH: 8.5					od: T3			C	ond.: 34					Method: S3	i
Flood Signs:					od: GE			Т	urb.: T	M		\Box C	✓	Method: Gl	Ē
1 1000 Giginoi															
				M	ORP	HOL	OGY								
Bed Material:	Oominant: F		Subdom	: G				01	B1	B2	B3	D1 [D2 D3	3	
D95: 14.0	D (cm): 4.0	00	Morph	: SP	С	ISTURE	BANCE								
Pattern: IR						INDICA		C1	C2	C3	C4	C5 S	S1 S2	2 S3 S4	S5
Islands: F													$\neg \top \Gamma$		
Coupling: DC															
Confinement: UN						D	ars:	N	SID		DIAGE		MID	SPAN	BR
FSZ:						Ь	ais.	N	טוט		DIAG		WID_	SPAN	БК
				НАІ	BITA	τ οι	JALI1	ГΥ							
Name	1							ommen	to						
Spawning Habitat	none							-SHIIII CH							
OverWinter Habitat	none														
Rearing Habitat	none														
					COM	MEN	ITS								
Section	I						С	omment	ts						
CHANNEL	S6 - very sm	nall stream	, borderli	ne NCD	. Channe	els at rc.	N chanr	nel is NC	D, s cha	annel is	more "s	streamy"	. Margin	al Habitat.	
	1														

Reach # ILP Map # ILP #

Site

PROJECT																	
Project I Stream Name Project Watershed		S CREE		000-000	0-0000-	000-000	-000-000	0-000-00	0	F	Project Co	ode:			17415	;	
					,	WAT	ERSI	HED									
Gazetted Name: Watershed Code: 00 ILP Map#: 10			00-0000- .P #: 10		0-000-0		000-000		Loc D#: 10	cal Name	e: Read	ch #:		1.0		Site #: 1	22
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3	383263.6336	024	M	lethod:				Re	Site Lo			Me	thod: Gl	E	Acce	ess: H	
Date:	2007/08/11	Т	ime: 12:	50	,	Agency:	C660	C	rew: I	KM RS		ı	Fish Cro	d?:] [ncomple	ete: 🗸
						СН	ANN	EL									
1	Mtd width	width	width	width	width	width	width	width	width	width	Avg			Gadi	ient %	Mtd	Avg
. ,	MS								0.00		Method	1:		С	0.00		
. , ,	MS										0.00		Method	II:		С	
Pool Depth (m):	MS										0.00		No Vie C	°h · □	Interm	ittent:	
Wb Depth:	No Vis.Ch.:															Ħ	
COVER	I	Total:															_
,,	SWD LWD B U DP OV IV CROWN CLOSURE																
Amount:		INSTREAMINES. N. A. D. M. C. V. C.															
Loc: P/S/O:		INSTREAM VEG: N A M V															
LWD:		DIST:															
LB SHP:	RB SHP:																
Texture:	F 🗌 G 🗌	c \square	B 🗌 F	$R \square A$,					Texture	: F] G [_ c [B] R [] A []
RIP:										RIP	:						
STG:										STG	:						
						W	ATE	R									
EMS:							, <u> </u>	•	R	eq #:							
Temp:					Metho	od: T3				ond.:					Me	thod: S	3
pH:					Metho	od: P2			-	urb.: T	M			_		thod: G	
Flood Signs:					Metho	od: GE			'	uib i	□ IVI	Ш'	- 🗆 c	<i>_</i> _	ivie	illou. G	·E
					M	I O R P	HOL	OGY									
Bed Material:	Dominan	+-		Subdom					01	B1	B2 E	B3	D1	D2 [D3		
Ded Material.	Dominan D (cm			Morph		_											
	<i>D</i> (0111	,.		Morpi			ISTURE INDICA		- 04	- 00	00 (~	05				4 05
Pattern: Islands:							11101011	10110	C1	C2	C3 (C4	C5	S1 5	S2 S	33 S4	4 S5
Coupling:																	
Confinement:																	
FSZ:]						В	ars:	N	SID	E	DIAG		MID] SPA	AN_	BR
						COM	IMEN	ITS									
Section						J J 14	!\		ommen	te							
	NOD								OHIHEN	ıo							
CHANNEL		seepage	;														
SITE CARD	NCD																

Reach # ILP Map # ILP # Site

	T KOULOT														
	Project Name Stream Name (gaz.) Project Watershed Code			000-0000)-0000-0	000-000-	000-00	0-000-00	00	F	Project Co	ode:		17415	
					V	N A T E	ERS	HED							
	Gazetted Name: Watershed Code: 000-000	0000-00000-000	00-0000-0	0000-000					Lo	ocal Name	e: M22				
	ILP Map#: 104G.0		LP #: 102			p #: 104			ID#: 1	0029	Read	ch #:	1.0	Site #: 12	23
	Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.38324	4.6335974	Me	ethod:				Re	Site L ef. Nam	.g: 100 ie:		Method	: GE	Access: H	
	Date: 2007	7/08/11	Time: 12:5	5	А	gency: (2660	C	rew:	KM RS		Fish	Crd?:	Incomplet	e: 🗌
						СН	ANN	EL							
	Mtd	width width	width	width	width	width	width	width	width	width	Avg		Gadie	ent % Mtd	Avg
Г	Channel Width (m): MS	0.17 0.27	0.15	0.35	0.40	0.15					0.25	Meth	nod I: 51.0	С	51.00
	Wetted Width (m): MS	0.20 0.30	0.20	0.38	0.40	0.20					0.28	Meth	od II:	С	
	Pool Depth (m): MS	0.10									0.10				7
-			1 .										is.Ch.:	Intermittent:	
L	Wb Depth: .2	.1 .2	Avg: al: A	0.17	М	ethod:	MS	St	age: L	M	✓ H		Dw: 🔲	Tribs.: _	
	·	LWD	В	U	DP	1 6	OV	IV	1 CE	ROWN CL	OSLIBE				
	Type: SWD Amount: S	N	N	D	N N			N			1-70%				
	LOC: P/S/O: V A M V LWD: N DIST: NA														
	LB SHP: U RB SHP: U Toyturo: F C C C R C R C R C R C R C R C R C R C														
	Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐														
	RIP: C									RIP	: C				
	RIP: C STG: MF STG: MF														
	STG: MF WATER														
	EMS:								F	Req#:					
	Temp: 4				Metho	d: T3			(Cond.: 34	7			Method: S3	3
	pH: 8.5				Metho	d: P2				Turb · T	□ М г		C	Method: GE	=
	Flood Signs:				Metho	d: GE					□		V		_
					М	ORP	HOL	. O G Y							
	Bed Material: D	ominant: G	S	Subdom:	F				O1	B1	B2 E	33 D1	D2 D	3	
	D95: 5.00	D (cm): 3.00		Morph:		_									
		D (0111): 0.00		worpin.	0.		ISTURI INDICA	BANCE							0-
	Pattern: IR					'	II VDIO/ V	TORO	C1	C2	C3 (C4 C5	S1 S	2 S3 S4	S5
	Islands: N														
	Confinement III														
	Confinement: UN FSZ:						В	ars:	N	SID	E 🗀	DIAG	MID	SPAN	BR
	1 32.						- 01								
	N	<u> </u>			HAE	BITA	rqt	JALIT		<u> </u>					
	Name Spawning Habitat	none							comme	nts					
	OverWinter Habitat	none none													
	Rearing Habitat	none													
						СОМ	MEN	NTS							
	Section	1							ommei	nts					
		CE venien	l atacs at-	oom M-	rrout	ul defin -	d obor								
	CHANNEL	S6 - very smal	steep str	eam. Na	IIIOW WE	ueine	u cnan	nei throu	yn mos	os.					

Reach # ILP Map # ILP #

Site

	PROJECT																					
	Project Stream Name Project Watershed	00-0000-000-000-000-000-000					Project Code:						17415									
	WATERSHED																					
	ILP Map#: 10 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.	00-000-000-000-000 NID Map #: 104G.016				Ref. Name:				1.0 Site #: 124 ethod: GE Access: H												
Date: 2007/08/11 Time: 13:25 Agency: C660 Crew: KM RS Fish Crd?: Incomplete:																						
CHANNEL																						
	Channel Width (m): Wetted Width (m):	Mtd MS MS MS	width	width	width	width:	width	0.00 0.00 0.00						Method II: Method III: No Vis.Ch	nod II: C							
COVER Total: Type: SWD LWD B U DP OV IV CROWN CLOSURE											l											
								W	ATE	R												
EMS: Temp: pH: Flood Signs:								Method: T3 Method: P2 Method: GE				Req #: Cond.: Turb.: T						Method: S3 Method: GE				
							M	1 O R P	HOL	OGY												
	Bed Material: D95: Pattern: Islands: Coupling: Confinement:	D95: D (cm): Morp ttern: ands: bling:						D	ISTURE INDICA	BANCE					C5 S	S S1 S2 S3 S4 S5						
	FSZ:]							Б	ars:	N_	SID		DIA	<u></u>	MID	SFA	N_	BR			
								COM	MEN	ITS												
	Section									C	ommen	ts										
	CHANNEL		NCD																			
	SITE CARD		NCD																			

Reach # ILP Map #

1.0

ILP #

Site

125

104G.016

PROJECT Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M23 NID #: 10031 Site #: 125 ILP Map#: 104G.016 ILP #: 1024 NID Map #: 104G.016 1.0 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383258.6336056 Ref. Name: Incomplete: 🗹 Date: 2007/08/11 Time: 13:30 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C2 СЗ C5 S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: N SIDE DIAG MID BR FSZ: COMMENTS Section Comments NCD - channelized at rc, but seepage us and ds. CHANNEL SITE CARD

ILP Map # Reach # ILP# Site

1.0 104G.016 1025 126 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M24 ILP Map#: 104G.016 NID #: 10032 Site #: 126 ILP #: 1025 NID Map #: 104G.016 1.0 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383326.6336132 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/11 Time: 13:40 Agency: C660 Crew: KM RS CHANNEL width width width width Gadient % Mtd Mtd width width width width width width Avg Avg Channel Width (m) MS 3 80 3 60 3.00 4.10 3 40 Method I: 59.50 2 70 3.20 62.0 57.0 С Method II: Wetted Width (m) MS 2.60 2.50 2.90 2.90 2.80 3.80 2.92 С Pool Depth (m) 0.00 MS No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .4 .3 Avg: 0.35 Method: MS Stage: L ☐ M ✔ H ☐ Dw: COVER Total: M **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 21-40% Ν Amount D S Ν S Loc: P/S/O: **V** INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ LWD: A DIST: E LB SHP: V Texture: F \bigcap G \bigcap C \bigvee B \bigvee R \bigcap A \bigcap Texture: F ☐ G ☐ C ✔ B ✔ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 4 Method: T3 Cond.: 257 Method: S3 pH: 8.5 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Subdom: B Bed Material: Dominant: C D95: 35.0 D (cm): 20.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ S1 S3 S5 Islands: N Coupling: DC Confinement: OC BR SIDE MID Bars: N DIAG SPAN FSZ: HABITAT QUALITY

Name	Comments								
OverWinter Habitat	none								
Spawning Habitat	none								
Rearing Habitat	none								
	COMMENTS								
Section	Comments								
CHANNEL S5 - moderate sized steep cascading stream, no pools. Marginal habitat.									

Reach # ILP Map # ILP # Site

1.0 104G.016 1026 127 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M25 ILP Map#: 104G.016 NID #: 10033 ILP #: 1026 1.0 NID Map #: 104G.016 Reach #: Site #: 127 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383332.6336139 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/11 Time: 14:05 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 1.40 1.80 Method I: 64.00 1 10 1.80 1 60 1 30 1.50 64.0 С Method II: Wetted Width (m) MS 1.00 1.20 1.10 1.00 1.20 1.60 1.18 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .3 .2 Avg: 0.25 Method: MS Stage: L ☐ M ✔ H ☐ Dw: COVER Total: M **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 21-40% Ν Amount D Ν Ν Ν Loc: P/S/O: INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ **V V** LWD: A DIST: E Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 3 Method: T3 Cond.: 363 Method: S3 pH: 8.4 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Subdom: G Bed Material: Dominant: C D95: 22.0 D (cm): 8.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: ST C2 С3 C4 S1 S3 S5 Islands: N Coupling: DC Confinement: UN SPAN Bars: N SIDE DIAG MID BR

HABITAT QUALITY Name Comments OverWinter Habitat none Spawning Habitat none Rearing Habitat none COMMENTS Section Comments CHANNEL S6 - small steep cascading stream. Marginal habitat.

Reach # ILP Map # ILP # Site

1.0 104G.016 1027 128 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M-26 NID #: 10034 Reach #: ILP Map#: 104G.016 ILP #: 1027 NID Map #: 104G.016 1.0 Site #: 128 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383831.6337147 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/11 Time: 15:10 Agency: C660 Crew: KM RS CHANNEL width width width Mtd Mtd width width width width Gadient % Avg width width width Avg Channel Width (m) MS 2.10 2.50 2.00 2.06 Method I: 39.0 35.0 37.00 1.50 2.20 С 1.80 Method II: Wetted Width (m) MS 1.40 1.00 2.00 2.40 1.72 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Avg: 0.47 Stage: L ☐ M ✓ H ☐ Dw: Wb Depth: .8 .2 .4 Method: MS Tribs.: COVER Total: A **CROWN CLOSURE** SWD LWD DP В OV IV Type: U Ν 1-20% Ν Ν Amount S D S S Loc: P/S/O: INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ LWD: A DIST: C Texture: F \bigcap G \bigcirc C \bigcirc B \bigcap R \bigcap A \bigcap Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 3 Method: T3 Cond.: 424 Method: S3 pH: 8.1 Method: P2 Turb.: $T \sqcap M \sqcap L \sqcap C$ Method: GE

Flood Signs:		Method:	GE	Turb.: I M L C Method: GE							
		M C	RPHOLOGY								
Bed Material: D95: 18.0	Dominant: C D (cm): 10.00	Subdom: G Morph: CP	DISTURBANCE	O1 B1 B2 B3 D1 D2 D3							
Pattern: ST Islands: N Coupling: CO			INDICATORS	C1 C2 C3 C4 C5 S1 S2 S3 S4							
Confinement: CO FSZ:			Bars:	N♥ SIDE DIAG MID SPAN							
		HAB	ITAT QUALIT	ГҮ							
Name	Т		C	comments							
Spawning Habitat	none										
OverWinter Habitat	none										
Rearing Habitat	none										
		С	OMMENTS								
Section			C	comments							
CHANNEL S6 - small stream in avalanche/debris chute. Almost completely covered in LWD from debris avalanche (old). Recommend bridge to avoid cv washouts due to debris. Marginal habitat.											

Name

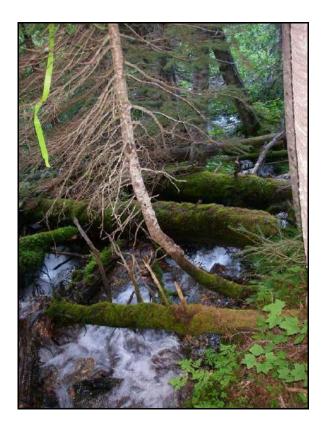
Reach # ILP Map # ILP#

Site 1.0 104G.016 1030 131 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M33 ILP #: 1030 NID #: 10040 ILP Map#: 104G.016 NID Map #: 104G.016 Reach #: 1.0 Site #: 131 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384771.6339694 Ref. Name: Incomplete: Date: 2007/08/12 Time: 08:40 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) MS 1 50 2.50 Method I: 33.50 1 20 1 40 2 00 1.72 39.0 28.0 С Wetted Width (m) MS 0.80 1.30 2.00 1.60 1.70 1.48 Method II: С Pool Depth (m) MS 0.20 0.10 0.15 No Vis.Ch.: Intermittent: Wb Depth .7 .4 Avg: 0.55 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 41-70% Ν Amount S D Ν S INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V** LWD: A DIST: E Texture: F ✓ G ☐ C ☐ B ✓ R ☐ A ☐ Texture: F ✓ G ☐ C ☐ B ✓ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 3 Method: T3 Cond.: 187 Method: S3 pH: 8.4 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: G Subdom: C D95: 35.0 D (cm): 10.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: ST C2 С3 C5 S1 S3 S5 Islands: N Coupling: DC Confinement: FC DIAG Bars: N SIDE MID SPAN BR FSZ: FEATURES NID Map Method AirPhoto NID Type Hgt Method Lg Photo UTM (Z/E/N) Method 104G.016 10042 GE 100 F: 3977 9.384771.6339694 GP3 RB R: Comments: outlet of creek into mess. Flat low gradient, good rearing NID Map NID Туре Hgt Method Lg Method Photo AirPhoto UTM (Z/E/N) Method 100 F: 3975 L: 9.384765.6339686 104G.016 10041 С 10.0 GE 15 GE #: GP3 Comments: 39%

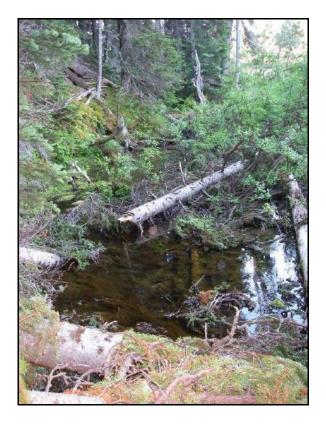
HABITAT QUALITY

Comments

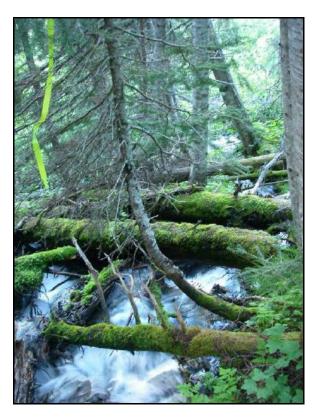
						HABITAT QUALITY								
		Name			Comments									
	Spa	awning Ha	bitat	poor - few p	poor - few patches of gravel but no connectivity									
	Ove	rWinter H	abitat	none										
	Re	earing Hal	oitat	fair - decen	fair - decent pools, cover, sp morph									
						PHOTOS								
	Photo Fo			oc Lg	Dir	Comments								
R:	100	F: 367	5 8	STD	D	39% cascade ds of rc (~10m)								
R:	100	F: 397	6 5	STD	D	cascade								
R:	100	F: 397	7 5	STD	U	off channel hab of mess cr at outlet of M33								
R:	100	F: 397	3 5	STD	U	29%sp morph at rc.								
						COMMENTS								
	Section Comments													
	CHANNEL S6 - road through this section is only 20m upslope from Mess cr. And associated side channels. Recommend moving road upslope 20m to avoid HADD in Mess cr during falling and blasting. Small sp stream with good hab. Potential . 39% grade at outlet to Mess													



Site 131 – Downstream 39% cascade



Site 131 – Upstream off channel habitat



Site 131 – Downstream cascade



Site 131 – Upstream 29% step-pool morphology

STD

STD

D

U

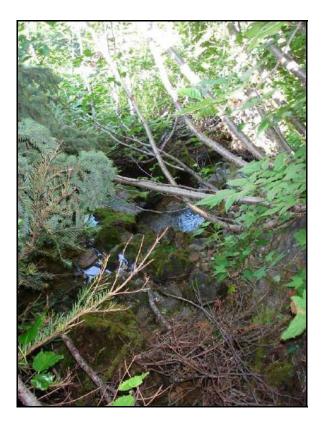
bouldery cascade at rc

100 F: 3983

100 F: 3984

ILP Map# Reach # ILP# Site 1.0 104G.016 1031 132 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M32 ILP Map#: 104G.016 NID #: 10043 ILP #: 1031 1.0 NID Map #: 104G.016 Reach #: Site #: 132 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384704.6338998 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/12 Time: 10:25 Agency: C660 Crew: KM RS RD CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 3 00 Method I: 45.00 2 00 2 60 2.53 45.0 С Wetted Width (m) MS 0.70 0.50 0.90 0.70 Method II: С Pool Depth (m) MS 0.12 0.12 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .7 .7 .5 Avg: 0.63 Method: MS Stage: L ✓ M ☐ H ☐ Dw: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U >90% Ν Amount S S Ν Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: N DIST: NA Texture: F ☐ G ☐ C ☐ B ✔ R ✔ A ☐ Texture: F ☐ G ☐ C ☐ B ✔ R ☐ A ☐ RIP: S RIP: S STG: SHR STG: SHR WATER EMS: Req#: Temp: 4 Method: T3 Cond.: 114 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: B Subdom: G D95: 20.0 D (cm): 12.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ S1 S3 S5 Islands: N **V** Coupling: DC Confinement: CO Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name Spawning Habitat none OverWinter Habitat none Rearing Habitat none **PHOTOS** Foc Lg Photo Dir Comments

COMMENTS								
Section	Comments							
CHANNEL	S6 - very bouldery channel through av chute. Steep but low flow at this time. Marginal habitat. ~40m upslope from Mess Cr.							



Site 132 – Downstream view



Site 132 – Upstream boulder cascade

Reach #

1.0

ILP Map #

104G.016

ILP#

Site 133

caon # ILI Map #

1032

PROJECT Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M31 ILP Map#: 104G.016 NID #: 10044 Site #: 133 ILP #: 1032 NID Map #: 104G.016 1.0 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384615.6338697 Ref. Name: Incomplete: 🗹 Date: 2007/08/12 Time: 11:30 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL Mtd width width width width width Gadient % Mtd width width width width width Avg Avg 0.00 Channel Width (m) MS 0.00 Method I: С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: Bars: N SIDE DIAG MID SPAN BR FSZ: PHOTOS Foc Lg Dir Comments R: 100 F: 3985 STD U seepage beside rd COMMENTS Section Comments CHANNEL NCD SITE CARD NCD



Site 133 – Upstream, seepage beside road

ILP# Reach # ILP Map # Site 1.0 104G.016 1034 135 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: NID #: 10046 Site #: 135 ILP Map#: 104G.016 ILP #: 1034 NID Map #: 104G.016 1.0 Reach # Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385048.6341401 Ref. Name: Incomplete: 🗸 Date: 2007/08/12 Time: 14:15 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL Mtd width width width width width Gadient % Mtd width width width width width Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C5 S1 S3 S5 Islands: Coupling: Confinement: BR SPAN DIAG Bars: N SIDE MID FSZ: PHOTOS Photo Foc Lg Dir Comments

R: 100 F: 4005 ST	TD D	barely a seepage										
COMMENTS												
Section		Comments										
CHANNEL	NCD - seepage at edge of av chut	CD - seepage at edge of av chute. Alder and dc.										
SITE CARD	NCD											



Site 135 – Downstream, barely a seepage

Rearing Habitat

Photo

100 F: 4006

100 F: 4007

none

Dir

D

U

Foc Lg

STD

STD

Reach # ILP Map # ILP # Site

1.0 104G.016 1035 136 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M40 ILP Map#: 104G.016 NID #: 10047 ILP #: 1035 1.0 NID Map #: 104G.026 Reach #: Site #: 136 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385075.6341641 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/12 Time: 14:50 Agency: C660 Crew: KM RS RD CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.65 0.60 0.86 Method I: 30.0 32.0 34.00 1 20 1.00 С 0.30 Method II: Wetted Width (m) MS 0.55 0.50 0.30 0.41 40.0 С Pool Depth (m) MS 0.13 0.13 No Vis.Ch.: Intermittent: Dw: Wb Depth: .2 .2 Avg: 0.20 Method: MS Stage: L ✓ M ☐ H ☐ Tribs.: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 1-20% Ν Amount S Ν Ν D Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: N DIST: NA Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F \bigvee G \square C \square B \bigvee R \square A \square RIP: M RIP: M STG: PS STG: PS WATER EMS: Req#: Temp: 6 Method: T3 Cond.: 226 Method: S3 pH: 8.5 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Subdom: C Bed Material: Dominant: G D95: 25.0 D (cm): 4.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: SI C2 СЗ C4 S1 S3 S5 Islands: N Coupling: DC Confinement: OC Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name OverWinter Habitat Spawning Habitat none

PHOTOS

ryan for scale

Comments

	COMMENTS
Section	Comments
CHANNEL	S6 - very small stream through dc alder spruce. Low flow. Marginal habitat.

Site



Site 136 – Downstream view



Site 136 – Upstream view

Reach # ILP

ILP Map#

ILP # Site

1.0

104G.016

1036

								PR	OJE	СТ														
Project Wate	00-0000-	-000-00	Project Code:						17415															
	WATERSHED																							
Gazetted Name: Local Name: M41																								
Watershed Code: 000-000000-00000-00000-0000-000-000-00												D #: 10048 Reach #: 1.0 Site #: 137												
Field UTM (Z.E.N): Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385054.6341702 Ref. Name:																								
	Date: 20	07/08/1	12	Т	ime: 15	:05		Agency			Crew: KN	/ RS RE)		Fish	n Crd?: Incomplete:								
									IANN					-										
Ob an a al Milatela (Mtd	widt	th wid	dth	width	width	width	width	width	width	width	width	Avg		14-4	h I I -	Gadi	ent %	Mtd C	Avg				
Channel Width (+						+				0.00	-		hod I:			C	0.00				
Pool Depth (0.00	1						J 				
Wb Dep	oth:				Avç	g: 0.00	N	Method:	MS	Si	tage: L	М	ПНГ	_	No V	is.Ch/ Dv		Intermittent:						
COVE	R			Tota	ıl:																			
Ту	pe: SW	/D	LWD	T	В	U	DF	·	OV	IV	CR	OWN CL	OSURE	1										
Amo																								
Loc: P/S	5/0:										INSTREAM VEG: N A M V													
LV	VD:			DI	ST:																			
LB S	HP:											RB SHP	:											
Text	ure: F [_ G [C		В	R 🔲 A	\				Texture: F G C B R A													
ı	RIP:										RIP:													
S	TG:										STG:													
								V	VATE	R														
EM	ЛS:										Req #:													
Ter	•							od: T3			С	ond.:						Me	thod: S	3				
Flood Sig	р Н :							od: P2 od:GE	!		Т	urb.: T	\square M		L	γС		Method: GE						
F1000 Sig	ns:											_												
							N	I O R I	PHO	LOGY														
Bed Mater	ial:	Domin	nant:			Subdom	1:				O1 B1 B2 B3 D1 D2 D3													
D	95:	D (d	cm):			Morph	1:			RBANCE														
Patte									INDIC	ATORS	C1	C2	C3	C4	C5	5 S	S1 S2 S3 S4 S							
Islan																								
Coupli Confineme	-																							
	SZ:								ı	Bars:	N	SID	E	DIA	AG	ľ	MID	SPA	AN	BR				
								ΡI	ното	o s														
Photo		oc Lg		Г	Г)ir							Comme	nts										
R: 100 F: 4008																								
R: 100 F: 4009		STD				U	ove	rland flo																
								COI	MME															
Section											Comments													
CHANNEL				newh	at chan	nelized a	at rc but	overlan	d flow u	s and ds	and seep	page.												
SITE CARD NCD																								



Site 137 – Upstream view, overland flow



Site 137 – Upstream view, overland flow

Reach # ILP Map #

ILP#

Site

1.0 104G.016 1037 138 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: NID #: 10049 ILP Map#: 104G.016 ILP #: 1037 NID Map #: 104G.016 1.0 Site #: 138 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385045.6341734 Ref. Name: Incomplete: 🗹 Date: 2007/08/12 Time: 15:20 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL width width width width Mtd Mtd width width width width width width Gadient % Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth Avg: 0.00 Method: MS Stage: L M H H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В Type: U Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: LB SHP: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 B2 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments R: 100 F: 4010 STD U seepage at rc COMMENTS Section Comments SITE CARD CHANNEL NCD - small channelized a bit at rc. Lots of underground flow.



Site 138 – Upstream view, seepage

Reach # ILP Map #

ILP#

Site

1.0 104G.016 1038 139 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M42 ILP #: 1038 NID #: 10050 1.0 Site #: 139 ILP Map#: 104G.016 NID Map #: 104G.016 Reach # Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385161.6342171 Ref. Name: **V** Incomplete: Date: 2007/08/12 Time: 15:50 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) MS 5 50 8 40 4.30 4 93 Method I: 24.00 4 30 4.10 3.00 33.0 15.0 С Wetted Width (m) MS 2 30 1.50 2.60 1.90 1.50 1.80 1.93 Method II: С 0.15 Pool Depth (m) MS 0.13 0.16 0.18 0.14 0.13 No Vis.Ch.: Intermittent: Wb Depth: 1.2 .6 .7 Avg: 0.83 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: M **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 1-20% Ν Amount S Ν Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: LWD: F DIST: F RB SHP: V Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F \bigcap G \bigcirc C \bigcirc B \bigcap R \bigcap A \bigcap RIP: M RIP: M STG: MF STG: MF WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 248 Method: S3 pH: 8.4 Method: P2 Turb.: T M L C Method: GE Flood Signs: debris from avalanch Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: C. Subdom: G D95: 65.0 D (cm): 28.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: ST C1 C2 S1 S3 S5 Islands: N Coupling: DC Confinement: FC SIDE MID 🗸 DIAG Bars: SPAN BR FSZ: FEATURES NID Map AirPhoto UTM (Z/E/N) NID Type Hgt Method Lg Method Photo Method 104G.016 10051 GE 100 F: 4021 9.385170.6342159 GP3 4.0 8 R: Comments: 33% cascade ~10m us of rc HABITAT QUALITY Name Comments Spawning Habitat fair - some gravel, good flow. OverWinter Habitat Rearing Habitat fair - some pools, good flow; low cover in lower gradient area. Higher us.

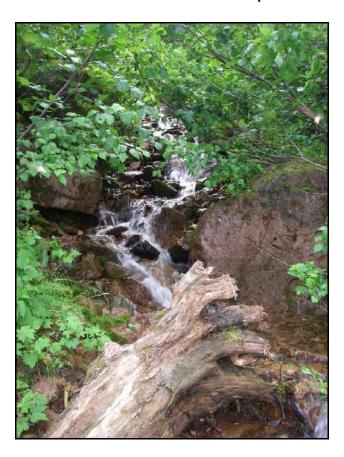
						PHOTOS
	Ph	oto		Foc Lg	Dir	Comments
R:	R: 100 F: 4011 STD NS 8 an				NS	8 angles forTC. Starting us and working clockwise
R:	100	F:	4012	STD	NS	TC
R:	100	F:	4013	STD	NS	TC
R:	100	F:	4014	STD	NS	TC
R:	100	F:	4015	STD	NS	TC
R:	100	F:	4016	STD	NS	TC
R:	100	F:	4017	STD	NS	TC
R:	100	F:	4018	STD	NS	TC
R:	100	F:	4019	STD	U	boulders and logs on lb from debris flow.
R:	100	F:	4020	STD	U	boulders and debris from debris flow on rb
R:	100	F:	4021	STD	U	33% cascade us of rc
						COMMENTS
		Se	ection			Comments
		CHA	NNEL		,	at rc. Evidence of old debris flow/rock avalanche on both banks. Could move rc 30m us and avoid fish and 10m from rb of stream, all could be avoided by moving us. Important habitat.





Site 139 – Upstream debris

Site 139 – Upstream boulders and debris



Site 139 - Upstream 33% cascade

Reach # ILP Map # ILP #

Site

								PR	OJE	СТ							
	Projec Stream Nam Project Watersho		MESS	S CREE	≣K	0000-000	0-0000-	-000-00	0-000-0	00-000-00	00	F	roject Co	de:		17415	
								WAT	ERS	HED							
	Gazetted Name: Watershed Code: ILP Map#: Field UTM (Z.E.N): GIS UTM (Z.E.N):	000-0000 104G.01 	6		ILP #: 10)-000-00)4G.016	N	Loc ID #: 19 Site Loc ef. Name	g: 100	e: Reacl	h #: Method: (1.0 GE	Site #: 14 Access: H	40
	Date	e: 2007/	08/12		Time: 08:	:45		Agency	/: C660	(Crew: KN	M RS RD)	Fish C	ord?:	Incomplet	e: 🗸
								CH	IANN	IEL						·	
	Γ	Mtd	width	width	width	width	width	width	_		width	width	Avg		Gadio	ent % Mtd	Avg
	Channel Width (m): Wetted Width (m): Pool Depth (m):	MS MS MS											0.00 0.00 0.00	Metho Metho	od I:	C C	0.00
	Wb Depth:				Avg	g: 0.00	N	Method	: MS	S	tage: L	M	_ н _		Dw:	Tribs.:	
	COVER			To	tal:						_						
	Type: Amount:	SWD	LW	/D	В	U	DF	>	OV	IV	CR	OWN CL	.OSURE				
	Loc: P/S/O:										INS	TREAM	VEG: I	N \square A	П М П	V \square	
LWD: DIST:																	
	LB SHP:											RB SHP	:				
	Texture:	F \square	$G \; \bigsqcup$	С	В	R \square A						Texture	: F	$G \square C$	В	R A	
	RIP: STG:											RIP STG					
										_							
								V	VATE	R	_						
	EMS: Temp: pH: Flood Signs:						Metho	od: T3 od: P2 od: GE			С	eq #: ond.: -urb.: T	M [_ L _	С	Method: S3	
	MORPHOLOGY																
	Bed Material: D95: Pattern: Islands: Coupling: Confinement:	Do	ominant D (cm)			Subdom Morph				RBANCE ATORS	01 C1	B1		33 D1 34 C5		93 32 S3 S4	\$5
	FSZ:[ا	Bars:	N	SID	E [DIAG	MID	SPAN	BR
								Р	нот	o s							
	Photo	Foc	: Lg	T	D	Dir	T						Commen	ts			
F	R: 101 F: 4023	ST				D	a bit			seepage	10m N	of M42					
								СО	ММЕ	NTS							
	Section									(Commen	ts					
	CHANNEL		NCD - rc upsl		ge (proba	bly from	last stre	am) sh	annelize	s a bit at	road cro	ssing, th	en seeps	out again	ds. Could a	avoid by shifting	previous
	SITE CARD		NCD	opo.													



Site 140 – Downstream channelized seepage

Reach # ILP Map # ILP # Site

PROJECT

Project Nam	ne: Schaft Creek						
•	:.): MESS CREEK			P	roject Code:	17415	
Project Watershed Cod		00-00000-0000-0000-	000-000-000-000-00		roject code.	17415	
.,							
			WATERSHE	D			
Gazetted Name:				Local Name	e: M43		
Watershed Code: 000-0	00000-00000-00000-	0000-0000-000-000-0	000-000-000				
ILP Map#: 104G.	016 ILP :	#: 1040 NID Ma	ap #: 104G.016	NID #: 10052	Reach #:	1.0 Site	#: 141
Field UTM (Z.E.N):		Method:		Site Lg: 100	Method	: GE Access: H	l
GIS UTM (Z.E.N): 9.385	198.6342173			Ref. Name:			
						o 10	
Date: 200	07/08/13 Time	e: 09:20	Agency: C660	Crew: KM RS RD	Fish	Crd?: Incom	plete:
			CHANNEL				
Mtd	width width w	idth width width	width width wi	dth width width	Avg	Gadient % Mt	d Avg
Channel Width (m): MS		.40 1.10 0.70	1.60				21.50
Wetted Width (m): MS	0.60 0.80 0	.80 0.80 0.50	1.40		0.82 Meth	od II:	С
Pool Depth (m): MS					0.00 No V	is.Ch.: Intermittent	. 🖂
Wb Depth: .2	.2	Avg: 0.20 M	Method: MS	Stage: L M	✓ H □	Dw: Tribs.	=
COVER	Total:			о П	•		
) O)/ I)	/ CROWN CL	OCUDE		
Type: SW Amount: S	D LWD B		D N		1-90%		
Loc: P/S/O:							
				INSTREAM	VLG. II	M 🗸 V	
LWD: F	DIST	: E					
LB SHP: V				RB SHP	: V		
Texture: F	P G □ C □ B	□ R □ A □		Texture	: F 🔽 G 🗌 (C B B R A	
RIP: M				RIP	: M		
STG: MF				STG	: MF		
			WATER				
EMO:			WAIER	D#-			
EMS: Temp: 5		Metho	od: T3	Req #: Cond.: 35	7	Method:	63
pH: 8.3			od: P2				
Flood Signs:			od: GE	Turb.: T	\square M \square L \square	C Method:	GE
		N.	IORPHOLO	2 V			
		IV	IORPHOLO	-	D0 D0 D4	D0 D0	
Bed Material:	Dominant: G	Subdom: F		O1 B1	B2 B3 D1	D2 D3	
D95: 8.00	D (cm): 3.00	Morph: CP	DISTURBAN	CE LLILL			
Pattern: IR			INDICATOR	RS C1 C2	C3 C4 C5	S1 S2 S3	S4 S5
Islands: N							
Coupling: DC							
Confinement: UN FSZ: —			Bars:	N √ SID	DIAG	MID SPAN	BR_
F32.				•			
			FEATURES				
NID Map NID Type	Hgt Method	Lg Method	Photo	AirP	noto	UTM (Z/E/N)	Method
104G.016 10053 GE		GE	R: 101 F: 402	4 L:	#:	9.385185.6342113	GP3
Comments: source spring							
		НА	BITAT QUA	LITY			
Name				Comments			
Spawning Habitat							
	none						
OverWinter Habitat	none - no deep po	ools, probably freezes					
OverWinter Habitat Rearing Habitat	none - no deep po	ools, probably freezes pools, lots of cover					

						PHOTOS	
	Photo Foc Lg			Foc Lg	g Dir Comments		
R:	101	F:	4024	STD	U	feature - source spring	
R:	101	F:	4025	STD	U	feature - source spring	
R:	101	F:	4026	STD	D	undefined area ds of rc	
R:	101	F:	4027	STD	U	overland flow ds of rc	
R:	R: 101 F: 4028 STD U good channel bit near rc.				good channel bit near rc.		
						COMMENTS	
		Se	ction			Comments	
CHANNEL S4 Default - borderline stream - mostly scoured but a couple of areas of overland flow, undefined channel. Good flow. Streat from spring at bottom of av. Chute. Can't really move rc up but try to make it more parallel to stream direction.							



Site 141 – Upstream source spring



Site 141 – Downstream undefined area



Site 141 – Upstream, overland flow



Site 141 – Upstream, good channel

Name

Reach # ILP Map # ILP # Site

1.0 104G.016 1041 142 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M44 ILP Map#: 104G.016 NID #: 10054 ILP #: 1041 1.0 NID Map #: 104G.016 Reach #: Site #: 142 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385239.6342198 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/13 Time: 09:25 Agency: C660 Crew: KM RS RD CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) MS 1 20 0.70 0.65 Method I: 19.00 1.50 1.30 1.20 1 09 19.0 С Wetted Width (m) MS 1.50 1.20 1 00 0.60 1.00 1.00 1.05 Method II: С Pool Depth (m) MS 0.26 0.19 0.16 0.20 No Vis.Ch.: Intermittent: Tribs.: 🗹 Wb Depth: .3 .2 .2 Avg: 0.23 Method: MS Stage: L ☐ M ✔ H ☐ Dw: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 41-70% Ν Amount S D Ν S S INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: A DIST: E Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: M RIP: M STG: MF STG: MF WATER EMS: Req#: Temp: 4 Method: T3 Cond.: 425 Method: S3 pH: 8.4 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: G Subdom: F D95: 15.0 D (cm): 5.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: IR C2 С3 C4 C5 S1 S3 S5 Islands: N Coupling: DC Confinement: UN DIAG Bars: N SIDE MID SPAN BR FSZ: FEATURES NID Map AirPhoto NID Type Hgt Method Lg Method Photo UTM (Z/E/N) Method 104G.016 10056 GE 9.385246.6342096 GP3 GE R: Comments: source spring 2 NID Map NID Type Hgt Method Lg Method Photo AirPhoto UTM (Z/E/N) Method 9.385208.6342096 GP3 104G.016 10055 GE GE 101 F: 4032 1. #: Comments: source spring 1 HABITAT QUALITY

Comments

							HABITAT QUALITY	
		N	ame				Comments	
Spawning Habitat poor - there's water but shallow. Too steep.					ı. Too steep.			
OverWinter Habitat none								
Rearing Habitat fair - decent pools, good cover and good flow					and good flow			
							PHOTOS	
Photo Foc Lg Dir Comments			Comments					
R:	101	F:	4029	ST	.D	D near rc		
R:	101	F:	4030	ST	D	U near rc		
R:	101	F:	4031	ST	D	U	feature - spring source	
R:	101	F:	4032	ST	D	U	feature - spring source	
R:	R: 101 F: 4035 STD U note road ribbon 5m to right of stream.							
							COMMENTS	
		Se	ection				Comments	
	CHANNEL S4 Default - small stream arising from av chute springs and stream. Sp morph but decent pools. Low gradient and connected to Mess cr. Road runs parallel for ~20m on LB - alternate alignment so it crosses perpendicular to stream higher up.							



Site 142 – Downstream view



Site 142 – Spring source



Site 142 – Upstream view



Site 142 – Upstream view

STD

STD

U

U

spring source

stream section

101

F: 4033

101 F: 4034

Reach # ILP Map # ILP # Site

1.0 104G.016 1042 143 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M45 ILP Map#: 104G.016 NID #: 10057 ILP #: 1042 1.0 NID Map #: 104G.016 Reach #: Site #: 143 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385229.6342175 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/13 Time: 10:00 Agency: C660 Crew: KM RS RD CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.90 2.10 Method I: 21.50 1 10 0.70 1 00 1.50 1.22 24.0 19.0 С 0.50 1.30 Method II: Wetted Width (m) MS 0.60 0.30 0.40 0.90 0.67 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: .2 .4 .2 Avg: 0.27 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: T **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 21-40% Ν Amount S Ν S Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: N DIST: NA Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 5 Method: T3 Cond.: 435 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: F Subdom: G D95: 6.00 D (cm): 3.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: ST C2 С3 C4 S1 S3 S5 Islands: N Coupling: DC Confinement: FC SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Name Spawning Habitat none OverWinter Habitat none Rearing Habitat none - no connectivity small **PHOTOS** Foc Lg Photo Dir Comments

Reach # ILP Map # ILP # Site

1.0 104G.016 1042 143

	COMMENTS						
Section Comments							
CHANNEL	S6 - if rc moves us on left it will cross this stream at a better spot, arises from a spring in us av chute. Marginal habitat.						



Site 143 – Upstream spring source



Site 143 – Upstream view

Name Spawning Habitat

OverWinter Habitat

Pooring Habitat

none

none

Reach # ILP Map # ILP # Site

1.0 104G.016 1043 144 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.016 NID #: 10058 ILP #: 1043 1.0 NID Map #: 104G.016 Reach # Site #: 144 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385233.6342183 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/13 Time: 10:40 Agency: C660 Crew: KM RS RD CHANNEL width width width width Gadient % Mtd Mtd width width width width width width Avg Avg Channel Width (m) MS 3 00 Method I: 27.00 0.90 1 60 1.50 1.75 27.0 С 0.80 Method II: Wetted Width (m) MS 1.50 0.45 1.60 1.09 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: .2 .2 Avg: 0.20 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 1-20% Ν Amount S Ν Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: F DIST: E RB SHP: S Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 5 Method: T3 Cond.: 432 Method: S3 pH: 8.4 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 В3 D1 D2 D3 Bed Material: Dominant: F Subdom: G D95: 2.00 D (cm): 2.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: SI C2 СЗ C5 S1 S3 S5 Islands: N Coupling: PC Confinement: OC Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY

'	Cuili	ig i labit	idt Hone		
					PHOTOS
Р	noto		Foc Lg	Dir	Comments
R: 101	F:	4036	STD	U	
R: 101	F:	4038	STD	D	

Comments

Reach # ILP Map # ILP # Site

1.0 104G.016 1043 144

	COMMENTS						
Section Comments							
CHANNEL	S6 - small trib to 1042, not on road route yet but move xings uphill a bit and it will be. Marginal habitat.						



Site 144 – Upstream view



Site 144 – Downstream view

Reach # ILP Map #

ILP#

Site

			PROJECT				
Stream Name (gaz.	e: Schaft Creek): MESS CREEK e: 630-000000-00000-000	000-0000-0000-000	0-000-000-000-000-0		roject Code:	17415	
		W	ATERSHED				
Gazetted Name:				Local Name	e:		
Watershed Code: 000-00	0000-00000-00000-0000-	0000-000-000-000	-000-000-000				
ILP Map#: 104G.0	16 ILP #: 104	14 NID Map #	#: 104G.016 N	ID #: 10059	Reach #: 1.0	Site #: 145	
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3852		ethod:	Re	Site Lg: 100 ef. Name:	Method: GE	Access: H	
Date: 2007	7/08/13 Time: 11:3	30 Age	ency: C660 C	Crew: KM RS	Fish Crd?:	☐ Incomplete: ✓	
			CHANNEL				
Mtd	width width width	width width w	vidth width width	width width	Avg	Gadient % Mtd Avg	
Channel Width (m): MS					0.00 Method I:	C 0.00	
Wetted Width (m): MS					0.00 Method II:	С	
Pool Depth (m): MS					0.00 No Vis.Ch.:	Intermittent:	
Wb Depth:	Avg:	0.00 Met	thod: MS St	age: L _ M	H Dw:	Tribs.:	
COVER	Total:						
Type: SWD	LWD B	U DP	OV IV	CROWN CL	OSURE		
Amount:							
Loc: P/S/O:				INSTREAM	VEG: N A M	V	
LWD: DIST:							
LB SHP:				RB SHP	:		
Texture: F] G	R A		Texture	: F _ G _ C _ I	B _ R _ A _	
RIP:				RIP			
STG:				STG	:		
	WATER						
EMS:				Req #:			
Temp:		Method: Method:		Cond.:		Method: S3	
pH: Flood Signs:		Method:		Turb.: T	\square M \square L \square C \square	Method: GE	
3 .							
			RPHOLOGY	O1 B1	B2 B3 D1 D2	D3	
		Subdom:					
D95:	D (cm):	Morph:	DISTURBANCE INDICATORS				
Pattern: Islands:			INDICATORS	C1 C2	C3 C4 C5 S1	S2 S3 S4 S5	
Coupling:							
Confinement:							
FSZ:			Bars:	N SID	E DIAG MII	D SPAN BR	
			PHOTOS				
	oc Lg Di				Comments		
R: 101 F: 4041 S	TD D						
		С	OMMENTS				
Section				Comments			
CHANNEL	NCD - seepage channe	lizes a bit at rc. Ove	erland flow and organ	ic substrate dom	inate.		
SITE CARD	NCD						



Site 145 – Downstream view

Reach # ILP Map # ILP # Site

		PROJECT					
Project Name: Schaft C	:reek						
			Drainet Code	17.11 <i>E</i>			
Stream Name (gaz.): MESS C			Project Code:	17415			
Project Watershed Code: 630-000	000-00000-00000-0000-0	000-000-000-000-000	-000				
		WATEROUEE					
		WATERSHED					
Gazetted Name:			Local Name: M46				
Watershed Code: 000-000000-00000	0-00000-0000-0000-000-0	000-000-000-000					
ILP Map#: 104G.016	ILP #: 1045 N	ID Map #: 104G.016	NID #: 10060 Reach #:	1.0 Site #: 146			
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: 0	GE Access: H			
GIS UTM (Z.E.N): 9.385280.6342239			Ref. Name:	7,00033.11			
GIS 01W (Z.E.IV). 9.363260.0342238	1		Nei. Name.				
Date: 2007/08/13	Time: 11:45	Agency: C660	Crew: KM RS RD Fish C	rd?: Incomplete:			
		CHANNEL					
		ridth width width widt		Gadient % Mtd Avg			
Channel Width (m): MS 2.70 3.7	10 1.30 3.40 3	3.00	2.70 Metho				
Wetted Width (m): MS 2.30 1	.30 1.00 1.40 1	.40	1.48 Metho	d II:			
Pool Depth (m): MS			0.00				
			No Vis	s.Ch.: Intermittent:			
Wb Depth: .3 .3	.2 Avg: 0.27	Method: MS	Stage: L M W H	Dw: Tribs.:			
COVER	Total: A						
Type: SWD LWD	B U	DP OV IV	CROWN CLOSURE				
	N N	N D N	1 1-20%				
Loc: P/S/O:			INSTREAM VEG: N A	M ✓ V			
LWD: F	DIST: E						
LB SHP: S			RB SHP: S				
Texture: F 🗹 G 🗌 C	BRA		Texture: F ✓ G ☐ C	BRA			
RIP: C			RIP: M				
STG: MF			STG: MF				
WATER							
EMS:			Req #:				
Temp: 4	1	Method: T3	Cond.: 463	Method: S3			
pH: 8.5	1	Method: P2	Turb.: T M L	C Method: GE			
Flood Signs:	ī	Method: GE	Turb.: T M L	ivietilod. GE			
		MORPHOLOG	Υ				
Pad Materials Deminant C Subdam F 01 B1 B2 B3 D1 D2 D3							
Bed Material: Dominant: G	Subdom: F		O1 B1 B2 B3 D1	D2 D3			
D95: 12.0 D (cm):	4.00 Morph: C	P DISTURBANC					
Pattern: ST		INDICATORS		S1 S2 S3 S4 S5			
			01 02 03 04 03	31 32 33 34 33			
Islands: O							
Coupling: DC							
Confinement: OC		Doros	NET SIDEE DIACE	MIDE CRANE BRE			
FSZ:		Bars:	N✓ SIDE DIAG	MID SPAN BR			
		HABITAT QUAL	ITV				
		HABITAT QUAL					
Name			Comments				
Spawning Habitat none							
OverWinter Habitat none	naala ahalla:::						
Rearing Habitat poor - no	pools, shallow	PHOTOS					
		1 10103					
Photo Foc Lg	Dir		Comments				
R: 101 F: 4042 STD	U						
R: 101 F: 4043 STD	D						

	COMMENTS
Section	Comments
CHANNEL	S6 - wide poorly defined unconfined steam with multiple channels through moss and shrubs. No barriers ds to mess cr. Soft banks, no good for arch cv.
	good for archicv.



Site 146 – Upstream view



Site 146 – Downstream view

Reach # ILP Map # ILP # Site

		PROJECT					
Project Name: Schaft C	reek						
Stream Name (gaz.): MESS 0			Project Code:	17415			
Project Watershed Code: 630-000		000-000-000-000-000-000-0	•				
,							
		WATERSHED					
Gazetted Name:			Local Name: M47				
Watershed Code: 000-000000-00000	0-00000-0000-0000-000-0	000-000-000-000					
ILP Map#: 104G.016	ILP #: 1046 NI	D Map #: 104G.016	NID #: 10061 Reach #:	1.0 Site #: 147			
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: 0	GE Access: H			
GIS UTM (Z.E.N): 9.385300.6342282		F	Ref. Name:	7.00000			
(2.2). 0.00000000000	•	•		_			
Date: 2007/08/13	Time: 12:30	Agency: C660	Crew: KM RS Fish C	rd?: Incomplete:			
		CHANNEL					
Mtd width w	ridth width width wi	idth width width width	width width Avg	Gadient % Mtd Avg			
Channel Width (m): MS 1.60 0.9	0.70 0.80 1	.10	1.02 Metho	d I: 28.0 35.0 C 31.50			
Wetted Width (m): MS 1.15 (0.50 0.80 0.70 0	.60	0.75 Method	d II: C			
Pool Depth (m): MS			0.00				
	 		No Vis.				
Wb Depth: .3 .2	.1 Avg: 0.20	Method: MS	Stage: L M 🗸 H	Dw: Tribs.:			
COVER	Total: A						
Type: SWD LWD	B U	DP OV IV	CROWN CLOSURE				
Amount: T T	T N	N D N	5 >90%				
Loc: P/S/O:			INSTREAM VEG: N 🗸 A [$\neg M \sqcap V \sqcap$			
LWD: N	DIST: NA						
LB SHP: S			RB SHP: S				
Texture: F 🗹 G 🗌 C	□ B □ R □ A □		Texture: F 🗸 G 🗌 C	□ B □ R □ A □			
RIP: S			RIP: S				
STG: SHR			STG: SHR				
		WATER					
WATER EMS: Reg #:							
		Anthody TO	Req #: Cond.: 217	Marthault, CO			
Temp: 5 pH: 8.6		Method: T3 Method: P2		Method: S3			
Flood Signs:		Method: F2	Turb.: T M L	C Method: GE			
r lood Olgrio.	.,,						
MORPHOLOGY							
Bed Material: Dominant: G	Subdom: F		O1 B1 B2 B3 D1	D2 D3			
D95: 4.00 D (cm):	4.00 Morph: Cl	P DISTURBANCE					
Pattern: ST		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5			
Islands: N							
Coupling: CO							
Confinement: OC							
FSZ:□		Bars:	N♥ SIDE DIAG	MID SPAN BR			
	ŀ	HABITAT QUALI	ΤΥ				
Name			Comments				
Spawning Habitat none							
OverWinter Habitat none							
Rearing Habitat none		DUCTOS					
Rearing Habitat none		PHOTOS					
Rearing Habitat none Photo Foc Lg	Dir	PHOTOS	Comments				
Rearing Habitat none	Dir U D	PHOTOS	Comments				

COMMENTS							
Section	Section Comments						
CHANNEL	S6 - very small stream through av. Chute. Marginal habitat.						



Site 147 – Upstream view



Site 147 – Downstream view

Reach # ILP Map#

ILP#

Site 149

1.0 104G.016 1048

									Р	ROJE	СТ									
	Stream Nan	ect Name: Schaft Creek ne (gaz.): MESS CREEK ned Code: 630-000000-00000-0000-0000-0000-000-000-								Project Code: 17415					5					
									W A	TERS	SHED									
	Gazetted Name:	:										Loc	al Name	e: M49						
	Watershed Code: 000-00000-00000-00000-0000-0000-000-00																			
	ILP Map#: 104G.016							ID #: 10	013	Read	ch #:		1.0		Site #: 1	49				
	Field UTM (Z.E.N): Method: Site Lg: 100 Method: GE Access: H																			
	GIS UTM (Z.E.N): 9.385327.6342484 Ref. Name:																			
	Dat	te: 200	7/08/13		Time	: 13:	25		Agend	cy: C660	(Crew: KN	ARS RE)	ı	Fish Cr	rd?:		Incomple	te: 🗸
									С	HANI	NEL									
		Mtd	width	widtl	h wi	dth	width	width	widt	th widtl	h width	width	width	Avg	_			dient %	Mtd	Avg
	Channel Width (m):	MS												0.00	I ⊢	Metho			С	0.00
-	Wetted Width (m): Pool Depth (m):	MS MS		1	-					+	+			0.00	Ľ	Method) II.		С	j
<u> </u>													<u> </u>		1	No Vis.	Ch.:		nittent:	
L	Wb Depth:					Avg	: 0.00	N	∕letho(d: MS	S	tage: L	M	H [Dw:		Tribs.:	
	COVER			T	otal:															
	Туре:	SWE	LV	WD	В		U	DF)	OV	IV	CRO	OWN CL	OSURE						
	Amount:					_						_							_	
	Loc: P/S/O:					Ш			LL			INS	TREAM	VEG:	N] A [M) V [
	LWD:	:			DIST:															
	LB SHP	:										1	RB SHP	:						
	Texture	: F 🗀] G 🗌] C [] B [F	R 🔲 A						Texture	: F _	G [_ c	□ В [_ R [] A [
	RIP	:											RIP	:						
	STG	:											STG	:						
									,	WATE	E R									
	EMS:											R	eq #:							
	Temp:							Meth	od: T	3			ond.:					Me	thod: S	3
	pH:								od: P			Т	urb.: T	М		L [С	Me	thod: G	E
	Flood Signs:							Meth	od: GE	≣					Ш					
								N	1 O R	PHO	LOGY									
	Bed Material:	[Dominar	nt:			Subdom	:				01	B1	B2	B3	D1	D2	D3		
	D95:		D (cm	n):			Morph	:		DISTUI	RBANCE									
	Pattern:										CATORS	C1	C2	C3	C4	C5	S1	S2	S3 S4	1 S5
	Islands:																			
	Coupling:																			
	Confinement: FSZ:										Bars:	N	SID	ΕΠ	DIAG	3	MID	∃ SP	AN	BR
	F32.																			
									Р	нот	o s									
	Photo	9								Comme	nts									
R:	101 F: 4050	S	TD)	cha			followed b	y overlar	nd bit at	rc.						
	0/		1						CO	ММЕ		Dame	10							
	Section CHANNEL		NCD	neel:	to of -	abe =	nolizatio	intere	orco-	ا بدائله منا	osurface fl	Commen		, and as	nnc ~ -	Not -	ontinus			
	SITE CARD		NCD -	- pocke	515 OI C	Judili	rielizatior	rinersp	Je18e0	a with Sul	osunace II	Jw, overi	aliu IIUW	and See	spage	. INOL C	oriuriuou	ə.		
	SHE CARD		INCD																	



Site 149 – Downstream view

Foc Lg

STD

STD

Dir

U

D

at rc

ds of rc to mess cr.

Photo

101 F: 4051

101 F: 4052

Reach # ILP Map # ILP # Site

Comments

1.0 104G.016 1049 150 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M50 ILP Map#: 104G.016 NID #: 10064 ILP #: 1049 1.0 NID Map #: 104G.016 Reach #: Site #: 150 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385365.6342590 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/13 Time: 13:40 Agency: C660 Crew: KM RD RS CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) MS 7 00 2.76 Method I: 47.50 1.30 2.30 2 00 1.20 47.0 48.0 С 0.60 Method II: Wetted Width (m) MS 0.40 0.80 2.00 0.80 0.92 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: .2 .6 Avg: 0.00 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 1-20% Ν Amount S Ν Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V** LWD: N DIST: NA Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: C RIP: M STG: MF STG: MF WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 264 Method: S3 pH: 8.6 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: G Subdom: C D95: 30.0 D (cm): 8.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ C4 S1 S3 S5 Islands: N Coupling: CO Confinement: CO Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name OverWinter Habitat Spawning Habitat none Rearing Habitat none **PHOTOS**

Reach # ILP Map # ILP # Site

COMMENTS							
Section	Section Comments						
CHANNEL	S6 - small steep channel through dc. Marginal habitat.						



Site 150 – Upstream view



Site 150 – Downstream view

Reach # ILP Map # ILP # Site

				PR	OJE	СТ							
Project Name	: Schaft Creek												
Stream Name (gaz.)							_	F	Project Co	ode:		17415	
Project Watershed Code: 630-000000-00000-00000-0000-0000-000-000													
				WAT	ERSI	HED							
Gazetted Name:							Loc	cal Name	e: M51				
Watershed Code: 000-000		000-0000-00 LP #: 1050					ID#: 10)OSE	Read	h #•	1.0	Site #:	151
ILP Map#: 104G.0	10 1	Meth		/lap #: 10	40.016	IN			Real	Method: (Access: H	151
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.38542	29.6342870	Metri	iou.			Re	Site Lo ef. Name			wethou.	3 E	Access. II	
Date: 2007	7/08/13 ⁻	Time: 14:20		Agency:	C660	C	rew: KN	A RS RE)	Fish C	rd2·	Incompl	ete:
Date. 2007	700/13	Time: 14.20			ANN		new. Ki	VI IXO IXE	,	1 1311 0	iu:.	Псотгр	ete
Mtd	width width	width w	ridth width	width	width	width	width	width	Avg		Gadie	ent % Mtd	Avg
, ,	2.70 2.00		2.20 2.40	2.60					2.35	Metho	od I: 23.0	21.0 C	22.00
Wetted Width (m): MS Pool Depth (m): MS	1.60 0.80 0.14 0.12	1.10 1 0.14	.50 1.60	0.80					1.23 0.13	Metho	d II:	С	
Fooi Deptii (iii).	0.14 0.12	0.14	<u> </u>	1					0.13	No Vis	.Ch.:	Intermittent:	
Wb Depth: .3	.4 .4	Avg:	0.37	Method:	MS	St	age: L	M	✓ H [Dw:	Tribs.:	
COVER		al: A					_						
Type: SWD Amount: T	LWD	B S	U D		OV D	IV N	CR0		LOSURE I-20%				
Loc: P/S/O:							4			N 🗾 A I	M	V \square	
LWD: N		DIST: NA				<u> </u>	J						
LWD: N LB SHP: S	L	IST: INA						חם כו ום					
Texture: F	G \sqcap C \sqcap	B R R	¬ A □					RB SHP Texture		G ┌ C	В	R A	٦
RIP: S								RIP					_
STG: SHR								STG	: SHR				
				W	ATE	R							
EMS:							R	eq #:					
Temp: 7				Method: T3 Method: P2				Cond.: 210 Method:					S3
pH: 8.5 Flood Signs: rafted de	ebris			nod: P2			Т	urb.: T	M	_ L _	C 🔼	Method: 0	GE
				MORF	HOL	OGY							
Bed Material: D	ominant: C	Sul	bdom: G	•			01	B1	B2 E	33 D1	D2 D	3	
D95: 30.0	D (cm): 11.00		Morph: SP	г	DISTURE	RANCE							
Pattern: ST					INDICA		C1	C2	C3 (C4 C5	S1 S	2 S3 S	4 S5
Islands: O										✓			
Coupling: CO Confinement: OC													
FSZ:					В	ars:	N	SID	E	DIAG	MID	SPAN	BR
]			ЦΛ	BITA	T OI	1	ГУ						
Name			пА	БПА			ommen	ts					
Spawning Habitat	none						Jonninen						
OverWinter Habitat	none	, , ,											
Rearing Habitat	poor - shallow	few pools ta	ast flow	PH	ІОТО	S							
Photo Fo	c Lg	Dir							Commer	nts			
R: 101 F: 4054 S	TD	U											
	TD	D			'h = a · · · ! . '		avel- '	ha -!-! '					
R: 101 F: 4056 S	TD	U	sp	morph. T	nrough b	ouldery	avaianc	ne debri	S.				

COMMENTS							
Section	Comments						
CHANNEL	S6 - evidence of avalanche debris - lots. Small stream through avalanche chute. Marginal habitat.						

Reach #

ILP Map#

ILP#

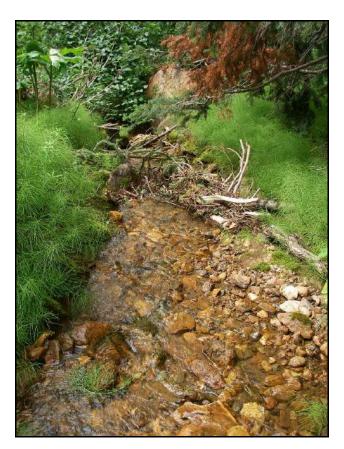
Site







Site 151 – Upstream step-pool morphology



Site 151 – Downstream view

Reach # ILP Map # ILP #

Site

		PROJEC	Т							
Project Name	e: Schaft Creek									
	Stream Name (gaz.): MESS CREEK Project Code: 17415									
Project Watershed Code	shed Code: 630-00000-00000-00000-0000-0000-000-000-									
WATERSHED										
Gazetted Name: Local Name: Watershed Code: 000-00000-00000-0000-0000-0000-000-000										
ILP Map#: 104G.016										
Field UTM (Z.E.N): Method: Site Lg: 100 Method: GE Access: H										
GIS UTM (Z.E.N): 9.385412.6343145 Ref. Name:										
Date: 200	7/08/13 Time: 15:10	Agency: C660	Crew: KM RS RD	Fish Crd?: Incomplete:						
Date: 200	7/00/13 Time. 13.10			incomplete.						
Mtd	المانين الطعاماتين الطعاماتين	C H A N N E		Codiant 0/ Mtd Aug						
Channel Width (m): MS	width width width width	h width width width	width width Avg 0.00	Method I: Mtd Avg C 0.00						
Wetted Width (m): MS				Method II: C						
Pool Depth (m): MS			0.00	N V 0						
Wb Depth:	Avg: 0.0	00 Method: MS	Stage: L M H	No Vis.Ch.: Intermittent: Tribs.:						
COVER	Total:									
Type: SWD	D LWD B U	DP OV	IV CROWN CLOSURE							
Amount:										
Loc: P/S/O:			INSTREAM VEG: N	_ A _ M _ V _						
LWD:	DIST:									
LB SHP:			RB SHP:							
Texture: F] G	Α 🗌	Texture: F G	Texture: F G C B R A						
RIP:			RIP:							
STG:			STG:							
		WATER								
EMS:			Req #:							
Temp:		Method: T3 Method: P2	Cond.:	Method: S3						
pH: Flood Signs:		Method: GE	Turb.: T M	L C Method: GE						
		MORPHOLO	2 C V							
			O1 B1 B2 B3	D1 D2 D3						
Bed Material: [D95:	Dominant: Subd D (cm): Mo									
	D (CIII). IVIO	r ^{pn:} DISTURBA INDICAT	000	05 04 00 00 04 05						
Pattern: Islands:			ORS C1 C2 C3 C4	C5 S1 S2 S3 S4 S5						
Coupling:										
Confinement:		D	NC ODEC DIAG							
FSZ:		Ba	rs: N SIDE DIAG	B MID SPAN BR						
		РНОТО:	3							
	oc Lg Dir		Comments							
R: 101 F: 4058 S	STD D	overland and seepage COMMEN								
Section	1	O W W E N	Comments							
CHANNEL	NCD - some surface water a	nd flow, but no channel	Johnnes							
SITE CARD	NCD									



Site 152 – Downstream seepage

F: 4061

101

STD

NS

Reach # ILP Map # ILP # Site

1.0 104G.016 1052 153 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M52 Hits Cr. NID #: 10067 ILP #: 1052 ILP Map#: 104G.016 NID Map #: 104G.016 Reach # 1.0 Site #: 153 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385423.6343199 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/13 Time: 15:00 Agency: C660 Crew: KM RS RD CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) MS 3 30 5.00 4.80 Method I: 22.00 3 10 4 50 3.20 3.98 24.0 20.0 С Wetted Width (m) MS 2 30 2.60 2 60 2 00 2.60 2.00 2.35 Method II: С 0.30 Pool Depth (m) MS 0.40 0.30 0.20 0.20 0.26 0.15 No Vis.Ch.: Intermittent: Wb Depth: .5 .5 .9 Avg: 0.63 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 21-40% Ν Amount S Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: N DIST: NA Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: M RIP: C STG: PS STG: MF WATER EMS: Req#: Temp: 6 Method: T3 Cond.: 212 Method: S3 pH: 8.5 Method: P2 Turb.: T M L C Method: GE Flood Signs: rafted debris Method: GE MORPHOLOGY D1 D2 Bed Material: Dominant: C. Subdom: B D95: 40.0 D (cm): 25.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: IR C2 S1 S3 S5 Islands: N **V** Coupling: DC Confinement: OC Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name Spawning Habitat poor - no gravel OverWinter Habitat poor - pools not deep enough. Low cover us of rc Rearing Habitat fair - fast flow but good pools and cover in sp morph **PHOTOS** Foc Lg Photo Dir Comments 101 F: 4059 STD U scoured valley us of rc 4060 STD F: Х deposited debris on LB 101

8 angles for tc starting looking ds and working clockwise. 4061-8

	COMMENTS
Section	Comments
CHANNEL	S3 Default - ds of rc nice stream with sp morph - lots of cover and good pools. Us of rc evidence of debris flow, extensive scour and
	downrutting. Still good pools, but less cover 24% slope. Important habitat in places. Return to EF.

Reach #

ILP Map#

ILP#

Site



Site 153 – Upstream scoured valley



Site 153 – Across view, deposited debris on left bank

STD

STD

D

U

101 F: 4069

101 F: 4070

Reach # ILP Map # ILP # Site

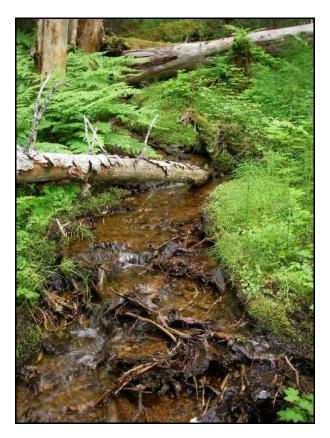
1.0 104G.016 1056 157 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M53 NID #: 10068 ILP #: 1056 1.0 ILP Map#: 104G.016 NID Map #: 104G.016 Reach #: Site #: 157 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385432.6343329 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/13 Time: 16:00 Agency: C660 Crew: KM RS RD CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.50 0.90 0.60 0.60 0.82 Method I: 18.50 0.90 1 40 16.0 21.0 С Method II: Wetted Width (m) MS 0.60 1.10 0.70 0.90 0.70 0.60 0.77 С Pool Depth (m) MS 0.20 0.20 No Vis.Ch.: Intermittent: Wb Depth: .3 .2 Avg: 0.25 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: M **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 21-40% D Ν Amount Ν Ν S INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: N DIST: NA Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 5 Method: T3 Cond.: 163 Method: S3 pH: 8.2 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: G Subdom: F D95: 12.0 D (cm): 4.00 Morph: RP DISTURBANCE **INDICATORS** Pattern: ST C2 С3 S1 S3 S5 Islands: N Coupling: DC Confinement: UN SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Name Spawning Habitat fair - some decent gravel but shallow water OverWinter Habitat none - no pools Rearing Habitat poor - shallow, few pools **PHOTOS** Foc Lg Photo Dir Comments

Reach # ILP Map # ILP # Site
1.0 104G.016 1056 157

	COMMENTS
Section	Comments
	S4 Defult - 3 streams join at rc - this is the southernmost. Small gravel stream, good flow but shallow. Few pools. Connected to mess



Site 157 – Downstream view



Site 157 – Upstream view

Reach # ILP Map # ILP # Site

	PROJECT													
Project Name:														
Stream Name (gaz.): Project Watershed Code:			000-000	0-0000-	000-000	-000-00	0-000-00	10	P	roject C	ode:		17415	
				,	WAT	ERS	HED							
Gazetted Name:	000 00000 00	000 0000	0000 00	000 0	00 000	000 000		Loc	cal Name	e: M53				
Watershed Code: 000-0000 ILP Map#: 104G.010		ILP #: 10			ap #: 104			D#: 10	069	Read	ch #:	1.0	Site	#: 158
Field UTM (Z.E.N):			lethod:					Site Lo			Metho		Access: I	
GIS UTM (Z.E.N): 9.385441	.6343349		iou iou.				Re	ef. Name	•		Would	u. 0L	7100000.1	•
Date: 2007/08/13 Time: 16:20 Agency: C660 Crew: KM RS RD Fish Crd?: Incomplete												nplete:		
	EL													
	width width		width	width	width	width	width	width	width	Avg				td Avg
` '	.00 1.60 1.80 1.30	0.90 1.00	0.40	0.70						1.12		thod I: 16 hod II:		C 15.00
Pool Depth (m): MS	1.00 1.30	1.00	0.40	0.30						0.00	IVIEL	nod II.		<u> </u>
Wb Depth: .2	.2	Ανσ	: 0.20		/lethod:	MS	St	age: L	п м			Vis.Ch.: Dw:	Intermitten Tribs	
COVER		utal: A	j. 0.20	IV.	ietiloa.	IVIO	Oi.	age. L		✓ H		DW.		· []
Type: SWD	LWD	В	U	DP	' (VC	IV	CR	OWN CL	.OSURE				
Amount: S	D	N	S	N		S	N	1	1	-20%				
Loc: P/S/O:			V				✓	INS	TREAM	VEG:	N 🗸	A M	V	
LWD: A DIST: E														
LB SHP: V									RB SHP	: V				
Texture: F	G \square C \square	ВП	R \square A	· 🔲					Texture	: F 🗸	G 🖂	С П В	□ R □ A	
RIP: C		<i>.</i> —		_					RIP		_			
STG: MF									STG	: MF				
					W	ATE	R							
EMS:								R	eq #:					
Temp: 5					od: T3			С	ond.: 17	3			Method	: S3
pH: 7.1 Flood Signs:					od: P2 od: GE			Т	urb.: T	\square M		¬ c 🗸	Method	: GE
Flood Signs:														
				M	ORP	HOL	O G Y					_	-	
Bed Material: Do	minant: F		Subdom	: G				01	B1		B3 D	1 D2	D3	
D95: 7.00	D (cm): 3.00)	Morph	: RP		ISTUR								
Pattern: SI						INDICA	TORS	C1	C2	C3	C4 C	5 S1	S2 S3	S4 S5
Islands: N														
Coupling: DC Confinement: UN														
FSZ:						В	ars:	N	SID	E	DIAG	MID	SPAN	BR
				HAI	ВІТА	T Q L	JALIT	ГΥ						
Name							С	ommen	ts					
' '	none													
	none poor - shallov	v organic	e cubetra	nto										
ivearing Habitat	- SIIaii0V	v, organic	o oubolla	11.0	PΗ	ото	S							
Photo Foc	Lg	D	oir	1						Comme	nts			
R: 101 F: 4071 ST			J	us o	f rc									
R: 101 F: 4072 ST	D	[D	us o	f rc									

Section CHANNEL Reach # ILP Map # ILP # Site

1.0 104G.016 1057 158

C

S4 Default - 2nd stream at M53. Small shallow, poorly defined in places. Marginal habitat but connected to Mess Cr.

OMMENTS	
Comments	



Site 158 – Upstream view



Site 158 – Downstream view

F:

F: 4075

STD

101

101

U

IJ

us of rc

at rc showing 3 streams coming together

ILP Map # Reach # ILP# Site 1.0 104G.016 1058 159 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M53 NID #: 10070 ILP #: 1058 ILP Map#: 104G.016 NID Map #: 104G.016 Reach #: 1.0 Site #: 159 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385431.6343349 Ref. Name: **V** Incomplete: Date: 2007/08/13 Time: 16:30 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL width width Mtd Mtd width width width width width width width width Gadient % Avg Avg Channel Width (m) MS 1 40 2.50 Method I: 11.00 2 30 2.00 1.50 1.70 1.94 16.0 12.0 С 2 20 Method II: Wetted Width (m) MS 1.80 1.90 1.30 1.10 0.60 1.70 2.00 1.49 5.0 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Dw: Wb Depth: .3 .4 .5 Avg: 0.40 Method: MS Stage: L ☐ M ✔ H ☐ Tribs.: COVER Total: M **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 21-40% Ν Amount D S Ν INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: F DIST: F Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 4 Method: T3 Cond.: 378 Method: S3 pH: 8.4 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY D1 D2 D3 Bed Material: Dominant: G Subdom: C D95: 22.0 D (cm): 10.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: SI C2 С3 S1 S3 S5 Islands: N Coupling: DC Confinement: UN SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Comments Name Spawning Habitat fair - us of rc some gravel, but fast and shallow good ds of rc. OverWinter Habitat none Rearing Habitat good - ds of crossing, good. Us poor. **PHOTOS** Foc Lg Photo Dir Comments STD cascade us of rc 101 F: 4073 D 4074 STD

ILP Map # 1.0 104G.016 1058

Reach #

ILP#

Site

	PHOTOS													
	Ph	noto		Foc Lg	Dir	Comments								
R:	101	F	: 4076	STD	D	ds from rc to Mess Cr.								
R:	101	F	: 4086	STD	TD U critical sp habitat at outlet to Mess Cr.									
R:	101	F	: 4087	STD	D	critical sp habitat at outlet to Mess Cr.								
						COMMENTS								
		S	ection			Comments								
CHANNEL S4 Default - Low gradient, connected to Mess Cr. 3rd stream at rc M53. main waterbody - good flow but fast, steel Excellent spawning habitat at outlet to Mess Cr. Recommend bridge.														



Site 159 – Downstream cascade



Site 159 - Upstream viewSite



Site 159 – Downstream view



159 – Upstream showing 3 streams joining

ILP Map# Reach #

ILP# 1059

104G.026

1.0

Site 160

							PK	OJE	5 I							
Proje Stream Nan Project Watersh	ne (gaz.)		S CREE	K	000-000	00-0000-	000-000)-000-00	0-000-00	00	F	Project Co	ode:		17415	
							WAT	ERS	HED							
Gazetted Name:	:									Loc	al Nam	e:				
Watershed Code: ILP Map#: Field UTM (Z.E.N): GIS UTM (Z.E.N):	: 000-000 : 104G.0 :	26	II	_P #: 10			00-000- ap #: 10-		N	ID #: 10 Site Lo	072 g: 100	Read	ch #: Method: (1.0 GE	Site #: 1 Access: H	60
010 0 TW (2.E.IV).	. 3.30342	22.00404	100						170	zi. ivaiiie						_
Dat	te: 2007	7/08/14	Т	ime: 09:	:00	4	Agency:	C660	C	Crew: KN	/I RD RS	3	Fish C	rd?:	Incomple	te: 🗸
							СН	ANN	EL							
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadi	ent % Mtd	Avg
Channel Width (m):	MS											0.00	Metho	od I:	С	0.00
Wetted Width (m):	MS											0.00	Metho	d II:	С	
Pool Depth (m):	MS											0.00	N	a		_
Wb Depth:		1		Δνα	g: 0.00		/lethod:	MS	St	age: L	М	□н□	No Vis	Dw:	Intermittent: Tribs.:	_
-					j. 0.00	IV	neu iou.	IVIO	31	aye. L	IVI	Н		DW	TIIDS	_
COVER			Tota	al:						_						
Type:	SWD	LW	/D	В	U	DF)	OV	IV	CR	OWN C	OSURE				
Amount:																
Loc: P/S/O:										INS	TREAM	I VEG:	N A [M	V	
LWD:			D	IST:												
			D	101.												
LB SHP				_		_					RB SHF		. — .			
Texture	: F	G _	С	В	R \square A	\					Texture): F	G C	В] R 🗌 A 🗌	
RIP	:										RIF) :				
STG											OTO					
	•										STG	i:				
							W	ATE	R		SIG	i:				
							W	ATE	R	R		i:				
EMS:						Metho		ATE	R		eq #:	:			Method: S	3
EMS:							od: T3	ATE	R	С	eq #: ond.:				Method: S	
EMS:						Metho		ATE	R	С	eq #:			С	Method: S. Method: G	
EMS: Temp: pH:						Metho Metho	od: T3 od: P2 od: GE			С	eq #: ond.:			с 🗆		
EMS: Temp: pH:						Metho Metho	od: T3 od: P2 od: GE		R O G Y	Т	eq #: ond.: ⁻ urb.: T	M			Method: G	
EMS: Temp: pH:		D ominant			Subdom	Metho	od: T3 od: P2 od: GE			С	eq #: ond.:	M	B3 D1			
EMS: Temp: pH: Flood Signs:		Dominant D (cm)			Subdom	Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL	OGY	Т	eq #: ond.: ⁻ urb.: T	M			Method: G	
EMS: Temp: pH: Flood Signs:						Metho Metho N	od: T3 od: P2 od: GE I O R F	НОЦ	OGY	Т	eq #: ond.: ⁻ urb.: T	B2 E		D2 [Method: G	E
EMS: Temp: pH: Flood Signs: Bed Material: D95:						Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL	OGY	O1	eq #: ond.: 'urb.: T	B2 E	B3 D1	D2 [Method: G	E
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern:						Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL	OGY	O1	eq #: ond.: 'urb.: T	B2 E	B3 D1	D2 [Method: G	E
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands:						Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL DISTURI INDICA	O G Y BANCE TORS	01 C1	eq #: ond.: Turb.: T	B2 E C3 (C	B3 D1	D2 [S1 S	Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling:						Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL DISTURI INDICA	OGY	O1	eq #: ond.: Turb.: T	B2 E C3 (C	B3 D1	D2 [Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement:						Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL DISTURI INDICA B	O G Y BANCE TORS ars:	01 C1	eq #: ond.: Turb.: T	B2 E C3 (C	B3 D1	D2 [S1 S	Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ:						Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL DISTURI INDICA B	BANCE TORS	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 E C3 (C	B3 D1	D2 [S1 S	Method: G	E
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ:		D (cm)				Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL DISTURI INDICA B	BANCE TORS	01 C1	eq #: ond.: Turb.: T B1 C2 SID	B2 E C3 (C	B3 D1	D2 [S1 S	Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habita		D (cm)				Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL DISTURI INDICA B	BANCE TORS	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 E C3 (C	B3 D1	D2 [S1 S	Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habitat Rearing Habitat		D (cm)				Metho Metho N	od: T3 od: P2 od: GE I O R F	PHOL DISTURI INDICA B	BANCE TORS	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 E C3 (C	B3 D1	D2 [S1 S	Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habita		D (cm)				Metho Metho N	od: T3 od: P2 od: GE	PHOL DISTURI INDICA B	BANCE TORS ars:	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 E C3 (C	B3 D1	D2 [S1 S	Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habitat Rearing Habitat		D (cm)				Metho Metho N	od: T3 od: P2 od: GE	PHOL DISTURI INDICA B	BANCE TORS ars:	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 E C3 (C	B3 D1	D2 [S1 S	Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habita Rearing Habitat Spawning Habitat	at t	D (cm) none none none			Morph	Metho Metho Metho Metho	od: T3 od: P2 od: GE IORF	PHOL DISTURI INDICA B	BANCE TORS ars:	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 E C3 (C	B3 D1	D2 [S1 S	Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habita Rearing Habitat Spawning Habitat	at t	D (cm)			Morph	Metho Metho Metho Metho	Dus of r	PHOL DISTURI INDICA B TQU	BANCE TORS ars:	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 E C3 (C) [B3 D1	D2 [S1 S	Method: G	S5
EMS: Temp: pH: Flood Signs: Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habita Rearing Habitat Spawning Habitat	at t	D (cm) none none none			Morph	Metho Metho Metho Metho	Dus of r	PHOL DISTURI INDICA B	BANCE TORS ars:	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 E C3 (C) [B3 D1	D2 [S1 S	Method: G	S5

ı		
	CHANNEL	NCD - w/~5m of channel @ rc - underground flow everywhere else.
	SITE CARD	NCD



Site 160 – Upstream NCD

Reach # ILP Map # ILP # Site

		PROJECT													
Project Name Stream Name (gaz.) Project Watershed Code		ĒΚ	000-000	0-0000-	000-000)-000-00	0-000-00	00	F	Project Co	ode:		17415		
				,	M/ A T	ERSI	HED								
0 " 11					WAI	EKSI	пер			1454					
Gazetted Name: Watershed Code: 000-000	0000 00000 00	200 0000	0000 00	000 0	00 000	000 000		Loc	al Name	e: IVI54					
ILP Map#: 104G.02		ILP #: 10			ap #: 104		NID #: 10073							#: 161	
Field UTM (Z.E.N):			lethod:					Site Lg: 100 Method: GE Access:							
GIS UTM (Z.E.N): 9.38538	3.6343556	ıv	icti ica.				Re	ef. Name	•		Wictin	ou. OL	7100033.1		
		Time: 09:			Agency:								1 .	. \square	
Date: 2007		Crew: KN	I RS RE)	Fis	sh Crd?:] Incom	plete:							
	CHANNEL														
Mtd	width width	width	width	width	width	width	width	width	width	Avg			ient % Mt	J	
Channel Width (m): MS Wetted Width (m): MS	2.80 3.20 1.20 1.20	2.70 1.00	1.90 0.90	1.20	2.00 1.20					2.30		ethod II: 15.0		13.50	
Pool Depth (m): MS	0.10 0.14	0.28	0.90	1.10	1.20					1.10 0.17	IVIC	striou ii.	1 1 '		
											No	Vis.Ch.:	Intermittent	: 🔲	
Wb Depth: .3	.3 .4	Avg	: 0.33	M	lethod:	MS	St	age: L	M	✓ H		Dw:	Tribs.	: 📙	
COVER	To	tal: A													
Type: SWD	LWD	В	U	DP	' (OV	IV	CRO	OWN CL	OSURE					
Amount: N	S	T	S	N		D	N	2		1-40%					
Loc: P/S/O:			✓				/	INS	TREAM	VEG:	N 🗸	A M	V		
LWD: F	[DIST: E													
LB SHP: V								1	RB SHP	: V					
Texture: F	G ✓ C 🗆	В	R 🗌 A						Texture	: F 🗸	G 🗸	С	R _ A		
RIP: C									RIP						
STG: MF									STG	: MF					
					W	ATE	R								
EMS:						,,, <u> </u>		R	eq #:						
Temp: 5				Metho	od: T3				ond.: 42	4			Method:	S3	
pH: 8.7				Metho	od: P2			Т	urb.: T		<u> </u>	□ c 🔼	Method:	GE	
Flood Signs:				Metho	d: GE					☐ ··· [
				M	ORP	HOL	OGY								
Bed Material: D	ominant: C		Subdom	: G				01	B1	B2 E	33 [D1 D2	D3		
D95: 18.0	D (cm): 9.00		Morph		г	DISTURE	RANCE								
Pattern: IR					_	INDICA		C1	C2	C3 (C4 (C5 S1	S2 S3	S4 S5	
Islands: N															
Coupling: DC															
Confinement: UN						В	ars:	N	SID	E 🗸	DIAG	☐ MID	SPAN	BR	
FSZ:						_	u. 0.		0.5		J., 10_		J 0. 7		
					FEA	TUR	ES								
NID Map NID Type	Hgt Metho	od L	.g N	lethod		Photo	т		AirP	hoto		UTM	(Z/E/N)	Method	
	1.2 MS	(0 1	MS	R: 10	2 F:	4091 L	.:		#:		9.385374	1.6343579	GP3	
Comments: possible barrier ~	30m ds of rc														
				HAI	BITA	T QL	JALI	ГҮ							
Name								comment	ts						
Spawning Habitat	fair - some gra	avel in ca	scade ar	eas, but	swift, sl	hallow flo	OW.								
OverWinter Habitat Rearing Habitat	none poor - few poo	ols only o	verhand	ing vege	tation fo	or cover									
iteaning Habitat	Poor - Iew boo	ois, offig C	veniany	ing vege	nauon IC	or cover									

CHANNEL

Reach # ILP Map # ILP # Site
1.0 104G.026 1060 161

	PHOTOS												
	Ph	oto	Foc Lg	Dir	Comments								
R:	102	F: 4089	STD	U	pool and cascade								
R:	102	F: 4090	STD	U	look us to rc								
R:	102	F: 4091	STD	NS	falls								
					COMMENTS								
	Section Comments												

S6 - swift shallow stream, cascades w/some steps. Possible barrier (~1m falls) located ~30m ds of rc. Ds pool is 30cm deep.



Site 161 – Upstream pool and cascade



Site 161 - Upstream



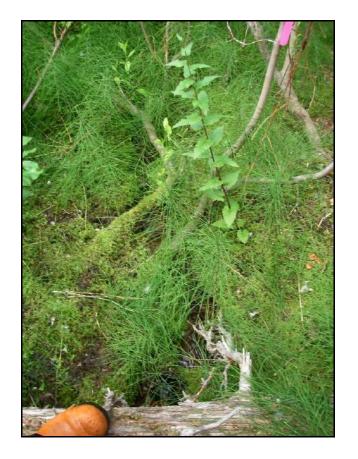
Site 161 – Falls

Reach # ILP Map # ILP # Site

PROJECT														
Project Name: Schaft Cr	eek													
Stream Name (gaz.): MESS Cl	REEK						Pr	oject Cod	de:		17415			
Project Watershed Code: 630-0000	00-00000-00000	-0000-0000-0	000-000-	000-000	0-000-00	0								
			WATE	RSH	I F D									
Gazetted Name:				- 10 0 1		Loc	al Name:	M55						
Watershed Code: 000-000000-00000	.00000-0000-000	0-000-000-0	00-000-0	00-000		Loc	ai i vairio.	WOO						
ILP Map#: 104G.026	ILP #: 1061		NID Map #: 104G.026 NID #:					Reach	#:	1.0	Site #	±: 162		
Field UTM (Z.E.N):	Metho	od:				Site Lg	j: 100		Method:	d: GE Access: H				
GIS UTM (Z.E.N): 9.385282.6343877					Re	f. Name	:							
Date: 2007/08/14	Time: 10:40	A	Agency: 0	2660	С	rew: KN	I RS RD		Fish (Ord?:	Incom	olete: 🗸		
CHANNEL														
Mtd width wi	dth width wid	dth width	width	width	width	width	width	Avg		Gadie	ent % Mtd	d Avg		
Channel Width (m): MS								0.00	Meth		C	Ü		
Wetted Width (m): MS								0.00	Metho	od II:	C	;		
Pool Depth (m): MS			J					0.00	No Vi	s.Ch.:	Intermittent:			
Wb Depth:	Avg: 0	.00 N	lethod:	MS	Sta	age: L	П М Г	¬н⊏		Dw:	Tribs.:	_		
COVER	Total:													
Type: SWD LWD	В Ц	J DP	С	V	IV	CRO	OWN CLO	SURE						
Amount:														
Loc: P/S/O:						INS	TREAM \	/EG: N	1 🗌 A	\square M \square	V			
LWD: DIST:														
LB SHP:						F	RB SHP:							
Texture: F G C	□ B □ R □	¬ A ┌						FΠ	G 🖂 C	ВГ	R 🔲 A			
RIP:							RIP:							
STG:							STG:							
			W	ATEF	₹									
EMS:						Re	eq #:							
Temp:		Metho	d: T3			Co	ond.:				Method:	S3		
pH:		Metho	d: P2											
Flood Signs:							urb.: T	\square M \lceil	7 L	C	Method:	GE		
		Metho					urb.: T	M]	C	Method:	GE		
			od: GE ORP	HOL	OGY		urb.: T] L [Method:	GE		
Bed Material: Dominant:	Sub			HOL	OGY	O1	B1	B2 B:	3 D1	D2 D	3_	GE		
Bed Material: Dominant: D95: D (cm):		М	ORP	HOL STURB		Т	B1	B2 B:		D2 D		GE		
		M dom:	O R P		ANCE	O1	B1	B2 B:	3 D1	D2 D	3	GE S4 S5		
D95: D (cm): Pattern: Islands:		M dom:	O R P	ISTURB	ANCE	O1	B1	B2 B:	3 D1	D2 D	3			
D95: D (cm): Pattern: Islands: Coupling:		M dom:	O R P	ISTURB	ANCE	O1	B1	B2 B:	3 D1	D2 D	3			
D95: D (cm): Pattern: Islands: Coupling: Confinement:		M dom:	O R P	ISTURB NDICAT	ANCE	O1	B1	B2 B3	3 D1	D2 D	3			
D95: D (cm): Pattern: Islands: Coupling:		M dom:	ORP DI	ISTURB NDICAT Ba	ANCE FORS ars:	01 C1	B1 C2	B2 B3	3 D1	D2 D	3 2 S3	\$4 \$5		
D95: D (cm): Pattern: Islands: Coupling: Confinement: FSZ: ✓	M	M dom: orph:	O R P	ISTURB NDICAT Ba	ANCE FORS ars:	01 C1	B1 C2 SIDE	B2 B3	3 D1	D2 D S1 S MID	3 2 S3 SPAN	\$4 \$5		
D95: D (cm): Pattern: Islands: Coupling: Confinement: FSZ: NID Map NID Type Hgt M	Method Lg	dom: orph:	ORP	ISTURB NDICAT Ba TUR	ANCE FORS	01 C1	B1 C2	B2 B3 C3 C3 C4 D	3 D1	D2 D S1 S MID UTM (2	3 2 S3 SPAN	S4 S5 BR Method		
D95: D (cm): Pattern: Islands: Coupling: Confinement: FSZ: ✓	M	M dom: orph:	ORP	ISTURB NDICAT Ba TUR	ANCE FORS ars:	01 C1	B1 C2 SIDE	B2 B3	3 D1	D2 D S1 S MID	3 2 S3 SPAN	\$4 \$5		
D95: D (cm): Pattern: Islands: Coupling: Confinement: FSZ: NID Map NID Type Hgt M 104G.026 10077 FSZ	Method Lg	dom: orph:	O R P DI	ISTURB NDICAT Ba TUR	ANCE FORS Ars: E S 4094 L	01 C1	B1 C2 SIDE	B2 B3 C3 C3 C4 D	3 D1	D2 D S1 S MID UTM (2	3 2 S3 SPAN	S4 S5 BR Method		
D95: D (cm): Pattern: Islands: Coupling: Confinement: FSZ: NID Map NID Type Hgt M 104G.026 10077 FSZ	Method Lg	dom: orph:	O R P DI	Ba TUR Photo	ANCE FORS Ars: E S 4094 L	01 C1	B1 C2 SIDE	B2 B3 C3 C3 C4 D	3 D1	D2 D S1 S MID UTM (2	3 2 S3 SPAN	S4 S5 BR Method		
D95: D (cm): Pattern: Islands: Coupling: Confinement: FSZ: ✓ NID Map	ethod Lg 80 Dir D	dom: orph:	O R P DI	Ba TUR Photo 2 F: 4	ANCE FORS Ars: E S 4094 L	01 C1	B1 C2 SIDE	B2 B3 C3 C3 D otto ##:	3 D1	D2 D S1 S MID UTM (2	3 2 S3 SPAN	S4 S5 BR Method		
D95: D (cm): Pattern: Islands: Coupling: Confinement: FSZ: ✓ NID Map NID Type Hgt M: 104G.026 10077 FSZ Comments: at ncd outlet - road adjacent	ethod Lg 80	Method GE scou	O R P DI I	Ba TUR Photo Price Fri 4 OTO	ANCE FORS Ars: ES 4094 L	01	B1 C2 SIDE	B2 B3 C3 C3 D otto ##:	3 D1	D2 D S1 S MID UTM (2	3 2 S3 SPAN	S4 S5 BR Method		

 Site

	COMMENTS
Section	Comments
	NCD - small, partially scoured NCD, scoured down to Mess Cr but overland flow us of rc. Very narrow and shallow. Flows into FSZ @ Mess Creek. Take care to keep construction well back from here. Move alignment us slightly.
SITE CARD	NCD



Site 162 – Downstream scour



Site 162 – Upstream scour and overland flow



Site 162 – FSZ at outlet

ILP Map# Reach #

ILP#

Site 163

1.0 104G.026 1062

	PROJECT																		
	Proj	ect Name	e: Scha	ft Creel	(
	Stream Na							000 000				F	Project C	ode:			17415		
	Project Waters	nea Coae	e: 630-C	100000-	.00000-00	0000-000	0-0000	-000-000)-000-00	0-000-00	00								
								WAT	ERSI	HED									
	Gazetted Name	e:									Loc	al Name	ə:						
	Watershed Code																		
	ILP Mapa	#: 104G.0	26		ILP #: 10	162	NID M	ap #: 10	4G.026	N	NID #: 10078 Reach #: 1.0 Site #: 163							63	
	Field UTM (Z.E.N				M	lethod:				_	Site Lg			Me	ethod: GE		Acces	s: H	
	GIS UTM (Z.E.N): 9.3851	53.63440)47						Re	ef. Name):							
Date: 2007/08/14 Time: 11:15 Agency: C660 Crew: KM RS RD Fish Crd?: Incomplete:													e: 🗸						
CHANNEL																			
		Mtd	width	width	width	width	width	width	width	width	width	width	Avg] _		Gadie	ent %	Mtd	Avg
	Channel Width (m)												0.00	!	Method I:			С	0.00
┞	Wetted Width (m) Pool Depth (m)												0.00	l L	Method II:			С	
L					<u> </u>										No Vis.Ch	\equiv	Intermit	=	
L	Wb Depth	Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.:																	
	COVER			To	tal:						_								
	Туре		LV	/D	В	U	DF	>	OV	IV	CRO	OWN CI	OSURE						
	Amoun Loc: P/S/C		+								INSTREAM VEG: N A M V								
	LWD: DIST:																		
	LB SHI			C —	р —	D ^						RB SHP		- C		. p —		^ _	
	Textur] 6 🗌	с <u> </u>	В	\ /	, П							G	_ c _		Κ	^ _	
	RII STO											RIP STG							
	ENG	\ <u>.</u>						W	ATE	R		//-							
	EMS Temp						Meth	od: T3				eq #: ond.:					Meth	nod: S3	
	p⊦							od: P2				urb.: T	— м		L \square C			nod: GE	
	Flood Signs	S:					Meth	od: GE				uib i	□ ""				Wich	10u. OL	-
							N	I O R F	HOL	OGY									
	Bed Materia	l: C	Dominan	t:		Subdom	1:				01	B1	B2	ВЗ	D1 [)2 D	3		
	D95	5 :	D (cm)):		Morph	1:		DISTURE	BANCE									
	Patterr	n:							INDICA		C1	C2	C3	C4	C5 S	S1 S	2 S3	S4	S5
	Islands																		
	Coupling Confinement	,																	
	FSZ								В	ars:	N	SID	E	DIAC	-	MID	SPAN	N	BR
								D.1	10.70	•									
	Photo	Г-	2015	<u> </u>	,	ir		PH	ОТО	3			Comm-	ntc					
R:	Photo 102 F: 4095		c Lg TD		D N		NCI	D covere	ed by OV				Comme	าแร					
							1		MEN										
	Section									C	comment	ts							
	CHANNEL		NCD -	partiall	y channe	lized NC	D. Flow	s over o	rganic fir	es and o	s and debris @ rc. Very low flow.								
	SITE CARD		NCD																
			-																



Site 163 – NCD covered by overhanging vegetation

Reach # ILP Map #

p#

ILP#

Site 164

							PK										
Proi	ect Nam	e: Scha	aft Creek														
Stream Na												roject C	ode.		17415		
					2000 000	20 0000	000 000	000 00	0000	200		roject C	oue.		17415		
Project Waters	neu Cou	e. 630-6	000000-0	J0000-0C	000-000	JU-UUUU-	-000-000	-000-00	0-000-0	000							
							\A/ A T	ERSI	JED								
							WAI	EKSI	1 E D								
Gazetted Name										Loc	cal Name	e: M56					
Watershed Code	e: 000-00	00000-00	000-000	000-0000	-0000-0	00-000-0	000-000-	000-000									
ILP Map	#: 104G.0	026	II	LP #: 10	063	NID M	ap #: 104	4G.026	- 1	NID #: 10	079	Read	ch #:	1.0		Site #: 16	64
Field UTM (Z.E.N	١٠			N	lethod:					Site Lo	r: 100		Method	ŀ GE	Acces	se· H	
GIS UTM (Z.E.N	•	27 6244	274		ioti iod.					Ref. Name			Woulde	02	710001	30.11	
GIS OTIVI (Z.L.IV). 9.3031	21.0344	214						,	vei. ivaille	.						
Da	ate: 200	7/08/14	1	Γime: 11:	:35		Agency:	C660		Crew: KN	M RS RD)	Fish	Crd?:] In	complet	e: 🗸
							СН	ANN	E L								
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Ga	dient %	Mtd	Avg
Channel Width (m)	: MS											0.00	Met	hod I:		С	0.00
Wetted Width (m)	: MS											0.00	Meth	nod II:		С	
Pool Depth (m)	: MS											0.00					
		1	1										No V	′is.Ch.: 🗌	Intermi	ttent:	
Wb Depth	:			Avg	g: 0.00	ľ	Nethod:	MS	5	Stage: L		Н		Dw:	Т	ribs.:	
COVER			Tota	al·													
COVER																	
Туре	: SWI) LV	ND	В	U	DF	•	OV	IV	CR	OWN CL	.OSURE					
Amoun	t:																
Loc: P/S/C):									INS	TREAM	VEG:	N \square A	МПМП	7 V 🖂		
LWD):		D	IST:													
LB SHF	P:										RB SHP	:					
Texture	e: F 🗆	¬ G ┌	СП	В	R \square A	A 🖂					Toyturo			C - B -	\neg R \Box	АП	
											rexture		G				
DI	_			Ш									<u> </u>	С 🗌 В [,, <u> </u>	
RIF											RIP	:		с <u>П</u> в [
RIF STO												:	G	с 🗌 в [
							W	ATE	R		RIP	:					
STO	3 :						W	ATE	R	P	RIP STG	:					
STO	3: :							ATE	R		RIP STG eq #:	:					
STO EMS Temp	9: : :					Meth	od: T3	ATE	R		RIP STG	:				hod: S3	
STO EMS Temp	: : :					Meth: Meth:	od: T3	ATE	R	С	RIP STG eq #:	:			Meti		
STO EMS Temp	: : :					Meth: Meth:	od: T3	ATE	R	С	RIP STG eq #: ond.:	:			Meti	nod: S3	
STO EMS Temp	: : :					Meth Meth	od: T3 od: P2 od: GE	ATE		C T	RIP STG eq #: ond.:	:			Meti	nod: S3	
EMS Temp pH Flood Signs	6: : :					Meth Meth Meth	od: T3 od: P2 od: GE			C T	RIP STG eq #: ond.:	: :] c [Meti	nod: S3	
EMS Temp pH Flood Signs	:	Dominar	nt:		Subdom	Meth Meth Meth	od: T3 od: P2 od: GE	HOL	O G Y	01	RIP STG eq #: ond.:	: :] c [Meti Meti	nod: S3	
EMS Temp pH Flood Signs	:		nt:			Meth Meth Meth	od: T3 od: P2 od: GE	PHOL	O G \	01	RIP STG eq #: ond.:	: :] c [Meti Meti	nod: S3	
EMS Temp pH Flood Signs	: :	Dominar	nt:		Subdom	Meth Meth Meth	od: T3 od: P2 od: GE	HOL	O G \	01	RIP STG eq #: ond.:	B2		D2	Meti Meti	nod: S3	
EMS Temp pH Flood Signs Bed Material D95	: : : : : : : : : : : : : : : : : : :	Dominar	nt:		Subdom	Meth Meth Meth	od: T3 od: P2 od: GE	PHOL	O G \	01	eq #: ond.: Turb.: T	B2	B3 D1	D2	Meti	nod: S3	
EMS Temp pH Flood Signs Bed Material D95	: : : : : : : : : : : : : : : : : : :	Dominar	nt:		Subdom	Meth Meth Meth	od: T3 od: P2 od: GE	PHOL	O G \	01	eq #: ond.: Turb.: T	B2	B3 D1	D2	Meti	nod: S3	
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling		Dominar	nt:		Subdom	Meth Meth Meth	od: T3 od: P2 od: GE	PHOL	O G \	01	eq #: ond.: Turb.: T	B2	B3 D1	D2	Meti	nod: S3	\$5
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement		Dominar	nt:		Subdom	Meth Meth Meth	od: T3 od: P2 od: GE	PHOL DISTURE INDICA	O G \	01	eq #: ond.: Turb.: T	B2 C3	B3 D1	D2	Meti	nod: S3 nod: GE	
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling		Dominar	nt:		Subdom	Meth Meth Meth	od: T3 od: P2 od: GE	PHOL DISTURE INDICA	O G '	01 C1	eq #: ond.: Turb.: T B1 C2	B2 C3	B3 D1	D2	Metl Metl D3 S2 S:	nod: S3 nod: GE	\$5
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement		Dominar	nt:		Subdom	Meth Meth Meth	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURE INDICA	OG SANCE	01 C1	eq #: ond.: Turb.: T B1 C2	B2 C3	B3 D1	D2	Metl Metl D3 S2 S:	nod: S3 nod: GE	\$5
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ		Dominar	nt:		Subdon	Meth Meth Meth	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURE INDICA B	OG SANCE	01 C1	eq #: ond.: Turb.: T B1 C2	B2 C3 E	B3 D1	D2	Metl Metl D3 S2 S:	hod: S3 hod: GE	\$5
EMS Temp pH Flood Signs Bed Material D95 Patterr Islands Coupling Confinement FSZ		Dominar D (cm	nt: n):		Subdon Morph	Meth Meth Meth	od: T3 od: P2 od: GE	PHOL DISTURE INDICA	OG SANCE	01 C1	eq #: ond.: Turb.: T B1 C2 SID	B2 C3 E	B3 D1	D2 S S1 MID	Meth Meth S2 S2 S3 SPA	hod: S3 hod: GE	\$5 BR
EMS Temp pH Flood Signs Bed Material D95 Patterr Islands Coupling Confinement FSZ	: : : : : : : : : : : : : : : : : : :	Dominar D (cm	nt: n):		Subdon Morph	Method	od: T3 od: P2 od: GE	PHOL DISTURE INDICA	OG SANCETORS ars:	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 C3 C3 Choto	B3 D1	D2 S S1 MID	Meth Meth S2 S3 SPA (Z/E/N)	hod: S3 hod: GE	S5 BR
EMS Temp pH Flood Signs Bed Material D95 Patterr Islands Coupling Confinement FSZ NID Map NID 104G.026 10080	: : : : : : : : : : : : : : : : : : :	Dominar D (cm	nt: n):		Subdon Morph	Method	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURE INDICA B TUR Photo 2 F:	OGS BANCE TORS ars: ES 4097	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 C3 C3 Choto	B3 D1	D2 S S1 MID	Meth Meth S2 S3 SPA (Z/E/N)	hod: S3 hod: GE	S5 BR
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ NID Map NID 104G.026 10080 Comments: at outfloor	:: :: :: :: :: :: :: :: :: :: :: :: ::	Dominar D (cm	nt: n):	id L	Subdon Morph	Method	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURE INDICA	OGS BANCE TORS ars: ES 4097	01 C1 N	RIP STG eq #: ond.: Turb.: T B1 C2 SID AirP	B2 C3 hoto #:	B3 D1 C4 C5 DIAG	D2 S S1 MID	Meth Meth S2 S3 SPA (Z/E/N)	hod: S3 hod: GE	S5 BR
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ NID Map NID 104G.026 10080 Comments: at outflood	E: E: E: E: E: E: E: E: E: E:	Dominar D (cm	nt: n):	d L	Subdon Morph	Method Method GE	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B TUR Photo 2 F:	O G Y BANCE TORS BANCE TORS 4097	01	eq #: ond.: Turb.: T B1 C2 SID	B2 C3 hoto #:	B3 D1 C4 C5 DIAG	D2 S S1 MID	Meth Meth S2 S3 SPA (Z/E/N)	hod: S3 hod: GE	S5 BR
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ NID Map NID 104G.026 10080 Comments: at outflood Photo R: 102 F: 4096	E: E: E: E: E: E: E: E: E: E:	Dominar D (cm	nt: n):	d L	Subdon Morph	Method GE	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B TUR Photo 2 F:	O G Y BANCE TORS BANCE TORS 4097	01 C1 N	eq #: ond.: Turb.: T B1 C2 SID	B2 C3 hoto #:	B3 D1 C4 C5 DIAG	D2 S S1 MID	Meth Meth S2 S3 SPA (Z/E/N)	hod: S3 hod: GE	S5 BR
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ NID Map NID 104G.026 10080 Comments: at outflood	E: E: E: E: E: E: E: E: E: E:	Dominar D (cm	nt: n):	d L	Subdon Morph	Method Method GE	od: T3 od: P2 od: GE I O R F F E A R: 10 P H	PHOL DISTURE INDICA B TUR Photo 2 F:	O G Y BANCES BAN	01	eq #: ond.: Turb.: T B1 C2 SID	B2 C3 hoto #:	B3 D1 C4 C5 DIAG	D2 S S1 MID	Meth Meth S2 S3 SPA (Z/E/N)	hod: S3 hod: GE	S5 BR
EMS Temp pH Flood Signs Bed Material D95 Pattern Islands Coupling Confinement FSZ NID Map NID 104G.026 10080 Comments: at outflood Photo R: 102 F: 4096	E: E: E: E: E: E: E: E: E: E:	Dominar D (cm	nt: n):	d L	Subdon Morph	Method GE	od: T3 od: P2 od: GE I O R F F E A R: 10 P H	PHOL DISTURE INDICA B TUR Photo 2 F:	O G Y BANCES BAN	01	eq #: ond.: Turb.: T B1 C2 SID	B2 C3 hoto #:	B3 D1 C4 C5 DIAG	D2 S S1 MID	Meth Meth S2 S3 SPA (Z/E/N)	hod: S3 hod: GE	S5 BR

Section	Continents
	NCD - channelized in places but lots of overland and subsurface flow. Outflow into wetland ~15m ds of rc and 100m of approach on low chain side is within 15m of wl. Recommend moving upslope to avoid sidecast into wl and FSZ
	chain side is within 15th of wi. Recommend moving apsiope to avoid sidecast into wi and F52
SITE CARD	NCD



Site 164 – Downstream dry patch



Site 164 – FSZ

ILP Map# Reach # ILP# Site

9.385118.6344301

GP3

1.0 104G.026 1064 165 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M57 ILP #: 1064 NID #: 10081 ILP Map#: 104G.026 1.0 NID Map #: 104G.026 Reach #: Site #: 165 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385118.6344301 Ref. Name: **V** Incomplete: Date: 2007/08/14 Time: 11:55 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) MS 0.70 0.50 1.98 Method I: 22.50 3 10 3 60 2 50 1.50 22.0 23.0 С 2.60 Wetted Width (m) MS 2.70 2.00 1.40 0.80 0.60 1.68 Method II: С 0.40 Pool Depth (m) MS 0.20 0.30 No Vis.Ch.: Intermittent: Wb Depth: .5 .3 .5 Avg: 0.43 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 21-40% Ν Amount S Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V** LWD: A DIST: E Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ Texture: F G G C B R A RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 387 Method: S3 pH: 8.7 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: C Subdom: G **V** D95: 40.0 D (cm): 13.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: SI C2 C5 S1 S3 S5 Islands: N Coupling: PC Confinement: OC DIAG Bars: N SIDE MID SPAN BR FSZ: FEATURES NID Map AirPhoto UTM (Z/E/N) NID Type Hgt Method Lg Method Photo Method

	II/ZII/II QU/ZIII
Name	Comments
Spawning Habitat	poor - at rc, good in WL
verWinter Habitat	poor - no deep pools, fast flow, turbulent

HABITAT QUALITY

GE

Sp Ove poor - at rc, good in WL Rearing Habitat

104G 026

Comments

10082

RB

steep stream enters wl.

Reach # ILP Map # ILP # Site
1.0 104G.026 1064 165

			PHOTOS		
Photo	Foc Lg	Dir	Comments		
R: 102 F: 4098	STD	D	good spawning habitat in WL ds of rc		
			COMMENTS		
Section Comments					
CHANNEL		stream w/marginal l	nabitat at rc, flows into WL with great spawning and rearing habitat. Recommend bridge to avoid		



Site 165 – Downstream good spawning area

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: Schaft 0	Creek			
Stream Name (gaz.): MESS (Project Code:	17415
,,		200 000 000 000 000 000	· ·	17413
Project Watershed Code: 630-000	000-0000-0000-000-00	000-000-000-000-000-000)	
		WATERSHED		
Gazetted Name:			Local Name: M58	
	0 00000 0000 0000 000 00	20,000,000,000	Local Name. Mos	
Watershed Code: 000-000000-0000			2 // 40004 D L //	4.0
ILP Map#: 104G.026	ILP #: 1065 NIE	0 Map #: 104G.026 NII	D#: 10084 Reach #:	1.0 Site #: 166
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: G	E Access: H
GIS UTM (Z.E.N): 9.385134.6344353	3	Ref	. Name:	
Date: 2007/08/14	Time: 13:35	Agency: C660 Cr	rew: KM RS RD Fish Cro	d?: Incomplete:
		CHANNEL		
Mtd width v	vidth width width wid	dth width width width	width width Avg	Gadient % Mtd Avg
Channel Width (m): MS 1.50 1.	60 1.20 2.00 1.5	50 1.50	1.55 Method	H: 38.0 33.0 C 35.50
Wetted Width (m): MS 0.70 (0.40 0.80 0.60 0.4	40 0.40	0.55 Method	II: C
Pool Depth (m): MS			0.00	
			No Vis.0	
Wb Depth: .2 .2	.4 Avg: 0.27	Method: MS Sta	ige: L 🗸 M 🗌 H 🦳 💮 I	Dw: L Tribs.: L
COVER	Total: M			
Type: SWD LWD	B U	DP OV IV	CROWN CLOSURE	
Amount: S N	S N	N D N	4 71-90%	
Loc: P/S/O:			INSTREAM VEG: N A	
LWD: N	DIST: NA			
LB SHP: S			RB SHP: S	
	∀ B	1	Texture: F G 🗸 C	B R R A R
		J		
RIP: D			RIP: D	
STG: PS			STG: PS	
		WATER		
EMS:			Req #:	
Temp: 8	М	ethod: T3	Cond.: 256	Method: S3
pH: 8.5	M	ethod: P2	Turb.: T M L C	C Method: GE
Flood Signs:	M	ethod: GE	Turb T	Wethou. GE
		MORPHOLOGY		
			O1 B1 B2 B3 D1	D2 D3
Bed Material: Dominant: 0				
D95: 35.0 D (cm):	4.00 Morph: SP	DISTURBANCE		
Pattern: ST		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands: N				
Coupling: CO				
Confinement: CO				
FSZ:		Bars:	N✓ SIDE DIAG	MID SPAN BR
_		ADITAT OUALIT	V	
	П	ABITAT QUALIT		
Name		Co	omments	
OverWinter Habitat none				
Spawning Habitat none				
Rearing Habitat none		PHOTOS		
	T 5: 1	1110100		
Photo Foc Lg	Dir		Comments	
R: 102 F: 4100 STD	U			
R: 102 F: 4101 STD	D			

	COMMENTS
Section	Comments
CHANNEL	S6 - marginal habitat, shallow marginal stream through alder. Confined by high banks, no pools, steep gradient.



Site 166 – Upstream view



Site 166 – Downstream view

Reach # ILP Map # ILP # Site

Project Name: Stream Name (gaz.): Project Watershed Code:	MESS CF	REEK	000-0000)-0000-	000-000	-000-000	0-000-00	0	Pr	oject Cod	de:		174	115	
				1	WAT	ERSI	HED								
Gazetted Name:								Loc	cal Name:	M59					
Watershed Code: 000-0000	000-00000-	0000-0000	-0000-000)-000-0	00-000-0	000-000									
ILP Map#: 104G.02		ILP #: 10			ap #: 104		NI	D#: 10	0085	Reach	n #:	1.0		Site #: 1	67
·	•														• .
Field UTM (Z.E.N):		IV	lethod:				_	Site Lo	_		Method:	GE	A	ccess: H	
GIS UTM (Z.E.N): 9.385126	5.6344347						Re	f. Name	9:						
Date: 2007/	08/14	Time: 13:	55	,	Agency:	C660	С	rew: KN	M RS RD		Fish (Crd?:		Incomple	te:
					СН	ANN	EL								
	width wid			width	width	width	width	width	width	Avg			Gadient 9		Avg
` '	.40 1.30		1.30	1.30	1.40					1.37			36.0	С	36.00
` '	1.00 1.0	00 1.00	1.20	1.20	1.00					1.07	Meth	od II:		С	
Pool Depth (m): MS										0.00	NI - 1/	- 0			٦
Wh Donth: 1	2 1	Δ	. 0.22		1athadi	MC	C4	!		- II -		is.Ch.:		rmittent:	\exists
Wb Depth: .1	.3 .:		: 0.23	IV	1ethod:	IVIO	St	age: L	□ IVI	/ H _	J	Dw:		Tribs.:	
COVER		Total: A													
Type: SWD	LWD	В	U	DP	(VC	IV	CRO	OWN CL	OSURE					
Amount: S	S	N	N	N		D	N	4	71	-90%					
Loc: P/S/O:				V				INS	STREAM	/EG: N	N 🕡 A		□ V [\neg	
		11		ت ت	الله الله		<u>* </u>	l			•	ш			
LWD: F		DIST: E													
LB SHP: S								1	RB SHP:	S					
Texture: F	G \square C	¬ в ┌ ।	R \square A	П					Texture:	F 🗸	G 🖂 C		3 🖂 R	_ A _	
RIP: M									RIP:						,
STG: PS									STG:						
5.6.16									010.						
					W	ATE	R								
EMS:								R	eq #:						
Temp: 7				Metho	d: T3			C	ond.: 250				1	Method: S	3
pH: 8.5		Method: P2						Turb.: T M L C M					Method: G	=	
Flood Signs:				Metho	d: GE				uib i	□ '" □		V	<u> </u>	vietriou. C	_
				N/	ORP	ног	O G V								
					J IN F	.1 J L	5 5 1	01	B1	B2 B	3 D1	D2	D3		
Bed Material: Do	ominant: G		Subdom:	С					ы			D2			
D95: 12.0	D (cm): 3	00	Morph:	SP		ISTURE									
Pattern: IR						INDICA	TORS	C1	C2	С3 С	4 C5	S1	S2	S3 S4	4 S5
Islands: N															
Coupling: PC															
Confinement: OC															
FSZ:						В	ars:	N	SIDE		DIAG	MI		PAN	BR□
				LI A ') I T 4	T 0 '	1	r v							
				наі	511A	ı Qt	IALIT								
Name							С	ommen	ts						
Spawning Habitat	none														
	none														
Rearing Habitat	none				יום	0.7.0	9								
					7 11	ото	3								
Photo Foc	_	D							C	Comment	s				
R: 102 F: 4102 ST		l		at ro											
R: 102 F: 4103 ST	D	l l	J	swd	ds of rc										

Section CHANNEL Reach # ILP Map # ILP # Site

1.0 104G.026 1066 167

COMMENTS
Comments
S6 - small steep stream occasional overland flow. Lots of swd from blowdown. Almost totally covered by alder, dc and swd.



Site 167 – Upstream view



Site 167 – Upstream SWD

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: Schaft C	reek			
Stream Name (gaz.): MESS (Project Code:	17415
		2000 000 000 000 000 000 00		17415
Project Watershed Code: 630-000	000-00000-00000-0000-0	1000-000-000-000-000-000	0	
		WATERSHED		
Gazetted Name:			Local Name: M60	
		000 000 000 000 000	Local Name: IVI60	
Watershed Code: 000-000000-00000			D // 40000	4.0
ILP Map#: 104G.026	ILP #: 1067 NI	D Map #: 104G.026 NI	D #: 10086 Reach #:	1.0 Site #: 168
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: G	E Access: H
GIS UTM (Z.E.N): 9.384891.6344828		Re	f. Name:	
Date: 2007/08/14	Time: 14:45	Agency: C660 C	rew: KM RS RD Fish Cro	d?: Incomplete:
		CHANNEL		
Mtd width v	ridth width width wi	idth width width width	width width Avg	Gadient % Mtd Avg
Channel Width (m): MS 1.60 1.3	20 2.30 3.30		2.10 Method	d I: 31.0 27.0 C 29.00
Wetted Width (m): MS 1.10 1	.10 1.60 1.80		1.40 Method	II: C
Pool Depth (m): MS			0.00	
			No Vis.0	
Wb Depth: .3 .4	.4 Avg: 0.37	Method: MS St	age: L 🦳 M 🗸 H 🦳	Dw: Tribs.:
COVER	Total: A			
Type: SWD LWD	B U	DP OV IV	CROWN CLOSURE	
Amount: T S	S T	N D N	2 21-40%	
Loc: P/S/O:			INSTREAM VEG: N	
LWD: N	DIST: NA			
LB SHP: V			RB SHP: V	
Texture: F ✔ G ☐ C	\square B \square R \square A \square	٦	Texture: F ✓ G ☐ C	\neg B \neg R \neg A \neg
RIP: C			RIP: C	
STG: MF			STG: MF	
		WATER		
EMS:			Req #:	
Temp: 8	N	Method: T3	Cond.: 317	Method: S3
pH: 8.6	N	Method: P2	Turb.: T M L C	C Method: GE
Flood Signs:	N	Method: GE	Tuib T	Wethou. GE
		MORPHOLOGY		
			O1 B1 B2 B3 D1	D2 D3
Bed Material: Dominant: E				
D95: 32.0 D (cm):	5.00 Morph: SI	DISTURBANCE		
Pattern: ST		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands: N				
Coupling: PC				
Confinement: FC				
FSZ:		Bars:	N ✓ SIDE DIAG	MID SPAN BR
_		LABITAT OUALIS	- V	
	<u>'</u>	HABITAT QUALI1		
Name		C	omments	
OverWinter Habitat none				
Spawning Habitat none				
Rearing Habitat none		PHOTOS		
	T 5:	1110100	-	
Photo Foc Lg	Dir		Comments	
R: 102 F: 4107 STD	U			
R: 102 F: 4108 STD	D			

Reach # ILP Map # ILP # Site

COMMENTS								
Section	Section Comments							
CHANNEL	6 - sp stream through dc. Marginal habitat no pools.							



Site 168 – Upstream view



Site 168 – Downstream view

Reach # ILP Map #

IL

ILP # Site

1.0 104G.026

		PROJECT		
Stream Name (gaz.):	: Schaft Creek : MESS CREEK : 630-000000-00000-00000-0000	0-0000-000-000-000-000-000	Project Code: 0	17415
		WATERSHED		
Gazetted Name: Watershed Code: 000-000 ILP Map#: 104G.02 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.38481	Method:	NID Map #: 104G.026 NI	Local Name: D #: 10087 Reach #: 1 Site Lg: 100 Method: GE of. Name:	.0 Site #: 169 Access: H
Date: 2007	7/08/14 Time: 15:35	Agency: C660 C	rew: KM RS RD Fish Crd?:	☐ Incomplete: ✓
		CHANNEL		
Mtd	width width width width	width width width width	width width Avg	Gadient % Mtd Avg
Channel Width (m): MS Wetted Width (m): MS Pool Depth (m): MS Wb Depth:	Avg: 0.00		0.00 Method I: Method II: 0.00 Method II	C 0.00
COVER Type: SWD	Total:	DP OV IV	CROWN CLOSURE	
Amount: Loc: P/S/O:	DIST:		INSTREAM VEG: N A	М
LB SHP: Texture: F RIP: STG:	G C B R A		RB SHP: Texture: F G C C RIP: STG:	B _ R _ A _
		WATER		
EMS: Temp: pH: Flood Signs:		Method: T3 Method: P2 Method: GE	Req #: Cond.: Turb.: T	Method: S3 Method: GE
		MORPHOLOGY		
Bed Material: D D95: Pattern: Islands: Coupling: Confinement:	dominant: Subdom. D (cm): Morph		O1 B1 B2 B3 D1 D C1 C2 C3 C4 C5 S	12 D3
FSZ:		Bars:	N SIDE DIAG N	MID SPAN BR
		PHOTOS		
Photo Foo	c Lg Dir		Comments	
R: 102 F: 4109 ST	TD U	seepage overland flow.		
		COMMENTS		
Section		С	comments	
CHANNEL	NCD - seepage w/some flow @	rc. No fish habitat.		
SITE CARD	NCD			
	I .			



Site 169 - Upstream view, seepage, overland flow

Reach #

ILP Map #

ILP#

1.0 104G.026 1069

Site 170

			PROJE	СТ			
Stream Name	t Name: Schaft Cre e (gaz.): MESS CR d Code: 630-00000	EEK	0-0000-000-000-000-00	0-000-000	Project Cod	de:	17415
			WATERSI	HED			
ILP Map#: 1 Field UTM(Z.E.N): . GIS UTM(Z.E.N): 9	04G.026 .3.384799.6345108 : 2007/08/14 Mtd width width MS MS MS MS	ILP #: 1069 Method: Time: 15:50	### ATERS 0-000-000-000-000-000 NID Map #: 104G.026 Agency: C660 C H A N N width width width Method: MS DP OV DP OV OV	NID #: 1 Site L Ref. Nam Crew: K E L width width Stage: L	g: 100 e: M RS RD Width Avg 0.00 0.00 0.00 M	Method: GE Fish Crd?:	Site #: 170 Access: H Incomplete: ent % Mtd Avg C 0.00 C Intermittent: Tribs.:
LWD: LB SHP: Texture: RIP: STG:	F G G C	DIST:			RB SHP: Texture: F RIP: STG:	G] R
			WATE	R			
EMS: Temp: pH: Flood Signs:			Method: T3 Method: P2 Method: GE	(Req #: Cond.: Turb.: T M	L C C	Method: S3 Method: GE
			MORPHOL				
Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ:	Dominant: D (cm):	Subdom: Morph:	DISTURE INDICA		C2 C3 C		SPAN BR
			РНОТО	S			
Photo	Foc Lg	Dir	1		Comment	S	
R: 102 F: 4110	STD	U	subsurface and over				
			COMMEN				
Section				Commer			
CHANNEL		surface and some cha	annelized flow through r	noss. No fish ha	bitat.		
SITE CARD	NCD						



Site 170 - Upstream, subsurface overland flow

Reach # ILP Map # ILP # Site

1.0 104G.026 1070 171 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M62 ILP Map#: 104G.026 NID #: 10089 ILP #: 1070 1.0 NID Map #: 104G.026 Reach #: Site #: 171 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384772.6345142 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/14 Time: 16:00 Agency: C660 Crew: KM RS RD CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.60 0.40 0.40 1.50 0.60 Method I: 35.00 0.50 0.20 35.0 С 0.60 Method II: Wetted Width (m) MS 0.40 0.40 0.30 0.30 0.30 0.38 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: .2 .2 .2 Avg: 0.20 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 21-40% Ν Amount S Ν S Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: F DIST: E Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 289 Method: S3 pH: 8.5 Method: P2 Turb.: T M L C Method: GE Flood Signs: overland flow Method: GE MORPHOLOGY 01 D1 D2 D3 Subdom: F Bed Material: Dominant: G D95: 25.0 D (cm): 3.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: ST C2 С3 C4 S1 S3 S5 Islands: N Coupling: DC Confinement: UN Bars: N SIDE DIAG MID SPAN BR FSZ:

HABITAT QUALITY Name OverWinter Habitat Spawning Habitat none Rearing Habitat none **PHOTOS** Foc Lg Photo Dir Comments STD R: 102 F: 4111 IJ ds of rc COMMENTS Section Comments



Site 171 – Upstream view

SITE CARD

NCD

Reach # ILP Map #

ILP#

Site

1.0 104G.026 1071 172 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.026 NID #: 10090 Site #: 172 ILP #: 1071 NID Map #: 104G.026 1.0 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384774.6345318 Ref. Name: Incomplete: 🗹 Date: 2007/08/15 Time: 08:30 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments R: 102 F: 4116 STD D seepage draw no channel COMMENTS Section Comments CHANNEL NCD - dry channel through dc and alder. No fish habitat.



Site 172 – Downstream seepage draw

Reach # ILP Map # ILP # Site

									PR	OJE	СТ							
		Proje	ect Name	e: Scha	ft Creek													_
		Stream Nar	ne (gaz.): MES	S CREE	K							F	Project C	ode:		17415	
	Pı	roject Watersh	ned Code	e: 630-0	00000-0	00000-00	000-000	0-0000-	000-000	0-000-00	0-000-00	00						
									WAT	ERS	HED							
	G	azetted Name	:									Loc	cal Name	e: M64 it	tsh creek			
		itershed Code		0000-00	000-000	00-0000	-0000-00	0-000-0	000-000	-000-000)							
		ILP Map#	: 104G.0	26	II	LP #: 10	72	NID Ma	ap #: 10	4G.026	N	ID #: 10	0091	Rea	ch #:	1.0	Site #: 173	
	Field	UTM (Z.E.N)	:			N	flethod:					Site Lo	g: 100		Method:	GE	Access: H	
	GIS	UTM (Z.E.N)	: 9.3846	68.6345	904						Re	ef. Name	e :					
		Da	te: 200	7/08/15	٦	Time: 08	:55		Agency:	C660	C	Crew: KN	√I RS RE)	Fish C	Crd?:	Incomplete:	
									СН	ANN	EL							
			Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadie	U]
		nel Width (m): ted Width (m):	MS MS	4.70 3.70	3.10	3.50 2.10	4.50 2.10	6.00 3.80	3.20 2.00					4.17	Metho		20.0 C 27.00 C	Ц
F		ool Depth (m):	MS	0.20	2.40 0.12	0.18	2.10	3.60	2.00					2.68 0.17	Metho	od II: 35.0	C	
		. , ,	1	1		1				I.	I	ı		<u>I</u>	No Vis		Intermittent:	
L		Wb Depth:	1.0	.6	.6		g: 0.73	N	Method:	MS	St	age: L	M	✓ H		Dw:	Tribs.:	
	_	COVER				al: M						-						
	-	Type	_) LV		B S	U S	DF N	<u> </u>	OV T	IV N	CR0		LOSURE :1-40%				
	F	Amount Loc: P/S/O										-			N \square A	□ M ✓	V \square	
	L												711(L/ (IV	I VLO.	🗆	··· V		
		LWD			D	IST: E												
		LB SHP			<u> </u>	D —	D A						RB SHP					
				J G 🗸	C ~	Ь	R _ A	, П							G 🗸 C	✓ □	R A	
		RIP STG	r: C i: MF										RIF	7: C 3: MF				
											_							_
		EMO							W	ATE	R		//-					
		EMS: Temp						Metho	od: T3				eq #: ond.: 23	2			Method: S3	
		•	8.5						od: P2							C 🗔	Method: GE	
		Flood Signs:	rafted d	ebris				Metho	od: GE			'	uib i	IVI			Welliod. GL	
								N	1 O R F	HOL	. O G Y							
		Bed Material:	: [Dominan	t: C		Subdom	ı: G				01	B1		B3 D1	D2 D	3	
		D95:	35.0	D (cm): 15.00		Morph	: SP	[DISTURI	BANCE			✓		v		
		Pattern	: SI							INDICA		C1	C2	C3	C4 C5	S1 S	2 S3 S4 S5	5
		Islands	: N															
		Coupling:																
		Confinement: FSZ:								В	ars:	N	SID	EΠ	DIAG	MID	SPAN BR	
		1 02.	Ш															
	HABITAT QUALITY																	
	Co	Name	.4			ovel een	tional to	n n n l n 1 4	lata fas	t flour of		commen	ts					
		awning Habita erWinter Habit		poor -	some gr	avei cor	iiinea to	pooi out	iets, ras	ı iiow, st	eep caso	aues.						
		earing Habitat		_	some po	ools but	steep ca	scades l	between	, fast flo	w.							_
									PΗ	юто	S							
		oto		oc Lg)ir							Comme	nts			
R:	100	F: 4117		TD			U				n ds of ro	;						
R:	100	F: 4118 F: 4119		TD	+	N	D IS			de to Me	ss Cr ting w/loo	nk iie an	d workin	a clocks	vise.			
١٨.	100	1.4118		עוי		- IN		o al	igi c a IUI	i U Stal	arig w/i00	m us all	a WUIKIII	ig CIUCKW	136.			

	PHOTOS									
	Ph	oto		Foo	: Lg	Dir	Comments			
R:	100	F:	4120	ST	D	NS	2nd shot			
R:	100	F:	4121	ST	D	NS	3rd shot			
R:	100	F:	4122	ST	D	NS	4th shot			
R:	100	F:	4123	ST	D	NS	5th shot			
R:	100	F:	4124	ST	.D	NS	6th shot			
R:	100	F:	4125	ST	D	NS	7th shot			
R:	100	F:	4126	ST	D	Х	erosion and slope failure on rb at rc			
R:	100	F:	4127	ST	D	U	slope failure on LB just us of rc			
	COMMENTS									
		Se	ction				Comments			
	CHANNEL S5 default - slopes on both banks failing. Stream at current rc is probably s5 but moving ds, might make it S3. couple of good cascade barriers ds of rc. Steps up to .8m.									



Site 173 – Upstream steep cascade



Site 173 – Upstream slope failure



Site 173 – Downstream 20% cascade

Reach # ILP Map #

ILP#

Site

174

PROJECT Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.026 NID #: 10092 ILP #: 1073 NID Map #: 104G.026 1.0 Reach #: Site #: 174 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384659.6346055 Ref. Name: Incomplete: 🗹 Date: 2007/08/15 Time: 10:00 Agency: C660 Crew: KM RS RD Fish Crd?: CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg 0.00 Channel Width (m) MS 0.00 Method I: С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments R: 100 F: 4129 STD D NCD in dc - overland flow COMMENTS Section Comments CHANNEL NCD - overland and seepage flow at rc. No fish habitat. SITE CARD NCD



Site 174 – Downstream NCD

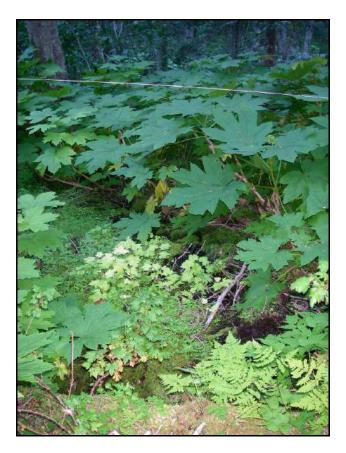
ILP Map# Reach #

ILP#

Site 175

1.0 104G.026 1074

							PR	OJE	СТ									
Project Stream Name Project Watershed		MESS	CREE	ĒΚ	000-000	0-0000-	-000-000)-000-00	00-000-00	00	F	Project Code:						
							WAT	ERS	HED									
Gazetted Name:										Loc	cal Name	e:						
Watershed Code: 0	000-0000	000-000				0-000-0	000-000	000-000)									
ILP Map#: 1	104G.026	6	- 1	ILP #: 10	74	NID M	ap #: 10	4G.026	N	ID #: 10	0093	Read	ch #:	•	1.0	:	Site #: 1	75
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9		7.63462	79	M	lethod:				Re	Site Lo ef. Name	•		Me	ethod: GE		Acce	ss: H	
Date	: 2007/0	08/15		Time: 10:	20		Agency:	C660	C	Crew: KN	M RS RE)		Fish Crd?	: 🔲	Ir	comple	te: 🗸
							СН	ANN	EL									
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg			Gadie	ent %	Mtd	Avg
Channel Width (m):	MS											0.00		Method I:			С	0.00
Wetted Width (m):	MS											0.00		Method II:			С	
Pool Depth (m):	MS											0.00		No Vis.Ch	ı.: 🔲	Intermi	ttent:	
Wb Depth:				Avg	g: 0.00	N	Method:	MS	St	age: L	M	□н□		Dv	\equiv		ribs.:	
COVER			Tot	tal:														
Type:	SWD	LW	D	В	U	DF)	OV	IV	CRO	OWN CL	OSURE						
Amount:]								
Loc: P/S/O:										INS	TREAM	VEG:	N	_ A	М	V		
LWD:				DIST:														
LB SHP:											RB SHP	:						
Texture:	F \square	G 🗌	С	В	R 🗌 A						Texture	: F	G	_ c _	В	R _	Α 🗆	
RIP:				_							RIP	:						
STG:											STG	i:						
							W	ATE	R									
EMS:										R	eq #:							
Temp:						Meth	od: T3			C	ond.:					Met	hod: S	3
pH:							od: P2			Т	urb.: T	 М		L \square C		Met	hod: G	E
Flood Signs:						Meth	od: GE						ш					
						N	1 O R F	НОІ	- O G Y									
Bed Material:	Do	minant	:		Subdom	:				01	B1	B2	B3	D1 [D2 D	3		
D95:		D (cm)	:		Morph	:	[DISTUR	BANCE									
Pattern:								INDICA		C1	C2	C3	C4	C5 S	S1 S	2 S	3 S4	S5
Islands:																		
Coupling:												,			,	·		
Confinement:	_							Е	Bars:	N	SID	ΕΠ	DIAC	3 □	MID	SPA	N	BR
FSZ:																		
							PH	ЮТС	S									
Photo	Foc			D								Comme	nts					
R: 100 F: 4130	STI	ט)	see	page at	rc / M E l	ите									
Coation	Т						CON	I IVI E		`ommo=	te							
Section CHANNEL		NCD	coors	ge through	h do					Commen	ເຮ							
			seepag	ge irirougi	ii uc.													
SITE CARD		NCD																



Site 175 – Downstream seepage

ILP Map# Reach #

1.0

104G.026

ILP#

Site

1075

				Р	ROJE	СТ							
=	ame: Schaft Cr gaz.): MESS Cl Code: 630-0000	REEK	000-0000-0	0000-000-0	000-000-00	0-000-00	00	Pr	roject Co	ode:		17415	
				W A	TERS	HED							
Gazetted Name:							Loc	al Name	:				
Watershed Code: 000	0-000000-00000-	-0000-0000-0	0000-000-	000-000-0	00-000-000)			-				
ILP Map#: 104	4G.026	ILP #: 107	75 N	IID Map #:	104G.026	N	ID #: 10	094	Reac	h #:	1.0	Site #	176
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3	84679.6346322	Me	ethod:			Re	Site Lg ef. Name	•		Method: G	E	Access: H	
Date:	2007/08/15	Time: 10:2	25	Agen	cy: C660	C	Crew: KN	I RS RD		Fish Cr	d?:	Incomp	lete: 🗸
				С	HANN	EL							
		dth width	width w	vidth wid	th width	width	width	width	Avg		Gadie		Avg
` '	IS IS								0.00	Method		C	
Wetted Width (m): N									0.00	Method	11:	C	
			<u> </u>	<u> </u>		1		II		No Vis.	Ch.:	Intermittent:	
Wb Depth:		Avg:	0.00	Metho	d: MS	St	age: L	M [_ H [Dw: 🔲	Tribs.:	
COVER		Total:					_						
71	SWD LWD	В	U	DP	OV	IV	CRO	OWN CLO	OSURE				
Amount:							1110	TDE 4.44	V.E.O.	N	- M -	v 🗔	
200.17070.							IINS	IKEAM	VEG:	N _ A _	IVI	v	
LWD:		DIST:											
LB SHP:								RB SHP:					
	_ G _ C	□в□к	A [G C	В	R \square A	
RIP: STG:								RIP: STG:					
316.								316.					
					WATE	R							
EMS:								eq #:					
Temp: pH:				Method: 7 Method: F			Co	ond.:				Method:	
Flood Signs:				Method: G			Т	urb.: T	□ M [_ L _ (Method:	GE
				MOF	RPHOL	O G V							
				141 0 1			O1	B1	B2 B	33 D1	D2 D	3	
Bed Material: D95:	Dominant:	8	Subdom: Morph:									- -	
	D (cm):		Morph:		DISTURI INDICA		- 04	00	00 0	24 05	64 6		24 05
Pattern: Islands:							C1	C2	C3 C	C4 C5	S1 S	2 S3 :	S4 S5
Coupling:													
Confinement:								0.00				00444	
FSZ:					В	ars:	N	SIDE	: L	DIAG	MID	SPAN	BR
				F	ното	S							
Photo R: 100 F: 4131	Foc Lg STD	Dir U		dr. NOD	ot ro			(Commen	ts			
R: 100 F: 4131	עונ			dry NCD	M M E N	NTS							
Section							Comment	ts					
CHANNEL	NCD - drv	partially chan	nelized NO	CD, no fish	habitat								
SITE CARD	NCD ary	ranany onan		,									
3112 0/11/2	1.100												



Site 176 – Upstream dry NCD

ILP Map# ILP# Reach #

Site 177 1.0 104G.026 1076

									PR	OJE	СТ									
	Pı	Pro Stream N oject Water		.): MES	S CREE	K	0000-000	0-0000-	000-000)-000-00	00-000-00	0	F	Project C	ode:			17415		
								,	WAT	ERS	HED									
	G	azetted Nan	ne:									Loc	al Nam	e: M65						
		tershed Cod		00000-00	000-000	000-0000	-0000-00	0-000-0	00-000-	000-000)									
			o#: 104G.			LP #: 10			ap #: 10			D#: 10	095	Rea	ch #:		1.0	5	Site #: 17	7
	Field	UTM (Z.E.I	N)·				Method:					Site Lo	ı: 100		Metl	hod: GE		Acces	ss: H	
		UTM (Z.E.I		709.6346	429		icuioa.				Re	ef. Name			Wich	110u. OL		710000	55.11	
			•																	
			Date: 200	7/08/15	•	Time: 12	:00	,	Agency:	C660	C	rew: KN	I RS RE)	F	ish Crd?	: 📙	In	complete	ə: 🔲
									СН	ANN	EL									
			Mtd	width	width	width	width	width	width	width	width	width	width	Avg			Gadie	ent %	Mtd	Avg
Г		nel Width (m		0.80	2.00	0.80	1.30	0.70	0.90					1.08	ı	Method I:	40.0	23.0	С	31.50
		ed Width (m		0.80	0.40	0.40	0.50	0.30	0.50					0.48	N	lethod II:			С	
L	Po	ool Depth (m	n): MS											0.00		a Via Ch	🗆	lo to roo it		1
Г		Wb Dept	h: .4	.4	.2	Δνα	g: 0.33	٨	/lethod:	MS	St	age: L	— м	у н [lo Vis.Ch Dv	=	Intermit	ribs.:	1
<u> </u>				<u> </u>		_ `	g. 0.00	.,	nou iou.	IVIO	O.	age. L	☐ . v .	V		D.	w		1103	_
	_	COVE				al: A						•								
	-	Тур			ND	В	U	DP)	OV	IV			LOSURE						
	-	Amou Loc: P/S/	_	_	S	S	N	N		D	N	3		1-70%				· -		
		LUC. F/3/	O: 🗸				✓		□		✓	INS	TREAM	I VEG:	N	A	M 🗸	v 📙		
		LW	'D: N			IST: NA														
		LB SF	IP: S										RB SHP	: S						
		Textu	ıre: F	, G 🗀	C	В 🦳	R \square A						Texture	: F 🗸	G	7 C 🗆	В	R	А	
			IP: M										RIP							
			G: MF											: MF						
	_														_					
									W	ATE	R									
		EM -											eq #:	_						
		Tem	ip: / H: 8.4						od: T3			C	ond.: 32					Meth	nod: S3	
		Flood Sign							od: GE			Т	urb.: T	M		c	✓	Meth	nod: GE	
		oou o.g.																		
								M	ORF	HOL	. O G Y									
		Bed Materia	al:	Dominar	nt: C		Subdom	: G				01	B1	B2	В3	D1 [D2 D)3		
		D9	5: 16.0	D (cm	n): 4.00		Morph	:SP		DISTUR	BANCE									
		Patter	rn: SI							INDICA	TORS	C1	C2	СЗ	C4	C5 S	S1 S	2 S3	3 S4	S5
		Island	ls: N												П				1	
		Couplin	•																	
		Confinemer									Bars:	NI	SID	_	DIAG	_	MID	SPAI	NI-	B D□
		FS	Z:							L	oais.	N	SID	<u>- </u>	DIAG		MID	SFAI		BR
								НАІ	BITA	ТОІ	J A L I 1	ГΥ								
		Name		1					- A. H. A.			ommen	to							
	Ove	rWinter Hat	oitat	none								ommen	13							
		awning Hab		none																
		earing Habit		none																
									PH	ЮТС	S									
	Ph	oto	F	oc Lg		D)ir	T						Comme	nts					
R:	100	F: 4132		STD			U	~201	m ds of	rc										
R:	100	F: 4133	S	STD			D													

Reach # ILP Map # ILP # Site
1.0 104G.026 1076 177

	COMMENTS								
Section	Comments								
CHANNEL	S6 - small shallow stream through dc, alder and moss. No pools, no fish habitat.								



Site 177 – Upstream view



Site 177 – Downstream view

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: So	chaft Creek			
Stream Name (gaz.): MI			Project Code:	17415
ισ ,	30-00000-00000-00000-0000-00	000-000-000-000-000-000	•	
·				
		WATERSHED		
Gazetted Name:			Local Name: M66	
Watershed Code: 000-000000-	-00000-00000-0000-0000-000	00-000-000-000		
ILP Map#: 104G.026	ILP #: 1077 NI	O Map #: 104G.026 NIE	0 #: 10096 Reach #:	1.0 Site #: 178
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: GI	E Access: H
GIS UTM (Z.E.N): 9.384728.63		Ref	. Name:	
0.0 0 (2.2). 0.00 20.00				_
Date: 2007/08/1	15 Time: 11:30	Agency: C660 Cr	ew: KM RS RD Fish Cro	lncomplete:
		CHANNEL		
Mtd wid	th width width width wid	dth width width width	width width Avg	Gadient % Mtd Avg
Channel Width (m): MS 1.10	1.00 1.40 1.20 0.3	30 0.20	0.87 Method	l: 34.0 30.0 C 32.00
Wetted Width (m): MS 0.5	50 0.20 0.40 0.30 0.2	20 0.10	0.28 Method	II: C
Pool Depth (m): MS			0.00	
			No Vis.C	
Wb Depth: .4 .3	3 .1 Avg: 0.27	Method: MS Sta	ge: L 🗸 M 🗌 H 🦳 [Dw: Tribs.:
COVER	Total: A			
Type: SWD	LWD B U	DP OV IV	CROWN CLOSURE	
Amount: T	S N S	N D N	1 1-20%	
Loc: P/S/O:			INSTREAM VEG: N A	MVV
LWD: A	DIST: E	•		
	DISTE			
LB SHP: V			RB SHP: V	
Texture: F 🗸 G	□ C □ B □ R □ A □		Texture: F 🗸 G 🗌 C [B R A
RIP: C			RIP: C	
STG: MF			STG: MF	
		WATER		
EMS:			Req #:	
Temp: 5	M	lethod: T3	Cond.: 235	Method: S3
pH: 8.1		lethod: P2		
Flood Signs: none	M	lethod: GE	Turb.: T M L C	Method: GE
		MORPHOLOGY		
		III O RT II O E O O T	O1 B1 B2 B3 D1	D2 D3
	nant: G Subdom: F			D2 D3
D95: 20.0 D ((cm): 5.00 Morph: SP	DISTURBANCE		
Pattern: ST		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands: N				
Coupling: CO				
Confinement: CO		Poro	NET SIDE DIACE	MIDE SDANE BRE
FSZ:		Bars:	N ✓ SIDE DIAG	MID SPAN BR
	н	IABITAT QUALIT	Υ	
Name				
Name Spawning Habitat non	<u> </u>	Co	omments	
OverWinter Habitat non				
Rearing Habitat non				
		PHOTOS		
Photo Foc Lg	Dir		Comments	
R: 100 F: 4134 STD		look towards rc		
R: 100 F: 4135 STD		@ source 10m us of rc		

Reach # ILP Map # ILP # Site
1.0 104G.026 1077 178

COMMENTS									
Section	Comments								
CHANNEL	S6 - small barely flowing stream starts as seepage ~40m us and channelizes 10m us of rc. Very shallow, low flow. No fish habitat.								



Site 178 – Downstream view



Site 178 – Upstream view at source spring

Reach # ILP Map # ILP # Site

PROJECT																				
	Project Name: Schaft Creek																			
	Stream Name (gaz.): MESS CREEK												Project Code: 17415							
Project Watershed Code: 630-000000-00000-00000-0000-0000-0000-0											000-000-000									
	WATERSHED																			
	Gazetted Name: Local Name: M67 - Jori Cr																			
		tershed Code	00-000	-0000-00	00-000-0	000-000-	000-000)	LOC	ai ivaiii	e. IVIO7 -	JOH CI								
		ILP Map#				LP #: 10			ap #: 10			ID#: 10	097	Rea	ch #:	1.0		Site #: 1	179	
	Field	UTM (Z.E.N):			N	/lethod:					Site Lo	Site Lg: 300 Method				Ac	cess: H		
	GIS	UTM (Z.E.N): 9.3848	17.6347	037						Re	ef. Name	:							
		Da	ate: 200	7/08/15	-	Γime: 13:	:00		Agency:	C660	C	crew: KN	/ RS RI)	Fis	h Crd?:		Incomple	ete:	
CHANNEL																				
			Mtd	width	width	width	width	width	width	width	width	width	width	Avg		G	adient %	Mtd	Avg	
		nel Width (m)		6.60	9.20	4.50	9.90	5.30	5.50					6.83	Me	ethod I: 5	5.0 8.0) C	6.67	
		ed Width (m)		4.00	6.40	2.90	5.80	3.90	3.50					4.42	Me	thod II: 7	'.0	С		
L	Po	ool Depth (m)	: MS	0.35	0.20	0.15	0.35	0.33						0.28	No	Vis.Ch.:	Inter	mittent:		
		Wb Depth	: 1.0	1.1	.6	Avg	g: 0.90	N	Method:	MS	St	age: L	М	✓ H		Dw:		Tribs.:		
		COVER			Tot	al: M														
	Γ	Туре	: SWE) LV	/D	В	U	DF	·	OV	IV	CR	OWN C	LOSURE						
		Amount	t: T	5	3	S	N	Т	T D N				1 1-20%							
		Loc: P/S/O):				V		INSTREAM VEG: N 🗸							A M V				
		LWD): F		D	IST: E														
		LB SHF	P: V										RB SHF	P: S						
			e: F _] G \square	C 🗸	В	R \square A	\				Texture: F ☐ G ☐ C ✔ B ✔ R ☐ A ☐								
			P: M			•			RIP: M										_	
		STO	9: MF										STG	6: MF						
									W	ATE	R									
		EMS	:									R	eq #:							
		Temp	: 10						od: T3			С	Cond.: 104					fethod: S	3	
			: 8.3						od: P2			Т	Turb.: T ☐ M ☐ L ☐ C ✓ Method: GE						SE.	
		Flood Signs	: bedload	i movem	ent				od: GE											
								N	ORF	HOL	. O G Y									
		Bed Material	: [Dominan	t: B		Subdom	n: C				01	O1 B1 B2 B3 D1 D2 D3							
		D95	: 50.0	D (cm): 25.00)	Morph	n: SP	[DISTURI			✓	✓						
		Pattern	: IR							INDICA	TORS	C1 C2 C3 C4 C5 S1					S2	S2 S3 S4 S5		
		Islands																		
		Coupling Confinement																		
		FSZ								В	ars:	N	SID	E 🗸	DIAG	MID	✓ SI	PAN	BR	
								НА	BITA	TQI	JALIT									
	Sno	Name	at	good -	natche	e of good	l araval v	with doo	ner slow	er flow s		Commen	ts							
Spawning Habitat good - patches of good gravel with OverWinter Habitat fair - some deep pools, but fast flov											aria riolali	ig aica								
		earing Habitat		_			leep poo		•											
									PH	ото	S									
	Pho		Fc	c Lg		D)ir		Comments											
R: 100 F: 4136 STD D								_	fnc lwd and pools us of crossing											
R:	100	F: 4137		TD	-		X		abandoned channel on lb											
K:	R: 100 F: 4138 STD X deposited cobble and boulders on road approach to rc																			

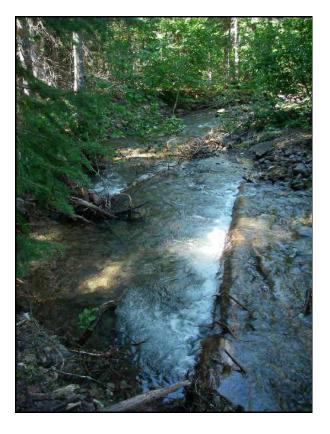
Section

CHANNEL

Reach # ILP Map # ILP # Site
00 1.0 104G.026 1078 179

W	atersh	ned Cod	de: 000-000000-00000-0	00000-0000-0000-000	0-000-000-000-000	1.0	104G.026	1078	179					
	PHOTOS													
Pl	oto		Foc Lg											
100 F: 4139 STD X deposited alluvial sand (this year) ds of rc														
100 F: 4140 STD NS 8 angles for tc starting w/look ds and working clockwise. 4140-4147														
	COMMENTS													

Comments
S2 - extensive evidence of debris flows/bedload movt. Alluvial deposits start 40m back from lb of stream. Old channels evident. Spreads out over alluvial fan as it approached mess cr. No barriers. Better bridge location 384904 6347060, more confined.



Site 179 – Downstream LWD



Site 179 - Deposited cobble and boulders



Site 179 – Downstream abandoned channel



Site 179 - Deposited alluvial sand

Reach # ILP Map # ILP # Site

1.0 104G.026 1079 180 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M68 Alexander Crk NID #: 10098 ILP Map#: 104G.026 ILP #: 1079 NID Map #: 104G.026 Reach # 1.0 Site #: 180 Field UTM (Z.E.N): .. Method: Site Lg: 300 Method: GE Access: H GIS UTM (Z.E.N): 9.384913.6347801 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/15 Time: 15:00 Agency: C660 Crew: KM RS RD CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg MS 23 00 17.90 22.70 Method I: 5.50 Channel Width (m) 19 90 18.70 24.50 21.12 5.0 6.0 С Wetted Width (m) MS 7.70 7.30 6.30 5.00 3.70 7.30 6.22 Method II: С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: 2.2 1.5 1.8 Avg: 1.83 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: T **CROWN CLOSURE** SWD LWD DP OV IV Type: В U D Ν Amount Ν Ν Ν INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V** LWD: N DIST: NA Texture: F \bigcap G \bigcap C \bigvee B \bigvee R \bigcap A \bigcap Texture: F ☐ G ☐ C ✔ B ✔ R ☐ A ☐ RIP: M RIP: M STG: MF STG: MF WATER EMS: Req#: Temp: 12 Method: T3 Cond.: 99 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: eroded banks Method: GE MORPHOLOGY D1 D2 Bed Material: Dominant: C. Subdom: B **V** D95: 65.0 D (cm): 35.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: SI C2 СЗ C4 S1 S3 S5 Islands: N ✓ **V** Coupling: PC Confinement: OC Bars: N SIDE DIAG MID 🗸 SPAN BR FSZ: HABITAT QUALITY Comments Name Spawning Habitat poor - no gravel OverWinter Habitat poor - no pools or cover Rearing Habitat fair - low cover, but good flow and shelter behind boulders

PHOTOS

TC photos, starting looking us and working clockwise

fresh erosion on lb us of rc

Comments

Foc Lg

STD

STD

STD

Dir

D

NS

NS

Photo

F: 4148

F: 4153

F: 4152

100

100

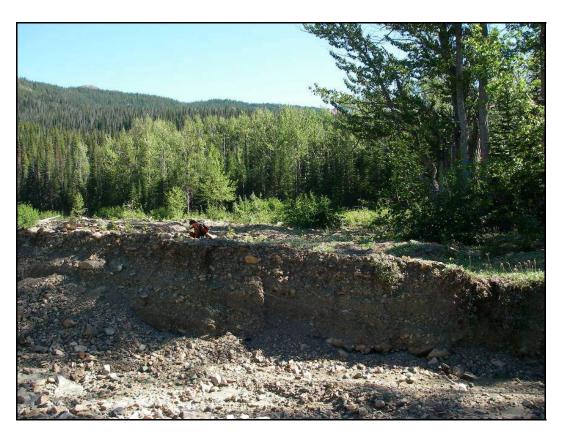
	PHOTOS													
Photo Foo			Foc	Lg	Dir	Comments								
R:	100	F:	4154	ST	D	NS	TC							
R:	100	F:	4155	ST	D	NS TC								
R:	100	F:	4156	ST	D	NS	TC							
R:	100	F:	4157	ST	D	NS	TC							
R:	100	F:	4158	ST	D	NS	TC							
R:	100	F:	4159	ST	D	NS	TC							
R:	100	F:	4160	ST	D	D	fresh erosion on lb ds of rc							
R:	100	F:	4161	ST	D	Х	lb at crossing note alluvial fan and erosion							
	COMMENTS													
		Se	ction			Comments								
		CHA	NNEL		S2 - very dynamic channel w/ wide floodplain (~80m wide w/ sparse alder & avens). Lots of evidence of bedload movement and channel migration. Banks are eroded. Bridge is @ narrowest spot b/w treed areas, but there is a wide alluvial floodplain just US.									



Site 180 – Downstream fresh erosion



Site 180 – Downstream fresh erosion



Site 180 – Left bank at crossing, note alluvial fan and erosion

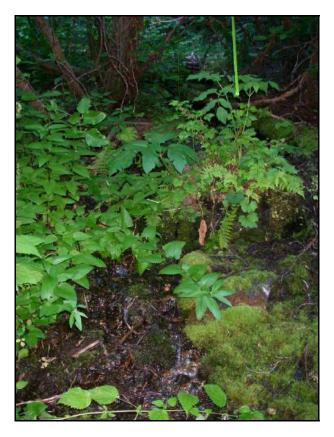
SITE CARD

NCD

Reach # ILP Map # ILP #

Site

1.0 104G.026 1080 181 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M69 ILP Map#: 104G.026 NID #: 10099 Site #: 181 ILP #: 1080 NID Map #: 104G.026 1.0 Reach # Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384899.6348000 Ref. Name: Incomplete: 🗸 Date: 2007/08/16 Time: 08:45 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL width width width width Gadient % Mtd Mtd width width width width width width Avg Avg 0.00 Channel Width (m) MS 0.00 Method I: С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: Texture: F G C B R A Texture: F G C B R A RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C5 S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments 101 F: 4063 STD U looking towards rc R 101 F: 4064 STD U close up of NCD COMMENTS Section Comments CHANNEL NCD - pours out of sprign at rc, partially channelized but mostly undefined overland flow. Turns into a stream ~30m ds of rc.



Site 181 – Upstream view



Site 181 – Close up of NCD

Reach # ILP Map # ILP #

Site

								PR	OJE	СТ											
	Projec								Project Code: 1741												
	Stream Nam Project Watershe			000-000	0-0000-	-000-000	0-000-00	0-000-00	00	Project Code:					5						
Project Watershed Code: 630-000000-00000-0000-0000-0000-000-000-																					
								WAT	ERS	HED											
Gazetted Name: Local Name:																					
Watershed Code: 000-000000-00000-0000-0000-000-000-000												-b #.	1.0		C:40 #. 1	00					
	•	NID M	ар #: 10	4G.026	IN			Read		1.0		Site #: 1	82								
	Field UTM (Z.E.N): GIS UTM (Z.E.N):		EU 6349	224	ľ	/lethod:				D,	Site Lo	_		Method:	GE	Acce	ess: H				
	GIS OTIVI (Z.E.IV).						Ref. Name:								_						
	Date	,	Agency:	: C660	C	Crew: I	w: KM RS Fish Crd?:					Incomplete: 🗸									
CHANNEL																					
		Mtd	width	width	width	width	width	width	width	width	width	width	Avg			dient %	Mtd	Avg			
	Channel Width (m): Wetted Width (m):	MS MS											0.00	Metho Metho			C	0.00			
	Pool Depth (m):	MS							 				0.00	Wicard	Ju 11.	<u>:</u>					
	W D 4		1	1	.							<u> </u>		No Vi	_		ntermittent:				
	Wb Depth:			<u> </u>		g: 0.00	N	Method:	MS	St	age: L	ШМ	M H Dw: Tribs.:								
	COVER				tal:						- -										
	Type: Amount:	SWD) L\	ND	В	U	DF	,	OV	IV	CR	OWN CI	OSURE								
	Loc: P/S/O:						1—				INS	STRFAM	IVFG:	N \square A	— м –	7 V 🗀					
)	· V _ O .	🗀	□ ∟						
	LWD:			ſ	DIST:																
	LB SHP:										RB SHP:										
	Texture:] G		В	R \square A	, <u> </u>					Texture: F G C B R A									
	RIP: STG:											RIP: STG:									
	316.											310	··								
								W	ATE	R											
	EMS:						Math	ad. To				eq #:				Method: S3					
	Temp: pH:						Method: T3 Method: P2				Cond.:										
	Flood Signs:							od: GE			Turb.: T M L C Metho					thod: G	E				
							IV	10RF	PHOL	OGY											
	Bed Material:		Dominar	nt:		Subdom					01	B1	B2 I	B3 D1	D2	D3					
	Ded Material.		D (cm			Morph			DICTUD	DANCE											
	Pattern:		_ (*	-,-					DISTURI INDICA								3 S4	S5			
	Islands:																				
	Coupling:	_																			
	Confinement:	_		Bars:								N SIDE DIAG MID SPAN BR									
FSZ:										uis.	N SIDE DIAG MID SPAN						BR				
								PΗ	ното	S											
Photo Foc Lg Dir											Comments										
F	R: 101 F: 4065	S	TD	$\perp \Gamma$		D	dry ı	ncd at re													
								CON	MME												
	Section				Comments																
	CHANNEL			- dry wit	h some a	reas of c	nanneliz	zation at	t rc, mos	tıy overla	ind and	subsurfa	ce flow.								
	SITE CARD		NCD																		



Site 182 – Downstream, dry NCD

Reach # ILP Map # ILP #

Site

1.0 104G.026 1082 183 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.026 NID #: 10102 Site #: 183 ILP #: 1082 NID Map #: 104G.026 1.0 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384642.6348682 Ref. Name: Incomplete: 🗹 Date: 2007/08/16 Time: 09:55 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: Bars: N SIDE DIAG MID SPAN BR FSZ: PHOTOS Foc Lg Dir Comments R: 101 F: 4067 STD D dry seepage COMMENTS Section Comments CHANNEL NCD - dry seepage no fish habitat. SITE CARD NCD



Site 183 – Downstream seepage

ILP Map# ILP# Site Reach # 184 1.0 104G.026 1083 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.026 NID #: 10103 ILP #: 1083 NID Map #: 104G.026 Reach #: 1.0 Site #: 184 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384302.6349989 Ref. Name: Incomplete: 🗸 Fish Crd?: Date: 2007/08/16 Agency: C660 Crew: KM RS Time: 11:35 CHANNEL Mtd width Avg Gadient % Mtd Avg

Channel Width	n (m): MS									0.00		Method I:			С	0.00
Wetted Width	n (m): MS									0.00		Method II:			С	
Pool Depth	n (m): MS									0.00	l •					· ¬
	No Vis.Ch.: Intermittent:														╛	
Wb D	epth:		Α	vg: 0.00	Met	hod: MS	St	age: L	M	Н		Dw:	: 🔲	7	ribs.:	
COVER Total: M																
	Type: SW	D LWI) В	U	DP	OV	IV	CR	OWN CL	OSURE						
An	nount: T	S	N	N	S	S	D	1	1	-20%						
Loc: F	P/S/O:						□□✓ INSTREAM VEG: N □ A □ M □ V ✓									
	LWD: N		DIST: N	A				_								
LB	SHP: S								RB SHP	: S						
Te	Texture: F ✓ G C B R A								Texture: F ✓ G C B R A							
	RIP: M			RIP: M												
	STG: MF				STG: MF											

EMS:				Req	#:								
Temp: 8		Method	: T3	Cond	d.: 174			Method:	S3				
pH: 8.1		Method	: P2	Turk	. T - M		C —	Method:	GE				
Flood Signs:		Method	Tuit		Welliod. GL								
MORPHOLOGY													
Bed Material: D95: 0.00	Dominant: F D (cm): 0.00	Subdom: NA Morph:	DISTURBANCE	O1 E	B1 B2	B3 D1	D2 D3						
Pattern:			INDICATORS	C1 (C2 C3	C4 C5	S1 S2	S3	S4	S5			
Islands:													
Coupling: Confinement: FSZ: ✓			Bars:	N_	SIDE	DIAG	MID	SPAN]	BR			

WATER

	· ·										
	HABITAT QUALITY										
Name		Comments									
Spawning Habi	itat no	one									
OverWinter Hab	oitat fa	fair - good depth at this time but may drain or become isolated on winter									
Rearing Habit	at fa	fair - good cover but turbid and still water									
	PHOTOS										
Photo	Foc L	.g Di	r Comments								
R: 101 F: 4167	STD	Х	view showing proximity of road to FSZ								

Photo			Foc Lg	Dir	Comments						
R:	101	F:	4167	STD	X	view showing proximity of road to FSZ					
R:	101	F:	4168	STD	D	looking N towards inlet /outlet					
R:	101	F:	4169	STD	U	looking S towards end of pond					

Reach # ILP Map #

104G.026

1.0

ILP # 1083 Site 184

	COMMENTS								
Section	Comments								
	FSZ - off channel habitat of Mess Cr within 5m of proposed alignment - shift road upslope at least 20m to avoid sidecast debris. ~70m long x 20m wide, inlet from Mess Cr at N end. Ribbon says ILP 1084								
SITE CARD	FSZ not all measurements taken								





Site 184 – Across view

Site 184 – Downstream view



Site 184 – Upstream view

Reach # ILP Map # ILP # Site

Project Name: Schaft C Stream Name (gaz.): MESS C Project Watershed Code: 630-000	REEK	•	ect Code: 17415									
WATERSHED												
Gazetted Name:			Local Name:									
Watershed Code: 000-000000-00000	-00000-0000-0000-000-0	00-000-000-000										
ILP Map#: 104G.026			NID #: 10104	Reach #: 1.0 Site #: 185								
•		,	Cita Lav 100	Method: GE Access: H								
Field UTM (Z.E.N):	Method:	D	Site Lg: 100	Method: GE Access: H								
GIS UTM (Z.E.N): 9.384392.6350219		K	tef. Name:									
Date: 2007/08/16	Time: 12:00	Agency: C660	Crew: KM RS	Fish Crd?: ☐ Incomplete: ✓								
CHANNEL												
	dth width width wi	dth width width width		Gadient % Mtd Avg								
Channel Width (m): MS				.00 Method I: C 0.00								
Wetted Width (m): MS Pool Depth (m): MS				.00 Method II: C								
1 doi Deptii (iii).			1 0	No Vis.Ch.: Intermittent:								
Wb Depth:	Avg: 0.00	Method: MS S	Stage: L M M	H Dw: Tribs.:								
COVER	Total: A											
			7	.ups								
Type: SWD LWD	B U	DP OV IV	CROWN CLOS									
Amount: T S	N N	N D S	1 1-20									
Loc: P/S/O:			INSTREAM VE	G: N A M V V								
LWD: N	LWD: N DIST: NA											
	-		DD CLID, C									
LB SHP: S			RB SHP: S									
Texture: F ✓ G C				G C B R A								
RIP: W			RIP: C									
STG: NA			STG: MI	=								
		WATER										
EMS:			Req#:									
Temp:	N	Method: T3	Cond.:	Method: S3								
pH:	N	Method: P2	Turb · T	M								
Flood Signs:	N	Method: GE	Turb.: T M L C Meth									
		MORPHOLOGY	<i>,</i>									
		OKI NOLOGI	O1 B1 B2	2 B3 D1 D2 D3								
Bed Material: Dominant:	Subdom:											
D95: D (cm):	Morph:	DISTURBANCE										
Pattern:		INDICATORS	C1 C2 C3	3 C4 C5 S1 S2 S3 S4 S5								
Islands:												
Coupling:												
Confinement:		D	NC ODEC	DIACE MIDE CRANE								
FSZ: 🔽		Bars:	N SIDE	DIAG MID SPAN BR								
	H	IABITAT QUALI	TY									
Name			Comments									
Spawning Habitat none												
OverWinter Habitat none												
Rearing Habitat poor - slo	v flow, shallow, little conn											
		PHOTOS										
Photo Foc Lg	Dir		Cor	mments								
R: 101 F: 4170 STD		looking S along base at slop										
R: 101 F: 4171 STD	D	looking N along base of slop										

Reach # ILP Map # ILP # Site
1.0 104G.026 1084 185

COMMENTS									
Section	Comments								
CHANNEL	FSZ - road pases within 5m of another FSZ - this one a wetland. May be accessible to fish during floods. Recommend moving road ~20m us to avoid FSZ								
SITE CARD	FSZ								



Site 185 – Upstream view



Site 185 – Downstream view

ILP Map # Reach # ILP#

Site 1.0 104G.026 1085 186 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M71 ILP Map#: 104G.026 NID #: 10105 Site #: 186 ILP #: 1085 1.0 NID Map #: 104G.026 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384525.6350519 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/16 Time: 13:20 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.45 0.60 0.90 0.60 0.65 Method I: 18.00 0.70 17.0 19.0 С Method II: Wetted Width (m) MS 0.00 С Pool Depth (m) MS 0.00 Intermittent: 🗸 No Vis.Ch.: Wb Depth: .4 .4 Avg: 0.40 Method: MS Stage: L ✓ M ☐ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 1-20% Ν Amount S Ν S Ν D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: NS DIST: NS RB SHP: V Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: none Method: GE MORPHOLOGY В3 D1 D2 D3 Subdom: C Bed Material: Dominant: G D95: 16.0 D (cm): 8.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: SI C2 СЗ C4 S1 S3 S5 Islands: N Coupling: DC Confinement: UN Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name OverWinter Habitat Spawning Habitat none Rearing Habitat none

PHOTOS

Comments

Foc Lg

STD

STD

Dir

D

U

at rc

at rc

Photo

101 F: 4172

101 F: 4173

Reach # ILP Map # ILP # Site
1.0 104G.026 1085 186

COMMENTS									
Section	Comments								
CHANNEL	S6 - totally dry channel, moderate gradient. Might want to check at high water as it flows into wetland ~50m ds of rc. Marginal habitat								



Site 186 – Downstream view



Site 186 – Upstream view

Confinement: UN

FSZ:

Reach # ILP Map # ILP # Site

SPAN

BR

MID

1.0 104G.026 1086 187 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M72 Mikael Cr. ILP #: 1086 NID #: 10106 ILP Map#: 104G.026 NID Map #: 104G.026 Reach # 1.0 Site #: 187 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384673.6351276 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/16 Time: 14:10 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 5 40 10.50 5.80 8.70 6.82 Method I: 4.00 5.30 3.0 5.0 С 5 20 Wetted Width (m) MS 3 90 3.30 3 50 3.20 4.20 5.00 3.85 Method II: С Pool Depth (m) MS 0.20 0.50 0.30 0.50 0.30 0.60 0.40 No Vis.Ch.: Intermittent: Wb Depth: .6 .8 Avg: 0.70 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: M **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 1-20% Ν Amount S S S D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V** LWD: F DIST: F LB SHP: S Texture: F \bigcap G \bigcirc C \bigcirc B \bigcap R \bigcap A \bigcap Texture: F G G C B R A RIP: M RIP: M STG: MF STG: MF WATER EMS: Req#: Temp: 12 Method: T3 Cond.: 70 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY В3 D1 D2 Bed Material: Dominant: C Subdom: G **✓ V V** D95: 22.0 D (cm): 13.00 Morph: RP DISTURBANCE **INDICATORS** Pattern: SI C2 C4 S1 S3 S5 Islands: O Coupling: DC

Name Comments Spawning Habitat good - good gravels at pool outlets. Good flow OverWinter Habitat good - some deep pools suitable for overwintering Rearing Habitat good - some excellent deep pools with LWD cover

Bars:

N

SIDE

DIAG

	PHOTOS											
Photo			Foc Lg	Dir	Comments							
R:	101	F:	4175	STD	U	step pools ds of rc (~60m)						
R:	101	F:	4176	STD	U	bank erosion on rb ~30m us of rc						
R:	101	F:	4177	STD	U	old log jam on lb ~40m us of rc forced avulsion						

						PHOTOS					
	Ph	oto		Foc Lg	Dir	Comments					
R:	101	F:	4178	STD	NS	TC photos looking us and working clockwise					
R:	101	F:	4179	STD	NS	TC					
R:	101	F:	4180	STD	NS	TC					
R:	101	F:	4181	STD	NS	TC					
R:	101	F:	4182	STD	NS	TC					
R:	101	F:	4183	STD	NS	TC					
R:	101	F:	4184	STD	NS	TC					
R:	101	F:	4185	STD	NS	TC					
R:	101	F:	4186	STD	U	deep pools and stabilizing cottonwoods just us of rc					
						COMMENTS					
		Se	ction			Comments					
		СНА	NNEL			n low gradient with some deep pools, good cover. Us of rc there are several eroding banks and an old log tream a bit. At rc there are 2 cottonwoods on us side of rc whose roots stabilize a pool,					



Site 187 – Upstream step-pools



Site 187 – Upstream bank erosion



Site 187 – Upstream log jam on left bank



Site 187 – Upstream deep pools and cottonwoods

Reach # ILP I

ILP Map#

ILP#

1.0 104G.026

1087

Site 188

		PROJE	СТ									
Stream Name (gaz.)	: Schaft Creek : MESS CREEK : 630-000000-00000-00000-0	000-0000-000-000-000-000	Project Code: 00-000-000	e: 17415								
WATERSHED												
Gazetted Name: Watershed Code: 000-000 ILP Map#: 104G.0 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.38481 Date: 2007	Method 12.6351764	NID Map #: 104G.026	Local Name: NID #: 10107 Reach #: Site Lg: 100 Method: 0 Ref. Name: Crew: KM RS Fish C									
		CHANN	EL									
Channel Width (m): MS Wetted Width (m): MS Pool Depth (m): MS Wb Depth: COVER	width width width width Avg: 0.0		width width width Avg 0.00 Method 0.00 Movis Stage: L M H	d II: C								
Type: SWD LWD B U DP OV IV CROWN CLOSURE Amount: Loc: P/S/O:												
		WATE	R									
EMS: Temp: pH: Flood Signs:		Method: T3 Method: P2 Method: GE	Req #: Cond.: Turb.: T	Method: S3 C Method: GE								
		MORPHOL	_ O G Y									
Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ:	Dominant: Subdo D (cm): Mor	oh: DISTUR INDICA	DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S Bars: N SIDE DIAG MID SPA									
		2112-1										
		РНОТО										
	c Lg Dir TD D	rc	Comments									
1. 101 1. 4107 5		COMME	NTS									
Section	I		Comments									
CHANNEL NCD - dry with pockets of scour, mostly overland flow. No fish habitat.												
SITE CARD	NCD	. , y ovolulia now. i										



Site 188 – Downstream view

ILP# Site Reach # ILP Map# 1.0 104G.026 1088 189 PROJECT Project Name: Schaft Creek

	Stream Name (gaz.)	: MESS CF	REEK						P	roject Co	ode:	174	15	
	Project Watershed Code	: 630-0000	00-00000-00	000-0000-0	000-000-000	0-000-00	0-000-00	00						
	WATEROUER													
	WATERSHED													
	Gazetted Name:							Loc	cal Name	e: M73				
	Watershed Code: 000-000									_			0: " 4	
	ILP Map#: 104G.0	26	ILP #: 10	88 NII	O Map #: 10	4G.026	N	ID #: 10	108	Read	ch #: 1.0)	Site #: 18	39
	Field UTM (Z.E.N):		M	ethod:				Site Lo	g: 100		Method: GE	Ac	cess: H	
	GIS UTM (Z.E.N): 9.38481	14.6351793					Re	ef. Name) :					
	Date: 2007	7/08/16	Time: 15:	35	Agency:	C660	C	Crew: I	KM RS		Fish Crd?:		Incomplete	e: 🗌
		700/10												у. <u> </u>
	CHANNEL Mtd width Avg Gadient % Mtd Avg													
	Channel Width (m): MS	1.20 2.70			20	width	width	width	width	1.60		33.0 33.		33.00
	Wetted Width (m): MS	1.20 2.70	0 1.40	1.30 1.	20					0.00	Method II:	33.0 33.	C	33.00
	Pool Depth (m): MS									0.00	Wethod II.		Ŭ	
	· • • • • • • • • • • • • • • • • • • •							l			No Vis.Ch.:	Inte	rmittent: 🗸]
	Wb Depth: .3	.2	Avg	: 0.25	Method:	MS	St	tage: L	✓ M	ПН	Dw:		Tribs.:]
	COVER		Total: A								_			
	Type: SWD	LWD	В	U	DP	OV	IV	1 CR	OWN CL	OSURE				
	Amount: T	S	N	T	N	D	N	5		>90%				
	Loc: P/S/O:						V	INS	TREAM	VEG:	N 🗸 A 🗌 M	1 🖂 V 🗆		
								<u> </u>						
	LWD: F		DIST: E											
	LB SHP: S								RB SHP					
	Texture: F	G 🔽 C	✓ B _ F	R 🗌 A 🗀]				Texture	: F 🗌	G 🗸 C 🗸	B \square R	A	
	RIP: M								RIP	: M				
	STG: YF								STG	: MF				
					W	ATE	R							
	EMS:					A ! L	11	P	oa #:					
	Temp:			Λ.	Method: T3			Req #: Cond.:				Method: S3		
	pH:				lethod: P2	d· P2								
	Flood Signs: none		Turb.: T M L C Method: GE						=					
	-				MORF	1101	000							
					WOKE	пос	0 0 1	O1	B1	B2 I	B3 D1 D2	D3		
		ominant: C		Subdom: G					ы	D2 I	53 01 02	D3		
	D95: 20.0	D (cm): 15	5.00	Morph: SF	۱ .	DISTURE			Ш					
	Pattern: ST					INDICA	TORS	C1	C2	C3 (C4 C5 S1	S2	S3 S4	S5
	Islands: O													
	Coupling: PC													
	Confinement: UN					ь	oro:	N	SID		DIACE M		DANI	PP □
	FSZ:					Ь	ars:	N	SID		DIAG MI	D S	PAN	BR
				F	IABITA	T QL	JALI.	ΤΥ						
	Name	I						Commen	ts					
	Spawning Habitat	none												
	OverWinter Habitat	none												
	Rearing Habitat	none												
	PHOTOS													
	Photo Fo	c Lg	Di	ir						Commer	nts			
_														

FSZ:		Bars: N✓	SIDE DIAG	MID SPAN	BR					
	H	IABITAT QUALITY								
Name		Comments								
Spawning Habitat	none									
OverWinter Habitat	none									
Rearing Habitat	Rearing Habitat none									
		PHOTOS								
Photo Foc	c Lg Dir	Comments								
R: 101 F: 4188 ST	TD U	us of rc								
R: 101 F: 4189 ST	TD D	measuring at rc								

Section CHANNEL Reach # ILP Map # ILP # Site

1.0 104G.026 1088 189

	COMMENTS
_	Comments
	S6 - dry scoured channel. Steep (33%). No fish habitat.



Site 189 – Upstream view



Site 189 – Downstream view

Reach # ILP Map # ILP # Site

1.0 104G.026 1089 190 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M74 ILP Map#: 104G.026 NID #: 10109 Site #: 190 ILP #: 1089 1.0 NID Map #: 104G.026 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384901.6352271 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/17 Time: 08:40 Agency: C660 Crew: KM RS CHANNEL width width width width Gadient % Mtd Mtd width width width width width width Avg Avg Channel Width (m) MS 0.70 0.40 0.98 Method I: 21.50 0.80 1.80 1.20 18.0 25.0 С 0.50 Method II: Wetted Width (m) MS 0.50 0.70 0.30 1.10 0.62 С Pool Depth (m) 0.00 MS No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .3 .2 Avg: 0.25 Method: MS Stage: L ☐ M ✔ H ☐ Dw: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 1-20% Ν Ν Amount S S Ν D Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: F DIST: E RB SHP: V Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: M RIP: M STG: YF STG: MF WATER EMS: Req#: Temp: 10 Method: T3 Cond.: 386 Method: S3 pH: 8.6 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Subdom: C Bed Material: Dominant: G D95: 18.0 D (cm): 4.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: IR C2 СЗ S1 S3 S5 Islands: N Coupling: DC Confinement: UN SPAN SIDE Bars: N DIAG MID BR FSZ:

	HABITAT QUALITY								
Name Comments									
Spawning Habi	itat noi	none							
OverWinter Hab	OverWinter Habitat none								
Rearing Habit	Rearing Habitat none - shallow, steep fine substrates and low flow								
	PHOTOS								
Disease	F1-		D:-	On the state of th					

	PHOTOS											
	Photo Foc Lg Dir Comments											
R	: 102	F:	4190	STD	U	barely a stream ds of rc						
R	: 102	F:	4191	STD	U	U stream disperses overland us of rc						

	COMMENTS
Section	Comments
CHANNEL	S6 - small stream flowing through dc, alder and balsam. Most of water diverted overland just us of rc by LWD. Rechannelizes just ds of rc and flows into lake. Good flow us of rc but nearly a seepage ds. Multiple seepage like channels ds of rc several barr
	to and nows into take. Good now us of to but hearly a seepage us. Multiple seepage like charmers us of to several barr

Reach #

ILP Map#

ILP#

Site



Site 190 – Upstream view, barely a stream



Site 190 – Upstream dispersal overland

Reach # ILP Map # ILP #

Site

1.0 104G.026 1090 191 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M75 ILP Map#: 104G.026 ILP #: 1090 NID #: 10110 1.0 NID Map #: 104G.026 Reach #: Site #: 191 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384887.6322387 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/17 Time: 09:10 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 1.30 0.60 0.40 0.80 0.90 0.73 Method I: 19.50 0.40 22.0 17.0 С Method II: Wetted Width (m) MS 0.70 0.35 0.70 0.30 0.60 0.60 0.54 С Pool Depth (m) MS 0.13 0.13 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .2 .2 Avg: 0.20 Method: MS Stage: L ☐ M ✔ H ☐ Dw: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 21-40% Ν Amount S S Ν D Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: N DIST: NA Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 382 Method: S3 pH: 8.5 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: C. Subdom: G D95: 12.0 D (cm): 2.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: SI C2 СЗ C4 S1 S3 S5 Islands: N Coupling: DC Confinement: UN Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name Spawning Habitat none OverWinter Habitat none Rearing Habitat none **PHOTOS** Foc Lg Photo Dir Comments 102 F: 4192 STD D ds of rc 102 F: 4193 STD U at rc

Reach # ILP Map # ILP # Site
1.0 104G.026 1090 191

	COMMENTS
Section	Comments
CHANNEL	S6 - small stream flowing through cobbles and boulders, spruce, willow. Very low shallow flow, no pools or deep water anywhere. No
	S6 - small stream flowing through cobbles and boulders, spruce, willow. Very low shallow flow, no pools or deep water anywher fish habitat.



Site 191 – Downstream view



Site 191 – Upstream view

Reach # ILP Map # ILP # Site

		PROJEC	Т			
Project Name: Schar Stream Name (gaz.): MES: Project Watershed Code: 630-0	S CREEK	0-0000-000-000-000-000-0		Project Code:	17415	
		WATERSH	E D			
Gazetted Name: Watershed Code: 000-000000-000 ILP Map#: 104G.036 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.385087.63529 Date: 2007/08/17 Mtd width Channel Width (m): MS 1.40 Wetted Width (m): MS Pool Depth (m): MS	ILP #: 1092 Method: 997 Time: 10:50	O-000-000-000-000 NID Map #: 104G.036 Agency: C660 C H A N N E	Local Name NID #: 10112 Site Lg: 100 Ref. Name: Crew: KM RS	Reach #: 1.0 Method: GE Fish Crd?: Avg 1.20 0.00 Method I: 7.0 Method II:	С	
Wb Depth: .2 .3 COVER	.2 Avg: 0.23	Method: MS	Stage: L 🗾 M	No Vis.Ch.: Dw:	Intermittent: 🗹 Tribs.:	
Amount: S T Loc: P/S/O: V V	VD B U T N S DIST: NA	DP OV N D	INSTREAM	1-20% IVEG: N 🕢 A ☐ M ☐	_ V	
LB SHP: S Texture: F ✔ G ✔ RIP: M STG: MF	C B R A		RIF	e: F ☑ G ☑ C ☐ B [D: M G: MF	R A	
		WATER				
EMS: Temp: pH: Flood Signs: fld ch. + overInd	1 fl	Method: T3 Method: P2 Method: GE				
		MORPHOLC	GY			
Bed Material: Dominan D95: 24.0 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: UN FSZ:	nt: G Subdom:): 14.00 Morph:		ORS C1 C2	B2 B3 D1 D2 C3 C4 C5 S1 DIAG MID	D3 S2 S3 S4 S5 SPAN BR	
		HABITAT QU	ALITY			
Name Spawning Habitat none - OverWinter Habitat none	good potential but dries u		Comments			
Rearing Habitat none -	good potential but dries u	<u>Р Р Н О Т О S</u>				
Photo Foc Lg R: 102 F: 4196 STD R: 102 F: 4197 STD	Dir D U	see drill nose on lb		Comments		

	COMMENTS
Section	Comments
CHANNEL	S4 default - dry but decent sized stream channel - evidence of flooding this year - deposited sand up to 5m from rb, evidence of overland flow. Dd drilling hose just ds of road. Recommend EF at higher water. Low gradient flows into fb lake without barrier
	overland flow. Dd drilling nose just ds of road. Recommend EF at nigher water. Low gradient flows into ib lake without barrier



Site 193 – Downstream view



Site 193 – Upstream view, dry pool

Reach # ILP Map # ILP # Site

	9			ect Name										F	Project Cod	e:		17415	
	Proje	ct Wat	ers	hed Code	e: 630-0	00000	0-00000-0	0000-000	00-0000	-000-000	0-000-0	00-000-0	00						
										WAT	ERS	HED							
	Gaze	tted Na	ame	9:									L	ocal Name	e: M78				
	Water	shed C	ode	e: 000-00	0000-00	000-0	0000-0000	0-0000-00	00-000-0	000-000	000-00	00							
		ILP M	ap#	#: 104G.0	36		ILP #: 1	093	NID M	ap #: 10	4G.026	5 N	IID #:	10113	Reach	#:	1.0	Site #: 194	
	Field UT	M (Z.E	E.N):			1	Method:					Site	Lg: 100		Method: G	E	Access: H	
	GIS UT	M (Z.E	E.N): 9.3851 [.]	10.6353	293						R	ef. Na	-					
											1								
	Date: 2007/08/17 Time: 11:30 Agency: C660 Crew: KM RS Fish Crd?: Incomplete:																		
										СН	ANN	NEL							
				Mtd	width	widt		width	width	width	width	n width	widt	h width	Avg		Gadie	Ŭ	_
F	Channel				1.00	1.60	2.00	1.00	2.40	1.80					1.63	Method		14.0 C 13.5	0
H	Wetted	Depth	. ,		0.50	1.30	0.80	0.80	1.40	1.80			-		0.00	Method	11:	С	
L	1 001	Берип	(111)	. IVIO											0.00	No Vis.	Ch.:	Intermittent:	
	,	Wb De	pth	.3	.3	.4	Av	g: 0.33	1	Method:	MS	S	stage:	L M	∨ H □		Dw:	Tribs.:	
		COV	ER			Т	otal: A												
		Т	уре	: SWD	LV	VD	В	U	DI	>	OV	IV	٦ c	ROWN CL	OSURE				
		Amo			+		T	T	N		D	N	1	2 2	1-40%				
	ı	oc: P/	S/C): 🗸 🗀 [V				11	NSTREAM	VEG: N	ПАГ	М Г	V 🖂	
	<u> </u>	L	WE				DIST: E			<u></u>									
		LB S	2110	o. e										RB SHP	· C				
					G	СГ	В	R \square A								a \Box c i	→ B □	R \square A \square	
									, П								V		
				P: M B: MF									RIP: M STG: MF						
		`) [(J. IVII										310	i. IVII				
										W	ATE	R							
		E	MS	:										Req #:					
		Te		: 10						Method: T3				Cond.: 22	8			Method: S3	
	_		•	: 8.5							ethod: P2 ethod: GE			Turb.: T M L C			Method: GE		
	FI	00a Si	gns	: flood ch	on rb				ivietn	00: GE									
									N	IORF	НО	LOGY	' <u> </u>						
	Ве	d Mate	rial	: [Dominan	t: C		Subdom	n: G				01		B2 B3	B D1	D2 D	3	
			95	: 16.0	D (cm): 11.0	00	Morph	n: CP	Г	DISTUF	RBANCE							
		Patt	ern	: SI		· · · · · · · · · · · · · · · · · · ·						ATORS	C1	C2	C3 C4	4 C5	S1 S	2 S3 S4 S	5
		Isla																	$\neg 1$
		Coup	ing	: DC														_ , , L	
	Co	nfinem										Dara:	K/C	0.5		IAC	MID	CDANI DE	
		F	SZ	:								Bars:	N _[√ SID	E DI	IAG	MID	SPAN BF	'
									НΑ	BITA	T Q	UALI	ΤY						
		Name											Comm	ents				•	
		ning Ha			_	ome g	ravel pres	sent, but s	shallow	water an	d poss	ibly too s	teep						
	OverW				none	I	on ne -!-	an ra c -l	4 in -1										
	Kear	ing Hal	oita	l .	poor -	по ае	ep pools,	spread ot	ut in pia		ЮТ	0 S							
	Dhat-		Ţ	Г-	016	<u> </u>		Nir.			. •				Commert				
R:	Photo 102 F		1		c Lg TD	-+		Dir D							Comments	•			
R:	102 F	_			TD	\dashv		U	+										

	COMMENTS
Section	Comments
	S3 Default - small stream spread out in places, defined in others. Through dc, alders and cottonwood/balsam. Meadow ~50m nw=helipad. Marginal Habitat.



Site 194 – Upstream view

Foc Lg

STD

STD

Dir

U

D

Photo

102 F: 4200

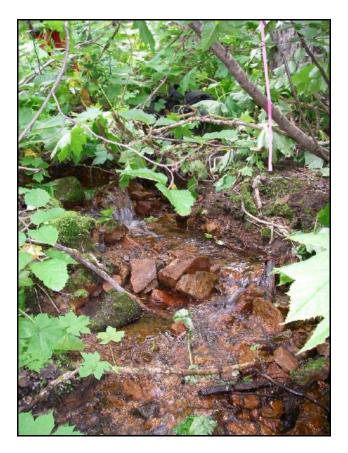
102 F: 4201

Reach # ILP Map # ILP#

Comments

Site 1.0 104G.036 1094 195 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M79 ILP #: 1094 NID #: 10114 ILP Map#: 104G.036 NID Map #: 104G.036 Reach # 1.0 Site #: 195 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385132.6353520 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/17 Time: 13:30 Agency: C660 Crew: KM RS CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) MS 2.70 Method I: 14.00 2 70 3 00 1.70 2.70 2.50 2.55 14.0 14.0 С Wetted Width (m) MS 1 40 1.00 1.10 2.00 2.00 1.50 1.50 Method II: С 0.16 Pool Depth (m) MS 0.16 No Vis.Ch.: Intermittent: Wb Depth: .3 .3 .4 Avg: 0.33 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 1-20% Ν Amount S D Ν S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: A DIST: E Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 10 Method: T3 Cond.: 170 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: G Subdom: C D95: 50.0 D (cm): 12.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: SI C2 S1 S3 S5 Islands: N Coupling: DC Confinement: UN SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Comments Name Spawning Habitat fair - nice gravels in places, but steep with frequent steps and cascades OverWinter Habitat poor - no deep pools Rearing Habitat fair - nice stream with good flow and cover, but few pools **PHOTOS**

COMMENTS								
Section	Comments							
CHANNEL S3 default - nice sp stream with lots of cover, but few pools. Moderate gradient, important habitat return to EF								



Site 195 – Upstream view

Reach #

ILP Map #

ILP#

Site

1.0 104G.036 1097 198 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.036 NID #: 10117 Site #: 198 ILP #: 1097 NID Map #: 104G.036 1.0 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385286.6354139 Ref. Name: Incomplete: 🗹 Date: 2007/08/17 Time: 14:40 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: Bars: N SIDE DIAG MID SPAN BR FSZ: PHOTOS Foc Lg Dir Comments R: 102 F: 4204 STD U some scour at rc COMMENTS Section Comments CHANNEL NCD - dry with evidence of overland flow. SITE CARD NCD



Site 198 – Upstream, showing some scour

Reach # ILP Map #

ILP#

Site

1.0 104G.036 1098 199 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.036 NID #: 10118 ILP #: 1098 NID Map #: 104G.036 1.0 Reach #: Site #: 199 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385297.6354321 Ref. Name: Incomplete: 🗹 Date: 2007/08/17 Time: 14:55 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg 0.00 Channel Width (m) MS 0.00 Method I: С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: Bars: SIDE DIAG MID SPAN BR FSZ: PHOTOS Foc Lg Dir Comments R: 102 F: 4205 STD U dry NCD COMMENTS Section Comments CHANNEL NCD - dry - somewhat channelized us of rc but mostly overland flow. SITE CARD NCD

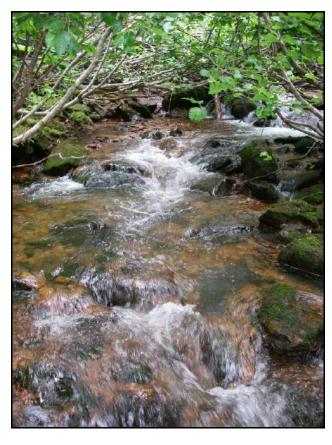


Site 199 – Upstream view

Reach # ILP Map # ILP # Site

									PR	OJE	СТ							
		Proj	ect Name	e: Scha	t Creek													
		Stream Na											F	Project Co	ode:		17415	
	Pı	oject Waters	hed Code	e: 630-0	00000-0	00000-00	000-000	0-0000-	-000-000	-000-00	0-000-00	0						
									\A/ A T	EDC	u E D							
		azatta d Name							WAT	EKS	пеи	l a	aal Nam	o. M04 A	lieie Cr			
		azetted Name tershed Code		0000-00	000-000	00-000	-0000-00	00-000-0	00-000-	000-000)	LOC	cai ivam	e: M81 A	licia Cr			
	***	ILP Map#				LP #: 10			ap #: 104			D#: 10)119	Read	:h #:	1.0	Site #: 20	00
	Field	UTM (Z.E.N	١٠			Λ.	1ethod:		•			Site Lo	n: 200		Method: GE	=	Access: H	
		UTM (Z.E.N	•	15.6354	169	•••					Re	ef. Name	-			-	7.00000111	
		Do	ate: 200	7/00/17	7	Γime: 15:	15		A aonou	Ceen		rew: I	VM DC		Fish Crd	a. 🗆	Incomplet	٠a. 🗆
		D	ale. 200	7/06/17		rime. 15	. 13	-	Agency:	ANN		iew.	NIVI KS		FISH CIO	·	incomplet	le
			Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadie	ent % Mtd	Avg
	Chani	nel Width (m)		7.90	9.30	5.40	5.60	6.30	4.30	width	WIGHT	WIGHT	widti	6.47	Method		10.0 C	9.00
		ed Width (m)		5.40	6.80	3.20	3.10	2.50	3.90					4.15	Method	II:	С	
	Po	ool Depth (m)	: MS	0.40	0.40	0.20	0.24	0.38	0.43					0.34				! ¬
		Wb Depth	: .6	.4	.5	1 Δν.	g: 0.50		Method:	MS	St.	ane. I	п м	✓ H [No Vis.C ¬ ⊓	Sh.: Dw:	Intermittent: Tribs.:	_
-		COVER	1			al: A	j. 0.50		vieti ioa.	IVIO	Oi.	aye. L	IVI	✓ '' _		лw	THIDS	
	Г) LV		В	U	DF	<u>. </u>	OV	IV	1 CD		LOSURE				
	-	Type Amount		, LV		T	N	T	<u> </u>	S	N	1		1-20%				
	-	Loc: P/S/C										1			N \square A \square	M	V \square	
	L	1.14/5					اللا		الكار كاد		<u> </u>	1						
		LWD			ט	IST: E												
		LB SHF				5 —	n — .	_					RB SHF		0 - 0 -			
			e: F	J G ✓	✓	В	K /	, <u> </u>						· · · · · · · · · · · · · · · · · · ·	G 🔨 C	/ B ∟	R A	
			P: C G: MF										RIF	P: C B: MF				
		310	J. IVIF										310). IVIF				
									W	ATE	R							
		EMS						Math	od: T3				eq #:				Made adv. Of	
		Temp	l: 8.2						od: P2				ond.: 64				Method: S3	
		Flood Signs							ethod: P2 Turb.: T == ethod: GE						_ r _ c	V	Method: GI	E
								IV	IORP	ног	OGY							
		D 114 : 1					0.1.1			0 _		01	B1	B2 E	33 D1	D2 D	3	
		Bed Material	i: L 5: 90.0	D (cm	i: C): 20.00		Subdom Morph							V		ПΙΓ		
				D (on	. 20.00		Worpi	. 01		ISTURE INDICA		- 24	- 00		24 05	04 0		0.5
		Pattern Islands										C1	C2	C3 (C4 C5	S1 S		S5
		Coupling																
		Confinement																
		FSZ	<u>'</u> .:							В	ars:	N	SID	E	DIAG	MID 🗸	SPAN	BR
								НΔ	RITA	T Q I	JALI1	ГУ						
		Name										ommen	ts					
	Spa	awning Habita	at	good -	some g	ood sub	strate an	d pool o	utlets									
	Ove	rWinter Habi	tat				itat in de											
	Re	earing Habita	t	good -	lots of c	deep poo	ls and c	over in n										
									PH	ото	S							
<u> </u>		oto		c Lg			ir							Commer	nts			
R:	102 102	F: 4210 F: 4211		TD	_		J		Idery sp									
R:	102	F: 4211 F: 4212		TD	-	N					ls and wo	rkina cl	ockwise					
		· · · · · · · ·				• • • • • • • • • • • • • • • • • • • •	*	1.0		9			00					

						PHOTOS			
Photo				Foc Lg	Dir	Comments			
R:	102	F:	4213	STD	NS	TC			
R:	102	F:	4214	STD	NS	TC			
R:	102	F:	4215	STD	NS	TC			
R:	102	F:	4216	STD	NS	TC			
R:	102	F:	4217	STD	NS	TC			
R:	102	F:	4218	STD	NS	TC			
R:	102	F:	4219	STD	NS	TC			
						COMMENTS			
		Se	ection			Comments			
	CHANNEL S2 - nice sp stream with LWD boulders, somplex habitat. Some drops up to .7m but probably still passable. LB is 4m higher than RB and will require rb to be filled. Don't fill flood channels. Critical habitat.								



Site 200 – Upstream, boulder step-pool morphology



Site 200 – Upstream cliffs and step-pool morphology

Reach # ILP Map #

1.0

104G.036

ILP#

Site 202

		PROJECT		
Project Name: Schaf Stream Name (gaz.): MESS Project Watershed Code: 630-0	CREEK	000-000-000-000-000-000-0	Project Code:	17415
		WATERSHED		
Gazetted Name:			Local Name: M82	
Watershed Code: 000-000000-000				
ILP Map#: 104G.036		D Map #: 104G.036	NID #: 10121 Reach #:	1.0 Site #: 202
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.385537.63546	Method: 12	F	Site Lg: 100 Method: 0 Ref. Name:	GE Access: H
Date: 2007/08/18	Time: 08:55	Agency: C660	Crew: KM RS Fish C	rd?: ☐ Incomplete: ✓
		CHANNEL		
Mtd width	width width width width	dth width width width		Gadient % Mtd Avg
Channel Width (m): MS Wetted Width (m): MS			0.00 Metho	
Wetted Width (m): MS Pool Depth (m): MS			0.00 Metho	d II.
Wb Depth:	Avg: 0.00	Method: MS	No Vis	S.Ch.: Intermittent: Tribs.:
COVER	Total:			
Type: SWD LW	D B U	DP OV IV	CROWN CLOSURE	
Amount: Loc: P/S/O:			The state of the s	
200.17370.			INSTREAM VEG: N A	IVI V
LWD:	DIST:			
LB SHP:		_	RB SHP:	
	C _ B _ R _ A _		Texture: F G C	□ B □ R □ A □
RIP: STG:			RIP: STG:	
316.			316.	
		WATER		
EMS: Temp:	M	Method: T3	Req #: Cond.:	Mothod: C2
pH:		Method: P2		Method: S3
Flood Signs:		Method: GE	Turb.: T M L	C Method: GE
		MORPHOLOGY	1	
Bed Material: Dominant	: Subdom:		O1 B1 B2 B3 D1	D2 D3
D95: D (cm)		DISTURBANCE		
Pattern:	·	INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands:				
Coupling:				
Confinement:		Bars:	N SIDE DIAG	MID SPAN BR
FSZ:		Dais.	N OBE BING	IVIID OF AIR
		PHOTOS		
Photo Foc Lg	Dir		Comments	
R: 103 F: 4222 STD	U	channelized section at rc		
		COMMENTS		
Section			Comments	
	seepage channelizes ~15m	us for rc then seeps out ~20	m ds of rc. Not a stream, no fish habi	tat.
SITE CARD NCD				



Site 202 – Upstream channelized section

Reach # ILP Map # ILP # Site

									PR	OJE	СТ									
		Pro	ject Nam	e: Scha	aft Creel	<														
		Stream Na	-										F	roject Co	ode:		1	7415		
	Pro	oject Waters	shed Cod	e: 630-	000000-	-00000-00	000-000	0-0000-	000-000	0-000-00	00-000-00	00								
									WAT	EDE	n e v									
		aretted Nom							WAI	EKS	пси	1.0	aal Nama	. M02						
		azetted Nam		0000-00	000-00	000-000) <u>-</u> 0000-00	0-000-0	00-000-	.000-000	n	LO	cal Name	e: IVI83						
	vvai		#: 104G.(ILP #: 11	000-0000-000-000-000-000-000 1102 NID Map #: 104G.036 NID #:							D#: 10122 Reach #: 1.0 Site #: 2					Site #: 20)3
	Field	UTM (Z.E.N					/lethod:					Site L				hod: GE		Acces		
		UTM (Z.E.)		53.6354	1829	IN.	neti iou.				Re	ef. Name	-		IVICU	ilou. OL		Acces	3.11	
		•	•																	
		D	ate: 200	7/08/18		Time: 09	:20	,	Agency:	C660	C	Crew:	KM RS		F	ish Crd?:		In	complet	e: 🔛
									СН	ANN	EL									
_			Mtd	width	width	width	width	width	width	width	width	width	width	Avg	l _		Gadient	t %	Mtd	Avg
		nel Width (m		0.70	1.10	1.30	0.80	1.50	1.40					1.13		Method I:	15.0		С	15.00
-		ed Width (mool Depth (m	,	0.40	0.50									0.45		lethod II:			С	
L	10	or Deptir (iii). IVIO						<u>l</u>	ļ				0.00	I N	o Vis.Ch	.: 🔲 In	termit	tent:	
		Wb Deptl	n: .3	.4	.5	Αν <u>ς</u>	g: 0.40	N	/lethod:	MS	St	age: L	✓ M	H [Dv	v: 🗌	Tı	ribs.:	
		COVER	₹		To	tal: A														
	Γ	Тур	e: SWI) L\	ND	В	U	DF	·	OV	IV	CR	OWN CL	OSURE						
		Amour	nt: T		Т	Т	S	N		D	N	1 1-20%								
		Loc: P/S/0	D: 🔽 🗌				V				V	INS	STREAM	VEG:	N 🗸	A 🗌	M 🔲 V			
		LWI	D· F		Г	DIST: E														
		LB SH			-								RB SHP	. 1.1						
			re: F 🗸	a G 🗀	СП	ВП	R \square A								G	¬ с г	В 🔲 І	R \square	A 🗀	
			P: C				🔲 .	. \square					RIP] - [Ц	
			G: MF											: SHR						
									W	ATE	R									
		EMS						N A = 41= .	l. T0				eq #: ond.: 21	0					. 00	
		Tem	p: 10 H: 8.5						od: T3										od: S3	
		Flood Sign							od: GE			7	Γurb.: Τ	M		_ c	✓	Meth	od: GE	
		-						N/	IAPE		OGY									
									IOKI	пог	_001	O1	B1	B2	B3	D1 D	2 D3			
		Bed Materia		Dominar			Subdom													
			5: 10.0	D (cm	n): 6.00)	Morph	: SP	[DISTUR INDICA	BANCE		Ш		ш					
		Patter								INDICA	ATORS	C1	C2	C3 (C4	C5 S	1 S2	S3	S4	S5
		Island Coupling																		
		Confinemen	-																	
		FSZ								E	Bars:	N	SID	E	DIAG		MID	SPAN	1	BR
								HA	BITA	TQ	U A L I	ΤΥ								
		Name									C	Commen	nts							
		awning Habi rWinter Hab		none																
		earing Habita		none																
		J							PΗ	ОТО	S									
Photo Foc Lg Dir						Dir	Comments													
R:	103	F: 4223		STD			D	dry	section (ds of rc										
R:	103	F: 4224	5	STD			U	flow	ing sect	ion us o	f rc									

Section CHANNEL Reach # ILP Map # ILP # Site
1.0 104G.036 1102 203

COMMENTS
Comments
S6 - partially dewatered stream-water us of rc but dries up at rc and ds. Ni fish habitat.



Site 203 – Downstream dry section

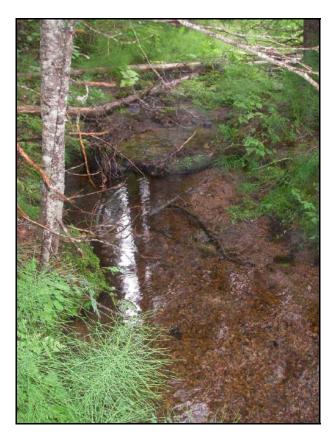


Site 203 – Upstream flowing section

Reach # ILP Map # ILP # Site

					PR	OJE	СТ							
Project Name:		,):4 O	- d		47445	
Stream Name (gaz.): Project Watershed Code:			000-000	0-0000-	000-000	-000-00	0-000-00	0	۲	roject C	ode:		17415	
				,	WAT	ERSI	HED							
Gazetted Name:								Loc	cal Name	e: M84				
Watershed Code: 000-00000	00-00000-0000	00-0000-0	0000-00	0-000-0	00-000-	000-000								
ILP Map#: 104G.036	IL	.P #: 110	03	NID Ma	ap #: 104	IG.036	NI	D#: 10)123	Rea	ch #:	1.0	Site #:	204
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.385578.	6354862	Me	ethod:				Re	Site Lo f. Name	-		Method:	GE	Access: H	
Date: 2007/0	8/18 T	ime: 09:4	15	A	Agency:	C660	С	rew: I	KM RS		Fish (Ord?:	Incomple	ete:
					СН	ANN	EL							
	vidth width	width	width	width	width	width	width	width	width	Avg			ent % Mtd	Avg
` '	30 1.00 0.80 0.90	1.40 0.60	0.90	1.40 0.90	1.60 0.90					1.27 0.78	Metho Metho		7.0 C	5.00
` '	0.30 0.25	0.00	0.00	0.90	0.30					0.78	Wetric	od II.	Ü	
Wb Depth: .3	.3 .2	Ava:	0.27		fethod:	MS	St	age: L	п м	V H [No Vi	s.Ch.:	Intermittent: [
COVER	Tota	ıl: A										_		
Type: SWD	LWD	В	U	DP	• (VC	IV	CR	OWN CL					
Amount: S	S	N	T	T		D	N	3		1-70%				
Loc: P/S/O:	V		/				/	INS	STREAM	VEG:	N L A	M ✓	V	
LWD: F	DI	ST: E												
LB SHP: V									RB SHP	: V				
Texture: F 🗹	G C □	B 🔲 R	R 🗌 A						Texture	: F 🗸	G 🗸 C	В 🗆] R A	
RIP: S									RIP	: S				
STG: SHR									STG	: SHR				
					W	ATE	R							
EMS:									eq #:					
Temp: 8					od: T3			С	ond.: 21				Method: S	S3
pH: 8.0 Flood Signs:					od: P2 od: GE			T	Γurb.: Τ	\square M		C 🗸	Method: 0	3E
r lood digits.														
				IVI	ORP	HOL	OGY	04	D4	DO	D0 D4	D0 5	20	
	ninant: G	5	Subdom					01	B1		B3 D1		03	
	0 (cm): 4.00		Morph	:RP		ISTURE			Ш					
Pattern: IR						INDICA	TUKS	C1	C2	C3	C4 C5	S1 S	32 S3 S	4 S5
Islands: N Coupling: DC														
Confinement: UN														
FSZ:						В	ars:	N	SID	E 🗸	DIAG	MID	SPAN	BR
				HAI	ЗІТА	ΤQU	JALI1	ГΥ						
Name							С	ommen	nts					
	ood - nice gra			nools										
	ood - lots of c													
<u> </u>		,			PΗ	ото	S							
Photo Foc L	-g	Dir	r	T						Comme	nts			
R: 103 F: 4226 STD)	U					_		_	_				
R: 103 F: 4227 STD)	D)											

	COMMENTS
Section	Comments
CHANNEL	S4 default - very nice fishy looking small stream. Abundant cover, some pools, good spawning gravels. Important habitat.



Site 204 – Upstream view



Site 204 – Downstream view

Reach # ILP Map #

104G.036

ILP# 1104

Site 205

1.0

								PR	OJE	СТ									
	Projec Stream Nam Project Watersho	ne (gaz.)	: MES		K	000-000	0-0000	-000-000	0-000-00	0-000-00	00	F	Project C	ode	:		17415	5	
								WAT	ERS	HED									
	Gazetted Name:										Loc	cal Name	e:						
	Watershed Code:		000-00	000-000	000-000	-0000-00	0-000-0	000-000-	000-000)									
	ILP Map#:	104G.0	36	- 1	LP #: 11	104	NID Ma	ap #: 104	4G.036	N	ID #: 10)124	Rea	ch#	# :	1.0		Site #: 20	05
	Field UTM (Z.E.N):				N	/lethod:					Site Lo	g: 100		M	/lethod: GE	•	Acce	ess: H	
	GIS UTM (Z.E.N):	9.38565	50.6355	219						Re	ef. Name	e:							
	Date	e: 2007	7/08/18		Time: 10	:30		Agency:	C660	C	Crew: I	KM RS			Fish Crd	?: []	ncomplet	e: 🗸
								СН	ANN	EL									
	Γ	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	1		Gad	ient %	Mtd	Avg
	Channel Width (m):	MS											0.00	1 1	Method	_	1	С	0.00
	Wetted Width (m):	MS											0.00		Method	l:		С	•
	Pool Depth (m):	MS											0.00		No Vis.C	h · 🖂	Interm	ittent:	7
	Wb Depth:				Avg	g: 0.00	N	Method:	MS	St	age: L	П М	ПНГ			ow:		Tribs.:	j
	COVER	<u> </u>	·	Tot		-					_								
	Type:	SWD	IV	VD	В	U	DF	>	OV	IV	1 CR	OWN CI	OSURE						
	Amount:	02	T	-	_				•		1								
	Loc: P/S/O:										INS	STREAM	VEG:	Ν	A] M 🗌	٧ 🗆		
	LWD:			Г	IST:						_								
	LB SHP:			_								RB SHP							
	Texture:		ı G \square	СП	В 🗆	R \square A								ı G	СС	⊐в⊏	¬ R ⊏	1 A \Box	
	RIP:					🗀						RIP] -			J L		
	STG:											STG							
	FMC.							VV	ATE	K		#-							
	EMS: Temp:						Metho	od: T3				eq #: ond.:					Me	thod: S3	\
	pH:							od: P2					M						
	Flood Signs:						Metho	od: GE			'	uib i	☐ IVI		Г С	. \square	ivie	thod: GI	=
							N	1 O R F	НОГ	OGY									
	Bed Material:		Oominan	ht.		Subdom					01	B1	B2	ВЗ	D1	D2 I	D3		
	Ded Material:	L	D (cm			Morph		-	NOTUDI	DANCE				П					
	Pattern:		ζ-	,				L	ISTURI INDICA		C1	C2	C3	C4	C5	S1 :	 S2	3 S4	S5
	Islands:													$\frac{\overline{\Box}}{\Box}$					
	Coupling:																		
	Confinement:	_							В	ars:	N	SID	F	Δ١Δ	\G∏	MID	1 SPA	AN	BR□
	FSZ:[ais.	"	J SID		יוט	.0	IVIID	J 51 7		ы
								PΗ	ОТО	S									
	Photo	Fo	c Lg	т)ir	т						Comme	nts					
R			TD			Χ													
R	R: 103 F: 4229	S	TD			D	ope	n water											
								CON	MEN										
	Section		1165			***					Commen								
	CHANNEL					rith some ving up w			poor co	nnectivity	/. Wetlai	nd is at h	eadwate	er of	f stream M	85 and	snould l	e avoide	d if
	SITE CARD		NCD			<u> </u>													
			-																



Site 205 – Across view



Site 205 – Downstream view, open water

STD

STD

D

U

103 F: 4230

103 F: 4231

Reach # ILP Map # ILP # Site

1.0 104G.036 1105 206 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M85 ILP Map#: 104G.036 NID #: 10125 ILP #: 1105 1.0 NID Map #: 104G.036 Reach #: Site #: 206 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385676.6355426 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/18 Time: 11:05 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 1 20 0.80 0.70 1.10 0.97 Method I: 20.50 0.60 1 40 21.0 20.0 С 0.90 Method II: Wetted Width (m) MS 0.80 0.80 0.80 0.90 0.90 0.85 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: .2 .3 .3 Avg: 0.27 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** DP SWD LWD В OV IV Type: U 21-40% Ν Amount D S Ν S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: F DIST: E RB SHP: U Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 10 Method: T3 Cond.: 195 Method: S3 pH: 8.0 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: C Subdom: G D95: 18.0 D (cm): 4.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: SI C2 СЗ C4 S1 S3 S5 Islands: N Coupling: DC Confinement: UN Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name Spawning Habitat none OverWinter Habitat none Rearing Habitat poor - low flow, no pools, steepish **PHOTOS** Foc Lg Photo Dir Comments

	COMMENTS
Section	Comments
CHANNEL	S6 - small stream through balsam and dc. Borderline gradient (20-21%) and marginal habitat= not fish bearing.



Site 206 - Downstream view



Site 206 – Upstream view

Confinement: UN

FSZ:

Reach # ILP Map # ILP # Site

DIAG

MID

SPAN

BR

SIDE

N

1.0 104G.036 1106 207 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M86 ILP Map#: 104G.036 NID #: 10126 Site #: 207 ILP #: 1106 NID Map #: 104G.036 1.0 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385699.6355571 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/18 Time: 11:30 Agency: C660 Crew: KM RS CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg Channel Width (m) MS 2 20 1 40 1.10 0.90 Method I: 8.0 10.50 0.90 2.00 1.42 13.0 С 0.90 0.70 Method II: Wetted Width (m) MS 1.10 0.80 1.00 0.70 0.87 С Pool Depth (m) MS 0.18 0.18 No Vis.Ch.: Intermittent: Dw: Tribs.: Wb Depth: .3 .3 .3 Avg: 0.30 Method: MS Stage: L ☐ M ✔ H ☐ COVER Total: A **CROWN CLOSURE** SWD LWD DP В OV IV Type: U 21-40% Ν Amount S D S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: F DIST: E RB SHP: S Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 9 Method: T3 Cond.: 230 Method: S3 pH: 8.5 Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcirc Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 D1 D2 Subdom: C Bed Material: Dominant: G D95: 24.0 D (cm): 9.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: SI C2 СЗ S1 S3 S5 Islands: N Coupling: DC

	HABITAT QUALITY						
Name	Comments						
Spawning Habitat fair - some patches of good gravel but steepish with some large (~50cm) steps							
OverWinter Habitat	poor - not enough deep pools						
Rearing Habitat	Rearing Habitat fair - some deep pools and lots of cover but moderate to high gradient						
	PHOTOS						

Bars:

١							PHOTOS
	Photo			Foc Lg	Dir	Comments	
	R:	103	F:	4232	STD	U	.5m step at rc
Ī	R:	103	F:	4233	STD	D	ds rp/cp habitat

	COMMENTS
Section	Comments
	S4 default - important habitat. Nice stream with some good habitat but gradient is on the high side. Couple of steps ~.5m could be barriers to smaller fish . Return to EF
	pamers to smaller lish . Return to EF



Site 207 – Upstream 0.5m step-pool



Site 207 – Downstream view

Reach # ILP Map # ILP # Site

1.0 104G.036 1107 208 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M87 ILP Map#: 104G.036 NID #: 10127 ILP #: 1107 1.0 NID Map #: 104G.036 Reach #: Site #: 208 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385702.6355690 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/18 Time: 12:10 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.70 0.90 0.80 0.40 0.82 Method I: 28.0 22.0 25.00 1 10 1.00 С 0.70 0.40 Method II: Wetted Width (m) MS 0.60 0.40 0.50 0.80 0.57 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: .3 .3 .4 Avg: 0.33 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 21-40% Ν Amount S Ν Ν D Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: F DIST: E RB SHP: V Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 10 Method: T3 Cond.: 168 Method: S3 pH: 8.2 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: C Subdom: G D95: 14.0 D (cm): 6.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ C4 C5 S1 S3 S5 Islands: N Coupling: DC Confinement: UN Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Comments Name Spawning Habitat none OverWinter Habitat none Rearing Habitat none

PHOTOS

Comments

Foc Lg

STD

STD

Dir

D

U

Photo

103 F: 4235

103 F: 4236

COMMENTS									
Section	Comments								
CHANNEL	S6 - small steep cp stream through alder and dc. No fish habitat.								



Site 208 – Downstream view



Site 208 – Upstream view

Reach # ILP Map # ILP # Site

Droin at Norm	o. Cohoft Crook													
Stream Name (gaz.	e: Schaft Creek				Project Code:	17415								
,,,	e: 630-000000-00000-0000	0-0000-0000-000	0-000-000-000-000	0-000	Project Code.	17415								
r rojout Waterenioù Cou	0. 000 000000 00000 0000	.0 0000 0000 000		, 000										
WATERSHED														
Gazetted Name:				Loc	cal Name: M88 Nahta Cr.									
Watershed Code: 000-00	0000-00000-00000-0000-00	000-000-000-000-	-000-000-000											
ILP Map#: 104G.0	036 ILP #: 1108	NID Map #	#: 104G.036	NID #: 10	0128 Reach #:	1.0 Site #	<i>‡</i> : 209							
Field UTM (Z.E.N):	Metl	nod:		Site Lo	g: 200 Method	d: GE Access: H								
GIS UTM (Z.E.N): 9.3857	20.6356007			Ref. Name	e:									
D	7/00/40 T' 44.00		0000		1/14 DO 5: 1	0.10	\Box							
Date: 200	7/08/18 Time: 14:30	Age	ency: C660	Crew: I	KIVI RS FISH	Crd?: Incom	plete:							
			CHANNEL											
Mtd			vidth width wid	lth width	width Avg	Gadient % Mtd								
Channel Width (m): MS			0.00			thod I: 4.0 3.0 (
Wetted Width (m): MS Pool Depth (m): MS	15.00 14.00 18.00 1	5.00 17.00 18	8.00	_		hod II:	;							
Fool Deptil (III). Wo					0.00 No \	/is.Ch.: Intermittent	: 🔲							
Wb Depth: 1.8	2.0 1.7 Avg:	1.83 Meth	hod: MS	Stage: L		Dw: Tribs.	: 🗍							
COVER	Total: T													
Type: SWI	D LWD B	U DP	OV IV	CRO	OWN CLOSURE									
Amount: N	S D	N T	T N	0										
Loc: P/S/O:				INS	STREAM VEG: N 🕡 A	$A \square M \square V \square$								
LWD: NS	DIST: NA													
LB SHP: V					RB SHP: V									
Texture: F	G C B R	A			Texture: F ☐ G ✓	C ⊘ B □ R □ A								
RIP: M					RIP: M									
STG: MF					STG: MF									
			WATER											
EMS:				R	eq #:									
Temp: 12		Method:	·											
pH: 8.1		Method:	P2	т	Γurb.: Τ ┌ Μ ┌ L ┌	C Method: GE								
Flood Signs: log jam	, erode banks	Method:	GE				OL.							
		МО	RPHOLOG	Y										
D 114 () 1	2 1 12 2			01	B1 B2 B3 D ²	1 D2 D3								
		ibdom: C												
D95: 100.0	D (cm): 40.00	Morph: CP	DISTURBANC INDICATORS	^										
Pattern: IR			INDICATOR	C1	C2 C3 C4 C5	5 S1 S2 S3	S4 S5							
Islands: N Coupling: DC														
Confinement: UN														
FSZ:			Bars:	N	SIDE ✓ DIAG	MID SPAN	BR							
			EATURES											
NID Map NID Type	Hgt Method Lg	Method	Photo	1.,	AirPhoto	UTM (Z/E/N)	Method							
104G.036 10129 F	1.5 GE 0	GE R:	: F:	L:	#:	9.385720.6356007	GP3							
Comments: small falls passa	nie													
		HABI	TAT QUAL	ITY										
Name				Commen	its									
Spawning Habitat	poor - not many suitable of													
OverWinter Habitat Rearing Habitat	fair - may be overwintering fair - swift current, but son													
rearing Habitat	ian - Switt Guiletti, Dut SUI	ne deep pools all	ia boulder cover											

	PHOTOS												
	Photo Foo			Foc Lg	g Dir Comments								
R:	103	F:	4237	STD	NS	TC 1 starting looking ds and working clockwise							
R:	103	F:	4238	STD	NS	TC							
R:	103	F:	4239	STD	NS	TC							
R:	103	F:	4240	STD	NS	TC							
R:	103	F:	4241	STD	NS	TC							
R:	104	F:	4248	STD	NS	TC							
R:	104	F:	4249	STD	NS	TC							
R:	104	F:	4250	STD	NS	TC							
						COMMENTS							
		Se	ection			Comments							
		CHA	NNEL	S2 - large	2 - large stream with fair habitat. Clear and swift most cover is behind boulders. Shocked last year and found fish.								

Reach # ILP Map # ILP # Site

							PR	OJE	CT									
	ct Name																	
Stream Nan					0000 000	0000	000 000	2 000 00	0 000 00	Project Code: 17415								
Project Watersh	eu Coue	e. 030-	000000	-00000-0	0000-000	10-0000-	-000-000	J-000-00	0-000-00	<i>,</i>								
						,	WAT	ERS	HED									
Gazetted Name:										Loc	cal Name	e:						
Watershed Code: 000-000000-00000-00000-0000-000-000-00																		
-			Read		1.0			10										
Field UTM (Z.E.N): . Method: Site Lg: 100 GIS UTM (Z.E.N): 9.385658.6357535 Ref. Name:													Method:	GE	Acce	ess: H		
Dat	te: 2007	7/08/19		Time: 09	:00	,	Agency:	C660	C	Crew: I	KM RS		Fish (Crd?:	I	ncomplet	te: 🗹	
							СН	ANN	EL									
OL LIME HILL	Mtd	width	width	width	width	width	width	width	width	width	width	Avg	NA -11		dient %	Mtd	Avg	
Channel Width (m): Wetted Width (m):	MS MS		-									0.00	Metho			C	0.00	
Pool Depth (m):	MS		†	+								0.00					_	
Wb Depth:			1		~. 0.00		Anthoni.	MC					No Vi	s.Ch.: U		ittent: L Tribs.:		
					g: 0.00	IV.	Method:	IVIS	Si	age: L	M	ПН		Dw:	ļ	TIDS.: _		
COVER	CWE	<u>. I</u>		tal:		L		01/	D/	1 cp/	OVAVAL CI	OCUDE						
Type: Amount:	SWD) LV	ND	В	U	DP		OV	IV	CRI	OWN CI	LOSURE						
Loc: P/S/O:						1				INS	STREAM	I VEG:	N \square A	П М П	7 V 🖂			
LWD:				DIST:						<u>'1</u>								
				101:							DD 011D							
LB SHP Texture		. G [. c =	В	R \square A						RB SHP		G \square C	:	¬ R ⊏	- A -		
RIP						, П					RIP		G C] ^		
STG											STG							
									_									
EMS:							VV	ATE	K	D	00 #:							
Temp:						Metho	od: T3				eq #: ond.:			Method: S3				
pH:							od: P2			Turb.: T M L C						thod: GI		
Flood Signs:						Metho	od: GE			I WILL C WELLIOU. GE								
						N	1 O R F	HOL	OGY									
Bed Material:		Dominar	nt:		Subdom	1:				O1	B1	B2	B3 D1	D2	D3			
D95:		D (cm	n):		Morph	1:	ı	DISTURI	BANCE									
Pattern:								INDICA		C1	C2	C3	C4 C5	S1	S2 S	33 S4	S5	
Islands:																		
Coupling: Confinement:																		
FSZ:								В	ars:	N	SID	E	DIAG	MID	SPA	AN	BR	
									-									
							Pŀ	юто	S									
Photo R: 104 F: 4256		oc Lg STD			Dir U	dny	organic	cuhetrati	es and gi	raval		Comme	nts					
1. 107 1. 4200	3					Lui y C		/ M E N		avoi								
Section		T								Commen	ts							
CHANNEL		NCD -	- overla	nd flow o	ver organ	ics a co	uple of	areas of				at.						
SITE CARD		NCD					-			•								



Site 210 – Upstream dry channel and gravel

Reach # ILP Map # ILP # Site

PROJECT														
Project Name: Schaft C Stream Name (gaz.): MESS C Project Watershed Code: 630-000	CREEK	0-0000-000-000-000		Project Code:	17415									
WATERSHED														
Gazetted Name: Local Name:														
Watershed Code: 000-000000-0000	0-00000-0000-0000-000	0-000-000-000-000	Local Name	o .										
ILP Map#: 104G.036		NID Map #: 104G.036	NID #: 10131	Reach #: 1.0	Site #: 211									
•														
Field UTM (Z.E.N):	Method:		Site Lg: 100 Ref. Name:	Method: GE	Access: H									
GIS UTM (Z.E.N): 9.385548.635795			Rei. Name.											
Date: 2007/08/19 Time: 09:30 Agency: C660 Crew: KM RS Fish Crd?: Incomplete:														
CHANNEL														
Mtd width v	vidth width width	width width width	width width width	Avg G	adient % Mtd Avg									
	10 0.70 1.40	1.10 1.20	man man		.0 9.0 C 7.50									
	.00 0.70 0.60	1.20 1.40		0.97 Method II:	C									
Pool Depth (m): MS 0.22 (0.14 0.13			0.16										
				No Vis.Ch.:	Intermittent:									
Wb Depth: .3 .3	.3 Avg: 0.30	Method: MS	Stage: L M	✓ H Dw: _	Tribs.:									
COVER	Total: A													
Type: SWD LWD	B U	DP OV	IV CROWN CI	LOSURE										
Amount: S S	N T	N D	N 3 4	1-70%										
Loc: P/S/O:			INSTREAM	IVEG: N A M	✓ V □									
LWD: F	DIST: E													
LB SHP: U			RB SHP	P: S										
Texture: F 🗹 G 🗌 C	\square B \square R \square A		Texture	e: F 🗹 G 🗌 C 📗 B	\square R \square A \square									
RIP: C			RIP	P: C										
STG: MF			STG	6: MF										
		WATER	•											
EMO		WAIER												
EMS: Temp: 7		Method: T3	Req #: Cond.: 25	7	Mada de CO									
pH: 8.2		Method: P2	Cond., 25		Method: S3									
Flood Signs: deposited fines		Method: GE	Turb.: T	_ M □ L □ C ▼	Method: GE									
· · · · · · · · · · · · · · · · · · ·			2.2.4											
		MORPHOL			_									
Bed Material: Dominant: 0	Subdom:	F	O1 B1	B2 B3 D1 D2	D3									
D95: 9.00 D (cm):	4.00 Morph:	RP DISTURB	ANCE DID											
Pattern: SI		INDICAT		C3 C4 C5 S1	S2 S3 S4 S5									
Islands: N														
Coupling: DC														
Confinement: UN														
FSZ:		Ba	rs: N🗸 SID	E DIAG MID	SPAN BR									
		HABITAT QU	ALITY											
Name			Comments											
-	e nice gravel, but quest	tionable connectivity												
OverWinter Habitat none	d flow and a seconds (mall paging late at a												
Rearing Habitat fair - goo	u now and a couple of s	mall pools; lots of cover PHOTO	8											
Photo Foc Lg	Dir			Comments										
R: 104 F: 4257 STD	U	+												
R: 104 F: 4258 STD	D													

	COMMENTS
Section	Comments
CHANNEL	S4 default - small rp stream. Decent habitat but possible poor connectivity due to multiple small swd jams that create steps up to .3m high. Site not flagged.



Site 211 – Upstream view

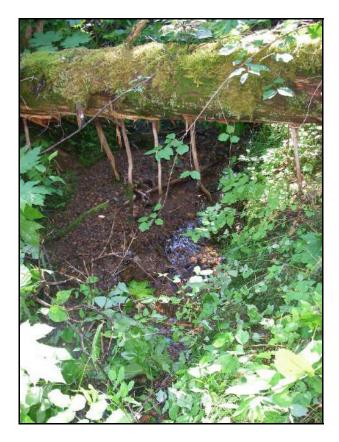


Site 211 – Downstream view

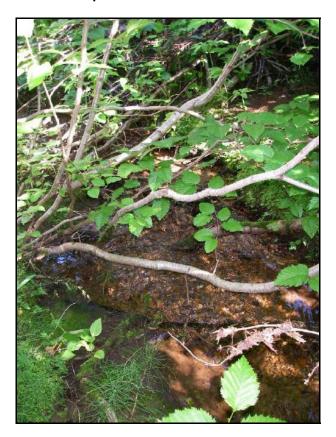
Reach # ILP Map # ILP # Site

PROJECT														
Project Name:	Schaft Creek													
Stream Name (gaz.):							Project C	ode:	17415					
Project Watershed Code:			0-0000-000	0-000-000-00	00-000-00	00	•							
WATERSHED														
Gazetted Name:						Loc	al Name: M89							
Watershed Code: 000-000	000-00000-0000	0-0000-0000-000	0-000-000-	000-000-000)									
ILP Map#: 104G.03	6 ILF	P#: 1111	NID Map #	#: 104G.036	NI	ID #: 10	132 Rea	ch #: 1.0	Site #: 212					
Field UTM (Z.E.N):		Method:				Site Lg	ı: 100	Method: GE	Access: H					
GIS UTM (Z.E.N): 9.38551	1.6358187				Re	ef. Name:								
Date: 2007/08/19 Time: 10:35 Agency: C660 Crew: KM RS Fish Crd?: Incomplete:														
CHANNEL														
Mtd	width width	width width	width wi	idth width	width	width	width Avg	G	Sadient % Mtd Avg					
()	1.70 1.60	0.90 1.10	1.30 1.	.50			1.35	Method I:	6.0 C 6.00					
Wetted Width (m): MS	0.40 1.00	0.60 1.00	1.00 0.	.80			0.80	Method II:	С					
Pool Depth (m): MS							0.00	Na Via Ob . [
Wb Depth: .3	.4	Avg: 0.35	Moth	nod: MS	C+	000: 1		No Vis.Ch.: Dw:	Intermittent: Tribs.:					
		•	Men	iou. IVIS	31	age: L	M ✓ H [Dw. [IIIDS					
COVER	Total:	: A												
Type: SWD		B U	DP	OV	IV		OWN CLOSURE							
Amount: S	S	N T	N	D	N	3	41-70%							
Loc: P/S/O:				✓	V	INS	TREAM VEG:	N A M	✓ ∨ □					
LWD: A	DIS	ST: E												
						-	DD CUD. II							
LB SHP: U							RB SHP: U							
Texture: F		. П к П <u>ч</u>						,	□ R □ A □					
RIP: C							RIP: C							
STG: MF							STG: MF							
				WATE	R									
EMS:						Re	eq #:							
Temp: 9			Method:	T3		Co	ond.: 309		Method: S3					
pH: 8.5			Method:	P2		Т	urb.: T \square M	□ L □ C ✓	Method: GE					
Flood Signs: deposited	d fines		Method: 0	GE		•	u.bv.		Woulde. OE					
			МО	RPHOI	OGY									
D-d Matarials D	it- O	Cook do so				01	B1 B2	B3 D1 D2	D3					
	ominant: G	Subdom:												
D95: 12.0	D (cm): 3.00	Morph:	KP	DISTUR										
Pattern: SI				INDICA	TORS	C1	C2 C3	C4 C5 S1	S2 S3 S4 S5					
Islands: N														
Coupling: DC														
Confinement: UN				Е	Bars:	N	SIDE	DIAG MID	SPAN BR					
FSZ:							5.2 _							
			HABI	TAT Q	UALII	ГΥ								
Name					C	comment	ts							
Spawning Habitat	fair - lots of nice	gravel but shall	ow and few	/ holding are										
OverWinter Habitat	none	·												
Rearing Habitat	poor - no pools,	but abundant co	ver											
				РНОТО	S									
Photo Foo	Lg	Dir	T				Comme	nts						
R: 104 F: 4261 ST	.D	U												
R: 104 F: 4262 ST	D	D		•										
					·		·	·	·					

COMMENTS								
Section	Comments							
CHANNEL	S4 default - low gradient, gravel stream with lots of cover but few pools. Shallow. Marginal habitat. Return to EF							



Site 212 – Upstream view



Site 212 – Downstream view

Reach # ILP Map # ILP # Site

							PR	OJE	СТ									
Projec	ct Name	: Scha	ft Creek	(
Stream Nam										Project Code: 17415								
Project Watersho	ed Code	e: 630-0	000000-	00000-00	0000-000	0-0000-	000-000	0-000-00	0-000-00	00								
						,	WΔT	ERS	HFD									
Gazetted Name:							" 			Loc	cal Name	- MQ1						
Watershed Code:		0000-00	000-000	000-0000	-0000-00	0-000-0	000-000	-000-000)	Loc	Jai I v aiii	5. IVIS I						
ILP Map#: 104G.036													1.0		Site #: 2	14		
Field UTM (Z.E.N): Method:											g: 100		Method:	GE	Acce	ss: H		
GIS UTM (Z.E.N): 9.385290.6359181 Ref. Name:																		
Date: 2007/08/19													rd2·	1	ncomplet	· .		
Dat	6. 2007	700/13		Tillie. 15	.20					JIGW. I	IN INO		1 1311 C	Ju:.	"	icompie	.c. <u>v</u>	
	Mtd	width	width	width	width	width	width	A N N	width	width	width	Δισ		Codi	ient %	Mtd	Δνα	
Channel Width (m):	MS	width	width	width	width	width	width	widin	width	width	width	Avg 0.00	Metho		ent %	С	Avg 0.00	
Wetted Width (m):	MS			 								0.00	Metho			С		
Pool Depth (m):	MS											0.00		🗖			7	
Wb Depth:			l	Τ Δνα	g: 0.00	Λ.	Лethod:	MS	St	age: L	П М	ПНГ	No Vis	Dw:	Interm	ittent: L Fribs.:]	
COVER			Tot		g. 0.00	.,	nou iou.	IVIO	O.	ago. L		Ш Г		Dw	,	11103	_	
	SWD	1 I I V	VD	В В	U	I DP	, T	OV	IV	1 CB(OSURE						
Type: Amount:	3000	LV	VD	Ь	U	DF		OV	IV	CK	OVVIN CL	LOSUNL						
Loc: P/S/O:										INS	TREAM	VEG:	N \square A	П М П	V 🖂			
LWD				NOT:		-1				4								
LWD:				DIST:														
LB SHP:			· C —	P —	D [RB SHP				- P -			
Texture:				Ь	R \square A	· 🔲							G C] \ _	_ ^		
RIP: STG:										RIP: STG:								
010.												•						
							W	ATE	R									
EMS:						Matha	. d. T0				eq #: ond.:			Mathada CO				
Temp: pH:							od: T3 od: P2					Method: S3						
Flood Signs:							od: GE			Turb.: T M L C Method: GE								
						M	IORE	HOL	O G Y									
	_						<u> </u>	1101	. 0 0 1	01	B1	B2 I	B3 D1	D2 [03			
Bed Material: D95:	L	Oominar O (cm			Subdom													
		D (cm).		Morph		[DISTURI INDICA			- 00	00				. 04	0.5	
Pattern: Islands:									TONO	C1	C2	C3 (C4 C5	S1 S	32 S	3 S4	\$5	
Coupling:											Ш							
Confinement:								_										
FSZ:[В	ars:	N	SID	E	DIAG	MID	SPA	'N	BR	
							PH	юто	S									
Photo	Fo	ıc Lg		C)ir	T						Commer	nts					
R: 104 F: 4289		TD			U	end	of chan	nelized p	oart ~5m	ds of rc								
							COV	MEN	N T S									
Section									C	commen	ts							
SITE CARD		NCD																
CHANNEL		NCD -	channe	elized for	~15m at	rc, seep	s out go	oes unde	erground	and pop	s out ag	ain ~20m	n ds of rc. N	No fish hab	itat.			



Site 214 – Upstream end of channelized section

Foc Lg

STD

STD

Dir

D

U

Photo

104 F: 4290

104 F: 4291

ILP Map # Reach # ILP# Site

Comments

1.0 104G.036 1114 215 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M92 ILP Map#: 104G.036 NID #: 10135 ILP #: 1114 1.0 NID Map #: 104G.036 Reach #: Site #: 215 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385245.6359315 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/19 Time: 15:35 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.50 0.60 0.40 0.82 Method I: 35.00 0.90 1.50 1 00 35.0 С 0.60 Method II: Wetted Width (m) MS 0.40 0.70 1.40 0.50 0.50 0.68 С Pool Depth (m) 0.00 MS No Vis.Ch.: Intermittent: Dw: Tribs.: Wb Depth: .3 .2 .3 Avg: 0.27 Method: MS Stage: L ☐ M ✔ H ☐ COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 21-40% Ν Amount S S S Ν D Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: N DIST: NA RB SHP: U Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 9 Method: T3 Cond.: 148 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: C. Subdom: B D95: 28.0 D (cm): 12.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: ST C1 C2 СЗ C4 S1 S3 S5 Islands: N Coupling: DC Confinement: FC SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Comments Name Spawning Habitat none OverWinter Habitat none Rearing Habitat none **PHOTOS**

COMMENTS										
Section	Comments									
CHANNEL	S6 - small steep sp stream, flows underground for ~5m at rc. No fish habitat.									



Site 215 – Downstream view



Site 215 – Upstream view

Rearing Habitat

Photo

104 F: 4292

104 F: 4293

none

Dir

IJ

D

Foc Lg

STD

STD

ILP Map # Reach # ILP# Site

1.0 104G.036 1115 216 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M93 ILP Map#: 104G.036 NID #: 10136 ILP #: 1115 1.0 NID Map #: 104G.036 Reach #: Site #: 216 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385054.6359517 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/19 Time: 16:10 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 2 00 0.50 0.80 1.50 Method I: 25.0 29.0 27.00 1 00 1.50 1.22 С 0.50 0.80 Method II: Wetted Width (m) MS 0.40 0.30 0.40 0.70 0.52 С Pool Depth (m) 0.00 MS No Vis.Ch.: Intermittent: Wb Depth: .3 .2 .2 Avg: 0.23 Method: MS Stage: L ✓ M ☐ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** LWD DP SWD OV IV Type: В U 21-40% Ν Amount D S Ν Ν S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: N DIST: NA Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 8 Method: T3 Cond.: 176 Method: S3 pH: 8.2 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 D3 Subdom: C Bed Material: Dominant: G D95: 30.0 D (cm): 4.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ C4 S1 S3 S5 Islands: N Coupling: DC Confinement: UN SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Comments Name Spawning Habitat none OverWinter Habitat none

PHOTOS

channel observed by dc

trickle at rc

Comments

COMMENTS										
Section	Comments									
CHANNEL	S6 - barely a stream. Water running through moss covered rocks and LWD									



Site 216 – Upstream view, trickle



Site 216 – Downstream view

Reach # ILP Map #

ILP # 1116 Site

217

	PROJECT																				
Pr	Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Watershed Code: 630-000000-00000-00000-00000-00000-0									0-000-000-000-000-000				Project Code:					17415		
									WAT	ERS	HED										
Wa Field	Gazetted Name: Watershed Code: 000-000000-00000-00000-0000-0000-0000								D Map #: 104G.036 NID #				.g: 100		ch #: Meth	od: GE	1.0	Acces	Site #: 21 ss: H	7	
0.0	OTIVI														_						
		Da	ite: 200	7/08/20	٦	Γime: 08:	20		Agency:	C660	C	crew:	KM RS		Fi	sh Crd?): <u></u>	In	complete	e: 🔽	
									СН	ANN	EL										
Wett	wt C	idth (m): idth (m): idth (m): b Depth: COVER Type Amount c: P/S/O LWD	SWE T		VD T	al: T B D	width g: 0.00	width DF N		OV T	St IV S	(NOWN CI	0% VEG:	Mo No		: n.:	Intermi T	Mtd C C C State of the control of th	Avg 0.00	
		RIF STG	2: S 3: SHR :	9 G	С	В	R A			ATE	R		Texture RIP STG Req #:	: F <u>✓</u> :S :SHR	G [B				
	_	EMS Temp	P: S B: SHR :	• G	С	В	R	Meth	od: T3	ATE	R	(Texture RIP STG Req #: Cond.: 16	: F 🗸 : S : SHR				Metl	nod: S3		
		EMS Temp	P: S S: SHR : : : 6 : 8.2	• G	С	В	R _ A	Meth Meth		ATE	R	(Texture RIP STG Req #:	: F 🗸 : S : SHR		_ c		Metl			
		EMS Temp	P: S S: SHR : : : 6 : 8.2] G	С [В	R	Meth Meth	od: T3 od: P2 od: GE			(Texture RIP STG Req #: Cond.: 16	: F 🗸 : S : SHR				Metl	nod: S3		
	Floo Bed I	EMS Temp pH od Signs	P: S B: SHR B: 6 B: 8.2 B: 0.00 B: C.	Dominan		В	Subdom Morph	Meth Meth Meth	od: T3 od: P2 od: GE	PHOL DISTURE INDICA	O G Y	(Req #: Cond.: 16 Turb.: T	: F : S : SHR	L B3	D1 [C5 3		Meth	nod: S3		
	Floo Bed I	EMS Temp pH d Signs Material D95 Pattern Islands Coupling nement	P: S B: SHR B: 6 B: 8.2 B: 0.00 B: C.	Dominan	nt: F	В	Subdom	Meth Meth Meth n: NA	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURE INDICA B	O G Y BANCE TORS	01 C1	Req #: Cond.: 16 Turb.: T	: F : S : SHR	B3 C4	D1 [C5 3	D2 D:	Meth Meth	nod: S3	\$5 	
	Floo Bed I	EMS Temp pH d Signs Material D95 Pattern Islands coupling nement FSZ	P: S B: SHR B: 6 B: 8.2 B: 0.00 B: C.	Dominan	nt: F	В	Subdom	Meth Meth Meth n: NA	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURE INDICA B	OGY BANCE TORS ars:	01 C1 N	RIP STG Req #: Cond.: 16 Turb.: T B1 C2 SID	: F : S : SHR	B3 C4	D1 [C5 3	D2 D:	Meth Meth	nod: S3	\$5 	
	Floo Bed I	EMS Temp pH d Signs Material D95 Pattern Islands Coupling nement	:: S:: SHR :: :: 6 :: 8.2 :: :: 0.00 :: :: ::	Dominan	nt: F	B	Subdom	Meth Meth Meth n: NA	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURE INDICA B	OGY BANCE TORS ars:	01 C1	RIP STG Req #: Cond.: 16 Turb.: T B1 C2 SID	: F : S : SHR	B3 C4	D1 [C5 3	D2 D:	Meth Meth	nod: S3	\$5 	
Spa Ove	Floo Bed I CC Confin	EMS Temp pH od Signs Material D95 Pattern Islands Coupling nement FSZ	:: SHR :: 6 :: 8.2 :: 0.00 :: ::	Dominan D (cm	nt: F): 0.00	y freezes	Subdom Morph	Meth Meth Meth n: NA n:	od: T3 od: P2 od: GE	PHOL DISTURE INDICA B	O G Y BANCE TORS ars:	O1 C1 N TY	RIP STG Req #: Cond.: 16 Turb.: T B1 C2 SID	: F : S : SHR	B3 C4	D1 [C5 3	D2 D:	Meth Meth	nod: S3	\$5 	
Spa Ove	Floo Bed I CC Confin	EMS Temp pH d Signs Material D95 Pattern Islands Coupling nement FSZ	:: SHR :: 6 :: 8.2 :: 0.00 :: ::	Dominan D (cm	nt: F): 0.00	y freezes	Subdom Morph	Meth Meth Meth n: NA n:	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B T Q (OGY BANCE TORS ars:	O1 C1 N TY	RIP STG Req #: Cond.: 16 Turb.: T B1 C2 SID	: F : S : SHR	B3 C4	D1 [C5 3	D2 D:	Meth Meth	nod: S3	\$5 	
Spa Ove Re	Floo Bed I C Confil	EMS Temp pH od Signs Material D95 Pattern Islands Coupling nement FSZ	:: SHR :: : 6 :: 8.2 :: 0.00 :: : : ::	Dominan D (cm none poor - fair - k	nt: F): 0.00	y freezes	Subdom Morph	Meth Meth Meth n: NA n:	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B	OGY BANCE TORS ars:	O1 C1 N TY	RIP STG Req #: Cond.: 16 Turb.: T B1 C2 SID Mess Cr.	E G G G G G G G G G G G G G G G G G G G	B3 C4 DIAG	D1 [C5 3	D2 D:	Meth Meth	nod: S3	\$5 	
Spa Ove Re	Floo Bed I C Confil Na awning	EMS Temp pH d Signs Material D95 Pattern Islands coupling nement FSZ	P: S B: SHR : : 6 : 8.2 : : 0.00 : : : : 0.00 : : : : T	Dominan D (cm none poor - fair - Id	nt: F): 0.00	y freezes r but goo	Subdom Morph	Methodological Method	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B TQL	O G Y BANCE TORS ars: C water references	O1 C1 N TY Commen	RIP STG Req #: Cond.: 16 Turb.: T B1 C2 SID Mess Cr.	: F : S : SHR	B3 C4 DIAG	D1 [C5 3	D2 D:	Meth Meth	nod: S3	\$5 	
Spa Ove Re	Floo Bed I C Confil Na awning rrWint earing oto F:	EMS Temp pH od Signs Material D95 Pattern Islands Coupling nement FSZ	P: S B: SHR : : 6 : 8.2 : : 0.00 : : : : 0.00 : : : : SHR	Dominan D (cm none poor - fair - k	nt: F): 0.00	y freezes r but goo	Subdom Morph	Methodological Method	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B T Q L V a high v	OGY BANCE TORS ars:	O1 C1 N TY Commen	RIP STG Req #: Cond.: 16 Turb.: T B1 C2 SID Mess Cr.	E G G G G G G G G G G G G G G G G G G G	B3 C4 DIAG	D1 [C5 3	D2 D:	Meth Meth	nod: S3	\$5 	

Reach # ILP Map # ILP # Site
1.0 104G.036 1116 217

	PHOTOS											
Pho	oto	Foc Lg	c Lg Dir Comments									
R: 105	F: 4298	STD	looking n from source									
				COMMENTS								
	Section			Comments								
	CHANNEL			ess cr. Clear ater good depth but low cover, mod substrates. May provide high water refuge for mess cr as ~20cm observed. Important habitat.								
5	SITE CARD	FSZ not a	Il measurements take	en								



Site 217 – Upstream looking south



Site 217 – Downstream view to outlet



Site 217 – Upstream source



Site 217 – Downstream view from source

105 F: 4299

105 F: 4300

STD

U

D

ILP Map# Reach # ILP# Site

1.0 104G.036 1117 218 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M94 ILP Map#: 104G.036 ILP #: 1117 NID #: 10138 1.0 NID Map #: 104G.036 Reach #: Site #: 218 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.385034.6360299 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/20 Time: 09:10 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.80 0.90 1.18 Method I: 22.00 1.40 1.50 1.20 1.30 С 22 0 Method II: Wetted Width (m) 0.00 Pool Depth (m) 0.00 No Vis.Ch.: Intermittent: 🗸 Dw: Wb Depth: .2 Avg: 0.20 Method: MS Stage: L ✓ M ☐ H ☐ Tribs.: COVER Total: A **CROWN CLOSURE** SWD LWD DP В OV IV Type: U Ν 21-40% Ν Amount S Ν Ν D Loc: P/S/O: INSTREAM VEG: N 📝 A 🗌 M 📗 V 📗 **V V** LWD: F DIST: E Texture: F \bigvee G \bigvee C \square B \square R \square A \square RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: Method: Cond.: Method: pH: Method: Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: MORPHOLOGY 01 D3 D1 D2 Subdom: F Bed Material: Dominant: G D95: 5.00 D (cm): 5.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ S1 S3 S5 Islands: N Coupling: DC Confinement: UN Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name Spawning Habitat none OverWinter Habitat none Rearing Habitat none **PHOTOS** Foc Lg Photo Dir Comments STD

Reach # ILP Map # ILP # Site

COMMENTS				
Watershed Code: 000-000000-00000-00000-0000-0000-000-0	1.0	104G.036	1117	218

COMMENTS										
Section	Comments									
CHANNEL	S6 - dry channel mostly scoured with some overland deposits. Narrow channel. No fish habitat.									



Site 218 – Upstream view



Site 218 - Downstream view

Reach # ILP Map # ILP # Site

								PR	OJE	СТ											
	Proje	ct Name	e: Scha	aft Creel	k																
	Stream Nam		•									F	Project Co	ode:		17415					
	Project Watersho	ed Code	e: 630-	000000	-00000-0	0000-000	0-0000-	000-000	0-000-00	0-000-00	00										
							,	WAT	ERS	HED											
	Gazetted Name: Local Name:																				
	Watershed Code:																				
	ILP Map#:	104G.0	36		ILP #: 1	118	NID Ma	ap #: 10	4G.036	N	ID #: 10	139	Read	ch #:	1.0		Site #: 2	19			
	Field UTM (Z.E.N):				N	/lethod:					Site Lo	g: 100		Method:	GE	Acce	ss: H				
	GIS UTM (Z.E.N): 9.385024.6360324 Ref																				
	Dat	e: 2007	7/08/20		Time: 09	:25	,	Agency:	C660	C	Crew: I	KM RS		Fish C	rd?:	lı	ncomplet	e: 🗸			
		Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadi	ent %	Mtd	Avg			
-	Channel Width (m):	MS											0.00	Metho			С	0.00			
_	Wetted Width (m): Pool Depth (m):	MS MS											0.00	Metho	d II:		С				
		IVIO								<u> </u>			0.00	No Vis	s.Ch.:	Interm	ittent:				
	Wb Depth:				Av	g: 0.00	N	/lethod:	MS	St	age: L	M	H [Dw:	٦	Γribs.:				
	COVER			То	tal:																
	Type:	SWD) L\	WD	В	U	DP)	OV	IV	CR	OWN CL	OSURE								
	Amount: Loc: P/S/O:																				
	Loc. F/3/O.										INSTREAM VEG: N A M V										
	LWD:			I	DIST:																
	LB SHP:										RB SHP:										
	Texture:	F] G _] C [B	R \square A	· 🗌				Texture: F G C B R A										
	RIP:											RIP:									
	STG:											STG	i:								
								W	ATE	R											
	EMS:											eq #:									
	Temp: pH:							od: T3			Cond.: Method: S3										
	Flood Signs:							od: GE			Turb.: T M L C Method: 0						thod: Gl	Ē			
							M	I O R F	HOL	O G V											
	D 1M : 11					0.1.1					01	B1	B2 I	B3 D1	D2 [03					
	Bed Material: D95:	L	Dominar D (cm			Subdom Morph		_													
	Pattern:		D (011	.,.		Worpi		I	DISTURI INDICA	SANCE TORS	C1	C2	C3 (C4 C5	S1 5	 32 S	3 S4	S5			
	Islands:																7				
	Coupling:																				
	Confinement:								В	ars:	N	SID	F	DIAG	MID	SPA	N 🗌	BR			
	FSZ:[_	aro.		OID		<i>5</i> (6		0.7					
								PΗ	юто	S											
	Photo		oc Lg			Dir							Commer	nts							
R:	105 F: 4301	S	TD			D		001													
								CON	MMEN												
	Section		NOD	dn: -		naturat -				C	Commen	ts									
	CHANNEL SITE CARD		NCD -	- ary, or	ganic sub	ostrate															
	SILE CARD		INCD																		



Site 219 – Downstream view

Reach # ILP Map # ILP # Site

	PROJECT														
Project Name	: Schaft C	reek													
Stream Name (gaz.):									P	roject Co	ode:		17415	;	
Project Watershed Code	: 630-0000	00-00000-0	0000-000	0-0000-	000-000	-000-00	0-000-00	00							
WATERSHED															
WATERSHED Gazetted Name: Local Name: M96															
Gazetted Name: Local Name: M96 Watershed Code: 000-000000-00000-0000-0000-000-000-000															
ILP Map#: 104G.03		ILP #: 1			ap #: 104			ID#: 10)140	Read	ch #:	1.0		Site #: 2	20
Field UTM (Z.E.N):			Лethod:					Site Lo			Method:			ess: H	
GIS UTM (Z.E.N): 9.38503	4.6360354		neti iou.				Re	ef. Name			wethou.	GL	Acce	333.11	
												_	,		
Date: 2007	/08/20	Time: 09	:35	,	Agency:	C660	С	crew: I	KM RS		Fish (Crd?:] 1	ncomplet	:e:
					СН	ANN	EL								
Mtd		idth width	width	width	width	width	width	width	width	Avg			lient %	Mtd	Avg
` '	1.80 0.6		1.70	1.40	0.60					1.40	Meth		<u> </u>	C	29.00
Wetted Width (m): MS Pool Depth (m): MS	0.70 0	.40 0.50	0.20	0.10	0.20					0.35	Metho	od II:		C	
Tool Bopail (III).										0.00	No Vi	s.Ch.:	Interm	ittent:	
Wb Depth: .2	.5	.4 Avç	g: 0.37	N	/lethod:	MS	St	age: L	✓ M	_ н [Dw:	-	Tribs.:	
COVER		Total: A													
Type: SWD	LWD	В	U	DP	,	OV	IV	CR	OWN CL	.OSURE					
Amount: D	Т	Т	N	N		S	N	5	;	90%					
Loc: P/S/O:							/	INS	STREAM	VEG:	$N \ \bigsqcup \ A$) V 🗌		
LWD: N		DIST: NA						_							
LB SHP: V									RB SHP	٠ \ /					
Texture: F	G 🕡 C	□В□	R \square A						_		G 🕡 C	В	¬ R ┌	1 A 🖂	
RIP: D	•								RIP						
STG: PS									STG						
					W	ATE	R								
EMS: Temp: 10				Mothe	od: T3				eq #: ond.: 20!	=			Ma	thod: S	
pH: 8.4					od: P2							_			
Flood Signs:					od: GE			1	Turb.: T	M		C 🔼	Me	thod: G	E
				M	ORF	HOL	OGY								
D 1M / : 1 D			0.1.1			0 _		01	B1	B2 I	B3 D1	D2	D3		
Bed Material: D D95: 16.0	ominant: C D (cm): 1		Subdom												
	D (cili). I	0.00	Morpi	i. Oi		DISTURE INDICA			- 00		04 05			. 04	0.5
Pattern: SI Islands: N						11101071	TORIO	C1	C2	C3 (C4 C5	S1	S2 S	3 S4	S5
Coupling: DC															
Confinement: OC															
FSZ:						В	ars:	N	SID	E	DIAG	MID] SPA	AN_	BR
HABITAT QUALITY															
Mana	1			1171		1 00			4-						
Name Spawning Habitat	none							Commen	ııs						
OverWinter Habitat	none														
Rearing Habitat	none						_		_					_	
					PH	ОТО	S								
	c Lg		Dir							Commer	nts				
R: 105 F: 4302 ST			U												
R: 105 F: 4303 ST	ΓD	<u> </u>	D												

COMMENTS										
Section	Comments									
CHANNEL	S6 - deep wide but almost dry channel, steep (29%) no fish habitat									

Reach #

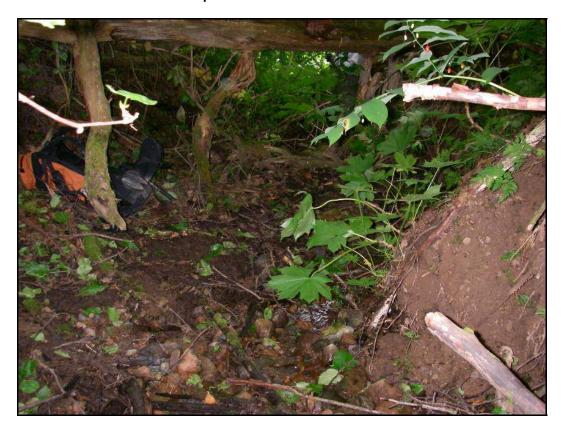
ILP Map#

ILP#

Site



Site 220 – Upstream view



Site 220 - Downstream view

Reach # ILP Map # ILP # Site

		PROJECT											
Project Name: Schaft C	reek												
Stream Name (gaz.): MESS 0			Project Code:	17415									
·		000 000 000 000 000 000		17415									
Project Watershed Code: 630-000	000-00000-00000-0000-0	000-000-000-000-000-000											
		WATERSHED											
Gazetted Name: Local Name: M97													
Gazetted Name: Local Name: M97 Watershed Code: 000-00000-00000-0000-0000-000-000-000-													
				4.0									
ILP Map#: 104G.036	ILP #: 1120 NI	D Map #: 104G.036 NID	0 #: 10141 Reach #:	1.0 Site #: 221									
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: G	E Access: H									
GIS UTM (Z.E.N): 9.385004.6360454		Ref.	. Name:										
Date: 2007/08/20	Time: 10:00	Agency: C660 Cr	ew: KM RS Fish Cro	d?: ☐ Incomplete: ✓									
		CHANNEL											
Mtd width v	ridth width width wi	idth width width width	width width Avg	Gadient % Mtd Avg									
Channel Width (m): MS 1.20 1.3	20 1.00 0.50 0	.70	0.92 Method	II: 22.0 C 22.00									
Wetted Width (m): MS			0.00 Method										
Pool Depth (m): MS		1 1 1	0.00										
. , , , , , , , , , , , , , , , , , , ,			No Vis.0	Ch.: Intermittent:									
Wb Depth: .2 .4	Avg: 0.30	Method: MS Stag	ge: L 🗸 M 🦳 H 🦳	Dw: Tribs.:									
COVER	Total: A												
Type: SWD LWD	B U	DP OV IV	CROWN CLOSURE										
Amount: S T	T N	N D N	1 1-20%										
Loc: P/S/O:			INSTREAM VEG: N A										
LWD: N	DIST: NA												
LB SHP: V			RB SHP: V										
Texture: F G C			Texture: F ✓ G ✓ C										
RIP: C			RIP: C										
STG: MF			STG: MF										
		WATER											
EMS:			Req #:										
Temp:	N	Method: T3	Cond.:	Method: S3									
pH:	N	Method: P2	Turb.: T \square M \square L \square (C									
Flood Signs:	N	Method: GE	Turb.: T M L	ivietriod. GE									
		MORPHOLOGY											
B 111			O1 B1 B2 B3 D1	D2 D3									
Bed Material: Dominant: C		_											
D95: 24.0 D (cm):	6.00 Morph: C	DISTURBANCE											
Pattern: ST		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5									
Islands: N													
Coupling: DC		,											
Confinement: UN													
FSZ:		Bars:	N ✓ SIDE DIAG	MID SPAN BR									
_		LABITAT OHALIT	V										
		HABITAT QUALIT											
Name		Co	mments										
OverWinter Habitat none													
Spawning Habitat none													
Rearing Habitat none		PHOTOS											
Dhoto T1	D:-		Co										
Photo Foc Lg	Dir		Comments										
R: 105 F: 4304 STD R: 105 F: 4305 STD	D U												
R: 105 F: 4305 STD	1 0												

COMMENTS										
Section	Section Comments									
SITE CARD	water measurements not taken.									
CHANNEL	S6 - small dry streambed, totally covered in dc. Steep no fish habitat.									



Site 221 – Downstream view



Site 221 – Upstream view

Reach # ILP Map # ILP # Site

	PROJECT														
Project Name:	Schaft Cre	ek													
Stream Name (gaz.):	MESS CR	EEK							F	roject Co	de:	17415			
Project Watershed Code:	630-00000	0-00000-00	0000-000	0-0000-	000-000	-000-00	0-000-00	0							
				,	WAT	FRSI	HFD								
Gazetted Name: Local Name: M98															
Watershed Code: 000-0000	5. IVI30														
ILP Map#: 104G.03		ILP #: 11			ap #: 104			D#: 10)142	Reac	h#: 1.	0 5	Site #: 222	!	
Field UTM (Z.E.N):		N	/lethod:					Site Lo	g: 100		Method: GE	Acces	s: H		
GIS UTM (Z.E.N): 9.384993	3.6360461						Re	f. Name							
Date: 2007/	08/20	Time: 10	·15		Agency:	Ceen	_	rew: I	KM PS		Fish Crd?:	☐ Inc	complete:		
Date: 2007/	00/20	Time. 10	.43	,		ANN		iew. r	INIVI INS		risir Ciur.		Joinpiete.		
Mtd	width wid	th width	width	width	width	width	width	width	width	Δια	Г	Gadient %	Mtd A	Avg	
	0.80 0.60		1.00	0.80	0.60	width	width	widtii	widti	Avg 0.75	Method I:	24.0		24.00	
Wetted Width (m): MS										0.00	Method II:		С		
Pool Depth (m): MS										0.00					
Wb Depth: .2	.3 .3	Avo	g: 0.27	Λ.	/lethod:	MS	St	ane. I	. ■ M	ПНГ	No Vis.Ch.:	\equiv	ribs.:		
COVER		Total: A	g. 0.21	.,	nou iou.	IVIO	0.0	ago. L	✓	Ш '' С	Dw.		100		
				I DD		O) /	11.7	l on		OCUDE					
Type: SWD Amount: S	LWD	B N	U N	DP N	'	D D	IV N	3		OSURE 1-70%					
Loc: P/S/O:								ł			N A A	и п v п			
								I	, <u></u>						
LWD: N		DIST: NA													
LB SHP: V									RB SHP						
Texture: F ✓	G ✓ C	В	R \square A	,					Texture	: F 🗸	G ✓ C	В П К П	Α		
RIP: C					RIP: C										
STG: MF									STG	: MF					
					W	ATE	R								
EMS:					Req #:										
Temp:					od: T3			Cond.: Method							
pH: Flood Signs:					od: P2 od: GE			Т	Turb.: T ☐ M ☐ L ☐ C ✓ Method: GE						
r lood digris.															
				M	I O R P	HOL	OGY								
Bed Material: Do	ominant: G		Subdom	: F				01	B1	B2 B	33 D1 D2	2 D3			
D95: 19.0	D (cm): 4.0	00	Morph	: CP		ISTURE	BANCE								
Pattern: SI						INDICA	TORS	C1	C2	C3 C	C4 C5 S1	S2 S3	S4	S5	
Islands: N															
Coupling: DC Confinement: UN															
FSZ:						В	ars:	N	SID	E C	DIAG M	ID SPAN	1	BR	
1 32.															
				HAI	BITA	ΤQL	JALIT								
Name							С	ommen	its						
	none														
	none														
					PΗ	ото	S								
Photo Foc	Lg	D)ir							Commen	ts				
R: 105 F: 4306 ST			D		_	_			_	_					
R: 105 F: 4307 ST	D		U							-					

Reach # ILP Map # ILP # Site

1.0 104G.036 1121 222

COMMENTS								
Section	Comments							
CHANNEL	S6 - dry small stream channel. Totally covered by dc, cranberry, elderberry. No fish habitat.							

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: Schaft C	:reek			
•			Project Code:	17415
Stream Name (gaz.): MESS C			Project Code:	17415
Project Watershed Code: 630-000	000-00000-00000-0000-0	J000-000-000-000-000-	-000	
		WATERCHER		
		WATERSHED		
Gazetted Name:			Local Name: M99 Wayne	
Watershed Code: 000-000000-00000	0-00000-0000-0000-000-0	000-000-000-000		
ILP Map#: 104G.036	ILP #: 1122 N	ID Map #: 104G.036	NID #: 10143 Reach #:	1.0 Site #: 223
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method:	GE Access: H
GIS UTM (Z.E.N): 9.384985.6361012)		Ref. Name:	
(2.2.17). 0.00 .000.000 .0.1	•		. ton rame.	
Date: 2007/08/20	Time: 13:25	Agency: C660	Crew: KM RS Fish C	Crd?: Incomplete:
		CHANNEL		
		vidth width width widt		Gadient % Mtd Avg
. ,		2.00 1.80	1.18 Metho	
` '	0.80 0.20 0.30 0	0.10 0.10	0.32 Metho	od II:
Pool Depth (m): MS			0.00	a. 🗆
W/s Dorothyl 0 4		M (I MO	No Vis	
Wb Depth: .3 .4	Avg: 0.35	Method: MS	Stage: L V M H	Dw: Tribs.:
COVER	Total: A			
Type: SWD LWD	B U	DP OV IV	CROWN CLOSURE	
Amount: S S	T S	N D N	3 41-70%	
Loc: P/S/O:			INSTREAM VEG: N ✓ A	
			INSTREAM VEG. IN V	
LWD: F	DIST: E			
LB SHP: U			RB SHP: U	
Texture: F ✓ G C			Texture: F 🗹 G 🗌 C	
RIP: C			RIP: C	
STG: MF			STG: MF	
		WATER		
EMO.		WAIER	D "	
EMS:			Req #:	
Temp: 10		Method: T3	Cond.: 109	Method: S3
pH: 7.9		Method: P2	Turb.: T \bigcap M \bigcap L \bigcap	C Method: GE
Flood Signs:		Method: GE		
		MORPHOLOG	Υ	
Bed Material: Dominant: G	Subdom: F		O1 B1 B2 B3 D1	D2 D3
		_		
D95: 30.0 D (cm):	3.00 Morph: S	DISTURBANCI		
Pattern: ST		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands: N				
Coupling: DC				
Confinement: UN				
FSZ:		Bars:	N✓ SIDE DIAG	MID SPAN BR
	I	HABITAT QUAL	ITY	
Name			Comments	<u> </u>
Spawning Habitat none				
OverWinter Habitat none				
Rearing Habitat none				
		PHOTOS		
Photo Foc Lg	Dir		Comments	
R: 105 F: 4311 STD	D			
R: 105 F: 4313 STD	U			
1 1 1				

	COMMENTS
Section	Comments
CHANNEL	S6 - small barely flowing creek through dc and balsam. Choked w/SWD. High gradient 27%. Portions of subsurface flow. No fish habitat.



Site 223 - Downstream view



Site 223 – Upstream view

Section

CHANNEL

SITE CARD

NCD

ILP Map# Reach # ILP# Site

1.0 104G.036 1123 224 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.036 NID #: 10144 ILP #: 1123 1.0 NID Map #: 104G.036 Reach #: Site #: 224 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384978.6361222 Ref. Name: Incomplete: 🗸 Date: 2007/08/20 Time: 14:20 Agency: C660 Crew: KM RS Fish Crd?: CHANNEL width width Mtd Mtd width width width width width width width width Gadient % Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С С Method II: Wetted Width (m) MS 0.00 Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth Avg: 0.00 Method: MS Stage: L M H H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD DP LWD OV IV Type: В U Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 B2 В3 D1 D2 D3 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C5 S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: N SIDE DIAG MID[BR FSZ: PHOTOS Foc Lg Dir Comments 105 F: 4316 STD D from rc towards mess cr. R 105 F: 4317 STD U at rc. COMMENTS

Comments

NCD - seepage with ponded water along base of slope. Seeps underground in places not continuous. Probably floods at high water from mess cr and may provide off channel refuge. Recommend cv to maintain water flow. Currently shallow stagnant and weed choked



Site 224 – Downstream view



Site 224 – Upstream view



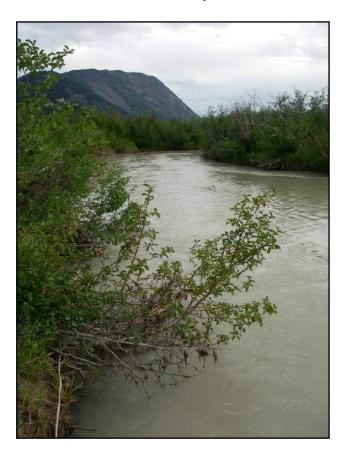
Site 225 – Upstream view



Site 225 – Downstream view



Site 226 – Upstream view



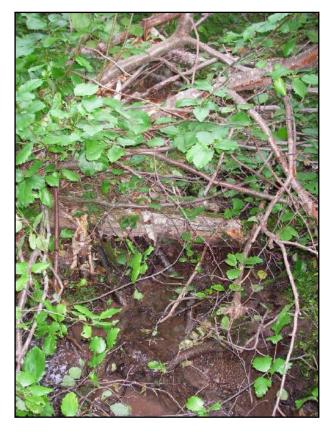
Site 226 – Downstream view



Site 226 – Across view to right bank



Site 229 – Downstream view



Site 229 – Upstream view

Reach # ILP Map # ILP # Site

		Proie	ect Nam	e: Scha	ft Creek														
	S	tream Na									Project Code: 17415								
Project Watershed Code: 630-000000-00000-00000-0000-0000-000-000																			
									WAT	ERS	HED								
	Gazet	tted Name):									Loc	cal Name	e: M105					
		shed Code		0000-00	000-000	000-0000	-0000-00	0-000-0	000-000-	000-000)								
		ILP Map#				LP #: 11			ap #: 104			D#: 10	0155	Read	:h #:	1.0		Site #: 231	1
_																			
		M (Z.E.N)		67 6060	225	IV	lethod:				Da	Site Lo of, Name	•		Method:	GE	Acce	SS: H	
'	315 011	M (Z.E.N)): 9.3841	67.6362	325						Re	er. iname	ə :						
		Da	te: 200	7/08/22	٦	Time: 09:	45		Agency:	C660	С	rew:	KM RS		Fish (Crd?:	Ir	ncomplete:	
									<u>С</u> П	ANN	EI							•	
						1				_			1						
		140 to ()	Mtd	width	width	width	width	width	width	width	width	width	width	Avg			dient %		Avg
		Width (m):	MS	1.50	1.40	0.80	1.20	1.00						1.18	Meth				0.00
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Width (m):												0.00	Meth	od II:		С	
	Pool L	Depth (m):	MS											0.00	No Vi	is.Ch.:	Interm	ittent: 🗸	
	\	Wb Depth:	: .1	.2		1 Avo	: 0.15	N	/lethod:	MS	St	age: L	П М	_ н г		Dw:		Γribs.:	
_						_ ~	,. 0.10		nounou.	Wio	0.0	ago. L				5			
		COVER			I ot	al: T						_							
		Туре	: SWI) LV	۷D	В	U	DF)	OV	IV	CR	OWN CL	OSURE.					
		Amount			N	N	N	N		D	N	0		0%					
		.oc: P/S/O									/	INS	STREAM	VEG:	N 🗸 A	M] V [
		LWD	ı. NI			DIST: NA						_							
					D	JIST: INA													
		LB SHP											RB SHP	: S					
		Texture	· F 🗔	G															
			· · 🔽			В	$R \bigsqcup A$,					Texture	: F 🗸	G 🗸 C	В	R] A 🗌	
			P: W			В	R A	· 🗌					Texture RIP		G 🗸 C	ВПВ	R] A 🗌	
		RIF				В	R \square A							: W	G 🗸 (В	R] A	
		RIF	P: W			В	K []	· 🗌					RIP	: W	G ✓ (Э В [R] A	
		RIF STG	P: W B: NA			В	R	·	W	ATE	R		RIP STG	: W	G 🗸 (В	R] A []	
		RIF STG EMS	P: W B: NA			В	R L A			ATE	R		RIP STG	: W	G ✓ (В			
		EMS Temp	P: W B: NA			В	K A	Metho	od: T3	ATE	R		RIP STG	: W	G 🗸 (В		thod: S3	
		EMS Temp	P: W B: NA :			В	R	Metho Metho	od: T3	ATE	R	С	RIP STG leq #:	: W : NA			Met		
	Flo	EMS Temp	P: W B: NA :			В		Metho Metho	od: T3	ATE	R	С	RIP STG leq #:	: W : NA	G 🗸 (Met	thod: S3	
	Fk	EMS Temp	P: W B: NA :			В	K A	Metho Metho	od: T3 od: P2 od: GE		R . O G Y	С	RIP STG leq #:	: W : NA			Met	thod: S3	
		EMS Temp pH ood Signs	: W S: NA :: : : : : : : : : : : : : : : : :					Metho Metho Metho	od: T3 od: P2 od: GE			С	RIP STG leq #:	: W : NA			Met	thod: S3	
		EMS Temp pH ood Signs	P: W S: NA	Dominar	nt: G		Subdom	Metho Metho Metho	od: T3 od: P2 od: GE	НОГ	. O G Y	1	RIP STG eq #: cond.: Furb.: T	: W : NA] C	Met Met	thod: S3	
		EMS Temp pH ood Signs	P: W B: NA	Dominar				Metho Metho Metho	od: T3 od: P2 od: GE	PHOL	. O G Y BANCE	O1	RIP STG	: W : NA	33 D1	D2	Met Met	thod: S3	_
		EMS Temp pH oood Signs d Material D95	P: W B: NA :: :: :: :: :: 10.0	Dominar	nt: G		Subdom	Metho Metho Metho	od: T3 od: P2 od: GE	НОГ	. O G Y BANCE	1	RIP STG eq #: cond.: Furb.: T	: W : NA] C	Met Met	thod: S3	\$5
		EMS Temp pH ood Signs: d Material D95 Pattern Islands	P: W B: NA	Dominar	nt: G		Subdom	Metho Metho Metho	od: T3 od: P2 od: GE	PHOL	. O G Y BANCE	O1	RIP STG	: W : NA	33 D1	D2	Met Met	thod: S3	\$5
	Bed	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling:	P: W S: NA : : : : : : : : : : : : : : : : : :	Dominar	nt: G		Subdom	Metho Metho Metho	od: T3 od: P2 od: GE	PHOL	. O G Y BANCE	O1	RIP STG	: W : NA	33 D1	D2	Met Met	thod: S3	\$5
	Bed	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling	P: W B: NA	Dominar	nt: G		Subdom	Metho Metho Metho	od: T3 od: P2 od: GE	PHOL DISTURI	OGY BANCE TORS	01 C1	RIP STG	B2 E C3 C	33 D1 D24 C5	D2 S1	Met Met	thod: S3 thod: GE	
	Bed	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling:	P: W B: NA	Dominar	nt: G		Subdom	Metho Metho Metho	od: T3 od: P2 od: GE	PHOL DISTURI	. O G Y BANCE	O1	RIP STG	B2 E C3 C	33 D1	D2	Met Met	thod: S3 thod: GE	S5
	Bed	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling	P: W B: NA	Dominar	nt: G		Subdom	Metho Metho Metho I: F	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURI INDICA B	OGY BANCE TORS	01 C1	RIP STG	B2 E C3 C	33 D1 D24 C5	D2 S1	Met Met	thod: S3 thod: GE	
	Bed	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling nfinement: FSZ:	P: W B: NA	Dominar	nt: G		Subdom	Metho Metho Metho I: F	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURI INDICA B	BANCE TORS	01 C1 NV	RIP STG	B2 E C3 C	33 D1 D24 C5	D2 S1	Met Met	thod: S3 thod: GE	
	Cor	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling nfinement: FSZ:	P: W B: NA	Dominar D (cm	nt: G s): 7.00		Subdom Morph	Metho Metho Metho I: F I: RP	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURI INDICA B	BANCE TORS	01 C1	RIP STG	B2 E C3 C	33 D1 D24 C5	D2 S1	Met Met	thod: S3 thod: GE	
	Cor N Spawn	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling nfinement: FSZ:	P: W S: NA : : : : : : : : : : : : : : : : : :	Dominar D (cm	nt: G s): 7.00		Subdom Morph	Metho Metho Metho I: F I: RP	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURI INDICA B	BANCE TORS	01 C1 NV	RIP STG	B2 E C3 C	33 D1 D24 C5	D2 S1	Met Met	thod: S3 thod: GE	
	Cor N Spawn OverWi	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling: nfinement: FSZ:	P: W S: NA : : : : : : : : : : : : : : : : : :	Dominar D (cm poor - none	nt: G s): 7.00		Subdom Morph	Metho Metho Metho I: F I: RP	od: T3 od: P2 od: GE 1 O R F	PHOL DISTURI INDICA B	BANCE TORS	01 C1 NV	RIP STG	B2 E C3 C	33 D1 D24 C5	D2 S1	Met Met	thod: S3 thod: GE	
	Cor N Spawn OverWi	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling nfinement: FSZ:	P: W S: NA : : : : : : : : : : : : : : : : : :	Dominar D (cm	nt: G s): 7.00		Subdom Morph	Metho Metho Metho I: F I: RP	od: T3 od: P2 od: GE IORF	DISTURI INDICA B	BANCE TORS ars:	01 C1 NV	RIP STG	B2 E C3 C	33 D1 D24 C5	D2 S1	Met Met	thod: S3 thod: GE	
	Cor N Spawn OverWi Rearii	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling: nfinement: FSZ:	P: W S: NA : : : : : : : : : : : : : : : : : :	Dominar D (cm poor - none	nt: G s): 7.00	otential b	Subdom Morph	Metho Metho Metho I: F I: RP	od: T3 od: P2 od: GE IORF	PHOL DISTURI INDICA B	BANCE TORS ars:	01 C1 NV	RIP STG	B2 E C3 C	33 D1 D24 C5	D2 S1	Met Met	thod: S3 thod: GE	
	Cor Spawn OverWi Rearin	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling infinement: FSZ:	P: W S: NA : : : : : : : : : : : : : : : : : :	Dominar D (cm poor - none none	nt: G s): 7.00	otential b	Subdom Morph out dries	Metho Metho Metho I: F I: RP	od: T3 od: P2 od: GE IORF	DISTURI INDICA B	BANCE TORS ars:	01 C1 NV	RIP STG	B2 E C3 C	33 D1	D2 S1	Met Met	thod: S3 thod: GE	
R: 1	Cor Spawn OverWi Rearii Photo	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling infinement: FSZ:	P: W S: NA : : : : : : : : : : : : : : : : : :	Dominar D (cm poor - none none	nt: G s): 7.00	otential b	Subdom Morph out dries	Metho Metho Metho I: F I: RP	od: T3 od: P2 od: GE IORF	DISTURI INDICA B	BANCE TORS ars:	01 C1 NV	RIP STG	B2 E C3 (C	33 D1	D2 S1	Met Met	thod: S3 thod: GE	
R: 1	Cor Spawn OverWi Rearin	EMS Temp pH ood Signs d Material D95 Pattern Islands Coupling infinement: FSZ:	P: W S: NA : : : : : : : : : : : : : : : : : :	Dominar D (cm poor - none none	nt: G s): 7.00	otential b	Subdom Morph out dries	Metho Metho Metho I: F I: RP	od: T3 od: P2 od: GE IORF	DISTURI INDICA B	BANCE TORS ars:	01 C1 NV	RIP STG	B2 E C3 (C	33 D1	D2 S1	Met Met	thod: S3 thod: GE	

	COMMENTS
Section	Comments
	S4 default - dry channel from alluvial fan, may provide fish habitat during high flows - access or migration to main channel. Currently dry. Spreads out ds of RC
	Spreads out as of RC



Site 231 – Upstream view



Site 231 – Downstream view

ILP Map# ILP# Site Reach #

232 1.0 104G.036 1129 PROJECT

	Pr		eam N	am	e (gaz.):	le: Schaft Creek L): MESS CREEK Project Code: 17415 le: 630-000000-00000-00000-0000-0000-0000-0														
											WAT	ERS	HED							
	G	zette	ed Nam	ne:										Lo	cal Name	e: M106	Shift Cr			
	Wa	tersh	ed Cod	de:	000-000	000-00			-0000-00	0-000-0	000-000-	000-000								
		II	_P Map	o#:	104G.03	36	I	LP #: 11	29	NID Ma	ap #: 104	4G.036	N	ID #: 10	0156	Read	ch #:	1.0	Site #: 232	2
			(Z.E.1	-				M	lethod:						g: 100		Method:	GE	Access: H	
	GIS	UTM	(Z.E.1	N):	9.38407	5.63623	392						R	ef. Nam	e:					
			С	Date	e: 2007	/08/22	-	Γime: 10:	:15		Agency:	C660	(crew:	KM RS		Fish C	rd?:	Incomplete	: 🗸
											СН	ANN	EL							
				Г	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadie	ent % Mtd	Avg
	Chanr	el W	idth (m	ո)։	MS											0.00	Metho	od I: 6.0		5.50
L			idth (m	-	MS	2.30	2.50	3.80	3.00	2.50	2.90					2.83	Metho	d II:	С	
L	Po	OI D	epth (m	1):	MS]		0.00	No Vis	s.Ch.:	Intermittent:	
		W	b Dept	h:				Avg	g: 0.00	N	Method:	MS	S	age: L	. П М	✓ H [Dw:	Tribs.:	
			COVE	R			Tot	al: A									_			
	Γ		Тур	e:	SWD	LW	/D	В	U	DF	·	OV	IV	CR	OWN CL	OSURE				
			Amou	_	S	5		Т	N	Т		D	N	1	1	-20%				
		Lo	c: P/S/	O:	V V				V V	' '	V	V V	V V V	INS	STREAM	VEG:	N 🗸 A	M	V	
	-		LW	'D:	A	•	С	IST: E		•	-			•						
			LB SH				_								RB SHP	· S				
						G 🕡	C 🗾	В 🦳	R 🗌 A								G 🕡 C	В □	R □ A □	
				IP:		•	•							Texture: F ☐ G ✔ C ✔ B ☐ R ☐ A ☐ RIP: M						
					MF										STG					
											W	ATE	R							
			EM	S:										F	Req #:					
			Tem	ıp: 9	9					Metho	od: T3				Cond.: 73				Method: S3	
		_		H: 8	3.2						od: P2								Method: GE	
_		Floc	od Sign	is:						Metho	od: GE									
										N	ORF	HOL	. O G Y							
		Bed	Materia	al:	D	ominan	t: C		Subdom	: G				01	B1	B2 I	B3 D1	D2 D:	3	
			D9	95:	19.0	D (cm)	: 16.00		Morph	:CP		DISTURI	BANCE		✓					
			Patter	rn: l	R						_	INDICA		C1	C2	C3 (C4 C5	S1 S	2 S3 S4	S5
			Island	ls: (0												✓			
			Couplin													•				
		Conf	inemer									В	ars:	N	SID	ΕΠ	DIAG	MID	SPAN	BR✔
			FS	ا:ک												<u> </u>				
										НА	BITA	T QI	JALI.	ГΥ						
			ame										(Commer	nts					
			ig Habi			_			, good flo											
			ter Hab d Habita		t				ally deep ge), cove		WD and	10\/								
	T.C	ann	, i abili	al		1all - S	ome ho	oio (hini)	ye), cove	i iiOIII L		0 T C	S							
	Pho	oto	1		Foo	c La	$\overline{}$	D	ir	T						Commer	nts			
R:	101		4345		ST		+		D							20				
R:	101	F:	4346		S1	D			J											
					S1	-D	T		X	LB										

Reach # ILP Map # ILP # Site
1.0 104G.036 1129 232

					PHOTOS				
Photo Fo		oc Lg Dir			Comments				
R: 101 F: 43	48 STI)	X	RB					
					COMMENTS				
Section	n	Comments							
CHANN	CHANNEL S3 - this crossing is on a dynamic constantly changing alluvial fan, RB present during previous trips. Extensive bedload movement,								
0.75.0					an where stream is more confined				
SITE CA	.RD r	main channel do	own alluvial fan,	, no bank	ss, so some measurements not taken				



Site 232 - Downstream view



Site 232 – Left bank



Site 232 – Upstream view



Site 232 - Right bank

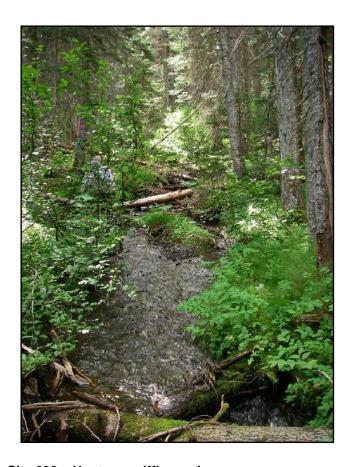
ILP Map# ILP# Site Reach #

233 1.0 104G.036 1130 PROJECT

	Pr		eam N	ame	(gaz.):	Schal MESS 630-0	S CREE		000-000	0-0000-	-000-000)-000-00	0-000-00	00	F	Project Co	ode:		17415	
											WAT	ERS	HED							
	G	azette	ed Nam	ne:										Lo	cal Name	e: M107	Big B Cr			
	Wa	tersh	ed Cod	de: 0	00-000	000-00	000-000	000-0000	-0000-00	0-000-0	000-000-	000-000)	· · · · · · · · · · · · · · · · · · ·						
		П	_P Map	o#: 10	04G.03	36		ILP #: 11	30	NID M	ID Map #: 104G.036 NID #			ID #: 10) #: 10157 Reach #: 1				Site #: 23	3
	Field	UTM	(Z.E.I	N):				N	lethod:		Sit			Site L	Site Lg: 100 Method: GE				Access: H	
	GIS	UTM	(Z.E.I	N): 9.	.38364	8.63630	017						Re	ef. Name	e:					
	Date: 2007/08/22 Time: 12:05 Agency: C660 Crew: KM RS Fish Crd?: Incomplete:												: 🔲							
											СН	ANN	EL							
				┰	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadie	ent % Mtd	Avg
Γ	Chanr	nel W	idth (m	n):	MS	1.80	3.20	3.30	2.70	2.80	3								5.50	
	Wett	ed W	idth (m	_	MS	1.80	2.70	3.20	2.80	2.40	1.80					2.45	Metho	d II:		
L	Po	ol De	epth (m	1):	MS	0.32	0.29	0.40	0.25	0.35	0.30					0.32	No Vis	. Ch · \square	Intermittent:	
		W	b Dept	h:	.3	.3	.2	Avo	g: 0.27	N	Method:	MS	St	age: L	□ М	✓ H		Dw:	Tribs.:	
<u> </u>			COVE			-		tal: A	,			-		J		▼ ··· L				
	г				SWD	LW		В	U	DF	, I .	OV	IV	1 CB	OWN CL					
	ŀ		Typ	_	SWD	LV		N	S	S		T	N	2		-030RE 1-40%				
	ŀ	Lo	c: P/S/	_+										-			N 🕡 A	П М П	V \square	
	L										سعار ساد]						
				D: A				DIST: E												
			LB SF			_									RB SHP			_		
			Textu	re:	F 🗸	G 🗸	с 🗌	В	R \square A						Texture	: F	G 🗸 C	B	R \square A \square	
				IP: C											RIP					
			ST	G: N	1F										STG	: MF				
											W	ATE	R							
			EM	S:										R	leq #:					
			Tem		_						Method: T3			Cond.: 185			Method: S3			
		Flor		H: 8.		sand o	nhank				Method: P2 Method: GE			Turb.: T ☐ M ☐ L ☐ C ✓ Metho					Method: GE	
		FIOC	u Sigii	15. UE	epositu	Sanu 0	IIDalik													
										N	ORF	HOL	. O G Y							
		Bed	Materia	al:	D	ominan	t: G		Subdom	: C				01	B1	B2	B3 D1	D2 D:	3	
			D9	5: 2	3.0	D (cm)	: 15.00)	Morph	:CP		DISTUR								
			Patter	n: SI	I							INDICA	TORS	C1	C2	C3	C4 C5	S1 S	2 S3 S4	S5
			Island																	
			Couplin	-																
		Cont	inemer ES	nt: O(Z: [Е	ars:	N	SID	E ~	DIAG	MID	SPAN□	BR□
			1 3	۷.											J					
										НА	BITA	T Q	JALI.	ГΥ						
			ame										C	commer	nts					
			g Habi			_		gravel, g			-داما بد	hocd'								
			ter Hab Habit					eep pools ater dee					r							
	130	zai II Iţ	, i abit	at .		9000 -	olcai W	ator uee	p pools, I	oto or gi		OTC								
	Ph	oto			Foo	: La	Т	Г	Dir	T	Comments									
R:	105		4350		ST		_	Dir Comments U riffle section												
R:	105		4351		S1				U		equence									
R٠	105	F·	4352		ST	D	D from rc													

Reach # ILP Map # ILP # Site
1.0 104G.036 1130 233

	PHOTOS											
Photo	Foc Lg	oc Lg Dir Comments										
R: 105 F: 4353	STD	X	deep pool us at rc									
			COMMENTS									
Section			Comments									
CHANNEL	CHANNEL S3 default - excellent stream, critical habitat. Low stable banks, somewhat confined by stable valley walls											



Site 233 – Upstream riffle section



Site 233 – Downstream view



Site 233 – Upstream step-pool section



Site 233 – Across view, showing deep pool

Reach # ILP Map # ILP # Site

1.0 104G.036 1131 234 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M108 NID #: 10158 ILP Map#: 104G.036 ILP #: 1131 NID Map #: 104G.036 Reach #: 1.0 Site #: 234 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383567.6363093 Ref. Name: Crew: KM RS Fish Crd?: Incomplete: Date: 2007/08/22 Time: 14:00 Agency: C660 CHANNEL width width Gadient % Mtd Mtd width width width width width width Avg width width Avg Method I: Channel Width (m) MS 1.60 1.60 4.70 1.40 1.40 2.07 13.0 12.0 12.50 1.70 С Wetted Width (m): MS 0.60 0.90 0.80 Method II: 0.70 1.20 1.20 0.90 Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Dw: Stage: L ✓ M ☐ H ☐ Tribs.: Wb Depth: .3 .2 .5 Avg: 0.33 Method: MS COVER Total: A **CROWN CLOSURE** SWD LWD DP O۷ В U IV Type: Ν 21-40% Ν Ν Ν D Amount: S Loc: P/S/O: INSTREAM VEG: N \bigcirc A \bigcirc M \bigcirc V \bigcirc **V V** LWD: F DIST: E LB SHP: S RB SHP: S

		_		_ 5 _	- A -		Texture: F - G - C - B - B - A -						
	Texture: F	✓ G L	ГСПВ	R	_ A		Texture: F ✓ G C B R A RIP: C						
	RIP: C												
	STG: MF					STG: MF							
						WATER							
	EMS:					W/X : = X	Req #:						
	Temp: 7				Meth	od: T3	Req #. Cond.: 113		Method: S3				
	pH: 7.8					od: P2							
F	Flood Signs:				Meth		Turb.: T] M 🗌 L 🗆	C Method	: GE			
					N	IORPHOLOG	Υ						
			. 0				O1 B1 B2	2 B3 D1	D2 D3				
В	ed Material:	Domina			dom: F								
	D95: 17.0	D (cn	n): 5.00	M	orph: RP	DISTURBANCE							
	Pattern: SI					INDICATORS	C1 C2 C3	3 C4 C5	S1 S2 S3	S4 S5			
	Islands: N												
	Coupling: DC												
Co	onfinement: UN					Bars:	NE CIDEE	MID SPAN					
	FSZ:					Dais.	N ✓ SIDE	MID SPAN	BR				
						FEATURES							
NID Map	NID Type	Hgt	Method	Lg	Method	Photo	AirPhoto)	UTM (Z/E/N)	Method			
104G.036	10159 GE	1.5	GE	2	GE	R: 101 F: 4356	L:	#:	9.383548.6363152 GP3				
Comment	ts: seepage barrie	r, overlan	d flow										
					НА	BITAT QUAL	ITY						
	Name						Comments						
	ning Habitat	poor	patches of o	gravel but	t lots of fines	s, spread out	•		•				
OverW	Vinter Habitat	none											
	ring Habitat		ne or - pockets of good flow, but mostly spread out, undefined										

						PHOTOS					
	Photo			Foc Lg	Dir	Comments					
R:	101	F:	4354	STD	U	marginal flow us of rc					
R:	101	F:	4355	STD	D	D almost a seepage at rc					
R:	101	F:	4356	STD	STD U seepage barrier						
R:	101	F:	4357	STD	D	decent habitat ~20m ds of rc					
						COMMENTS					
		Se	ection			Comments					
		CHA	NNEL		S6 - small stream w/marginal habitat, a bit of scour @ rc but v. seepage like. Then there's a stretch of decent habitat ~20m long. Outlet has an overland flow barrier (drops 1.5m over 2m, flows over moss and SWD)						



Site 234 – Upstream view



Site 234 – Upstream seepage barrier



Site 234 – Downstream view, almost a seepage



Site 234 – Downstream good habitat

ILP Map# ILP# Site Reach #

235 1.0 104G.036 1132 PROJECT

Stream Name (gaz.): MESS CREEK Project Code: 17415 Project Watershed Code: 630-000000-00000-0000-0000-0000-0000-00
WATERSHED
Gazetted Name: Local Name: M109
Watershed Code: 000-000000-00000-00000-0000-0000-000-0
ILP Map#: 104G.036
Field UTM (Z.E.N): Method: Site Lg: 100 Method: GE Access: H
GIS UTM (Z.E.N): 9.383516.6363131 Ref. Name:
Date: 2007/08/22 Time: 14:30 Agency: C660 Crew: KM RS Fish Crd?: Incomplete:
CHANNEL
Mtd width Avg Gadient % Mtd Avg Channel Width (m): MS 1.60 1.90 1.50 1.90 3.90 1.80 2.10 Method I: 17.0 24.0 C 20.50
Wetted Width (m): MS 1.20 1.80 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.60 Method II: C
Pool Depth (m): MS 0.13 0.24 0.18
No Vis.Ch.: Intermittent:
Wb Depth: .3 .3 .3 Avg: 0.30 Method: MS Stage: L M ✓ H Dw: Tribs.:
COVER Total: A
Type: SWD LWD B U DP OV IV CROWN CLOSURE
Amount: S D T T T S N 2 21-40%
Loc: P/S/O: V V V V V V V V V V
LWD: A DIST: E
LB SHP: V RB SHP: V
Texture: F 📝 G C B R A Texture: F 📝 G C B R A
RIP: C
STG: MF
WATER
EMS: Req #:
Temp: 6 Method: T3 Cond.: 119 Method: S3
Temp: 6 Method: T3 Cond.: 119 Method: S3 pH: 7.9 Method: P2 Turb.: T □ M □ L □ C ☑ Method: GE
Temp: 6 pH: 7.9 Method: T3 pH: 7.9 Cond.: 119 Method: S3 pH: 7.9 Flood Signs: Method: GE Turb.: T
Temp: 6 pH: 7.9 pH: 7.9 Method: P2 pthod: GE Turb.: T
Temp: 6 pH: 7.9 Method: T3 pH: 7.9 Cond.: 119 Method: S3 pH: 7.9 Flood Signs: Method: GE Turb.: T
Temp: 6 pH: 7.9 pH: 7.9 Flood Signs: Method: T3 pH: T method: S3 pH: T.9 pH: T method: S3 pH: T.9 pH: T method: GE Method: GE Turb.: T method: T method: GE Method: GE
Temp: 6

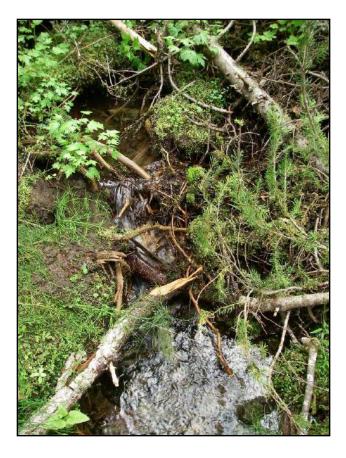
						PHOTOS					
	Photo			Foc Lg	Dir	Comments					
R:	101	F:	4358	STD	D	24% cascade barrier					
R:	101	F:	4359	STD	D	@ rc					
R:	101	F:	4360	STD	U	@ rc					
						COMMENTS					
		Sec	ction			Comments					
		CHAI	NNEL	S6 - small	mall stream w/good flow, abundant SWD at RC. Some decent pools, but generally shallow. 24% cascade barrier ~40m DS of RC						



Site 235 – Downstream 25% cascade barrier



Site 235 - Downstream view



Site 235 – Upstream view

Reach # ILP Map # ILP# Site 1.0 104G.036 1133 237 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M110 NID #: 10163 ILP #: 1133 Reach #: 1.0 Site #: 237

ILP Map#: 104G.036 NID Map #: 104G.036 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383484.6363126 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/22 Time: 15:25 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 2 00 1 40 Method I: 16.00

Method II: Wetted Width (m) MS 1.00 0.80 2.20 2.60 1.10 1.40 1.52 29.0 С Pool Depth (m) MS 0.31 0.15 0.23 No Vis.Ch.: Intermittent: Dw: Wb Depth: .2 .2 .4 Avg: 0.27 Method: MS Stage: L ☐ M ✔ H ☐ Tribs.: COVER Total: A

DP SWD LWD В OV IV Type: U Ν Amount S D S S Loc: P/S/O: **V V**

2 60

2 90

1.10

0.70

CROWN CLOSURE 21-40% INSTREAM VEG: N ☐ A 🗸 M 🗸 V ☐

1.78

7.0 12.0 С

LWD: F DIST: F RB SHP: U Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F ✓ G ☐ C ✓ B ☐ R ☐ A ☐

RIP: C RIP: C STG: MF STG: MF

WATER EMS: Req#: Temp: 6 Method: T3 Cond.: 108 Method: S3 pH: 7.6 Method: P2 Turb.: T M L C Method: GE

Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: F Subdom: C D95: 40.0 D (cm): 10.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: SI C2 СЗ S1 S3 S5 Islands: N Coupling: DC Confinement: UN SPAN Bars: N SIDE DIAG MID BR FSZ:

HABITAT QUALITY Name Spawning Habitat OverWinter Habitat none - at RC, poor DS of RC Rearing Habitat poor - at RC, fair ~20m ds of RC w/more pools and defined channel

							PHOTOS
	Photo			Foc Lg	Dir	Comments	
F	R: 101	1	F:	4362	STD	D	nice habitat about 20m ds from RC
F	R: 101	1	F:	4363	STD	U	crappy habitat @ rc

	COMMENTS
Section	Comments
CHANNEL	S6 - at RC due to marginal channelization 29% slope at rc, ~20m ds of rc maybe fb. US of road marginal w/several sections of overland
	and subsurface flow, mostly seepage, ~10m ds of RC several other streams enter and resulting stream is way better habitat



Site 237 – Downstream view, nice habitat



Site 237 – Upstream view, bad habitat

Reach # ILP Map # ILP # Site

									PR	OJE	СТ									
		Pro	ject Nam	e: Scha	ft Creek	(
		Stream Na	ame (gaz): MES	S CREE	ĒΚ							F	Project Co	ode:			17415		
	Pro	oject Waters	shed Cod	e: 630-0	000000-	00000-00	000-000	0-0000-	000-000	0-000-00	00-000-00	00								
									WAT	ERS	HFD									
	Ga	zetted Nam)O:						W A I	LKJ		Loc	aal Name	e: M112						
		ershed Cod		0000-00	000-000	000-000	-0000-00	0-000-0	00-000	-000-000)	LOC	Jai Ivalli	₽. IVIIIZ						
			#: 104G.(ILP #: 11				4G.036		ID #: 10)165	Read	ch #:	1	.0	S	Site #: 23	39
	Field I	UTM (Z.E.N	۷):			N	/lethod:					Site Lo	a: 100		Meth	od: GE		Acces	s: H	
		UTM (Z.E.N	,	77.6363	136						Re	ef. Name	-							
		5	N-4 000	7/00/00		T: 45			A	. 0000	_	S 1	KM DC		- :-	-1- 010-		l-		\Box
Date: 2007/08/22 Time: 15:55 Agency: C660 Crew: KM RS Fish Crd?: Incomplete:											e: 🔲									
CHANNEL																				
	Chann	el Width (m	Mtd i): MS	width 0.70	width 0.70	width 0.90	width 1.20	width 0.60	width 0.90	width	width	width	width	Avg 0.83		lethod I:	Gadie 13.0	nt %	Mtd C	Avg 13.50
-		ed Width (m		0.40	0.70	0.50	1.40	0.70	1.30					0.87	_	ethod II:	13.0	14.0	С	13.30
		ol Depth (m	,	0.18	0.21	0.28								0.22				<u> </u>		_
_		14/1 D (1			1	·										Vis.Ch.		Intermit	=	
L		Wb Depti		.2		_ `	g: 0.30	N	/lethod:	MS	St	tage: L	ШМ	✓ H		Dw	r: 🔲	Ti	ribs.:	
		COVE	₹		Tot	tal: A						_								
		Тур			۷D	В	U	DP)	OV	IV			OSURE						
		Amour Loc: P/S/	_	-	D	N	S	T		T	N	3		1-70%		. —	—	—		
		LUC. F/3/	O: V				✓	V			✓	INS	STREAM	VEG:	N \square	Α 📗	IVI 🗸	v 📙		
		LW	D: A			DIST: E														
		LB SH	IP: U										RB SHP	: U						
		Textu	re: F 🗸	9 G 🗆	C 🗆	В	R 🔲 A	· 🗌					Texture	: F 🗸	G] C 🗌	В	R \square	Α 🗌	
		RI	IP: C										RIP	: C						
		ST	G: MF										STG	:MF						
									W	/ ATE	R									
		EM	S:									R	eq #:							
		Tem	p: 7					Metho	Method: T3				Cond.: 118					Meth	nod: S3	3
			H: 8.0						od: P2		Turb.: T ☐ M ☐ L ☐ C ☑ Met					Meth	nod: Gl	≣		
		Flood Sign	S:					Metho	od: GE								•			
								N	1 O R I	PHOL	. O G Y									
		Bed Materia	al:	Dominar	nt: G		Subdom	: C				01	B1			D1 D				
		D9	5: 9.00	D (cm): 25.00)	Morph	: CP		DISTUR	BANCE									
		Patter	n: SI							INDICA	TORS	C1	C2	C3 (C4 (C5 S	1 S2	2 S3	S4	S5
		Island																		
		Coupling	•																	
	(Confinemen FS2								Е	Bars:	N	SID	ΕΠ	DIAG	¬ N	/IID	SPAN	N	BR
		1 32	۷																	
								HA	BITA	T Q	U A L I	ΤΥ								
		Name									C	Commen	ts							
		wning Habi Winter Hab		none																
		aring Habita		none	some d	leep pool	s but nor	or conne	ctivity											
	1,0			P 301	30.710 0	- op pool	POC	5511110		нотс	S									
	Pho	oto	F	oc Lg	T	D	Dir							Commer	nts					
R:	101	F: 4366		STD			U	defir	ned cha	innel us	of rc									
R:	101	F: 4367	5	STD			D	from	rc											

	COMMENTS
Section	Comments
CHANNEL	S6 - marginal habitat, small well-defined stream, multiple small steps over LWD. Some pools, but sections of overland flow, esp. US of
	RC



Site 239 – Upstream view, defined channel



Site 239 – Downstream view

Reach # ILP Map # ILP # Site

Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 Project Watershed Code: 630-000000-00000-0000-0000-0000-000-000-
WATERSHED
Gazetted Name: Local Name: M113
Watershed Code: 000-000000-00000-00000-0000-0000-000-0
ILP Map#: 104G.036
Field UTM (Z.E.N): . Method: Site Lg: 100 Method: GE Access: H
GIS UTM (Z.E.N): 9.383316.6363459
Date: 2007/08/23 Time: 08:25 Agency: C660 Crew: KM RS Fish Crd?: Incomplete:
CHANNEL
Mtd width Avg Gadient % Mtd Avg
Channel Width (m): MS 1.60 1.10 1.50 2.00 1.70 1.20 1.52 Method I: 13.0 26.0 C 19.50
Wetted Width (m): MS 1.00 0.80 1.70 1.10 1.40 1.28 Method II: C
Pool Depth (m): MS 0.12 0.12 0.12 No Vis.Ch.: Intermittent:
Wb Depth: 3 3 .3 Avg: 0.30 Method: MS Stage: L M ✓ H Dw: Tribs.:
COVER Total: M
Type: SWD LWD B U DP OV IV CROWN CLOSURE
Amount: S D N S N T N 3 41-70% Loc: P/S/O:
Loc: P/S/O: V A M V V
LWD: A DIST: E
LB SHP: S
Texture: F G C B R A Texture: F G C B R A
RIP: C
STG: MF
STG: MF
STG: MF WATER
STG: MF STG: MF W A T E R EMS: Req #:
STG: MF WATER
STG: MF WATER
STG: MF W A T E R EMS: Req #: Temp: 5 Method: T3 Cond.: 151 Method: S3 pH: 8.0 Method: P2 Turb.: T
STG: MF W A T E R EMS: Req #: Temp: 5 Method: T3 Cond.: 151 Method: S3 pH: 8.0 Method: P2 Turb.: T
STG: MF W A T E R EMS: Req #: Temp: 5 Method: T3 Cond.: 151 Method: S3 pH: 8.0 Method: P2 Turb.: T
STG: MF W A T E R EMS: Req #: Temp: 5 Method: T3 Cond::151 Method: S3 pH: 8.0 Method: P2 Turb.: T □ M □ L □ C ✓ Method: GE MOR PHOLOGY
STG: MF W A T E R EMS: Req #: Temp: 5 Method: T3 Cond.: 151 Method: S3 pH: 8.0 Method: P2 Turb.: T
STG: MF WATER EMS:
STG: MF EMS: Temp: 5 pH: 8.0 Flood Signs: Bed Material: Dominant: C D95: 24.0 D0: 13.00 D0: 13.00 D0: 13.00 Morph: CP Pattern: SI Islands: N Coupling: DC STG: MF W A T E R Req #: Cond.: 151 Turb.: T M L C V Method: S3 Method: GE Nethod: GE Nethod: P2 Turb.: T M Bed Ba Ba D1 D2 D3 DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
STG: MF STG:
STG: MF EMS: Temp: 5 pH: 8.0 Flood Signs: Bed Material: Dominant: C D95: 24.0 D0: 13.00 D0: 13.00 D0: 13.00 Morph: CP Pattern: SI Islands: N Coupling: DC STG: MF W A T E R Req #: Cond.: 151 Turb.: T M L C V Method: S3 Method: GE Nethod: GE Nethod: P2 Turb.: T M Bed Ba Ba D1 D2 D3 DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5
STG: MF STG:
STG: MF WATER EMS: Temp: 5
STG: MF STG: MF STG: MF
STG: MF EMS:
STG: MF EMS:
STG: MF EMS:
STG: MF
STG: MF EMS:

					PHOT	08					
	Photo Fo			g Dir	Comments						
R:	102	F: 4368	STD	D	from rc						
R:	R: 102 F: 4369 STD U				from rc						
					COMMI	ENTS					
		Section		Comments							
		CHANNE	_ S6	6 - marginal habitat, shall	ow but clear stream with o	ood flow. Gradient barrier ds of rc 26% slope (feature)					



Site 245 – Downstream view



Site 245 – Upstream view

Reach # ILP Map # ILP # Site

		PROJECT				
Project Name: Schaf	t Creek					
Stream Name (gaz.): MESS			Project Code:	17415		
,,		0000 000 000 000 000 000 0	•	17415		
Project Watershed Code: 630-0	00000-00000-00000-0000-0	000-000-000-000-000-0	50			
		WATERSHED				
0		WATERSHED				
Gazetted Name:			Local Name: M114			
Watershed Code: 000-000000-000						
ILP Map#: 104G.036	ILP #: 1138 N	ID Map #: 104G.036 N	IID #: 10172 Reach #:	1.0 Site #: 246		
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: G	GE Access: H		
GIS UTM (Z.E.N): 9.383003.63635	545	R	ef. Name:			
(
Date: 2007/08/23	Time: 09:25	Agency: C660	Crew: KM RS Fish Cr	rd?: Incomplete:		
		CHANNEL				
Mtd width	width width width w	idth width width width	width width Avg	Gadient % Mtd Avg		
Channel Width (m): MS 3.70		.10 4.70	3.10 Method			
Wetted Width (m): MS 0.90	1.30 0.90 2.00 1	.30 0.90	1.22 Method	d II:		
Pool Depth (m): MS			0.00 No Vis.	Ch.: Intermittent:		
Wb Depth: .4 .4	.4 Avg: 0.40	Method: MS S		Dw: Tribs.:		
· ! · · ·		ivietilou. Ivio	tage: L M 🗸 H 🗌	DW IIIDS		
COVER	Total: A					
Type: SWD LW	'D B U	DP OV IV	CROWN CLOSURE			
Amount: S S	N N	N D N	3 41-70%			
Loc: P/S/O:			INSTREAM VEG: N 🗸 A	\neg M \square V \square		
LWD: F	DIST: E					
LB SHP: S			RB SHP: S			
	C _ B _ R _ A _	٦	Texture: F 🗸 G 🗸 C	\square B \square R \square A \square		
			_			
RIP: C			RIP: C			
STG: MF			STG: MF			
		WATER				
EMS:			Req #:			
Temp: 7	,	Method: T3	Cond.: 190	Method: S3		
pH: 8.3		Method: P2				
Flood Signs:		Method: GE	Turb.: T M L	C Method: GE		
r lood Signs.	'					
		MORPHOLOGY				
Bed Material: Dominant	: C Subdom: G		O1 B1 B2 B3 D1	D2 D3		
	: 14.00 Morph: C	Б				
, ,	. 1 1.00 Molphi. 0	DISTURBANCE INDICATORS				
Pattern: SI		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5		
Islands: N						
Coupling: CO						
Confinement: OC		_				
FSZ:		Bars:	N SIDE ✓ DIAG	MID SPAN BR		
	ı	HABITAT QUALI	ТҮ			
Name		(Comments			
Spawning Habitat none						
OverWinter Habitat none						
Rearing Habitat poor -	no pools	B 6 T - 2				
		PHOTOS				
Photo Foc Lg	Dir		Comments			
R: 102 F: 4370 STD	U					
R: 102 F: 4371 STD	D					

COMMENTS					
Section	Comments				
CHANNEL	S6 - 26% barrier @ 1st crossing, marginal habitat, no pools, shallow. Same stream as site 245.				



Site 246 – Upstream view



Site 246 – Downstream view

Reach # ILP Map # ILP # Site

	et Name: Schaft C e (gaz.): MESS C ed Code: 630-0000				Project Code: 17415
			WATERSH	I E D	
Gazetted Name:				Local Nar	ne:
	000-000000-00000	-00000-0000-0000-000-	-000-000-000-000	223	
ILP Map#:			NID Map #: 104G.036	NID #: 10174	Reach #: 1.0 Site #: 248
·		Method:			Method: GE Access: H
Field UTM (Z.E.N): GIS UTM (Z.E.N):				Site Lg: 100 Ref. Name:	IVIEUTIOU. GE ACCESS: T
GIO UTIVI (Z.E.N):	a.JUZƏ11.UJDJJJ8/			nei. Naifie:	
Dat	e: 2007/08/23	Time: 10:35	Agency: C660	Crew: KM RS	Fish Crd?: Incomplete:
			CHANNE		
ı	Mtd width w	idth width width v			Gadient % Mtd Avg
Channel Width (m):	MS 0.60 0.3		width width width 0.20 1.00	width width width	Avg Gadient % Mtd Avg
Wetted Width (m):			0.20 1.00		0.48 Method II: C 28.00
Pool Depth (m):	MS 0.30 0	0.20 0.00	0.20	- 	0.00 Wethod II.
				<u> </u>	No Vis.Ch.: Intermittent:
Wb Depth:	.2 .5	.2 Avg: 0.30	Method: MS	Stage: L 🗸 M	I H Dw: Tribs.:
COVER		Total: A			
	CWD LIVE		DD OV	IV CDOWN	N OOLIDE
Type:	SWD LWD	B U	DP OV D	IV CROWN 0	21-40%
Amount: Loc: P/S/O:					
LUC. F/3/U:				INSTREA	M VEG: N A M V
LWD:	N	DIST: NA			
LB SHP:	V			RB SH	P· V
			\neg		r.v re: F 🔽 G C C B R A C
		BRA			
RIP:					P: C
STG:	IVIF			ST	G: MF
F1.12			WATER		
EMS:	2		Mathadi Ta	Req #:	05
Temp:			Method: T3	Cond.: 1	85 Method: S3
_i.i.	7 0		Mothod: DO		
pH:	7.8		Method: P2	Turb.:	T M L C Method: GE
pH: Flood Signs:	7.8		Method: GE		T M L C Method: GE
•	7.8				T M L C Method: GE
Flood Signs:			M O R P H O L		T
•	Dominant: C	Subdom: 0	MORPHOL	O G Y O1 B1	
Flood Signs: Bed Material: D95:	Dominant: C 18.0 D (cm): 2	Subdom: 0	Method: GE MORPHOLO G CP DISTURBA	O G Y O1 B1	B2 B3 D1 D2 D3
Flood Signs: Bed Material: D95: Pattern:	Dominant: C 18.0 D (cm): 2 ST	Subdom: 0	MORPHOL	O G Y O1 B1	
Bed Material: D95: Pattern: Islands:	Dominant: C 18.0 D (cm): 2 ST N	Subdom: 0	Method: GE MORPHOLO G CP DISTURBA	O G Y O1 B1	B2 B3 D1 D2 D3
Bed Material: D95: Pattern: Islands: Coupling:	Dominant: C 18.0 D (cm): 2 ST N DC	Subdom: 0	Method: GE MORPHOLO G CP DISTURBA	O G Y O1 B1	B2 B3 D1 D2 D3
Bed Material: D95: Pattern: Islands: Coupling: Confinement:	Dominant: C 18.0 D (cm): 2 ST N DC FC	Subdom: 0	Method: GE MORPHOLO G CP DISTURBA	O G Y O1 B1 ANCE ORS C1 C2	B2 B3 D1 D2 D3
Bed Material: D95: Pattern: Islands: Coupling:	Dominant: C 18.0 D (cm): 2 ST N DC FC	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO G CP DISTURBA INDICAT	O G Y O1 B1 O1 C2 O1 C2 O1 C2 O1 C3	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Bed Material: D95: Pattern: Islands: Coupling: Confinement:	Dominant: C 18.0 D (cm): 2 ST N DC FC	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO G CP DISTURBA INDICAT	O G Y O1 B1 O1 C2 O1 C2 O1 C2 O1 C3	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Bed Material: D95: Pattern: Islands: Coupling: Confinement:	Dominant: C 18.0 D (cm): 2 ST N DC FC	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO G CP DISTURBA INDICAT	O G Y O1 B1 O1 C2 O1 C2 O1 C2 O1 C3	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Flood Signs: Bed Material:	Dominant: C 18.0 D (cm): 2 ST N DC FC	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO G CP DISTURBA INDICAT	O G Y ANCE CORS C1 C2 ITS: N SI ALITY	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name	Dominant: C 18.0 D (cm): 2 ST N DC FC	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO G CP DISTURBA INDICAT	O G Y ANCE CORS C1 C2 ITS: N SI ALITY	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habita	Dominant: C 18.0 D (cm): 2 ST N DC FC	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO G CP DISTURBA INDICAT	O G Y ANCE CORS C1 C2 ITS: N SI ALITY	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habitat	Dominant: C 18.0 D (cm): 2 ST N DC FC L Innone	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO G CP DISTURBA INDICAT	OGY ANCE ORS C1 C2 Ors: N SI ALITY Comments	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habita Spawning Habitat	Dominant: C 18.0 D (cm): 2 ST N DC FC I t none none	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO GCP DISTURBA INDICAT Ba HABITAT QU	OGY ANCE ORS C1 C2 Ors: N SI ALITY Comments	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5
Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habitat Spawning Habitat Rearing Habitat	Dominant: C 18.0 D (cm): 2 ST N DC FC L Innone	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO GCP DISTURBA INDICAT Ba HABITAT QU	OGY ANCE ORS C1 C2 Ors: N SI ALITY Comments	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5 DE DIAG MID SPAN BR
Bed Material: D95: Pattern: Islands: Coupling: Confinement: FSZ: Name OverWinter Habitat Spawning Habitat Rearing Habitat	Dominant: C 18.0 D (cm): 2 ST N DC FC I t none none Foc Lg	Subdom: 0 2.00 Morph: 0	Method: GE MORPHOLO GOP DISTURBATINDICAT Ba HABITAT QU PHOTO:	OGY ANCE ORS C1 C2 Ors: N SI ALITY Comments	B2 B3 D1 D2 D3 C3 C4 C5 S1 S2 S3 S4 S5 DE DIAG MID SPAN BR

	COMMENTS
Section	Comments
CHANNEL	S6 - barely a stream, very narrow, defined channel with barely a trickle of flow. High gradient (27%)



Site 248 – Upstream view



Site 248 – Downstream view

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: Schaft 0	Creek			
Stream Name (gaz.): MESS (Project Code:	17415
Project Watershed Code: 630-000		00-000-000-000-000-000-00	· ·	17410
1 Tojock Waterenba Code. Coo coc				
		WATERSHED		
Gazetted Name:			Local Name:	
Watershed Code: 000-000000-0000	D-00000-0000-0000-000-0	00-000-000-000	Local Name.	
			D#: 10177 Reach#:	1.0 Site #: 251
ILP Map#: 104G.036	ILP #: 1143 NII	D Map #: 104G.036 NI	D#. 10177 Reach#.	1.0 Site #. 251
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: G	E Access: H
GIS UTM (Z.E.N): 9.382955.6362792	2	Re	ef. Name:	
Date: 2007/08/23	Time: 12:00	Agency: C660 C	rew: KM RS Fish Cro	d?: Incomplete:
Date: 2007/00/23	Time: 12.00		new. Nivi No	a: incomplete
		CHANNEL		
	vidth width width wid		width width Avg	Gadient % Mtd Avg
. ,	60 1.70 1.80 1.		2.05 Method	
` '	2.10 1.60 1.50 1.4	40 1.40	1.67 Method	II: C
Pool Depth (m): MS			0.00	~ □ □
Wh Donthy 2 2	2 4 0.00	Mada al MO O	No Vis.0	
Wb Depth: .3 .3	.3 Avg: 0.30	Method: MS St	age: L M 🗸 H 🗌	Dw: Tribs.:
COVER	Total: A			
Type: SWD LWD	B U	DP OV IV	CROWN CLOSURE	
Amount: D S	N T	N S N	1 1-20%	
Loc: P/S/O:			INSTREAM VEG: N A	7 M 🗩 V 🗀
LWD: A	DIST: E			
LB SHP: S			RB SHP: S	
Texture: F 🕡 G 🔲 C	₽ B □ R □ A □	1	Texture: F 🔽 G 🗌 C [B R R A F
RIP: C		J	RIP: C	
STG: MF			STG: MF	
STG. IVIF			31 G. IVIF	
		WATER		
EMS:			Req #:	
Temp: 5	N	lethod: T3	Cond.: 90	Method: S3
pH: 7.8	N	lethod: P2	Turb : T C M C I C (C 🗔 Method: GE
Flood Signs:	N	lethod: GE	Turb.: T M L C	ivietriod. GE
		MORPHOLOGY		
		MORTHOLOGI	O1 B1 B2 B3 D1	D2 D3
Bed Material: Dominant: 0				
D95: 30.0 D (cm):	7.00 Morph: CF	DISTURBANCE		
Pattern: SI		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands: N				
Coupling: DC				
Confinement: OC				
FSZ:□		Bars:	N✓ SIDE DIAG	MID SPAN BR
	н	IABITAT QUALIT	ГҮ	
Name		C	comments	
OverWinter Habitat none				
Spawning Habitat none				
Rearing Habitat none				
		PHOTOS		
Photo Foc Lg	Dir		Comments	
R: 102 F: 4379 STD	U			
R: 102 F: 4380 STD	D			

	COMMENTS
Section	Comments
CHANNEL	S6 - steep wide stream with no pools. Choked with SWD



Site 251 – Upstream view



Site 251 – Downstream view

Reach # ILP Map # ILP # Site

			PR	OJEC	Т			
Project Name	: Schaft Creek							
Stream Name (gaz.)						F	Project Code:	17415
Project Watershed Code	: 630-000000-0	0000-00000-000	0-0000-000-00	0-000-000-0	000-000			
	WATERSHED							
Gazetted Name:						Local Name	e: M120	
Watershed Code: 000-000	0000-00000-0000	00-0000-0000-00	00-000-000-000	0-000-000				
ILP Map#: 104G.03	36 IL	.P #: 1145	NID Map #: 10	04G.036	NID #	: 10179	Reach #:	1.0 Site #: 253
Field UTM (Z.E.N):		Method:				te Lg: 100	Method: 0	GE Access: H
GIS UTM (Z.E.N): 9.38297	2.6362776				Ref. N	lame:		
Date: 2007	/08/23 Ti	ime: 13:30	Agency	r: C660	Crew	r: KM RS	Fish C	rd?: Incomplete:
			CH	IANNE	L			
Mtd	width width	width width	width width	width	width wi	dth width	Avg	Gadient % Mtd Avg
Channel Width (m): MS Wetted Width (m): MS	2.00 1.20 0.50 0.40	1.40 6.00 0.30 0.70	4.70 4.40 0.00 0.00	++			3.28 Metho	
Pool Depth (m): MS	0.30 0.40	0.30 0.70	0.00 0.00	+ +			0.00	u II.
W 5 4 4 4					٥.		No Vis	
Wb Depth: .4	.3 .4	Avg: 0.37	Method	: MS	Stage	: L 🗸 M	∐ н ∐	Dw: Tribs.:
COVER	Tota		1 55 1	0) / I	n./	0000000	OOUDE	
Type: SWD Amount: T	LWD	B U S N	DP N	OV T	IV N	CROWN CL	1-70%	
Loc: P/S/O:							VEG: N ✓ A	$\neg M \cap V \cap$
LWD: N		ST: NA						
LB SHP: V	DI.	OT. NA				RB SHP	• \/	
Texture: F	G , C ,	B □ R □ A						✓ B □ R □ A □
RIP: C						RIP		
STG: MF						STG		
			V	VATER				
EMS:			-			Req #:		
Temp: 6			Method: T3	3		Cond.: 94		Method: S3
pH: 7.6			Method: P2	2		Turb.: T	\square M \square L \square	C Method: GE
Flood Signs:			Method: GE					
			MOR	PHOLC		0.4 0.4	D0 D0 D1	Do Do
	ominant: C	Subdom			_	O1 B1	B2 B3 D1	D2 D3
D95: 46.0	D (cm): 16.00	Morph	i: CP	DISTURBA INDICATO	200		V	
Pattern: ST Islands: N				INDICATO	JKS [C1 C2	C3 C4 C5	S1 S2 S3 S4 S5
Coupling: CO								
Confinement: CO							F	MIDE ODANE DDE
FSZ:				Bar	5:	N SID	E DIAG	MID☐ SPAN☐ BR✓
			HABIT	AT QU	ALITY			
Name					Com	ments		
Spawning Habitat OverWinter Habitat	none none							
Rearing Habitat	none							
			CO	MMENT	rs			
Section					Com	ments		
CHANNEL	S6 - small strea	am down debris	chute. Scoured	to rock in p	laces. Wa	ter goes und	erground in places	

Reach # ILP Map # ILP # Site

					PR	OJE	СТ							
Project Name	: Schaft Creel	<												
Stream Name (gaz.)									F	Project Co	ode:		17415	
Project Watershed Code	: 630-000000	-00000-00	J000-00C	10-0000-	000-000	-000-00	U-000-00)()						
					WAT	ERSI	HED							
Gazetted Name:								Loc	cal Name	e:				
Watershed Code: 000-000 ILP Map#: 104G.0		000-0000 ILP #: 11			100-000- ap #: 104			ID#: 10	180	Read	ch #·	1.0	Site #:	254
Field UTM (Z.E.N):	00		lethod:	TAID IVIC	ар //. 10	10.000				rtout	Method:		Access: H	201
Field UTM (Z.E.N): Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382959.6362724 Ref. Name:														
Date: 2007	7/08/23	Time: 13:	:55	,	Agency:	C660	С	Crew: I	KM RS		Fish C	rd?:	Incomple	ete:
						ANN								
Mtd	width width	width	width	width	width	width	width	width	width	Avg		Gadie	ent % Mtd	Avg
, ,	0.80 0.70	1.10	1.20	1.00	1.40					1.03	Metho		15.0 C	21.00
Wetted Width (m): MS Pool Depth (m): MS	0.80 0.90 0.13	1.00	1.10	0.80	1.40					1.00 0.13	Metho	d II:	С	_
					l	l		l			No Vis	=	Intermittent:	
Wb Depth: .3	.3 .4		g: 0.33	N	/lethod:	MS	St	age: L	M	✓ H		Dw:	Tribs.:	
COVER		tal: A												
Type: SWD Amount: T	LWD	B T	U S	DF N) (D D	IV N	CR0		LOSURE 1-40%				
Loc: P/S/O:		· /						-			N \square A	M 🗸	V \square	
LWD: F		DIST: E						4						
LB SHP: V		JIO1. L							RB SHP	· 11				
Texture: F	G \square C \square	В	R \square A	\							G ┌ C	В	R A	٦
RIP: C									RIP					_
STG: MF									STG	: MF				
					W	ATE	R							
EMS:									eq #:					
Temp: 5 pH: 8.0					od: T3			С	ond.: 11				Method: S	
Flood Signs:					od: GE			Т	urb.: T	M		C 🔨	Method: (3E
				N	IORP	HOL	OGY							
Bed Material: D	ominant: C		Subdom	n: B				O1	B1	B2 I	B3 D1	D2 D	3	
D95: 32.0	D (cm): 7.00)	Morph			ISTURE	BANCE							
Pattern: SI					_	INDICA		C1	C2	C3 (C4 C5	S1 S	2 S3 S	4 S5
Islands: N														
Coupling: DC Confinement: FC														
FSZ:						В	ars:	N	SID	E	DIAG	MID	SPAN	BR
				HA	BITA	T Q L	JALI1	ГΥ						
Name								commen	ts					
Spawning Habitat	none													
OverWinter Habitat Rearing Habitat	none poor - steep,	few nools												
rearing Habitat	гоог этеер,	. 5 11 POUIS			PΗ	ото	S							
Photo Fo	c Lg	D	Dir							Commer	nts			
	TD		U	_	cade bar	rier ds o	f rc							
	TD TD		D D	@ ro										
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1				-									

COMMENTS					
Section	Comments				
CHANNEL	S6 - steep small stream w/good flow, 27% cascade just ds of rc				





Site 254 – Upstream cascade barrier

Site 254 – Upstream view



Site 254 – Downstream view

Foc Lg

STD

STD

Dir

U

D

Photo

102 F: 4397

102 F: 4398

ILP Map # Reach # ILP# Site 1.0 104G.036 1148 256 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M123 ILP Map#: 104G.036 NID #: 10182 ILP #: 1148 1.0 NID Map #: 104G.036 Reach #: Site #: 256 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382794.6362313 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/23 Time: 14:45 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.30 0.80 0.60 1 40 1.30 0.85 Method I: 8.0 9.00 0.70 10.0 С 0.60 Method II: Wetted Width (m) MS 0.60 0.90 1.00 0.70 1.20 0.83 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: .4 .3 .3 Avg: 0.33 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** DP SWD LWD В OV IV Type: U 1-20% Ν Amount D Ν S Ν S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: NS DIST: NS LB SHP: U Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: M RIP: M STG: PS STG: PS WATER EMS: Req#: Temp: 8 Method: T3 Cond.: 144 Method: S3 pH: 7.6 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: F Subdom: G **V ~** D95: 12.0 D (cm): 3.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: IR C2 С3 S1 S3 S5 Islands: N Coupling: CO Confinement: NS SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Comments Name Spawning Habitat OverWinter Habitat none Rearing Habitat poor - shallow, no pools **PHOTOS**

Comments

Reach # ILP Map # ILP # Site
1.0 104G.036 1148 256

	COMMENTS
Section	Comments
CHANNEL	S6 - small stream @ bottow of av chute. Lots of SWD. Good flow, but shallow, no pools. Probably ds barrier. Road follows stream (actually on top of stream) for several M us of rc.



Site 256 – Upstream view



Site 256 - Downstream view

Reach # ILP Map # ILP # Site

			PROJECT			
Project Name: Stream Name (gaz.): Project Watershed Code:	MESS CREEK	000-0000-0000-000	0-000-000-000-000-C	Project Code:	17415	
		W	ATERSHED			
Gazetted Name:				Local Name: M104		
Watershed Code: 000-00000	00-00000-00000-0000-	0000-000-000-000	-000-000-000	2000		
ILP Map#: 104G.036				NID #: 10183 Reach #:	1.0 Site #: 257	
Field UTM (Z.E.N):	M	ethod:		Site Lg: 100 Method	I: GE Access: H	
GIS UTM (Z.E.N): 9.382772.		ctriod.	F	Ref. Name:	7,00003.11	
(
Date: 2007/08/23 Time: 15:05 Agency: C660 Crew: KM RS Fish Crd?: ☐ Incomplete: ✔						
			CHANNEL			
Mtd v	width width width	width width w	vidth width width	width width Avg	Gadient % Mtd Avg	
Channel Width (m): MS 0.0	60 0.50 1.10	0.30 0.50 0	0.80		hod I: 5.0 4.0 C 4.50	
` '	0.40 0.50 0.70	0.40 0.60 0	0.80		nod II: C	
Pool Depth (m): MS				0.00	/is.Ch.: Intermittent:	
Wb Depth: .3	.3 Avg	: 0.30 Metl	thod: MS S	Stage: L M W H	/is.Ch.: Intermittent: Tribs.:	
· 1		. 0.00	aloa. Mo	stage. L W V II	5w	
COVER	Total: A			_		
Type: SWD	LWD B	U DP	OV IV	CROWN CLOSURE		
Amount: T	S N	T N	D N	2 21-40%		
Loc: P/S/O:				INSTREAM VEG: N A		
LWD: NS	DIST: NS					
LB SHP: V				RB SHP: U		
Texture: F 🕡 🤇	G C C B F	R \square A \square		Texture: F 🔽 G 🦳	C _ B _ R _ A _	
RIP: M				RIP: M		
STG: YF				STG: YF		
			WATER			
EMS:			WAILK	Pog #:		
Temp: 7		Method:	Т3	Req #: Cond.: 153	Method: S3	
pH: 7.9		Method:				
Flood Signs:		Method:	GE	Turb.: T M L	C Method: GE	
		MO	RPHOLOGY	/		
			NI IIO E O O	O1 B1 B2 B3 D1	D2 D3	
		Subdom: G				
D95: [D (cm):	Morph: RP	DISTURBANCE			
Pattern: SI			INDICATORS	C1 C2 C3 C4 C5	S S1 S2 S3 S4 S5	
Islands: N						
Coupling: DC Confinement: UN						
FSZ:			Bars:	N SIDE DIAG	MID SPAN BR	
1 32.						
		HABI	ITAT QUALI	TY		
Name				Comments		
Spawning Habitat n	none					
	none					
Rearing Habitat p	poor - no pools, lots of f	low				
			PHOTOS			
Photo Foc L				Comments		
R: 102 F: 4399 STD						
R: 102 F: 4400 STD) ι	<u>'</u>				

	COMMENTS Section Comments								
Section	Comments								
SITE CARD	bedmaterial and LWD func. Missing on site card.								
CHANNEL	S6 - small stream along edge of wetland. Multiple sections of underground flow, no pools. Marginal habitat.								



Site 257 – Downstream view



Site 257 – Upstream view

Foc Lg

STD

STD

Dir

IJ

D

us to av chute, SWD

@ rc

Photo

102 F: 4412

102 F: 4413

ILP Map # Reach # ILP# Site 1.0 104G.036 1152 260 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M126 ILP Map#: 104G.036 NID #: 10186 ILP #: 1152 1.0 NID Map #: 104G.036 Reach #: Site #: 260 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382508.6361780 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/23 Time: 15:55 Agency: C660 Crew: KM RS CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 1.10 0.50 0.50 0.80 Method I: 14.00 1 10 0.90 0.70 14.0 С Method II: Wetted Width (m) MS 1.00 1.10 0.70 0.70 0.40 0.50 0.73 С Pool Depth (m) MS 0.00 No Vis.Ch.: Intermittent: Dw: Tribs.: Wb Depth: .3 .2 .3 Avg: 0.27 Method: MS Stage: L ☐ M ✔ H ☐ COVER Total: A **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 21-40% Ν Amount D Ν Ν S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A 🗸 M 🗸 V ☐ LWD: A DIST: E RB SHP: S Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 11 Method: T3 Cond.: 168 Method: S3 pH: 8.0 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Subdom: F Bed Material: Dominant: G **V** D95: 13.0 D (cm): 6.00 Morph: RP DISTURBANCE **INDICATORS** Pattern: IR C2 С3 C5 S1 S3 S5 Islands: F Coupling: DC Confinement: UN SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Comments Name OverWinter Habitat Spawning Habitat none Rearing Habitat none **PHOTOS**

Comments

Reach # ILP Map # ILP # Site
1.0 104G.036 1152 260

	COMMENTS
Section	Comments
CHANNEL	S6 - small stream comes from av chute and splits into 2 channels just us of rc. Shallow no pools, marginal habitat. Probably gradient barrier ds.
	pamer us.



Site 260 – Upstream to avalanche chute



Site 260 - Downstream view

Reach # ILP Map # ILP # Site

	PROJECT														
		Stream N	lame (gaz.)	:: Schaft Cro :: MESS CF :: 630-0000		00-0000-0	00-000-00	00-000-00	10-000-0	00	Project	Code:		17415	
							WA	TERS	HED						
	Gaze	etted Nar	ne:							Loc	al Name: M2	7 Arctic Cr.			
)000-0000-	-00000-0000-0	0-000-000	00-000-000	0-000-000)						
		ILP Ma	p#: 104G.0	16	ILP #: 200	0 NII	O Map #: 1	04G.016	N	IID #: 200)00 R	each #:	1.0	Site #: 300	
	Field UT	TM (Z.E.	N):		Me	thod:				Site Lg:	: 100	Access: H			
			-	09.6337546					R	ef. Name:					
		_			- :			0000				=:	ı0 4		
			Date: 2007	/08/10	Time: 09:10	<u> </u>		y: C660		Crew: S	H KD	Fish Cr	d?: ✓	Incomplete:	
								HANN	EL						
_	01 1	11471111	Mtd	width wid			dth width		width	width	width Avg		Gadie		Avg
 		Width (n Width (n	-	14.30 12.8 10.70 11.			.30 12.00 30 7.40		┼	++	12.5 8.95			6.0 C 4	1.33
 		Depth (n	·	0.38 0.3			36	'	+-	+	0.37		3.0	C	
<u> </u>		(,									No Vis.	Ch.:	Intermittent:	
	-	Wb Dep	th: .8	.8 .0	6 Avg:	0.73	Method	l: MS	S	tage: L	M ✓ H	I 🗌	Dw:	Tribs.:	
		COVE	R		Total: M										
		Туг	pe: SWD	LWD	В	U	DP	OV	IV	CRC	WN CLOSU	RE			
		Amou	ınt: T	Т	D	N	N	Т	N	1	1-20%				
	1	Loc: P/S/	/O:						V	INS	ΓREAM VEG:	N 🗸 A	M	V	
		ΙW	/D: F		DIST: E					_					
		LB SI								г	RB SHP: S				
				G \square C	B ▼ R		1						□в□	R \square A \square	
							J							🗀 🗀	
			RIP: D TG: PS								RIP: C STG: MF				
							V	N A T E	R						
		EM						_			eq #:				
			np: 4				lethod: T3 lethod: P2			Co	ond.: 50			Method: S3	
	F		oH: os: rafted lo	and sm wd			lethod: GE			Tı	urb.: T 🥅 I	M \square L \square	C	Method: GE	
				u 0 114									V	Wictiod. OL	
							1100		0.01				<u> </u>	Wictiod: GE	
							MOR	PHOL	. O G Y						
	Ве	ed Materi		Dominant: B		Subdom: C			. O G Y	01	B1 B2	B3 D1	D2 D3		
	Вє			Oominant: B D (cm): 0		Subdom: C Morph: CF		PHOL	BANCE						
	Вє		95: 0.90					PHOL	BANCE		B1 B2			3	\$5
	Вє	D9 Patte Island	95: 0.90 rn: SI ds: N					PHOL	BANCE	O1	B1 B2	B3 D1	D2 D3	3	\$5
		Patte Island Couplir	95: 0.90 rn: SI ds: N ng: PC					PHOL	BANCE	O1	B1 B2	B3 D1	D2 D3	3	\$5
		Patte Island Couplir onfineme	95: 0.90 rn: SI ds: N ng: PC nt: FC					PHOL DISTURI INDICA	BANCE	01 C1	B1 B2	B3 D1	D2 D3	3	
		Patte Island Couplir onfineme	95: 0.90 rn: SI ds: N ng: PC			Morph: CF	5	PHOL DISTURI INDICA	BANCE TORS Bars:	01 C1	B1 B2 C2 C3	B3 D1 C4 C5	D2 D3	3] 2 S3 S4	S5
		Patte Island Couplir onfineme	95: 0.90 rn: SI ds: N ng: PC nt: FC			Morph: CF		PHOL DISTURI INDICA	BANCE TORS Bars:	01 C1	B1 B2 C2 C3	B3 D1 C4 C5	D2 D3	3] 2 S3 S4	
	Co	Patte Island Couplir onfineme	95: 0.90 rn: SI ds: N ng: PC nt: FC			Morph: CF	5	PHOL DISTURI INDICA	BANCE LTORS Bars:	01 C1	B1 B2 C2 C3 SIDE	B3 D1 C4 C5	D2 D3	3] 2 S3 S4	
	Co	Patte Island Couplir onfineme FS Name	95: 0.90 rrr: SI ds: N ng: PC nt: FC SZ:	D (cm): 0	.23	Morph: CF	IABIT,	PHOL DISTURI INDICA B AT QU	BANCE TORS Bars:	O1 C1 N TY Comment:	B1 B2 C2 C3 SIDE	B3 D1 C4 C5	D2 D3	3] 2 S3 S4	
	Ccc Spaww OverW	Patte Island Coupling Confineme FS Name Vining Hab	95: 0.90 rr: SI ds: N ng: PC nt: FC sZ:	D (cm): 0	narily boulders eep pools and	Morph: CF	I A B I T	PHOL DISTURI INDICA B AT QU	BANCE TORS Bars:	O1 C1 N TY Comment:	B1 B2 C2 C3 SIDE	B3 D1 C4 C5	D2 D3	3] 2 S3 S4	
	Ccc Spaww OverW	Patte Island Couplir onfineme FS Name	95: 0.90 rr: SI ds: N ng: PC nt: FC sZ:	D (cm): 0	.23	Morph: CF	IABIT Ass. Occasionging bankin stream	PHOL DISTURI INDICA B AT QU onal grave	BANCE TORS Bars: UALI (el patche	O1 C1 N TY Comment:	B1 B2 C2 C3 SIDE	B3 D1 C4 C5	D2 D3	3] 2 S3 S4	
	Spawi OverW Rear	Patte Island Couplir Confineme FS Name Vinter Hal	95: 0.90 rn: SI ds: N ng: PC nt: FC SZ:	D (cm): 0 poor - prim fair - few de	narily boulders eep pools and nty of cover an	Morph: CF and cobble I no overha d boulders	IABIT Ass. Occasionging bankin stream	PHOL DISTURI INDICA B AT QU	BANCE TORS Bars: UALI (el patche	O1 C1 N TY Comment:	B1 B2 V V C2 C3 SIDE	B3 D1 C4 C5 DIAG	D2 D3	3] 2 S3 S4	
D	Spaww OverW Rear	Patte Island Couplir Couplir Confineme FS Name Ining Habit Tring Habit	95: 0.90 rn: SI ds: N ng: PC nt: FC SZ: bitat bitat tat	D (cm): 0 poor - prim fair - few di good - pler c Lg	narily boulders eep pools and nty of cover an	Morph: CF and cobble I no overha d boulders	IABIT Ass. Occasionging bankin stream	PHOL DISTURI INDICA B AT QU onal grave	BANCE TORS Bars: UALI (el patche	O1 C1 N TY Comment:	B1 B2 C2 C3 SIDE	B3 D1 C4 C5 DIAG	D2 D3	3] 2 S3 S4	
R:	Spaww OverW Rear Photo	Patte Island Coupling Coupling Patter FS Name Island Vinter Hall Vinter Habita Pabita	95: 0.90 rn: SI ds: N ng: PC nt: FC SZ: bitat bitat tat Fo	poor - prim fair - few de good - pler c Lg	narily boulders eep pools and nty of cover an	Morph: CF and cobble I no overha d boulders	IABIT Ass. Occasionging bankin stream	PHOL DISTURI INDICA B AT QU onal grave	BANCE TORS Bars: UALI (el patche	O1 C1 N TY Comment:	B1 B2 V V C2 C3 SIDE	B3 D1 C4 C5 DIAG	D2 D3	3] 2 S3 S4	
R: R: R:	SpawwoverW Rear Photo 106 1	Patte Island Couplir Couplir Confineme FS Name Ining Habit Tring Habit	95: 0.90 rn: SI ds: N ng: PC nt: FC SZ:	D (cm): 0 poor - prim fair - few di good - pler c Lg	narily boulders eep pools and nty of cover an	Morph: CF and cobble I no overhand boulders	IABIT Ass. Occasionging bankin stream	DISTURI INDICA B AT QU onal grave	BANCE TORS Bars: UALI (el patche	O1 C1 N TY Comment:	B1 B2 V V C2 C3 SIDE	B3 D1 C4 C5 DIAG	D2 D3	3] 2 S3 S4	

						PHOTOS
	Ph	oto		Foc Lg	Dir	Comments
R:	106	F:	392	STD	Х	eroding bank LB
R:	106	F:	393	STD	Х	abandoned channel
						COMMENTS
		Se	ction			Comments
		СНА	NNEL			robably not dense enough to have recovered fish via shocking. Important habitat value. Recommend e to eroding banks on RB.



Site 300 – Upstream view



Site 300 - Erosion left bank



Site 300 – Abandoned channel



Site 300 - Downstream view



Site 300 – Erosion right bank

Reach #

ILP Map #

ILP#

1.0 104G.016 2001

Site 301

				PRO	OJEC	T								
Stream Name (gaz.)		K	00-0000-00	Project Code: 17415								17415		
			W	ATE	ERSH	HED								
Gazetted Name:							Loc	al Name	e: M28					
Watershed Code: 000-000	0000-00000-000	00-0000-0000-0	00-000-000	0-000-0	000-000									
ILP Map#: 104G.0	16 I	LP #: 2001	NID Map	lap #: 104G.016 NID #				001	Read	h #:	1	.0	Site #: 3	01
Field UTM (Z.E.N):		Method:		Site				ite Lg: 100 Method: G				E Access: H		
GIS UTM (Z.E.N): 9.38454	19.6338538					Re	ef. Name							
D / 0007	1/00/40	F: 45.00			2000					- : .	0 10			
Date: 2007	7/08/10	Гіте: 15:30	Ag	ency: (rew: S	SH KD		Fish	Crd?:		Incomple	te: 🔽
					ANNI									
Mtd	width width	width width	width v	width	width	width	width	width	Avg			Gadier	nt % Mtd	Avg
Channel Width (m):									0.00		thod I:			0.00
Wetted Width (m): Pool Depth (m):									0.00	ivieti	hod II:			J
1 del Depair (m).				!					0.00	No V	/is.Ch.	: 🗸 l	ntermittent:	
Wb Depth:		Avg: 0.00	Met	thod:	MS	St	age: L	M	ПНГ		Dw	: 🗌	Tribs.:	
COVER	Tot	al:												
Type: SWD	LWD	B U	DP	OV	IV	CRO	OWN CI	OSURE						
Amount:														
Loc: P/S/O:					INSTREAM VEG: N A M V									
LWD:	Γ	IST:								_				
		101.												
LB SHP:		P — P —	• —					RB SHP		c —	c —	р 🗆	P	
	G C C	B _ R _ /	` 🗌					Texture		<u> </u>		Ь	R _ A _	
RIP:								RIP						
STG:					STG:									
				W.	ATEI	R								
EMS:							Re	eq #:						
Temp:			Method:				C	ond.:					Method:	
pH:			Method:				Т	urb.: T	П М [7 C [7	Method: G	E
Flood Signs:			Method:	:								_		
			M C	ORP	HOL	OGY								
Bed Material: D	Oominant:	Subdor	n:				01	B1	B2 E	33 D1	1 D	2 D3		
D95:	D (cm):	Morp	h:	D	ISTURE	BANCE								
Pattern:				Ī	INDICA	TORS	C1	C2	C3 (C4 C5	5 S	1 S2	S3 S4	S5
Islands:											1			
Coupling:]						
Confinement:					D,	oro:	NI	SID				AID .	SPAN	PD.
FSZ:					Do	ars:	N	טוט	E	DIAG	IV.	/IID	SPAIN	BR
			C	ОМ	MEN	TS								
Section	I						comment	s						
CHANNEL	no visible char	nnel												
SITE CARD	no visible char													
SITE OAKD	no visible crial													

Reach #

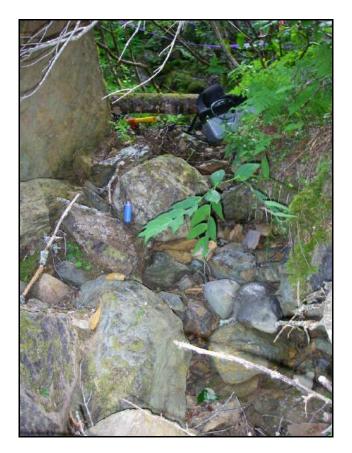
ILP Map #

ILP#

Site

1.0 104G.016

		PRO	JECT								
Stream Name (gaz.)	: Schaft Creek : MESS CREEK : 630-000000-00000-0000	0-0000-0000-000-000-C	000-000-000-000	Project Code:	17415						
		WATE	RSHED								
Gazetted Name: Watershed Code: 000-000 ILP Map#: 104G.0 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.38456	Metl	NID Map #: 1040	00-000		Site #: 302 Access: H						
		A O	000 0 011	_							
Date: 2007	7/08/10 Time: 15:45		Agency: C660 Crew: SH RD Fish Crd?: Incom								
Mtd Channel Width (m): Wetted Width (m): Pool Depth (m): Wb Depth: COVER	width width width v Avg:			M H Dw: Ga	dient % Mtd Avg 0.00						
Type: SWD Amount: Loc: P/S/O: LWD: LB SHP:	DIST:	U DP O	INSTR RB Te	N CLOSURE EAM VEG: N A M SHP: xture: F G C B [RIP: STG:							
		W A	TER								
EMS: Temp: pH: Flood Signs:		Method: Method: Method:	Req : Cond Turb	L:	Method: GE						
		MORPI	HOLOGY								
Bed Material: D D95: Pattern: Islands: Coupling: Confinement:			STURBANCE	21 B2 B3 D1 D2 22 C3 C4 C5 S1	D3 S2 S3 S4 S5						
FSZ:			Bars: N	SIDE DIAG MID	SPAN BR						
		PHO	OTOS								
Photo Foo	c Lg Dir			Comments							
	TD U	lighter for scal									
		COMI	MENTS								
Section			Comments								
CHANNEL	NCD										
SITE CARD	NCD										
	1										



Site 302 – Upstream view

Reach # ILP Map #

ILP#

Site

1.0 104G.016

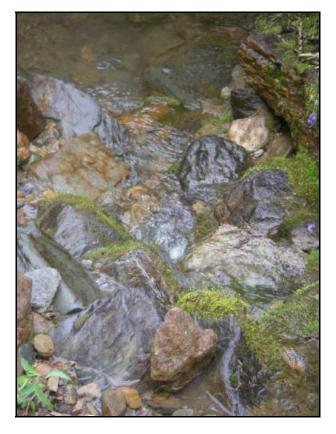
2007

					PR	OJE	C T								
Project Name Stream Name (gaz.) Project Watershed Code	MESS CF	REEK	0000-000	0-0000-	000-000)-000-00	0-000-00	0	F	Project C	ode:		17415		
				,	WAT	ERSI	HED								
Gazetted Name:								Loc	al Nam	e: M34					
Watershed Code: 000-000	000-00000-	-00000-0000	0-0000-00	0-000-0	-000-000-000-000										
ILP Map#: 104G.01	16	ILP #: 20	007	NID Map #: 104G.016 NID #: 1					0007	Rea	ch #:	1.0	;	Site #: 30	07
Field UTM (Z.E.N):		N	Method:					Site Lo	g: 100		Method:	GE	Acce	ss: H	
GIS UTM (Z.E.N): 9.38485	8.6339948						Re	f. Name) :						
Date: 2007	/08/10	Time: 08	:30	Agency: C660 Crew: SH							Fish (Crd?:] In	complet	e: 🗌
					CHANNEL										
Mtd	width wi	dth width	width	width	width	width	width	width	width	Avg	1	Gad	ient %	Mtd	Avg
. ,	3.00 1.40		2.60	1.80	0.90					1.95	Meth				37.00
Wetted Width (m): MS Pool Depth (m): MS		70 1.30 19 0.10	2.00 0.11	1.20 0.12	0.90					1.25 0.13	Metho	od II:		С	
Pool Deptil (III): WiS	0.10 0.	19 0.10	0.11	0.12	0.17				<u> </u>	0.13	No Vi	s.Ch.:	Intermi	ttent:	
Wb Depth: .4															
COVER Total: M															
Type: SWD	LWD	В	U	DP) (OV	IV	CRO	OWN CI	OSURE					
Amount: T	S	D					Т	1		1-20%					
Loc: P/S/O:								INS	TREAM	I VEG:	N \square A	M ✓	V		
LWD: F		DIST: E													
LB SHP: S								1	RB SHP	: S					
Texture: F	G \square C	□ B ✓	R \square A						Texture	: F _	G 🗆 C	В	P R □	Α 🗌	
RIP: D									RIP	: S					
STG: PS									STG	: SHR					
					W	ATE	R								
EMS:								R	eq #:						
Temp: 4					od: T3			C	ond.: 80				Met	hod: S3	3
pH: 8.1					od: P2			Т	urb.: T	П М		C 🗸	Met	hod: GE	≣
Flood Signs:					od: GE										
				M	I O R P	HOL	OGY								
	ominant: C		Subdom					01	B1	B2	B3 D1		D3		
D95: 60.0	D (cm): 2	50	Morph	:SP		DISTURE									
Pattern: ST						INDICA	TORS	C1	C2	C3	C4 C5	S1 :	S2 S	3 S4	S5
Islands: N															
Coupling: CO Confinement: FC															
FSZ:						В	ars:	N	SID	E	DIAG	MID] SPA	N	BR
•	,			HAI	ВІТА	ΤQL	JALIT								
Name Spawning Habitat	none - noo	or substrate a	and high	aradient	:		С	ommen	ts						
OverWinter Habitat	none - fev		ana mgm	gradicill	•										
Rearing Habitat		dient and fev	v pools, b	ut good	boulder	cover.									
					PΗ	ото	S								
	c Lg		Dir							Comme	nts				
	ΓD		U												
R: 107 F: 410 S	ΓD		D												

	COMMENTS
Section	Comments
CHANNEL	S6 - beautiful glacier fed stream, high gradient with no habitat value due to slope, current and lack of pools. Riparian veg consisted on alder and devils club. Marginal habitat value.



Site 307 – Upstream view



Site 307 – Downstream view

Reach # ILP Map # ILP # Site

	PROJECT												
Project Name: Schaft Stream Name (gaz.): MESS Project Watershed Code: 630-00	CREEK	0000-000-000-000-000	Project Code:	17415									
		WATERSHED)										
Gazetted Name:			Local Name: M36										
Watershed Code: 000-000000-0000	0-00000-0000-0000-000-	000-000-000-000											
ILP Map#: 104G.016	ILP #: 2008 N	IID Map #: 104G.016	NID #: 20008 Reach #:	1.0 Site #: 308									
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method	d: GE Access: H									
GIS UTM (Z.E.N): 9.384893.634004	8		Ref. Name:										
Date: 2007/08/10	Time: 09:50	Agency: C660	Crew: SH RD Fish	Crd?: Incomplete:									
		CHANNEL											
Mtd width	vidth width width v	vidth width width widt	h width Avg	Gadient % Mtd Avg									
Channel Width (m): MS 2.00 1	30 0.90 2.30	1.20 1.40		hod I: 40.0 38.0 C 31.67									
	0.90 0.80 0.90	1.00 0.80	0.82 Metl	nod II: 17.0 C									
Pool Depth (m): MS 0.10	0.12 0.11 0.11 (0.90 0.70	0.34										
			No \	/is.Ch.: Intermittent:									
Wb Depth: .4 .6	.4 Avg: 0.47	Method: MS	Stage: L ☐ M ✓ H ☐	Dw: Tribs.:									
COVER	Total: A												
Type: SWD LWI	B U	DP OV IV	CROWN CLOSURE										
Amount: T	S T	DI D T	5 >90%										
Loc: P/S/O:													
			☐ INSTREAM VEG: N 📝 A	`									
LWD: N	DIST: NA												
LB SHP: S			RB SHP: S										
Texture: F G G				C B 🗸 R A									
													
RIP: C			RIP: D										
STG: PS			STG: PS										
		WATER											
EMS:			Req #:										
Temp: 4		Method: T3	Cond.: 160	Method: S3									
pH:		Method: P2	Turb : T C M C I C	C Method: GE									
Flood Signs:		Method: GE	Turb.: T M L	∫ C ✓ Wethod. GE									
		MORPHOLOG	Υ										
			O1 B1 B2 B3 D1	D2 D3									
Bed Material: Dominant:			01 61 62 63 61	D2 D3									
D95: 48.0 D (cm):	20.00 Morph: S	DISTURBANC	E										
Pattern: SI		INDICATORS		5 S1 S2 S3 S4 S5									
Islands: N													
Coupling: PC													
Confinement: CO													
FSZ:		Bars:	N✓ SIDE DIAG	MID SPAN BR									
		HABITAT QUAL	ITY										
Name			Comments										
Spawning Habitat none													
OverWinter Habitat none													
Rearing Habitat fair - slo	v flows with good cover b												
		PHOTOS											
Photo Foc Lg	Dir		Comments										
R: 107 F: 411 STD	U	note extensive over veg.											
R: 107 F: 412 STD	D												

Reach # ILP Map # ILP # Site

1.0 104G.016 2008 308

	COMMENTS									
Section	Comments									
	S6 - gradient great, lack of pools. Gradient decrease for 30m ds of road crossing then increases again. c/b at top and g/c on bottoms for bed material. Marginal habitat value.									
SITE CARD	ph meter broken									



Site 308 – Upstream view



Site 308 – Downstream view

Reach #

1.0

ILP Map #

104G.016

ILP# 2009

309

Site

				PR	OJE	СТ							
Project Na Stream Name (ga Project Watershed Co	•	EEK	.0000-0000-	-000-000	-000-000	0-000-00	0	F	Project Co	de:		17415	
				WAT	ERSI	HED							
Gazetted Name:							Lo	cal Name	e: M37				
Watershed Code: 000-	000000-00000-0	0000-0000-0000	0-000-000-0	000-000-	000-000			oui - tui					
ILP Map#: 1040	G.016	ILP #: 2009	NID M	ap #: 104	4G.016	NID #: 20009 Reach #: 1.					1.0	Site #: 30	9
Field UTM (Z.E.N):		Metho	d:			Site Lg: 50 Method: GE Access:					Access: H		
GIS UTM (Z.E.N): 9.38	4890.6340063					Re	f. Name	э:					
Date: 20	007/08/10	Time: 10:10		Agency:	C660	С	rew:	SH RD		Fish (Ord?:	Incomplete	: ✓
				СН	ANN	EL							
Mto		h width wid	width	width	width	Avg		Gadie		Avg			
Channel Width (m): MS Wetted Width (m): MS									0.00	Meth Metho		C	0.00
Pool Depth (m): MS									0.00	WEUT	Ju 11.	Ü	
14# D #				Method:		٥.				No Vi		Intermittent:	
Wb Depth:		Avg: 0.	St	age: L	M	_ н _		Dw: 🔲	Tribs.:				
COVER Total: Type: SWD LWD B U DP OV IV CROWN CLOSURE													
Type: SV Amount:	VD LWD	B l	J DF	, (OV	IV	CR	OWN CL	OSURE				
Loc: P/S/O:							INIS	STREAM	VEG: I	N \square A	М	v 🗆	
] "') (L / (V	VLO.		□ □	. 🗀	
LWD:		DIST:											
LB SHP:								RB SHP		0 — 0		D — A —	
	☐ G ☐ C [] R] A [Texture: F G C B R A							
RIP: STG:						RIP: STG:							
316.								310	•				
				W	ATE	R							
EMS:								eq #:					
Temp: pH:				od: T3				ond.:				Method: S3	
Flood Signs:				od: GE			٦	Γurb.: Τ	M [_ L _] c 🗌	Method: GE	
			N.	1 O R P	ног	O G V							
5	Б	2 :			11 U L	331	O1	B1	B2 B	3 D1	D2 D3	3	
Bed Material: D95:	Dominant: D (cm):		dom: orph:										
Pattern:	D (GIII).	IVI	лрп.		ISTURE INDICA		C1	C2	C3 C	4 C5	S1 S2	2 S3 S4	S5
Islands:										74 03	31 32	33 34	33
Coupling:												<u> </u>	
Confinement:					D.	ars:	NI	l ein	- ·	DIAG	MID	SDANI	BP□
FSZ:					Di	a13.	N	SID	'		וויוט	SPAN	BR
				COM	IMEN	ITS							
Section						C	ommen	its					
CHANNEL	NCD - seep	age channel. So	me gravel	accumula	ated but	no scour	r and no	banks a	ınd overgi	rown.			
SITE CARD	NCD												
	•												

ILP Map# ILP# Site Reach #

310 1.0 104G.016 2010 PROJECT

Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Watershed Code: 630-000000-00000-00000-0000										000-000	-000-00	0-000-00	00	P	roject Co	ode:		17415	
										WAT	ERS	HED							
	Ga	zette	d Name):									Loc	cal Name	e:				
	Wa	tershe	ed Code	: 000-00	0000-00	000-000	00-000	-0000-00	0-000-0	000-000-	000-000								
		IL	P Map#	: 104G.0	16	IL	_P #: 20	10	NID Ma	ID Map #: 104G.016 NID #:				0010	Reac	h #:	1.0	Site #: 310	
	Field	UTM	(Z.E.N	:			N	lethod:					Site Lo	g: 100		Method: G	E	Access: H	
	GIS	UTM	(Z.E.N	: 9.3849	63.6340	087						Re	ef. Name						
			Da	ite: 200	7/08/10	т	ime: 10:	40		Agency:	Ceeo	,	rew:	SH DU		Fish Cro	42.	Incomplete:	
			De	ZUU	1/00/10	1	c. 10.	70	•				/16 VV.			1 1311 CIC	u:	incomplete.	
											ANN	_							. 7
_	01	134/	. 101 ()	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadie		Avg
-			idth (m): idth (m):	MS MS	0.36 0.16	0.45	0.30	0.34							0.36	Method Method		42.0 C 3 36.0 C	8.67
H			epth (m):		0.10	0.20	0.12								0.00	Wethod		30.0	
_										<u> </u>	<u> </u>			1		No Vis.0	Ch.: 🔲	Intermittent:	
		W	Depth:	.2	.5	.2	Avg	j: 0.30	N	/lethod:	MS	St	age: L	✓ M	Н] '	Dw:	Tribs.:	
		(COVER			Tota	al: A												
Type: SWD LWD B U) (OV	IV	CR	OWN CL	.OSURE				
Amount: D											S		5	;	>90%				
	Γ	Loc	: P/S/O										INS	STREAM	VEG:	N 🗸 A 🗌	M	V	
	<u></u>		LWD	: N	-	ח	IST: NA			•			_						
						5								סם פווס	. c				
			LB SHF		. G —	С	в 🗀 '	R ^						RB SHP		$G \square G$	¬ p □	R \square Δ \square	
						<u>-</u>	ر ا '	R \square A	. П									R _ A _	
			RIF	P: S 6: YF										RIP: S STG: SHR					
			510	. 11										516	. 0. 111				
										W	ATE	R							
			EMS							To				eq #:	2				
			Temp							od: T3			Cond.: 190 Meti					Method: S3	
		Floo	pH d Sians	: : this cou	ld be fld	ch				od: P2 od: GE			Turb.: T ☐ M ☐ L ☐ C ✔ Method: GE						
		00		000		J					11.5	0.011							
									N	ORP	HOL	OGY	<u> </u>		P.0 -	:	Po 5		
		Bed I	Material	: [Dominan	t: F		Subdom	: G				01	B1	B2 E	33 D1	D2 D3	3	
			D95	2.00	D (cm): 0.01		Morph	:SP		ISTUR								
			Pattern	: ST							INDICA	TORS	C1	C2	C3 C	C4 C5	S1 S2	2 S3 S4	S5
			Islands																
			coupling	DC															
Coupling: DC																			
			nement	OC				Confinement: OC FS7· Bars: N SIDE DIAG MID SPAN BR											
				OC							В	ars:	N	SID	E [DIAG	MID	SPAN	BR
			nement	OC					на	BITA		ars:		SID	E [DIAG	MID	SPAN	BR
		Confi	nement	OC	Ī				НА	BITA		JALI.			E [DIAG	MID	SPAN	BR
		Confi	nement FSZ	OC	none				НА	BITA		JALI.	ГҮ		E [DIAG	MID	SPAN	BR
	Ove Spa	Na rWint	rsz FSZ me er Habit g Habita	at at	none				HA	BITA		JALI.	ГҮ		E [DIAG	MID	SPAN	BR
	Ove Spa	Na rWint	rement FSZ me er Habit	at at	_				НА		T Q l	JALI	ГҮ		E	DIAG	MID	SPAN	BR
	Ove Spa Re	Na rWint awnin	rsz FSZ me er Habit g Habita	at	none				НА			JALI	ГҮ	ıts			MID	SPAN	BR
	Ove Spa Re	Na rWint awnin	me er Habita Habitat	at Fc	none none		D			PΗ	т Q (JALI	ГҮ	ıts	E [MID	SPAN	BR
R:	Ove Spa Re	Na rWint awnin	rsz FSZ me er Habit g Habita	oc at at Fc S	none		l	ir J			т Q (JALI	ГҮ	ıts			MID	SPAN_	BR

COMMENTS							
Section	Comments						
	S6 - small trickle, barely a stream but formed bank. Us scour suggests +/- 1yr old. Looks like a flood channel we would not have found it						
	except for lucky movement of ov. Marginal Habitat value.						





Site 310 – Upstream view

Site 310 – Downstream view



Site 310 – Across view

Reach # ILP Map # ILP # Site

1.0 104G.016 2011 311 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: NID #: 10227 ILP Map#: 104G.016 ILP #: 2011 NID Map #: 104G.016 1.0 Site #: 311 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384887.6340234 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/26 Time: 15:30 Agency: C660 Crew: LT DD CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 1.72 3.30 2.59 2.66 Method I: 26.0 10.0 17.00 2 18 2 93 3.25 С Method II: 15.0 Wetted Width (m) MS 0.75 1.50 2.05 2.89 2.66 1.66 1.92 С Pool Depth (m) MS 0.19 0.15 0.23 No Vis.Ch.: Intermittent: Dw: Tribs.: Wb Depth: .3 .2 Avg: 0.25 Method: MS Stage: L ☐ M ✔ H ☐ COVER Total: T **CROWN CLOSURE** SWD LWD DP В OV IV Type: U 21-40% Amount S D S S Loc: P/S/O: **V V V V V V V** INSTREAM VEG: N ☐ A ☐ M 📝 V 🗍 LWD: F DIST: C Texture: F \bigcap G \bigcap C \bigcap B \bigcirc R \bigcap A \bigcap Texture: F \square G \square C \square B \swarrow R \square A \square RIP: S RIP: C STG: MF STG: SHR WATER EMS: Req#: Temp: 6 Method: T3 Cond.: 210 Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \checkmark Method: GE Flood Signs: overflow channel Method: GE MORPHOLOGY 01 В1 D3 B2 В3 D1 D2 Subdom: C Bed Material: Dominant: B **~** D95: 0.41 D (cm): 0.41 Morph: SPB DISTURBANCE INDICATORS

	INDICATORS	C1	C2 C3	C4 C5	S1 S2	: S3 S	4 S5					
			V									
	_											
	Bars:	N	SIDE	DIAG	MID	SPAN	BR					
	PHOTOS											
Dir			Comn	nents								
U												
D												
	COMMENTS											
	(Comments										
steep gradient barrier (26%) d	s of rc for 15m, then 10% ds	from there.	Boulder and	d cobble with	some gravel	(shale). LWI) forms					
pools ds of rc. 15% us of rc.												
	U D	COMMENTS COMMENTS (steep gradient barrier (26%) ds of rc for 15m, then 10% ds	Bars: N PHOTOS Dir U D COMMENTS Comments Steep gradient barrier (26%) ds of rc for 15m, then 10% ds from there.	Bars: N SIDE V PHOTOS Dir Comm U D COMMENTS Comments Steep gradient barrier (26%) ds of rc for 15m, then 10% ds from there. Boulder and	Bars: N SIDE DIAG PHOTOS Dir Comments U D COMMENTS Comments Steep gradient barrier (26%) ds of rc for 15m, then 10% ds from there. Boulder and cobble with	Bars: N SIDE DIAG MID PHOTOS Dir Comments U D COMMENTS Comments Steep gradient barrier (26%) ds of rc for 15m, then 10% ds from there. Boulder and cobble with some gravel	Bars: N SIDE DIAG MID SPAN PHOTOS Dir Comments U D COMMENTS Comments Steep gradient barrier (26%) ds of rc for 15m, then 10% ds from there. Boulder and cobble with some gravel (shale). LWI					



Site 311 – Upstream view



Site 311 – Downstream view

Reach # ILP Map #

ILP#

Site

2.0 104G.016 2011 312 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M38 ILP Map#: 104G.016 NID #: 20013 ILP #: 2011 20 NID Map #: 104G.016 Reach # Site #: 312 Field UTM (Z.E.N): .. Method: Site Lg: 50 Method: GE Access: H GIS UTM (Z.E.N): 9.384899.6340250 Ref. Name: Incomplete: 🗸 Date: 2007/08/06 Time: 12:00 Agency: C660 Crew: SH RD Fish Crd?: CHANNEL width width Mtd Mtd width width width width width width width width Gadient % Avg Avg Channel Width (m) MS 1 70 3.20 3.00 Method I: 26.00 1.80 2 00 2.30 2.33 26.0 С С Wetted Width (m) MS 1.50 1.50 2.00 2.00 2.40 2.70 2.02 Method II: Pool Depth (m) MS 0.11 0.24 0.20 0.17 0.10 0.70 0.25 0.25 No Vis.Ch.: Intermittent: Wb Depth .3 .6 .4 Avg: 0.43 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: A **CROWN CLOSURE** DP SWD LWD В OV IV Type: U >90% Amount D D Loc: P/S/O: INSTREAM VEG: N A M V LWD: NS DIST: NS Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F \bigcap G \bigcirc C \bigcap B \bigcap R \bigcap A \bigcap RIP: S RIP: C STG: SHR STG: MF WATER EMS: Req#: Temp: 5 Method: T3 Cond.: 180 Method: S3 pH: Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: C Subdom: G D95: 50.0 D (cm): 3.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: SI C2 С3 C4 C5 S1 S3 S5 Islands: O Coupling: DC Confinement: UN DIAG Bars: SIDE MID 🗸 SPAN BR FSZ: FEATURES NID Map Method AirPhoto NID Hgt Method Lg Photo UTM (Z/E/N) Method 104G.016 20014 GE GE 107 F: 421 9.384899.6340250 GP3 20 3 R: Comments: possible barrier HABITAT QUALITY Name Comments poor - good gravel substrate except for ds mult channel avulsions and wetland area Spawning Habitat OverWinter Habitat poor - good cover no deep pools Rearing Habitat good - excellent flow and cover and food source, few small pools

Reach # ILP Map # ILP # Site

	PHOTOS												
	Pho	oto		Foc Lg	Dir Comments								
R:	107	F:	420	STD	D								
R:	107	F:	421	STD	U barriers possible								
						WILDLIFE							
	Group Observations												
	BI	IR		songbird feathers									
	MAM moose scat												
	COMMENTS												
	Section Comments												
	CHANNEL S4 - reach 2 exhibits good gravel substrate and good cover. The stream is wildly unconfined yet streamlike 100% ov for cover. Good flow nd many side channels. Important habitat values.												



Site 312 – Downstream view



Site 312 – Upstream view, possible barrier

Reach #

ILP Map #

ILP#

2012

Site 313

1.0 104G.016

PROJECT Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP #: 2012 NID # ILP Map#: 104G.016 NID Map #: 104G.016 Reach # 1.0 Site #: 313 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.384826.6340470 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/10 Time: 15:05 Agency: C660 Crew: SH RD CHANNEL width width Mtd Mtd width width width width width width width width Gadient % Avg Avg Channel Width (m) MS Method I: 17.00 1 30 1.50 1.70 0.90 1.20 1.32 17.0 С 0.90 Wetted Width (m) MS 0.70 1.10 0.80 0.80 0.86 Method II: С Pool Depth (m) MS 0.12 0.14 0.19 0.15 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .4 .4 Avg: 0.40 Method: MS Stage: L ☐ M ✔ H ☐ Dw: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 71-90% Amount S D INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: LWD: N DIST: NA Texture: F \bigcap G \bigcirc C \bigcap B \bigcap R \bigcap A \bigcap Texture: F \bigcap G \bigcirc C \bigcap B \bigcap R \bigcap A \bigcap RIP: S RIP: C STG: SHR STG: MF WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 260 Method: S3 pH: Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY D1 D2 Bed Material: Dominant: G Subdom: C D95: 35.0 D (cm): 1.00 Morph: SP DISTURBANCE **INDICATORS** Pattern: SI C2 C4 C5 S1 S3 S5 Islands: NS ✓ Coupling: DC Confinement: UN SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Comments Name Spawning Habitat poor - low h20 level wetland barrier leading to decent gravel. OverWinter Habitat none Rearing Habitat poor - low velocity flow. Muddy substrate leading to nice gravel sp. **PHOTOS** Foc Lg Photo Dir Comments 107 STD F: 423 D pen for scale STD D 424 better photo of ds 107 F: F: STD NS 107 425 dead vole

Reach # ILP Map # ILP # Site 1.0 104G.016 2012 313

PHOTOS									
Photo	Foc Lg	Foc Lg Dir Comments							
R: 107 F: 426	STD	U note 18% ov.							
	WILDLIFE								
Group	Group Observations								
MAM	MAM moose scat								
MAM	MAM dead vole								
	COMMENTS								
Section	Section Comments								
CHANNEL S6 - habitat value important, compromised by wetland adct to Mess Cr. Good gravels flow unconfined. Extensive devils club= rip ve									



Site 313 – Downstream view



Site 313 – Downstream view



Site 313 – Dead vole



Site 313 – Upstream view showing vegetation

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: Stream Name (gaz.): Project Watershed Code:		0000-000-000-000-000-000	Project Code:	17415
		WATERSHED		
Gazetted Name: Watershed Code: 000-00000 ILP Map#: 104G.016	00-00000-00000-0000-0000-0000- ILP #: 2013 N	-000-000-000-000	Local Name: #: 20016 Reach #:	1.0 Site #: 314
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.384852.	Method: 6340678		Site Lg: 30 Method: GE Name:	Access: H
Date: 2007/0	8/18 Time: 15:20	Agency: C660 Cro	ew: SH RD Fish Crd	?: Incomplete: 🗸
		CHANNEL		
Channel Width (m): MS Wetted Width (m): MS Pool Depth (m): MS Wb Depth:	vidth width width width vidth		Width Width Avg Method	: C
COVER Type: SWD Amount: Loc: P/S/O: LWD: LB SHP: Texture: F CRIP: STG:	Total: LWD B U DIST: C B R A	DP OV IV	CROWN CLOSURE INSTREAM VEG: N A RB SHP: Texture: F G C RIP: STG:	<u> </u>
		WATER		
EMS: Temp: pH: Flood Signs:		Method: T3 Method: P2 Method: GE	Req #: Cond.: Turb.: T	Method: S3 Method: GE
		MORPHOLOGY		
	ninant: Subdom: O (cm): Morph:	DISTURBANCE INDICATORS Bars:		D2 D3
		B.U. 6 = 2 - 2		
		PHOTOS		
Photo Foc L R: 107 F: 430 STD	_		Comments	
R: 107 F: 430 STD	, INS	COMMENTS		
Section			mments	
	ICD - seepage starting to form a			
	0	-		



Site 314 – Showing stream bed

Reach # ILP Map #

ILP#

Site

					PR	OJEC	; T									
Project Name Stream Name (gaz. Project Watershed Code	: MESS CR	EEK	0-0000-000-000-000-000-000			0	Project Code:					17415				
					WAT	ERSH	HED									
Gazetted Name: Watershed Code: 000-00 ILP Map#: 104G.0 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3847	16 98.6340564	S Ref. N				D#: 20 Site Lç ef. Name	Local Name: #: 20017 Reach #: Site Lg: 250 Method: Gl Name: ew: SH RD Fish Cro									
					СН	ANN	EL									
Channel Width (m): MS Wetted Width (m): MS Pool Depth (m): MS Wb Depth:	width wid		width : 0.00	width	width	width	width	width	width	Avg 0.00 0.00 0.00		Method I: Method II: No Vis.Ch	n.: 🔲	Interm	Mtd C C ittent:	Avg 0.00
COVER Type: SWE Amount: Loc: P/S/O: LWD: LB SHP: Texture: F RIP: STG:		DIST:	U R A	DP		DV	IV	INS	TREAM	: : F	N [_ A C] A]
					W	ATE	R									
EMS: Temp: pH: Flood Signs:				Metho Metho	od: T3 od: P2 od:GE			С	eq #: ond.: ⁻ urb.: T	M [L □ C			hod: S	
				M	ORP	HOL	OGY									
Bed Material: [D95: Pattern: Islands: Coupling: Confinement: FSZ:	Dominant: D (cm):		Subdom Morph		D	OISTURE INDICA Ba	BANCE TORS ars:	01 C1	B1 C2 SID	C3 (B3 C4 DIAG	C5 S	D2 D S1 S MID			4 S5
					COM	MEN										
Section								ommen								
CHANNEL	NCD - wetla streams as														ole unde	erground
SITE CARD	NCD	*	,		•	•										

1371

F: 1372

DIG F:

DIG

STD

STD

D

Χ

looking west

Reach # ILP Map # ILP# Site

1.0 104G.016 2050 320 **PROJECT** Project Name: Schaft Creek Project Code: 17415 Stream Name (gaz.): WATERSHED Gazetted Name: Local Name: M222 NID #: 20020 ILP Map#: 104G.016 ILP #: 2050 NID Map #: 104G.016 Reach #: 1.0 Site #: 320 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382514.6331690 Ref. Name: Fish Crd?: Incomplete: Date: 2007/10/11 Time: 09:18 Agency: C660 Crew: SF SC CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) MS 1 20 1.10 1.10 0.80 Method I: 12.00 1 20 0.75 1.03 15.0 9.0 С Wetted Width (m) MS 0.80 0.70 0.50 0.70 0.85 0.60 0.69 Method II: С Pool Depth (m) MS 0.06 0.04 0.07 0.12 0.08 0.11 0.08 No Vis.Ch.: Intermittent: Wb Depth: .3 .7 .3 Avg: 0.43 Method: MS Stage: L ✓ M ☐ H ☐ Dw: Tribs.: COVER Total: M **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 1-20% Ν Amount Ν Ν D Loc: P/S/O: **VV V V VV V V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V 🗸 LWD: F DIST: E Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 1 Method: T3 Cond.: 20 Method: S3 pH: 8.5 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY D2 Bed Material: Dominant: F Subdom: G D95: 0.50 D (cm): 5.00 Morph: RPG DISTURBANCE **INDICATORS** Pattern: SI C2 C4 C5 S1 S3 S5 Islands: NS ✓ Coupling: CO Confinement: CO SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Name OverWinter Habitat poor - minimal pool depth and flow Rearing Habitat poor - minimal pool depth and flow Spawning Habitat poor - few sections of fine mix. Lots of organics. **PHOTOS** Foc Lg Comments Photo Dir R: DIG F: 1370 STD U

COMMENTS							
Section	Section Comments						
CHANNEL S6 - non fish. Int channel ~30m us of crossing. Line crosses stream in 3 locations.							





Site 320 – Upstream view

Site 320 – Downstream view



Site 320 – Looking west across stream

Foc Lg

STD

STD

Dir

IJ

D

Photo

R: DIG F: 1374

R: DIG F: 1375

ILP Map# Reach # ILP# Site 1.0 104G.016 2051 321 **PROJECT** Project Name: Schaft Creek Project Code: 17415 Stream Name (gaz.): WATERSHED Gazetted Name: Local Name: M221 ILP Map#: 104G.016 NID #: 20021 Site #: 321 ILP #: 2051 1.0 NID Map #: 104G.016 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382573.6332015 Ref. Name: Fish Crd?: Incomplete: Date: 2007/10/11 Time: 09:50 Agency: C660 Crew: SF SC CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.80 0.79 0.78 0.72 0.94 0.81 Method I: 1.00 0.82 1.0 С Wetted Width (m) MS 0.66 0.61 0.61 0.61 0.61 0.77 0.65 Method II: С MS Pool Depth (m) 0.28 0.20 0.50 0.50 0.60 0.40 0.41 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .4 .4 .4 Avg: 0.40 Method: MS Stage: L ✓ M ☐ H ☐ Dw: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U D Amount Ν Ν Ν S S Loc: P/S/O: **V** INSTREAM VEG: N A M V LWD: N DIST: NA Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: W RIP: S STG: SHR STG: SHR WATER EMS: Req#: Temp: 1 Method: T3 Cond.: 50 Method: S3 pH: 8.1 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: F Subdom: NA D95: 0.50 D (cm): 2.00 Morph: RP DISTURBANCE **INDICATORS** Pattern: IR C2 С3 S1 S3 S5 Islands: N Coupling: DC Confinement: UN SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Name OverWinter Habitat poor - minimal depth and flow. Rearing Habitat good - abundant cover Spawning Habitat poor - few gravels **PHOTOS**

Comments

	COMMENTS
Section	Comments
CHANNEL	S6 - resample 0.5 degrees at sample time. Good channel with cover in wetland/marsh.



Site 321 – Upstream view



Site 321 – Downstream view

Reach #

ILP Map #

104G.016

ILP#

Site

1.0

Project Watershed Code: 610-517000-98500-00000-0000-0000-0000-0000-0000				PROJE	СТ		
Gazetted Name: Watershed Code: 000-000000-0000-0000-0000-0000-0000-0	Stream Nan	ne (gaz.):		0-0000-000-000-000	0-000-000	Project Code:	17415
Watershed Code: 0000-00000-0000-0000-0000-0000-0000-0				WATERS	HED		
C	Watershed Code ILP Map# Field UTM (Z.E.N)	: 000-000000-000 : 104G.016 :	ILP #: 2052 Method:		NID #: 200 Site Lg	D22 Reach #: : 75 Method: GE	
Channel Width widt	Dai	te: 2007/10/11	Time: 10:10	Agency: C660	Crew: S	FSC Fish Crd	?: Incomplete: 🗸
Channel Width (m) MS				CHANN	EL		
Type SWD LWD B U DP OV IV Amount Loc P/SIO DIST:	Wetted Width (m): Pool Depth (m):	MS MS		width width width	width width	0.00 Method I 0.00 No Vis.C	C 0.00
LWD: DIST: LB SHP: Texture: F G C B R A Texture: F G C B R A RIP: STG: WATER EMS: Temp: Method: T3 Cond.: Flood Signs: Method: P2 Turb.: T M L C Method: GE Bed Material: D95: D (cm): Morph: D95: D (cm): Morph: D95: D (cm): Morph: D95: D (cm): D95:	COVER Type:	SWD LW	Total:				
RB SHP: Texture: F G C B R A Texture: F G C B R A A Texture: F G C B R A G Texture: F G C B R A G Texture: F G C G C B R A G Texture: F G G Texture: F G C B R A G Texture: F G C Texture: F G G Texture: F G Texture: F G G Texture: F G G Texture: F G G Texture: F G Texture					INS	TREAM VEG: N A	M D V D
EMS: Temp:	LB SHP Texture RIP	: : F				Texture: F G C C] B
Temp:				WATE	R		
Bed Material: Dominant: Subdom: Disturbance Dist	Temp: pH:			Method: P2	Co	ond.:	
Description				MORPHOL			
PHOTOS Photo Foc Lg Dir Comments R: DIG F: 1376 STD D D C OM M E N T S Section Section Comments CHANNEL NCD - flows nto WL with M221. intermittent dry, no defined channel.	D95: Pattern: Islands: Coupling:			: DISTURE	BANCE		S1 S2 S3 S4 S5
Photo Scound Process Foc Lg Dir Comments R: DIG F: 1376 STD D COMMENTS Comments Comments Comments Comments NCD - flows nto WL with M221. intermittent dry, no defined channel.	FSZ:			В	ars: N	SIDE DIAG	MID SPAN BR
R: DIG F: 1376 STD D C O M M E N T S Section Comments CHANNEL NCD - flows nto WL with M221. intermittent dry, no defined channel.				РНОТО	S		
Section Comments CHANNEL NCD - flows nto WL with M221. intermittent dry, no defined channel.						Comments	<u>-</u>
CHANNEL NCD - flows nto WL with M221. intermittent dry, no defined channel.	K. DIG F: 13/6	סוט	l D	COMMEN	ITS		
·	Section				Comment	S	
SITE CARD NCD	CHANNEL	NCD -	flows nto WL with M221.	intermittent dry, no defin	ned channel.		
	SITE CARD	NCD					



Site 322 – Downstream view

Reach #

1.0

ILP Map# 104G.016 ILP#

Site

								PR	OJE	СТ									
ļ	Proje Stream Nan Project Watersh):			0000-000	0-0000-	000-00	0-000-0	00-000-00	00	F	Project Co	ode:			17415	i	
								WAT	ERS	HED									
	Gazetted Name:							WAI	LKO	11 2 2	Loc	cal Name	ь.						
W	Vatershed Code: ILP Map#:	000-000 104G.0			ILP #: 20	053			-000-00 04G.016		ID#: 20	0023	Read			1.0		Site #: 3	323
	ld UTM (Z.E.N): S UTM (Z.E.N):		03.6332	164	IV	/lethod:				Re	Site Lo ef. Name	-		IVI	ethod: G	E	Acce	ess: H	
	Dat	te: 2007	7/10/11		Time: 10	:20	,	Agency	: C660	C	Crew:	SF SC			Fish Cro	d?:	ı	ncomple	ete: 🗸
								СН	IANN	IEL									
		Mtd	width	width	width	width	width	width	width	width	width	width	Avg			Gad	ent %	Mtd	Avg
Cha	nnel Width (m):	MS											0.00		Method	d I:		С	0.00
	etted Width (m):	MS											0.00		Method	II:		С	
	Pool Depth (m):	MS											0.00		No Vis.0	Ch.: 🗀	Interm	ittent:	
	Wb Depth:				Ave	g: 0.00	N	/lethod:	MS	St	age: L	M	□н□			Dw:		Tribs.:	
	COVER			Tot	al:														
	Type:	SWD	LV	۷D	В	U	DP)	OV	IV	CR	OWN CI	OSURE						
	Amount:																		
	Loc: P/S/O:										INS	STREAM	I VEG:	N [A	M	V		
	LWD:				DIST:														
	LB SHP:											RB SHP):						
	Texture] G 🖂	СП	В 🖂	R 🔲 A							: : F 🖂	G		⊐ в г	7 R F	7 A [1
	RIP:											RIP		J					
	STG											STG							
								10	/ A T E	D									
	EMS:							V	AIE	K	D	00 #:							
	Temp:						Metho	od: T3				eq #: ond.:					Me	thod: S	:3
	pH:							od: P2						_	. — (_			
	Flood Signs:						Metho	od: GE				Γurb.: Τ	M ['		ivie	thod: G	PE
							IV	1 O R I	PHO	LOGY									
	Bed Material:)aminan	4.		Subdom					01	B1	B2 E	B3	D1	D2 [03		
	Ded Material:	L	Dominan D (cm			Morph													
			D (cili	.,-		Morph				RBANCE ATORS	C1		C2 (C4	CE	C4 6			4 05
	Pattern: Islands:											C2	C3 (C4	C5	S1 5	52 5	33 S4	4 S5
	Coupling:																		
	Confinement:																		
	FSZ:								I	Bars:	N	SID	E	DIA	G_	MID	SPA	AN_	BR
								Ρŀ	ното	o s									
P	Photo	Fo	c Lg	Т		Dir	Т						Commer	nts					
R: DIG			TD			U													
								COL	ИМЕ	NTS									
	Section									C	commen	its							
	CHANNEL		NCD -	short re	each with	water ar	nd flow <	<100m											
	SITE CARD		NCD																
			•																



Site 323 – Upstream view

Reach # ILP Map # ILP # Site

Stream Name (gaz. Project Watershed Cod			59500-00	000-000	00-0000-	000-000)-000-00	0-000-0	00	P	roject Co	de:		17415	
						WAT	ERS	HED							
Gazetted Name:									Lo	cal Name	e:				
Watershed Code: 000-00	0000-000	000-000	00-0000	-0000-0	00-000-0	000-000-	000-000								
ILP Map#: 104G.0)16	II	LP #: 20	54	NID M	ap #: 104	4G.016	Ν	ID #: 20	0024	Reac	h #:	1.0	Site #	# : 324
Field UTM (Z.E.N):			N	lethod:					Site L	g: 100		Method	: GE	Access: H	
GIS UTM (Z.E.N): 9.3826	16.63322	247						R	ef. Name	e:					
Date: 200	7/10/11	Т	Time: 10:	32		Agency:	C660	(Crew:	SF SC		Fish	Crd?:	Incom	plete:
	.,,						ANN								
Mtd	width	width	width	width	width	width	width	width	width	width	Δια		Gadie	nt % Mto	d Ava
Channel Width (m): MS		0.53	0.70	0.64	0.44	0.35	width	width	width	width	Avg 0.53	Met	hod I: 25.0	30.0	Ŭ
Wetted Width (m): MS	0.30	0.41	0.49	0.46	0.32	0.27					0.38		od II: 45.0	(
Pool Depth (m): MS	0.03	0.10	0.06	0.02	0.04	0.04					0.05				_
Wh Donthy 4	1 1	1	1	0.40		A - 4ll.	мо			_ ,,				Intermittent	
Wb Depth: .1	.1	.1		j: 0.10	ľ	/lethod:	IVIS	5	tage: L	✓ IVI	Н		Dw: 🔲	Tribs.	
COVER		Tota	al: M						_						
Type: SWI			В	U	DF	,	OV	IV		OWN CL					
Amount: T	N	<u> </u>	N	N	T		D	N	1		-20%				
Loc: P/S/O:						V	~		INS	STREAM	VEG:	N \square A	M 🗸	v 📙	
LWD: NS		D	IST: NS												
LB SHP: S										RB SHP	: S				
Texture: F	G 🗸	С	В П	R \square	4 🗍					Texture	: F 🗸	G 🗸	С В В	$R \prod A$	
RIP: C			_							RIP	: C				
STG: MF										STG	: MF				
						W	ATE	R							
EMS:						W	ATE	R	R	teq #:					
EMS: Temp: 1					Metho	w od: T3	ATE	R		eq #: Cond.: 10				Method:	S3
Temp: 1 pH: 8.3					Meth	od: T3	ATE	R	C		☐ M ☐	7 L F	C	Method:	
Temp: 1					Meth	od: T3	ATE	R	C	ond.: 10	M [c 🔨		
Temp: 1 pH: 8.3					Metho Metho	od: T3 od: P2 od: GE	ATE		- -	ond.: 10	M [_ L _] C 🗹		
Temp: 1 pH: 8.3 Flood Signs: none	Dominant	t: F		Subdon	Metho	od: T3 od: P2 od: GE			- -	ond.: 10		L [Method:	
Temp: 1 pH: 8.3 Flood Signs: none	Dominant D (cm)	t: F): 3.00		Subdon	Metho Metho Netho	od: T3 od: P2 od: GE	HOL	. O G Y	- -	Cond.: 10				Method:	
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50					Metho Metho Netho	od: T3 od: P2 od: GE		OGY	01	Furb.: T	B2 B	33 D1	D2 D:	Method:	GE
Temp: 1 pH: 8.3 Flood Signs: none Bed Material:					Metho Metho Netho	od: T3 od: P2 od: GE	PHOL	OGY	- -	Cond.: 10	B2 B		D2 D:	Method:	
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI					Metho Metho Netho	od: T3 od: P2 od: GE	PHOL	OGY	01	Furb.: T	B2 B	33 D1	D2 D:	Method:	GE
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC Confinement: CO					Metho Metho Netho	od: T3 od: P2 od: GE	PHOL DISTURE INDICA	O G Y	01 C1	B1 C2	B2 E	33 D1	D2 D:	Method:	S4 S5
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC					Metho Metho Netho	od: T3 od: P2 od: GE	PHOL DISTURE INDICA	OGY	01	B1 C2	B2 E	33 D1	D2 D:	Method:	S4 S5
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC Confinement: CO					Metho Metho Netho	od: T3 od: P2 od: GE IORF	PHOL DISTURE INDICA B	O G Y BANCE TORS ars:	01 C1	B1 C2	B2 E	33 D1	D2 D:	Method:	S4 S5
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ:	D (cm)			Morpl	Metho Metho Netho	od: T3 od: P2 od: GE IORF	PHOL DISTURE INDICA	O G Y BANCE TORS ars:	01 C1	B1 C2 SID	B2 E C3 C	33 D1	D2 D3	Method:	S4 S5
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ:): 3.00	d L	Morpl	Metho Metho Nn: NA h: RP	od: T3 od: P2 od: GE IORF	PHOL DISTURE INDICA B	BANCE TORS ars:	01 C1	B1 C2	B2 E C3 C	33 D1	D2 D:	Method: 3 2 S3 SPAN SPAN	S4 S5
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type	Hgt 30.0): 3.00 Method	d L	Morpl	Methon Methon No. NA. h: RP	od: T3 od: P2 od: GE IORF	PHOL DISTURE INDICA B TUR Photo	BANCE TORS ars:	01 C1	B1 C2 SID	B2 E C3 C3 C	33 D1	D2 D3 S1 S2 MID UTM (Z	Method: 3 2 S3 SPAN SPAN	S4 S5 BR Method
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type 104G.016 20025 C	Hgt 30.0): 3.00 Method	d L	Morpl	Method Method GE	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B TUR Photo	OGY BANCE TORS ars:	01 C1 N	B1 C2 SID	B2 E C3 C3 C	33 D1	D2 D3 S1 S2 MID UTM (Z	Method: 3 2 S3 SPAN SPAN	S4 S5 BR Method
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type 104G.016 20025 C	Hgt 30.0): 3.00 Method	d L	Morpl	Method Method GE	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B TUR Photo F:	BANCE TORS ars:	01 C1 N	B1 C2 SID AirP	B2 E C3 C3 C	33 D1	D2 D3 S1 S2 MID UTM (Z	Method: 3 2 S3 SPAN SPAN	S4 S5 BR Method
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type 104G.016 20025 C Comments: gradient barrier	D (cm) Hgt 30.0 40%): 3.00 Method	d L	Morpl	Method Method GE	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B TUR Photo F:	BANCE TORS ars:	01 C1 NV	B1 C2 SID AirP	B2 E C3 C3 C	33 D1	D2 D3 S1 S2 MID UTM (Z	Method: 3 2 S3 SPAN SPAN	S4 S5 BR Method
Temp: 1 pH: 8.3 Flood Signs: none Bed Material: D95: 0.50 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type 104G.016 20025 C Comments: gradient barrier a	Hgt 30.0 40%	Method GE shallow shallow	d L 5	Morpl g N	Method GE HA	od: T3 od: P2 od: GE I O R F	PHOL DISTURE INDICA B TUR Photo F:	BANCE TORS ars:	01 C1 NV	B1 C2 SID AirP	B2 E C3 C3 C	33 D1	D2 D3 S1 S2 MID UTM (Z	Method: 3 2 S3 SPAN SPAN	S4 S5 BR Method

Reach # ILP Map# ILP# Site 324 104G.016 2054

1.0

				PHOTOS					
Photo		Foc Lg	Dir	Comments					
R: DIG F:	1378	STD	U						
R: DIG F:	1379	STD	D						
	COMMENTS								

F	: DIG	F:	1378	STE)	U	
F	: DIG	F:	1379	STE	0	D	
							COMMENTS
		Se	ection				Comments
		CHA	ANNEL	9	S6 - gradie	nt barrier 45%ds. Veg is	upper alpine balsam. Flows into marsh.



Site 324 – Upstream view



Site 324 – Downstream view

Name

OverWinter Habitat

Rearing Habitat

Spawning Habitat

good - cover, pools, flow

good - abundant cover

good - nice mix of fines

Reach # ILP Map # ILP # Site

1.0 104G.016 2056 326 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M219 NID #: 20027 ILP #: 2056 1.0 ILP Map#: 104G.016 NID Map #: 104G.016 Reach # Site #: 326 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382477.6332728 Ref. Name: Incomplete: Date: 2007/10/11 Time: 11:15 Agency: C660 Crew: SF SC Fish Crd?: CHANNEL width width width Mtd Mtd width width width width width width width Gadient % Avg Avg Channel Width (m) MS 1.10 1 00 1.10 Method I: 30.67 1 30 1 00 1.30 1.13 22.0 С 27.0 Method II: С Wetted Width (m) MS 1.20 0.80 1.10 0.90 0.70 0.76 0.91 43.0 Pool Depth (m) MS 0.12 0.12 0.10 0.90 0.80 0.30 0.39 No Vis.Ch.: Intermittent: Dw: Wb Depth .3 .4 .3 Avg: 0.33 Method: MS Stage: L ☐ M ✔ H ☐ Tribs.: COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 1-20% D Ν Amount Loc: P/S/O: **V V V V V V VV V V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: NS DIST: NS LB SHP: S RB SHP: V Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 1 Method: T3 Cond.: 70 Method: S3 pH: 8.0 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: G Subdom: C D95: 2.00 D (cm): 20.00 Morph: RPG DISTURBANCE **INDICATORS** Pattern: SI C1 C2 С3 S1 S3 S5 Islands: N Coupling: CO Confinement: EN DIAG Bars: N SIDE MID SPAN BR FSZ: FEATURES NID Map Method AirPhoto UTM (Z/E/N) NID Type Hgt Method Lg Photo Method 104G.016 20028 50.0 GE 75 GE R: DIG F: 1385 9.382500.6332732 GP3 Comments: >40%

HABITAT QUALITY

Comments

ILP Map# ILP# Site Reach # 1.0 104G.016 2056 326

PHOTOS		
	Comments	

	Ph	oto		Foo	: Lg	Dir	Comments
R:	DIG	F:	1382	ST	D	U	
R:	DIG	F:	1383	ST	D	D	
R:	DIG	F:	1385	ST	D	NS	feature - cascade
							COMMENTS
		Se	ction				Comments
		CHA	NNEL		S6 - gradie	ent >40%.	



Site 326 - Downstream view



Site 326 – Upstream view



Site 326 – Downstream view



Site 326 – Across view

Reach # ILP Map # ILP # Site

Project Watershed Code: 630-000000-0000-0000-0000-0000-0000-000	Stream Name (gaz): MESS CREEK	Stream Name (gaz.	e: Schaft Cree													
Project Watershed Code: 630-000000-00000-0000-0000-0000-0000-00	Project Watershed Code: 630-000000-0000-0000-0000-0000-0000-000	.=	\ MEGG OD!								_				47445	
WATERSHED	Capacited Name: Capacited	Fioject Watershed Cod			000 000	00 0000	000 000	000 00	2 000 00	00	P	roject Cod	ie:		1/415	
Case Mare	Case Name: M218 Watershed Code: 000-0000-0000-0000-0000-000-0000-000-0	•	e: 630-00000	J-00000-00	000-000	00-0000-	000-000	-000-00	J-000-00)0						
Watershed Code: 0000-00000-0000-0000-0000-0000-000-000	Watershed Code: 000-000000-0000-0000-0000-000-000-000-						WAT	ERSI	HED							
Watershed Code: 0000-00000-0000-0000-0000-0000-000-000	Watershed Code: 000-000000-0000-0000-0000-000-000-000-	Gazetted Name:								10	cal Name	. M218				
LP Mappr: 104G.016	LP Migrat 104G.016		0000-00000-0	<u> </u>	-0000-0	<u></u>	00-000-	000 - 000		LO	cai ivailie	5. IVIZ 10				
Site Lg: 100	Site Lg: 100									ID #· 2	0029	Reach	#-	1.0	Site	#· 327
Ref. Name:	Ref. Name Ref. Name	•	710			THE INC	др <i>п</i> . 10	10.010	.,			rtodor				
Date: 2007/10/11 Time: 11:43 Agency: C660 Crew: SF SC Fish Crd?: Incomplete:	Date: 2007/10/11		04 6222042	IV	letnoa:				D.		-		Method	: GE	Access: F	I
CHANNEL	CHANNEL	GIS UTIVI (Z.E.IN): 9.3625	01.0332912						K	ei. Mam	e.					
Mitd width	Mid width	Date: 200	7/10/11	Time: 11:	43		Agency:	C660	C	Crew:	SF SC		Fish	Crd?:	Incom	plete:
Mitd width	Mid width						СН	ANN	EL							
Method With (m) MS 1.40 1.50 1.50 1.00 0.90 0.90	Channel Width (m) MS 1.40 1.50 1.50 1.00 0.90 0.90	Mtd	width widt	h width	width	width		_	_	width	width	Ava		Gadie	nt % Mt	d Ava
Wested Wich (m)	Wested Width (m) MS 0.70 120 1.77 0.80 0.82 0.60							· · · · · · ·	····a	W.Ga.	******		Metl			
Wb Depth: 3	Wb Depth	, ,	0.70 1.20	1.17	0.80	0.82	0.60						Meth	od II:	(
Wb Depth: 3	Wb Depth: 3	Pool Depth (m): MS	0.10 0.05	0.06	0.10	0.07	0.90					0.21				
COVER Total: A Type SWD LWD B U DP OV V Amount T S N S D T N Loc: P/S/O V V V V V V V V V	COVER												No V			\equiv
Type: SWD LWD B U DP OV IV Amount: T S N S D T N 1 1-20% LWD: F DIST: E	Type: SWD LWD B U DP OV IV Amount: T S N S D T N Los: P/S/O V V V V D DST: E LB SHP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C B R A BRP: S Texture: F G G C C B R BRP: S Texture: F G G C C B R BRP: S Texture: F G G C C B R BRP: S Textu	Wb Depth: .3	.1 .1	Avg	j: 0.17	N	/lethod:	MS	St	age: L	M	✓ H _		Dw: 🔲	Tribs.	: 🔲
Amount: T S N S D T N I 1-20%	Amount: T S N S D T N I 1-20%	COVER	Т	otal: A												
LWD; F	LOC: P/S/O	Type: SWI	LWD	В	U	DF) (OV	IV	CR	OWN CL	.OSURE				
LWD: F DIST: E LB SHP: S Texture: F	LWD:F DIST:E LB SHP:S Texture: F	Amount: T	S	N	S	D		T	N	1	1	-20%				
LWD: F DIST: E LB SHP: S Texture: F	LWD: F	Loc: P/S/O:	V 		V V		V V	V V		INS	STREAM	VEG: N	ΙΠΑ		V 🔲	
LB SHP: S	LB SHP: S Texture: F G G C B R A	I WD· F	L	DIST: F		II.				-						
Texture: F	Texture: F			DIO1. L								. 0				
RIP: C STG: MF	RIP: C STG: MF			¬ p — ı	p — /						_	_	c 🗔 (~ — p —	D	
STG: MF STG:	STG:MF			յ թ 🗀 ՝	` ′	`						_	√ (к 🗆 А	
EMS:	Second S															
EMS: Temp: 10	EMS:	STG: MF									SIG	: IVIF				
Method: Table Method: Table Method: Table Method: Pack M	Method: T3															
Method: P2 Method: GE Met	Method: P2 Method: GE						W	ATE	R							
Method: GE	Method: GE	EMS:					W	ATE	R	F	Req #:					
MORPHOLOGY Subdom: C Dominant: G Subdom: C D95: 3.00 D (cm): 15.00 Morph: RPG DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 S5 S5 S5 S5 S5 S5	Bed Material: Dominant: G Subdom: C D95: 3.00 D (cm): 15.00 Morph: RPG DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 S5 S5 S5 S5 S5 S5	Temp: 10					od: T3	ATE	R		•				Method:	S3
Bed Material: Dominant: G Subdom: C D95: 3.00 D (cm): 15.00 Morph: RPG DISTURBANCE INDICATORS Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ:	Bed Material: Dominant: G Duble	Temp: 10 pH: 7.8				Metho	od: T3	ATE	R	C	ond.: 40	П М Г	7 L [C		
Dominant: G Suddom: C Dominant: G Suddom: C Disturbance Dist	Dominant: G Subdom: C Disturbance Di	Temp: 10 pH: 7.8				Metho	od: T3	ATE	R	C	ond.: 40	M] L [] c 🗸		
D95: 3.00 D (cm): 15.00 Morph: RPG DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 S5 S5 S5 S5 S5 S5	D95: 3.00 D (cm): 15.00 Morph: RPG DISTURBANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5 S5 S5 S5 S5 S5 S5	Temp: 10 pH: 7.8				Metho Metho	od: T3 od: P2 od: GE			C	ond.: 40	M		c 🗸		
Pattern: SI SI STABANCE INDICATORS C1 C2 C3 C4 C5 S1 S2 S3 S4 S5	Pattern: SI SI SI SI SI SI SI SI	Temp: 10 pH: 7.8 Flood Signs: none	Dominant: G		Subdon	Metho Metho	od: T3 od: P2 od: GE				Cond.: 40 Turb.: T				Method:	
Slatands: N	Islands: N	Temp: 10 pH: 7.8 Flood Signs: none Bed Material:				Metho Metho Metho Metho	od: T3 od: P2 od: GE	HOL	OGY		Cond.: 40 Turb.: T				Method:	
Coupling: DC Confinement: CO FSZ:	Coupling: DC Confinement: CO FSZ:	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00				Metho Metho Metho Metho	od: T3 od: P2 od: GE	PHOL	O G Y	01	Cond.: 40 Turb.: T	B2 B:	3 D1	D2 D	Method:	GE
Bars: N SIDE DIAG MID SPAN BR SPAN	Bars N SIDE DIAG MID SPAN BR	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI				Metho Metho Metho Metho	od: T3 od: P2 od: GE	PHOL	O G Y	01	Cond.: 40 Turb.: T	B2 B:	3 D1	D2 D	Method:	GE
Bars: N SIDE DIAG MID SPAN BR	Bars: N SIDE DIAG MID SPAN BR	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI Islands: N				Metho Metho Metho Metho	od: T3 od: P2 od: GE	PHOL	O G Y	01	Cond.: 40 Turb.: T	B2 B:	3 D1	D2 D	Method:	GE
NID Map NID Type Hgt Method Lg Method Photo AirPhoto UTM (Z/E/N) Method 104G.016 20030 C 4.0 GE 5 GE R: DIG F: 1389 L: #: 9.382622.6332815 GP3	NID Map NID Type Hgt Method Lg Method Photo Fr 1389 Lr Method Fr 1389 Lr Method Photo Photo Method Photo Photo Photo Method Photo Photo Photo Photo Method Photo Phot	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI Islands: N Coupling: DC				Metho Metho Metho Metho	od: T3 od: P2 od: GE	PHOL	O G Y	01	Cond.: 40 Turb.: T	B2 B:	3 D1	D2 D	Method:	GE
NID Map NID Type Hgt Method Lg Method Photo AirPhoto UTM (Z/E/N) Method 104G.016 20030 C 4.0 GE 5 GE R: DIG F: 1389 L: #: 9.382622.6332815 GP3 HABITAT QUALITY Name Comments OverWinter Habitat fair - depth minimal - likely ice over	NID Map NID Type Hgt Method Lg Method Photo AirPhoto UTM (Z/E/N) Method 104G.016 20030 C 4.0 GE 5 GE R: DIG F: 1389 L: #: 9.382622.6332815 GP3 HABITAT QUALITY Comments OverWinter Habitat fair - depth minimal - likely ice over Rearing Habitat good - abundant pool cover	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI Islands: N Coupling: DC Confinement: CO				Metho Metho Metho Metho	od: T3 od: P2 od: GE	PHOL DISTURE INDICA	O G Y BANCE TORS	01 C1	B1 C2	B2 B:	3 D1	D2 D:	Method:	S4 S5
104G.016 20030 C 4.0 GE 5 GE R: DIG F: 1389 L: #: 9.382622.6332815 GP3	104G.016 20030 C 4.0 GE 5 GE R: DIG F: 1389 L: #: 9.382622.6332815 GP3	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI Islands: N Coupling: DC Confinement: CO				Metho Metho Metho Metho	od: T3 od: P2 od: GE I O R P	P H O L DISTURE INDICA	O G Y BANCE TORS	01 C1	B1 C2	B2 B:	3 D1	D2 D:	Method:	S4 S5
Comments: 45% slope HABITAT QUALITY Name Comments OverWinter Habitat fair - depth minimal - likely ice over	Comments: 45% slope HABITAT QUALITY Name Comments OverWinter Habitat fair - depth minimal - likely ice over Rearing Habitat good - abundant pool cover	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI Islands: N Coupling: DC Confinement: CO				Metho Metho Metho Metho	od: T3 od: P2 od: GE I O R P	P H O L DISTURE INDICA	O G Y BANCE TORS	01 C1	B1 C2	B2 B:	3 D1	D2 D:	Method:	S4 S5
HABITAT QUALITY Name Comments OverWinter Habitat fair - depth minimal - likely ice over	Name Comments OverWinter Habitat fair - depth minimal - likely ice over Rearing Habitat good - abundant pool cover	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type	D (cm): 15.0	nod L	Morph	Method Method	od: T3 od: P2 od: GE	PHOL DISTURE INDICA B TUR Photo	O G Y BANCE TORS ars:	01 C1	Cond.: 40 Turb.: T B1 C2 SID	B2 B3 C3 C3 C3 C4 D4	3 D1	D2 D3 S1 S2 MID UTM (Z	Method:	S4 S5 BR
Name Comments OverWinter Habitat fair - depth minimal - likely ice over	Name Comments OverWinter Habitat fair - depth minimal - likely ice over Rearing Habitat good - abundant pool cover	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type 104G.016 20030 C	D (cm): 15.0	nod L	Morph	Method Method	od: T3 od: P2 od: GE	PHOL DISTURE INDICA B TUR Photo	O G Y BANCE TORS ars:	01 C1	Cond.: 40 Turb.: T B1 C2 SID	B2 B3 C3 C3 C3 C4 D4	3 D1	D2 D3 S1 S2 MID UTM (Z	Method:	S4 S5 BR
OverWinter Habitat fair - depth minimal - likely ice over	OverWinter Habitat fair - depth minimal - likely ice over Rearing Habitat good - abundant pool cover	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type 104G.016 20030 C	D (cm): 15.0	nod L	Morph	Method Method Method Method GE	FEA	B TURE Photo	O G Y BANCE TORS ars: E S 1389 I	01 C1 N	Cond.: 40 Turb.: T B1 C2 SID	B2 B3 C3 C3 C3 C4 D4	3 D1	D2 D3 S1 S2 MID UTM (Z	Method:	S4 S5 BR
	Rearing Habitat good - abundant pool cover	Temp: 10 pH: 7.8 Flood Signs: none Bed Material: D95: 3.00 Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type 104G.016 20030 C	D (cm): 15.0	nod L	Morph	Method Method Method Method GE	FEA	B TURE Photo	O G Y BANCE TORS ars: E S 1389 I	01 C1 N	Cond.: 40 Turb.: T B1 C2 SID	B2 B3 C3 C3 C3 C4 D4	3 D1	D2 D3 S1 S2 MID UTM (Z	Method:	S4 S5 BR
Rearing Habitat good - abundant pool cover		Temp: 10 pH: 7.8 Flood Signs: none Bed Material:	D (cm): 15.0 Hgt Mett 4.0 GE	nod L	Morpi	Method GE HAI	FEA	B TURE Photo	O G Y BANCE TORS ars: E S JALI JALI JALI	01 C1 N_	Cond.: 40 Turb.: T B1 C2 SID AirP	B2 B3 C3 C3 C3 C4 D4	3 D1	D2 D3 S1 S2 MID UTM (Z	Method:	S4 S5 BR
Construction Habitat	Spawning Habitat Igood - riffles, gravel	Temp: 10 pH: 7.8 Flood Signs: none Bed Material:	Hgt Mett 4.0 GE	nod L	Morpl g 1	Method GE HAI	FEA	B TURE Photo	O G Y BANCE TORS ars: E S JALI JALI JALI	01 C1 N_	Cond.: 40 Turb.: T B1 C2 SID AirP	B2 B3 C3 C3 C3 C4 D4	3 D1	D2 D3 S1 S2 MID UTM (Z	Method:	S4 S5 BR
opawning maditat 19000 - inites, gravei	10	Temp: 10 pH: 7.8 Flood Signs: none Bed Material:	Hgt Mett 4.0 GE	nod L iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	Morpl g 1	Method GE HAI	FEA	B TURE Photo	O G Y BANCE TORS ars: E S JALI JALI JALI	01 C1 N_	Cond.: 40 Turb.: T B1 C2 SID AirP	B2 B3 C3 C3 C3 C4 D4	3 D1	D2 D3 S1 S2 MID UTM (Z	Method:	S4 S5 BR

						PHOTOS		
	Ph	oto		Foc Lg	Dir	Comments		
R:	DIG	F:	1386	STD	U			
R:	DIG	F:	1387	STD	D			
R:	DIG	F:	1389	STD	NS	feature - cascade.		
						COMMENTS		
		Se	ction			Comments		
	CHANNEL S6 - flat shelf = good habitat above barrier. Possible fish movement during glaciation? 45% at mouth into s. mess lake.							





Site 327 – Upstream view

Site 327 – Downstream view



Site 327 - Cascade

Reach # ILP Map #

ILP#

Site

1.0 104G.016

2058

			Р	ROJECT	Г		
Stream Nan	ct Name: Scha ne (gaz.): MES ed Code: 630-0		-0000-0000-000-	000-000-000-0	000-000	Project Code:	17415
			W A	TERSHE	E D		
	000-000000-00 104G.016 	0000-00000-0000-0000 ILP #: 2058 Metho	NID Map #:		Loc NID #: 200 Site Lg Ref. Name	: 100 Method: 0	1.0 Site #: 328 GE Access: H
	e: 2007/10/11	Time: 12:30	Ager	ncy: C660	Crew: S		rd?: Incomplete:
Date		Time: 12.00		HANNEI		113110	incomplete.
	Mtd width	width width width	dth width wid		vidth width	width Avg	Gadient % Mtd Avg
Channel Width (m): Wetted Width (m): Pool Depth (m):	MS MS MS					0.00 Metho 0.00 Metho 0.00 No Vis	d I: C 0.00 d II: C
Wb Depth:		Avg: 0	.00 Metho	od: MS	Stage: L	M H	Dw: Tribs.:
COVER Type: Amount: Loc: P/S/O:	SWD LV	Total:	J DP	OV		OWN CLOSURE	\neg M \cap V \cap
LWD:		DIST:				- 🗀 [
LB SHP:	: : F	C	A 🗌			RB SHP: Texture: F G C RIP: STG:	□ B □ R □ A □
				WATER			
EMS: Temp: pH: Flood Signs:			Method: Method: Method: G	P2 GE	Co T	eq#: ond.: urb.: T M L L	Method: S3 C Method: GE
			MOI	RPHOLO			
Bed Material: D95: Pattern: Islands: Coupling: Confinement:	Dominan D (cm		dom: orph:	DISTURBAN INDICATO		B1 B2 B3 D1 C2 C3 C4 C5	D2 D3 S1 S2 S3 S4 S5
FSZ:				Bars	s: N	SIDE DIAG	MID SPAN BR
				рнотоѕ			
Photo	Foc Lg	Dir				Comments	
R: DIG F: 1393	STD	D		- 14 F M C			
			C	OMMENT			
Section SITE CARD	NOD				Comment	S	
CHANNEL	NCD -	· McElhanney notes a	s saenaga				
CHANNEL	NCD -	· wc=manney notes a	s seepage				



Site 328 – Downstream view

Reach # ILP Map # ILP # Site

Project Name: Schaft Stream Name (gaz.): MESS Project Watershed Code: 630-00		0-000-000-000-00	Project Code: 00	17415
	W	ATERSHED		
Gazetted Name:			Local Name: M217	
	000-00000-0000-0000-000-000-000-	-000-000-000		
ILP Map#: 104G.016			ID #: 20032 Reach #:	1.0 Site #: 329
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method:	GE Access: FT
GIS UTM (Z.E.N): 9.382578.63332		R _f	ef. Name:	7,00033.11
CIO O TWI (Z.Z.IV). 0.00207 0.00002		110	n. Hamo.	
Date: 2007/10/11	Time: 12:40 Age	ency: C660 C	crew: SF SC Fish C	Crd?: Incomplete:
		CHANNEL		
Mtd width	width width width w	vidth width width	width width Avg	Gadient % Mtd Avg
		0.80	0.82 Meth	
Wetted Width (m): MS 0.58	0.60 0.65 0.60 0.68 0	0.60	0.62 Metho	
Pool Depth (m): MS 0.18	0.10 0.21 0.10 0.12 0	0.08	0.13	
			No Vi	
Wb Depth: .1 .1	.1 Avg: 0.10 Met	thod: MS St	age: L 🦳 M 🗹 H 🦳	Dw: Tribs.:
COVER	Total: A			
Type: SWD LW	D B U DP	OV IV	CROWN CLOSURE	
Amount: N T	N S D	T N	1 1-20%	
Loc: P/S/O:			INSTREAM VEG: N A	\square M \bigcirc V \square
LWD: F	DIST: E		_	
	5101. E		55.015.0	
LB SHP: S			RB SHP: S	
	C _ B _ R _ A _		Texture: F 🗹 G 🗸 C	В К А
RIP: C			RIP: C	
STG: MF			STG: MF	
		WATER		
EMS:			Req #:	
Temp: 1	Method:	T3	Cond.: 50	Method: S3
pH: 7.8	Method:	P2		
Flood Signs: none	Method:		Turb.: T M L	C Method: GE
	Wethou.	GE	Turb.: T M L	C Method: GE
		GE) R P H O L O G Y	Turb.: T M L	C Method: GE
Dad Matarial Daminant	МО		Turb.: T M L C	C Method: GE D2 D3
Bed Material: Dominant	M O	RPHOLOGY		
D95: 1.50 D (cm)	M O	DRPHOLOGY DISTURBANCE	O1 B1 B2 B3 D1	D2 D3
D95: 1.50 D (cm). Pattern: SI	M O	RPHOLOGY		
D95: 1.50 D (cm). Pattern: SI Islands: N	M O	DRPHOLOGY DISTURBANCE	O1 B1 B2 B3 D1	D2 D3
D95: 1.50 D (cm). Pattern: SI Islands: N Coupling: DC	M O	DRPHOLOGY DISTURBANCE	O1 B1 B2 B3 D1	D2 D3
D95: 1.50 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: CO	M O	DISTURBANCE INDICATORS	O1 B1 B2 B3 D1 C1 C2 C3 C4 C5	D2 D3 S1 S2 S3 S4 S5
D95: 1.50 D (cm). Pattern: SI Islands: N Coupling: DC	M O	DRPHOLOGY DISTURBANCE	O1 B1 B2 B3 D1	D2 D3
D95: 1.50 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: CO	M O : F Subdom: G : 5.00 Morph: RPG	DISTURBANCE INDICATORS	O1 B1 B2 B3 D1 C1 C2 C3 C4 C5	D2 D3 S1 S2 S3 S4 S5
D95: 1.50 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: CO	M O : F Subdom: G : 5.00 Morph: RPG	DISTURBANCE INDICATORS Bars: FEATURES Photo	O1 B1 B2 B3 D1 C1 C2 C3 C4 C5 N✓ SIDE DIAG AirPhoto	D2 D3 S1 S2 S3 S4 S5 MID SPAN BR UTM (Z/E/N) Method
D95: 1.50 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map	M O : F Subdom: G : 5.00 Morph: RPG	DISTURBANCE INDICATORS Bars: FEATURES Photo	O1 B1 B2 B3 D1 C1 C2 C3 C4 C5 N✓ SIDE DIAG AirPhoto	D2 D3 S1 S2 S3 S4 S5 MID SPAN BR
D95: 1.50 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type Hgt	Subdom: G : 5.00 Morph: RPG F Method Lg Method GE 30 GE R:	DISTURBANCE INDICATORS Bars: FEATURES Photo F: L	O1 B1 B2 B3 D1 C1 C2 C3 C4 C5 N✓ SIDE DIAG AirPhoto : #:	D2 D3 S1 S2 S3 S4 S5 MID SPAN BR UTM (Z/E/N) Method
D95: 1.50 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map	Subdom: G : 5.00 Morph: RPG F Method Lg Method GE 30 GE R:	DISTURBANCE INDICATORS Bars: FEATURES Photo	O1 B1 B2 B3 D1 C1 C2 C3 C4 C5 N✓ SIDE DIAG AirPhoto : #:	D2 D3 S1 S2 S3 S4 S5 MID SPAN BR UTM (Z/E/N) Method
D95: 1.50 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map	Subdom: G : 5.00 Morph: RPG F Method Lg Method GE 30 GE R:	DISTURBANCE INDICATORS Bars: FEATURES Photo FI F: L	O1 B1 B2 B3 D1 C1 C2 C3 C4 C5 N✓ SIDE DIAG AirPhoto : #:	D2 D3 S1 S2 S3 S4 S5 MID SPAN BR UTM (Z/E/N) Method
D95: 1.50 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type Hgt 104G.016 20033 C 20.0 Comments: 36% for ~30m	Subdom: G : 5.00 Morph: RPG F Method Lg Method GE 30 GE R:	DISTURBANCE INDICATORS Bars: FEATURES Photo FI F: L	O1 B1 B2 B3 D1 C1 C2 C3 C4 C5 N SIDE DIAG AirPhoto : #:	D2 D3 S1 S2 S3 S4 S5 MID SPAN BR UTM (Z/E/N) Method
D95: 1.50 D (cm) Pattern: SI Islands: N Coupling: DC Confinement: CO FSZ: NID Map NID Type Hgt 104G.016 20033 C 20.0 Comments: 36% for ~30m	Subdom: G : 5.00 Morph: RPG F Method Lg Method GE 30 GE R:	DISTURBANCE INDICATORS Bars: FEATURES Photo FI F: L	O1 B1 B2 B3 D1 C1 C2 C3 C4 C5 N SIDE DIAG AirPhoto : #:	D2 D3 S1 S2 S3 S4 S5 MID SPAN BR UTM (Z/E/N) Method

Reach # ILP Map # ILP # Site

1.0	104G.016	2059	329

	PHOTOS									
Photo Foc Lg Dir Comments										
R:	DIG	F: 1394	STD	U						
R:	DIG	F: 1395	STD	D						
	COMMENTS									
		Section	Section Comments							
	CHANNEL S6 - >35% at mouth into S Mess lk.									



Site 329 – Upstream view



Site 329 – Downstream view

Reach # ILP Map #

104G.016

1.0

ILP#

2060

Site

330

PROJECT Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.016 NID #: 20034 Site #: 330 ILP #: 2060 NID Map #: 104G.016 1.0 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 50 Method: GE Access: FT GIS UTM (Z.E.N): 9.382596.6333213 Ref. Name: Incomplete: 🗹 Date: 2007/10/11 Time: 13:00 Agency: C660 Crew: SF SC Fish Crd?: CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments R: DIG F: 1396 STD U COMMENTS Section Comments CHANNEL NCD - "overland flow". No defined channel scour or continual reach. SITE CARD NCD



Site 330 – Upstream view of NCD

Reach # ILP Map # ILP # Site

Project Name: Stream Name (gaz.): Project Watershed Code:	MESS CF	REEK	0-0000-000-00	00-000-000-0	000-000	Project Coc	de:	17415
			WA	TERSHI	E D			
Gazetted Name:						Local Name: M216		
Watershed Code: 000-0000	000-00000-	00000-0000-0000-00	0-000-000-000	0-000-000	-	200ai 14ai 110. 1412 10		
ILP Map#: 104G.010		ILP #: 2061	NID Map #: 1		NID #:	20035 Reach	n #: 1.0	Site #: 331
·	-							
Field UTM (Z.E.N):	0000115	Method:				J	Method: GE	Access: FT
GIS UTM (Z.E.N): 9.382591	.6333445				Ref. Na	me:		
Date: 2007/	10/11	Time: 13:10	Agenc	y: C660	Crew:	SF SC	Fish Crd?:	Incomplete:
			CI	HANNE				
	. 10	to I state I state I					0.1	10/ LA4/ LA
	width wid		width width		vidth widt	3		ent % Mtd Avg
` '	2.00 11.3 2.10 2.3		10.00 8.20 5.00 5.20			10.30	Method I: 6.0	2.0 C 4.00
` '	0.15 0.1		0.10 0.10			3.50 0.12	Method II:	
1 del Deptil (III).	0.10 0.	12 0.12 0.10	0.10	<u> </u>		0.12	No Vis.Ch.:	Intermittent:
Wb Depth: .7	.8 1.	.3 Avg: 0.93	Method	I: MS	Stage:	L M 🗸 H	_	Tribs.:
COVER		Total: N			_		J	
			1 55 '	0)/		000000000000000000000000000000000000000		
Type: SWD	LWD	B U	DP			ROWN CLOSURE		
Amount: N	N	D N	S		N	1 1-20%		
Loc: P/S/O:						NSTREAM VEG: N	N ✓ A ☐ M ☐	V
LWD: NS		DIST: NS						
LB SHP: S						RB SHP: V		
_	G 🔽 C	✓ B □ R □ A					G ✓ C ✓ B	
RIP: C						RIP: C		
STG: MF						STG: MF		
			١	WATER				
EMS:						Req #:		
Temp: 0			Method: T3	3		Cond.: 110		Method: S3
pH: 7.7			Method: P2					
Flood Signs:			Method: GE			Turb.: T M		Method: GE
-			N 0 5	DUCLO	0 V			
			MUR	PHOLO				
Bed Material: Do	minant: C	Subdom	В		01	1 B1 B2 B3	3 D1 D2 D)3
D95: 4.50	D (cm): 60	0.00 Morph	RPC	DISTURBA	NCE			
Pattern: NS				INDICATO	ORS C1	1 C2 C3 C4	4 C5 S1 S	32 S3 S4 S5
Islands: O								
Coupling: CO								
Confinement: EN								
FSZ:				Bars	s: N[SIDE D	DIAG MID	SPAN BR
_			HABIT	A.T. O.II. 4	T.V			
			HABIT	AT QUA				
Name					Comm	ents		
OverWinter Habitat good - pools and flow								
	Rearing Habitat good - abundant cover Spawning Habitat good - lots of fines							
Spawning Habitat	youa - 10tS	UI IIIIES	D	нотоѕ				
				110103		_		
Photo Foc		Dir				Comments	S	
R: DIG F: 1344 ST		D						
R: DIG F: 1346 ST	U	U						

COMMENTS						
Section	Comments					
CHANNEL	S2 default - return to sample/EF					

DIG F: 1420

DIG

F: 1421

STD

Reach # ILP Map# ILP# Site

1.0 104G.016 2062 332 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M215 ILP #: 2062 NID #: 20036 ILP Map#: 104G.016 NID Map #: 104G.016 Reach #: 1.0 Site #: 332 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: FT GIS UTM (Z.E.N): 9.382775.6334355 Ref. Name: Fish Crd?: Incomplete: Date: 2007/10/11 Time: 14:25 Agency: C660 Crew: SF SC CHANNEL width width Mtd Mtd width width width width width width width width Gadient % Avg Avg MS 1 30 1.10 1.60 1.30 Method I: 35.00 Channel Width (m) 1 40 1 90 1.43 35.0 С С Wetted Width (m) MS 0.80 1.20 1.20 0.70 1.10 1.10 1.02 Method II: Pool Depth (m) MS 0.11 0.06 0.12 0.12 0.16 0.10 0.11 No Vis.Ch.: Intermittent: Dw: Tribs.: Wb Depth: .3 .5 .6 Avg: 0.47 Method: MS Stage: L ☐ M ✔ H ☐ COVER Total: A **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 1-20% D Ν Amount S S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A 🗸 M 🗸 V ☐ LWD: NS DIST: NS Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 1 Method: T3 Cond.: 40 Method: S3 pH: 8.1 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY D1 D2 Bed Material: Dominant: G Subdom: C D95: 3.00 D (cm): 20.00 Morph: CPC DISTURBANCE **INDICATORS** Pattern: ST C2 С3 S1 S3 S5 Islands: N Coupling: CO Confinement: EN SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Name OverWinter Habitat Rearing Habitat poor - cascade pool morph Spawning Habitat poor -**PHOTOS** Foc Lg Photo Dir Comments R: DIG F: 1419 STD U from creek at mouth STD

U

D

at crossing

at crossing

Reach # ILP Map # ILP # Site
1.0 104G.016 2062 332

COMMENTS							
Section	Comments						
CHANNEL	S6 - ~35% gradient alond entire reach. 2m drops at line. Other wise step pool. Barrier at mouth.						





Site 332 – Upstream view

Site 332 – Upstream view



Site 332 – Downstream view

Section

CHANNEL

S6 - 75% gradient.

Reach # ILP Map # ILP # Site

1.0 104G.016 2063 333 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M214 ILP Map#: 104G.016 NID #: 20037 Site #: 333 ILP #: 2063 1.0 NID Map #: 104G.016 Reach #: Field UTM (Z.E.N): .. Method: Site Lg: 50 Method: GE Access: H GIS UTM (Z.E.N): 9.382756.6334570 Ref. Name: Fish Crd?: Incomplete: Date: 2007/10/11 Time: 15:00 Agency: C660 Crew: SF SC CHANNEL width width width width Gadient % Mtd Mtd width width width width width width Avg Avg Channel Width (m) GE 0.90 1.25 0.80 1.02 Method I: 75.00 1.10 0.80 1.30 75.0 С Method II: Wetted Width (m) 0.00 Pool Depth (m) 0.00 No Vis.Ch.: Intermittent: 🗸 Dw: Wb Depth: .6 .5 .5 Avg: 0.53 Method: MS Stage: L ✓ M ☐ H ☐ Tribs.: COVER Total: A **CROWN CLOSURE** SWD LWD DP В OV IV Type: U 21-40% D Ν Amount Ν Loc: P/S/O: **V V** LWD: F DIST: E Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: Method: Cond.: Method: pH: Method: Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D3 D1 D2 Subdom: G Bed Material: Dominant: C. D95: 3.00 D (cm): 20.00 Morph: CPC DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ S1 S3 S5 Islands: N Coupling: DC Confinement: CO Bars: N SIDE DIAG MID SPAN BR FSZ: PHOTOS Foc Lg Dir Comments DIG F: 1423 STD U R: DIG F: 1424 STD D COMMENTS

Comments



Site 333 – Upstream view

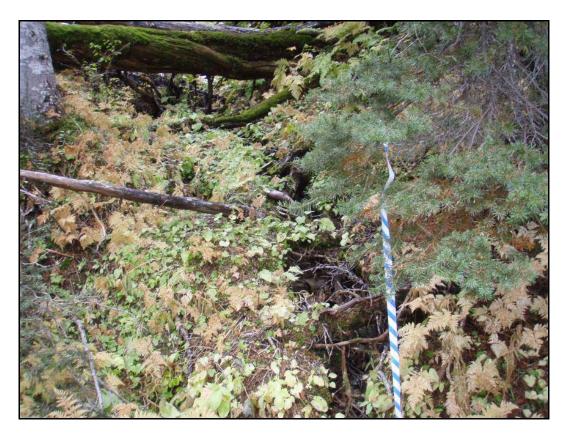


Site 333 – Downstream view

Reach # ILP Map # ILP #

Site

1.0 104G.016 2064 334 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M213 ILP Map#: 104G.016 NID #: 20038 ILP #: 2064 1.0 NID Map #: 104G.016 Reach #: Site #: 334 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382760.6334600 Ref. Name: Fish Crd?: Incomplete: Date: 2007/10/11 Time: 15:15 Agency: C660 Crew: SF SC CHANNEL width width width width Gadient % Mtd Mtd width width width width width width Avg Avg Channel Width (m) MS 0.70 0.82 0.70 0.75 0.80 0.77 Method I: 45.0 41.0 43.00 0.85 С Method II: Wetted Width (m) 0.00 Pool Depth (m) 0.00 No Vis.Ch.: Intermittent: 🗸 Dw: Wb Depth: .2 .4 .3 Avg: 0.30 Method: MS Stage: L ✓ M ☐ H ☐ Tribs.: COVER Total: T **CROWN CLOSURE** SWD LWD DP В OV IV Type: U 1-20% D Ν Amount Ν S Loc: P/S/O: **V V** INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ LWD: F DIST: E LB SHP: V Texture: F \bigcap G \bigcap C \bigvee B \bigvee R \bigcap A \bigcap Texture: F ☐ G ☐ C ✔ B ✔ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: Method: Cond.: Method: pH: Method: Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 Subdom: G Bed Material: Dominant: C. D95: 3.00 D (cm): 20.00 Morph: CPC DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ S1 S3 S5 Islands: N Coupling: CO Confinement: EN SPAN Bars: N SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments DIG F: 1425 STD U R DIG F: 1426 STD D COMMENTS Section Comments CHANNEL S6



Site 334 – Upstream view



Site 334 – Downstream view

Reach # ILP Map # ILP # Site

					PRO	JEC	; T							
Project Name: Stream Name (gaz.): Project Watershed Code:	MESS CR	EEK	0000-0000	0-0000-0	00-000-	000-000)-000-00	0	F	Project Co	ode:		17415	
				٧	VATE	ERSH	HED							
Gazetted Name: Watershed Code: 000-0000										e: M211				
ILP Map#: 104G.01		ILP #: 20	66 lethod:	NID Map	o #: 104	G.016		D#: 20 Site Lg	j: 100	Read	ch #: Method: GE	1.0	Site # Access: H	
GIS UTM (Z.E.N): 9.382980 Date: 2007/									Fish Crd?	:	Incomp	olete:		
					СН	ANNI	EL							
Mtd	width widt	th width	width	width	width	width	width	width	width	Avg		Gadie	ent % Mtd	d Avg
	.20 1.13					*******	maar	····	*******	1.16	Method I	22.0	50.0 C	
Wetted Width (m):										0.00	Method II			_
Pool Depth (m):										0.00				_
		_			-						No Vis.Ch		Intermittent:	
Wb Depth: .2	.4 .4	Avg	: 0.33	Me	ethod:	MS	Sta	age: L	✓ M	H [D'	w: 🔲	Tribs.:	
COVER	Т	otal: T												
Type: SWD	LWD	В	U	DP		V	IV	CRO	OWN CI	OSURE				
Amount: T	D	S	T	N		N	N	1		I-20%				
Loc: P/S/O:											N 🗸 A 🗌	м 🗆	V \square	
								1110	/	VLO.	🗸		· 🗆	
LWD: NS		DIST: NS												
LB SHP: V									RB SHP	· V				
Texture: F	GGCC	⊐ В ⊏ I	R \square A								G ✓ C □	1 B 🖂	R \square A \square	
		. □ "												
RIP: C									RIP					
STG: MF									STG	: MF				
					W	ATE	₹							
EMS:								R	eq #:					
Temp:				Method	d:				ond.:				Method:	
pH:				Method	d:			-	.	_ N			Method:	05
Flood Signs:				Method	d:			ı	urb.: T	IVI	□ r □ c		ivietnoa:	GE
				8.4	0 D D	HOL	0 0 V							
				IVI	UKP	HUL	UGI						_	
Bed Material: Do	ominant: G		Subdom:	F				01	B1	B2	B3 D1 [D2 D	3	
D95: 1.50	D (cm): 10.	.00	Morph:	RPG	D	ISTURB	ANCE							
Pattern: ST					ا	INDICAT	TORS	C1	C2	C3	C4 C5 S	S1 S:	2 S3	S4 S5
Islands: N									02	<u> </u>	C4 C3 (J1 0.	7 00	D D
Coupling: CO														
Confinement: CO														
FSZ:						Ва	ars:	N	SID	E	DIAG	MID	SPAN	BR
1 32.								•						
				HAB	ITA	T Q U	ALII	Υ						
Name								ommen	te					
OverWinter Habitat	poor						C	OH HITTELL	w					
Rearing Habitat	poor													
Spawning Habitat	poor													
	p ==:				РΗ	ото	S							
Photo Foo	Lq	D	ir							Comme	nts			
R: DIG F: 1436 ST			 J											
R: DIG F: 1437 ST)											
1 2 1 2 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2														

Reach # ILP Map # ILP # Site
1.0 104G.016 2066 335

COMMENTS							
Section	Comments						
CHANNEL	S6 - dry channel no fish habitat.						



Site 335 – Upstream view



Site 335 – Downstream view

Reach # ILP Map # ILP #

Site

					PR	OJE	СТ							
Project Name Stream Name (gaz. Project Watershed Code): MESS	CREEK	00-00000-000	0-0000-0	000-000	-000-000	0-000-00	0	P	roject Co	ode:		17415	
,														
				1	WAT	ERSI	HED							
Gazetted Name:					00 000			Loc	cal Name	e: M210	Chunky Mtn	Cr.		
Watershed Code: 000-00 ILP Map#: 104G.0			0000-0000-00 #: 2067		00-000- ap #: 104			D#: 20	0041	Read	h #·	1.0	Site #:	336
•	10	121 7	Method:	IVID IVIC	ър т. 10-	0.010	141			rtoac	Method: G		Access: H	000
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3829	99.633556	68	weiriou.				Re	Site Lo f. Name			Metriod. G	·E	Access. n	
Date: 200	7/10/12	Time	e: 09:10	, ,	Agency:			rew: S	SF SC		Fish Cr	d?:	Incomp	lete:
						ANN								
Channel Width (m): MS			idth width	width	width	width	width	width	width	Avg	Matha	Gadie		Avg
Channel Width (m): MS Wetted Width (m):	2.10 1	.90 3	.30							2.43 0.00	Method		40.0 C	38.00
Pool Depth (m):										0.00				_
Wh Dorothy 5		_	4 0.50				0.				No Vis.	\equiv	Intermittent:	
Wb Depth: .5	.6	.5	Avg: 0.53	IV	lethod:	MS	St	age: L	✓ M	Н		Dw: 🔲	Tribs.:	
COVER		Total:						-						
Type: SWI				DP		VC	IV	CR0		OSURE				
Amount: T Loc: P/S/O:	S	D	N	T		N	N			-20%	N \square A \lceil	¬ м 🖂	v 🗖	
					اللاللا			INS	INLAW	VLG.			ч П	
LWD: F		DIST	: E											
LB SHP: V	_	_						- 1	RB SHP			_		
Texture: F] G 🔽 (С 🔽 В	□ R □ A	,					Texture	: F	G 🔽 C	✓ B _	R A	
RIP: C									RIP					
STG: MF									STG	: MF				
					W	ATE	R							
EMS:									eq #:					
Temp:				Metho				C	ond.:				Method:	
pH: Flood Signs: none				Metho	oa: od: GE			Т	urb.: T	M [_ L _	С	Method:	GE
- Hood eignerment							0.0.1/							
				IVI	ORP	HOL	OGY	O1	B1	B2 E	33 D1	D2 D	2	
	Dominant:		Subdom										3 □	
D95: 10.0	D (cm):	25.00	Morph	I: CPB		ISTURE INDICA								
Pattern: ST Islands: N						INDICA	TONO	C1	C2	C3 (C4 C5	S1 S	2 S3 S	S4 S5
Coupling: CO														
Confinement: EN														
FSZ:						В	ars:	N	SID	E	DIAG	MID	SPAN	BR
				HAE	BITA	T QL	JALIT	ГΥ						
Name	_							ommen	ts					
OverWinter Habitat	none													
Rearing Habitat	none													
Spawning Habitat	none					0.7.0								
					PH	ото	5							
	c Lg		Dir							Commer	nts			
	TD TD	+	U D	-										
	-													

Reach # ILP Map # ILP # Site

COMMENTS	
Watershed Code: 000-000000-00000-00000-0000-0000-000-0	336

COMMENTS						
Section	Comments					
CHANNEL	S6 - steep dry channel.					



Site 336 – Upstream view



Site 336 – Downstream view

Foc Lg

STD

STD

Dir

U

D

Photo

R: DIG F: 1443

R: DIG F: 1444

ILP Map# Reach # ILP# Site

Comments

1.0 104G.016 2068 337 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M209 NID #: 20042 ILP #: 2068 1.0 ILP Map#: 104G.016 NID Map #: 104G.016 Reach #: Site #: 337 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383011.6335800 Ref. Name: Fish Crd?: Incomplete: Date: 2007/10/12 Time: 09:20 Agency: C660 Crew: SF SC CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 1 10 1.00 1.30 1.20 Method I: 50.0 45.0 47.50 1 12 1 20 1.15 С 0.87 Method II: Wetted Width (m) MS 0.80 0.82 0.70 0.90 0.88 0.83 С MS 0.03 0.04 Pool Depth (m) 0.03 0.03 0.05 0.06 0.04 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .3 .3 .5 Avg: 0.37 Method: MS Stage: L ✓ M ☐ H ☐ Dw: COVER Total: A **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 1-20% D Ν Amount Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A 🗸 M 🗸 V ☐ LWD: F DIST: F Texture: F \bigcap G \bigcirc C \bigcirc B \bigcap R \bigcap A \bigcap Texture: F G G C B R A RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 1 Method: T3 Cond.: 210 Method: S3 pH: 8.3 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 Bed Material: Dominant: C. Subdom: G D95: 2.50 D (cm): 17.00 Morph: RPC DISTURBANCE **INDICATORS** Pattern: ST C2 С3 S1 S3 S5 Islands: N Coupling: CO Confinement: EN Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name Rearing Habitat poor OverWinter Habitat poor Spawning Habitat poor **PHOTOS**

COMMENTS					
Section	Comments				
CHANNEL	S6 - steep with minimal depth. Depth ration of pools to falls - minimal. Not passable gradient >40%				



Site 337 – Upstream view



Site 337 – Downstream view

Photo

R: DIG F: 1446

R: DIG F: 1448

STD

STD

Dir

U

D

ILP Map# Reach # ILP# Site

Comments

1.0 104G.016 2069 338 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M208 ILP Map#: 104G.016 NID #: 20043 ILP #: 2069 1.0 NID Map #: 104G.016 Reach #: Site #: 338 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383031.6335856 Ref. Name: Fish Crd?: Incomplete: Date: 2007/10/12 Time: 09:35 Agency: C660 Crew: SF SC CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 1 00 Method I: 45.00 1 10 1.13 1.50 1.18 45.0 С Wetted Width (m) MS 0.60 0.40 0.57 0.70 0.57 Method II: С MS 0.03 Pool Depth (m) 0.02 0.02 0.02 0.02 No Vis.Ch.: Intermittent: Dw: Tribs.: Wb Depth: .5 .5 .5 Avg: 0.50 Method: MS Stage: L ✓ M ☐ H ☐ COVER Total: A **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 1-20% D Ν Amount S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: F DIST: E Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ RIP: M RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 1 Method: T3 Cond.: 210 Method: S3 pH: 8.2 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 D3 Subdom: G Bed Material: Dominant: C D95: 4.00 D (cm): 7.00 Morph: RPC DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ C4 C5 S1 S3 S5 Islands: NS \checkmark Coupling: CO Confinement: EN Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name OverWinter Habitat poor Rearing Habitat poor Spawning Habitat poor **PHOTOS** Foc Lg

Reach # ILP Map # ILP # Site

Watershed Code: 000-000000-00000-0000-0000-0000-000-00	1.0	104G.016	2069	338

COMMENTS				
Section	Comments			
CHANNEL	S6 - steep channel.			



Site 338 – Upstream view



Site 338 – Downstream view

Spawning Habitat

Photo

R: DIG F: 1451

R: DIG F: 1452

poor

Dir

U

D

Foc Lg

STD

STD

Reach # ILP Map # ILP # Site

1.0 104G.016 2070 339 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M207 ILP Map#: 104G.016 NID #: 20044 ILP #: 2070 1.0 NID Map #: 104G.016 Reach #: Site #: 339 Field UTM (Z.E.N): .. Method: Site Lg: 75 Method: GE Access: H GIS UTM (Z.E.N): 9.383089.6335998 Ref. Name: Fish Crd?: Incomplete: Date: 2007/10/12 Time: 09:54 Agency: C660 Crew: SF SC CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.70 1 60 2 50 1.80 2.00 Method I: 45.00 0.75 1.56 45.0 С Wetted Width (m) MS 0.30 0.28 0.60 0.70 0.65 0.60 0.52 Method II: С MS 0.03 0.04 Pool Depth (m) 0.03 0.05 0.05 0.05 0.03 No Vis.Ch.: Intermittent: Dw: Tribs.: Wb Depth: .1 .2 .2 Avg: 0.17 Method: MS Stage: L ☐ M ✔ H ☐ COVER Total: A **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 1-20% Ν Amount D S Ν S INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V** LWD: F DIST: E Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 1 Method: T3 Cond.: 220 Method: S3 pH: 8.0 Method: P2 Turb.: T M L C Method: GE Flood Signs: none Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: C. Subdom: G D95: 4.00 D (cm): 10.00 Morph: RP DISTURBANCE **INDICATORS** Pattern: ST C2 СЗ C4 S1 S3 S5 Islands: N Coupling: CO Confinement: CO Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name Rearing Habitat poor OverWinter Habitat poor

PHOTOS

Comments

COMMENTS					
Section	Comments				
CHANNEL	S6 - steep gradient. Lots of organics, minimal pool depth, flow.				



Site 339 – Upstream view



Site 339 – Downstream view

Reach # ILP Map # ILP # Site

					PR	OJEC	T							
Project Name Stream Name (gaz.)	Schaft Creek								P	roject C	ode:	,	17415	
Project Watershed Code	: 630-000000-	00000-00	000-000	0-0000-	000-000	-000-000	0-000-00	00						
				,	WAT	ERSH	HED							
Gazetted Name:								Loc	al Name	e: M206	Tish Cr.			
Watershed Code: 000-000	000-00000-00	000-000	-0000-00	0-000-0	00-000-	000-000								
ILP Map#: 104G.01	16	ILP #: 20	71	NID Ma	ap #: 104	IG.016	NI	ID #: 20	045	Read	ch #:	1.0	Site #: 3	340
Field UTM (Z.E.N):		M	lethod:					Site Lo	j: 100		Method: GE		Access: H	
GIS UTM (Z.E.N): 9.38320	0.6336175						Re	ef. Name	:					
Date: 2007	/10/12	Time: 10:	15	,	Agency:	C660	С	rew: S	SC SF		Fish Crd?	: 🔲	Incomple	ete:
					СН	ANNI	EL							
Mtd	width width	width	width	width	width	width	width	width	width	Avg		Gadier	nt % Mtd	Avg
Channel Width (m): MS	3.80 3.10	2.10	2.40	2.10	3.00					2.75	Method I:	26.0	30.0 C	28.00
Wetted Width (m): MS	2.80 2.20	1.50	1.90	2.00	2.20					2.10	Method II:		С	
Pool Depth (m): MS	0.05 0.10	0.09	0.15	0.12	0.05					0.09	No Vis.Ch	i	ntermittent:	
Wb Depth: .4	.4 .6	Avg	: 0.47	N	/lethod:	MS	St	age: L	М	/ H [Tribs.:	
COVER	To	tal: A								<u>•</u>				
Type: SWD	LWD	В	U	DP	· T (OV	IV	CRO	OWN CL	.OSURE				
Amount: N	D	S	T	S		N	N	1		-20%				
Loc: P/S/O:			V V V					INS	TREAM	VEG:	N 🗸 A 🗌	МΠ	/ 🗍	
LWD: A		DIST: E						1						
	L) S1.E								_				
LB SHP: S		р — Г							RB SHP	_		. p —	D	1
Texture: F	g ∧ c □	ь 🗌 .	` _ ^	. П							G ✓ C □	□	K A	
RIP: C STG: MF									RIP STG					
31 G. IVIF									316	. IVIF				
					W	ATEI	R							
EMS:									eq #:					_
Temp: 0 pH: 8.3					od: T3			C	ond.: 180)			Method: S	3
•	at Iwd							Т	urb.: T	\square M		✓	Method: G	iΕ
3							Flood Signs: swd built at lwd Method: GE							
				M		ШΩІ	O G V							
					ORP	HOL	OGY	01	R1	B2	R3 D1 [)3 D3		
	ominant: G		Subdom	: C	ORP	HOL	OGY	01	B1			D2 D3		
D95: 3.00	ominant: G D (cm): 35.00		Subdom Morph	: C	C	ISTURB	BANCE							
D95: 3.00 Pattern: SI				: C	C	-	BANCE							4 S5
D95: 3.00 Pattern: SI Islands: O				: C	C	ISTURB	BANCE							4 S5
D95: 3.00 Pattern: SI Islands: O Coupling: CO				: C	C	ISTURB	BANCE							4 S5
D95: 3.00 Pattern: SI Islands: O				: C	C	ISTURE INDICA	BANCE			C3	C4 C5 S			4 S5
D95: 3.00 Pattern: SI Islands: O Coupling: CO Confinement: CO				: C :: RPG	D	ISTURB INDICA ⁻ Ba	BANCE TORS	C1	C2	C3	C4 C5 S	S1 S2	S3 S4	
D95: 3.00 Pattern: SI Islands: O Coupling: CO Confinement: CO FSZ:				: C :: RPG	D	ISTURB INDICA ⁻ Ba	BANCE FORS	C1	C2	C3	C4 C5 S	S1 S2	S3 S4	
D95: 3.00 Pattern: SI Islands: O Coupling: CO Confinement: CO FSZ:	D (cm): 35.00)		: C :: RPG	D	ISTURB INDICA ⁻ Ba	BANCE FORS	C1	C2	C3	C4 C5 S	S1 S2	S3 S4	
D95: 3.00 Pattern: SI Islands: O Coupling: CO Confinement: CO FSZ:		n pools	Morph	: C :: RPG	D	ISTURB INDICA ⁻ Ba	BANCE FORS	C1	C2	C3	C4 C5 S	S1 S2	S3 S4	
D95: 3.00 Pattern: SI Islands: O Coupling: CO Confinement: CO FSZ:	D (cm): 35.00	n pools r/lwd cove	Morph	: C :: RPG	D	ISTURB INDICA ⁻ Ba	BANCE FORS	C1	C2	C3	C4 C5 S	S1 S2	S3 S4	
D95: 3.00 Pattern: SI Islands: O Coupling: CO Confinement: CO FSZ: Name OverWinter Habitat Rearing Habitat	D (cm): 35.00 poor - depth is good - boulded	n pools r/lwd cove	Morph	: C :: RPG	BITA	ISTURB INDICA ⁻ Ba	BANCE FORS ars:	C1	C2	C3	C4 C5 S	S1 S2	S3 S4	
D95: 3.00 Pattern: SI Islands: O Coupling: CO Confinement: CO FSZ: Name OverWinter Habitat Rearing Habitat Spawning Habitat	D (cm): 35.00 poor - depth is good - boulded	n pools r/lwd cove	Morph	: C :: RPG	BITA	Ba	BANCE FORS ars:	C1	C2 SID	C3	C4 C5 S DIAG	S1 S2	S3 S4	
D95: 3.00 Pattern: SI Islands: O Coupling: CO Confinement: CO FSZ: Name OverWinter Habitat Rearing Habitat Spawning Habitat Photo Formula	poor - depth in good - boulded poor - fewer fi	n pools r/lwd cove nes mix D	Morph er	: C :: RPG	BITA	Ba	BANCE FORS ars:	C1	C2 SID	C3	C4 C5 S DIAG	S1 S2	S3 S4	
D95: 3.00 Pattern: SI Islands: O Coupling: CO Confinement: CO FSZ: Name OverWinter Habitat Rearing Habitat Spawning Habitat Photo For	poor - depth ii good - boulde poor - fewer fi	n pools r/lwd cove nes mix D	Morph er	: C :: RPG	BITA	Ba	BANCE FORS ars:	C1	C2 SID	C3	C4 C5 S DIAG	S1 S2	S3 S4	

COMMENTS					
Section	Comments				
CHANNEL	S3 default - from crossing down to little mess cr. ~25%with step pool morph. Fish passable, recommend sampling. Us fish barrier >30%.				





Site 340 – Upstream view

Site 340 – Downstream view



Site 340 – Across view

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: Stream Name (gaz.): Project Watershed Code:		-0000-000-000-000-000	Project Code: 0-000	17415
		WATERSHE	D	
Gazetted Name:			Local Name: M205	
	000-00000-00000-0000-0000	-000-000-000-000	2004111411101111200	
ILP Map#: 104G.016		NID Map #: 104G.016	NID #: 20046 Reach #:	1.0 Site #: 341
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method:	GE Access: H
GIS UTM (Z.E.N): 9.383200.			Ref. Name:	7,00033.11
(2.2.1.). 0.000200				
Date: 2007/1	10/12 Time: 10:40	Agency: C660	Crew: SF SC Fish C	Crd?: Incomplete:
		CHANNEL		
Mtd v	width width width	width width width wi	dth width width Avg	Gadient % Mtd Avg
` '	.50 1.60 2.20 2.80	2.10 2.00	2.03 Metho	od I: 60.0 C 60.00
. , ,	0.90 1.20 2.00 2.40	1.40 1.50	1.57 Metho	od II:
Pool Depth (m): MS (0.05 0.04 0.04 0.03	0.03 0.03	0.04 No Via	Ch. Intermittent
Wb Depth: .4	.4 Avg: 0.40	Method: MS	No Vis	S.Ch.: Intermittent: Dw: Tribs.:
· · · · · · · · · · · · · · · · · · ·		Wethou. We	Stage. L W V II	Dw
COVER	Total: M		<u></u>	
Type: SWD	LWD B U	DP OV IV		
Amount: S Loc: P/S/O:	D T T	T T N		
Loc: P/S/O:			INSTREAM VEG: N ✓ A	M V
LWD: NS	DIST: C			
LB SHP: V			RB SHP: V	
Texture: F 🕡	G ✓ C ☐ B ☐ R ☐ A		Texture: F 🗸 G 🗸 C	\square B \square R \square A \square
RIP: C			RIP: C	
STG: MF			STG: MF	
		WATER		
EMS:			Req #:	
Temp: 1		Method: T3	Cond.: 180	Method: S3
pH: 8.2 Flood Signs: none		Method: P2 Method: GE	Turb.: T M L	C Method: GE
1 lood Signs. Hone				
		MORPHOLO	G Y	
Bed Material: Dor	minant: G Subdom:	С	O1 B1 B2 B3 D1	D2 D3
D95: 2.00 [D (cm): 10.00 Morph:	RPG DISTURBAN		
Pattern: ST		INDICATOR	S C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands: N				
Coupling: CO				
Confinement: EN		D		MIDE CDANE DDE
FSZ:		Bars:	N ✓ SIDE DIAG	MID SPAN BR
		HABITAT QUA	IITV	
N		IIABIIAI QUA		
Name OverWinter Habitat r	none		Comments	
	none			
	none			
		PHOTOS		
Photo Foc I	Lg Dir	T	Comments	
R: DIG F: 1459 STD				
R: DIG F: 1460 STD	D D			

Reach # ILP Map # ILP # Site
1.0 104G.016 2072 341

COMMENTS				
Section	Comments			
CHANNEL	S6 - steep gradient. In valley wall, tributary to Tish Cr.			



Site 341 – Upstream view



Site 341 – Downstream view

Reach # ILP Map # ILP #

Site

			PROJE	СТ		
Stream Name (g	lame: Schaft Crogaz.): MESS CF		-0000-000-000-000-000	0-000-000	Project Code	e: 17415
			WATERSI	HED		
Gazetted Name:				Lo	ocal Name: M204	
		00000-0000-0000-000			00047 Darah	# 4.0 City # 0.40
ILP Map#: 104	4G.016		NID Map #: 104G.016	NID #: 2		
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3	83223.6336197	Method:		Ref. Nam	•	Method: GE Access: H
Date: 2	2007/10/12	Time: 10:50	Agency: C660	Crew:	SF SC	Fish Crd?: Incomplete:
			CHANN	EL		
		dth width width	width width width	width width	ŭ	Gadient % Mtd Avg
Channel Width (m): M Wetted Width (m): M					0.00	Method II: C 0.00
Pool Depth (m): M					0.00	
Wb Depth:		Avg: 0.00	Method: MS	Stage: I		No Vis.Ch.: Intermittent: Dw: Tribs.:
COVER		Total:				
Type: S	SWD LWD	B U	DP OV	IV CF	ROWN CLOSURE	
Amount:					N	
				IN	STREAM VEG: N	A M V
LWD:		DIST:				
LB SHP:					RB SHP:	
Texture: F		B R A				G C B R A
RIP: STG:					RIP: STG:	
			WATE	R		
EMS:				1	Req #:	
Temp:			Method: T3	(Cond.:	Method: S3
pH: Flood Signs:			Method: P2 Method: GE		Turb.: T M	L C Method: GE
i lood Signs.						
			MORPHOL		D4 D2 D2	D4 D2 D2
Bed Material:	Dominant:	Subdom:		01	B1 B2 B3	B D1 D2 D3
D95:	D (cm):	Morph:	DISTURE INDICA	BANCE -		
Pattern: Islands:			11451671	TORS C1	C2 C3 C4	4 C5 S1 S2 S3 S4 S5
Coupling:						
Confinement:			P	ars: N□		IAG MID SPAN BR
FSZ:			Ь	ars: N	SIDE DI	IAG MID SPAN BR
			РНОТО	S		
Photo Pi 1462	Foc Lg	Dir			Comments	5
R: DIG F: 1462	STD	U	COMMEN	ITS		
Section				Comme	nts	
CHANNEL	NCD					
SITE CARD	NCD					



Site 342 – Upstream view

Reach # ILP Map # ILP # Site

	Project Name	e: Schaft Cr	reek										
Strear	m Name (gaz.								Project Cod	le:	17	7415	
	atershed Cod			000-0000-00	000-000-000	-000-000	0-000-000		,				
•													
					WAT	ERSH	IED						
Gazetted I	Name [.]							Local Nam	e: M203				
	Code: 000-00	0000-00000	-0000-0000-0	0000-000-0	00-000-000-	000-000		Localitain	O. 111200				
	Map#: 104G.0		ILP #: 207		D Map #: 104		NID	#: 20048	Reach	#: 1.0	n	Site #: 34	3
	•	, 10			5 Map #. 10	10.010							
Field UTM (Z	•		Me	ethod:				Site Lg: 100		Method: GE	F	Access: H	
GIS UTM (2	Z.E.N): 9.3832	37.6336250					Ref.	Name:					
	Date: 200	7/10/12	Time: 10:5	53	Agency:	C660	Cre	w: SF SC		Fish Crd?:		Incomplete	: 🗌
						ANNE							
	Mtd		dth width	width wid		width	width v	vidth width	Avg		Gadient		Avg
Channel Widtl		2.20 1.6		2.40 1.					1.95		70.0		70.00
Wetted Width	` '		10 1.40	1.50 1.4					1.43	Method II:		С	
Pool Depti	h (m): MS	0.06 0.	.05 0.05	0.05 0.0	0.05				0.05	No Vis.Ch.:	☐ Int	termittent:	
Wb D	Depth: .3	.5	Δνα:	0.40	Method:	MS	Stan	e: L M	∨ H □	Dw:	\equiv	Tribs.:	
<u> </u>				0.40	wictiou.	WIO	Olag	o. L w	▼ □	DW.		111b3	
CO	OVER		Total: T										
	Type: SWI	LWD	В	U	DP	OV	IV	CROWN C	LOSURE				
	nount: S	D	T	Т	Т	Т	N	1	1-20%				
Loc: F	P/S/O:			ノママ		~ ~ 		INSTREAM	IVEG: N	\square A \square N	/ \		
	LWD: F		DIST: E		<u> </u>								
	LWD: F		DISTE										
	3 SHP: S							RB SHF	P: S				
Te	exture: F 🗸				_								
	L.V.			${}^{L} $]			Texture	e: F 🗸 (G ✓ C 🗌	B _ F	R 🗌 A 🗌	
	RIP: C		∐ в ∐ к	8 A					e: F 🔽 (P: C	G ✓ C	В 🗌 Р	R A	
	_		□в□к	8 A				RIF		G ✓ C	B 🔲 F	R A	
	RIP: C		В	A _				RIF	P: C	G ✓ C	B 🗌 F	R	
	RIP: C STG: MF		В	A		ATEF	₹	RIF STO	P: C	G ▼ C □	B F	R	
	RIP: C STG: MF				W	ATEF	₹	RIF STO Req #:	P: C B: MF	G ▼ C □	B F		
	RIP: C STG: MF EMS: Temp: 1			M	W lethod: T3	ATEF	₹	RIF STO	P: C B: MF	G ▼ C □	B F	Method: S3	
7	RIP: C STG: MF EMS: Temp: 1 pH: 8.2			M	W lethod: T3 lethod: P2	ATER	₹	RIF STC Req #: Cond.: 19	P: C S: MF				
7	RIP: C STG: MF EMS: Temp: 1		В	M	W lethod: T3	ATEF	र	RIF STC Req #: Cond.: 19	P: C S: MF	G ♥ C □		Method: S3	
7	RIP: C STG: MF EMS: Temp: 1 pH: 8.2			M	W lethod: T3 lethod: P2 lethod: GE			RIF STC Req #: Cond.: 19	P: C S: MF			Method: S3	_
Flood S	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none			M M M	W lethod: T3 lethod: P2			RIF STC Req #: Cond.: 19 Turb.: T	P: C B: MF	l C c		Method: S3	
7	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none	Dominant: F		M M M Subdom: G	W lethod: T3 lethod: P2 lethod: GE			RIF STC Req #: Cond.: 19	P: C S: MF	l C c		Method: S3	
Flood S	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none			M M M	W lethod: T3 lethod: P2 lethod: GE	PHOL	O G Y	RIF STC Req #: Cond.: 19 Turb.: T	P: C B: MF	l C c		Method: S3	
Flood S Bed Ma	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none	Dominant: F		M M M Subdom: G	W lethod: T3 lethod: P2 lethod: GE	HOL	O G Y	RIF STC Req #: Cond.: 19 Turb.: T	P: C B: MF	L C 0	2 D3	Method: S3	\$5
Flood S Bed Ma	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none	Dominant: F		M M M Subdom: G	W lethod: T3 lethod: P2 lethod: GE	PHOL	O G Y	Req #: Cond.: 19 Turb.: T	P: C B: MF B: MF B2 B3	L C C S1	2 D3	Method: S3 Method: GE	
Flood S Bed Ma Pa Isl	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none aterial: I D95: 1.00 attern: ST	Dominant: F		M M M Subdom: G	W lethod: T3 lethod: P2 lethod: GE	PHOL	O G Y	Req #: Cond.: 19 Turb.: T	P: C S: MF 00 B2 B3 C3 C4	L C C S1	2 D3	Method: S3 Method: GE	
Flood S Bed Ma Pa Isl Cou	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none aterial: I D95: 1.00 attern: ST	Dominant: F		M M M Subdom: G	W lethod: T3 lethod: P2 lethod: GE	PHOL DISTURB INDICAT	O G Y ANCE ORS	Req #:	B2 B3 C3 C4	B D1 D2	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none aterial: I D95: 1.00 attern: ST llands: O upling: CO	Dominant: F		M M M Subdom: G	W lethod: T3 lethod: P2 lethod: GE	PHOL DISTURB INDICAT	O G Y	Req #:	B2 B3 C3 C4	B D1 D2	2 D3 S2	Method: S3 Method: GE	
Flood S Bed Ma Pa Isl Cou	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none atterial: D95: 1.00 attern: ST llands: O upling: CO ement: CO	Dominant: F		M M Subdom: G Morph: RF	W lethod: T3 lethod: P2 lethod: GE MORF	PHOL DISTURB INDICAT Ba	O G Y ANCE FORS	Req #:	B2 B3 C3 C4	B D1 D2	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou Confine	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none aterial: D95: 1.00 attern: ST lands: O upling: CO ement: CO FSZ:	Dominant: F		M M Subdom: G Morph: RF	W lethod: T3 lethod: P2 lethod: GE	PHOL DISTURB INDICAT Ba	O G Y ANCE FORS	RIF STC Req #:	B2 B3 C3 C4	B D1 D2	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou Confine	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none aterial: D95: 1.00 attern: ST Jands: O upling: CO ement: CO FSZ:	Dominant: F D (cm): 5		M M Subdom: G Morph: RF	W lethod: T3 lethod: P2 lethod: GE MORF	PHOL DISTURB INDICAT Ba	O G Y ANCE FORS	Req #:	B2 B3 C3 C4	B D1 D2	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou Confine Name	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none aterial: D95: 1.00 attern: ST lands: O upling: CO ement: CO FSZ:	Dominant: F D (cm): 5		M M Subdom: G Morph: RF	W lethod: T3 lethod: P2 lethod: GE MORF	PHOL DISTURB INDICAT Ba	O G Y ANCE FORS	RIF STC Req #:	B2 B3 C3 C4	B D1 D2	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou Confine Name OverWinter Rearing H	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none atterial: D95: 1.00 attern: ST llands: O upling: CO ement: CO FSZ:	Dominant: F D (cm): 5		M M Subdom: G Morph: RF	W lethod: T3 lethod: P2 lethod: GE MORF	PHOL DISTURB INDICAT Ba	O G Y ANCE FORS	RIF STC Req #:	B2 B3 C3 C4	B D1 D2	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou Confine Name	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none atterial: D95: 1.00 attern: ST llands: O upling: CO ement: CO FSZ:	Dominant: F D (cm): 5		M M Subdom: G Morph: RF	Welthod: T3 lethod: P2 lethod: GE MORF	DISTURB INDICAT Ba	O G Y ANCE FORS Ars: Cor	RIF STC Req #:	B2 B3 C3 C4	B D1 D2	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou Confine Name OverWinter Rearing H	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none atterial: D95: 1.00 attern: ST llands: O upling: CO ement: CO FSZ:	Dominant: F D (cm): 5		M M Subdom: G Morph: RF	Welthod: T3 lethod: P2 lethod: GE MORF	PHOL DISTURB INDICAT Ba	O G Y ANCE FORS Ars: Cor	RIF STC Req #:	B2 B3 C3 C4	B D1 D2	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou Confine Name OverWinter Rearing H	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none aterial: I D95: 1.00 attern: ST lands: O upling: CO ement: CO FSZ:	Dominant: F D (cm): 5		M M Subdom: G Morph: RF	Welthod: T3 lethod: P2 lethod: GE MORF	DISTURB INDICAT Ba	O G Y ANCE FORS Ars: Cor	RIF STC Req #:	B2 B3 C3 C4	B D1 D2 1 C5 S1	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou Confine Name OverWinter Rearing H Spawning H	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none atterial: I D95: 1.00 attern: ST alands: O upling: CO ement: CO FSZ:	Dominant: F D (cm): 5	5.00	M M Subdom: G Morph: RF	Welthod: T3 lethod: P2 lethod: GE MORF	DISTURB INDICAT Ba	O G Y ANCE FORS Ars: Cor	RIF STC Req #:	B2 B3 C3 C4 DE V DI	B D1 D2 1 C5 S1	2 D3 S2	Method: S3 Method: GE	\$5
Flood S Bed Ma Pa Isl Cou Confine Name OverWinter Rearing H Spawning H Photo R: DIG F: 14	RIP: C STG: MF EMS: Temp: 1 pH: 8.2 Signs: none atterial: D95: 1.00 attern: ST alands: O upling: CO ement: CO FSZ:	Dominant: F D (cm): 5	5.00 S	M M Subdom: G Morph: RF	Welthod: T3 lethod: P2 lethod: GE MORF	DISTURB INDICAT Ba	O G Y ANCE FORS Ars: Cor	RIF STC Req #:	B2 B3 C3 C4 DE V DI	B D1 D2 1 C5 S1	2 D3 S2	Method: S3 Method: GE	\$5

COMMENTS				
Section	Comments			
CHANNEL	S6 - no fish habitat steep above and below. Gradient 70%			



Site 343 – Upstream view



Site 343 – Downstream view

Reach # ILP Map #

1.0

104G.016

ILP#

Site 344

2075

PROJECT Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M202 ILP Map#: 104G.016 NID #: 20049 Reach #: ILP #: 2075 NID Map #: 104G.016 1.0 Site #: 344 Field UTM (Z.E.N): .. Method: Site Lg: 50 Method: GE Access: H GIS UTM (Z.E.N): 9.383640.6336995 Ref. Name: Incomplete: 🗹 Date: 2007/10/12 Time: 12:00 Agency: C660 Crew: SF SC Fish Crd?: CHANNEL Mtd width width width width width Gadient % Mtd width width width width width Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth: Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C4 C5 S1 S3 S5 Islands: Coupling: Confinement: Bars: N SIDE DIAG MID SPAN BR FSZ: PHOTOS Foc Lg Dir Comments R: DIG F: 1467 STD D COMMENTS Section Comments CHANNEL NCD - >70% slope ds. SITE CARD NCD



Site 344 – Downstream view

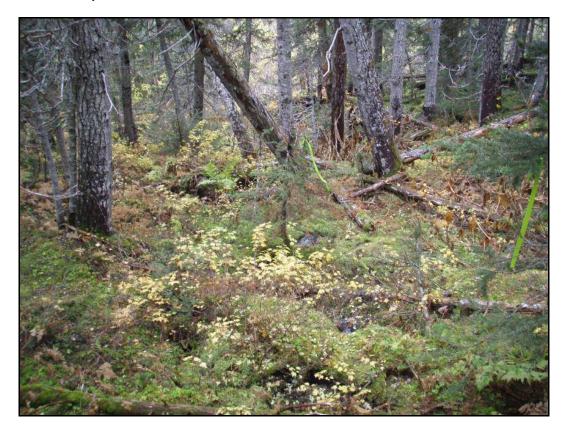
Reach # ILP Map # ILP # Site

	PROJE	C I	
Project Name: Schaft 0	Creek		
Stream Name (gaz.): MESS (Project Code:	17415
			17415
Project Watershed Code. 630-000	000-0000-0000-0000-000-000-000-000-0	00-000-000	
	WATER	115.0	
	WATERS	HED	
Gazetted Name:		Local Name: M201	
Watershed Code: 000-000000-0000	0-00000-0000-0000-000-000-000-000-00	0	
ILP Map#: 104G.016	ILP #: 2076 NID Map #: 104G.016	NID #: 20050 Reach #:	1.0 Site #: 345
Field LITM (7 F NI)	Mathadi	Cita Lav 100 Mathady Cl	- Access II
Field UTM (Z.E.N):	Method:	Site Lg: 100 Method: G	E Access: H
GIS UTM (Z.E.N): 9.383745.6337089)	Ref. Name:	
Date: 2007/10/12	Time: 12:04 Agency: C660	Crew: SF SC Fish Cro	d?: Incomplete:
Date: 2001/10/12			incomplete.
	CHANN	IEL	
Mtd width v	vidth width width width width width	width width Avg	Gadient % Mtd Avg
Channel Width (m): MS 0.45 0.	75 0.90 0.70 0.65 1.00	0.74 Method	l: 40.0 C 40.00
Wetted Width (m): MS 0.30 (0.60 0.65 0.40 0.40 0.70	0.51 Method	II: C
Pool Depth (m): MS 0.05 (0.02 0.03 0.08 0.02 0.03	0.04	
		No Vis.0	Ch.: Intermittent:
Wb Depth: .2 .4	.4 Avg: 0.33 Method: MS	Stage: L M V H	Dw: Tribs.:
COVER	Total: A		
		000000000000000000000000000000000000000	
Type: SWD LWD	B U DP OV	IV CROWN CLOSURE	
Amount: T S	D T T S	N 1 1-20%	
Loc: P/S/O:		INSTREAM VEG: N ☐ A ▶	MVV
			
LWD: F	DIST: E		
LB SHP: S		RB SHP: S	
Texture: F 🖂 G 🕡 C	y B □ R □ A □	Texture: F G 🗸 C	⊅ B □ R □ A □
RIP: C		RIP: C	
STG: MF		STG: MF	
	WATE	R	
EMS:		Req#:	
Temp: 0	Method: T3	Cond.: 250	Method: S3
pH: 8.1	Method: P2		
Flood Signs: none	Method: T2	Turb.: T M L C	Method: GE
r lood Signs. Hone	Metriod. GE		
	MORPHO	LOGY	
Bed Material: Dominant: 0	Subdom: F	O1 B1 B2 B3 D1	D2 D3
D95: 1.00 D (cm):	2.0101	RBANCE	
Pattern: SI	INDIC	ATORS C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands: O			
Coupling: DC			
Confinement: FC			
FSZ:		Bars: N✓ SIDE DIAG	MID SPAN BR
- 3	<u></u>		
	HABITAT Q	UALITY	
Name		Comments	
OverWinter Habitat poor			
Rearing Habitat poor			
Spawning Habitat poor			
- F	PHOT	o s	
Photo Foc La		Comments	
Photo Foc Lg	Dir	Comments	
Photo Foc Lg R: DIG F: 1469 STD R: DIG F: 1470 STD		Comments	

COMMENTS									
Section	Comments								
CHANNEL	S6 - minimal fish habitat. Lots of cover, minimal pool depths and flow. Steep gradient.								



Site 345 – Upstream view



Site 345 – Downstream view

Foc Lg

STD

STD

Dir

D

U

Photo

R: DIG F: 1472

R: DIG F: 1473

ILP Map# Reach # ILP# Site

Comments

1.0 104G.016 2077 346 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: M200 ILP #: 2077 NID #: 20051 1.0 ILP Map#: 104G.016 NID Map #: 104G.016 Reach #: Site #: 346 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.383805.6337156 Ref. Name: Fish Crd?: Incomplete: Date: 2007/10/12 Time: 12:10 Agency: C660 Crew: SF SC CHANNEL width width Mtd Mtd width width width width width width width width Gadient % Avg Avg Channel Width (m) MS 1 70 0.90 0.70 0.80 Method I: 30.00 1 60 1.14 30.0 С Wetted Width (m) MS 1.30 1.20 0.70 0.50 0.60 0.86 Method II: С 0.05 Pool Depth (m) MS 0.06 0.03 0.04 0.05 0.05 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .1 .1 .2 Avg: 0.13 Method: MS Stage: L ✓ M ☐ H ☐ Dw: COVER Total: A **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 1-20% D Ν Amount Ν S Loc: P/S/O: **VV V V V V VV V V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: F DIST: E Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F ✓ G ✓ C ☐ B ☐ R ☐ A ☐ RIP: M RIP: M STG: MF STG: MF WATER EMS: Req#: Temp: 1 Method: T3 Cond.: 270 Method: S3 pH: 8.1 Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY D1 D2 D3 Subdom: F Bed Material: Dominant: G D95: 4.00 D (cm): 5.00 Morph: RPG DISTURBANCE **INDICATORS** Pattern: ST C2 С3 C4 C5 S1 S3 S5 Islands: O \checkmark Coupling: DC Confinement: OC SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Name OverWinter Habitat poor - minimal flow Rearing Habitat fair - abundant cover Spawning Habitat poor - cobbles no mix of fines **PHOTOS**

	COMMENTS									
Section	Comments									
CHANNEL	S6 - up from crossing, S4 down from crossing. Sampling required. Marginal fish habitat.									



Site 346 – Downstream view



Site 346 – Upstream view



Site 399 – Upstream view



Site 399 – Downstream view

Reach #

1.0

ILP Map#

104G.036

ILP# 4000 Site 400

PROJECT Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.036 NID #: 10200 ILP #: 4000 NID Map #: 104G.036 1.0 Reach #: Site #: 400 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382493.6361723 Ref. Name: Incomplete: 🗹 Date: 2007/08/24 Time: 09:33 Agency: C660 Crew: LT DD Fish Crd?: CHANNEL width width width Mtd Mtd width width width width width width width Gadient % Avg Avg 0.00 Channel Width (m) MS 0.00 Method I: С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m) MS 0.00 Intermittent: 🗸 No Vis.Ch.: Wb Depth Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В Type: U Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: Texture: F G C B R A Texture: F G C B R A RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C5 S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments 100 STD U R 100 F 2 STD D COMMENTS Section Comments CHANNEL NCD - ~60m ds goes subsurface for ~10m along 30% grade. Returns ds in aw grade section. ~20% w/ defined channel @ rd crossing, SITE CARD NCD



Site 400 – Upstream view



Site 400 – Downstream view

Foc Lg

STD

STD

Dir

IJ

D

Photo

F:

3

100

100 F: 4

ILP Map # Reach # ILP# Site

Comments

1.0 104G.036 4001 401 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.036 NID #: 10201 ILP #: 4001 1.0 NID Map #: 104G.036 Reach # Site #: 401 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382481.6361649 Ref. Name: Incomplete: 🗸 Fish Crd?: Date: 2007/08/24 Time: 10:06 Agency: C660 Crew: LT DD CHANNEL width width width width Gadient % Mtd Mtd width width width width width width Avg Avg Channel Width (m) MS 0.90 0.48 0.59 0.79 Method I: 20.0 10.0 15.00 1 20 С 0.59 Method II: Wetted Width (m) MS 0.90 0.91 0.48 0.72 С Pool Depth (m) MS 0.07 0.05 0.06 No Vis.Ch.: Intermittent: Wb Depth: .1 .1 Avg: 0.10 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: NS **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 1-20% Amount Ν Ν D S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: F DIST: C Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: M RIP: M STG: MF STG: MF WATER EMS: Req#: Temp: 6 Method: T3 Cond.: 200 Method: S3 pH: Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 В3 D1 D2 D3 Subdom: G Bed Material: Dominant: F D95: 0.13 D (cm): 0.11 Morph: RPG DISTURBANCE **INDICATORS** Pattern: IR C2 СЗ C4 C5 S1 S3 S5 Islands: N \checkmark Coupling: DC Confinement: OC Bars: N SIDE DIAG MID SPAN BR FSZ: HABITAT QUALITY Name OverWinter Habitat none Rearing Habitat poor Spawning Habitat poor **PHOTOS**

taken ~10m ds rd crossing

taken ~10m ds rd crossing

COMMENTS										
Section	Comments									
CHANNEL	S6 - poorly defined channel, shallow fines, and poor habitat values for rearing and spawning. Goes under roos mass of live tree for short 1.5m. Moss in channel, some cobble (<1%) mostly fines. Gradient above rd crossing 10%, below 20%									
` <u>-</u>	1.3m. Woss in channel, some copple (<1%) mostly lines. Gradient above to crossing 10%, below 20%									



Site 401 – Upstream view



Site 401 – Downstream view

Reach # ILP Map # ILP # Site

	PROJECT																					
	Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Watershed Code: 630-000000-00000-00000-0000-0000-0000-0												000	Project Code:					17415			
WATERSHED																						
	Gazetted Name: Local Name:																					
	Watershed Code: 000-00000-00000-00000-0000-0000-000-00																					
														NID #: 10	0202	Read	ch #:	1.0	0	Site #: 4	02	
Field UTM (Z.E.N): Method:															Site Lg: 100 Method					Access: H		
GIS UTM (Z.E.N): 9.382464.6361639													F	Ref. Name:								
			Г	Date:	2007/	08/24		Time: 10):36		Agend	y: C660		Crew:	חם דו		Fish	n Crd?:		Incomple	te· 🗸	
Date: 2007/08/24 Time: 10:36 Agency: C660 Crew: LT DD Fish Crd?: ☐ Incomplete: ✔ CHANNEL																						
	Chanr	nel W	idth (n).58	0.61	h width 0.29	0.93	0.61	wiat	n widi	in widin	width	width	Avg 0.60	Me	thod I:		nt % Mtd 14.0 C	Avg 16.50	
-			idth (n		MS	0.58	0.61		1.10	0.69		-		+	 	0.65		hod II:	10.0	14.0 C	10.00	
	Po	ol De	epth (n	n): l	MS	0.16	0.10)								0.13					J 	
	No Vis.Ch.: Intermittent:																					
L	Wb Depth: .1 .1 .1 Avg: 0.10 Method: MS Stage: L M ✓ H Dw: Tribs.:																					
	_		COVE	R			T	otal: T						_								
	L		Тур	-	SWD	LW		В	U	DF	,	OV	IV			OSURE						
	-		Amou		S	1		N	D	T		T	T	2		1-40%	N			, —		
		LU	c: P/S/	/O. ▼						V			V	INS	SIREAN	VEG:	N \square	4 🔲 K	/I 🗸 \	/ <u> </u>		
			LW	/D: N	S			DIST: NS	3													
			LB SH	HP: S											RB SHP	: S						
			Textu	ure:	F 🗸	G \square	С	В	$R \square A$	A 🗌					Texture	: F 🗸	G \square	С	В	R \square A \square		
			R	RIP: C											RIP: C							
			S	TG: YI	F										STG: YF							
											1	WAT	ER									
			EM	1S:										F	Req #:							
			Ten	np: 6						Meth	Method: T3				Cond.: 210					Method: S3		
			-	H:							Method: P2				Turb.: T M L C					Method: GE		
		Floo	od Sigr	ns:						Meth	od: GE											
										N	1 O R	PHO	LOGY	1								
		Bed	Materi	ial:	Do	minan	t: G		Subdon	n: NA				01	B1	B2 I	B3 D	1 D2	2 D3			
			D9	95: 5	.50	D (cm)	: 5.5	0	Morph	n: RPG		DISTU	RBANCE									
			Patte	rn: TN	Л								CATORS	C1 C2 C3 C4 C5					S1 S2 S3 S4 S5			
			Island	ds: N										V		ПП		7 [
			Couplir	-																		
		Conf	ineme		;								Bars:	N	SID	F	DIAG	1 M	ID[SPAN	BR	
			FS	SZ:									Dais.	N	J 01D		DIAG_	J IVI		OI AIN	ы	
										НΑ	ВІТ	AT C	UALI	ΤΥ								
Name Comments																						
			ter Hal			not specified																
			g Habit			poor																
	Spawning Habitat good PHOTOS																					
Photo Foc Lg Dir Comments																						
R: 100 F: 5 S							+		U	take	taken above rd crossing											
R:	100	F:	6		ST		十		D			ow rd cro										
				_				_						_	_	_	_					

Reach # ILP Map # ILP # Site
00 1.0 104G.036 4002 402

	COMMENTS
Section	Comments
CHANNEL	S6 - good flow in channel. Steady open channel, branched from another channel located ~20m from rd crossing. Multiple braids from main channel through slide area. Good gravels for spawning, limited rearing. Site 403 on another branch from same stream us
SITE CARD	some measurements missing (ph, additional stream widths)



Site 402 – Upstream view



Site 402 – Downstream view



Site 402 – Upstream view



Site 403 – Downstream view

Reach # ILP Map # ILP # Site

Project Name: Schoff Crock													
Stream Name (gaz.	e: Schaft Creek): MESS CREEK e: 630-000000-00000-00000-0	000-0000-000-000-000-000-	Project Cod	de: 17415									
		WATERSH	E D										
Gazetted Name: Watershed Code: 000-00 ILP Map#: 104G.0 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3824: Date: 200	Method 56.6361619	NID Map #: 104G.036	Local Name: NID #: 10203 Reach Site Lg: 100 Ref. Name: Crew: LT DD	#: 1.0 Site #: 403 Method: GE Access: H Fish Crd?:									
		CHANNE	1										
Mtd Channel Width (m): MS Wetted Width (m): MS Pool Depth (m): MS Wb Depth: .1 COVER Type: SWD Amount: D Loc: P/S/O: ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	width width width width 0.66 0.95 0.94 0.68 0.88 0.91 0.98 0.62 0.03 0.11	h width width width B	width width Avg 0.81 0.85 0.07 Stage: L M H IV CROWN CLOSURE T 2 21-40% INSTREAM VEG: N RB SHP: S	Gadient % Mtd Avg Method I: 13.5									
		WATER											
EMS: Temp: 6 pH: Flood Signs:		Method: T3 Method: P2 Method: GE	Req #: Cond.: 200 Turb.: T M	Method: S3 L C ✓ Method: GE									
		MORPHOLO	GY										
Bed Material: [D95: 0.07 Pattern: TM Islands: N Coupling: DC Confinement: OC FSZ: [Dominant: G Subdo D (cm): 0.07 Mor	om: F ph: RPG DISTURBA INDICATO Bar	ORS C1 C2 C3 C										
		HABITAT OU	AIITY										
HABITAT QUALITY													
Nama			Comments										
Name Rearing Habitat	poor		Comments										
Name Rearing Habitat	poor	РНОТОS											
Rearing Habitat	poor Dir	PHOTOS		s									
Rearing Habitat Photo Fo		PHOTOS	3	S									
Rearing Habitat	oc Lg Dir		Comment	s									
Rearing Habitat	oc Lg Dir	PHOTOS COMMENT	Comment	S									

	COMMENTS
Section	Comments
CHANNEL	S6 - 13.5% below from same water source as site 402 in slide area. Frequently flows under wood debris and root woods. Poor for
	rearing. Good gravel but access impaired by flow under root systems and shallow depths. Immediately us rd xing creek branches.

Section

CHANNEL

ILP Map# Reach # ILP# Site

1.0 104G.036 4003 404 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: #131 ILP Map#: 104G.036 NID #: 10204 ILP #: 4003 1.0 NID Map #: 104G.036 Reach #: Site #: 404 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382418.6361572 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/24 Time: 11:56 Agency: C660 Crew: LT DD CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0 46 0.82 0.20 0.57 0.39 0.54 Method I: 18.00 0.83 18.0 С Method II: Wetted Width (m) MS 0.55 0.38 0.82 0.28 0.57 0.39 0.50 С Pool Depth (m) MS 0.03 0.07 0.06 0.05 No Vis.Ch.: Intermittent: Wb Depth .1 Avg: 0.10 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: T **CROWN CLOSURE** SWD LWD В DP OV IV Type: U 1-20% Ν Amount D D Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: F DIST: C Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: M RIP: M STG: INIT STG: INIT WATER EMS: Req#: Temp: 7 Method: T3 Cond.: 190 Method: S3 pH: Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: F Subdom: NA D95: 0.01 D (cm): 0.01 Morph: RP DISTURBANCE **INDICATORS** Pattern: IR C1 C2 С3 S1 S3 S5 Islands: N **V** Coupling: DC Confinement: OC SPAN Bars: N SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments 100 10 STD U at rd crossing R 100 F 9 STD D at rd crossing COMMENTS

Comments

S6 - still in slide area, above road crossing spreads into flat mud area and goes subsurface.



Site 404 – Downstream view



Site 404 – Upstream view

Reach # ILP

ILP Map #

P#

1.0 104G.036

ILP # 4004 Site 405

PROJECT Project Name: Schaft Creek															
Project Name	: Schaft Cr	eek													
Stream Name (gaz.)	: MESS CF	REEK							F	Project Co	ode:			17415	
Project Watershed Code	: 630-0000	00-00000-00	0000-0000	0-0000-	000-00	0-000-0	00-000-00	00							
					WAT	ERS	HFD								
Gazetted Name:					,			Loc	al Nam	ь.					
Watershed Code: 000-000	0000-00000-	00000-0000	-0000-00	0-000-0	00-000	-000-00	0	200	zai i tairi	.					
ILP Map#: 104G.0	36	ILP #: 40	004	NID Ma	ap #: 10	04G.036	N	ID#: 10	205	Read	ch #:		1.0	Site #:	405
Field UTM (Z.E.N):		N	lethod:					Site Lo	g: 100		Met	thod: GE		Access: H	
GIS UTM (Z.E.N): 9.38241	4.6361567						Re	ef. Name) :						
Date: 2007	/08/24	Time: 12:	:15	,	Agency	r: C660	C	crew: L	_T DD		F	ish Crd	?:	Incomp	lete: 🗸
						IANN	EL							·	
Mtd	width wi	dth width	width	width	width			width	width	Avg			Gadie	ent % Mtd	Avg
Channel Width (m): MS	0.48									0.48		Method	l: 12.0	С	12.00
Wetted Width (m): MS	0.27									0.27	N	Method I	l:	С	
Pool Depth (m): MS															
Wb Depth:		Avg	g: 0.00	N	/lethod:	MS	St	age: L	М	□н□		No Vis.C D	w: 🗌	Intermittent: Tribs.:	
COVER															
Type: SWD	Amount:														
	Amount:														
Loc: P/S/O:	c: P/S/O: N A M V														
LWD: DIST:															
LB SHP:								1	RB SHP):					
Texture: F	G \square C	ВП	R 🗌 A						Texture	: F 🗀	G	_ c _	В	R A	
RIP:									RIP): 					
STG:									STG	i:					
					V	VATE	R								
EMS:								R	eq #:						
Temp:					od: T3			C	ond.:					Method:	S3
pH:					od: P2	2		Т	urb.: T	М		- 🗆 С		Method:	GE
Flood Signs:					od: GE										
				N	OR	PHOI	LOGY								
Bed Material: D	ominant:		Subdom	:				01	B1		B3		D2 D	3	
D95:	D (cm):		Morph	:		DISTUR									
Pattern:						INDICA	ATORS	C1	C2	C3 (C4	C5	S1 S	2 S3 S	S4 S5
Islands:															
Coupling: Confinement:															
FSZ:						E	Bars:	N	SID	E	DIAG		$MID {\color{red}\square}$	SPAN	BR
						LOT	<u> </u>								
Di .				<u> </u>	PI	нотс) 5			0	<u>. </u>				
	c Lg TD	D	oir D	take	n ds rd	crossing	n			Commer	nts				
	TD		J	_		crossing	•								
						ММЕ									
Section							C	commen	ts						
CHANNEL	NCD - goe	s subsurface	e ~20m u	s rd cro	ssing. I	Flows for	r 30m the	n goes u	nder lar	ge mass	wood	y debris	and spre	eads out.	
SITE CARD	NCD														



Site 405 – Downstream view



Site 405 – Upstream view

Reach #

ILP Map #

1.0 104G.036 ILP# 4005 Site 406

PROJECT Project Name: Schaft Creek																
Proje Stream Nar Project Watersh	me (gaz.)): MES	S CREE	K	000-000	0-0000-	-000-000)-000-00	0-000-00	00	F	Project Co	ode:		17415	
							WAT	FRS	HFD							
Gazetted Name):						WAI	LKU		Loc	cal Nam	e:				
Watershed Code		0000-00	000-000	00-0000	-0000-00	0-000-0	000-000	000-000)							
ILP Map#	t: 104G.0	36	I	LP #: 40	005	NID Ma	ap #: 10	4G.036	N	ID #: 10	205	Read	ch #:	1.0	Site #:	406
Field UTM (Z.E.N) GIS UTM (Z.E.N)		99.6361	561	N	/lethod:				R	Site Lo ef. Name	_		Method	: GE	Access: H	
Da	ite: 2007	7/08/24	-	Γime: 12:	:50		Agency:	C660	(Crew: I	LT DD		Fish	Crd?:	Incompl	ete: 🗸
							СН	ANN	EL							
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gad	ient % Mtd	Avg
Channel Width (m):	MS											0.00		hod I:	С	0.00
Wetted Width (m): Pool Depth (m):												0.00	Metr	nod II:	С	
				1 .		_							No V	is.Ch.:	Intermittent:	
Wb Depth:			Tot		g: 0.00	N	Method:	MS	Si	tage: L	M	Н		Dw:	Tribs.:	
	COVER Total: Type: SWD LWD B U DP OV IV CROWN CLOSURE Amount: IV IV <td< td=""><td></td></td<>															
l	Amount:															
Loc: P/S/O																
LWD	LWD: DIST:															
LB SHP	LWD: DIST: LB SHP: RB SHP:															
Texture	e: F _] G 🗀	С	В	R \square A						Texture	e: F 🗌	G 🔲 (С 🗌 В 🗆] R A _	
RIF											RIF					
STG	: :										STG	} :				
							W	ATE	R							
EMS											eq #:					
Temp pH							od: T3 od: P2				ond.:				Method: S	
Flood Signs:							od: GE			1	Turb.: T	M [C 🔼	Method: 0	GE
						N	I O R F	HOL	. O G Y							
Bed Material	. г	Dominan	nt.		Subdom					01	B1	B2 E	B3 D1	D2 [D3	
Ded Waterial		D (cm			Morph			DISTURI	RANCE							
Pattern	:				•			INDICA		C1	C2	C3 (C4 C5	S1 S	S2 S3 S	4 S5
Islands																
Coupling												·	·			
Confinement: FSZ:								В	ars:	N	SIE	EΠ	DIAG	MID	SPAN	BR
							D.1		. 0							
Photo	Fo	oc Lg			Dir		PF	ОТО	5			Commer	nto.			
R: 100 F: 13		TD			U	at ro	oad cros	sing				Comme	115			
								ME	NTS							
Section		I							(Commen	ts					
CHANNEL			us subs	surface,	ds rd inte	rmittent	undergi	oung ar	nd under	logs.						
SITE CARD		NCD														



Site 406 – Upstream view

Reach # ILP Map # ILP # Site

	Project Name: Schaft Creek																	
S	Proj tream Na											F	Project Co	ode:		17	'415	
Projec	ct Waters	hed Code	e: 630-0	000000)-00000-00	0000-000	00-0000-	000-000	0-000-00	00-000-00	00							
								WAT	ERS	HED								
Gazet	ted Name	e:									Loc	cal Nam	e:					
Waters	hed Code	e: 000-00	0000-00	000-00	0000-0000	-0000-00	0-000-0	00-000	-000-00	0								
	ILP Map	#: 104G.0	36		ILP #: 40	006	NID Ma	ap #: 10	4G.036	N	ID #: 10)207	Read	ch #:	1.	.0	Site #:	407
Field UTI	M (Z.E.N):			N	fethod:					Site Lo	g: 100		Metho	od: GE	A	Access: H	
GIS UTI	M (Z.E.N): 9.3823	90.6361	528						Re	ef. Name	e:						
	Da	ate: 200	7/08/24		Time: 13	:01	,	Agency:	C660	C	Crew: I	LT DD		Fis	sh Crd?:		Incomp	lete:
								СН	ANN	IEL								
		Mtd	width	width	n width	width	width	width	width	width	width	width	Avg			Gadient	% Mtd	Avg
Channel V			1.90	1.33									1.62	Me	ethod I:	13.5	С	13.50
	Nidth (m)		1.13	0.95	1								1.04	Me	ethod II:		С	
Pool	Depth (m)	No Vis.Ch													Vis Ch	· 🔲 Int	ermittent:	
V	Wb Depth: Avg: 0.00 Method: MS Stage: L ☐ M ✔ H ☐ Dw: ☐ Tribs.: ☐																	
	COVER Total: T																	
	Type: SWD LWD B U DP OV IV CROWN CLOSURE																	
	Amount: S D N N N S T 1 1-20%																	
L	Loc: P/S/O:																	
LWD: F DIST: C																		
					DISTIC													
	LB SHI				. D —	D A						RB SHP		~ —	~ —	D — -		_
			' G _] B	K A	, П							G _		БП	R A	
		P: C G: SHR										RIF	: C :: SHR					
	510	3. SHK										516	SHK					
								W	ATE	R								
	EMS	S:									R	eq #:						
	Temp							od: T3			С	ond.: 20	0				Method:	S3
Ela	p⊦ ood Signs							od: P2 od: GE			T	Γurb.: T	\square M		_ c	~	Method:	GE
110	Jou Signs). 																
							IV	ORF	РНОІ	LOGY								
Bed	d Materia	l: [Dominar	nt: F		Subdom	n: G				01	B1			01 D:		٦	
	D95	5: 2.00	D (cm	n): 2.00	0	Morph	: RPG	ı	DISTUR	BANCE		✓		✓				
	Patterr	n: IR								ATORS	C1	C2	C3 (C4 C	C5 S	1 S2	S3 S	S4 S5
	Islands	s: O									✓	✓	✓	✓	/			
	Coupling																	
Cor	nfinement FSZ								E	Bars:	N	SID	ΕΠ	DIAG	¬ №	1ID	SPAN	BR✔
	FSZ											J						
							HA	BITA	T Q	UALI.	ΤΥ							
١	lame									C	Commen	nts						
	ng Habita		poor															
	ing Habit		poor															
OvervVii	nter Habi	ıdl	poor					PH	нотс) S								
Photo		F/	oc Lg			Dir							Commer	nts				
R: 100 F:	: 14		TD			U	take	n at rd	crossing	1			Comme	no.				
R: 100 F:			TD	-		D D	_		crossing									
	- 1																	

Reach # ILP Map # ILP # Site

	COMMENTS
Section	Comments
	S6 - heavy avulsions rarely confined, only 2 measurements possible in site area. Gravel and fines, shallow pools. In slide area still, though some mature trees still standing.



Site 407 – Upstream view



Site 407 – Downstream view

Reach # ILF

ILP Map #

ILP#

1.0 104G.036

4007

Site 408

	PROJECT Project Name: Schaft Creek																
Proje Stream Nan Project Watersh	ne (gaz.)	: MES	S CREE	K	000-000	00-0000-	-000-000)-000-00	0-000-00	00	F	Project Co	ode:			17415	
							WAT	ERSI	HED								
Gazetted Name:	:									Loc	al Nam	e:					
Watershed Code: ILP Map#:				000-0000 LP #: 40			000-000- ap #: 10-			ID#: 10	208	Read	ch #:	1	1.0	Site #	: 408
Field UTM (Z.E.N): GIS UTM (Z.E.N):		96.6361	414	N	Method:				Re	Site Lo ef. Name			Meth	nod: GE		Access: H	
Dat	te: 2007	7/08/24	•	Time: 13	:37		Agency:	C660	C	Crew: I	_T DD		F	ish Crd?	: 🗌	Incomp	olete: 🗸
							СН	ANN	EL								
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg			Gadie		
Channel Width (m):	MS											0.00	_	/lethod I:	12.0	С	
Wetted Width (m): Pool Depth (m):	MS MS											0.00	<u> </u>	lethod II:		С	_
Wb Depth:				Avg	g: 0.00	N	Method:	MS	St	age: L	П М	ПНГ		o Vis.Ch Dv		Intermittent: Tribs.:	=
COVER			Tot	al:									_				
Type: SWD LWD B U DP OV IV CROWN CLOSURE Amount:																	
LWD: DIST:																	
LB SHP:		· c —		p —	D						RB SHF			- c -	. p —		
Texture		<u> </u>		Ь	R _ A	, <u> </u>					Texture		G _] • _	□	R _ A [
RIP: STG:											RIF STG						
313.									_		510	,. 					
F1.10							W	ATE	R								
EMS: Temp:						Moth	od: T3				eq #: ond.:					Method:	63
pH:							od: P2							_			
Flood Signs:							od: GE			Т	urb.: T	M		С		Method:	GE
						N	I O R F	HOL	OGY								
Bed Material:	С	ominar	nt:		Subdom	1:				01	B1	B2 I	В3	D1 C)2 D3	3	
D95:		D (cm):		Morph			DISTURE	RANCE]	
Pattern:					•			INDICA		C1	C2	C3 (C4	C5 S	S1 S2	2 S3	S4 S5
Islands:																	
Coupling:																	
Confinement:																	
FSZ:								В	ars:	N	SID	E	DIAG[MID	SPAN	BR
							PH	ОТО	S								
Photo		c Lg)ir							Commer	nts				
R: 100 F: 16	S	TD			U	at ro	oad cros	_									
							COV	IMEN	ITS								
Section									C	commen	ts						
CHANNEL		NCD -	goes su	ubsurface	e at road	crossing	g for 2m	, then ag	ain 30m	ds for a	nother 3	3m, contir	nues w	/intermit	tent surfa	ace flow ds.	
SITE CARD		NCD															
·																	



Site 408 – Upstream view

Foc Lg

STD

STD

Dir

IJ

D

at rd crossing

us of rd crossing

Photo

F: 17

100

100 F: 18

ILP Map # Reach # ILP# Site

Comments

1.0 104G.036 4008 409 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: #136 ILP Map#: 104G.036 NID #: 10209 ILP #: 4008 1.0 NID Map #: 104G.036 Reach #: Site #: 409 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382292.6361393 Ref. Name: Fish Crd?: Incomplete: 🗸 Date: 2007/08/24 Time: 13:59 Agency: C660 Crew: LT DD CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.65 0.49 1.66 0.73 Method I: 12.00 0.52 0.32 12.0 С Method II: Wetted Width (m) MS 0.71 0.52 0.65 0.61 1.27 0.75 С Pool Depth (m) MS 0.50 0.50 No Vis.Ch.: Intermittent: Tribs.: Wb Depth: .2 .1 Avg: 0.15 Method: MS Stage: L ☐ M ✔ H ☐ Dw: COVER Total: T **CROWN CLOSURE** LWD DP SWD В OV IV Type: U 1-20% Ν Amount S D S S Loc: P/S/O: **V V** INSTREAM VEG: N ☐ A ☐ M 🗸 V ☐ LWD: A DIST: C RB SHP: S Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \checkmark Method: GE Flood Signs: Method: GE MORPHOLOGY 01 В3 D1 D2 D3 Subdom: G Bed Material: Dominant: F D95: 0.05 D (cm): 13.50 Morph: RPG DISTURBANCE **INDICATORS** Pattern: IR C2 С3 S1 S3 S5 Islands: N \checkmark Coupling: DC Confinement: FC SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Name OverWinter Habitat poor Rearing Habitat poor Spawning Habitat good PHOTOS

Reach # ILP Map # ILP # Site
1.0 104G.036 4008 409

	COMMENTS
Section	Comments
CHANNEL	S6 - creek flows under logs and root wads. Channel forked and joins at road crossing, ds it is a single channel. Us is fed by NCD - goes subsurface (site 410).
SITE CARD	not all measurements taken

Reach # ILP Map # ILP #

Site

	Project Name: Schaft Creek																			
	Projec Stream Nam Project Watersho	ne (gaz.): MES	S CRE	EEK	00-00	000-000	0-0000-	-000-00	0-000-00	00-000-00	00	F	Project C	ode:			17415		
									W A	ΓERS	HED									
	Gazetted Name: Watershed Code:		0000 00	2000 0	0000	0000	0000 00					Loc	al Name	e:						
	ILP Map#:	104G.0		0000-00		#: 40	08			04G.036		ID#: 10		Read	ch #:		1.0		Site #: 4	10
	Field UTM (Z.E.N): GIS UTM (Z.E.N):		80.6361	1401		M	lethod:				Re	Site Lo ef. Name	•		Meth	hod: GE		Acce	ss: H	
	Date	e: 200°	7/08/24	_	Tim	e: 12:	00			y: C660		Crew: L	_T DD		F	ish Crd?	?: 🗌	lr	complet	e: 🗸
	r			1						IANN				•	1					
	Channal Width (m)	Mtd MS	width	widt	h w	vidth	width	width	width	n width	width	width	width	Avg	_	Method I	Gadier	nt %	Mtd C	Avg 0.00
	Channel Width (m): Wetted Width (m):	MS		-	-					+				0.00		Method II			С	0.00
	Pool Depth (m):	MS			+									0.00	L'`	ictilod ii				
	Wb Depth:				1	Avg	: 0.00	N	Method	: MS	Si	tage: L	M	П Н [N	o Vis.Cl	n.:	ntermi	ttent:	
	COVER		Total: SWD LWD B U DP OV IV CROWN CLOSURE																	
	Type:	SWE	SWD LWD B U DP OV IV CROWN CLOSURE																	
	Amount: Loc: P/S/O:		INSTREAM VEG: N A M V														v 🖂			
	LWD:		DIST:																	
	LB SHP:																			
	Texture:	_	1 G 🗀	СГ	⊐В	F	R \square A								ı G \sqsubset	¬сг	В	R \sqsubset	1 A 🖂	
	RIP:] - [] - [Ш.	. 🗀 .						RIP]				J []	
	STG:												STG							
	0.0.												0.0	•						
									١	VATE	R									
	EMS:											R	eq #:							
	Temp:	6							od: T			C	ond.: 12	0				Met	hod: S3	3
	pH:								od: P			Т	urb.: T	M	□ L	□ c		Met	hod: Gl	≣
	Flood Signs:							Metno	od: GE											
								N	1 O R	PHOI	LOGY									
	Bed Material:	Г	Dominar	nt:			Subdom	ı:				01	B1	B2	В3	D1 I	D2 D3	3		
	D95:		D (cm				Morph	:		DISTUR	BANCE									
	Pattern:										ATORS	C1	C2	C3	C4	C5 :	S1 S2	e s	3 S4	S5
	Islands:																	1 [
	Coupling:														ш,			J L		
	Confinement:									_	_					_				
	FSZ:[E	Bars:	N	SID	E	DIAG		MID	SPA	N_	BR
			_			-			Р	ното) S				•					
R	Photo R: 100 F: 19		oc Lg STD			D		at ro	oad cro	esina				Comme	nts					
- "	100 1.1 18	3	, 1 D					atio		M M E	NTS									
	Section		T									Commen	te							
	CHANNEL		NCD	00	orac	k oo -	ito 400	hronsk :	io NOT	٠	ndergrour		ıo							
				- same	cree	r as s	nie 409,	uranch i	IS INCL	, goes u	nuergrour	iu.								
	SITE CARD		NCD																	



Site 409 – Upstream view



Site 409 – Downstream view



Site 410 – Upstream view

Reach # ILP Map #

1.0

ILP#

104G.036

4009

Site

PROJECT Project Name: Schaft Creek																
Proje Stream Na Project Watersl	me (gaz.): MES	S CREI	≣K	000-000	0-0000	-000-000)-000-00	0-000-00	00	F	Project Co	ode:		17415	
							WAT	ERS	HED							
Gazetted Name	e:									Loc	cal Nam	e:				
Watershed Code	e: 000-00	00000-00				0-000-0	000-000	000-000)							
ILP Map#	#: 104G.(036		ILP #: 40	009	NID M	ap #: 10	4G.036	N	ID #: 10		Read	ch #:	1.0	Site #: 4	411
Field UTM (Z.E.N) GIS UTM (Z.E.N)	•	65.6361	358	N	Method:				R	Site Lo ef. Name			Method:	GE	Access: H	
Da	ate: 200	7/08/24		Time: 14	:20		Agency:	C660	(Crew: I	LT DD		Fish (Crd?:	Incomple	ete: 🗸
							СН	ANN	EL							
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg			ent % Mtd	Avg
Channel Width (m)												0.00	Meth		С	0.00
Wetted Width (m) Pool Depth (m)												0.00	Meth	od II:	С	J
		1	1	'									No Vi	s.Ch.:	Intermittent:	
Wb Depth COVER	/ER Total:															
Туре																
	mount:															
Loc: P/S/O	S/O: N A M V															
LWD	LWD: DIST:															
LB SHF	LWD: DIST: LB SHP: RB SHP:															
Texture	e: F _] G _] c \Box	В	R _ A						Texture	e: F	G 🗌 C) B [] R A	
RIF											RIF					
STO	j:										STG	i:				
							W	ATE	R							
EMS						Made	- J. TO				eq #:					20
Temp pH							od: T3				ond.:			_	Method: S	
Flood Signs							od: GE			1	urb.: T	M [] c 🗌	Method: 0	GE .
						N	1 O R F	HOL	OGY							
Bed Material		Dominar	nt:		Subdom					01	B1	B2 E	B3 D1	D2 D)3	
Ded Waterial		D (cm			Morph			DISTURI	DANCE							
Pattern		`	,				L	INDICA		C1	C2	C3 (C4 C5	S1 S	 S2 S3 S	4 S5
Islands																
Coupling																
Confinement FSZ								В	ars:	N	SID	E 🗌	DIAG	MID	SPAN	BR
F32	• 🔲															
							PΗ	ото	S							
Photo Di 20		oc Lg)ir	4-1	n Francis					Commer	nts			
R: 100 F: 20		STD			U	take		rd cros								
Section							001	= 1		Commen	ts					
CHANNEL		NCD -	- seens	out of are	ound at re	d crossir	na. open	channe				nittent sub	surface th	rough soil	~10m ds site, a	and
		-ww=2		3. 910		2.30011	3, 3,5011			. 2510				2 - 3 - 7 - 00 - 11		-
SITE CARD		NCD														



Site 411 – Upstream view

Reach # ILP Map # ILP #

Site

	PROJECT Project Name: Schaft Creek																			
	Proje	ct Name	e: Scha	aft Creel	<															
	Stream Nam											F	Project Co	ode:		17415	;			
	Project Watersh	ed Code	e: 630-0	000000	-00000-0	0000-000	0-0000-	000-000	0-000-00	0-000-00	00									
							,	WAT	ERS	HFD										
	Gazetted Name:										Loc	cal Name	٥٠							
	atershed Code:		0000-00	00-00	000-0000)-0000-00	0-000-0	00-000	-000-000		200	our raint	J.							
	ILP Map#:	104G.0	36		ILP #: 40	010	NID Ma	ap #: 10	4G.036	N	ID#: 10	212	Read	ch #:	1.0		Site #: 4	12		
Fie	ld UTM (Z.E.N):				N	/lethod:					Site Lo	g: 50		Method:	GE	Acce	ss: H			
GI	S UTM (Z.E.N):	9.38212	24.6361	160						Re	ef. Name	e:								
	Dat	e: 2007	7/08/24		Time: 14	·52		Agency:	C660		Crew: L	T DD		Fish (Crd?	۱ ا	ncomplet	re. 🗸		
		2001	1700/24		11110. 14	.02	,		ANN		710 W. I			1 1511 0	Jiu:	, "	Toompic			
		Mtd	width	width	width	width	width	width	width	width	width	width	Δια		Gas	dient %	Mtd	Avg		
Cha	nnel Width (m):	MS	width	width	widin	width	width	widiii	width	widti	width	widti	Avg 0.00	Meth		JIETIL 76	С	0.00		
	etted Width (m):	MS											0.00	Metho	od II:		С			
	Pool Depth (m):	MS											0.00	NI NO	a		·	' ¬		
	Wb Depth:		1		Av.	g: 0.00	Λ.	/lethod:	MS	No Vis.Ch.: Intermittent: Stage: L M H Dw: Tribs.:										
<u> </u>	COVER			To	tal:	g. 0.00			0	0.	ago	□			Z			_		
	Type:	SWD	SWD LWD B U DP OV IV CROWN CLOSURE																	
	Amount:	SVVD	, Lv	V D		0		-	OV	1 V	CROWN CLOSURE									
	Loc: P/S/O:										INS	TREAM	VEG:	N \square A	ПМП) V 🖂				
	LWD:		DIST:																	
			DIST: RB SHP:																	
	LB SHP: Texture:		ı G \square	1 C _	B —	R \square Δ					ļ			G \square C	- B -	¬ R ⊏	1 A 🗀			
	RIP:					R _ A	, П							G 🗆 C	, [] ₂ [」'` ∟	」			
	STG:											RIP STG								
								W	ATE	R										
	EMS: Temp:						Motho	od: T3				eq #: ond.:				Mo	thod: S3			
	pH:							od: P2												
	Flood Signs:						Metho	od: GE			ı	urb.: T	ШМ			IVIE	thod: Gl	E		
							M	ORE	PHOL	OGY										
	Dad Matarial) ominor	.4.		Cubdom					O1	B1	B2 I	B3 D1	D2	D3				
	Bed Material: D95:	L	Dominar D (cm			Subdom Morph							ПП							
	Pattern:		D (0111	.,.		Worpi		I	DISTURE INDICA		C1	C2	C3 (C4 C5	S1	S2 S	3 S4	S5		
	Islands:											02				52 C	7	33		
	Coupling:																			
	Confinement:								ь		NI	CID	-	DIAC	MIDE	- CD/	NI C	DD		
	FSZ:								В	ars:	N	SID	<u> </u>	DIAG	MID	SPA	N _	BR		
								PH	юто	S										
P	hoto	Fo	c Lg			Dir							Commer	nts						
R: 100	F: 21	S	TD			Χ	dry													
								CON	/MEN	ITS										
	Section										Commen									
	CHANNEL			dry at	time of su	ırvey. Sc	oured sid	ols indic	cate wide	seepage	e that fre	equently	goes sub	es subsurface.						
	SITE CARD		NCD																	



Site 412 – Across view of dry channel

Foc Lg

STD

STD

Dir

IJ

D

taken ds at rd crossing

taken us at rd crossing

Photo

F: 22

23

100

100 F:

ILP Map # Reach # ILP# Site

Comments

1.0 104G.036 4011 413 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: #137 ILP Map#: 104G.036 NID #: 10213 ILP #: 4011 1.0 NID Map #: 104G.036 Reach #: Site #: 413 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.382031.6361027 Ref. Name: Fish Crd?: Incomplete: Date: 2007/08/24 Time: 15:10 Agency: C660 Crew: LT DD CHANNEL width width width Gadient % Mtd Mtd width width width width width width width Avg Avg Channel Width (m) MS 0.60 0 44 0.79 0.71 0.69 Method I: 16.50 1 19 0.41 17.0 16.0 С Method II: Wetted Width (m) MS 1.10 0.66 0.63 0.83 0.80 1.50 0.92 С Pool Depth (m) MS 0.18 0.16 0.07 0.14 No Vis.Ch.: Intermittent: Wb Depth: .2 .2 .2 Avg: 0.20 Method: MS Stage: L ☐ M ✔ H ☐ Dw: Tribs.: COVER Total: T **CROWN CLOSURE** LWD SWD В DP OV IV Type: U 21-40% Ν D Amount S S S INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: F DIST: C RB SHP: S Texture: F ✓ G ☐ C ☐ B ☐ R ☐ A ☐ RIP: C RIP: C STG: MF STG: MF WATER EMS: Req#: Temp: 5 Method: T3 Cond.: 140 Method: S3 pH: Method: P2 Turb.: T M L C Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D1 D2 D3 Bed Material: Dominant: G Subdom: NA D95: 7.00 D (cm): 0.24 Morph: RPC DISTURBANCE **INDICATORS** Pattern: IR C2 СЗ C4 C5 S1 S3 S5 Islands: N Coupling: DC Confinement: FC SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Comments Name OverWinter Habitat poor Rearing Habitat poor Spawning Habitat good **PHOTOS**

COMMENTS						
Section	Comments					
CHANNEL	S6 - channel had good flow at time of survey. Frequently runs below surface but w/enough power to have an underground channel. Still					
	may be migratory barrier. Good clean gravels suitable for spawning, good LWD cover.					



Site 413 – Upstream view



Site 413 – Downstream view

Reach # ILP Map # ILP #

Site

1.0 104G.036 4012 414 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: #138 ILP Map#: 104G.036 NID #: 10214 ILP #: 4012 NID Map #: 104G.036 1.0 Reach #: Site #: 414 Field UTM (Z.E.N): .. Method: Site Lg: 30 Method: GE Access: H GIS UTM (Z.E.N): 9.381920.6360824 Ref. Name: Incomplete: 🗸 Date: 2007/08/24 Time: 15:41 Agency: C660 Crew: LT DD Fish Crd?: CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg Channel Width (m) MS 0.00 Method I: 0.00 С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP O۷ IV В U Type: Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: RB SHP: Texture: F G C B R A Texture: F G C B R A RIP: RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 D3 В3 D1 D2 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C1 C2 СЗ C5 S1 S3 S5 Islands: Coupling: Confinement: SPAN Bars: SIDE DIAG MID BR FSZ: PHOTOS Foc Lg Dir Comments R: 100 F: 24 STD U view us taken ~6m ds of road crossing COMMENTS Section Comments CHANNEL NCD - subsurface above rd for ~5m, comes out 4m ds from rd crossing, flows for 10m then intermittent/subsurface flow. SITE CARD NCD



Site 414 – Upstream view

Reach # ILP Map # ILP # Site

		PROJECT		
Project Name: Schaft			Duning of Onder	47445
Stream Name (gaz.): MESS Project Watershed Code: 630-00		00-000-000-000-000-0	Project Code: 00	17415
		WATERSHED		
		WATERSHED		
Gazetted Name:			Local Name: #139	
Watershed Code: 000-000000-000				
ILP Map#: 104G.036	ILP #: 4013 NID	Map #: 104G.036 N	IID #: 10215 Reach #:	1.0 Site #: 415
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: G	GE Access: H
GIS UTM (Z.E.N): 9.381820.636069	8	R	ef. Name:	
Date: 2007/08/24	Time: 16:03	Agency: C660	Crew: LT DD Fish Cr	d?: Incomplete:
		CHANNEL		
Mtd width	width width width wid	Ith width width width	width width Avg	Gadient % Mtd Avg
	.93 0.74 0.80 0.6		0.73 Method	
Wetted Width (m): MS 0.57	0.93 0.67 0.78 0.8		0.77 Method	
Pool Depth (m): MS 0.07	0.06		0.06	
		1 1	No Vis.	Ch.: Intermittent:
Wb Depth: .1 .1	Avg: 0.10	Method: MS S	tage: L M 🗸 H	Dw: Tribs.:
COVER	Total: M			
Type: SWD LW) B U	DP OV IV	CROWN CLOSURE	
Amount: S D	T S	S S T	2 21-40%	
Loc: P/S/O:			INSTREAM VEG: N A	_ M ✓ V _
LWD: NS	DIST: NS		_	
	DIOT. NO			
LB SHP: S			RB SHP: S	
Texture: F 🗸 G	C B R A		Texture: F 🗸 G 🗌 C	B R A
RIP: M			RIP: M	
STG: MF			STG: MF	
		WATER		
5140		WAIER	D #	
EMS:		-414. TO	Req #:	M // 1 00
Temp: 6		ethod: T3	Cond.: 130	Method: S3
pH:		ethod: P2	Turb.: T M L L	C ✓ Method: GE
Flood Signs:	IVI	ethod: GE		
		MORPHOLOGY		
Bed Material: Dominant:	G Subdom: NA		O1 B1 B2 B3 D1	D2 D3
D95: 24.0 D (cm):		0		
(* /	o.p	DISTURBANCE INDICATORS		
Pattern: IR		INDICATORS	C1 C2 C3 C4 C5	S1 S2 S3 S4 S5
Islands: N				
Coupling: PC				
Confinement: FC		Poro:	NE SIDEE DIACE	MIDE CRANE BRE
FSZ:		Bars:	N ✓ SIDE DIAG	MID SPAN BR
	н	ABITAT QUALI	ΤΥ	
Name		(Comments	
OverWinter Habitat fair				
Rearing Habitat good				
Spawning Habitat fair				
		PHOTOS		
Photo Foc Lg	Dir		Comments	
R: 100 F: 25 STD	U t	aken from rd crossing		
R: 100 F: 26 STD	D t	aken from rd crossing		
	•			

COMMENTS						
Section	Comments					
	S6 - some gradient 20+%, frequently goes under root systems of trees and shrubs. Fair spawning gravels dominate. Cover high, poor for holding, but abundant LWD and SWD. Mig access poor. No defined step pools us rd crossing creek is spread out and branches					
	for holding, but abundant LVVD and SVVD. Mig access poor. No defined step pools us to crossing creek is spread out and branches					



Site 415 – Upstream view



Site 415 – Downstream view

ILP Map# ILP# Site Reach #

416 1.0 104G.036 4014 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: #140 ILP Map#: 104G.036 ILP #: 4014 NID Map #: 104G.036 NID #: 10216 Reach #: 1.0 Site #: 416 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.381670.6360500 Ref. Name: Fish Crd?: Incomplete: 🗸 Date: 2007/08/24 Agency: C660 Crew: LT DD Time: 16:52 CHANNEL width width width width width Gadient % Mtd Mtd width width width width width Avg Avg 0.89 8.00 Channel Width (m): 0.74 1.22 0.60 0.75 1.00 1.00 Method I: 8.0 С

	MS 1	.03 1.25	0.72 0.	75 1.20	1.69			1.11 Me	ethod II:	С
Pool Depth (m):	MS 0	.12 0.21	0.05					0.13	Via Ch . Intermitter	<u> </u>
Wb Depth:	.2	.1 .2	Avg: ().17 I	Method: M	S	Stage:	L M H	Vis.Ch.: Intermitter Dw: Tribs	=
COVER		Tota	al: A							
Type:	SWD	LWD	В	U DI	OV	IV		CROWN CLOSURE		
Amount:	S	D	N	S S	Т	Т		1 1-20%		
Loc: P/S/O: V INSTREAM VEG: N A M V V										
LWD:	NS	D	IST: NS							
LB SHP:	S							RB SHP: S		
Texture:	F 🗸 G	с 🗆	ВПВГ	$\neg \land \sqcap$				Texture: F 🗸 G	C B R A	
RIP:								RIP: C		_
STG:	MF							STG: MF		
					۱۸/ ۸	TER				
EMS:					WA	1 L IX		Req #:		
Temp: 6	6			Meth	od: T3			Cond.: 120	Method	l: S3
pH:				Meth	od: P2			Turb · T M I	C Method	l. GE
Flood Signs:				Meth	od: GE			Turb.: T M L	☐ C ✓ Wellioc	i. OL
				N	ORPH	OLOG	Υ			
Bed Material:	Dom	ninant: G	Sul	odom: F			0	1 B1 B2 B3 D	D1 D2 D3	
D05, 47.0 D (-m), 0.00 Marsh, DD				TURBANC	- [[
5101				DICATORS		1 C2 C3 C4 C	C5 S1 S2 S3	S4 S5		
Islands:										<u> </u>
Coupling:										
Confinement:						_				
FSZ:[Bars:	N[SIDE DIAG	MID SPAN	BR
					FEAT	URES				
NID Map NID T	уре Нд	t Metho	d Lg	Method	Ph	ioto	Т	AirPhoto	UTM (Z/E/N)	Method
04G.036 10218 F	.4	MS	1	MS	R: 100	F: 29	L:	#:	9.381681.6360500	GP3
Comments: 2 falls, up	per .4m									
NID Map NID T	уре Нд	t Metho	d Lg	Method	Ph	oto		AirPhoto	UTM (Z/E/N)	Method
04G.036 10217 F		MS	1	MS	R: 100	F: 29	L:	#:	9.381681.6360500	GP3
Comments: 2 fallw, lov	wer .6m									
				НА	BITAT	QUAL	ITY			
							Comm	ents		
Name										

SITE CARD

Reach # ILP Map # ILP # Site

1.0 104G.036 4014 416

HABITAT QUALITY Name Comments OverWinter Habitat good Spawning Habitat good Rearing Habitat good **PHOTOS** Dir Foc Lg Comments 100 27 STD U 100 28 STD D R: STD 100 F: 29 NS feature COMMENTS Section Comments S6 - 25m ds crossing creek goes undergroung for 7m. Under moss and tree roots over low gradient. Likely barrier to us mig. Though good flows may provide underground connectivity. Good pools, gravel and LWD cover. Several high drops ~.4 barrier to us mig. CHANNEL

morphology not recorded





Site 416 – Upstream view

Site 416 – Feature falls



Site 416 – Downstream view

Reach # ILP Map #

LP Map # 104G.036 ILP#

1.0

4015

Site 417

							PR	OJE	СТ							
Projed Stream Nam Project Watersho		MESS	CREE		000-000	00-0000-	-000-000)-000-00	0-000-00	00	F	Project Co	ode:		17415	
							WAT	ERS	HED							
Gazetted Name:										Loc	al Nam	e: #141				
Watershed Code:	000-000	000-000														
ILP Map#:	104G.03	6	II	_P #: 40)15	NID M	ap #: 10	4G.036	N	ID #: 10	219	Read	ch #:	1.0	Site #:	: 417
Field UTM (Z.E.N): GIS UTM (Z.E.N):		6.63604	139	M	fethod:				Re	Site Lo ef. Name			Method:	GE	Access: H	
Dat	e: 2007/	08/24	7	ime: 17:	:07		Agency:	C660	C	Crew: L	T DD		Fish C	Ord?:	Incomp	olete: 🗹
							СН	ANN	EL							
		width	width	width	width	width	width	width	width	width	width	Avg		Gadi	ent % Mtd	
Channel Width (m):	MS											0.00	Meth		С	
Wetted Width (m): Pool Depth (m):	MS MS											0.00	Metho	od II:	С	
				1 .									No Vis	s.Ch.:	Intermittent:	=
Wb Depth:			Tota		g: 0.00	Ŋ	Method:	MS	St	age: L	M	ПН		Dw: 🔲	Tribs.:	
Type:	SWD	LW		В	U	DF	·	OV	IV	CRO	OWN CI	OSURE				
Amount:										1						
Loc: P/S/O:										INS	TREAM	VEG:	N A	M	V	
LWD:			D	IST:												
LB SHP:										1	RB SHP	:				
Texture:	F 🖂	G \square	С	В	R \square A	\					Texture	: F 🗀	G 🗆 C	В	R A	
RIP:											RIF	:				
STG:											STG	:				
							W	ATE	R							
EMS:										R	eq #:					
Temp:							od: T3			C	ond.:				Method:	S3
pH: Flood Signs:							od: P2 od: GE			Т	urb.: T	M		С	Method:	GE
								1101	OGY							
							IUKF	HUL	OGI	01	B1	B2 I	B3 D1	D2 D	03	
Bed Material:	Do	ominant			Subdom											
D95:		D (cm)			Morph	1.		DISTURE INDICA				00 /	04 05	04 0	 ``	04 05
Pattern: Islands:										C1	C2	C3 (C4 C5	S1 S	S2 S3 5	S4 S5
Coupling:																
Confinement:								_			OID	-	DIA C	MID	0041	55
FSZ:[В	ars:	N	SID	E	DIAG	MID	SPAN	BR
							PΗ	ото	S							
Photo	Foo			D								Commer	nts			
R: 100 F: 30	ST	D			X	at ro	d crossin	ig 1 M E N	ITS							
Coation							CON	ı IVI C P		`ommo=	te					
Section CHANNEL		NCD	SAAN CC	nes into	ground a	t crossin	na			Commen	ເວ					
SITE CARD		NCD -	seeh go	ທຣວ ແກເປ (ground a	. UUSSII	iy									
OHE CARD		טטוי														



Site 417 – Across view

Reach #

1.0

ILP Map #

ILP#

Site

104G.036

			PROJEC	т		
Stream Nar	ect Name: Schaft me (gaz.): MESS ned Code: 630-00		0-0000-000-000-000-000	0-000-000	Project Code:	17415
			WATERSH	HED		
	: 000-000000-0000 : 104G.036 :	00-00000-0000-0000-000 ILP #: 4016 Method:	0-000-000-000-000 NID Map #: 104G.036	Local N NID #: 10220 Site Lg: 25 Ref. Name:		.0 Site #: 418 Access: H
, ,	te: 2007/08/24	Time: 17:21	Agency: C660	Crew: LT D	D Fish Crd?:	Incomplete: 🗸
Da	16. 2007/00/24	Time. 17.21	C H A N N I		Tish Ciu:.	incomplete. •
	Mtd width	width width width	width width width	width width wid	Hth Ava	Gadient % Mtd Avg
Channel Width (m): Wetted Width (m): Pool Depth (m):	MS MS MS				0.00 Method I: Method II: 0.00 No Vis.Ch.	C 0.00 C
Wb Depth:		Avg: 0.00	Method: MS	Stage: L	M H Dw	r: Tribs.:
COVER		Total:	DP OV	IV CROWN	I CLOSURE	
Loc: P/S/O				INSTRE	AM VEG: N A	M 🗌 V 📄
LWD	<u>.</u>	DIST:				
LB SHP Texture RIP STG	: F G G G	C B R A			SHP: ture: F G C C RIP: STG:	B
			WATE	र		
EMS: Temp pH Flood Signs:			Method: T3 Method: P2 Method: GE	Req# Cond.: Turb.:	:	Method: S3 Method: GE
			MORPHOL			
Bed Material: D95: Pattern: Islands: Coupling: Confinement:	D (cm):	Subdom: Morph:				
FSZ:			Ba	ars: N	SIDE DIAG N	MID SPAN BR
			РНОТО	S		
Photo	Foc Lg	Dir			Comments	
R: 100 F: 31	STD	NS	view ds NCD	TC		
0. 4			COMMEN			
Section	NOD			Comments		
CHANNEL SITE CARD	NCD NCD					
SHE CARD	NCD					



Site 418 – Downstream at NCD

Reach # ILP Map # ILP # Site

Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Watershed Code: 630-000000-00000-0	00000-0000-0000-000-000-000-000-	Project Code: -000-000	17415
	WATERSH	ED	
Gazetted Name:		Local Name:	
Watershed Code: 000-000000-00000-0000	00-0000-000-000-000-000-000		
ILP Map#: 104G.036	4017 NID Map #: 104G.036	NID #: 10221 Reach #:	1.0 Site #: 419
·	Method:	Site Lg: 350 Metho	d: GE Access: H
GIS UTM (Z.E.N): 9.381372.6360077	ivieti iod.	Ref. Name:	id. GL Access. 11
CIO CTIN (E.E.IV). 0.00 TO 2.0000077		Ton Hame.	_
Date: 2007/08/25 Time: 0	9:22 Agency: C660	Crew: LT DD Fis	h Crd?: Incomplete:
	CHANNE	L	
Mtd width width width	n width width width width	width width Avg	Gadient % Mtd Avg
Channel Width (m): MS 1.75 1.42 1.38	1.46 1.31 1.75		ethod I: 3.0 2.0 C 4.00
Wetted Width (m): MS 1.79 1.92 1.43	1.61 1.30 1.62	1.61 Me	thod II: 7.0 C
Pool Depth (m): MS 0.12		0.12	
			Vis.Ch.: Intermittent:
Wb Depth: .2 3.0 Av	vg: 1.60 Method: MS	Stage: L M 🗸 H	Dw: Tribs.:
COVER Total: M			
Type: SWD LWD B	U DP OV	IV CROWN CLOSURE	
Amount: S D T	S S T	T 2 21-40%	
Loc: P/S/O:			A \square M \square V \square
		INOTINE/IMI VEG. II	
LWD: A DIST: E			
LB SHP: S		RB SHP: S	
Texture: F 🗸 G ☐ C ☐ B ☐	R \square A \square	Texture: F 🕡 G 🦳	C B R A
RIP: C		RIP: C	
KIF. C		KIF. C	
STG: MF		STG: ME	
STG: MF		STG: MF	
STG: MF	WATER		
STG: MF EMS:	WATER		
	WATER Method: T3		Method: S3
EMS:		Req #: Cond.: 140	
EMS: Temp: 8	Method: T3	Req #:	
EMS: Temp: 8 pH:	Method: T3 Method: P2 Method: GE	Req #: Cond.: 140 Turb.: T M L	
EMS: Temp: 8 pH: Flood Signs: overflow channels	Method: T3 Method: P2 Method: GE MORPHOL(Req #: Cond.: 140 Turb.: T	C Method: GE
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G	Method: T3 Method: P2 Method: GE MORPHOL Subdom: NA	Req #: Cond.: 140 Turb.: T M L	C Method: GE
EMS: Temp: 8 pH: Flood Signs: overflow channels	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA	Req #:	C Method: GE
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA	Req #:	C Method: GE
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA	Req #:	C Method: GE
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O Coupling: PC	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA	Req #:	C Method: GE
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA INDICAT	Req #:	1 D2 D3 5 S1 S2 S3 S4 S5
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O Coupling: PC	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA	Req #:	1 D2 D3 5 S1 S2 S3 S4 S5
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O Coupling: PC Confinement: FC	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA INDICAT	Req #:	1 D2 D3 5 S1 S2 S3 S4 S5
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O Coupling: PC Confinement: FC FSZ:	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURB/ INDICAT	Req #:	C Method: GE 1 D2 D3 5 S1 S2 S3 S4 S5 MID SPAN BR
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O Coupling: PC Confinement: FC FSZ: NID Map NID Type Hgt Method	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA INDICAT Bai	Req #:	C Method: GE 1 D2 D3 5 S1 S2 S3 S4 S5 MID SPAN BR UTM (Z/E/N) Method
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O Coupling: PC Confinement: FC FSZ: NID Map NID Type Hgt Method 104G.036 10223 F	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURB/ INDICAT Bat FEATURE Lg Method Photo	Req #:	C Method: GE 1 D2 D3 5 S1 S2 S3 S4 S5 MID SPAN BR
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O Coupling: PC Confinement: FC FSZ: NID Map NID Type Hgt Method 104G.036 10223 F Comments: no plunge pool	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA INDICAT Bai FEATURE Lg Method Photo 1 GE R: 101 F: 1	Req #:	C ✓ Method: GE 1 D2 D3 5 S1 S2 S3 S4 S5 MID SPAN BR UTM (Z/E/N) Method 9.381679.6360077 GP3
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O Coupling: PC Confinement: FC FSZ: NID Map NID Type Hgt Method 104G.036 10223 F Comments: no plunge pool NID Map NID Type Hgt Method	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURB/ INDICAT Bai FEATURE Lg Method Photo 1 GE R: 101 F:	Req #:	C
EMS:	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA INDICAT Bai FEATURE Lg Method Photo 1 GE R: 101 F: 1	Req #:	C ✓ Method: GE 1 D2 D3 5 S1 S2 S3 S4 S5 MID SPAN BR UTM (Z/E/N) Method 9.381679.6360077 GP3
EMS: Temp: 8 pH: Flood Signs: overflow channels Bed Material: Dominant: G D95: 0.35 D (cm): 0.24 Pattern: ME Islands: O Coupling: PC Confinement: FC FSZ: NID Map NID Type Hgt Method 104G.036 10223 F Comments: no plunge pool NID Map NID Type Hgt Method	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA INDICAT Bai FEATURE Lg Method Photo 1 GE R: 101 F:	Req #:	C
EMS:	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURB/ INDICAT Bai FEATURE Lg Method Photo 1 GE R: 101 F:	Req #:	C
EMS:	Method: T3 Method: P2 Method: GE MORPHOLO Subdom: NA Morph: RPG DISTURBA INDICAT Bai FEATURE Lg Method Photo 1 GE R: 101 F:	Req #:	C

Reach # ILP Map # ILP # Site
1.0 104G.036 4017 419

								HABITAT QUALITY					
			Na	me				Comments					
		OverV	Vint	er Hal	oitat	good							
Rearing Habitat good													
	Spawning Habitat good												
	PHOTOS												
		Phot	0		Foo	: Lg	Dir	Comments					
R:	•	101	F:	2	S1	D	U	taken at road crossing					
R:	•	101	F:	3	S1	D	D	taken at road crossing					
								COMMENTS					
	Section Comments												
	CHANNEL S4 default - followed ~350m to where it enters large creek, branched to 2 channels before confluence, barriers to juvenile and possible adults. Banks undercut, frequent pockets clean gravel, low gradient, grade at rd xing 3% below, 2% above												



Site 419 – Upstream view



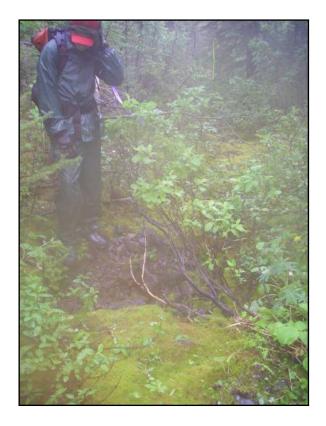
Site 419 – Downstream view

Reach # ILP Map # ILP # Site

Project Name: Schaft C				
Stream Name (gaz.): MESS C Project Watershed Code: 630-000	REEK	0-000-000-000-000	Project Code:	17415
	W	ATERSHED		
Gazetted Name: Watershed Code: 000-000000-00000 ILP Map#: 104G.036 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.381032.6359884 Date: 2007/08/25	ILP #: 4018 NID Map a	#: 104G.036 NID # Si Ref. N	Local Name: t: 10224 Reach #: ite Lg: 100 Method: Name: v: LT DD Fish 0	
	-	CHANNEL		
Mtd width w Channel Width (m): 0.89 1.3 Wetted Width (m):	34 0.91	hod: MS Stage		
Amount: N N Loc: P/S/O: V V LWD: N LB SHP: S	N N N DIST: NA	D S	3 41-70% INSTREAM VEG: N A	M 🗸 V
Texture: F ☑ G ☐ C RIP: M STG: MF	B R A		Texture: F ✓ G ☐ C RIP: M STG: MF	C B R A
RIP: M	B R A	WATER	RIP: M	C B R A
RIP: M	B R A Method: Method: Method:		RIP: M	Method:
RIP: M STG: MF EMS: Temp: pH:	Method: Method: Method:		RIP: M STG: MF Req #: Cond.:	Method:
RIP: M STG: MF EMS: Temp: pH:	Method: Method: Method: M O	DRPHOLOGY DISTURBANCE INDICATORS	RIP: M STG: MF Req #: Cond.:	Method:
RIP: M STG: MF EMS: Temp: pH: Flood Signs: Bed Material: Dominant: G D95: 15.0 D (cm): 1 Pattern: ST Islands: N Coupling: DC Confinement: FC	Method: Method: Method: Method:	DRPHOLOGY DISTURBANCE INDICATORS	RIP: M STG: MF Req #: Cond.: Turb.: T	Method: C
RIP: M STG: MF EMS: Temp: pH: Flood Signs: Bed Material: Dominant: G D95: 15.0 D (cm): 1 Pattern: ST Islands: N Coupling: DC Confinement: FC FSZ:	Method: Method: Method: M O Subdom: NA 5.00 Morph: RPG	DISTURBANCE INDICATORS Bars:	RIP: M STG: MF Req #: Cond.: Turb.: T	Method: C
RIP: M STG: MF EMS: Temp: pH: Flood Signs: Bed Material: Dominant: G D95: 15.0 D (cm): 1 Pattern: ST Islands: N Coupling: DC Confinement: FC FSZ:	Method: Method: Method: Subdom: NA 5.00 Morph: RPG	DISTURBANCE INDICATORS Bars:	RIP: M STG: MF Req #: Cond.: Turb.: T	Method: C
RIP: M STG: MF EMS: Temp: pH: Flood Signs: Bed Material: Dominant: G D95: 15.0 D (cm): 1 Pattern: ST Islands: N Coupling: DC Confinement: FC FSZ:	Method: Method: Method: Subdom: NA 5.00 Morph: RPG Dir NS goat tra	DISTURBANCE INDICATORS Bars:	RIP: M STG: MF Req #: Cond.: Turb.: T	Method: C
RIP: M STG: MF	Method: Method: Method: Subdom: NA 5.00 Morph: RPG Dir NS goat tra NS wool in	DISTURBANCE INDICATORS Bars: PHOTOS ail along and crossing cree	RIP: M STG: MF Req #: Cond.: Turb.: T	Method: C
RIP: M STG: MF	Method: Method: Method: Subdom: NA 5.00 Morph: RPG Dir NS goat tra NS wool in U D	DISTURBANCE INDICATORS Bars: PHOTOS ail along and crossing creations along goat trail	RIP: M STG: MF Req #: Cond.: Turb.: T	Method: C
RIP: M STG: MF	Method: Method: Method: Subdom: NA 5.00 Morph: RPG Dir NS goat tra NS wool in U D	DISTURBANCE INDICATORS Bars: PHOTOS ail along and crossing cree	RIP: M STG: MF Req #: Cond.: Turb.: T	Method: C
RIP: M STG: MF	Method: Method: Method: Subdom: NA 5.00 Morph: RPG Dir NS goat tra NS wool in U D	DRPHOLOGY DISTURBANCE INDICATORS Bars: PHOTOS ail along and crossing creations along goat trail	RIP: M STG: MF Req #: Cond.: Turb.: T	Method: C
RIP: M	Method: Method: Method: Subdom: NA 5.00 Morph: RPG Dir NS goat tra NS wool in U D	DISTURBANCE INDICATORS Bars: PHOTOS all along and crossing creating branches along goat trail COMMENTS Com	RIP: M STG: MF Req #: Cond.: Turb.: T M L O1 B1 B2 B3 D1 C1 C2 C3 C4 C5 N SIDE DIAG Comments ek	Method: C



Site 420 – Goat trail along and crossing creek



Site 420 – Upstream view



Site 420 - Wool in branches



Site 420 - Downstream view

ILP Map# Reach #

ILP#

Site

1.0 104G.036 4019 421 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: Local Name: ILP Map#: 104G.036 NID #: 10225 ILP #: 4019 1.0 NID Map #: 104G.036 Reach # Site #: 421 Field UTM (Z.E.N): .. Method: Site Lg: 100 Method: GE Access: H GIS UTM (Z.E.N): 9.381000.6359858 Ref. Name: Incomplete: 🗹 Date: 2007/08/25 Time: 10:12 Agency: C660 Crew: LT DD Fish Crd?: CHANNEL width width width Mtd Mtd width width width width width width width Gadient % Avg Avg 0.00 Channel Width (m) MS 0.00 Method I: С MS Method II: Wetted Width (m) 0.00 С Pool Depth (m): MS 0.00 No Vis.Ch.: Intermittent: Wb Depth Avg: 0.00 Method: MS Stage: L M H Dw: Tribs.: COVER Total: **CROWN CLOSURE** SWD LWD DP IV В OV Type: U Amount Loc: P/S/O INSTREAM VEG: N A M V LWD: DIST: Texture: F G C B R A Texture: F G C B R A RIP: STG: STG: WATER EMS: Req#: Temp: Method: T3 Cond.: Method: S3 pH: Method: P2 Turb.: T \bigcap M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: Method: GE MORPHOLOGY 01 В3 D1 D2 D3 Bed Material: Dominant: Subdom: D95: D (cm): Morph: DISTURBANCE **INDICATORS** Pattern: C2 СЗ C5 S1 S3 S5 Islands: Coupling: Confinement: DIAG SPAN Bars: SIDE MID BR FSZ: PHOTOS Foc Lg Dir Comments R: 101 F: 8 STD D at road crossing WILDLIFE Observations Group MAM goat trail and wool in branches noted along route COMMENTS Section Comments CHANNEL NCD - no water, no evidence of high scouring flows. Abundant moss.

	COMMENTS
Section	Comments
SITE CARD	NCD



Site 421 – Downstream view

ILP Map# Reach #

ILP#

Site

422 1.0 104G.036 4020

					PR	OJEC	; T							
Project Stream Name Project Watershed	,	S CREEK	00-00000-000	0-0000-	000-000	-000-000	0-000-00	0	P	Project Co	ode:		17415	
					\\/ A T	ERSI	JED							
Gazetted Name:					WAI	EKSI	ובט	Loc	al Name	٥٠				
Watershed Code: 0	00-000000-000	000-00000-0	0000-0000-00	0-000-0	00-000-	000-000		Loc	ai ivaiiit	5.				
ILP Map#: 1	04G.036	ILP#	±: 4020	NID Ma	ap #: 104	4G.036	NI	D#: 10	226	Read	ch #:	1.0	Site #:	422
Field UTM (Z.E.N):			Method:					Site Lg	j: 100		Method:	GE	Access: H	
GIS UTM (Z.E.N): 9	.380977.63598	329					Re	f. Name	:					
Date:	2007/08/25	Time	: 10:23	,	Agency:	C660	С	rew: L	T DD		Fish C	ord?:	Incompl	ete: 🗹
					СН	ANN	EL							
	Mtd width	width wi	dth width	width	width	width	width	width	width	Avg		Gadi	ent % Mtd	Avg
` '	MS									0.00	Metho		С	0.00
` /	MS MS									0.00	Metho	od II:	С	
			1		I	I					No Vis		Intermittent:	
Wb Depth:			Avg: 0.00	N	/lethod:	MS	St	age: L	M	_ н [Dw:	Tribs.:	
COVER	ows I	Total:	1	1 55		0) /		l 000	21441 01	001105				
Type: Amount:	SWD LW	/D B	U	DP	, (VC	IV	CRO	JWN CL	OSURE				
Loc: P/S/O:								INS	TREAM	VEG:	N \square A	П М П	V \square	
LWD:		DIST:												
LB SHP:		5.01.						ı	RB SHP					
Texture:	F \square G \square	СПВ	¬ R ┌ A								G 🗆 C	□в□	R A	٦
RIP:									RIP					_
STG:									STG	:				
					W	ATE	R							
EMS:								Re	eq #:					
Temp:					od: T3			Co	ond.:				Method:	S3
pH: Flood Signs:					od: P2 od: GE			Т	urb.: T	M		С	Method:	GE
1 lood olgilo.							0.01/							
					IORP	HOL	OGY	O1	B1	B2	B3 D1	D2 [)3	
Bed Material:	Dominant		Subdom										,3 	
D95:	D (cm)).	Morph	•		ISTURE INDICA	BANCE TORS			00	C4 C5	04 6		05
Pattern: Islands:								C1	C2	C3 (C4 C5	S1 S	32 S3 S	34 S5
Coupling:														
Confinement:	٦					В	ars:	N	SID	E	DIAG	MID	SPAN	BR□
FSZ:	_													
					PΗ	ото	S							
Photo	Foc Lg		Dir							Comme	nts			
R: 101 F: 9	STD		U	wide		with wet o	depressi TS	on acros	ss road r	oute				
Section					001	🗅 [1		omment	ts					
CHANNEL	NCD								-					
SITE CARD	NCD													



Site 422 – Upstream view, wide swale with wet depression

Reach # ILP Map #

ILP#

Site

423

			PI	ROJE	CT									
Project Nam Stream Name (gaz Project Watershed Cod	•		0-0000-000-0	00-000-00	0-000-00	00	P	roject Co	ode:			17415		
			WA	TERS	HED									
Gazetted Name: Watershed Code: 000-00 ILP Map#: 104G.0 Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3848	016 IL 62.6340351	00-0000-0000-00 P #: 4021 Method:	NID Map #: 1		NI Re	Loc ID #: 10 Site Lo ef. Name	g: 100 e:	e: Read	Meth	1 nod: GE ish Crd?:	i.0 :	Acces	Site #: 4 ss: H comple	
				HANN	FI								<u>'</u>	
Mtd Channel Width (m): Wetted Width (m): Pool Depth (m): Wb Depth:	width width	width width Avg: 0.00	width width	n width	width	width	width	Avg 0.00 0.00 0.00	M N	Method I: lethod II: o Vis.Ch		Intermit	Mtd ttent:	Avg 0.00
COVER Type: SWI Amount: Loc: P/S/O: LWD: LB SHP: Texture: F RIP: STG:		B U	DP C	OV I	IV	INS	STREAM RB SHP	: F :	N _				Α	
			1	NATE	R									
EMS: Temp: pH: Flood Signs:			Method: Method: Method:			С	eq #: ond.: urb.: T	M	_ L	_ c		Meth Meth	nod: nod: G	E
			MOR	PHOL	0 G Y									
Bed Material: D95: Pattern: Islands: Coupling: Confinement:	Dominant: D (cm):	Subdom Morph		DISTURI INDICA	TORS	01 C1	B1	C3 (C4	C5 S	D2 D3] S3		
FSZ:				В	ars:	N	SID	E	DIAG		MID	SPA	N	BR
			СО	MMEN	ITS									
Section					C	ommen	ts							
CHANNEL	NCD - no visible	e channel, devil's	s club swale 2	5% grade.										
SITE CARD	NCD			-										
	1													

Reach #

ILP Map#

Site 999

1.0

ILP# 104G.026 1999

								PR	OJE	СТ								
	Project Stream Name Project Watershe	e (gaz.)	: MES		K	000-000	0-0000-	000-000	D-000-00	0-000-00	00	F	Project Co	ode:		17415		
								WAT	ERS	HFD								
	Gazetted Name:							<u> </u>	LICO		Loc	al Name	- M70					
	Watershed Code: (ILP Map#: Field UTM (Z.E.N): GIS UTM (Z.E.N):	104G.0	26	I	LP #: 19			000-000- ap #: 10		N	ID #: 10 Site Lo)101 g: 100	Read	ch #: Method: G	1.0 E	Acces	Site #: 99 ss: H	99
	010 0 TW (2.E.IV).	0.00402	1.00-10	400						1	Ji. I vallic							
	Date	e: 2007	7/08/16	٦	Γime: 09:	:35	,	Agency:	C660	C	Crew: I	KM RS		Fish Cr	d?:	In	complet	e: 🗸
								СН	ANN	EL								
		Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadie	nt %	Mtd	Avg
	Channel Width (m):	MS											0.00	Method			С	0.00
	Wetted Width (m): Pool Depth (m):	MS											0.00	Method	II:		С	
	Pool Depth (m):	MS											0.00	No Vis.	Ch.:	Intermi	ttent:	
	Wb Depth:				Avg	g: 0.00	N	/lethod:	MS	St	age: L	M	н [Dw:	Т	ribs.:	
	COVER			Tota	al:													
	Type:	SWD	LV	VD	В	U	DF)	OV	IV	CR	OWN CL	OSURE					
	Amount:																	
	Loc: P/S/O:										INS	TREAM	VEG:	$N \square A \square$	M	V		
	LWD:			D	IST:						_							
	LB SHP:											RB SHP						
	Texture:	FΠ	G \square	СП	В 🗆	R □ A								G C	⊐ в □	R \square	А 🖂	
	RIP:											RIP						
	STG:											STG						
								W	ATE	R	_							
	EMS: Temp:						Moth	od: T3				eq #: ond.:				Moth	nod: S3	
	pH:							od: P2							o —			
	Flood Signs:						Metho	od: GE			ı	urb.: T	M			Meth	nod: GI	E
							IV	IORE	ног	OGY								
		_						. O			O1	B1	B2 I	B3 D1	D2 D3	3		
	Bed Material: D95:	D	Oominan Oom			Subdom										<u>,</u>		
			D (cm).		Morph		[DISTURI INDICA	BANCE								
	Pattern: Islands:								INDIO	TONO	C1	C2	C3 (C4 C5	S1 S2	2 S	3 S4	S5
	Coupling:																	
	Confinement:																	
	FSZ:								Е	ars:	N	SID	E	DIAG	MID	SPA	N	BR
								PH	ЮТС	9								
	Photo	Fo	o La			Dir			1010				Common	nto.				
R	R: 101 F: 4066		c Lg TD			U	subs	surface	and ove	rland flov	v		Commer	11.5				
						-	10000		/ M E I									
	Section		T								Commen	ts						
	CHANNEL		NCD -	seepan	e with so	ome over	land flov	w at rc.										
	SITE CARD		NCD															



Site 999 - Upstream view, subsurface and overland flow

APPENDIX 3.1-2 FISH SAMPLING CARDS COMPLETED FOR STREAM CROSSINGS ALONG THE PROPOSED SCHAFT ACCESS ROUTE



Reach #

ILP Map #

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104G.016

								W A	TER	ВО	DΥ	'							
Pr	•	e: 630-0 e: 000-0 D:	00000			0000-0000- 0000-0000-		0-000		00-000	.016	Loca ake/Str			ILP #:	100	04 R Lake Fror		1 -
Fis	sh Permit	#: SM07	7-3482	21	Date:	2007/08/	25	То	: 200	7/08/2	5	Age	ency:	C660)	Crew	: LT DD	Resa	ımple:
							S	ITE	/ N	1ET	ΗО	D							
Site#	NID Map	NID) #	UTN	l:Zone/Ea	ast/North/M	lthd	MTD	/NO	Temp) (Cond	Turl	bid			Cor	mment	
105	104G.01	6 200	58	9			GP3	EF	1	6		180	C	;					
							Α.	G E A	AR S	SET	TIN	NGS							
Site#	MTD/NC	H/P	Da	ate In	Time	In Date	Out	Time	Out						(Comme	ent		
105	EF 1	1	200	7/08/25	14:10	2007	08/25	14:	45										
					С.	ELEC	TRO	FIS	HE	R S	PΕ	CIF	I C A	I T A	ONS				
Site#	MTD	/NO	Н	I/P	Encl	Sec	L	ength		Width	1	Volt	age	F	requenc	:y	Pulse	Make	Model
105	EF	1		1	0	229		150.0		1.0		35	50		40		2	SR	LR-24
							F	ISH	SU	ММ	ΑR	Υ							
Site#	MTD	/NO	H/I	P S	pecies	Stage	Age	е	Total	# L	gth	(Min/Ma	ax)	Fish	nAct			Comment	
105	EF	1	1	l N	IFC				0										
								СО	ММ	ENT	ſS								
	Section											Comm	ents						
W	VATERBO	DY	1	fished a	vailable h	nabitat ds r	d cross	ing. At	40m c	ds grac	le ind	creases	to 4	0% be	efore flo	wing ir	nto lake be	low. S6	

Reach #

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Watershed Code:

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							WATE	RBOI	Υ						
	etted Name		00000-00	000-00000-	2000-0000-	000-000)-000-000-t	00-0	Loca	al: M4	2				
Г	,			000-00000-									Lake From Date: ew: KM RS Resample Comment		
W	aterbody IE		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		3000 0000		ILP Map #)16		ILP#:	1038 R	each #: 1	_	
	Project II		5						Lake/Str	ream:	S	Lake From	n Date:		
Fis	sh Permit #	: SM07	7-34821	Date	2007/08/	21	To: 20	07/08/21	Age	ency: C	660	Crew: KM RS	Resan	nple:	
						S	ITE /	METH	IOD						
Site#	NID Map														
139	104G.016	101	46 9			<u> </u>	EF 1	7	250	С					
						A. (GEAR	SETI	INGS						
Site#	MTD/NO	H/P	Date I				Time Out					Comment			
139	EF 1	1	2007/08				13:00								
				С.	ELEC	TRO	FISHE	RSF	PECIF	ICA	TIONS				
Site#	MTD/	NO	H/P	Encl	Sec	Le	ength	Width	Vol	tage	Frequen	cy Pulse	Make	Model	
139	EF	1	1	0	157		0.08	2.0		00	30	4	SR	LR-24	
						FI	ISH S	UMM	ARY						
Site#	MTD/	NO	H/P	Species	Stage	Age	e Tota	ıl# L	gth (Min/M	ax)	FishAct		Comment		
139	EF	1	1	NFC				0							
							COMM	I E N T	S						
	Section								Comm	ents					
V	VATERBO	ΣY	shoo	ked from m	outh at mes	s cr to 2	29% barriei	us of rc							
			1												

Reach #

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104G.016

								W A	TER	ВОГ	Υ							
F	/aterbody l	de: 630-0 de: 000-0	000000-		-00000-00 -00000-00			0-000-	000-00		16		: M4	ILP	#:	1040 I Lake Fro	Reach #: om Date:	1 -
F	ish Permit	#: SM0	7-34821		Date:	2007/08/	21	To:	2007	7/08/21		Age	ncy: (C660	C	crew: KM RS	S R	esample:
							S	ITE	/ M	IETH	0 D							
Site#	NID Ma	p NIC) #	UTM:	:Zone/Eas	st/North/M	lthd	MTD/	/NO	Temp	Cor	nd	Turbi	id		Co	mment	
141	104G.01	6 101	47	9			GP3	EF	1				С					
							Α.	GEA	R S	ETT	ING	3 S						
Site#	MTD/NO) H/P	Dat	e In	Time Ir	n Date	Out	Time	Out						Coi	mment		
141	EF 1	1	2007/	08/21	13:40	2007	/08/21	13:	50									
					С.	ELEC	TRO	FIS	HEF	RSP	EC	IFI	C A	TIOI	N S			
Site#	MTD	/NO	H/F	•	Encl	Sec	L	ength		Width		Volta	age	Frequ	uency	Pulse	Mak	e Model
141	EF	1	1		0	31		30.0		0.5		60	0	3	0	4	SR	LR-24
							F	ISH	SU	M M A	RY							
Site#	MTC)/NO	H/P	Sp	ecies	Stage	Age	е	Total #	# Lo	th (Mi	in/Ma	x)	FishAct	t 📘		Commen	t
141	EF	1	1	N	FC				0								•	
								СО	ММ	ENT	S							
	Section										Со	mme	ents					
١	WATERBO	DDY	sł	ocked	down 30	m from rc	- strear	m turns	s into s	eepage	with e	exten	sive o	verland	flow o	ver moss and	l organics.	

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								WATE	R B	O D	Υ						
	etted Name: roject Code: WS Code:										Loca	al: M	45				
Wa	aterbody ID: Project ID:	1741	5					ILP Map	#: 104	₩G.0′	16 Lake/Str	eam:	ILP S	#:	1042 R Lake Fron		-
Fis	sh Permit #:	SM07	7-3482 ⁻	1	Date:	2007/0	08/21	To: 20	007/08	/21	Age	ency:	C660	(Crew: KM RS	Resan	nple:
	43 104G.016 10149 9 GP3 EF 1 C																
Site#	Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 143 104G.016 10149 9 GP3 EF 1 C C																
143	143 104G.016 10149 9 GP3 EF 1 C A. GEAR SETTINGS																
	NID Map																
Site#	A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment																
143	EF 1	1	2007	/08/21	14:00		07/08/21	14:20									
					C.	ELE	CTRO	FISH	ER:	SP	ECIF	ICA	TION	1 S			
Site#	MTD/N	0	H/I	Р	Encl	Se		ength	Wid	dth	_	tage	Frequ	iency	Pulse	Make	Model
143	EF	1	1		0	87		50.0		0.1		50	3	0	4	SR	LR-24
							F	ISH S	UMI	M A	RY						
Site#	MTD/N	0	H/P		oecies	Stage	e Age	e Tot	al#	Lgt	th (Min/M	ax)	FishAct			Comment	
143	EF	1	1	N	IFC				0					丄			
								COM	MEN	IT S	S						
	Section										Comm	ents					
W	/ATERBOD	Y	sl	hocked	l up from	50m ds	of rc, real	lly margina	l habita	at wi	th steps ι	ıp to .	5m, lots	of swd	and moss.		

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								W A	TEI	RBO	O D	Υ							
F	/aterbody I	le: 630-0	00000			0000-0000 0000-0000		0-000		00-00	G.01				Hits Cr.	105	52 R Lake Fror		-
F	ish Permit	#: SM07	7-3482	21	Date	: 2007/08	/21	Т	o: 200	07/08/	/21	А	gency	C66	60	Crew	: KMRS	Resar	nple:
							S	ITE	E / I	M E	ТН	O D							
Site#	153 104G.016 10150 9 GP3 EF 1 6 210 C ph 8.6 A. GEAR SETTINGS																		
153	153 104G.016 10150 9 GP3 EF 1 6 210 C ph 8.6 A. GEAR SETTINGS																		
	53																		
Site#	A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment																		
153	Site# MTD/NO H/P Date In Time In Date Out Time Out Comment 153 EF 1 1 2007/08/21 15:30 2007/08/21 15:55																		
	Site# MTD/NO H/P Date In Time In Date Out Time Out Comment																		
Site#	MTC	/NO	Н	l/P	Encl	Sec	l	_ength	ı	Wic	lth	V	oltage	F	requenc	у	Pulse	Make	Model
153	EF	1		1	0	31		20.0		4	.0		350		30		4	SR	LR-24
							F	ISF	ısı	J M I	VI A	RY							
Site#	MTC	/NO	H/	P S	pecies	Stage	Ag	е	Tota	l #	Lgt	h (Min/	Max)	Fis	shAct			Comment	
153	EF	1	1	1	NFC				()									
								CC	O M M	IEN	TS	3							
	Section											Com	ments						
\	WATERBO	DY	:	shocke	d us from	mess cr.	Until hit	26%	gradier	nt bar	rier.								

Reach #

ILP Map #

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104G.016

							W A	TER	RBO	Υ							
Gazetted Nam Project Cod WS Cod	e: 630-0				0000-0000-					Loca	al: M	153					
Waterbody II Project II		5					ILP M	lap #:	104G.0)16 Lake/St	ream:		ILP #:	10	58 Ro Lake Fron		-
Fish Permit	: SM07	'-3482	21	Date:	2007/08/	14	To:	200	7/08/14	Ag	ency:	C66	0	Crew	: KM RS	RD Resan	nple:
	159 104G.016 10071 9 GP3 EF 1 5 378 C																
Site# NID Map	Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 159 104G.016 10071 9 GP3 EF 1 5 378 C																
159 104G.016 10071 9 GP3 EF 1 5 378 C A. GEAR SETTINGS																	
	159 104G.016 10071 9 GP3 EF 1 5 378 C A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment																
Site# MTD/NC	159																
159 EF 1	1	2007	7/08/14	08:20	0 2007/	08/14	08:4	40									
				С.	ELEC	TRO	FIS	ΗE	R SF	PECIF	ICA	A T I	ONS				
Site# MTD	NO	H/	/P	Encl	Sec	L	ength		Width	Vol	tage	F	requen	су	Pulse	Make	Model
159 EF	1	1	1	0	366		100.0		2.0	2	50		30		4	SR	LR-24
						F	ISH	S U	ММ	ARY							
Site# MTD	NO	H/P	Sp	oecies	Stage	Ag	е	Total	# L	gth (Min/M	lax)	Fis	hAct			Comment	
159 EF	1	1	N	IFC				0)								
							СО	ММ	ENT	S							
Section										Comm	ents						
WATERBO	ΣY	s	shocked	us from	good spaw	ning z	one to o	casca	de secti	on us of ro).						

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ILP Map #

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104G.026

								WAT	ERB	O D	Υ						
	etted Name: Project Code: WS Code:										Loca	al: M	154				
W	aterbody ID: Project ID:	1741	5					ILP Ma	ap#: 10	4G.02	26 Lake/Str	eam:		LP #:	1060 R Lake Fron		l -
Fis	sh Permit #:	SM07	7-3482	21	Date	: 2007/08	3/14	To:	2007/0	8/14	Age	ency:	C660	C	rew: KM RS	RD Resar	mple: 🗸
							S	ITE	/ M E	ТН	O D						
Site#	161 104G.026 10074 9 GP3 EF 1 5 424 C																
161	161 104G.026 10074 9 GP3 EF 1 5 424 C A. GEAR SETTINGS																
	104G.026 10074 9 GP3 EF 1 5 424 C																
Site#	A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment																
161	EF 1	1	200	7/08/14	09:3	30 200	7/08/14	09:50	0								
					С.	ELEC	CTRO	FISH	HER	SP	ECIF	I C A	ATIC	ONS			
Site#	MTD/N	0	Н	I/P	Encl	Sec	L	_ength	W	idth	Volt	age	Fre	equency	Pulse	Make	Model
161	EF	1		1	0	198		100.0		2.0	30	00		30	4	SR	LR-24
							F	ISH	SUM	M A	RY						
Site#	MTD/N	0	H/	P Sp	pecies	Stage	Ag	е Т	Γotal #	Lg	th (Min/M	ax)	Fish	Act		Comment	
161	EF	1	1	l N	IFC				0								
_								CON	ИМЕ	N T S	S						
	Section										Comm	ents					
V	VATERBOD'	Y		resampl	e. Shock	ked ds froi	m rc, abo	ove and I	below b	arrier	to outflow	/ @ n	ness c	reek.			

Reach #

ILP Map #

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Watershed Code:

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104G.026

							٧	V A T	ER	BOD	1						
	azetted Name Project Code WS Code Waterbody ID Project ID	630-0	00000-00				0-000-	-000-0	00-00	00-000 104G.020		al: M	ILP	#: 1		Reach #: 1 om Date:	-
	Fish Permit #:	SM07	-34821	Da	ate: 200	7/08/14		To:	200	7/08/14	Ag	ency:	C660	Cre	w: KMRS	S RD Resam	nple:
							SI	ΤE	/ N	1ETH (D D						
Site#	NID Map	NID	# L	JTM:Zone	/East/No	rth/Mth	d	MTD/N	VO	Temp	Cond	Turk	oid		C	omment	
165	104G.026	1008	3 9			(GP3	EF	1	6.5	387	С					
	A. GEAR SETTINGS ite# MTD/NO H/P Date In Time In Date Out Time Out Comment																
Site#	Site# MTD/NO H/P Date In Time In Date Out Time Out Comment 165 EF 1 1 2007/08/14 12:20 2007/08/14 12:45																
165																	
	165 EF 1 1 2007/08/14 12:20 2007/08/14 12:45																
Site#	MTD/N	10	H/P	End	el (Sec	Le	ngth		Width	Vol	tage	Frequ	iency	Pulse	Make	Model
165	EF	1	1	0	2	219	10	0.00		2.0	2	50	3	0	4	SR	LR-24
							FI	SH	S U	MMA	R Y						
Site#	MTD/N	10	H/P	Species	S Sta	ge	Age		Total	# Lgth	(Min/N	lax)	FishAct	t		Comment	
165	EF	1	1	RB	NS				1	.0		132	R	caugh	t in r1 not l	by rc.	
								IDU		FISH		TA					
Site#	MTD/NO	H/P	Species	Length	Weight	Sex	Mat	St		ge pl#/Age	Vch#		enetic Smpl#	Roll #	Frame#	Comn	nent
165	EF 1	1	RB	132	33.9	U	U	FR		1 2							
								COI	ММ	ENTS							
	Section										Comm	nents					
	WATERBOD	Υ	rb ca	aught in V	VL @outle	et of thi	s strea	m. NF	C in	R-2 where	e rc is.						
L																	

Reach #

ILP Map #

ILP#

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104G.026

					W	ATE	RBOD	Υ							
1	de: 630-0			0000-0000- 0000-0000-				Loca	al: M	78					
Waterbody Project	ID: ID: 1741	5			ILI	P Map #	t: 104G.0	26 Lake/Str	eam:	ILP#: S			each #: 1 n Date:	-	
Fish Permi	#: SM07	7-34821	Date	: 2007/08/	25	To: 20	07/08/25	Age	ency:	C660	Crew: L	T DD	Resam	nple:	
					SIT	E /	METH	O D							
Site# NID Ma															
194 104G.0	194 104G.026 20059 9 GP3 EF 1 5 180 C														
	A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment														
Site# MTD/N	Site# MTD/NO H/P Date In Time In Date Out Time Out Comment														
194 EF	194 EF 1 1 2007/08/25 15:20 2007/08/25 15:38														
	194 EF 1 1 2007/08/25 15:20 2007/08/25 15:38 C. ELECTROFISHER SPECIFICATIONS														
Site# MT	D/NO	H/P	Encl	Sec	Leng	th	Width	Volt	tage	Freque	ncy Pu	lse	Make	Model	
194 EF	1	1	0	86	360	.0	1.0	40	00	40	2	2	SR	LR-24	
					FIS	H S	UMMA	RY							
Site# MT	D/NO	H/P	Species	Stage	Age	Tota	al# Lo	th (Min/M	ax)	FishAct			Comment		
194 EF	1	1	NFC				0								
					С	OMI	/ ENT	S							
Section	า							Comm	ents						
WATERB	ODY			60m ds fro			large dro	. Followe	ed dry	channel 78	3m ds where	e it spre	eads out behin	d log into	

Reach # ILP

ILP Map # ILP #

1094

104G.026

							WAT	ERB	O D	Υ						
	etted Name:									Loc	al: M	79				
P	roject Code:															
	WS Code:	000-00	000-00	000-00000-	0000-0000	-000-00										
Wa	aterbody ID:						ILP Ma	ıp #: 10	4G.02	26		ILP	#:	1094 R	each #: 1	-
	Project ID:	17415								Lake/St	ream:	S		Lake Fro	m Date:	
Fis	sh Permit #:	SM07-3	34821	Date	e: 2007/08/	26	To:	2007/0	8/26	Ag	jency:	C660	(Crew: LT DD	Resan	nple:
Site#	Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 195 104G.026 20060 9 GP3 EF 1 5 170 C A . GEAR SETTINGS															
195	195 104G.026 20060 9 GP3 EF 1 5 170 C A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment															
						Α.	GEAI	RSE	TT	INGS	;					
Site#	195 104G.026 20060 9 GP3 EF 1 5 170 C A. GEAR SETTINGS															
195	A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment 195 EF 1 1 1 2007/08/26 08:25 2007/08/26 10:26															
	Site# MTD/NO H/P Date In Time In Date Out Time Out Comment															
Site#	MTD/N	10	H/P	Encl	Sec	L	Length	W	idth	Vo	Itage	Frequ	iency	Pulse	Make	Model
195	EF	1	1	0	664		310.0		1.5	5	550	5	0	2	SR	LR-24
						F	ISH	SUM	M A	RY						
Site#	MTD/N	10	H/P	Species	Stage	Ag	je T	otal #	Lg	th (Min/N	Лах)	FishAct	:		Comment	
195	EF	1	1	NFC				0								
							COV	ИМЕ	NTS	S						
	Section									Comn	nents					
W	VATERBOD	Υ												ds. Ef all pools 0m ds rd cross		nouth. Good
			•												-	

Reach #

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104G.036

Gazetted Name:							١	WATE	RBC	DY						
Project D: 17415		roject Code:								0	Local:	M84				
SITE / METHOD	W	,	17415					ILP Map	#: 1040		e/Strea	m: S				-
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment	Fis	sh Permit #:	SM07-34	1821	Date	: 2007/08/	26	To: 2	007/08/	26	Agend	y: C66	60	Crew: LT DD	Resar	nple:
204 104G.036 20061 9							SI	TE /	MET	HOL)					
A. GEAR SETTINGS	Site#	204 104G.036 20061 9 GP3 EF 1 6 190 C A. GEAR SETTINGS														
Site# MTD/NO	204	204 104G.036 20061 9 GP3 EF 1 6 190 C A. GEAR SETTINGS														
204 EF 1 1 2007/08/26 12:30 2007/08/26 13:30		204 104G.036 20061 9 GP3 EF 1 6 190 C A. GEAR SETTINGS ite# MTD/NO H/P Date In Time In Date Out Time Out Comment														
C ELECTROFISHER SPECIFICATIONS	Site#	Site# MTD/NO H/P Date In Time In Date Out Time Out Comment														
Site# MTD/NO H/P Encl Sec Length Width Voltage Frequency Pulse Make Model 204 EF 1 1 0 160 280.0 0.8 500 40 2 SR LR-24 FISH SUMMARY Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 204 EF 1 1 NFC 0 0 Image: Comment with a comment COMMENTS Section Comments WATERBODY followed 280m ds from rd xing grad ranged from 10-18% at 200m ds grade increased to 30% barrier. Limited pools along	204	204 EF 1 1 2007/08/26 12:30 2007/08/26 13:30														
204 EF 1 1 O 160 280.0 0.8 500 40 2 SR LR-24		204 EF 1 1 2007/08/26 12:30 2007/08/26 13:30 C. ELECTROFISHER SPECIFICATIONS														
Site# MTD/NO	Site#	MTD/N	0	H/P	Encl	Sec	Le	ength	Wid	th	Voltag	е	Frequen	cy Pulse	Make	Model
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 204 EF 1 1 NFC 0 Image: NFC comment state of the comment state	204	EF	1	1	0	160	2	0.08	0.	8	500		40	2	SR	LR-24
204 EF 1 1 NFC 0							FI	SH S	UMN	IARY	'					
COMMENTS Section Comments WATERBODY followed 280m ds from rd xing grad ranged from 10-18% at 200m ds grade increased to 30% barrier. Limited pools along	Site#	MTD/N	0	H/P	Species	Stage	Age	То	tal#	Lgth (N	lin/Max)	Fis	shAct		Comment	
Section Comments WATERBODY followed 280m ds from rd xing grad ranged from 10-18% at 200m ds grade increased to 30% barrier. Limited pools along	204	EF	1	1	NFC				0							
WATERBODY followed 280m ds from rd xing grad ranged from 10-18% at 200m ds grade increased to 30% barrier. Limited pools along								COM	MEN	TS						
33		Section								С	ommen	ts				
	V	VATERBOD'	′											ed to 30% barrie	r. Limited pools	along

Reach #

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Coazetted Name									W A	TER	ВОД	Υ						
Project ID: 17415		roject Cod	e: 630-0									Loca	al: M	186				
Site#	W	,		5					ILP M	1ap #:	104G.0		eam:		.P #:			-
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 207 104G.036 20052 9	Fi	sh Permit	#: SM07	7-3482	21	Date:	2007/08/	27	To:	2007	7/08/27	Age	ency:	C660	С	rew: LT DD	Resar	nple:
A								S	ITE	/ N	1ETH	O D						
A. GEAR SETTINGS	Site#	207 104G.036 20052 9 GP3 EF 1 6 120 C																
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment C. ELECTROFISHER SPECIFICATIONS Site# MTD/NO H/P Encl Sec Length Width Voltage Frequency Pulse Make Model 207 EF 1 1 0 180 320.0 1.5 450 40 2 SR LR-24 FISH SUMMARY Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 207 EF 1 1 NFC 0 COMMENTS	207	207 104G.036 20052 9 GP3 EF 1 6 120 C A. GEAR SETTINGS																
207 EF 1 1 2007/08/27 09:00 2007/08/27 10:10		104G.036 20052 9																
C ELECTROFISHER SPECIFICATIONS	Site#	A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment																
Site# MTD/NO H/P Encl Sec Length Width Voltage Frequency Pulse Make Model 207 EF 1 1 O 180 320.0 1.5 450 40 2 SR LR-24 FISH SUMMARY Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 207 EF 1 1 NFC 0 Image: Comment with the comme	207	EF 1	1	200	7/08/27													
207 EF						С.	ELEC	TRO	FIS	HEI	R SP	ECIF	I C A	TIO	NS			
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment	Site#	MTD	/NO	Н	l/P	Encl	Sec	L	_ength		Width	Vol	tage	Fre	quency	Pulse	Make	Model
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 207 EF 1 1 NFC 0 Image: Comment with the co	207	EF	1		1	0	180						50		40	2	SR	LR-24
207 EF 1 1 NFC 0 COMMENTS Section Comments								F	ISH	SU	M M A	RY						
COMMENTS Section Comments	Site#	MTD	/NO	H/I	P Sp	oecies	Stage	Ag	е	Total	# Lg	th (Min/M	ax)	FishA	Act		Comment	
Section Comments	207	EF	1	1	l N	IFC												
									CO	ММ	ENT	S						
WATERRODY injust floodplain 320m ds from rd ving. No harriers. No fish caught. Poor habitat quality.		Section										Comm	ents					
poins needplain 320m as nomina xing. No barners. No list daught. I do nablat quality	V	VATERBO	DY	j	joins floo	odplain 32	20m ds fro	m rd xii	ng. No	barrie	rs. No fi	sh caught	. Poor	r habita	t quality			

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								W A	TEF	RBOD	Υ						
	etted Name: roject Code: WS Code:	630-0									Loc	al:					
W	aterbody ID: Project ID:		5					ILP N	Мар #:	: 104G.0)36 Lake/St	ream:	ILP S	#:	1110 R Lake Fron		-
Fi	sh Permit #:	SM07	7-34821		Date:	2007/08/	27	To	: 200	07/08/27	Ag	ency:	C660	(Crew: LT DD	Resan	nple:
							S	ITE	/ [METH	I O D						
Site#	211 104G.036 20053 9 GP3 EF 1 6.5 150 C																
211	211 104G.036 20053 9 GP3 EF 1 6.5 150 C A. GEAR SETTINGS																
	211 104G.036 20053 9 GP3 EF 1 6.5 150 C A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment																
Site#	A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment																
211	Site# MTD/NO H/P Date In Time In Date Out Time Out Comment 211 EF 1 1 2007/08/27 12:12 2007/08/27 12:28																
	211 EF 1 1 2007/08/27 12:12 2007/08/27 12:28 C. ELECTROFISHER SPECIFICATIONS																
Site#	MTD/N	Ю	H/F)	Encl	Sec	L	_ength		Width	Vo	Itage	Frequ	uency	Pulse	Make	Model
211	EF	1	1		0	65		70.0		8.0		-00	4	0	2	SR	LR-24
							F	ISH	sι	JMMA	ARY						
Site#	MTD/N	Ю	H/P	Sp	ecies	Stage	Ag	е	Total	l# Lo	gth (Min/N	1ax)	FishAc	t		Comment	
211	EF	1	1	N	FC				()			•		•		•
								CO	MM	IENT	S						
	Section										Comn	nents					
V	VATERBOD	Y	fol Cr		and sho	cked marg	jinal ha	bitat fo	r 65m	ds rc the	en too thii	nk shru	ıbs to sh	ock, a	nd no poole. N	o barriers four	id to Mess

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Gazetted Name:										W	ATEI	RBC	DDY	Y						
WS Code: 000-000000-00000-00000-0000-0000-0000	Ga	zetted N	lame:											Loca	ıl: M	107 Big	B Cr			
Waterbody ID:		Project (Code:	630-0	000000-00	000-000	00-000	0-0000-0	00-00	0-00	0-000-0	0-00								
Project ID: 17415		WS	Code:	000-0	00000-00	000-000	00-000	0-0000-0	00-00	0-00	0-000-0	00-00	00							
Project ID: 17415	V	Vaterbo	dv ID:							ILP	Map #	: 1040	G.036	6		ILP	#: 1	130	Reach #: 1	_
Fish Permit #: SM07-34821 Date: 2007/08/27 To: 2007/08/27 Agency: C660 Crew: LT DD Resample:			•		5						- 1				eam.	S		Lake Fro	om Date:	
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment															ou			24.10 1 11	J 2 a.c.	
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment	F	Fish Peri	mit #:	SM07	7-34821	D	ate: 2	007/08/2	27	Т	o: 200	07/08/	27	Age	ency:	C660	Cre	w: LT DD	Resam	nple:
233 104G.036 20055 9									S	ΙΤ	E / I	ME1	ТНС	O D						
Site# MTD/NO H/P Date n Time n Date Out Time Out Comment	Site#	NID	Мар	NID	# l	JTM:Zon	e/East/	North/M	thd	MT	D/NO	Ten	np	Cond	Turb	id		C	omment	
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment	233	104G	.036	200	55 9				GP3	EF	1	6.5	5	150	С					
233 EF 1 1 2007/08/27 15:55 2007/08/27 16:25									Α.	GΕ	AR	SE1	ГТІ	NGS						
C ELECTROFISHER SPECIFICATIONS	Site#	MTD	/NO	H/P	Date	ln Ti	me In	Date	Out	Tim	e Out						Comr	nent		
Site# MTD/NO H/P Encl Sec Length Width Voltage Frequency Pulse Make Model 233 EF 1 1 O 260 185.0 3.0 400 40 2 SR LR-24 FISH SUMMARY Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 233 EF 1 1 RB J 1 135 R Immature INDIVIDUAL FISH DATA Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Str/Smpl# Roll # Frame# Comment	233	EF	1	1	2007/08	3/27 1	5:55	2007/	08/27	1	6:25									
233 EF 1 1 O 260 185.0 3.0 400 40 2 SR LR-24						(C. E	LEC	TRO	FI	SHE	R S	SPE	ECIF	I C A	TIOI	N S			
Site# MTD/NO	Site#	N	ITD/N	Ю	H/P	En	cl	Sec	L	.engt	h	Wid	lth	Volt	age	Frequ	uency	Pulse	Make	Model
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 233 EF 1 1 RB 1 135 R Immature IN DIVIDUAL FISH DATA Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Roll # Frame# Comment Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Roll # Frame# Comment	233	EF		1	1	C)	260		185.	0	3.	.0	40	00	4	.0	2	SR	LR-24
233 EF 1 1 RB J 1 135 135 R Immature									F	IS	нѕι	NW	M A F	RY						
Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Str/Smpl#/Age Str/Smpl# Str/Smpl#	Site#	N	ITD/N	Ю	H/P	Specie	s S	tage	Age	е	Tota	l #	Lgth	n (Min/Ma	ax)	FishAc	t		Comment	
Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Str/Smpl#/Age Str/Smpl# Roll # Frame# Comment	233	EF		1	1	RB		J				1	13	5 1	35	R	Immat	ure		
Str/Smpl#/Age Str/Smpl#									IDI/	/ID	UAL	_ FI	SH	I DA	ΤA					
	Site#	MTD/I	0	H/P	Species	Length	Weig	ht Sex	Ma	t	ŀ	Age		Vch#	Ge	netic	Roll #	Frame#	Comm	nent
222 EE 4 4 DD 425 22.6 H HM ED 4											Str/Sn	npl#/A	.ge		Str/	Smpl#				
200 EF ND 100 30.0 U	233	EF	1	1	RB	135	33.6	U	IM	F	R	1								

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								WATE	RB	O D	Υ						
	etted Name: roject Code: WS Code:	630-0									Loca	al: M	110				
Wa	aterbody ID: Project ID:		5					ILP Map	#: 10	4G.0	36 Lake/Str	eam:	ILP S	#:	1133 R Lake Fron		-
Fis	sh Permit #:	SM07	7-3482 ⁻	1	Date:	2007/08	3/27	To: 2	2007/08	8/27	Age	ency:	C660	C	crew: LT DD	Resan	nple:
	37 104G.036 20056 9 GP3 EF 1 5 100 C																
Site#	Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 237 104G.036 20056 9 GP3 EF 1 5 100 C																
237																	
	te# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 37 104G.036 20056 9 GP3 EF 1 5 100 C A. GEAR SETTINGS te# MTD/NO H/P Date In Time In Date Out Time Out Comment																
Site#	A. GEAR SETTINGS Site# MTD/NO H/P Date In Time In Date Out Time Out Comment																
237	EF 1	1	2007	/08/27	16:4		7/08/27	17:15									
					C.	ELE	TRO	FISH	ER	SP	ECIF	ICA	TION	ıs			
Site#	MTD/N	Ю	H/I	Ρ	Encl	Sec	L	-ength	W	idth	Volt	tage	Frequ	ency	Pulse	Make	Model
237	EF	1	1	l	0	98		200.0		1.3		00	4)	2	SR	LR-24
							F	ISH S	S U M	M A	RY						
Site#	MTD/N	Ю	H/P		oecies	Stage	Ag	e To	tal#	Lg	th (Min/M	ax)	FishAct			Comment	
237	EF	1	1	N	IFC				0								
								COM	ME	NT:	S						
	Section										Comm	ents					
W	VATERBOD	Υ	n	o gra >	·19% fou	nd 20m d	s at rc. C	Clear acce	ss to c	reek	below @2	200m.	4 tribs a	t 15, 8	0, 120 and 150	m, trib at 15m	n is ILP1135

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WATERBODY																		
	•	de: 6	Local: M112 630-00000-00000-0000-0000-0000-000-000-0															
W	aterbody Project		ILP Map #: 104G.036 ILP #: 1135 Reach #: 1 - 17415 Lake/Stream: S Lake From Date:													-		
Fi	sh Permi	t#: S	SM07-34821 Date: 2007/08/27 To: 2007/08/27 Agency: C660 Crew: LT DD Resample:											nple:				
SITE / METHOD																		
Site#	NID Ma	ар	NID#	U	ΓM:Zone/East/North/Mthd			MTD/NO	Temp	Cond	Turl	bid		Comment				
239	104G.0	36	20057	9			GP3	EF 1	5.5	110	110 C							
							A. G	EAR	SET	TINGS	3							
Site#	MTD/N	O F	H/P	Date In	Time	In Dat	e Out	Time Out					Comm	ent				
239	EF	1	1 2	2007/08/			7/08/27	18:00										
					С.	ELEC	TRO	FISHE	R S	PECIF	IC A	ATION	S					
Site#	MT	D/NO	O H/P		Encl	Sec	Le	ength	Width	Voltage		Frequency		Pulse	Make	Model		
239	EF		1	1	0	18		25.0	0.7		500	40	2 SR LR			LR-24		
							FI	SH S	UMM	ARY								
Site#	MT	D/NO	O H/P		Species	Stage	Age	Tota	al# L	Lgth (Min/Max		FishAct		Comment				
239	EF		1	1	NFC				0									
								COM	MENT	S								
Section Comments																		
WATERBODY joins 237 25m ds. Ef 18sec - NFC if good gradient, is accessible																		

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	WATERBODY																										
Gazetted Name: Local: M27 Arctic Cr. Project Code: 630-000000-00000-0000-0000-0000-000-000-																											
Waterbody ID: ILP Map #: 104G.016 ILP #: 2000 Reach #: Project ID: 17415 Lake/Stream: S Lake From Date:												1	-														
Fi	sh Pe	rmit #	: SM07	7-34821		Date	: 2007/0	8/10	Т	o: 2	007/08	3/10	А	gency:	C660)	Crew:	Lake From Date: SH KM RD Resample: Comment									
	SITE / METHOD																										
Site#	NIC	Мар	NID	NID# UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid									Comment														
300	104	G.016	2000	01 9)			GP:	3 EF	1	4	4	50	(
	A. GEAR SETTINGS																										
Site#	MT	D/NO	H/P	Date	ln	Time	In D	ate Out	Tim	ne Ou	t		Comment														
300	EF	1	1	2007/0	08/10	08:0	0 20	07/08/10	0	8:30																	
	C. ELECTROFISHER SPECIFICATIONS																										
Site#		MTD/I	NO) H/P		Encl	ncl Sec		Lengt	:h	n Wi		V	oltage	Fr	requenc	у Р	ulse	Mak	се	Model						
300	EF 1 1 O 540)	100.0		- :	2.0	780			30 4		4	SR	₹	LR-24											
								F	FIS	H S	UM	МАІ	RY														
Site# MTD/NO H/P Species Stage Age Total# Lgth (Min/Max) FishAct													Commer	nt													
300	EF		1	1	1	NFC					0																

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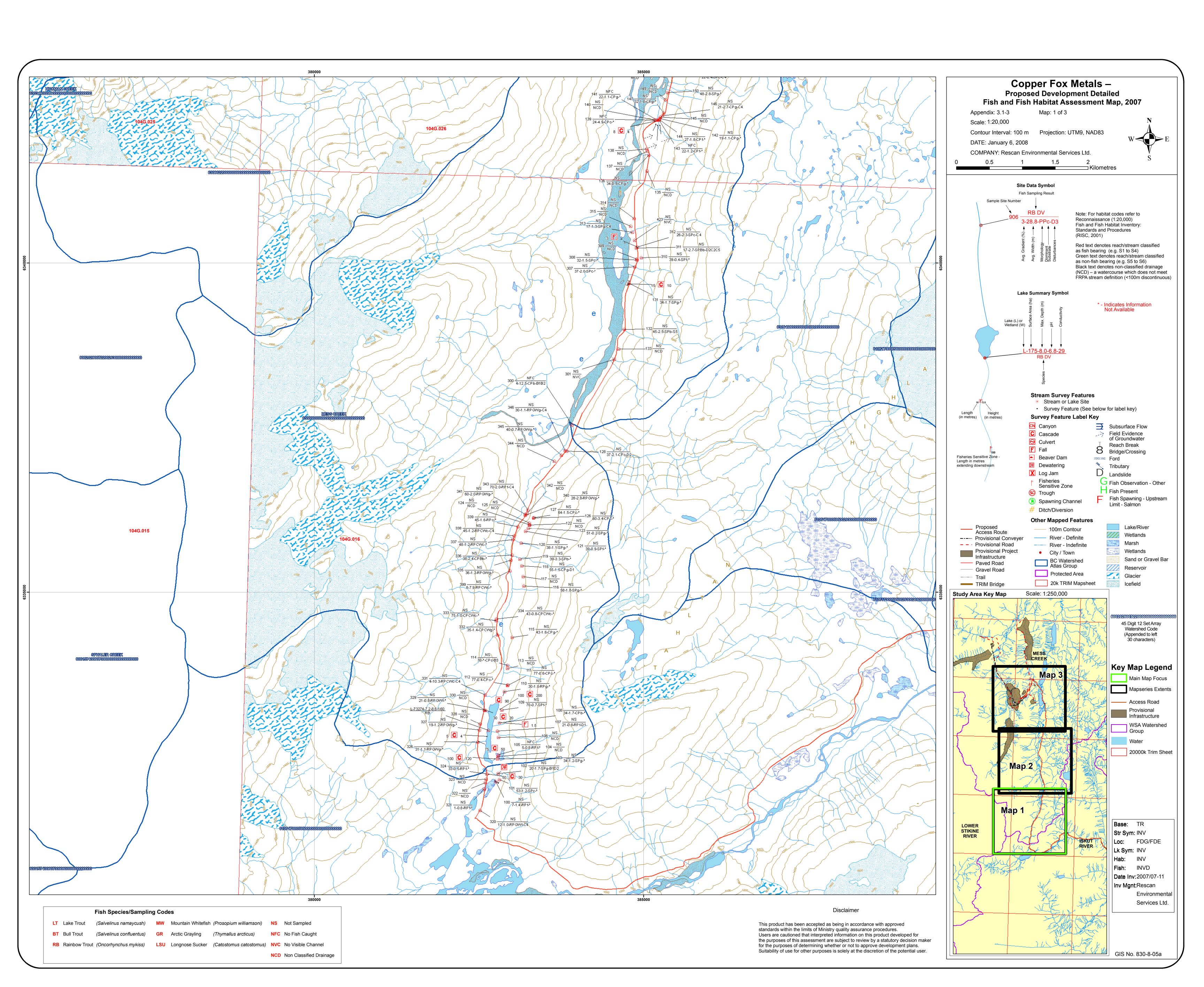
1.0

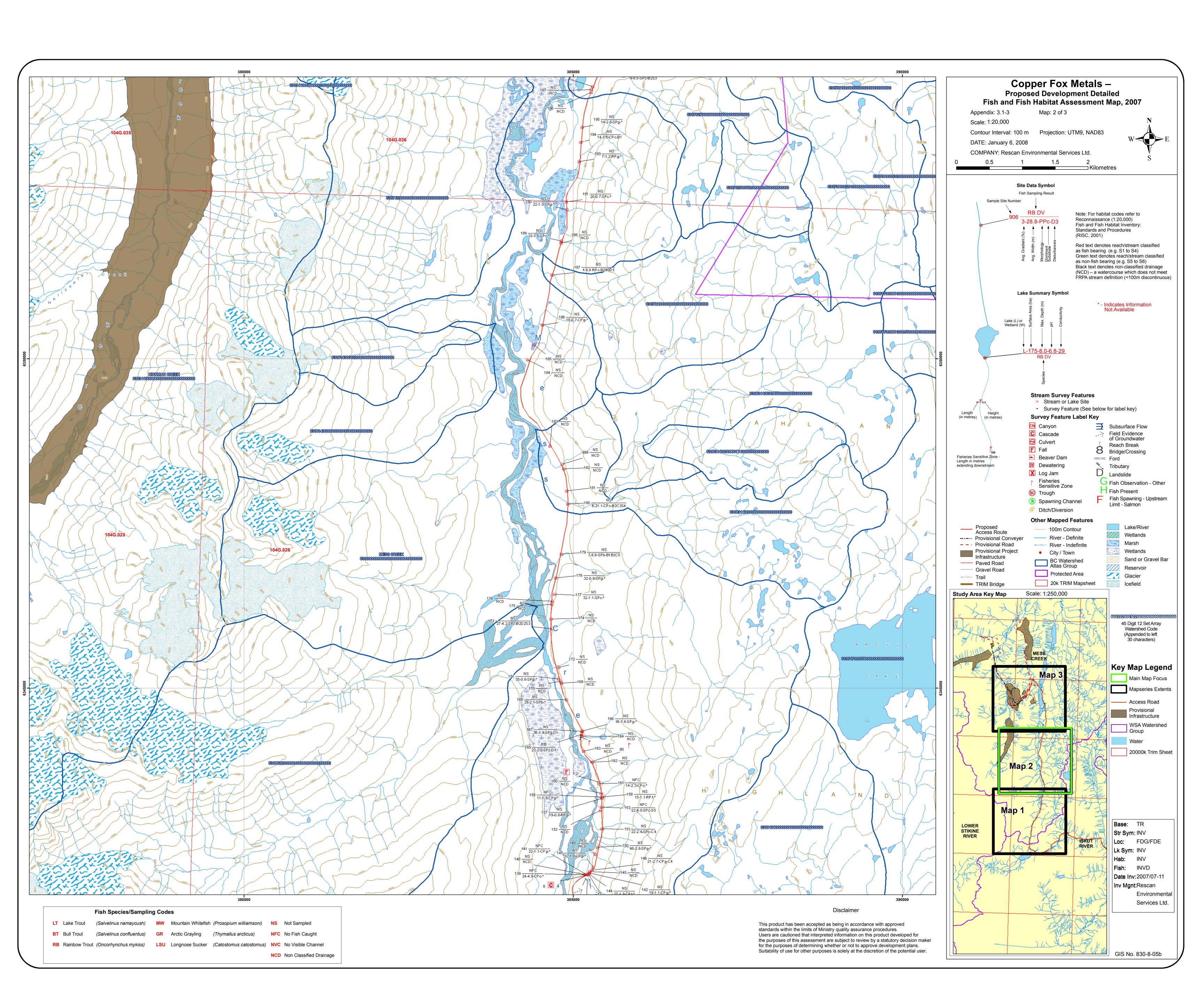
104G.036

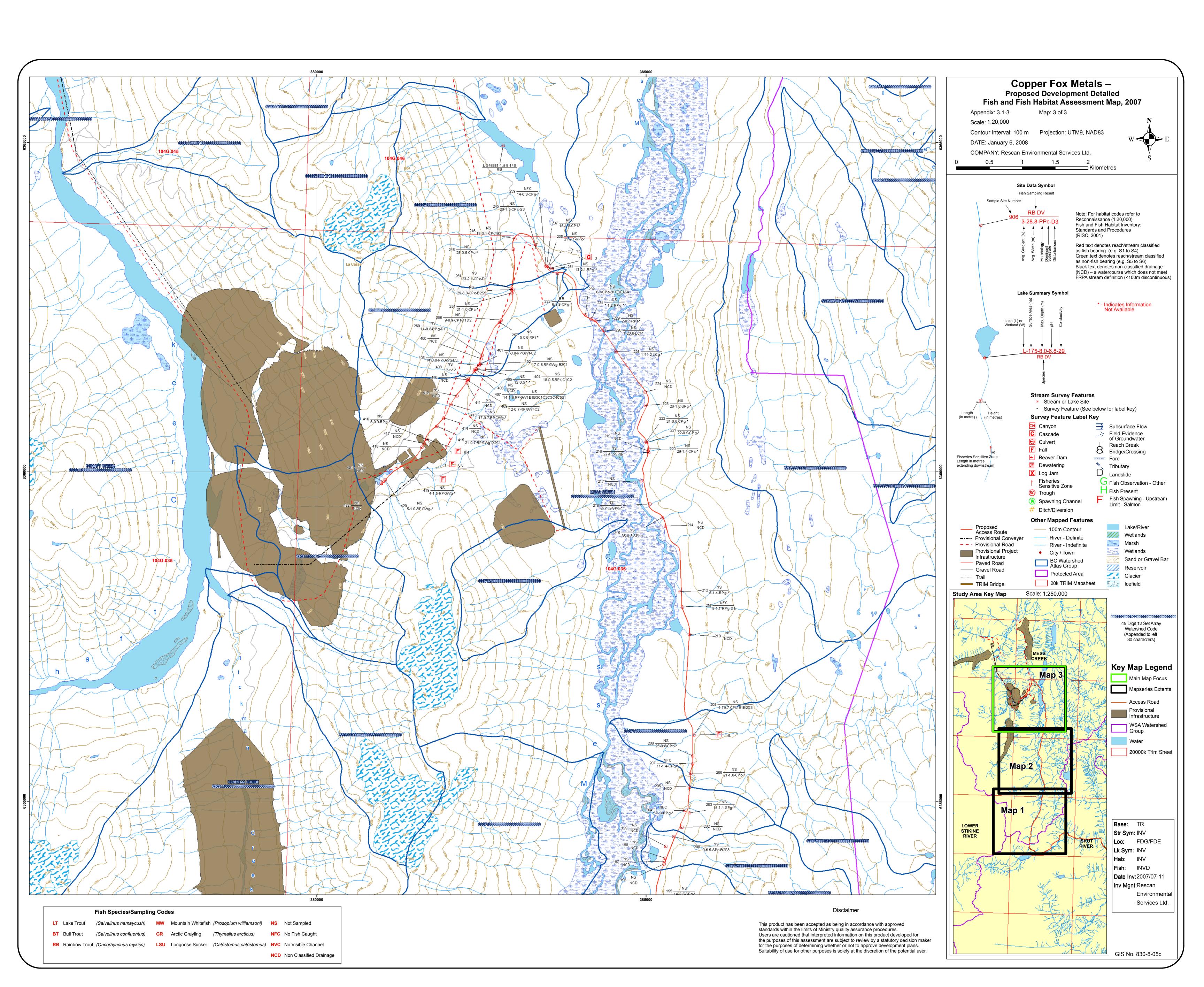
WATERBODY																			
	•	le: 630-0						Local: M89 00-000-000-000-000-0 00-000-000-000-00											
W	aterbody I Project I		D: ILP Map #: 104G.036 ILP #: 1111 Reach #: 7 D: 17415 Lake/Stream: S Lake From Date:											-					
Fi	sh Permit	#: SM0	: SM07-34821 Date: 2007/08/27 To: 2007/08/27 Agency: C660 Crew: LT DD Re									Resan	nple:						
SITE / METHOD																			
Site#	NID Ma) NID	#	UTM	M:Zone/East/North/Mthd			MTD/	/NO	Temp	Cond Turb		oid	Comment					
312	104G.03	9			GP3	EF	1	6	160	60 C									
							Α.	GEA	RS	SETT	INGS								
Site#	MTD/NO	H/P	Da	ate In	Time	In Date	e Out	Time	Out					Com	ment				
312	EF 1	1	2007	7/08/27	13:10	2007	/08/27	13:4	45										
	C. ELECTROFISHER SPECIFICATIONS																		
Site#	MTD	/NO	H/P		Encl	Sec	L	ength	h Wi		Vol	tage	Freque	ency	Pulse	Make	Model		
312	EF	1		1	0		100.0		0 '		4	00) 40		2	SR	LR-24		
							F	ISH	SU	ММ	ARY								
Site#	Site# MTD/N			H/P S		ecies Stage		е	Total #		_gth (Min/Max)		FishAct		Comment				
312	312 EF 1 1 NFC								0								•		
								СО	ММ	ENT	S								
	Section										Comm	nents							
V	VATERBO	DY	P	oor hal	bitat not r	nuch to Ef	found	l dead f	ish at	rc, rotte	n and 1/2	body	missing.						

APPENDIX 3.1-3 FDIS 1:20,000 FISH HABITAT MAPS FOR STREAM CROSSINGS ALONG THE PROPOSED SCHAFT ACCESS ROUTE









APPENDIX 3.1-4 SUMMARY OF SITE CLASSIFICATIONS FOR STREAM CROSSINGS ALONG THE PROPOSED SCHAFT ACCESS ROUTE



Appendix 3.1-4
Classification for All Sites Assessed Along Proposed Access Road

Classification for All Sites Assessed Along Proposed Access Road							
Site	McElhanney #	ILP	NID	Easting	Northing	Classification	
100	M1	1000	10000	382752	6332127	S6	
101	M1	1000	10002	382809	6332160	S6	
102	M4	1001	10003			S6	
103	M5	1002	10005	382778	6332474	S6	
104	N/A	1003	10007	382784	6332511	NCD	
105	N/A	1004	10008	382790	6332535	S6	
106	N/A	1005	10009	382791	6332798	NCD	
107	M7	1006	10018	382779	6332895	S6	
108	M8	1007	10010	382810	6333022	S6	
109	M9	1008	10012	382843	6333214	S6	
110	M10	1009	10014	382883	6333497	S6	
111	M11	1010	10016	382929	6333585	S6	
112	M12	1011	10017	382936	6333596	S6	
113	N/A	1012	10019	382931	6333844	NCD	
114	M13	1013	10020	382931	6333893	S6	
115	M14	1014	10021	383000	6334318	S6	
16	M15	1015	10022	383178	6335103	S6	
117	M16	1016	10023	383168	6335243	NCD	
18	M17	1017	10024	383147	6335405	S6	
19	M18	1018	10025	383117	6335507	S5	
20	M19	1019	10026	383139	6335753	S6	
21	M20	1020	10027	383206	6335929	S6	
22	M21	1021	10028	383263	6336024	NCD	
123	M22	1022	10029	383244	6335974	S6	
124	N/A	1023	10030	383258	6336031	NCD	
125	M23	1024	10031	383258	6336056	NCD	
126	M24	1025	10032	383326	6336132	S 5	
127	M25	1026	10033	383332	6336139	S6	
128	M26	1027	10034	383831	6337147	S6	
131	M33	1030	10040	384771	6339654	S6	
132	M32	1031	10043	384704	6338998	S6	
33	M31	1032	10044	384615	6338697	NCD	
34	M30	1033	10045			S6	
35	N/A	1034	10046	385048	6341401	NCD	
36	M40	1035	10047	385075	6341641	S6	
37	M41	1036	10048	385054	6341702	NCD	
38	N/A	1037	10049	385045	6341734	NCD	
39	M42	1038	10050	385161	6342171	(S3)	
40	N/A	1039	19999	385182	6342174	NCD	
141	M43	1040	10052	385198	6342173	S6	
142	M44	1041	10054	385239	6342198	S6	
143	M45	1042	10057	385229	6342175	S6	
144	N/A	1043	10058	385233	6342183	S6	
145	N/A	1044	10059	385249	6342220	NCD	
146	M46	1045	10060	384280	6342239	S6	
47	M47	1046	10061	385300	6342282	S6	
148	M48	1047	10062			S6	
149	M49	1048	10063	385327	6342484	NCD	
50	M50	1049	10064	385365	6342590	S6	
51	M51	1050	10065	385429	6342870	S6	
52	N/A	1051	10066	385145	6343145	NCD	
53	M52	1052	10067	385423	6343199	S5	
57	M53	1056	10068	385432	6343329	(S4)	
58	M53	1057	10069	385441	6343349	(S4)	
59	M53	1058	10070	385431	6343349	(S3)	
60	N/A	1059	10072	385422	6343408	NCD	
61	M54	1060	10073	385383	6343556	S6	
62	M55	1061	10076	385282	6343877	NCD	
63	N/A	1062	10078	385153	6344047	NCD	
64	M56	1063	10079	385127	6344274	NCD	
65	M57	1064	10073	385118	6344301	S6	
66	M58	1065	10084	385134	6344353	S6	
67	M59	1066	10085	385126	6344347	S6	
68	M60	1067	10086	384891	6344828	S6	
69	N/A	1068	10087	384815	6345077	NCD	
70	M61	1069	10087	384799	6345108	NCD	
71	M62	1009	10089	384772	6345142	S6	
72	N/A	1070	10099	384774	6345318	NCD	
173	M64	1071	10090	384668	6345904	S5	
173 174	N/A		10091	384659	6346055	NCD	
		1073					
75 76	N/A	1074	10093	384667	6346279	NCD	
176 177	N/A M65	1075 1076	10094	384679	6346322	NCD Se	
177	M65	1076	10095	384709	6346429	S6	
178	M66	1077	10096	384728	6346681	S6	
179	M67	1078	10097	384817	6347037	S2	
180	M68	1079	10098	384913	6347801	S2	
181	M69	1080	10099	384899	6348050	NCD	

(continued)

Appendix 3.1-4

Classification for All Sites Assessed Along Proposed Access Road (continued)							
Site	McElhanney #	ILP	NID	Easting	Northing	Classification	
182	N/A	1081	10100	384850	6348334	NCD	
183	N/A	1082	10102	384302	6348682	NCD	
184	N/A	1082	10103	384302	6349989	FSZ	
185	N/A	1084	10104	384392	6350219	FSZ	
186	M71	1085	10105	384525	6350519	S6	
187	M72	1086	10106	384673	6351276	S2	
188	N/A	1087	10107	384812	6351764	NCD	
189	M73	1088	10108	384814	6351793	S6	
190	M74	1089	10109	384901	6352271	S6	
191	M75	1090	10110	384887	6352387	S6	
			10111				
192	M76	1091		384909	6352546	S6	
193	M77	1092	10112	385087	6352997	(S4)	
194	M78	1093	10113	385110	6353294	S6	
195	M79	1094	10114	385132	6353520	(S3)	
196	N/A	1095	10115	385269	6354052	NCD	
197	M80	1096	10116	385267	6354093	NCD	
198	N/A	1097	10117	385286	6354139	NCD	
199	N/A	1098		385297		NCD	
			10118		6354321		
200	M81	1099	10119	385415	6354469	S2	
201	M81A	1100	10120			NCD	
202	M82	1101	10121	385537	6354612	NCD	
203	M83	1102	10122	385653	6354829	S6	
204	M84	1103	10123	385578	6354862	S6	
205	N/A	1104	10124	385650	6355219	NCD	
					6355426		
206	M85	1105	10125	385676		S6	
207	M86	1106	10126	385699	6355571	(S4)	
208	M87	1107	10127	385702	6355690	S6	
209	M88	1108	10128	385720	6356007	S2	
210	N/A	1109	10130	385658	6357535	NCD	
211	N/A	1110	10131	385548	6357951	(S4)	
212	M89	1111	10132	385511	6358187	S4	
					0000107		
213	M90	1112	10133	385453		S6	
214	M91	1113	10134	385290	6359181	NCD	
215	M92	1114	10135	385245	6359315	S6	
216	M93	1115	10136	385054	6359517	S6	
217	N/A	1116	10137	384922	6359870	FSZ	
218	M94	1117	10138	385034	6360299	S6	
219	M95	1118	10139	385024	6360324	NCD	
	M96		10140		6360354	S6	
220		1119		385034			
221	M97	1120	10141	385004	6360454	S6	
222	M98	1121	10142	384993	6360487	S6	
223	M99	1122	10143	384985	6361012	S6	
224	N/A	1123	10144	384978	6361222	NCD	
225	M100	N/A	10145	384536	6361837	S1	
226	M101	N/A	10151	384357	6362162	S1	
227	N/A	1124	10152	384304	6362203	NCD	
						NCD	
228	M102	1125	10153	384249	6362266		
229	M103	1126	10153	384227	6362300	S6	
230	M104	1127	10154			S6	
231	M105	1128	10155	384167	6362325	(S4)	
232	M106	1129	10156	384075	6362392	S3	
233	M107	1130	10157	383648	6363017	S3	
234	M108	1131	10158	383567	6363093	S6	
						S6	
235	M109	1132	10160	383516	6363131		
236	N/A	1132	10162	383508	6363132	NCD	
237	M110	1133	10163	383484	6363126	(S4)	
238	M111	1134	10164	383478	6363135	NCD	
239	M112	1135	10165	383477	6363136	(S4)	
245	M113	1138	10170	383316	6363459	S6	
246	M114	1138	10172	383003	6363545	S6	
	N/A	1139				NCD	
247	IN/A		10173	382972	6363490		
248		1140	10174	382977	6363387	S6	
249	N/A	1141	10175	382987	6363041	NCD	
250	M117	1142	10176	382947	6362989	NCD	
251	M118	1143	10177	382955	6362792	S6	
252	M119	1144	10178	382943	6362755	NCD	
253	M120	1145	10179	382972	6362776	S6	
254	M121	1146	10180	382959	6362724	S6	
255	M122	1147	10181	382799	6362320	NCD	
256	M123	1148	10182	382794	6362313	S6	
257	M124	1149	10183	382772	6362276	S6	
258	N/A	1150	10184	382761	6362246	NCD	
259	N/A	1151	10185	382546	6361899	NCD	
260						S6	
300	M126	1152	10186	382508	6361780		
<1 1()	M27	2000	20000	383909	6337546	S2	
301 302	M28 M29	2001 2002	20018 20002	384549	6338538	NVC	

(continued)

Appendix 3.1-4
Classification for All Sites Assessed Along Proposed Access Road (completed)

	Classification for				1100000	
Site	McElhanney #	ILP	NID	Easting	Northing	Classification
307	M34	2007	20007	384858	6339948	S6
308	M36	2008	20008	384893	6340048	S6
309	M37	2009	20009	384890	6340063	NCD
310	N/A	2010	20010	384903	6340087	S6
						?
311	M38	2011	20011	384873	6340212	
311	M38	2011	10227	384887	6340234	S6
312	M38	2011	20013	384899	6340250	(S4)
313	N/A	2012	20015	384826	6340470	(S4)
314	N/A	2013	20016	384852	6340678	NCD
315	N/A	2014	20017	384798	6340564	NCD
320	M222	2050	20020	382514	6331690	S6
321	M221	2051	20021	382573	6332015	S6
322	M220	2052	20021	382595	6332113	NCD
323	N/A				6332164	NCD
		2053	20023	382603		
324	N/A	2054	20024	382616	6332247	S6
325	N/A	2055	20026	382477	6332669	NCD
326	M219	2056	20027	382477	6332728	S6
327	M218	2057	20029	382501	6332912	S6
328	N/A	2058	20031	382515	6333003	NCD
329	M217	2059	20032	382578	6333215	S6
330	N/A	2060	20034	382596	6333213	NCD
331	M216	2061	20035	382591	6333445	(S2)
332	M215	2062	20036	382775	6334355	S6
333	M214	2063	20037	382756	6334570	S6
334	M213	2064	20038	382760	6334600	S6
335	M211	2066	20040	382980	6335493	S6
336	M210	2067	20041	382999	6335568	S6
337	M209	2068	20042	383011	6335800	S6
338	M208	2069	20043	383031	6335856	S6
339	M207	2070	20044	383089	6335998	S6
340	M206	2071	20045	383200	6336175	(S3)
341	M205	2072	20046	383200	6336190	S6
342	M204	2073	20047	383223	6336197	NCD
343	M203	2073	20047			S6
				383237	6336250	
344	M202	2075	20049	383640	6336995	NCD
345	M201	2076	20050	383745	6337089	S6
346	M200	2077	20051	383805	6337156	(S4)
399	M212	2061	20039	382965	6335329	(S2)
400	M130	4000	10200	382493	6361723	NCD
401	N/A	4001	10201	382481	6361649	S6
402	M129	4002	10202	382464	6361639	S6
403	N/A	4002	10203	382456	6361619	S6
404	M131	4003	10204	382418	6361572	S6
405	M132	4004	10205	382414	6361567	NCD
406	M133	4004		382399	6361561	NCD
			10206			
407	M134	4006	10207	382390	6361528	S6
408	M135	4007	10208	382296	6361414	NCD
409	M136	4008	10209	382292	6361393	S6
410	N/A	4008	10210	382280	6361401	NCD
411	N/A	4009	10211	382265	6361358	NCD
412	N/A	4010	10212	382124	6361160	NCD
413	M137	4011	10213	382031	6361027	S6
414	M138	4012	10214	381920	6360824	NCD
415	M139	4013	10215	381820	6360698	S6
416	M140	4014	10215		6360500	S6
				381670		
417	M141	4015	10219	381626	6360439	NCD
418	M142	4016	10220	381590	6360382	NCD
419	N/A	4017	10221	381372	6360150	(S4)
420	N/A	4018	10224	381032	6359884	S6
421	N/A	4019	10225	381000	6359858	NCD
422	N/A	4020	10226	380977	6359829	NCD
423	N/A	4021	10228	384862	6340351	NCD
999	M70	1999	10101	384824	6348405	NCD
555	1717 (1000	10101	00 r04T	0010700	1100

APPENDIX 3.1-5 NAVIGABLE WATER SITE APPENDIX



Documentation of Sites Assessed for Navigable Waters, 2007

Road crossing sites where average bankfull width exceeded 3 m were subjected to additional photo-documentation to determine their suitability for navigation as per the requirements of Transport Canada. These photographs will be used to assist in determining if any stream crossings need to be designed for navigability. Sites were generally photographed from eight angles looking towards the road crossing site. However, some sites that were obviously navigable, or where barriers to navigation existed, were photographed from fewer angles. In these instances, the habitat photos taken during the survey are presented here. A summary of sites assessed for Navigable Waters is presented in Table 1. Photos were taken starting at 0° (looking directly downstream) and moving clockwise around the crossing in 45° increments, for a total of eight angles. Camera angles are abbreviated using the following legend:

TC1: 0° looking downstream towards the stream crossing

TC2: 45° looking from the left bank downstream towards the crossing

TC3: 90° looking from left bank directly across the stream at the crossing

TC4: 135° looking from the left bank upstream towards the crossing

TC5: 180° looking upstream towards the crossing

TC6: 225° looking from the right bank upstream towards the crossing

TC7: 270° looking from the right bank directly across the stream at the crossing

TC8: 315° looking from the right bank downstream towards the crossing

Transport Canada – Information Related to the Navigable Waters Protection Act

This section provides information on 17 major stream crossings of the proposed Schaft Project access road. In the future, Copper Fox Metals Inc. will require an engineered road that is suitable for large and small truck traffic to access the mine site area on a year round basis. The information provided in this section is to be used to gain a sense of terrain and stream characteristics along the proposed road. The number and location of stream crossings is subject to change, and is dependent on the finalized road alignment. This section includes all major crossings identified in the field to assist Transport Canada in conducting a preliminary assessment on navigable waters. Further work is required to determine exact locations of small stream crossings using standard culvert designs. Crossing locations may still be subject to change as engineering work on road design progresses. CEA Agency, as well as the other regulatory agencies involved, will be kept up to date on any proposed changes to the access road alignment. No bridge designs have been developed at this time. Conventional bridge construction methods will be used. Bridges will be designed with a minimum of 1.5 m clearance between the lowest structural member and the Q100 (100 year return period discharge) level.

Table 1 provides summary information for each major stream crossing site, including:

- Reference Name;
- Rescan NID #;
- Rescan site #;
- Location (UTM);
- Channel width (m);
- Bankfull depth of water at crossing (m);
- Photos linked to the site (all photos in order presented in table);
- Preliminary estimation of navigability; and
- Comment.

Photos for All Potentially Navigable Streams along the Proposed **Access Road**



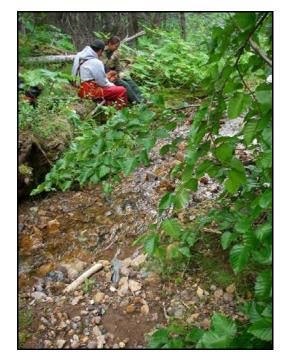
Site 139 - TC1



Site 139 - TC3



Site 139 - TC2



Site 139 - TC4





Site 139 - TC5

Site 139 - TC6





Site 139 - TC7

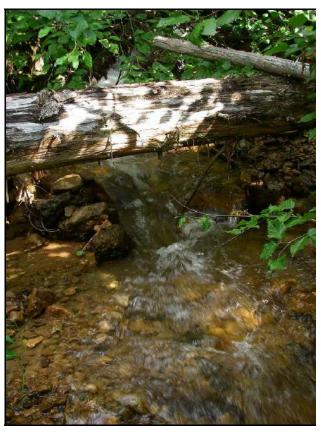
Site 139 - TC8



Site 153 – TC1 Site 153 – TC2



Site 153 – TC3 Site 153 – TC4





Site 153 - TC5

Site 153 - TC6



Site 153 - TC7

Site 153 - TC8





Site 173 - TC1

Site 173 - TC2





Site 173 - TC3

Site 173 - TC4





Site 173 - TC5

Site 173 - TC6





Site 173 - TC7

Site 173 - TC8





Site 179 - TC5 Site 179 - TC6



Site 179 - TC7 Site 179 - TC8





Site 180 - TC1

Site 180 - TC2



Site 180 - TC3

Site 180 - TC4





Site 180 - TC5

Site 180 – TC6





Site 180 - TC7

Site 180 - TC8





Site 187 – TC1 Site 187 – TC2





Site 187 – TC3 Site 187 – TC4





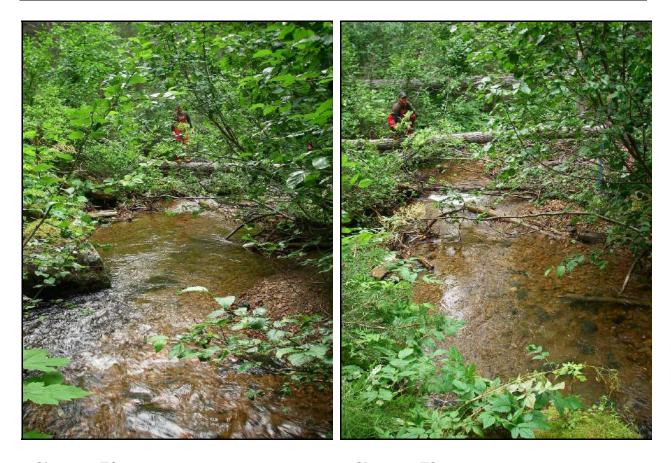
Site 187 – TC5 Site 187 – TC6





Site 187 - TC7

Site 187 - TC8



Site 200 - TC1 Site 200 - TC2



Site 200 - TC3 Site 200 - TC4





Site 200 - TC5

Site 200 - TC6





Site 200 - TC7

Site 200 - TC8





Site 209 – TC1 Site 209 – TC2





Site 209 – TC3 Site 209 – TC4



Site 209 - TC5



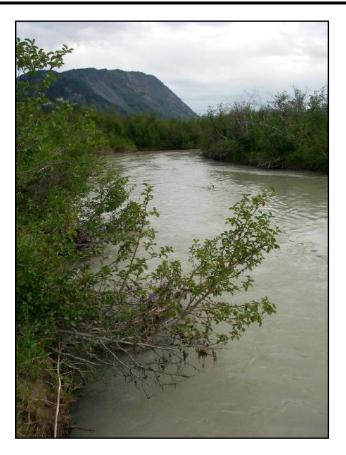
Site 225 - Downstream



Site 225 – Upstream



Site 226 - Upstream



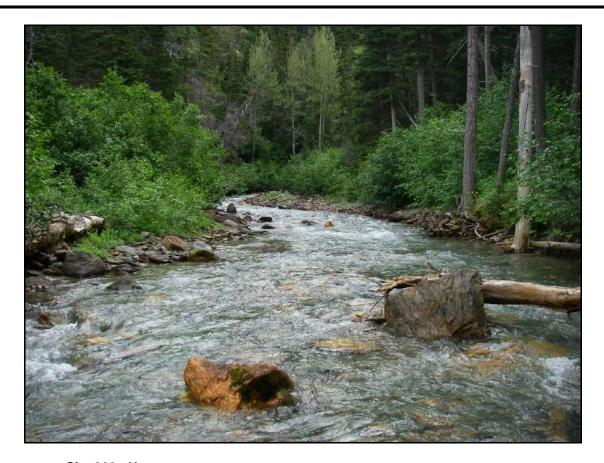
Site 226 - Downstream



Site 246 - Upstream



Site 246 - Downstream



Site 300 - Upstream



Site 300 - Downstream



Site 399 - Downstream



Site 399 - Upstream

APPENDIX 3.2-1 SITE CARDS COMPLETED FOR SCHAFT CREEK RECEIVING ENVIRONMENT SITES



100

Reach # ILP Map #

ILP#

Site

1.1 321 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): STIKINE RIVER Project Code: 17415 WATERSHED Gazetted Name: STIKINE RIVER Local Name: ST1 ILP#: NID #: 30046 ILP Map#: NID Map #: 104G.084 Reach #: 1 1 Site #: 321 Field UTM (Z.E.N): .. Method: Site Lg: 400 Method: GE Access: H GIS UTM (Z.E.N): 9.366523.6416438 Ref. Name: Fish Crd?: Incomplete: Date: 2007/06/19 Time: 09:30 Agency: C660 Crew: KM CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) GF 200.00 160.00 180.00 Method I: 0.25 180.00 0.0 0.5 С Wetted Width (m) GF 200.00 180.00 200.00 193.33 Method II: С Pool Depth (m) GE 0.00 No Vis.Ch.: Intermittent: Wb Depth: 10.0 15.0 Avg: 12.50 Method: GE Stage: L ☐ M ☐ H ✓ Dw: Tribs.: COVER Total: T **CROWN CLOSURE** LWD SWD В DP OV IV Type: U Amount S D Loc: P/S/O: **VV V V V V V V V V V V V V VV** INSTREAM VEG: N ☐ A ☐ M ☐ V ✔ LWD: N DIST: NA LB SHP: V RB SHP: V Texture: F \bigcirc G \bigcirc C \bigcirc B \bigcirc R \bigcirc A \bigcirc Texture: F \bigcap G \bigcap C \bigvee B \bigvee R \bigcap A \bigcap RIP: C RIP: D STG: MF STG: MF WATER EMS: Req#: Temp: 8 Method: T3 Cond.: 100 Method: S3 pH: 7.9 Method: P2 Turb.: T M L C Method: GE Flood Signs: in flood Method: GE MORPHOLOGY D1 D2 D3 Bed Material: Dominant: B Subdom: C **✓** D95: 40.0 D (cm): 40.00 Morph: LC DISTURBANCE **INDICATORS** Pattern: SI C2 С3 C4 S1 S3 S5 Islands: N Coupling: DC Confinement: OC SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Name Spawning Habitat poor - no suitable gravel here OverWinter Habitat fair - probably slows but doesn't freeze Rearing Habitat poor - little cover, fast flow **PHOTOS** Foc Lg Photo Dir Comments STD 100 F: 3418 U STD F: 3419 Х flooded trees 100 F: 3420 STD D

						PHOTOS						
	Ph	oto	F	oc Lg	Dir	Comments						
R:	100	F: 342	21 8	STD	X	to rb						
R:	100	F: 342	22 5	STD	Х	to rb						
R:	100	F: 3423 STD U lb										
R:	100	F: 342	24 5	STD	D	lb						
R:	100	F: 342	25 8	STD	NS	boulder bank, LB						
						COMMENTS						
	Section Comments											
	CHANNEL very large, single channel, standing waves ~1m in middle. Flooded with scars on RB ~1.5mabove PWL. No good habitat here, consistent all the way US to Mess Cr. No bars at this time, no islands, LB is ~8m cutbank from pine forest. RB is lower, also vertica											

F: 3431

100

STD

IJ

Reach # ILP Map # ILP #

Site

1.2 322 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): STIKINE RIVER Project Code: 17415 WATERSHED Gazetted Name: STIKINE RIVER Local Name: ST2 ILP#: NID #: 30047 ILP Map#: NID Map #: 104G.095 Reach #: 12 Site #: 322 Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: GE Access: H GIS UTM (Z.E.N): 9.372853.6419747 Ref. Name: Fish Crd?: Incomplete: Date: 2007/06/19 Time: 09:55 Agency: C660 Crew: KM CHANNEL width width Gadient % Mtd Mtd width width width width width width width width Avg Avg Channel Width (m) GF 180.00 200.00 180.00 Method I: 0.25 160.00 0.0 0.5 С Wetted Width (m) GF 180.00 200.00 160.00 180.00 Method II: С Pool Depth (m) GE 0.00 No Vis.Ch.: Intermittent: Wb Depth: 5.0 10.0 Avg: 7.50 Method: GE Stage: L ☐ M ☐ H ✓ Dw: Tribs.: COVER Total: T **CROWN CLOSURE** LWD SWD В DP OV IV Type: U Amount Ν S D Loc: P/S/O: **VV V V V V V V V V V V V V VV** INSTREAM VEG: N ☐ A ☐ M ☐ V ✔ LWD: N DIST: NA LB SHP: V Texture: F \bigcap G \bigcap C \bigvee B \bigvee R \bigcap A \bigcap Texture: F ☐ G ☐ C ☐ B ✔ R ✔ A ☐ RIP: D RIP: S STG: YF STG: SHR WATER EMS: Req#: Temp: 8 Method: T3 Cond.: 100 Method: S3 pH: 7.9 Method: P2 Turb.: T M L C Method: GE Flood Signs: in flood Method: GE MORPHOLOGY D1 D2 D3 Bed Material: Dominant: B Subdom: C D95: 80.0 D (cm): 40.00 Morph: LC DISTURBANCE **INDICATORS** Pattern: ST C2 С3 S1 S3 S5 Islands: N Coupling: CO Confinement: CO SPAN Bars: N SIDE DIAG MID BR FSZ: HABITAT QUALITY Name Spawning Habitat poor - no suitable gravel OverWinter Habitat poor - fast flow, no pools, but deep Rearing Habitat poor - little cover, fast flow **PHOTOS** Foc Lg Photo Dir Comments STD 100 F: 3429 D STD to RB F: 3430 Х 100

Reach # ILP Map # ILP # Site 1.2 322

	PHOTOS													
	Pho	oto		Foc Lg	Dir	Comments								
R:	100	F:	3432	STD	D	LB flooded								
R:	100	F:	3433	STD	U	RB flooded								
	WILDLIFE													
	Gro	oup				Observations								
	MA	AM		moose scat										
						COMMENTS								
	Section Comments													
	CHANNEL large single channel, faster than DS reach. But no standing waves. Jus tus of telegraph creek. RB is bedrock steep, LB is boulder cobble. Not a lot of useable fish habitat													

Reach # ILI

ILP Map #

ILP#

Site

1.1

	PROJECT Project Name: Schaft Creek																
Pro	ject Name	e: Schaf	t Creek														
Stream Na											F	Project Co	ode:		17415		
Project Waters	hed Code	e: 600-0	00000-0	00000-00	000-000	00-0000	000-00	0-000-0	00-000-00	00							
							WAT	ERS	HED								
Gazetted Nam									_	Loc	cal Nam	e: YC1					
Watershed Cod ILP Map		4400-000		00-0000 LP #:)-0000-00			-000-00 14G.073		ID#: 30	0000	Read	ah #•	1.1	C it.	e #: 300	0
•						ואו טוואו	ар #. тс	14G.073	IN			Neat					
Field UTM (Z.E.N GIS UTM (Z.E.N		57 64057	706	N	/lethod:				D,	Site Lر ef. Name	_		Method:	: HC Access: H			
GIS OTIVI (Z.L.IV	1). 9.3333	37.04037	00						i Ne	or. INallie	5 .						_
D	ate: 2007	7/06/13	٦	Γime: 09	:15		Agency	: C660	C	Crew: I	KM TS		Fish C	Crd?: ✓	Inco	mplete	y:
							СН	ANN	EL								
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadi	ient % N	∕Itd	Avg
Channel Width (m)			70.00	30.00	35.00							41.25	Meth				1.50
Wetted Width (m)		30.00	35.00	30.00	30.00			ļ				31.25	Metho	od II:		С	
Pool Depth (m)): GE				ļ						ļ	0.00	No Vis	s.Ch.:	Intermitter	nt:	ĺ
Wb Depth	n: 2.2	1.8		Αν	g: 2.00	N	Method:	GE	St	tage: L	М	✓ H		Dw:	Trib	s.: 🗌	
COVER Total: T																	
Туре	e: SWD	LW	/D	В	U	DF)	OV	IV	CR	OWN CI	OSURE					
Amoun	it: T	D)	Т	N	N	N S N 1 1-20%										
Loc: P/S/0					V V		INSTREAM VEG: N A M V										
LWI)· F			IST: E													
LB SH											RB SHF	/					
	r.v e:F	G	С	В	R \square A	\							GGC	B	R _ A	A .	
	o 🔽 P: D				🔲 ,	. П					RIF			V] 🗀 ,	. П	
	G: MF											: D :: SHR					
							V	/ A T E	R								
EMS											eq #:						
Temp	o: 6 H: 7.5						od: T3 od: P2			C	ond.: 90				Method	1: S3	
Flood Signs		ebris					od: GE			T	Γurb.: T	✓ M		С	Method	d: GE	
<u> </u>							100		1 0 0 V								
						IV	IURI	PHU	LOGY	01	D4	DO	D2 D4	D2 [22		
Bed Materia		Dominant			Subdom					01	B1	-	B3 D1	D2 [D3		
D95	5: 29.0	D (cm)	: 29.00		Morph	n: CP			BANCE			✓					
Pattern								INDIC	ATORS	C1	C2	C3	C4 C5	S1 S	S2 S3	S4	S5
Islands Coupling																Ш	
Confinemen	,																
FSZ								I	Bars:	N	SID	E	DIAG	MID✓	SPAN		BR
						НΑ	BITA	AT Q	UALI.	ΤΥ							
Name									C	Commen	nts						
Spawning Habit OverWinter Habit		_		good gra	ivel flow, no d	doon no	ole										
Rearing Habita		<u> </u>			pth, but I												
1.34		, y			, 221			LDL	FE								
Group									Observa	ations							
	grizzly trad		se track	(S													
BIR	sandpiper	S															

Reach # ILP Map # ILP #

Site

	PROJECT Project Name: Schaft Creek															
ı	Proje	ct Name	: Scha	ft Creek												
				S CREE								Р	roject Cod	de:		17415
Project Wat	tersh	ed Code	: 630-0	000000-0	00-0000	0000-0000	0-0000-	000-000	-000-00	00-000-00	0					
							,	WAT	FRS	HFD						
Gazetted N	lame:	MESS	CREEK						LKO	11 _ 0	Loc	al Name	• MC10			
Watershed C					00-0000	-0000-00	0-000-0	00-000-	000-00	0	Loc	arrame	. 111010			
ILP N	Иар#:			II	_P #:		NID Ma	ap #: 104	4G.036	NI	D#: 30	034	Reach	n #: 1.	.0	Site #: 317
Field UTM (Z.	.E.N):				N	lethod:					Site Lg	g: 75		Method: HC		Access: H
GIS UTM (Z.	.E.N):	9.38554	15.6364	664						Re	f. Name):				
	Dat	e: 2007	7/06/17	Т	ime: 08:	00	A	Agency:	C660	С	rew: Ł	KM TS		Fish Crd?:	~	Incomplete:
								СН	ANN	IEL						
		Mtd	width	width	width	width	width	width	width	width	width	width	Avg	Ī	Gadie	nt % Mtd Avg
	Channel Width (m): GE 42.00 33.00												37.50	Method I:	0.0	0.5 C 0.25
	Wetted Width (m): GE 45.00 40.00 Pool Depth (m): GE												42.50	Method II:		С
Pool Deptil	(111).	GE											0.00	No Vis.Ch.	: 🔲 ।	Intermittent:
Wb De	1.8		Avg	j: 1.65	M	lethod:	GE	St	age: L	M [H _	Dw	: 🗌	Tribs.:		
CO/	VER			Tota	al: M											
7	Type:	SWD		VD	В	U	DP	' (OV	IV		OWN CL				
Loc: P	ount:	S			N	N	S		D	N	1		-20%		—	v ==
LOC. F/	/3/0.					/ //	V		~ ~	V V V	INS	IREAM	VEG: N	\	IVI	v 📋
L	LWD:	F		D	IST: E											
	SHP:											RB SHP				
Tex	xture:	F 🗸	G	С	В	R \square A						Texture	: F 🗸	G C C	В	R _ A _
	RIP:											RIP				
	STG:	NA										STG	: NA			
								W	ATE	R						
	EMS:	_										eq #:				
16	emp: pH:							od: T3				ond.: 150				Method: S3
Flood Si	•	7						d: GE			Т	urb.: T	✓ M [l r 🗆 c		Method: GE
							M	ORP	НОІ	LOGY						
Bed Mate	orial:	Г	Oominan	+· F		Subdom:					01	B1	B2 B:	3 D1 D2	2 D3	3
		2.00): 2.00		Morph:		_	NETLID	BANCE						
	ttern:		•							ATORS	C1	C2	C3 C	4 C5 S	1 S2	 2 S3 S4 S5
	ands:												ПГ			
Coup	_															
Confiner									E	Bars:	N	SIDI		NAG ₪ M	1ID	SPAN BR
	FSZ:															
							HAI	BITA	T Q	UALII	ГҮ					
Name					التاسيية الم					С	ommen	ts				
Spawning Harder For Spawni				no grave		flow but to	urbid									
Rearing Ha						flow but to										
								PΗ	ОТО	o s						
Photo			c Lg			ir							Comment	S		
R: 100 F: 336 R: 100 F: 336			TD TD	+		J D	+									
1 100 1 330	′'	3			-											

Reach # ILP Map # ILP # Site 1.0 317

	WILDLIFE
Group	Observations
MAM	grizzly

Reach # ILP Map # ILP # Site

	Project Name: Schaft Creek													
	Project Name Stream Name (gaz.): Project Watershed Code	: MESS CREEK	0000-0000-0000	-000-000	-000-000	0-000-00	0	P	roject Cod	le:	1	7415		
				WAT	ERSE	HED								
	Gazetted Name: MESS 0	CREEK					Loc	cal Name	· MC1					
	Watershed Code: 630-000		0-0000-000-000-0	000-000-0	000-000		LOC	Jai ivaille	. IVIC I					
	ILP Map#:	ILP #:		ap #: 104			D#: 30	0002	Reach	#: 1.	.1	Site #: 30	1	
	Field UTM (Z.E.N):	1	Method:				Site Lo	a. 200		Method: GE		Access: H		
	GIS UTM (Z.E.N): 9.38391					Re	f. Name	_						
	D-4 0007	//00/40 Time - 40	.40	A	0000	_		VM TO		F:-b 0-40.			\square	
	Date: 2007	7/06/13 Time: 13	:10	Agency:			rew: I	KIVI 15		Fish Crd?:	<u> </u>	Incomplete	ə: 🗀	
	[1 1 1 1 1 1 1		ANN	_	1.141			г	0 "		. 1	
l	Mtd Channel Width (m): GE	width width width 100.00 90.00 70.00	width width	width	width	width	width	width	Avg	Mothodil	Gadien	t % Mtd C	Avg 1.50	
	Channel Width (m): GE Wetted Width (m): GE	100.00 90.00 70.00 10.00 12.00 11.00							86.67 11.00	Method I:	1.5	С	1.50	
	Pool Depth (m): GE	12.00							0.00	Woulde II.				
,			l l							No Vis.Ch.:	\equiv	termittent:		
	Wb Depth: 1.5	1.5 Av	g: 1.50	Method:	GE	St	age: L	M .	✓ H _	Dw	: 🔲	Tribs.:		
	COVER	Total: T												
	Type: SWD		U DI	IV	_	OWN CL								
	Amount: T	S T	T N		D	N	0		0%					
	Loc: P/S/O:			'V	/ / 	/ / /	INS	STREAM	VEG: N	I ✓ A 🗌 I	M D V			
	LWD: N	DIST: NA												
	LB SHP: S							RB SHP:	s					
		G ✓ C ☐ B ☐	R \square A \square							G ✓ C 🗆	В	R \square A \square		
	RIP: M							RIP:						
	STG: MF							STG:						
				14/	ATE	n								
	EMS:			VV	ATE	K	Ь	a a 4.						
	Temp: 4		Meth	od: T3				eq #: ond.: 80				Method: S3		
	pH: 7.0			od: P2										
	Flood Signs:			od: GE				urb.: I	✓ M [l r \square c		Method: GE	:	
				I O R P	HOL	OGY								
	D 111 1 1 1 D				• -	001	01	B1	B2 B3	B D1 D2	2 D3			
	Bed Material: D D95: 25.0	D (cm): 25.00	Subdom: G											
		D (cm): 25.00	Morph: RP		ISTURE INDICA									
	Pattern: SI				INDICA	IOKS	C1	C2	C3 C4	4 C5 S	1 S2	S3 S4	S5	
	Islands: N													
	Coupling: DC Confinement: UN													
	FSZ:				Ва	ars:	N	SIDE	V D	IAG V	⁄IID ✓	SPAN	BR	
			НА	BITA	T QU	JALIT	Υ							
	Name Comments													
	Spawning Habitat	fair - some good grave	l not much											
	OverWinter Habitat	poor - no shelter												
	Rearing Habitat	poor - no shelter from	flow, no deep po	ols										
						_							_	

Reach # ILP

ILP Map#

ILP#

Site 302

1.2

311

					PR	OJE	СТ								
Project Name	Schaft Creek	(
Stream Name (gaz.)	MESS CREE	ΞK							F	Project Co	ode:		17415		
Project Watershed Code	630-000000-	00000-00	000-000	0-0000-0	000-000	-000-00	00-000-00	0							
				,	WAT	FRS	HED								
Gazetted Name: MESS (PEEK			'		LKO	11 L D	Loc	al Name	a. MC2					
Watershed Code: 630-000		000-0000-	-0000-00	0-000-0	00-000-	000-000)	LOC	ai inaiii	e. IVICZ					
ILP Map#:		ILP #:			ıp #: 104			D#: 30	0004	Read	h #:	1.2	Site #: 3	302	
Field UTM (Z.E.N):		М	lethod:					Site Lo	g: 200		Method: GE	od: GE Access: H			
GIS UTM (Z.E.N): 9.38406	7.6354975						Re	ef. Name	:						
Date: 2007	/06/13	Time: 15:	15	A	Agency:	C660	C	rew: I	KM TS		Fish Crd?	: V	Incomple	ete:	
						ANN									
Mtd	width width	width	width	width	width	width	width	width	width	Avg		Gadie	nt % Mtd	Avg	
	60.00 30.00	45.00	18.00	32.00	maar	Width	Width	widti	Width	37.00	Method I:		C	1.00	
Wetted Width (m): GE	80.00 30.00	45.00	19.00	32.00						41.20	Method II:		С		
Pool Depth (m): GE										0.00	No Via Ch	. 🗆	Intormittont.	-	
Wb Depth: 1.5		Avg	: 1.50	N	lethod:	GE	St	No Vis.Ch.: ☐ Intermittent: ☐ Stage: L ☐ M ☐ H ☑ Dw: ☐ Tribs.: ☐							
Wb Depth: 1.5 Avg: 1.50 Method: GE Stage: L M H ✓ Dw: L Tribs.: COVER Total: M															
Type: SWD	LWD	В	U	DP	Т (VC	IV	l CR	OWN CI	OSURE					
Amount: S	D	N	S	N T N 0 0%											
Loc: P/S/O:			V V	VVV VVV INSTREAM VEG: N V A M V											
LWD: F		DIST: C													
LB SHP: S									RB SHP	· S					
Texture: F ✓	G \square C \square	В 🖂 Б	R \square A								G C C	В	R \square A \square		
RIP: W		ш							RIP						
STG: NA									STG						
					W	ATE	D								
EMS:					VV	AIL	N	R	eq #:						
Temp: 9				Metho	d: T3				ond.: 20	0			Method: S	S3	
pH: 7.3				Metho	d: P2			т	urb · T	□ M r	¬ L		Method: 0		
Flood Signs:				Metho	d: GE			•		V				-	
				М	ORP	HOL	OGY								
Bed Material: D	ominant: F		Subdom	: NA				01	B1	B2 E	33 D1 [)2 D	3		
D95: 0.10	D (cm): 0.01		Morph	: LC	Г	ISTUR	BANCE						•		
Pattern: IM						INDICA		C1	C2	C3 C	C4 C5 S	S1 S2	2 S3 S	34 S5	
Islands: N															
Coupling: PC															
Confinement: UN						Е	Bars:	N	SID	E I	DIAG	MID	SPAN	BR	
FSZ:									0.2	-U .			0.7		
				НАЕ	ЗІТА	T Q	J A L I 1	ГΥ							
Name							С	ommen	ts						
Spawning Habitat	poor - no grav		doroto o												
OverWinter Habitat Rearing Habitat	fiar - deep slo				ery turh	id									
Trouring Habitat	iaii Siowisii i	iov, mode	J. G.	. or, but v		DLI	FE								
Group								tions							
BIR goose ska	Group Observations														
MAM moose trac															

Reach # ILP Map # ILP #

Site

PROJECT													
Stream Name (gaz.):	Schaft Creek MESS CREEK 630-000000-00000-00000-000	0-0000-000-000-000-000-	Project Code: -000-000	17415									
		WATERSH	E D										
Gazetted Name: MESS C Watershed Code: 630-000 ILP Map#: Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.38370	000-00000-0000-0000-0000-00 ILP #: Method:	00-000-000-000-000 NID Map #: 104G.066	Local Name: MC5 NID #: 30038 Reach #: Site Lg: 200 Metl Ref. Name:	1.5 Site #: 319 hod: GE Access: H									
Date: 2007		Agonovii C660		ish Crd?: ✓ Incomplete:									
Date: 2007/	/06/17 Time: 13:05	Agency: C660		isn Cra?: V incomplete:									
Mtd	width width width width		width width Avg	Gadient % Mtd Avg									
Channel Width (m): GE 65.00 60.00 70.00 67.00 65.50 Wetted Width (m): GE 60.00 65.00 60.00 Pool Depth (m): GE 0.00 0.00 Wb Depth: 2.1 1.7 Avg: 1.90 Method: GE Method: 1.0 2.0 C 1.50 Method II: C C No Vis.Ch.: Intermittent: Dw: Tribs.: Tribs.:													
Type: SWD Amount: S Loc: P/S/O:	LWD B U	DP OV N S	IV CROWN CLOSURE N 1 1-20% INSTREAM VEG: N] A M V									
LWD: F DIST: E LB SHP: S Texture: F G C B R A R A RIP: C STG: PS INSTREAM VES. IN W. M. M. W. M. M. W. M.													
		WATER											
EMS: Temp: 8 pH: 7.5 Flood Signs: eroded b	panks	Method: T3 Method: P2 Method: GE	Req #: Cond.: 110 Turb.: T ✓ M ☐ L	Method: S3 C Method: GE									
		MORPHOL	O G Y										
Bed Material:													
Confinement: OC FSZ:		Bai	rs: N SIDE DIAG	✓ MID SPAN BR									
		HABITAT QU	ALITY										
Name			Comments										
Spawning Habitat	fair - some decent gravel in side	e channels											
OverWinter Habitat Rearing Habitat	poor - no deep pools fair - some good habitat in back	/side channels											
пеанну парнан	Iran - Some good nabital in back	WILDLIF	E										
Group			Observations										
MAM moose trac	cks, and moose cow.												

Reach # ILP Map # ILP # Site

PROJECT													
Project Name:	Schaft Creek												
Stream Name (gaz.):		<						F	roject Co	de:	174	115	
Project Watershed Code:	630-000000-0	0000-00000	0-0000-0000	-000-000	-000-00	0-000-00	0						
				14/ A T			_	_					
0 " 11 1500	DEE!/			WAT	ERSI	HED							
Gazetted Name: MESS C Watershed Code: 630-000		00 0000 000	00 000 000 (200 000	000 000		Loc	al Name	e: MC1				
ILP Map#:		.P #:		ap #: 104			D#: 50	033	Reacl	h# 2	.1	Site #: 5	517
Field UTM (Z.E.N):		 Meth		ар о			Site Lo			Method: GE		ccess: H	
GIS UTM (Z.E.N): 9.38391	4.6337796	Metri	iou.			Re	f. Name			700033.11			
, ,													. \square
Date: 2007	/09/18 T	ime: 15:20		Agency:			rew: 1	MM CD		Fish Crd?:	✓	Incomple	ete: 🔲
	* 101 * 101	. 14	. 14	C H width	ANN		. 141	. 141		Г	0 " 10		
Channel Width (m): GE	width width 40.00 50.00		idth width 0.00 60.00	width 60.00	width	width	width	Avg 54.29	Method I:	Gadient 9	% Mtd C	Avg 2.00	
Wetted Width (m): GE	5.20 10.20		1.00 12.00	60.00 12.00	12.00				10.43	Method II:	2.0	C	2.00
Pool Depth (m): GE	0.37 0.45		.42 0.40						0.41				_
M/ls Deaths 4.7	40 47		4.07		0.5	0.				No Vis.Ch.	=	ermittent:	
Wb Depth: 1.7	1.6 1.7	Avg: ′	1.67	Method:	GE	St	age: L	IVI	✓ H _	Dw	: 🔲	Tribs.:	
COVER	Tota												
Type: SWD	LWD		U DI		OV _	IV	l		OSURE				
Amount: T	T		T N	_	T	N	1		1-20%		M \square V \square	_	
Loc: P/S/O:							IINS	IKEAW	VEG: I	N 🗸 A 🗌	ıvı 🗌 v [
LWD: F	DI	ST: C											
LB SHP: V							1	RB SHP	: V				
Texture: F	G 🗸 C 🗸	B _ R [A					Texture	: F 🗸	G 🗸 C 🗸	B \square R	A]
RIP: M								RIP	: S				
STG: YF								STG	: SHR				
				W	ATE	R							
EMS:							R	eq #:					
Temp: 2				od: T3			C	ond.: 80			1	Method: S	3
pH: Flood Signs: scoured	books			od: P2 od: GE			Т	urb.: T	✓ M [¬ L □ C [¬ '	Method: G	E
1 1000 Signs. scouled	Daliks												
			<u> </u>	I O R F	HOL	OGY	01	B1	B2 B	D4 D	2 D3		
	ominant: C		bdom: G						V	33 D1 D	2 03		
D95: 35.0	D (cm): 27.00	N	Norph: CP		ISTURE								
Pattern: SI					INDICA	TORS	C1	C2		24 C5 S	1 S2	S3 S4	4 S5
Islands: AN Coupling: PC							✓	✓	✓				
Coupling: PC Confinement: OC													
FSZ:					В	ars:	N	SID	E V	DIAG N	MID √ S	SPAN	BR
				D 1 T 4			- >/						
N			нА	RITA	ıQl	JALIT							
Name Spawning Habitat	none - high cur	rent velocity	v large subs	trate		C	ommen	ts					
Spawning Habitat none - high current velocity, large substrate OverWinter Habitat none - no deep pools													
Rearing Habitat	poor - cascade	•	t, cold temp										
PHOTOS													
	c Lg	Dir							Commen	ts			
R: 113 F: 862 ST		U											
R: 113 F: 863 S1	טו	U											
R: 113 F: 864 S1	ΓD	D											

Reach # ILP Map # ILP # Site 2.1 517

	PHOTOS												
	Ph	oto		Foc Lg	Dir	Comments							
R:	113	F:	865	STD	NS	flood plain with bedload and carolly standing beside bank							
R:	113												
R:													
						COMMENTS							
	Section Comments												
	CHANNEL extensive evidence of spring flooding, very large flood plain with bedload. Step banks,. Bank scouring. Too cold to EF, shocked trib 300m us												

Reach # ILP Map # ILP # Site

	Project Name: Schaft Creek																	
	Project Name: Stream Name (gaz.): Project Watershed Code:	0-0000-	000-000)-000-00	0-000-00	0	F	Project C	ode:			17415						
						,	WAT	ERSI	HED									
	Gazetted Name: MESS C	PEEK								Loc	al Nam	a. MC2						
	Watershed Code: 630-000		0-000	00-0000	-0000-00	0-000-0	00-000-	-000-000		LOC	airiairi	e. IVIOZ						
	ILP Map#:			.P #:	0000 00		ap #: 10			D#: 50	034	Rea	ch #:	2	2.2	Site #: 59	98	
	Field UTM (Z.E.N):			N	1ethod:		•			Site Lg	1. 200		Metl	ethod: MS Access: H				
	GIS UTM (Z.E.N): 9.38406	7.6354975	5	IV	ieti iou.				Re	ef. Name			IVICII	7,00033.11				
	(=====,, =======																	
	Date: 2007	09/19	Т	ime: 08:	30	,	Agency:	C660	С	rew: N	MM CD		F	ish Crd?	: 🗸	Incomplet	e: 🔲	
							СН	ANN	EL									
	Mtd	width w	vidth	width	width	width	width	width	width	width	width	Avg	Ī		Gadie	nt % Mtd	Avg	
	Channel Width (m): GE	30.00 80	0.00	70.00	70.00	40.00	30.00	12.00				54.57	ı	Method I:	1.0	С	1.00	
	Wetted Width (m): GE		6.30	11.00	11.00	10.00	10.00	9.00				14.61	N	/lethod II:		С		
L	Pool Depth (m): GE	0.60	0.60	0.60	0.60	0.50	0.60	0.21				0.53] _N	lo Vis.Ch	. 🗆 .	Intermittent:	7	
Г	Wb Depth:			Avo	g: 0.00	N	/lethod:	GE	St	age: L	П М	.⊿ H [Dv	\equiv	Tribs.:	า๋	
Wb Depth: Avg: 0.00 Method: GE Stage: L M ✓ H Dw: L Tribs.: L COVER Total: NS														_				
		T 55		01/	1) /	1 cpc	3\4\4\ CI	OCUDE										
	Type: SWD Amount: T	LWD		B N	U S	DP D		OV T	IV CROWN CLOSURE T 1 1-20%									
	Loc: P/S/O:												N \square] A [м 🖂 ,	V \square		
											11(L)(IV	VLO.] · · 🗀		. 🗆		
	LWD: A		DI	ST: C														
	LB SHP: S									F	RB SHP): V						
	Texture: F	G 🗸 C		В	R \square A	· 🗌					Texture	: F 🗸	G 🔽	√ C □	В	R A		
	RIP: M										RIP	: G						
	STG: YF										STG	: SHR						
							W	ATE	R									
	EMS:						•••	A ! L		P.	eq #:							
	Temp: 3					Metho	od: T3				ond.: 21	0				Method: S3	3	
	pH:						od: P2									Method: GE		
	Flood Signs: side char	nnels, bar	3			Metho	od: GE			'	uib i	✓ IVI	□ -	С		Method. Gi	_	
						M	ORF	HOL	OGY									
							· • · · ·	• -		01	B1	B2	B3	D1 [D2 D3	3		
		ominant: F			Subdom						✓	V						
	D95: 0.01	D (cm):	0.01		Morph	: NS	[DISTURE										
	Pattern: IM							INDICA	IORS	C1	C2	C3	C4	C5 S	S1 S2	2 S3 S4	S5	
	Islands: O												Ш					
	Coupling: PC Confinement: OC																	
	FSZ:							В	ars:	N	SID	E	DIAG		MID	SPAN	BR	
	. 92.																	
						HAI	BITA	T QL	JALII	ГΥ								
	Name								С	omment	ts							
	Spawning Habitat	poor																
	OverWinter Habitat	good - de					b	114/5	1 0/4/5									
	Rearing Habitat	good - de	ep po	ois, side	cnanne	ıs, shall		, LWD a										
	0 1						CUN	ıı ıvı 🗅 N										
	Section									omment	ts							
	SITE CARD	helicopte	r picke	ed us up	early be	tore finis	shed. N	o picture	s, no EF									

Reach # ILP Map # ILP # Site

PROJECT														
Project Name:	Schaft Cree	k												
Stream Name (gaz.):									F	Project Co	ode:	174	15	
Project Watershed Code:	630-000000	-00000-0	0000-000	00-0000-	000-000)-000-00	0-000-00	00						
				,	WAT	ERS	HED							
Gazetted Name: MESS C	REEK							Loc	cal Name	e: MC5				
Watershed Code: 630-000		0000-0000	0-0000-00	0-000-0	00-000-	000-000)							
ILP Map#:		ILP #:		NID Ma	ap #: 10	4G.066	NI	ID #: 50	0025	Read	:h #: 2	2.5	Site #: 512	
Field UTM (Z.E.N):		N	Method:					Site Lo	g: 205		Method: GE	Ac	cess: H	
GIS UTM (Z.E.N): 9.38368	7.6394880						Re	ef. Name	e:					
Date: 2007	09/17	Time: 08	:30	,	Agency:	C660	C	rew: I	MM RS		Fish Crd?:	✓	Incomplete:	
					СН	ANN	EL							
Mtd	width width	width	width	width	width	width	width	width	width	Avg		Gadient %	Mtd Av	vg
Channel Width (m): GE	60.00 70.00									65.00	Method I:	2.0	C 2.0	00
Wetted Width (m): GE	40.00 45.00									42.50	Method II:		С	
Pool Depth (m): GE	1.00 1.00									1.00	No Vis.Ch.	: Inter	mittent:	
Wb Depth: 2.5	3.0	Av	g: 2.75	N	/lethod:	GE	St	age: L	П М	у н г	Dw	=	Tribs.:	
COVER	To	tal: NS									_			
COVER Total: NS Type: SWD LWD B U DP OV IV CROWN CLOSURE														
Amount: T	Т	S	N	N	N D N 1 1-20%									
Loc: P/S/O:		<	\		INSTREAM VEG: N Z A M V									
LWD: F		DIST: C						_'						
LB SHP: V									RB SHP	· \/				
Texture: F	G \square C \square	ВП	R \square A	\					_		G C C	B ┌ R	□ A □	
RIP: M		- П							RIF					
STG: YF									STG	:YF				
					W	ATE	R							
EMS:								R	eq #:					
Temp: 5				Metho	od: T3			С	ond.: 12	0		N	lethod: S3	
pH:					od: P2			Т	urb.: T	✓ M		N	lethod: GE	
Flood Signs: scoured	banks			Metho	od: GE									
				M	ORF	HOL	. O G Y							
Bed Material: D	ominant: C		Subdom	n: F				01	B1		33 D1 D			
D95: 28.0	D (cm): 18.0	0	Morph	n: RP		DISTURI	BANCE		✓	✓ [
Pattern: IM						INDICA	TORS	C1	C2	C3 (C4 C5 S	1 S2	S3 S4	S5
Islands: NS								✓	✓					
Coupling: PC														
Confinement: OC FSZ: ☐						В	ars:	N	SID	E	DIAG N	MID∏ SF	PAN E	BR□
1 02.														
				HAI	BITA	TQI	JALI1							
Name	f-:-	-1					С	commen	ts					
OverWinter Habitat fair - large pool across main channel Spawning Habitat poor														
Rearing Habitat	good -													
					PΗ	ОТО	S							
Photo Foo	: Lg		Dir							Commer	its			
R: 112 F: 835 S1			D		channe									
R: 112 F: 836 ST			D	side	channe	ıl								
R: 112 F: 837 S1	ט		D											

Reach # ILP Map # ILP # Site 2.5 512

	PHOTOS											
Photo	Foc Lg	Dir	Comments									
R: 112 F: 838	STD	U										
R: 112 F: 839	STD											
	COMMENTS											
Section			Comments									
SITE CARD	SITE CARD main channel too fast and deep to measure, missed approx 10 fish											
CHANNEL	CHANNEL big island between main and side channel. Extensive deposition of bedload and scouring of banks											

Reach # ILP Map #

1.1

ILP#

Site

					PR	OJE	СТ							
Project Name	e: Schaft Cre	eek												
Stream Name (gaz. Project Watershed Code	'		000-000	0-0000-	.000-000	-000-00	0-000-00	10	F	Project Co	de:		17415	
1 Tojoot Waterened Coat	J. 000 0000	00 00000 00	7000 000	70 0000	000 000	000 00	0 000 00	,,,						
					WAT	ERSI	HED							
Gazetted Name: SCHAI		00000 0000	0000 00	00 000 0	000 000	000 000		Lo	cal Name	e: SC1				
Watershed Code: 630-34 ILP Map#:	4000-00000-	ILP #:	-0000-00		ap #: 104			ID #: 30	0006	Reach	า #:	1.1	Site #: 3	303
Field UTM (Z.E.N):		N	1ethod:					Site L	g: 200		Method: H	С	Access: H	
GIS UTM (Z.E.N): 9.3760	00.6356760						Re	ef. Name	-					
Date: 200	7/06/14	Time: 08:	00	,	Agency:	C660	C	Crew:	KM TS		Fish Cro	d?: ✓	Incomple	ete:
					СН	ANN	EL							
Mtd	width wid	dth width	width	width	width	width	width	width	width	Avg		Gadie	ent % Mtd	Avg
Channel Width (m): GE	180.00 160									170.00	Method		С	4.00
Wetted Width (m): GE Pool Depth (m): GE	6.00 20.	.00								13.00 0.00	Method	II:	С]
											No Vis.0	\equiv	Intermittent:	
Wb Depth: 2.0	2.5		j: 2.25	N	/lethod:	GE	St	age: L	M	✓ H _] '	Dw: 📙	Tribs.:	
COVER		Total: T						.						
Type: SWE	LWD	B D	U N	DF N		OV N	IV N	CR 0	OWN CL	OSURE 0%				
Loc: P/S/O:		+						-			N 🗸 A 🗆	П М П	V \square	
LWD: N		DIST: NA						7						
LB SHP: V		DIST. NA							RB SHP	. \/				
Texture: F	G 🕡 C i	₽В□	R 🖂 A								G 🕡 C	у В П	R A	1
RIP: M		<u> </u>							RIP			<u> </u>		J
STG: MF									STG	: MF				
					W	ATE	R							
EMS:								R	leq #:					
Temp: 3					od: T3			C	ond.: 70				Method: S	3
pH: 7.3 Flood Signs:					od: P2 od: GE			-	Turb.: T	✓ M [_ L (C \square	Method: G	SE.
- 1 1000 Gigits.							0.0.1/							
				IV	IORP	HOL	OGY	01	B1	B2 B	3 D1	D2 D	12	
	Dominant: C	0.00	Subdom Morph											
D95: 120.0	D (cm): 60	5.00	worpi	i. CP		ISTURE INDICA		C1	C2	C3 C	4 05	C4 C		4 SE
Pattern: IR Islands: N								✓	C2	<u>√</u> [4 C5	S1 S	2 S3 S4	
Coupling: CO								V		<u> </u>				
Confinement: OC						В	ars:	N	SID	F r	DIAG□	MID	SPAN	BR✔
FSZ:							aro.] 0.0		/#.C		017.114	5 1.(V)
				HA	BITA	ΤQU	JALI.	ГΥ						
Name							C	Commer	nts					
OverWinter Habitat Spawning Habitat	poor													
Rearing Habitat	poor													
					CON	IMEN	ITS							
Section								commer						
CHANNEL	highly unst	able reach v	vith exter	nsive ele	evated ba	ars, dow	ncutting,	bedloa	d movem	nent				

Reach # ILP

ILP Map #

ILP#

Site

1.3

							PR	OJE	СТ								
Projec Stream Nam Project Watersho		: MESS	S CREE	K	0000-000	00-0000-	-000-00	0-000-00	00-000-00	00	ſ	Project Co	ode:		17415		
							WAT	ERS	HED								
Gazetted Name:	SCHAF	T CREE	· K				,	- 110		Loc	cal Nam	e: SC3					
Watershed Code: ILP Map#: Field UTM (Z.E.N):	630-344	1000-000	000-000 I	LP #:	0-0000-00 Method:)-000-000)4G.045	N	ID #: 30 Site Lo)017 g: 200	Read	ch #: Method: I	1.3 HC	Acce	Site #: 3 ss: H	808
GIS UTM (Z.E.N):	9.37576	6.63667	787						Re	ef. Name	9:						
Dat	e: 2007	/06/15		Time: 07	:55		Agency	r: C660	C	Crew: I	KM TS		Fish C	rd?: ✓] Ir	ncomple	te:
							CH	ANN	EL								
	Mtd	width	width	width	width	width	width	width	width	width	width	Avg			ient %	Mtd	Avg
Channel Width (m):		160.00	160.00									167.50	Metho		1.5	С	1.25
Wetted Width (m): Pool Depth (m):	GE GE	25.00	35.00	45.00	40.00							36.25 0.00	Metho	a II:		С	j
Tool Deptil (III).	OL				ļ							0.00	No Vis	.Ch.:	Interm	ittent:	
Wb Depth:	1.3	1.5		Ave	g: 1.40	N	Method:	GE	St	tage: L	M	✓ H		Dw:	٦	ribs.:	
COVER			Tot	al: T													
Type:	SWD	LW	/D	В	U	DF	·	OV	IV	CR	OWN C	LOSURE					
Amount:	S)	N	Т	N		N	N	0		0%					
Loc: P/S/O:	V V				V V	' 	V	' ' ' '	V V V	INS	STREAM	1 VEG:	N 🗸 A [М	V		
LWD:	N		_	IST: NA													
				/IO1.IVA							DD 01.15						
LB SHP:		G \square	c —	D —	p — ^						RB SHF		G \square C		¬ p —		1
		G 🔽	с <u> </u>	ь	R _ A	, П							G 🗸 C] K [_ ^ _	
RIP: STG:											RIF STG	2: C 3: MF					
							v	VATE	D								
EMS:							V	VAIC	ĸ		a a 4.						
Temp:	3					Meth	od: T3	l			eq #: ond.: 12	20			Met	hod: S	3
pH:							od: P2							. —			
Flood Signs:						Meth	od: GE			ı	urb.: I	✓ M		C	Met	hod: G	E
						N	I O R	PHOI	OGY								
Bed Material: D95:	_	ominan	t: G): 9.00		Subdom	n: F				01	B1		B3 D1		D3		
		D (CIII)	1. 9.00		Molbi	I. IXF		DISTUR									
Pattern: Islands:								IIVDIO	VI OIVO	C1	C2		C4 C5	S1	S2 S	3 S4	\$ \$5
Coupling:												✓ [
Confinement:																	
FSZ:								E	Bars:	N	SIE	E	DIAG	MID] SPA	'N	BR✓
						ЦΛ	DIT /	N.T. O.	U A L I .	TV							
		1				пА	D I I #	4 I W									
Name Spawning Habitat		foir o	ood are	vol. com	e holding	orooo				Commen	its						
OverWinter Habita			low cov		e noiding	aicas											
Rearing Habitat					me slowe	r areas											
							P	нотс	S								
Photo	Foo	c Lg	T	0	Dir	T						Commer	nts				
R: 100 F: 3314	SI				U												
R: 100 F: 3315		ΓD			Χ												
R: 100 F: 3316	ST	ΓD			D												

ILP Map # Reach #

ILP#

Site 320

1.5

							Р	ROJE	СТ								
Projec	ct Name	: Scha	ft Creel	(
Stream Nam											1	Project C	ode:		17415		
Project Watershe	ed Code	: 630-0	000000	-00000-0	0000-000	00-0000-	-000-0	000-000-0	000-000-00	00							
							W A	TERS	SHED								
Gazetted Name:	SCHAF	T CREE								Loc	cal Nam	e: SC5					
Watershed Code:				000-0000	0-0000-00	00-000-0	00-00	00-000-00	00	Lov	carryani	c. 000					
ILP Map#:				ILP #:				104G.066		ID #: 30	0040	Rea	ch #:	1.5	5	Site #: 3	20
Field UTM (Z.E.N):				N	Лethod:					Site L	g: 200		Method: GE		Acces	s: H	
GIS UTM (Z.E.N):	9.38417	0.6392	573						Re	ef. Name	e:						
Date	e: 2007	/06/17		Time: 14	:50		Agen	cy: C660	C	Crew:	KM TS		Fish Crd?	· 🗸	In	complet	te:
								HANI						- (-)			
Г	Mtd	width	width	width	width	width	wid			width	width	Avg	1	Gadie	ent %	Mtd	Avg
Channel Width (m):			180.00			Width	Wid	widt	Widai	width	Width	162.50	Method I	<u>.</u>	2.5	С	2.25
Wetted Width (m):	GE	80.00	100.00	90.00	110.00							95.00	Method II:			С	,
Pool Depth (m):	GE											0.00	No Via Ch		loto rocit	tont: [· ¬
Wb Depth:	1.5	1.8		Ave	g: 1.65	N	Леtho	d: GE	Si	tage: L	П М	∨ H [No Vis.Ch □ D\	N:	Intermit	ribs.:	
COVER			To	⊒ ····· tal: T	g						Ш	V					
	SWD	LV		В	U	DF	, T	OV	IV	1 CB		LOSURE	:				
Type: Amount:	S	5		T	N	N	_	D	N	0		0%	-				
Loc: P/S/O:	V V				V V	_	_	V V V	VVV	INS	STREAM	1 VEG:	N 🗸 A 🗌	М	V \square		
LWD:			-	DIST: E	عصت												
			L	JIST.E							DD 0115	,					
LB SHP:		G 🗖	c —	B —	P — 4	. —					RB SHF			B C	. p —	Δ	
Texture:		• V	о _П		"	, П							G 🗸 C 🔽		''` Ш	′`	
RIP: STG:												P: M B: MF					
								= -									
F140								WATE	= K		. ,,						
EMS:	7					Meth	nd· T	гз			leq #: Cond.: 90	1			Meth	nod: S	3
pH:						Meth					Furb.: T						
Flood Signs: I	broken t	rees				Meth	od: Gl	E			Turb.: I	□ IVI	▼ r □ c		ivieti	nod: G	E
						N	1 O F	RPHO	LOGY								
Bed Material:	D	ominan	t· G		Subdom	n: C				O1	B1	B2	B3 D1 [D2 D	3		
D95:): 15.00)	Morph			DISTUI	RBANCE								
Pattern:		•	,		•				CATORS	C1	C2	СЗ	C4 C5 S	S1 S:	 2 S3	8 S4	S5
Islands:																	
Coupling: I	DC														_ _	J C	
Confinement: I									Bars:	N	ı sır	DΕ	DIAG	MID	SPAI	NI I	BR✔
FSZ:[Dais.	"_	J	<u></u>	DI/\0		01 711	`	DI V
						НΑ	ВІТ	AT Q	UALI	ΤΥ							
Name		Τ							(Commen	nts						
Spawning Habitat	İ	good -	lots of	good gra	ıvel												
OverWinter Habita	ıt	!		p pools													
Rearing Habitat		tair - s	ome go	od habita	at in side	/back ch		ls P H O T	O S								
Photo	Ea	o La	ı	-)ir			11 5 1				Commo	nte				
R: 100 F: 3384		c Lg TD	+		Dir D	-						Comme	าแร				
R: 100 F: 3385		TD			U												
R: 100 F: 3386	S	TD			U												

Reach # ILP Map # ILP # Site

1.5

320	

	PHOTOS												
	Ph	oto		Foc Lg	Dir	Comments							
R:	100	F:	3387	STD	X	to lb							
R:	100	F:	3388	STD	X	to lb tree scars							

Reach # ILP Map #

ILP#

Site

1.6

					PR	OJE	СТ							
Project Name	: Schaft Cr	reek												
Stream Name (gaz.)									F	Project Co	ode:		17415	
Project Watershed Code			000-000	00-0000-	-000-000	0-000-00	0-000-00	00		•				
					WAT	ERS	HED							
Gazetted Name: SCHAF								Loc	cal Nam	e: SC6				
Watershed Code: 630-344 ILP Map#:	1000-00000	-00000-0000 ILP #:)-0000-00		000-000- ap #: 104			ID#: 30	0015	Read	ah #•	1.6	Site #: 3	207
				INID IVI	ар #. 104	40.033	IN			Real		1.0		507
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.37812	3 6361617		/lethod:				D.	Site Lo ef. Name			Method: HC		Access: H	
0.0 0 1111 (2.2.14). 0.07012	.0.0001017							on realine	,					
Date: 2007	/06/14	Time: 15	:25	4	Agency:	C660	C	crew: I	KM TS		Fish Crd?	': ✓	Incomple	ete:
					СН	ANN	EL							
Mtd		dth width	width	width	width	width	width	width	width	Avg		Gadie		Avg
` '		0.00 200.00								176.67	Method I		C	1.00
Wetted Width (m): GE Pool Depth (m): GE	90.00 80	0.00 100.00								90.00	Method II		C	j
			ı			I		<u> </u>	1		No Vis.Ch	n.: 🔲 - I	Intermittent:	
Wb Depth: 1.0		Av	g: 1.00	N	Method:	GE	St	age: L	M	✓ H [D	w:	Tribs.:	
COVER		Total: T												
Type: SWD	LWD	В	U	DF)	OV	IV	CR	OWN C	LOSURE				
Amount: T	D	N	N	N		T	T	0		0%				
Loc: P/S/O:			/ /		V	~ ~	V V V	INS	STREAM	I VEG:	N \square A \square	М 🔲 '	V 🗸	
LWD: F		DIST: E												
LB SHP: S									RB SHF): S				
Texture: F ✓	G 🗸 C	□ B □	R 🔲 A	A 🗌					Texture	: F 🗸	G 🗸 C 🗆	В	R A]
RIP: M									RIF	P: M				
STG: MF									STO	: MF				
					W	ATE	R							
EMS:								R	eq #:					
Temp: 6					od: T3			С	ond.: 11	0			Method: S	3
pH: 7.5					od: P2 od: GE			T	urb.: T	✓ M	\Box L \Box C		Method: G	SE.
Flood Signs:														
				N	1 O R F	HOL	. O G Y							
Bed Material: D	ominant: G		Subdon	n: F				01	B1			D2 D3	3	
D95: 10.0	D (cm): 10	0.00	Morph	n: RP		DISTURI								
Pattern: IR						INDICA	TORS	C1	C2	C3 (C4 C5 S	S1 S2	2 S3 S	4 S5
Islands: O								✓						
Coupling: DC Confinement: OC														
FSZ:						В	ars:	N	SIE	E	DIAG	MID	SPAN	BR✓
				HA	BITA	TQU	JALI.							
Name							C	commen	ts					
Spawning Habitat OverWinter Habitat		gravel and to		no noidii	ng areas	3								
Rearing Habitat	ł' '	pools or cove												
					WII	LDLI	FE							
Group							Observa	tions						
MAM moose trac	cks				C O 1	1 N/ E N	I T C							
0					CON	MEN		`aw:	40					
Section	I						C	Commen	เร					

Reach # ILP Map # ILP # Site

1.6 307

1.0

CHANNEL very wide, extensively braided section. No cover, all LWD sitting on bars.

Reach # ILP Map # ILP #

Site

								PR	OJE	ECT								
	Pro Stream N Project Water		.): MES	S CREE	K	000-000	0-0000-	000-000)-000-C	000-000-00	00	F	Project Co	ode:			17415	
								WAT	ERS	SHED								
	Gazetted Nan	ne: SCHA	FT CRE	ΞK							Lo	ocal Nam	e: SC7					
	Watershed Coo		14000-00		00-0000 LP #:	-0000-00		00-000- ap #: 10			ID#: 3	30032	Reac	:h #:	1.	.7	Site #	: 316
	Field UTM (Z.E.I	•	527.6384	002	N	lethod:				R	Site L ef. Nam	_g: 100 ne:		Metho	od: HC		Access: H	
	Г	Date: 200	07/06/16	7	Γime: 14:	20	,	Agency:	C660	(Crew:	KM TS		Fis	sh Crd?:	✓	Incomp	olete:
								СН	ANI	NEL								
		Mtd	width	width	width	width	width	width	widtl	h width	width	width	Avg			Gadie	nt % Mtc	Avg
	Channel Width (m	-	39.00	42.00	45.00	44.00	50.00						44.00	М	ethod I:	0.5	0.5 C	
	Wetted Width (m	,	35.00	40.00	43.00	44.00	50.00						42.40	Me	ethod II:		C	
L	Pool Depth (m	n): GE											0.00	No	Vis.Ch.:	: 🔲	Intermittent:	
	Wb Dept	h: 1.9	1.8		Avg	j: 1.85	N	/lethod:	GE	Si	tage: L	M	□ H		Dw	: 🔲	Tribs.:	
	COVE	R		Tota	al: M													
	Тур	e: SWI	D LV	VD	В	U	DP)	OV	IV	CF	ROWN CI	OSURE					
	Amou)	T	Т	N		S	N	_	0	0%					
	Loc: P/S/	O: V			'	V V	' '	V	V V	V V	IN	STREAM	I VEG:	N 🗸	Α 🔲 Ι	М	V 🗌	
	LW	D: F		D	IST: E													
	LB SH	IP: S										RB SHP	: V					
	Texture: F G C B R A Texture: F G C B R A																	
	RIP: M																	
	STG: MF STG: MF																	
								W	ATE	ER								
	EM	S:									ı	Req#:						
	Tem	p: 7					Metho	od: T3			(Cond.: 90					Method:	S3
	•	H: 7.4						od: P2				Turb.: T	✓ M	¬ L	□ Сг	7	Method:	GE
	Flood Sign	s: rafted o	debris				Metho	od: GE					• (
							N	ORF	НО	LOGY								
	Bed Materia	al:	Dominar	ıt: F		Subdom	n: G				01	B1		33 [D1 D2	2 D3	3	
	D9	5: 40.0	D (cm): 4.00		Morph	n: LC	[DISTUI	RBANCE			✓					
	Patter	n: SI								CATORS	C1	C2	C3 C	C4 (C5 S	1 S2	2 S3	S4 S5
	Island	ls: N																
	•	Coupling: DC																
	Confinemer									Bars:	N	□ SID	E 🗸	DIAG	¬ м	1ID	SPAN	BR□
	гъ	Z:																
							HA	BITA	T Q	UALI								
	Name	·	f-:			lia alaun				(Comme	nts						
	Spawning Hab OverWinter Hab			no deep	od grave	ı ın slowe	er parts r	naybe										
	Rearing Habit				od habita	it along b	onks, cov	/er										
	<u> </u>			3-		<u> </u>	,		LDL	IFE								
	Group									Observa	ations							
	MAM	porcupine	e scratch	ings														

Reach # ILP Map #

2.1

ILP#

Site 505

										PΕ	ROJE	СТ							
			Pro	oject Nam	ne: Scha	ft Creek													
		Str		ame (gaz										ı	Project Co	ode:		17415	
	Pr	oject	Water	shed Cod	le: 630-0	00000-0	0-0000	0000-000	0-0000-	000-00	00-000-00	00-000-00	00						
	_									W A 1	T E R S	HED							
				ne: SCHA			00 000	0000 00	000	00 000	2 000 000	,	Loc	cal Nam	e: SC1				
	vva		ied Cod LP Mar	de: 630-3 h#:	44000-00		00-0000 LP #:)-UUUU-UU			04G.035		ID #: 50	0017	Read	·h #·	2.1	Site #:	505
	F:-1-1							A = 41= = =1.	I VIID IVII	др <i>п</i> . т	0-0.000	14			rtoac		۷. ۱		505
			l (Z.E.I l (Z.E.I	N): N): 9.375	708 6358	570	ľ	/lethod:				P.	Site Lo ef. Name	-		Method: GE		Access: H	
	Olo	0110	(2.2.	11). 5.57 5	00.0000	510						110	Ji. I Vallic	.			_		
				Date: 200	07/09/15	٦	Time: 08	:45		Agency	y: C660	C	crew: I	MM RS		Fish Crd?): ✓	Incompl	ete:
										CH	A N N	EL							
_				Mtd	width	width	width	width	width	width	width	width	width	width	Avg		Gadie		Avg
-			idth (m			100.00	100.00		100.00						100.00	Method I	: 4.0	С	4.00
lŀ			idth (m		15.00 0.80	17.00 0.80	20.00	15.00 0.80	15.00 0.80						16.40 0.80	Method II		С	
L		, o. D.	opui (ii	1). OL	0.00	0.00	0.00	0.00	0.00	<u> </u>					0.00	No Vis.Ch	n.: 🗌	Intermittent:	
		W	b Dept	h: 4.0	4.0	8.0	Av	g: 5.33	N	/lethod	: GE	St	age: L	M	✓ H [D	w: 🗌	Tribs.:	
			COVE	R		Tota	al: NS												
	Г		Тур	e: SW	D LV	VD	В	U	DF	·	OV	IV	CR	OWN C	LOSURE				
			Amou	nt: N	ا	١	D	N	N		N	N	0		0%				
		Lo	c: P/S/	O:									INS	STREAM	1 VEG:	N 🗸 A 🗌	М	V	
			LW	'D: N		D	IST: NA						_						
			LB SF	IP· \/										RB SHF	D· \/				
				ıre: F	¬ G ┌	С	В	R □ A								G C C	В	R \square A \square	7
				IP: N											□ P: N				_
				G:										STG					
										V	VATE	R							
			EM	S·						-	.,		R	eq #:					
			Tem	-					Meth	od: T3	3			ond.: 40)			Method:	S3
				H:					Meth	od: P2	2		Т	Γurb.: Τ	- M	□ L □ C		Method: (GE
		Floo	od Sign	s: bedloa	d deposit	S			Meth	od: GE					V				
									N	1 O R	PHOL	OGY							
		Red	Materia	al·	Dominar	t· B		Subdom	·C				01	B1	B2 E	33 D1 I	D2 D:	3	
		Doa		5: 40.0): 32.00		Morph			DISTUR	DANCE		✓	V				
			Patter		,			·			INDICA		C1	C2		C4 C5 S	S1 S:	 2 S3 S	34 S5
				ds: AN									V	V		✓			
		(Couplin	ıg: PC										·	ш, і	.			
		Conf	inemer									Bars:	NI	eir		DIAC	MID	CDANG	PP □
			FS	Z:								oais.	N	J	DE	DIAG		SPAN	BR
									ΗА	BIT	AT Q	UALI	ГΥ						
		Na	ame		1							C	Commen	nts					
	Spa		ng Hab	itat	none														
			ter Hab		none														
	Re	earing	g Habit	at	none -	high gra	adient, h	igh veloc	ity, very										
										Р	нотс	5							
	Ph		700		oc Lg	_		Dir	4						Commer	nts			
R:	110 110	F:	796 798		STD STD			D U	-										
R:	110	F:	799	STD U bank of previous channel															

Reach # ILP Map # ILP # Site 2.1 505

							PHOTOS		
	Ph	oto		Foo	: Lg	Dir	Comments		
R:	110	F:	800	S1	TD .	D	rb at highest flows		
R:	110	F:	801	S1	D	D			
R:	110	F:	802	S1	D	U			
R:	110	F:	803	ST	D	U			
R:	110	F:	804	ST	D	D	rb at highest flows		
							COMMENTS		
	Section Comments								
		SITE	CARD		water too s	wift to measure dep	th in thalweg		
	CHANNEL evidence of very large runoff scour, large boulders in empty channels, several channel banks. High flows for season. Very cold.								

Reach # ILP Map # ILP # Site

					PR	OJE	C T						
Project Name	: Schaft Creek	ζ											
Stream Name (gaz.)									F	Project Co	ode:	17415	
Project Watershed Code	: 630-000000-	-00000-000	000-000	0-0000-0	000-000	-000-000	0-000-00	0					
				\	NAT	ERSI	HED						
Gazetted Name: SCHAF		200 0000 0	2000 000	2 200 00	20,000,0	200 000		Loc	cal Name	e: SC3			
Watershed Code: 630-344 ILP Map#:		JUU-UUUU-U ILP #:		NID Ma			NI	D#: 50	1008	Read	-h#· 2	3 Site #: 50	17
·				INID IVIA	ρ π . 104	0.040	INI			Neac			,,
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.38573	88 6366769	ivie	ethod:				Re	Site Lo f. Name			Method: GE	Access: H	
GIO OTIVI (2.E.IV). 3.30376	0.0000700						110	i. i vaiiic					
Date: 2007	7/09/15	Time: 12:00	0	Α	gency:	C660	C	rew: 1	MM RS		Fish Crd?:	✓ Incomplete	e: 🔲
					СН	ANN	EL						
Mtd	width width		width	width	width	width	width	width	width	Avg		Gadient % Mtd	Avg
	50.00 30.00	30.00								36.67	Method I:	1.2 C	1.20
Wetted Width (m): GE Pool Depth (m): GE	80.00 100.00 1.20 1.20	1.20								93.33	Method II:	С	
1 doi Deptii (III).	1.20	1.20	ı						<u> </u>	1.20	No Vis.Ch.	: Intermittent:]
Wb Depth: 2.0		Avg:	2.00	M	lethod:	GE	St	age: L	M	✓ H [Dw	r: Tribs.:]
COVER	To	tal: NS											
Type: SWD	LWD	В	U	DP		OV	IV	CRO	OWN CL	OSURE			
Amount: S	Т	N	T	N		D	N	1	1	I-20%			
Loc: P/S/O:								INS	TREAM	VEG:	N 🗸 A 🗌	M D V D	
LWD: NS	[DIST: NS						=					
LB SHP: U									RB SHP	· 11			
Texture: F	G , C ,	В □ В	ПА								G 🔽 C 🔽	B _ R _ A _	
RIP: M				Ш					RIP				
STG: MF									STG				
					W	ATE	R						
EMS:					•••	<u> </u>		R	eq #:				
Temp: 6				Metho	d: T3				ond.: 60			Method: S3	
pH:				Metho	d: P2			т	urb · T	M I		Method: GE	:
Flood Signs: scar ma	rks			Metho	d: GE			•		V			-
				М	ORP	HOL	OGY						
Bed Material: D	ominant: C	S	Subdom:	G				O1	B1	B2 E	33 D1 D	2 D3	
D95: 14.0	D (cm): 10.00		Morph:		_	IOTUDE	ANOF		V	V			
Pattern: IR	(- /					ISTURE INDICA		C1	C2		C4 C5 S		S5
Islands: AN								✓	✓		V 03 0	1 02 00 04	
Coupling: PC											<u>• </u>		
Confinement: OC						_			OID		DIA 0	41D ODAN -	55
FSZ:						В	ars:	N	SID	E	DIAG N	MID SPAN	BR✓
				HAE	BITA	T QL	JALIT	ГΥ					
Name	T							ommen	ts				
Spawning Habitat	none							5					
OverWinter Habitat	none												
Rearing Habitat	nonr - high flo	w, high sec	d, no po	ols									
					PH	ото	S						
	c Lg	Dir								Commen	nts		
	TD TD	NS		dry c	hannel								
	TD	U		-									
1 1 0111													

Reach # ILP Map #

ILP#

Site

			PHOTOS							
Photo	Photo Foc Lg Dir		Comments							
R: 110 F: 815	STD	NS	LB							

Reach # ILP Map # ILP # Site

Project Name: Schaft Creek										
Stream Name (gaz.): MESS CREEK Project Code: 17415										
Project Watershed Code: 630-000000-00000-00000-0000-0000-000-000										
WATERSHED										
Gazetted Name: SCHAFT CREEK Local Name: SC4										
Watershed Code: 630-344000-00000-00000-0000-0000-000-000-										
ILP Map#: ILP #: NID Map #: 104G.045 NID #: 50013 Reach #: 2.4 Site #: 510										
Field UTM (Z.E.N): Method: Site Lg: 200 Method: GE Access: H										
GIS UTM (Z.E.N): 9.379430.6373500 Ref. Name:										
Date: 2007/09/14 Time: 11:05 Agency: C660 Crew: MM RS Fish Crd?: ✓ Incomplete:										
CHANNEL										
Mtd width Avg Gadient % Mtd Avg										
Channel Width (m): GE 220.00 200.00 200.00 200.00 200.00 200.00 Method I: 1.0 C 1.00										
Wetted Width (m): GE 60.00 50.00 50.00 53.33 Method II: C										
Pool Depth (m): GE 0.80 0.80 0.80 0.80 0.80 No Vis.Ch.: Intermittent:										
No Vis.Ch.:										
COVER Total: T										
Type: SWD LWD B U DP OV IV CROWN CLOSURE										
Amount: D T N N S N N 0 0%										
Loc: P/S/O: VV VV VV VV VV INSTREAM VEG: N V A M V										
LWD: F DIST: C										
LB SHP: S RB SHP: V Teyture: F G G G C G B G R G A G Teyture: F G G G C G B G R G A G										
Texture: F ✓ G C B R A Texture: F ✓ G ✓ C B R A										
RIP: S RIP: NS STG: PS STG: INIT										
WATER										
WATER										
EMS: Req #:										
EMS: Req #: Temp: 4 Method: T3 Cond.: 60 Method: S3										
EMS: Req #: Temp: 4 Method: T3 Cond.: 60 Method: S3										
EMS: Req #: Temp: 4 Method: T3 Cond.: 60 Method: S3 pH: Method: P2 Turb.: T										
EMS: Req #: Temp: 4 Method: T3 Cond.: 60 Method: S3 pH: Method: P2 Turb.: T										
EMS:										
EMS: Temp: 4										
EMS: Temp: 4										
EMS: Temp: 4										
EMS: Temp: 4										
EMS: Temp: 4										
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EMS: Temp: 4										
EMS: Temp: 4										
EMS: Temp: 4										
EMS: Temp: 4										
EMS: Temp: 4										
EMS:										
EMS: Temp: 4										

Reach # ILP Map # ILP # Site 2.4 510

PHOTOS										
	Photo			Foc Lg		Dir	Comments			
R: ′	R: 111 F: 829 STD)	U	2nd channel				
R: ′	111	F:	830	STI)	NS	side channel where all RB found			
	COMMENTS									
	Section						Comments			
	SITE CARD				depth and width estimated due to large channel with high flows.					
	CHANNEL				all RB caught in side channels with swd, lwd, fines dominant in side channels.					

Reach # ILP Map # ILP # Site

				PROJE	СТ				
Project Name:	Schaft Creek								
Stream Name (gaz.):							Project	Code:	17415
Project Watershed Code	630-000000-000	000-00000-000	0-0000-00	0-000-000-00	00-000-00	00			
			W	ATERS	HED				
Gazetted Name: SCHAF	T CREEK					Loc	cal Name: SC	 5	
Watershed Code: 630-344	000-00000-00000	0-0000-0000-00	0-000-000	-000-000-000)				
ILP Map#:	ILP	P #:	NID Map	#: 104G.066	N	ID #: 50	0027 Re	each #: 2	.5 Site #: 513
Field UTM (Z.E.N):		Method:				Site Lo	_	Method: MS	Access: H
GIS UTM (Z.E.N): 9.38427	6.6392617				Re	ef. Name	9:		
Date: 2007	/09/17 Tim	ne: 11:55	Age	ency: C660	C	Crew: 1	MM CD	Fish Crd?:	✓ Incomplete:
				CHANN	EL				
Mtd	width width	width width	width w	vidth width	width	width	width Avg		Gadient % Mtd Avg
` ' '		260.00					263.3		2.0 C 2.00
Wetted Width (m): GE Pool Depth (m): GE		80.00 0.70					80.00 0.73	_	С
T dor Bopan (m).	0.70	0.70	<u> </u>				0.70	No Vis.Ch.	: Intermittent:
Wb Depth: 2.0	2.5 1.8	Avg: 2.10	Met	hod: GE	St	age: L	M ✓ H	Dw	: Tribs.:
COVER	Total:	NS							
Type: SWD		B U	DP	OV	IV	4	OWN CLOSUF	RE	
Amount: S	+	S T	S	D	N	1			
Loc: P/S/O:			V		V V	INS	STREAM VEG:	N 🗸 A 🗌 I	M [] V []
LWD: A	DIS	T: C							
LB SHP: V						1	RB SHP: V		
Texture: F	G ✓ C □ B	B R A					Texture: F	√ G √ C □	B R A
RIP: NS							RIP: NS		
STG: YF							STG: YF		
				WATE	R				
EMS:							eq #:		
Temp: 4			Method:			C	Method: S3		
pH: Flood Signs: deposite	d hedload			Method: P2 Method: GE			urb.: T 🔲 l	M 🔼 L 🗌 C	Method: GE
- Tioda dignor dopodilo	a 2001000				0.0 1/				
				RPHOL	- O G Y	01	B1 B2	B3 D1 D:	2 D3
	ominant: C	Subdom					V V		
D95: 25.0	D (cm): 14.00	Morph	: RP	DISTUR		C1			
Pattern: NS Islands: AN			INDICA				C2 C3	C4 C5 S	1 S2 S3 S4 S5
Coupling: DC									
Confinement: OC									
FSZ:				Е	Bars:	N	SIDE	DIAG N	MID♥ SPAN BR
			HARI	ITAT QI	UAII	ГΥ			
Name	I		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			commen	ts		
Spawning Habitat	ibly better	in regular flov		Johnnen					
OverWinter Habitat	good - some dee								
Rearing Habitat									
	good doop pool			B 11 6 = 1					
-				РНОТО	S				
	: Lg	Dir	-: !				Comm	nents	
R: 112 F: 840 S1	Lg D	D		nannel pool rit			Comm	nents	
	C Lg			nannel pool rit nannel riffle			Comm	nents	

Reach # ILP Map # ILP #

Site

513

	PHOTOS									
	Photo			Foo	Lg	Dir	Comments			
R:	112	F:	843	STD		D	2nd channel			
R:	112	F:	844	STD		X	both channels			
	COMMENTS									
	Section						Comments			
	SITE CARD could not measure depth and width						vidth of main channel, too much current.			
	CHANNEL a lot of SWd and lwd on island					d and lwd on islands	s bank erosion from large runoff			

2.5

Reach #

ILP Map #

ILP#

Site 506

2.6

. .

		PROJECT		
Project Name: Stream Name (gaz.): Project Watershed Code:		0000-000-000-000-000-00	Project Code: 00	17415
		WATERSHED		
Gazetted Name: SCHAFT	CREEK		Local Name: SC6	
	00-0000-0000-0000-000-000-000-	000-000-000-000		
ILP Map#:	ILP #: N	IID Map #: 104G.035	IID #: 50019 Reach #: 2	2.6 Site #: 506
Field UTM (Z.E.N):	Method:		Site Lg: 100 Method: GE	Access: H
GIS UTM (Z.E.N): 9.378117.	.6361360	R	ef. Name:	
Data: 2007/0	00/45 Time: 00:50	A man av # CCCO /	Crown MM DC Fish Cred?	: Incomplete:
Date: 2007/0	09/15 Time: 09:50		Crew: MM RS Fish Crd?	: V incomplete:
		CHANNEL		
		vidth width width width	width width Avg	Gadient % Mtd Avg
` '	50.00 200.00 200.00 60.00 70.00 60.00		183.33 Method I: 63.33 Method II:	
	0.70 0.70 0.70 0.70		0.70	
			No Vis.Ch	.: Intermittent:
Wb Depth:	Avg: 0.00	Method: GE S	tage: L M 🕢 H Dv	w: Tribs.:
COVER	Total: T			
Type: SWD	LWD B U	DP OV IV	CROWN CLOSURE	
Amount: T	D T N	N N N	0 0%	
Loc: P/S/O:			INSTREAM VEG: N A	$M \square V \square$
LWD: F	DIST: E		_	
	DIOT. E		DD CHD: H	
LB SHP: U			RB SHP: U	
	G □ C ✓ B □ R □ A □		Texture: F ☐ G ☐ C ✓	
RIP: S STG: INIT			RIP: M STG: MF	
316.1111			STG. IVII	
		WATER		
EMS:			Req #:	
Temp: 6		Method: T3	Cond.: 60	Method: S3
pH:		Method: P2	Turb.: T 📝 M 🖂 L 🦳 C	Method: GE
Flood Signs: sed depos	its	Method: GE		
		MORPHOLOGY	,	
Bed Material: Dor	minant: C Subdom: F	:	O1 B1 B2 B3 D1 E	D2 D3
D95: 20.0 E	D (cm): 17.00 Morph: C	DISTURBANCE		
Pattern: ME		INDICATORS	C1 C2 C3 C4 C5 S	S1 S2 S3 S4 S5
Islands: AN				
Coupling: PC				
Confinement: UN		Bars:	N SIDE DIAG	MID SPAN BR↓
FSZ:		Dais.	N SIDE DINO	WIID SI / KIV
		HABITAT QUALI	ТҮ	
Name			Comments	
	poor- very silty			
	poor- no deep pools			
Rearing Habitat p	poor - no pools little cover			
		PHOTOS		
Photo Foc L	-		Comments	
R: 110 F: 805 STD		lb		
R: 110 F: 806 STD R: 110 F: 807 STD		SWD		
R: 110 F: 807 STD	, INS	SVVD		

Reach # ILP Map # ILP # Site 2.6 506

	PHOTOS										
	Photo		Foc Lg	Dir	Comments						
R:	110	F:	809	STD	NS	RB					
R:	110	F:	810	STD	NS	shrubs on flood plain					
R:	110	F:	811	STD	U						
	COMMENTS										
		Se	ction		Comments						
	SITE CARD				too fast to measure depth	l.					

Reach # ILP Map # ILP # Site

			PROJE	СТ						
Project Name:	: Schaft Creek									
Stream Name (gaz.):						Pro	ject Code	:	17415	
Project Watershed Code:	: 630-000000-00000-0	0000-0000-0000-	-000-000-000	0-000-00	0					
			WATERSI	HFD						
Gazetted Name: SCHAF	T CREEK		WAILKOI		Loc	al Name:	SC7			
Watershed Code: 630-344		-0000-000-000-0	000-000-000-000		200	arramo.	00.			
ILP Map#:	ILP #:	NID Ma	ap #: 104G.066	NI	D#: 50	011	Reach #	: 2.	7 Site #:	511
Field UTM (Z.E.N):	N	Method:			Site Lg	j: 200	M	lethod: GE	Access: H	
GIS UTM (Z.E.N): 9.38174	3.6384421			Re	f. Name):				
Date: 2007	7/09/15 Time: 14	:30	Agency: C660	С	rew: N	MM RS		Fish Crd?:	✓ Incomp	lete:
			CHANN	EL						
Mtd	width width width	width width	width width	width	width	width	Avg		Gadient % Mtd	Avg
` ' '	35.00 35.00 40.00					3	36.67	Method I:	1.0 C	1.00
Wetted Width (m): GE Pool Depth (m): GE	28.00 25.00 30.00 1.00 1.00 1.00					-	27.67	Method II:	С	
Pool Depth (m): GE	1.00 1.00 1.00						1.00	No Vis.Ch.:	Intermittent:	
Wb Depth: 1.5	1.7 1.5 Av	g: 1.57 N	Method: GE	St	age: L		• н 🗆	Dw:	Tribs.:	
COVER	Total: M									
Type: SWD	LWD B	U DP	OV	IV	CRO	OWN CLO	SURE			
Amount: D	T N	т т	S	N	1	1-2	20%			
Loc: P/S/O:		V		/	INS	TREAM V	EG: N	✓ A 🔲 I	и	
LWD: F	DIST: C									
LB SHP: S					ı	RB SHP: V	/			
Texture: F ✓	G ✓ C ☐ B ☐	R \square A \square				Texture:	F 🔽 G	\Box c \Box	B R A	
RIP: S						RIP: N				
STG: SHR						STG: Y	/F			
			WATE	R						
EMS:					Re	eq #:				
Temp: 4			od: T3		Co	ond.: 60			Method:	S3
pH: Flood Signs: bank de	nocito		od: P2 od:GE		Т	urb.: T	✓ M □	L C C	Method:	GE
i lood Signs. bank de	posits									
		IV	<u>IORPHOL</u>	OGY	01	D4 F	20 D2	D4 D	D2	
	ominant: G	Subdom: F			01		B3 B3	D1 D2	2 D3 • •	
D95: 0.01	D (cm): 0.01	Morph: LC	DISTURE							
Pattern: SI			INDICA	IUKS	C1		C3 C4	C5 S		S4 S5
Islands: N Coupling: DC					Ш	✓				
Confinement: OC										
FSZ:			В	ars:	N	SIDE	DIA	√G N	IID SPAN✓	BR
		НΔ	BITAT QU	J A I I I	ГΥ					
Name	T T				omment	ts				
Spawning Habitat	poor - too much sedim	ent			01111110111					
OverWinter Habitat	poor - deep glide but to									
Rearing Habitat	good - log jams, swd,	with small pools,	•	•						
Bi		. 1	РНОТО	3						
	•	Dir D				Co	omments			
		U								
			lwd							
	-									

Reach # ILP Map #

ILP#

Site

2.7

	PHOTOS											
Photo	Foc Lo	Dir	Comments									
R: 111 F: 834	STD	U										
	COMMENTS											
Section			Comments									
SITE CARD	SITE CARD main channel too deep and fast to measure.											
CHANNEL	CHANNEL ds 100m goo dhabitat, with swd and lwd. Us 100m poor habitat, no swd lwd. Very turbid h2o.											

Reach # ILP Map # ILP # Site

				PR	OJE	СТ						
Project Name	Schaft Creek											_
Stream Name (gaz.):								F	Project Co	de:	17415	
Project Watershed Code	: 630-000000-	00000-00000-	0000-0000	-000-000	0-000-00	0-000-00	00					
				WAT	ERS	HED						
Gazetted Name:							Loc	cal Name	e: SKC2			
Watershed Code: 630-344							_					
ILP Map#:	l	LP #:		lap #: 10	4G.046	NI	ID#: 30		Reach		.2 Site #: 315	
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.38166	6 637/1261	Metho	d:			P.	Site Lو ef. Name			Method: GE	Access: H	
												_
Date: 2007	/06/16	Time: 12:50		Agency:			rew: I	KM TS		Fish Crd?:	✓ Incomplete:	
- Mad T	dalahdalah	and alaba and a	ala I d alab		ANN		and alala	ما داد اد		Г	Carliant Of Mad Acc	_
Channel Width (m): GE	width width 3.00 4.00	width wid	th width	width	width	width	width	width	Avg 4.00	Method I:	Gadient % Mtd Avg 0.5 1.0 C 0.50	
Wetted Width (m): GE	30.00 20.00	15.00							21.67	Method II:	0.0 C	
Pool Depth (m): GE									0.00	No Vis.Ch.	: Intermittent:	
Wb Depth: 2.0	1.8 2.2	Avg: 2.	00	Method:	GE	St	age: L	М	∏ H ✓		= =	
COVER	Tot	al: A								J		
Type: SWD	LWD	В І	l Di	Р	OV	IV	CR	OWN CI	OSURE			
Amount: S	S	N S			S	S	1		1-20%			
Loc: P/S/O:				' ' '	~ ~	/ / /	INS	STREAM	IVEG: 1	N	M 🗸 V 🗸	
LWD: F		IST: E										
LB SHP: V								RB SHP): V			
Texture: F ✓	$G \square C \square$	B _ R _] A 🗌					Texture	: F 🗸	G C C	B _ R _ A _	
RIP: W								RIP				
STG: NA								STG	o: NA			
				W	ATE	R						
EMS: Temp: 9			Meth	nod: T3				eq #: ond.: 15	0		Method: S3	
pH: 7.1				nod: P2						0 -		
Flood Signs: flooded			Meth	od: GE			'	urb.: I	∐ IVI [L C	Method: GE	
			ı	MORF	HOL	OGY						
Bed Material: D	ominant: F	Subo	lom: G				O1	B1	B2 B	3 D1 D	2 D3	
D95: 5.00	D (cm): 5.00	Мо	rph: LC	Г	DISTURE	BANCE						
Pattern: IM					INDICA		C1	C2	С3 С	4 C5 S	1 S2 S3 S4 S	S5
Islands: N												
Coupling: DC												
Confinement: UN FSZ:					В	ars:	N	SID	E C	DIAG M	MID SPAN BF	R
				DITA	T 01		F.V					
Ne			нА	BITA	IQU			40				
Name Spawning Habitat	fair - some go	od gravel in m	ain channe	el			commen	its				
OverWinter Habitat	good	-										
Rearing Habitat	good - lots of	cover, deep, s	low flow	DI	ЮТО	9						
Photo	210	Dir		7 1	1010	3			Commont	te		
Photo Foo R: 100 F: 3356 S1	E Lg FD	Dir D							Comment	15		
R: 100 F: 3357 S1		U										
R: 100 F: 3358 ST	ΓD	D	floo	ded wetl	and							

Reach # ILP Map #

ILP#

Site

1.2

					PHOTOS
Photo Foc Lg Dir					Comments
R: 100 F: 3359 STD U		U	flooded wetland		

Reach # ILP

ILP Map #

ILP#

Site 312

1.4

C

							PΕ	ROJE	СТ								
Proj	ect Name	e: Scha	aft Creek														
Stream Na	me (gaz.): MES	S CREE	K							F	roject Co	ode:		17415		
Project Waters	hed Code	e: 630-	000000-0	00-0000	000-00	000-0000-	-000-00	00-000-00	00-000-0	00							
							W A	TERS	HED								
Gazetted Name	e:									Loc	al Name	e: SKC4					
Watershed Code		4000-44	1200-000	00-0000	-0000-0	0-000-0	00-00	0-000-000)								
ILP Mapa	#:		- 1	LP #:		NID Ma	ар #: 1	04G.056	N	IID #: 30	026	Read	ch #:	1.4	S	ite #: 3	12
Field UTM (Z.E.N	l):			N	Method:					Site Lo	j: 100		Method	d: GE	Acces	s: H	
GIS UTM (Z.E.N): 9.3813	62.6375	294						R	ef. Name	:						
Da	ate: 200	7/06/15	٦	Γime: 15:	:55		Agenc	y: C660	(Crew: I	KM TS		Fish	Crd?:	/ Inc	omplet	te:
							СІ	HANN	EL								
	Mtd	width	width	width	width	width	width	h width	width	width	width	Avg		Ga	dient %	Mtd	Avg
Channel Width (m)		5.00	7.00	2.00	3.50							4.38	Met	thod I: 25.	0 50.0	С	38.33
Wetted Width (m)		5.00	7.00	2.00	3.00							4.25	Metl	hod II: 40.	0	С	
Pool Depth (m)	: GE											0.00	No \	/is.Ch.:	Intermitt	ent:	7
Wb Depth	.8	1.0		Avg	g: 0.90) <u>N</u>	Nethod	l: GE	S	tage: L	M	□ н 🕟	/	Dw:] Tri	ibs.:	Ī
COVER	!		Tota	al: A													
Туре	e: SWE) L\	WD	В	U	DF	·	OV	IV	CRO	OWN CL	OSURE					
Amoun		-	D	S	N	S		S	Т	2		1-40%					
Loc: P/S/C): V				V				✓	INS	TREAM	VEG:	N \square	4 🗌 M 🗆	Ŭ ✓		
LWI	D: N		D	IST: NA													
LB SHI	P: V									1	RB SHP	: V					
Textur	e: F _] G] C 🗌	В	R 🗸	Α 🗌					Texture	: F	G \square	С 🗌 В	R 🗸	Α 🔲	
RII	P: C										RIP	: C					
STO	G: MF										STG	: MF					
							\	WATE	R								
EMS	S:									R	eq #:						
Temp							od: T			C	ond.: 17	0			Meth	od: S3	3
pF Flood Signs	1: 7.5	7 m					od: Pi od:GE			Т	urb.: T	$\prod M$		_ C 🗸	Meth	od: Gl	E
Flood Signs	s. scarring	y ./III															
						N	1 O R	PHOL	. O G Y			50		. 50	D 0		
Bed Materia		Dominar			Subdor					01	B1		B3 D1	1 D2	D3		
D95	5: 65.0	D (cm	n): 40.00		Morp	h: CP		DISTUR			Ш						
Patterr	_							INDICA	TORS	C1	C2	C3	C4 C5	5 S1	S2 S3	S4	
Islands Coupling																	V
Confinement	•																
FSZ								E	Bars:	N	SID	E	DIAG	MID	SPAN		BR
							EE	ATUR	EC								
NID Mos NID	Tumo	Llos	Matha	ا ا	~	Mathad	FE		E 5		∆: ∗D	hata		LITA	1 (7/E/NI)	Τ,	Mathad
NID Map NID 104G.056 30028	Type F	Hgt 30.0	Metho GE		-g 50	Method GE	R:	Photo F:		L:	AirP	hoto #:			I (Z/E/N) 28.6375200		Method GP3
Comments:		,			· ·		11	11		· I		11					
NID Map NID	Туре	Hgt	Metho	d L	_g	Method		Photo	J		AirP	hoto		UTM	1 (Z/E/N)		Method
104G.056 30027	C	15.0	GE	_	50	GE	R:	F:		L:		#:			97.6375245		GP3
Comments: 25%										-							
						НА	BIT	AT Q	UALI	TY							
Name									(Commen	ts						

ILP Map # ILP# Site Reach # 1.4 312

							HABITAT QUALITY
		Ν	ame				Comments
	Spa	awni	ng Hab	itat	poor - no gi	avel, very steep	
	Ove	rWir	ter Ha	bitat	poor- no po	ols, very steep	
	Re	earin	g Habi	tat	poor - no po	ools, very steep	
							PHOTOS
	Ph	oto		Foo	: Lg	Dir	Comments
R:	100	F:	3338	ST	TD .	U	cascade
R:	100	F:	3339	ST	D	D	
R:	100	F:	3340	S1	TD .	D	
R:	100	F:	3341	S1	D	Х	to RB
R:	100	F:	3342	S1	TD .	Х	to RB
R:	100	F:	3343	S1	D	U	
R:	100	F:	3344	S1	D	NS	video of falls
R:	100	F:	3347	S1	D	NS	flls looking us
							COMMENTS
		Se	ection				Comments
		CHA	NNEL				scade which steepens dramamtically 30m us at outlet to steep step pool morph. ~60m us of outlet a very otal barrier to fish even first 30m has no useable habitat.

ILP Map # Reach #

ILP#

Site 2.1 500

		PROJEC	<i>></i> 1	
Project Name: S	Schaft Creek			
Stream Name (gaz.): I			Project	Code: 17415
Project Watershed Code: 6	630-000000-00000-00000-0	000-0000-000-000-00	0-000-000	
		WATERS	HED	
Gazetted Name:			Local Name: SK0	21
Watershed Code: 630-34400	00-44200-00000-0000-0000	-000-000-000-000-000		
ILP Map#:	ILP #:	NID Map #: 104G.046	NID #: 50000 Re	each #: 2.1 Site #: 500
Field UTM (Z.E.N):	Method	:	Site Lg: 150	Method: HC Access: H
GIS UTM (Z.E.N): 9.382607.6	6365340		Ref. Name:	
Date: 2007/09	9/13 Time: 09:55	Agency: C660	Crew: KM MM CD RS	Fish Crd?: ✓ Incomplete:
Date: 2007/03	9/13 Time: 09:55	C H A N N		Tish Cru:. • Incomplete.
NAL-I				Continue of Land Land
Channel Width (m): MS 3.8	width width width width width 30 2.60 3.00 4.30		width width width Avg	Gadient % Mtd Avg Method I: 2.0 C 2.00
	2.00 2.60 2.50 3.10		2.67	Method II: C
` '	0.20 0.19		0.20	
W D # 1 7				No Vis.Ch.: Intermittent:
·	.6 .6 Avg: 0.6	3 Method: MS	Stage: L M 🗸 H	Dw: Tribs.:
COVER	Total: M			
Type: SWD	LWD B U	DP OV	IV CROWN CLOSUF	RE .
Amount: T	T N S	S D	T 1 1-20%	
Loc: P/S/O:			✓ INSTREAM VEG:	N A M V
LWD: F	DIST: E			
LB SHP: V			RB SHP: V	
	G C □ B □ R □	Α 🦳	Texture: F	G G C B R A C
RIP: S			RIP: S	
STG: SHR			STG: SHR	
		WATE	D	
EMS:		WAIL	Req #:	
Temp: 5		Method: T3	Cond.: 128	Method: S3
pH: 7.9		Method: P2		M
Flood Signs: deposited b	bedload	Method: GE	Tulb T	Wethou. GE
		MORPHOL	OGY	
Bed Material: Dom	ninant: C Subdo	om. G	O1 B1 B2	B3 D1 D2 D3
			NAMOE	
Pattern: IR	,	pn: RP DISTURE INDICA		C4 C5 S1 S2 S3 S4 S5
Islands: N				
Coupling: DC				
Confinement: UN		_		
FSZ:		В	ars: N SIDE ✓	DIAG MID SPAN BR
		HABITAT QU	JALITY	
Name			Comments	
	ood - lots of gravel, good flo	W.		
	oor - few deep pools			
Rearing Habitat go	ood - lots of cover esp at ou			
		РНОТО	S	
Photo Foc L			Comm	ents
R: 108 F: 745 STD				
R: 108 F: 746 STD	U			

Reach #

ILP Map #

ILP#

Site 500

2.1

	COMMENTS
Section	Comments
CHANNEL	lots of scour and debris from flooding that wasn't here in june. Downcutting wider channels, still clear water.

Reach # ILP Map # ILP # Site

							PK	OJE	- 1								
	Project Name Stream Name (gaz.)			K								Project C	ode:			17415	
	Project Watershed Code				0000-000	0-0000-	000-000	0-000-00	0-000-00	00	·	rojeci C	oue.			17415	
							WAT	ERSI	HED								
	Gazetted Name:									Loc	al Name	e: SKC2	2				
	Watershed Code: 630-344	1000-442	200-000	00-0000	-0000-00	0-000-0	000-000	-000-000									
	ILP Map#:		II	LP #:		NID Ma	ap #: 10	4G.046	NI	ID #: 50	021	Rea	ch #:	2	2.2	Site #: 5	14
	Field UTM (Z.E.N):			N	/lethod:					Site Lg	: 200		Metho	od: GE		Access: H	
	GIS UTM (Z.E.N): 9.38165	7.63742	207						Re	ef. Name							
	D / 0007	1/00/47	-	- 40	00			0000			***						. \square
	Date: 2007	/09/17		Time: 16	:00	,	Agency:			crew: N	VIIVI CD		FIS	h Crd?:	✓	Incomplet	te: 🔲
								ANN	_				1				
_	Channal Width (m)	width	width	width	width	width	width	width	width	width	width	Avg		مفام ما اب	Gadie	nt % Mtd	Avg 0.50
-	Channel Width (m): MS Wetted Width (m): MS	7.00 3.00	4.00 2.00	1.80	2.00 1.00	2.50	1.50 1.50	6.00 2.00				3.54 1.90		ethod I: ethod II:	0.5	C	0.50
-	Pool Depth (m): MS	0.13	0.10	0.18	0.16	0.12	0.15	0.13				0.14		anou ii.			
_	. , ,	L		1 1										Vis.Ch	\equiv	Intermittent:	
L	Wb Depth: 1.4			Avg	g: 1.40	N	/lethod:	MS	St	age: L	M	✓ H [Dw	/: L	Tribs.:	
	COVER		Tota	al: NS													
	Type: SWD	LW		В	U	DP)	OV	IV	_		OSURE					
	Amount: S	S		N	S	D		S	S	1		I-20%					
	Loc: P/S/O:				V	V			/	INS	TREAM	VEG:	N \square	Α 🗌	M 🗸	V	
	LWD: A		D	IST: E													
	LB SHP: V										RB SHP	: V					
	Texture: F	G \square	С	В	R \square A	\					Texture	: F 🗸	G	С	В	$R \square A \square$	
	RIP: G										RIP		_				
	STG: SHR										STG	: SHR					
							W	ATE	D								
	EMS:						•	AIL	11	R	eq #:						
	Temp: 9					Metho	od: T3				ond.: 14	0				Method: S3	3
	pH:					Metho	od: P2			т	urb.: T	п м	□ L			Method: G	F
	Flood Signs: scars on	banks				Metho	od: GE				uib i	□ '''	□ -		✓	Wictifod.	-
						N	1 O R F	PHOL	OGY								
	Bed Material: D	ominant	F		Subdom	ı: G				01	B1	B2	В3 [)1 D	2 D3	3	
	D95: 0.01	D (cm):			Morph			DIOTUDE				V			/	1	
	Pattern: ME	_ ()					ı	DISTURE INDICA		C1	C2	C3		25 S		 2 S3 S4	S5
	Islands: N										O2			75 5	7 7	. 55 54	1 -
	Coupling: DC																
	Confinement: UN							_									
	FSZ:							В	ars:	N	SID	E	DIAG		MID	SPAN	BR
						HA	BITA	T QL	JALII	ГΥ							
	Name									ommen	ts						
	Spawning Habitat	poor - s	slow dee	ep pools	full of fir	nes											
	OverWinter Habitat	excelle															
	Rearing Habitat	excelle	nt - full	of cover	, very de	ep contir											
							CON	MMEN	ITS								
	Section								С	comment	ts						
	CHANNEL	beautifu	ul habita	at.												·	
_	·		_						_		_	_	_	_	_	·	·

Reach # ILP Map # ILP # Site

					PR	OJE	ЗΤ								
Project Name Stream Name (gaz.): Project Watershed Code		K	000-000	0-0000-	000-000	-000-000	0-000-00	0	F	Project C	ode:		17415		
				,	WAT	ERSI	HED								
Gazetted Name:								Loc	al Name	e: SKC3	3				
Watershed Code: 630-344	000-44200-000	000-0000	-0000-00	0-000-0	00-000-0	000-000									
ILP Map#:	1	LP #:		NID Ma	ap #: 104	IG.046	NI	D#: 50	029	Rea	ch #:	2.3	5	Site #: 51	15
Field UTM (Z.E.N):		N	lethod:					Site Lg	j: 100		Method:	GE	Acces	ss: H	
GIS UTM (Z.E.N): 9.38241	0.6360848						Re	f. Name):						
Date: 2007	/09/18	Time: 09:	:00	,	Agency:	C660	С	rew: N	MM RS		Fish (Ord?: ✓	In	complet	e: 🗌
						ANN	FI								
Mtd	width width	width	width	width	width	width	width	width	width	Avg	1	Gadi	ent %	Mtd	Avg
	7.30 6.00	3.00	2.20	1.80	2.00	1.50		····atii	*******	3.40	Meth		1	С	1.00
Wetted Width (m): MS	3.10 2.00	2.00	1.50	1.80	2.50	1.50				2.06	Metho	od II:		С	
Pool Depth (m): GE	0.10									0.10	N - \/	- Ob . 🗆	lasta anali		7
Wb Depth:		Avo	g: 0.00	Λ.	Method:	GF	St	age: L	п м	у н [s.Ch.: Dw:	Intermit	ribs.:]
COVER	Tot	al: NS	,					9	Ш	V					_
	LWD	В	U	DP		OV	IV	1 CP(OWN CL	OSLIDE	:				
Type: SWD Amount: S	S	T	S	S		D	N	1		-20%	-				
Loc: P/S/O:								INS			N \square A	ПМП	V 🖂		
				سحار	سارت		<u>* </u>	j							
LWD: NS	ט	DIST: NS													
LB SHP: S	0 - 0 -	5 —	D 4	_					RB SHP			. — . —		—	
Texture: F	G C C	В	R \square A	, <u> </u>							G	: в	K	Α	
RIP: M									RIP						
STG: SHR									STG	: YF					
					W	ATE	R								
EMS:								R	eq #:						
Temp: 5					od: T3			C	ond.: 15	0			Meth	hod: S3	;
pH: Flood Signs:					od: P2 od: GE			Т	urb.: T	$\prod M$		C 🗸	Meth	hod: GE	≣
Flood Signs.															
				M	ORP	HOL	OGY								
Bed Material: D	ominant: G		Subdom	: F				01	B1	B2	B3 D1	D2 [03		
D95: 0.01	D (cm): 0.01		Morph	: RP	D	ISTURE	BANCE								
Pattern: TM						INDICA [*]	TORS	C1	C2	C3	C4 C5	S1 S	S2 S3	3 S4	S5
Islands: N															
Coupling: PC															
Confinement: UN						В	ars:	N	SID	E ~	DIAG	MID	SPAI	N	BR
FSZ:															
				HAI	BITA	ΤQL	JALI1	ГΥ							
Name							С	ommen	ts						
Spawning Habitat OverWinter Habitat	good fair - some poo	ale hut n	nt really o	deen fict	would b	ne moro	likely to	OVERWIN	er in lak	Δ.					
Rearing Habitat	good - current			reeh IISI	. would t	JG IIIUI E	iikeiy iU	O A C I MILLI	or iii idk						
	10	, , , ,	,		COM	MEN	ITS								
Section								omment	ts						
CHANNEL	nice fish habita	at.													
	1														

Reach # ILP Map # ILP # Site

Watershed Code: 630-344000-62300-00000-0000-0000-000-000-000-0000 1.1 310

				PR	OJE	СТ					
Project Name	: Schaft Creek										
Stream Name (gaz.)	: MESS CREE	K						Р	roject Co	de:	17415
Project Watershed Code	: 630-000000-	00000-00000	0-0000-0000	-000-000	-000-00	0-000-00	00				
				WAT	F D S I	HED					
Gazetted Name:				WAI	EKSI	ПЕВ	Loc	cal Name	. TC1		
Watershed Code: 630-344	4000-62300-000	00-000-00	00-000-000-0	000-000-	000-000		LOC	cai mame	: 101		
ILP Map#:		LP #:		ap #: 10 ⁴			ID #: 30	0021	Reach	h#: 1.	.1 Site #: 310
Field UTM (Z.E.N):		Meth	od:				Site Lo	a: 200		Method: HC	Access: H
GIS UTM (Z.E.N): 9.37088	33.6367244					Re	ef. Name	-			
Data: 2007	7/06/45	Times 10:0F		A ~~~~	CCCO	0	rew: I	ZM TO		Fish Crd?:	Incomplete:
Date: 2007	7/06/15	Time: 12:25		Agency:			iew. i	NIVI 15		FISH CIU?:	incomplete:
					ANN			1.14	. 1	r	
Channel Width (m): GE	width width 31.00 55.00	width wi	idth width	width	width	width	width	width	Avg 43.00	Method I:	Gadient % Mtd Avg 1.0 1.5 C 1.25
Wetted Width (m): GE	25.00 30.00								27.50	Method II:	1.0 1.3 C 1.23
Pool Depth (m): GE									0.00		
Wh Double 4.4		1 ,			0.5	0.				No Vis.Ch.	
Wb Depth: 1.4		Avg: ′	1.40 1	Method:	GE	St	age: L	M	✓ H _	Dw	: Tribs.:
COVER	Tot	al: T					_				
Type: SWD			U DF		OV	IV	_	OWN CL			
Amount: S Loc: P/S/O: 2	T		N N		D	N	0		0%	V - V - I	M I V I
Loc: P/S/O:			/ ////		~ ~	/ / /	INS	IKEAM	VEG: I	N 🗸 A 🗌 I	IVI V
LWD: N		IST: NA									
LB SHP: S								RB SHP:	S		
Texture: F ✓	G ▼ C □	B _ R [A					Texture:	F	G 🗸 C 🗸	B R A
RIP: C								RIP:			
STG: YF								STG:	PS		
				W	ATE	R					
EMS:							R	eq #:			
Temp: 4				od: T3			С	ond.: 30			Method: S3
pH: 6.9 Flood Signs:				od: P2 od: GE			Т	Turb.: T	\square M	√ L □ C [Method: GE
Flood Signs.											
			N	I O R P	HOL	OGY					
Bed Material: D	Dominant: C	Sub	odom: G				01	B1		3 D1 D:	
D95: 0.01	D (cm): 0.01	M	Norph: RP		ISTURE				✓		
Pattern: SI					INDICA	TORS	C1	C2	C3 C	4 C5 S	1 S2 S3 S4 S5
Islands: O											
Coupling: PC Confinement: OC											
FSZ:					В	ars:	N	SIDE		DIAG M	MID SPAN BR✓
. 02.											
			HA	BITA	T Q L	JALII	ГҮ				
Name						С	commen	ts			
Spawning Habitat OverWinter Habitat	poor - no suita										
Rearing Habitat	poor - no pool	-									
- J	<u>,</u>			PΗ	ОТО	S					
Photo Fo	c Lg	Dir	T						Comment	ts	
R: 100 F: 3327 S	TD	D									
	TD	U								•	
R: 100 F: 3329 S	TD	X									

Reach # ILP Map # ILP # 1.1

Site

310

	PHOTOS												
	Ph	oto		Foc Lg	Dir	Comments							
R:	100	F:	3330	STD	D	side channel							
R:	100	F:	3331	STD	U	side channel							

Reach # ILP Map #

ILP#

Site

Watershed Code: 630-344000-62300-00000-0000-000-000-000-000-000 1.2 309

										PK	OJE	CI								
	Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Watershed Code: 630-000000-00000-00000-00000-00000-00000-0000)-000-00	00-000-00	00	F	Project Co	ode:		174 1	15	
										WAT	ERS	HED								
	Ga	zette	d Name):									Loc	cal Name	e: TC2					
					4000-623	300-000	00-0000	-0000-00	0-000-0	000-000	000-000)								
			.P Map#				_P #:			ap #: 10			ID#: 30	0019	Read	ch #:	1.2		Site #: 30	09
	Fiold I		(Z.E.N)				N	lethod:		•			Site L	a: 200		Method:	ПС	٨٥	cess: H	
			. ,		23.63688	800	IV	ieti iou.				R	ef. Name	-		Metrioa.	110	Au	Jess. 11	
			Da	te: 200	7/06/15	Т	ime: 09:	50		Agency:	C660	(Crew:	KM TS		Fish (Crd?:	/	Incomplet	e: 🗌
										СН	ANN	EL								
				Mtd	width	width	width	width	width	width	width	width	width	width	Δνα		Ga	adient %	Mtd	Δνα
Г	Chann	el Wi	dth (m):	GE	20.00	width	width	widiii	width	widti	width	width	width	widtii	Avg 20.00	Meth				Avg 2.25
F			dth (m):	GE	25.00	40.00	15.00	35.00							28.75	Meth		2.0	C	2.20
-			pth (m):	GE	20.00	10.00	10.00	00.00							0.00	Would	ou		Ŭ	
ᆫ			F ()				<u> </u>	<u> </u>								No Vi	is.Ch.:	Inter	mittent:	
		Wb	Depth:	1.5	1.2	1.3	Avg	: 1.33	1	Method:	GE	S	tage: L	M	√ H [Dw:		Tribs.:	
_		C	COVER			Tota	al: T													
	г			.I CM/F) I I I I				DF		01/	D/	1 CB		OSURE					
	F		Type		D LW		B T	U T	_		OV T	IV	0		0%					
	-		Amount						N			N	-					_ ,,	_	
		LUC	<i>.</i> . F/3/U		/ / /			/ //			~ ~	V V	INS	STREAM	VEG:	N 🗸 A	М	v		
			LWD	: F		D	IST: E													
			LB SHF). Q										RB SHP	٠ ٥					
					a G 🗀	C 🗖	B \square	P 🗀 🛭									B	п в г	_ ^ _	
					• G 🗌	· •		` _ ′	, Ш								V	□ '` [A	
			RIF											RIP						
			STG	i: MF										STG	: MF					
										W	ATE	R								
			EMS	:									R	eq #:						
			Temp	: 4					Meth	od: T3			С	ond.: 50				M	ethod: S3	3
			pН	: 7.1					Meth	od: P2			7	Γurb.: T	п м		СП	М	ethod: GE	<u> </u>
		Floo	d Signs	rafted d	lebris				Meth	od: GE					□	<u>v</u>				_
									N	1 O R F	НОГ	OGY								
						_							01	B1	B2	B3 D1	D2	D3		
		Red I	Material:		Dominant			Subdom												
			D95	35.0	D (cm)	: 22.00		Morph	: RP			BANCE		Ш	✓			Ш		
			Pattern	: IR							INDICA	ATORS	C1	C2	C3	C4 C5	S1	S2	S3 S4	S5
			Islands	: N									✓							
		С	oupling:	DC																
	(Confir	nement:	FC																
			FSZ:								E	Bars:	N	SID	E ~	DIAG	MID	✓ SF	PAN	BR
									ЦΑ	DITA	T 0	UALI	TV							
									пА	БІІА	ı Q									
		Na										(Commen	its						
			g Habita				ble grave													
1	Over		er Habit				pools, lo													
			Habitat		Itair - sc	ome slo	wer wate	er, piunge	pools											
		earing			iuii oc					י ם	\cap \top) (
	Re		-							PH	ОТС	S								
ı	Re Pho	oto	I	Fo	oc Lg	Ţ	D			PH	ОТС	S			Comme	nts				
R:	Pho 100	oto F:	3317	Fo	oc Lg		[)		PH	ЮТС) S			Commer	nts				
R: R:	Re Pho	oto F: :	I	Fo S	oc Lg		[PH	10 T C) S			Commer	nts				

Reach # ILP Map # ILP # Site 1.2 309

Watershed Code: 630-344000-62300-00000-0000-000-000-000-000-000-000

					PHOTOS								
	Pho	oto	Foc Lg	Dir	Comments								
R:	100	F: 3320	STD	U	back water area								
R:	100	F: 3321	STD	D	side channel								
	WILDLIFE												
	Gro	oup			Observations								
	MA	AΜ	grizzly tracks										
					COMMENTS								
		Section			Comments								
	CHANNEL site is at outlet at jackson creek, on alluvial fan so no CW. Emerges from canyon just US at site. High energy with a couple of backwater areas and side channels (braids)												

Reach # ILP Map # ILP # Site

Watershed Code: 630-344000-62300-00000-0000-0000-000-000-000-0000 1.3 311

PROJECT																	
	eam Nar	ne (gaz.	•	ft Creek S CREEK 000000-00		000-000	0-0000-	000-00	0-000-0	00-000-0	000		Project Co	de:		17415	
								W A	TERS	HED							
Watersh	LP Map# (Z.E.N)	: 630-34 : :			P #:	0000-00 ethod:			0-000-00 04G.045	I	S	Local Na #: 30022 Site Lg: 200 Name:	me: TC3 Read	h #: Method	1.3 I: HC	Site Access: I	#: 311 H
	Da	te: 200	7/06/15	Ti	me: 14:2:	5		Agenc	y: C660		Crev	w: KM TS	:	Fish	Crd?: ✓	Incon	nplete:
		200	1,00,10						HANN		0.0				0.0		
		Mtd	width	width	width	width	width	width		_	. I w	vidth widt	h Ava		Gadi	ent % M	td Ava
W	ridth (m): epth (m): b Depth:	GE GE GE	40.00 12.00	60.00 15.00	Avg:	1.75		Method					50.00 13.50 0.00	Meth No V	hod I: 2.0 nod II: /is.Ch.: Dw:	3.0	C 2.50 C
Lo	COVER Total: T Type: SWD LWD B U DP OV IV CROWN CLOSURE 0 0 % Amount: T S D N N N N N W A M V INSTREAM VEG: N A M INSTREAM VEG: N A A																
								,	NATE	: D							
Floo	EMS: Temp: pH: od Signs:	: 5 : 7.2					Metho	od: Ti od: Pi od: GE	3 2	K		Req #: Cond.: 4		✓ L □] c [Method Method	
							N	1 O R	PHO	LOG	Υ						
C	Material: D95: Pattern: Islands: Coupling: inement: FSZ:	120.0 IR N CO FC	Dominan D (cm	t: C): 40.00	S	Subdom Morph				RBANCE ATORS Bars:		01 B1 C1 C2 N S	C3 C	33 D1		03 	\$4 \$5
								EF	ATUF) E C							
		_						rE		(E2							
		Туре	Hgt	Method			lethod	D. I	Photo		1.1	Ai	rPhoto		UTM (Method
104G.045 3 Comments:		C chute v	4.0 vith 1-2m	GE drops 7:	-8% grad		GE sible bar	R:	F:		L:		#:		9.373962	.0307997	GP3
								 I	Dhat-	1		Λ:	rDhoto	1	LITEA /	7/E/NI\	Mothod
		Type TRB	Hgt	Method GE	Lg		lethod GE	R: 1	Photo 100 F:	3337	L:	Ai	rPhoto #:		UTM (2 9.373524		Method GP3
Comments:	0024 I	ΝD		GE		1 '	GE	r.	100 F:	333 <i>1</i>	L.		#:		a.si 3524	.0301013	GPS
Comments.																	

R: 100 F: 3334

R: 100 F: 3335

R: 100 F: 3336

R: 100 F: 3337

ILP Map# Reach #

ILP#

Site 311

Watershed Code: 630-344000-62300-00000-0000-0000-000-000-000-0000

STD

STD

STD

STD

1.3

FEATURES NID Map NID Туре Hgt Method Lg Method Photo AirPhoto UTM (Z/E/N) Method 104G.045 9.373478.6367808 GP3 30023 TRB GE GE 100 F: 3336 Comments: HABITAT QUALITY Comments Name Spawning Habitat poor OverWinter Habitat poor Rearing Habitat poor -**PHOTOS** Photo Foc Lg Dir Comments 100 3332 STD D R: F: R: 100 F: 3333 STD U

\sim	\sim	B. 4	8.4	NI	TS	•

floodplain

side channel

feature - trib

feature - trib

Section Comments CHANNEL just at canyon reach

D

D

NS

NS

ILP# Site Reach # ILP Map # 1.1 305 PROJECT Project Name: Schaft Creek

Stream Name (gaz.) Project Watershed Code): MESS CREEK 9: 630-000000-00000-00	000-0000-0000-000	0-000-000-000-0	00-000	Project Co	ode:	17415
		W	ATERSHE	: ח			
Gazetted Name: HICKM	AN CREEK	· · · · · · · · · · · · · · · · · · ·	AILKSIIL		al Name: HC1		
Watershed Code: 630-344		-0000-000-000-000	-000-000-000	200	arramo. Tro		
ILP Map#:	ILP #:		#: 104G.035	NID #: 30	011 Read	ch #: 1.1	Site #: 305
Field UTM (Z.E.N):	M	ethod:		Site Lg	ı: 200	Method: HC	Access: H
GIS UTM (Z.E.N): 9.37890		etilou.		Ref. Name		Wethod: 110	A00633.11
Date: 2007	7/06/14 Time: 11:	00 Age	ency: C660	Crew: k	KM TS	Fish Crd?: ✓	Incomplete:
			CHANNEI	_			
Mtd	width width width	width width w	vidth width w	idth width	width Avg	Gao	dient % Mtd Avg
Channel Width (m): GE	80.00 70.00				75.00	Method I: 2.0	C 2.00
Wetted Width (m): GE	15.00 14.00				14.50	Method II:	С
Pool Depth (m): GE					0.00		
						No Vis.Ch.:	Intermittent:
Wb Depth: 1.5	Avg	: 1.50 Met	hod: GE	Stage: L	\square M \checkmark H	Dw:	Tribs.:
COVER	Total: T						
Type: SWD		U DP			OWN CLOSURE		
Amount: D	S T	N N		N 1	1-20%		
Loc: P/S/O:		/// ///		✓ INS	TREAM VEG:	N 🗸 A 🗌 M 🗌) V 🗌
LWD: F	DIST: E						
LB SHP: V					RB SHP: S		
	G C B F	R \square A \square				G C B	\neg R \square A \square
RIP: W STG: NA					RIP: M STG: MF		
310.144					31 G. WII		
			WATER				
EMS:				Re	eq #:		
Temp: 4		Method:	T3	Co	ond.: 120		Method: S3
pH: 7.3		Method:		Т	urb.: T 🔽 M		Method: GE
Flood Signs: eroded I	banks	Method:	GE		•		
		МО	RPHOLO	G Y			
Bed Material: D	Dominant: C	Subdom: G		01	B1 B2	B3 D1 D2	D3
D95: 45.0	D (cm): 23.00	Morph: RP					
	D (0111). 20.00	Morph. 14	DISTURBAN INDICATO	D.C.			
Pattern: ST			INDIO/(IO	C1	C2 C3	C4 C5 S1	S2 S3 S4 S5
Islands: O							
Coupling: PC Confinement: OC							
FSZ:			Bars	: N	SIDE	DIAG MID	SPAN BR
. 52.							
		НАВІ	TAT QUA				
Name	noor no holding aroon	little grovel		Comment	is .		
Spawning Habitat OverWinter Habitat	poor - no holding areas poor - no pools	, iille graver					
Rearing Habitat	poor - low cover, fast						
	IL 20. 1011 00101, 1001		WILDLIFE				
Group				servations			
MAM wolverine	(?) tracks						
		С	OMMENT	S			

Section Comments

CHANNEL

Reach # ILP Map # ILP # Site

1.1 305

dynamic reach with wide bar on rb, lb is actively eroding a WL bog. LWD on bars, but none in channel

Reach #

ILP Map #

ILP#

Site 306

1.2

3

		PROJEC	Т									
Stream Name (gaz.	e: Schaft Creek): MESS CREEK e: 630-000000-00000-00000-00	00-0000-000-000-000-000-	Project Code:	17415								
		WATERSH	E D									
Gazetted Name: HICKM	MAN CREEK		Local Name: HC2									
	4000-89000-00000-0000-0000-0	00-000-000-000-000										
ILP Map#:	ILP #:	NID Map #: 104G.025	NID #: 30013 Reach #:	1.2 Site #: 306								
Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3781	Method: 15.6349889		Site Lg: 200 Method: Ref. Name:	HC Access: H								
Date: 200	7/06/14 Time: 13:15	Agency: C660	Crew: KM TS Fish C	Crd?: ✓ Incomplete:								
		CHANNE	L									
Mtd	width width width width	width width width	width width Avg	Gadient % Mtd Avg								
Channel Width (m): GE	15.00 14.00 13.00		14.00 Metho									
Wetted Width (m): GE Pool Depth (m): GE	10.00 11.00 10.00	 	10.33 Metho	d II: C								
	<u> </u>	1 1 1	No Vis	= =								
Wb Depth: 1.8	1.3 Avg: 1.55	Method: GE	Stage: L M W H	Dw: Tribs.:								
COVER	Total: T											
Type: SWI		DP OV	IV CROWN CLOSURE									
Amount: T	S T N	N D	N 0 0%									
Loc: P/S/O:	V VVV VVV		INSTREAM VEG: N 🗸 A	MUV								
LWD: N DIST: NA												
LB SHP: S RB SHP: V												
Texture: F G C B R A Texture: F G C B R A												
RIP: M			RIP: M									
STG: MF			STG: MF									
		WATER										
EMS:			Req #:									
Temp: 5		Method: T3	Cond.: 120	Method: S3								
pH: 7.8		Method: P2	Turb.: T 📝 M 🔲 L 🦳	C Method: GE								
Flood Signs:		Method: GE										
		MORPHOLO	GY									
Bed Material:	Dominant: C Subdor	m: G	O1 B1 B2 B3 D1	D2 D3								
D95: 35.0	D (cm): 18.00 Morp	h: RP DISTURBA	NCE V									
Pattern: SI		INDICATO	ORS C1 C2 C3 C4 C5	S1 S2 S3 S4 S5								
Islands: N												
Coupling: CO												
Confinement: OC FSZ:		Bar	s: N SIDE DIAG	MID SPAN BR								
1 02.												
		HABITAT QUA	ALITY									
Name	near ne good		Comments									
Spawning Habitat OverWinter Habitat	poor - no good gravel poor - no pools, low cover											
Rearing Habitat	poor - no pools, low cover											
		WILDLIF	E									
Group		0	bservations									
MAM lots of bea	ar tracks, scat.											

ILP Map # Reach #

ILP#

Site 304

1.3

						PR	OJE	СТ								
Project Nam Stream Name (gaz Project Watershed Coo	.): MES	S CREE	K	0000-000	00-0000-	-000-000)-000 - 00	00-000-00	00	F	Project C	ode:		17415		
						WAT	ERS	HED								
Gazetted Name: HICKI	ЛAN CRE	EEK							Loc	cal Nam	e: HC3					
Watershed Code: 630-3	44000-89	000-000	00-0000	0-0000-0	0-000-0	000-000	-000-000)								
ILP Map#:		II	LP #:		NID Ma	ap #: 10	4G.035	N	ID #: 30	8000	Read	ch #:	1.3	Si	te #: 304	4
Field UTM (Z.E.N):			N	Method:					Site Lo	g: 200		Metho	od: HC	Access	: H	
GIS UTM (Z.E.N): 9.378	672.6358	057						Re	ef. Name	e:						
Date: 20	07/06/14	7	Time: 09	:20		Agency:	C660	C	Crew: I	KM TS		Fis	h Crd?:	✓ Inc	omplete	a: 🗀
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						ANN									
Mtd	width	width	width	width	width	width	width	width	width	width	Ι Δ., σ	1	Co	idient %	Mtd	Δνα
Channel Width (m): GE	120.00	100.00	60.00	48.00	widtri	widin	width	width	width	width	Avg 82.00	Me	ethod I: 1.5			Avg 1.75
Wetted Width (m): GE	15.00	18.00	25.00	38.00							24.00		thod II:	2.0	С	0
Pool Depth (m): GE											0.00		-	1		
Wb Depth: 1.3	ı	1	1	~. 120		Anthonia.	C.F.					No	Vis.Ch.: Dw:	Intermitte	ent: 🔲 bs.: 🔲	l
	J			g: 1.30	I	Method:	GE	31	age: L	IVI	✓ H		DW.	J 1111	08	
COVER			al: T													
Type: SW Amount: T		VD S	B T	U T	DP		OV D	IV	CR(LOSURE 1-20%					
Amount: T					N	_		N	-			N 🗖	АПМГ	¬ v 🗆		
								VVV	IIVC	TILLAN	I VLO.	🗸	~ L	_		
LWD: N		D	IST: NA													
LB SHP: V										RB SHF						
Texture: F	7 G √	c _	В	R \square A	γ <u> </u>					Texture	e: F] G 🗸	C 🔽 B	R	Α	
RIP: M											P: M					
STG: MF										STG	3: MF					
						W	ATE	R								
EMS:									R	eq #:						
Temp: 4					Metho	od: T3			С	ond.: 12	.0			Metho	od: S3	
pH: 7.3						od: P2			Т	Turb.: T	. M		¬ c	Metho	d: GE	
Flood Signs:					Metho	od: GE					•					
					N	1 O R F	HOL	. O G Y								
Bed Material:	Dominar	nt: G		Subdon	n: C				01	B1	B2	B3 [)1 D2	D3		
D95: 53.0	D (cm): 35.00		Morph	n: RP	[DISTUR	BANCE								
Pattern: IR							INDICA		C1	C2	C3	C4 C	5 S1	S2 S3	S4	S5
Islands: O									~		✓					
Coupling: DC																
Confinement: OC							Е	Bars:	N	SID)E 🗸	DIAG	MID	✓ SPAN		BR
FSZ:											•	•				
						FE/	TUR	ES								
NID Map NID Type	Hgt	Metho	d I	Lg N	/lethod		Photo			AirP	hoto		UTM	1 (Z/E/N)	М	lethod
104G.035 30009 TRB		GE			GE	R:	F:	I	_:		#:		9.37867	72.6358057		GP3
Comments: ~150m us of utr	n															
					HA	BITA	TQI	UALI.	ΤΥ							
Name								(Commen	its						
Spawning Habitat		little suit														
OverWinter Habitat				ow, shallo quality co												
Rearing Habitat	poor -	no pools	s, poor 0	luanty CO	vei											

Reach # ILP Map # ILP # Site 1.3 304

		WILDLIFE
Group		Observations
BIR	sandpiper	
		COMMENTS
Section		Comments
CHANNEL	-	site is just ds at small canyon like reach, LB us at site is bedrock cliff, rb is forested. Within site both banks are low and forested. Trib with a wide fan comes in on rb ~50m from top of site.

Reach # ILF

ILP Map #

ILP#

Site 503

2.1

m .

					PR	OJE	СТ								
Project Name Stream Name (gaz. Project Watershed Code): MESS (CREEK	-00000-000	00-0000	-000-000)-000-00	0-000-00	00	F	Project C	ode:		17415		
					WAT	ERSI	HED								
Gazetted Name: HICKM	IAN CREEK	<						Loc	cal Nam	e: HC1					
Watershed Code: 630-34	4000-8900	0-00000-00	00-0000-0	0-000-0	000-000-	000-000									
ILP Map#:		ILP #:		NID M	ap #: 10	4G.035	N	ID #: 50	0002	Read	ch #:	2.1	S	Site #: 50	03
Field UTM (Z.E.N):			Method:					Site Lo	g: 200		Method: GE		Acces	s: H	
GIS UTM (Z.E.N): 9.3788	83.6355130	0					Re	ef. Name	e:						
Date: 200	7/09/14	Time:	12:40		Agency:	C660	C	crew: I	MM RS		Fish Crd	?: 🗸	Ind	complet	te:
					СН	ANN	EL								
Mtd	width v	vidth wid	th width	width	width	width	width	width	width	Avg		Gadie	ent %	Mtd	Avg
Channel Width (m): MS	19.80 20	0.00 20.0		20.00						19.96	Method	I: 4.0		С	4.00
Wetted Width (m): MS		3.50 12.0		11.00						12.74	Method I	l:		С	J
Pool Depth (m): MS	0.45	0.45 0.5	0 0.45	0.50						0.47	No Vis.C	h.: 🗌	Intermit	tent:	7
Wb Depth: .7	.7	.6	Avg: 0.67	N	Method:	GE	St	age: L	М	✓ H)w: 🗌	Tr	ibs.:	j
COVER		Total: N	3												
Type: SWD	LWD	В	U	DF		OV	IV	CR	OWN CI	LOSURE					
Amount: T	D	S	N	N		S	N	1		1-20%					
Loc: P/S/O:							/	INS	TREAM	I VEG:	N ✓ A 🗆] M 🔲	V		
LWD: A		DIST: 0	2					_							
LB SHP: S									RB SHF	o. S					
Texture: F	g □ c	В	$R \square A$	۱ ¬							GCC	В	R \square	А	
RIP: M									RIF						
STG: MF										: INIT					
					W	ATE	R								
EMS:								R	eq #:						
Temp: 5				Meth	od: T3				ond.: 60				Meth	od: S3	3
pH:					od: P2			Т	urb.: T	M			Meth	od: Gl	E
Flood Signs: fines or	shore			Meth	od: GE										
				N	I O R F	HOL	OGY								
Bed Material:	Dominant: 0		Subdon	n: G				01	B1		B3 D1	D2 D3			
D95: 34.0	D (cm):	22.00	Morpl	n: CPC		DISTURE	BANCE		✓	✓		V			
Pattern: IR						INDICA		C1	C2	C3	C4 C5	S1 S2	2 S3	S4	S5
Islands: AN								✓	✓		V V				
Coupling: PC															
Confinement: OC						В	ars:	N	SID	EΠ	DIAG	MID	SPAN	1	BR✓
F32.															•
				НΑ	BITA	ΤQL	JALI	ГΥ							
Name							C	Commen	ts						
Spawning Habitat		ge substra		/S											
OverWinter Habitat	-	deep pool		do noor	covor										
realing nabitat	Rearing Habitat poor- cold, high gradient cascade, poor cover PHOTOS														
Photo Fo	oc Lg	T	Dir							Comme	nts				
	TD		U							50.7111161					
	TD		U												
R: 109 F: 783 S	TD		NS	left l	bank						-				

Reach # ILP Map # ILP # 2.1

Site

503

	PHOTOS											
	Ph	oto		Foc Lg	Dir	Comments						
R:	109	F:	784	STD	NS	freshly eroded left bank						
R:	109	F:	785	STD	NS	shoreside woody debris						
R:	109	F:	786	STD	NS	woody debris						
R:	109	F:	787	STD	NS	left bank with shrubs						
R:	109	F:	788	STD	NS	dry creek beds with islands						
R:	109	F:	789	STD	D							
R:	109	F:	790	STD	NS	standing pools in dry creek bed						
R:	109	F:	791	STD	NS	dry creek bed with low flow						

766

767

STD

F:

109 F:

109

NS

D

small island

cascade riffle

ILP# Reach # ILP Map #

Site

2.2 502 **PROJECT** Project Name: Schaft Creek Stream Name (gaz.): MESS CREEK Project Code: 17415 WATERSHED Gazetted Name: HICKMAN CREEK Local Name: HC2 NID #: 50023 ILP Map#: IIP# 22 NID Map #: 104G.025 Reach #: Site #: 502 Field UTM (Z.E.N): .. Method: Site Lg: 200 Method: GE Access: H GIS UTM (Z.E.N): 9.377515.6348960 Ref. Name: **V** Incomplete: Date: 2007/09/14 Time: 09:30 Agency: C660 Crew: MM RS Fish Crd?: CHANNEL width width Mtd Mtd width width width width width width width width Gadient % Avg Avg Channel Width (m) MS 35.00 50.00 38.75 Method I: 4.00 35 00 35 00 4.0 С Wetted Width (m) MS 20.00 15.00 10.00 5.00 12.50 Method II: С Pool Depth (m) MS 0.50 0.50 No Vis.Ch.: Intermittent: Dw: Wb Depth: .6 .7 .7 Avg: 0.67 Method: MS Stage: L ☐ M ✔ H ☐ Tribs.: COVER Total: T **CROWN CLOSURE** SWD LWD DP OV IV Type: В U D Ν Amount Ν Ν Ν INSTREAM VEG: N ✓ A ☐ M ☐ V ☐ Loc: P/S/O: **V V** LWD: N DIST: NA Texture: F \bigcap G \bigcap C \bigcirc B \bigcap R \bigcap A \bigcap RIP: NS RIP: S STG: INIT STG: SHR WATER EMS: Req#: Temp: 2 Method: T3 Cond.: 60 Method: S3 pH: Method: P2 Turb.: T \bigvee M \bigcap L \bigcap C \bigcap Method: GE Flood Signs: deposited bedrock Method: GE MORPHOLOGY D1 D2 D3 Bed Material: Dominant: C Subdom: G **V ✓** D95: 26.0 D (cm): 16.00 Morph: CP DISTURBANCE **INDICATORS** Pattern: IM C1 C2 С3 C4 C5 S1 S3 S5 Islands: AN \checkmark Coupling: DC Confinement: OC Bars: N SIDE DIAG MID SPAN BR 🗸 FSZ: HABITAT QUALITY Name Spawning Habitat poor - no fine gravel OverWinter Habitat poor - high gradient, cold, no deep pools Rearing Habitat poor - high gradient, cold no pools **PHOTOS** Foc Lg Photo Dir Comments 109 STD IJ F: 765 STD

Reach # ILP Map # ILP # Site 2.2 502

PHOTOS										
Pl	noto		Foc Lg	Dir	Comments					
R: 109	F:	768	STD	NS	right bank					
R: 109	F:	770	STD	NS	channels					
R: 109	F:	773	STD	U						
R: 109	F:	774	STD	U						
R: 109	F:	775	STD	D						
R: 109	F:	778	STD	NS	trib also Efd					
R: 109	F:	779	STD	NS	dry creek bed					
R: 109	F:	780	STD	NS	dry creek bed with standing water					
					COMMENTS					
	Se	ection			Comments					
	CHA	NNEL	high flows	for season. Evidenc	ee of flooding deposited bedrock scouring dry channels.					

Reach # ILP Map # ILP # Site

PROJECT												
Stream Name (gaz.)	e: Schaft Creek): MESS CREEK e: 630-000000-00000-00000-00	00-000-000-000-000-	000-000-000	Project Code:	17415							
		WATER	SHED									
Gazetted Name: HICKM. Watershed Code: 630-344 ILP Map#: Field UTM (Z.E.N):	AN CREEK 4000-89000-00000-0000-0000-0 ILP #: Method:	00-000-000-000-000-0 NID Map #: 104G.03	00 5 NID #:	ocal Name: HC3 50004 Reach #: Lg: 100 Method:	2.3 Site #: 504 GE Access: H							
GIS UTM (Z.E.N): 9.37867		A OCCC	Ref. Nar		Nation 1							
Date: 2007	7/09/14 Time: 15:10	Agency: C660		MM RS Fish C	Crd?: ✓ Incomplete: □							
		CHAN										
Mtd Channel Width (m): GE Wetted Width (m): GE Pool Depth (m): GE Wb Depth: .8	width width width width 30.00 30.00 20.00 17.00 25.00 25.00 15.00 11.00		h width width Stage:	22.40 Metho 17.20 Metho 0.00 No Vis	od II: C							
COVER	Total: T	Wethou. Wio	Glage.		DW IIIDS							
Type: SWD LWD B U DP OV IV CROWN CLOSURE Amount: T N S N T D N 1 1-20% Loc: P/S/O: ✓ ✓ ✓ ✓ ✓ INSTREAM VEG: N ✓ A M V LWD: N DIST: NA <												
LB SHP: V Texture: F RIP: M STG: MF	G 🗸 C 🗸 B 🗸 R 🗀	Α 🗌		RB SHP: S Texture: F ☐ G ✓ C RIP: NS STG: INIT	⊘ B □ R □ A □							
		WAT	E R									
EMS: Temp: 6 pH: Flood Signs: eroded b	banks	Method: T3 Method: P2 Method: GE		Req #: Cond.: 60 Turb.: T ✔ M ☐ L ☐	Method: S3 C Method: GE							
		MORPHO	LOGY									
Bed Material: D95: 26.0 Pattern: IM Islands: AN Coupling: DC Confinement: UN FSZ:	Dominant: C Subdor D (cm): 15.00 Morp	h: CP DISTU	RBANCE C1 ATORS Bars: N	C2 C3 C4 C5	D2 D3 S1 S2 S3 S4 S5 MID SPAN BR ■ BR							
1 32.												
		HABITAT C										
Name	noor high ourrent large	irata	Comme	ents	-							
Spawning Habitat OverWinter Habitat	poor - high current, large subsi poor - no slow deep pools	iiaie										
Rearing Habitat	poor - fast current, not much c	over										

Reach # ILP Map # ILP #

Site

	PROJECT														
	Project Name Stream Name (gaz. Project Watershed Code): MESS CI	REEK	0000-000	0-0000-	000-000)-000-00	00-000-00	00	F	Project Co	ode:		17415	
					,	WAT	ERS	HED							
	Gazetted Name: HICKM Watershed Code: 630-34 ILP Map#: Field UTM (Z.E.N): GIS UTM (Z.E.N): 9.3708: Date: 2007	4000-89000- 83.6367244	-00000-0000 ILP #:	Method:	NID Ma	00-000- ap #: 104 Agency:	4G.045	Ni Re	Loo ID #: 50 Site Loo ef. Name	g: 200 e:	e: TC1 Read	ch #: 3 Method: GE Fish Crd?:	.1	Site #: 5 Access: H	
						CHANNEL									
	Mtd	width wi	idth width	width	width	width	width	width	width	width	Avg		Gadie	ent % Mtd	Avg
	Channel Width (m): GE Wetted Width (m): GE Pool Depth (m): GE	100.00 90. 33.00 50 0.35 0.	00 115.00 0.00 30.00 .45 0.30	70.00 30.00 0.40	25.00 0.50						93.75 33.60 0.40	Method I: Method II: No Vis.Ch.	4.0	C C	4.00
Wb Depth: 1.0 1.2 Avg: 1.10 Method: MS Stage: L M ✓ H Dw: Tribs.: COVER Total: NS															
	Type: SWD Amount: S	LWD N	U T	DP N	' '	OV D	IV N	CR ⁽		OSURE -20%					
	Loc: P/S/O:				/	INS	STREAM	VEG:	N 🗸 A 🗌	М	V				
LWD: N DIST: NA															
LB SHP: S RB SHP: S															
LB SHP: S Texture: F ✓ G ✓ C ✓ B │ R │ A │]	
	RIP: S									RIP					,
	STG: SHR									STG	: SHR				
						W	ATE	R							
	EMS:									eq #:					
	Temp: 3					od: T3			С	ond.: 10				Method: S	3
	pH: Flood Signs:					od: P2 od: GE			٦	Γurb.: Τ	✓ M	L C C		Method: G	iΕ
	- 100d Olgrio.							1/							
					M	ORF	НОГ	. O G Y						_	
	Bed Material:	Dominant: C		Subdom					01	B1		B3 D1 D			
	D95: 0.01	D (cm): 0	0.01	Morph	: CPB			BANCE	Ш	✓	✓				
	Pattern: IM						INDICA	TORS	C1	C2	C3 (C4 C5 S	1 S	2 S3 S4	4 S5
	Islands: AN								✓	✓					
	Coupling: PC														
	Confinement: OC FSZ:						E	Bars:	N	SID	E	DIAG N	/ID	SPAN	BR <mark>✓</mark>
					HAI	BITA	T Q	JALI	ГΥ						
	Name							C	ommen	nts					
	Spawning Habitat		e amounts o	of sedime	nt, fast c	urrent									
OverWinter Habitat poor - no deep pools															
	Rearing Habitat fair - small pools with veg and swd PHOTOS														
	Photo I 5-	oc Lg	1 ,	Dir							Comme	oto			
R							Commer	lio .							
R		TD		D U	-										
_															

Reach # ILP Map # ILP #

Site

PROJECT																
Project Name:	: Schaft Creek	ς .														
Stream Name (gaz.):									F	Project Co	de:	1	7415			
Project Watershed Code	: 630-000000-	00000-000	000-000	0-0000-	000-000	-000-00	0-000-00	0								
			_					_								
0 " 11 110101	05551/				WAI	ERSI	HED			T 00						
Gazetted Name: HICKMA		000 0000 (0000 00	0 000 0	00 000	000 000		Loc	cal Name	e: TC3						
Watershed Code: 630-344 ILP Map#:		JUU-0000-0 ILP #:	0000-00		ap #: 104			D#: 50	0006	Reach	n# 3	3.3 Site #: 509				
Field UTM (Z.E.N):			ethod:								Method: GE		Access: H			
GIS UTM (Z.E.N): 9.37349	9.6367844	ivic	striou.				Re	Site Lg: 200 Meth f. Name:			Welliou. OL		A00033.11			
					_		_									
Date: 2007	/09/16	Time: 08:5	50		Agency:			rew:	w: MM RS Fish			✓	Incomplet	te:		
						ANN			1							
Channel Width (m): GE	width width		width 80.00	width 70.00	width	width	width	width	width	Avg	Method I:	Gadien	t % Mtd C	Avg 2.00		
Wetted Width (m): GE	80.00 80.00 30.00 25.00		30.00	25.00						78.00 26.00	Method II:	2.0	С	2.00		
Pool Depth (m): GE	0.60 0.80	0.60								0.67				_		
No Vis.Ch.: Intermittent:													_			
Wb Depth: 4.0 3.0 Avg: 3.50 Method: GE Stage: L M ✓ H Dw: Tribs.:																
COVER Total: NS																
Type: SWD	LWD	В	U	DP	, (OV	IV	4		OSURE						
Amount: S	S	D	N	N		S	N	1 1-20%								
Loc: P/S/O:								INS	STREAM	IVEG: I	N ▼ A □	M V				
LWD: NS DIST: NA																
LB SHP: V																
Texture: F ✓	G 🗸 C 🗸	B 🗸 R	A 🔽 A						Texture	: F	G 🗸 C 🗸	В 🗸 І	R 🗸 A 🗌			
RIP: S									RIP	P: M						
STG: SHR					STG: MF											
					W	ATE	R									
EMS:								R	eq #:							
Temp: 1					od: T3			Cond.: 20 Metho						3		
pH: Flood Signs: deposit l	ud oud				od: P2 od: GE			Turb.: T 📝 M 🔲 L 🗎 C 🦳 Method: GE						E		
i lood Signs, deposit i	wa swa															
				M	ORP	HOL	OGY									
Bed Material: D	ominant: B	5	Subdom	: R				01	B1	B2 B			7			
D95: 0.64	D (cm): 0.25		Morph	: CPB		DISTURE		Ш	✓	✓	V					
Pattern: SI						INDICA	TORS	C1	C2	C3 C	4 C5 S	1 S2	S3 S4	S5		
Islands: AN								✓	✓							
Coupling: PC Confinement: OC																
FSZ:						В	ars:	N	SID	E .	DIAG N	MID_	SPAN	BR✓		
	_			HAI	BITA	ΓQU	JALIT									
Name Spawning Habitat	none - boulde	re and rec	k high	rolocity.			С	ommen	its							
OverWinter Habitat	none - all cas		k, mgm	relocity												
Rearing Habitat	none - all cas															
PHOTOS																
	c Lg	Dii	r							Comment	ts					
	ΓD	D														
	TD TD	U NS		fines												
R: 111 F: 822 S1	ΓD	NS.	,	fines	•											

Reach # ILP Map # ILP # Site 3.3 509

	PHOTOS													
	Ph	oto		Foc Lg	Dir	Comments								
R: 111 F: 823 STD NS failing slope														
R:	R: 111 F: 824 STD NS muddy deposits below bank													
R: 111 F: 825 STD NS 2m high banks														
	COMMENTS													
	Section Comments													
	SITE CARD sc2and 3 have mixed up utms on map. This is 2 on map													

Reach # ILP Map # ILP # Site

PROJECT															
Project Name:	Schaft Creek														
Stream Name (gaz.):									F	roject Co	de:	17415			
Project Watershed Code:	630-000000-	00000-000	000-000	0-0000-0	000-000	-000-00	0-000-00	0							
					WAT	ERS	HED								
Gazetted Name: RASPBI								Loc	cal Name	e: WC1					
Watershed Code: 630-465 ILP Map#:		100-0000-0 LP #:		0-000-00 NID Ma				D#: 30	103E	Reac	h#: 1.	.1 Site #: 318			
	ļ			INID IVIA	ıp #. 10²	+G.056	INI			Reac					
Field UTM (Z.E.N):	4 6204700	Me	ethod:				Da	Site Lo			Method: HC	Access: H			
GIS UTM (Z.E.N): 9.38790	4.0361790						RE	f. Name	; .						
Date: 2007	/06/17	Time: 10:2	:5	A	Agency:	C660	C	rew: I	KM TS		Fish Crd?:	✓ Incomplete:			
					СН	ANN	EL								
Mtd	Mtd width width width width width width									Avg		Gadient % Mtd Avg			
\ /	9.00 20.00		15.00							23.50	Method I:	3.0 4.0 C 3.50			
Wetted Width (m): GE	9.00 16.00	19.00	15.00							14.75	Method II:	С			
Pool Depth (m): GE										0.00	No Vis.Ch.:	: Intermittent:			
Wb Depth: 1.3 1.4 Avg: 1.35 Method: GE Stage: L M ✓ H Dw: Tribs.:															
COVER Total: M															
Type: SWD	Type: SWD LWD B U DP OV														
Amount: S	21									OSURE I-20%					
Loc: P/S/O:											N 🔽 A 🦳 I	м 🗆 ∨ 🖂			
LWD: N DIST: NA															
	LB SHP: V Texture: F G C B R A Texture: F G C B R A G														
	g		^								g				
RIP: M STG: MF									RIP STG						
01 G. IVIII															
					W	ATE	R								
EMS:							Req #:								
Temp: 5 pH: 7.0					d: T3 d: P2			C	ond.: 50			Method: S3			
Flood Signs: scarring	on trees			Metho				Turb.: T M L C Method: G							
				NA.	000	ног	OGY								
				IVI	UKF	HUL	. U G T	01	B1	B2 E	33 D1 D2	2 D3			
	ominant: C		Subdom						ы						
D95: 53.0	D (cm): 32.00)	Morph	: CP		ISTUR				✓					
Pattern: SI						INDICA	TORS	C1	C2	C3 C	C4 C5 S				
Islands: N								✓							
Coupling: DC Confinement: UN															
FSZ:						В	ars:	N	SID	E🗸 [DIAG N	MID♥ SPAN BR			
				HAE	BITA	T Q L	JALII	ГҮ							
Name							С	ommen	ts						
Spawning Habitat OverWinter Habitat	ble gravel														
OverWinter Habitat poor Rearing Habitat poor - steep and fast, no pools little cover															
g.i.asiat	, stoop a		F 3010 II	5070		ОТО	S								
Photo Foo	: Lg	Dir		T						Commen	ts				
R: 100 F: 3365 S1	_	D													
R: 100 F: 3366 S1		U													
R: 100 F: 3367 S1	D	D		to RI	3										

Reach # ILP Map # ILP # Site
1.1 318

PHOTOS														
Photo	Foc Lg	Dir	Comments											
R: 100 F: 3368	STD	D	side channel, LB											
WILDLIFE														
Group	Group Observations													
MAM wolf tracks														
MAM	moose tracks													
MAM	bear scratchings													
			COMMENTS											
Section	Comments													
CHANNEL large cobble boulder cascade stream, some smaller side channels could provide fair habitat but otherwise poor. Us end of study section is a single narrow channel, ds end has extensive bars.														

Reach # ILP Map # ILP #

Site

PROJECT														
Project Name:	Schaft Creek	(
Stream Name (gaz.):	MESS CREE	ΞK							F	Project Co	ode:	•	17415	
Project Watershed Code:	630-000000-	00000-00	000-000	0-0000-	000-000	0-000-00	0-000-00	0						
					W A T	ERS	HED							
Gazetted Name:					W A I	LKJ		Loc	ral Name	e: SKC1				
Watershed Code: 630-659	300-00000-00	000-000	-0000-00	0-000-0	00-000-	000-000)	LOC	Jai I v aiii	s. onor				
ILP Map#:		ILP #:			ap #: 10			D#: 30	052	Read	h #:	1.1	Site #: 3	14
Field UTM (Z.E.N):		N	lethod:		Site Lg: 200						Method: HC		Access: H	
GIS UTM (Z.E.N): 9.38252	9.6365415						Re	f. Name	e:					
Date: 2007	/06/16	Time: 09:	50	,	Agency:	C660	С	rew: I	KM TS		Fish Crd?	: ✓	Incomple	te:
						ANN	EL						·	
Mtd	width width	width	width	width							Gadier	nt % Mtd	Avg	
Channel Width (m): MS	3.50 2.20	2.90	2.00	2.90						2.70	Method I:		2.0 C	2.25
Wetted Width (m): MS	3.50 2.20	2.40	2.00	3.40						2.70	Method II:		С	
Pool Depth (m): GE										0.00	No Vis.Ch		ntermittent:	
Wb Depth: .6 .5 .6 Avg: 0.57 Method: MS Stage: L M H ✓ Dw: Tribs.:													<u></u>	
COVER Total: A														
Type: SWD	LWD	В	U	DF	·	OV	IV	l CR	OWN CL	OSURE				
Amount: S	21									I-20%				
Loc: P/S/O:	' ' ' '	V V	V V	INSTREAM VEG: N A M V										
LWD: F DIST: E INSTREAM VEG: N A M V														
	LB SHP: V Texture: F G G C B R A Texture: F G G C B R A													
RIP: W									RIP	_				
STG: NA									STG					
					W	ATE	R							
EMS:								R	eq #:					
Temp: 4				Metho	od: T3			Cond.: 160					Method: S	3
pH: 7.2				Metho	od: P2			Turb.: T ☐ M ☐ L ☐ C ✓ Method:						E
Flood Signs: transport	ed debris			Metho	od: GE									
				N	ORF	HOL	. O G Y							
Bed Material: D	ominant: G		Subdom	: F				01	B1	B2 E	33 D1 [D2 D3	3	
D95: 10.0	D (cm): 10.00)	Morph	:RP	Г	DISTUR	BANCE							
Pattern: IR						INDICA		C1	C2	C3 (C4 C5 S	S1 S2	. S3 S4	S5
Islands: N														
Coupling: DC														
Confinement: UN						Е	ars:	N	SID	E	DIAG	MID	SPAN	BR□
FSZ:														
				HA	BITA	TQI	JALII	ГΥ						
Name							С	ommen	ts					
Spawning Habitat	ow													
OverWinter Habitat poor - few deeppools, fast flow Rearing Habitat fair - some good cover, but very fast at this time														
PHOTOS														
Photo Foo	: Lg	D	ir							Commen	its			
R: 100 F: 3350 S1	_)											
R: 100 F: 3351 ST			J											
R: 100 F: 3352 S1	D	ι	J	flood	d plain									

Reach # ILP Map #

ILP#

Site

1.1

PHOTOS														
	Photo	Foc Lg	Dir	Comments										
	R: 100 F: 3353	STD	D	outlet into lake										

Reach # ILP Map # ILP #

Site

PROJECT																
Project Name Stream Name (gaz.) Project Watershed Code	: MESS CR	EEK	000-000	0-0000-	000-000)-000-00	0-000-00	00	F	roject Co	ode:	17	415			
				1	WAT	ERS	HED									
Gazetted Name:								Loc	cal Name	e: MT1						
Watershed Code: 630-664	900-00000-0	0000-0000	-0000-00	0-000-0	00-000-	000-000)									
ILP Map#:		ILP #:		NID Ma	ap #: 104	4G.036	NI	ID #: 30	0051	Reac	h #:	1.1	Site #: 3	313		
Field UTM (Z.E.N):		N	lethod:					Site Lo	g: 200		Method: H	C /	Access: H			
GIS UTM (Z.E.N): 9.38241	0.6360848						Re	ef. Name	e :							
Date: 2007	/06/16	Time: 08	:20	A	Agency:	C660	С	crew: I	KM TS		Fish Cro	i?:	Incomple	ete:		
					СН	ANN	EL									
Mtd	width wid	th width	width	width	width	width	width	width	width	Avg		Gadient	% Mtd	Avg		
` ' '	15.00 22.0	0 14.00	17.00							17.00	Method	l: 7.0	С	7.00		
Wetted Width (m): GE	9.00 10.0	00 10.00	12.00							10.25	Method	II:	С	_		
Pool Depth (m): GE 0.00 No Vis.Ch.: ☐ Intermittent												ermittent:				
Wb Depth: .9 1.2 Avg: 1.05 Method: GE Stage: L																
COVER Total: T																
Type: SWD	LWD	В	U	DP		OV	IV	CR	OWN CI	OSURE						
Amount: T	D	S	Т	N		S	N	1 1-20%								
Loc: P/S/O: VVV VVV VVV VVV VVV INSTREAM VEG: N V A] M 🗌 V				
LWD: F DIST: E																
LB SHP: S RB SHP: S																
Texture: F ✓ G ✓ C □ B □ R □ A □ Texture: F ✓ G ✓ C □ B □ R □ A □]		
RIP: C									RIP							
STG: MF									STG	: MF						
					W	ATE	R									
EMS:									eq #:							
Temp: 1					od: T3			С	ond.: 80				Method: S	3		
pH: 7.4 Flood Signs:					od: P2 od: GE			Т	Turb.: T M L C					E		
3 .						шлі	OGY									
					UKI	HUL	.001	01	B1	B2 E	33 D1	D2 D3				
Bed Material: D D95: 22.0	ominant: C D (cm): 18.	00	Subdom Morph										1			
Pattern: SI	D (cm). 10.	00	Morph	. 01		DISTURI INDICA		C1	C2	C3 C	C4 C5	S1 S2	S3 S4	4 S5		
Islands: N								✓			74 63	31 32		, 33 		
Coupling: DC																
Confinement: UN						ь	ars:	NI	SID	- r	DIAG	MID	SPAN	BD[_		
FSZ:						٥	ais.	N	SID	- Ш '	DIAG		SFAN_	BR✓		
				HAE	ЗІТА	ΤQU	JALI	ГΥ								
Name							С	commen	ts							
Spawning Habitat	poor - tooste		table grav	vel												
OverWinter Habitat poor - no pools Rearing Habitat poor - steep no pools																
TOGITING HADRAL	12001 3106h	, , , , , , , , , , , , , , , , , ,			PΗ	ОТО	S									
Photo Foo	c Lg	C)ir	T						Commen	ts					
R: 100 F: 3348 S	ΓD		U													
R: 100 F: 3349 S	ΓD		D													

Reach #

ILP Map #

ILP#

Site

1.1

	COMMENTS
Section	Comments
CHANNEL	steep clear trib to Mess Cr. No pools or shelter from flow. Too cold to shock

Reach # ILP Map # ILP # Site

PROJECT																			
	Projec	ct Name	: Scha	ft Creek															
Stre	am Nam	ne (gaz.)	: MES	S CREE	K							F	Project Co	ode:		17415			
Project V	Vatershe	ed Code	: 630-0	00000-	00000-0	0000-000	0-0000-	000-00	0-000-00	00-000-00	00								
								WAT	ERS	HED									
Gazetted	d Name:							W A I	LKJ	IILU	Lo	cal Name	a: MT1						
Watershe		630-664	1900-00	000-000	000-000	0-0000-00	0-000-0	000-000)-000-000)	LO	Jai Naiin	C. IVIII						
	P Map#:				LP #:				04G.036		ID #: 50	0031	Read	ch #:	2.1 Site #: 516				
Field UTM	(Z.E.N):				N	/lethod:					Site Lg: 200 Metho			Method: MS	od: MS Access: H				
GIS UTM			3.6360	888						Re	ef. Name								
	Date	e: 2007	7/09/18		Time: 11	·10		Agency	r: C660	C	crew.	ew: MM CD Fish): ✓	Incomp	lete:		
	11110. 11						71011.		I CD Fish Crd?: ✓ Incomplete: ☐										
Mtd width width width width wid									CHANNEL dth width width width width Avg						Gadie	ent % Mtd	Avg		
Channel Wid	dth (m):		30.00	30.00	35.00	35.00	35.00	15.00		12.00	12.00	12.00	25.50	Method I	<u> </u>	C	4.00		
Wetted Wid	٠,	GE	7.00	6.00	8.00	7.00	7.00	3.00	3.00	3.00			5.50	Method II	:	С	•		
Pool Dep	oth (m):	GE	0.10	0.12	0.50	1.10	0.10	0.10	1.20	1.10			0.54	NI- VII- OI	🖂	l-t	_		
No Vis.Ch.:																			
COVER Total: T																			
										IV	1 CD		_OSURE						
	Type: Amount:	SWD	LV		B S	U N	DP T		OV N	N	1		-030KL 1-20%						
									'	V V									
LWD: F DIST: C																			
LB SHP: S Texture: F G C B R A Texture: F G C C B R A Texture: F G C C B R A G A G A G A G A G A G A G A G A G A														_					
			G 🔽	✓		К 🗆 А	, П									K \square A			
	RIP: STG:											RIP STG							
	010.												,. II						
								V	VATE	R									
	EMS: Temp:	5					Mothe	od: T3			Req #: Cond.: 90					Method: S3			
	pH:	0						od: P2											
Flood	d Signs:	deposite	d bedlo	ad			Metho	od: GE			Turb.: T \square M \square L \square C \checkmark Method: GE								
							N	10 R	PHOL	OGY									
Rod N	/laterial:		ominan	t: C		Subdom	v: G				01	B1	B2	B3 D1 [D2 D:	3			
Beu N	D95:			i. C): 11.00)	Morph			D.O.T. 1.D.			V	✓		~				
	Pattern:		_ (,					DISTUR INDICA		C1	C2			S1 S:	 2 S3 S	84 S5		
	Islands:										✓	✓		V	J		7 55		
Co	oupling: I	DC																	
Confir	nement: I	UN							_			010		DIA O.		0041	DD		
	FSZ:[E	Bars:	N	SID	E	DIAG	MID	SPAN	BR✓		
							HA	BITA	AT Q	U A L I .	ГΥ								
Nar	ne									C	commen	ıts							
Spawning	only ca	scade a	nd pool																
OverWinte	ved																		
Rearing Habitat none - high gradient, very shallow step pools infrequent low nu											ents								
								P	потс	5									
Photo	0E 4		c Lg)ir	Comments clumped LWD												
R: 113 F: 854 STD D R: 113 F: 855 STD D								ipea L\	עאט										
-	857		TD	-		D	_												
		_														_			

FDIS Site Card

Reach # ILP Map # ILP # Site 2.1 516

						PHOTOS								
	Ph	oto		Foc Lg	Dir	Comments								
R:	113	F:	858	STD	NS	plunge pool								
R:	113													
R:														
R:	113	F:	861	STD	D	side channel								
						COMMENTS								
		Se	ction			Comments								
		СНА	NNEL			e, on riparian lower than carved banks. During freshet river obviously flooded riparian. A lot of evidence of nany abandoned channels.								

APPENDIX 3.2-2 FISH HABITAT ASSESSMENT PROCEDURE DATA FOR SCHAFT CREEK RECEIVING ENVIRONMENT SITES



Appendix 3.2-2
Fish Habitat Assessment Procedure Data for Schaft Creek Receiving Environment Sites

			at Assessme					Creek	Rec	eiving E				
Watershed	Station ID	Survey Date	Survey Crew	DS easting	DS northing	US Easting	US Northing	Temp (°C)	На	Turbidity	Conductivity (µS/cm)	Current Flow	Habitat type	Dist. from start (m)
Hickman	HC1	14-Sep-07	MM/RS	378883	6355130			5	,	T	60	М	С	0
Hickman	HC2	14-Sep-07	MM/RS	377515	6348960			2		T	60	M	С	0
Hickman Hickman	HC2 HC2	14-Sep-07 14-Sep-07	MM/RS MM/RS	377515 377515	6348960 6348960			2 2		T T	60 60	M M	R C	39 85
Hickman	HC3	14-Sep-07	MM/RS	378676	6358066			6		, T	60	M	C	0
Mess	MC1	18-Sep-07	MM/CD	383914	6337796			2		Т	80	M	С	0
Mess	MC10	13-Sep-07	KM/MM	385448	6364506	385380	6364623	2.5	8.3	T	193	М	G	0
Mess Mess	MC1a MC1a	18-Sep-07 18-Sep-07	MM/CD MM/CD	383906 383906	6337537 6337537	383950 383950	6337411 6337411	5 5		C C	150 150	M M	R P	0 42
Mess	MC1a	18-Sep-07	MM/CD	383906	6337537	383950	6337411	5		C	150	M	R	46
Mess	MC1a	18-Sep-07	MM/CD	383906	6337537	383950	6337411	5		Ċ	150	М	Р	72
Mess	MC1a	18-Sep-07	MM/CD	383906	6337537	383950	6337411	5		С	150	M	С	73
Mess	MC1a	18-Sep-07	MM/CD	383906	6337537	383950	6337411	5		С	150	M	P	83
Mess Mess	MC1a MC1a	18-Sep-07 18-Sep-07	MM/CD MM/CD	383906 383906	6337537 6337537	383950 383950	6337411 6337411	5 5		C C	150 150	M M	C P	86 105
Mess	MC1a	18-Sep-07	MM/CD	383906	6337537	383950	6337411	5		Č	150	M	Ċ	106
Mess	MC2	19-Sep-07	MM/CD	384067	6354975			3		Т	210	M	Р	0
Mess	MC2	19-Sep-07	MM/CD	384067	6354975			3		T	210	М	R	60.1
Mess	MC2	19-Sep-07	MM/CD	384067	6354975			3		T T	210	M	G	91.1
Mess Mess	MC5 MC5	17-Sep-07 17-Sep-07	MM/CD MM/CD	383652 383652	6394861 6394861			5.1 5.1		T T	120 120	M M	G P	0 29.2
Mess	MC5	17-Sep-07	MM/CD	383652	6394861			5.1		Ť	120	M	R	62.5
Mess	MC5	17-Sep-07	MM/CD	383652	6394861			5.1		Т	120	M	Р	79
Mess	MC5	17-Sep-07	MM/CD	383652	6394861			5.1		Т	120	M	R	112.3
Mess	MC5	17-Sep-07	MM/CD	383652	6394861			5.1		T	120	M	P	136.8
Mess Mess	MC5 MC5	17-Sep-07 17-Sep-07	MM/CD MM/CD	383652 383652	6394861 6394861			5.1 5.1		T T	120 120	M M	R G	167.6 184.7
Mess	MC5	17-Sep-07	MM/CD	383652	6394861			5.1		Ť	120	M	C	0
Mess Trib	MT1	18-Sep-07	MM/CD	382433	6360888	382351	6360734	4.9		C	90	Ĺ	Ċ	0
Mess Trib	MT1	18-Sep-07	MM/CD	382433	6360888	382351	6360734	4.9		С	90	L	Р	12.8
Mess Trib	MT1	18-Sep-07	MM/CD	382433	6360888	382351	6360734	4.9		С	90	L	С	13.8
Mess Trib Mess Trib	MT1 MT1	18-Sep-07 18-Sep-07	MM/CD MM/CD	382433 382433	6360888 6360888	382351 382351	6360734 6360734	4.9 4.9		C C	90 90	L L	P C	20.5 22
Mess Trib	MT1	18-Sep-07	MM/CD	382433	6360888	382351	6360734	4.9		C	90	L	P	44.5
Mess Trib	MT1	18-Sep-07	MM/CD	382433	6360888	382351	6360734	4.9		Ċ	90	Ĺ	R	45.5
Mess Trib	MT1	18-Sep-07	MM/CD	382433	6360888	382351	6360734	4.9		С	90	L	Р	69.1
Mess Trib	MT1	18-Sep-07	MM/CD	382433	6360888	382351	6360734	4.9		С	90	L	R	70.1
Mess Trib	MT1 MT1	18-Sep-07 18-Sep-07	MM/CD MM/CD	382433 382433	6360888 6360888	382351 382351	6360734 6360734	4.9 4.9		C C	90 90	L L	P C	93.1 97.6
Mess Trib Schaft	SC1	15-Sep-07	MM/RS	375970	6356768	376120	356800	4.9		T	90 40	M	C	0
Schaft	SC1	15-Sep-07	MM/RS	378057	6361248	070120	000000	5.5		Ť	60	M	Č	0
Schaft	SC3	15-Sep-07	MM/RS	375723	6366633	375738	6366769	6		Т	60	M		0
Schaft	SC4	16-Sep-07	MM/RS	379430	6373500			3.5		T	60	М	С	0
Schaft	SC4	16-Sep-07	MM/RS	379430	6373500			3.5		T T	60	M	В	0
Schaft Schaft	SC4 SC4	16-Sep-07 16-Sep-07	MM/RS MM/RS	379430 379430	6373500 6373500			3.5 3.5		T T	60 60	M M	R C	0 31
Schaft	SC4	16-Sep-07	MM/RS	379430	6373500			3.5		Ť	60	M	P	57
Schaft	SC4	16-Sep-07	MM/RS	379430	6373500			3.5		Т	60	M	G	88
Schaft	SC5	17-Sep-07	MM/WD	384276	6392617	384097	6392666	4		Т	70	M	LC	0
Schaft	SC5	17-Sep-07	MM/WD	384276	6392617	384097	6392666	4		T	70 70	M	P	0
Schaft Schaft	SC5 SC5	17-Sep-07 17-Sep-07	MM/WD MM/WD	384276 384276	6392617 6392617	384097 384097	6392666 6392666	4 4		T T	70 70	M M	R P	25.4 110
Schaft	SC5	17-Sep-07	MM/WD	384276	6392617	384097	6392666	4		Ť	70	M	R	130.3
Schaft	SC5	17-Sep-07	MM/WD	384276	6392617	384097	6392666	4		Т	70	M	Р	135.9
Schaft	SC5	17-Sep-07	MM/WD	384276	6392617	384097	6392666	4		T	70	М	R	148.3
Schaft	SC5 SC5	17-Sep-07 17-Sep-07	MM/WD	384276	6392617	384097	6392666	4		T T	70 70	M M	P C	152.3 161.4
Schaft Schaft	SC7	16-Sep-07	MM/WD MM/RS	384276 381743	6392617 6384421	384097	6392666	4 4		T T	60	M	G	0
Schaft	SC7	16-Sep-07	MM/RS	381743	6384421			4		Ť	60	M	R	100
Skeeter	SKC1	13-Sep-07	KM/MM/RS/CD	382607	6365340			4.6	7.9	С	128	M	R	0
Skeeter	SKC1	13-Sep-07 13-Sep-07	KM/MM/RS/CD KM/MM/RS/CD	382607	6365340			4.6	7.9	С	128	M	P	18.9
Skeeter Skeeter	SKC1 SKC1	13-Sep-07 13-Sep-07	KM/MM/RS/CD	382607 382607	6365340 6365340			4.6 4.6	7.9 7.9	C C	128 128	M M	R G	22.7 30.9
Skeeter	SKC1	13-Sep-07	KM/MM/RS/CD	382607	6365340			4.6	7.9	Č	128	M	P	36.2
Skeeter	SKC1	13-Sep-07	KM/MM/RS/CD	382607	6365340			4.6	7.9	C	128	M	R	82.2
Skeeter	SKC1	13-Sep-07	KM/MM/RS/CD	382607	6365340			4.6	7.9	С	128	M	С	110.9
Skeeter	SKC3	17-Sep-07	MM/CD	381660	6374261			9		С	190	M	Р	0
Skeeter Skeeter	SKC2 SKC2	18-Sep-07 18-Sep-07	MM/RS MM/RS	381657 381657	6374207 6374207			9 9		C C	190 190	M M	R P	0 11.6
Skeeter	SKC2	18-Sep-07	MM/RS	381657	6374207			9		C	190	M	R	15.6
Skeeter	SKC2	18-Sep-07	MM/RS	381657	6374207			9		Č	190	M	P	25.8
Skeeter	SKC2	18-Sep-07	MM/RS	381657	6374207			9		С	190	M	R	34.1
Skeeter	SKC2	18-Sep-07	MM/RS	381657	6374207			9		С	190	M	Р	42
Skeeter Skeeter	SKC2 SKC2	18-Sep-07 18-Sep-07	MM/RS MM/RS	381657 381657	6374207 6374207			9 9		C C	190 190	M M	R P	49.5 52.5
Skeeter	SKC2	18-Sep-07 18-Sep-07	MM/RS	381657	6374207			9		C	190	M	R	52.5 59.6
Skeeter	SKC2	18-Sep-07	MM/RS	381657	6374207			9		C	190	M	P	65.3
Skeeter	SKC2	18-Sep-07	MM/RS	381657	6374207			9		С	190	M	R	69.8
Tailings C	TC1	15-Sep-07	MM/RS	370883	6367244			3		T	10	M	Р	0
Tailings C	TC1	15-Sep-07	MM/RS	370883	6367244			3		T	10 10	M	C P	12 47
Tailings C Tailings C	TC1 TC1	15-Sep-07 15-Sep-07	MM/RS MM/RS	370883 370883	6367244 6367244			3 3		T T	10 10	M M	C	47 55
Tailings C	TC1	15-Sep-07	MM/RS	370883	6367244			3		Ť	10	M	P	75
Tailings C	TC1	15-Sep-07	MM/RS	370883	6367244			3		T	10	M	С	
Tailings C	TC3	16-Sep-07	MM/RS	373499	6367844			1		Т	20	М	С	0

Appendix 3.2-2
Fish Habitat Assessment Procedure Data for Schaft Creek Receiving Environment Sites (continued)

	Station	Survey			cedure Data Wetted Depth	Bankfull	Wetted Width	Bankfull	,		(-		,
Watershed	ID	Date	(m)	(%)	(m)	Depth (m)	(m)		% Sand	% Gravel	% Cobble	% Boulder	% Bedrock
Hickman	HC1	14-Sep-07	10	4	0.45	0.9	13.7	19.8	30	20	40	10	
Hickman	HC2	14-Sep-07	39	4	0.3	0.7	10.2	10.4		50	40	10	
Hickman	HC2	14-Sep-07	85	2	0.4	0.55	14	18	25	40	30	5	
Hickman	HC2	14-Sep-07	200	3.5	0.15	0.55	20	25	5	30	60	5	
Hickman	HC3	14-Sep-07	200	1.5	0.6	1.2	28.8	33	5	50	35	10	
Mess Mess	MC1 MC10	18-Sep-07 13-Sep-07	200 200	2 2.5	0.4 0.75	1.7 1.3	0.4 25	80 70	20 30	20 70	40	20	
Mess	MC1a	18-Sep-07	42	2.5	0.73	0.7	5	15	5	15	70	10	
Mess	MC1a	18-Sep-07	46	0.5	0.3	1.3	3	11.3	20	50	19	10	
Mess	MC1a	18-Sep-07	50	2	0.33	1.1	5	12	20	80	75	5	
Mess	MC1a	18-Sep-07	73	1	0.4	1.5	4.5	12.2	5	40	35	20	
Mess	MC1a	18-Sep-07	83	2	0.2	0.8	4.3	12.4	-	5	25	70	
Mess	MC1a	18-Sep-07	86	1	0.32	1.1	0.1	12.5		20	40	40	
Mess	MC1a	18-Sep-07	105	1	0.3	1	5	9	15	20	50	15	
Mess	MC1a	18-Sep-07	106	1	0.4	1.25	4.1	8.4	20	10	50	20	
Mess	MC1a	18-Sep-07	130	2	0.22	0.7	5.2	9		20	60	20	
Mess	MC2	19-Sep-07	60.1	1	0.9	2	11	80	80	20			
Mess	MC2	19-Sep-07	91.1	1.5	0.6	1.6	10	30	80	20			
Mess	MC2	19-Sep-07	200	1	0.75	2.5	9	12	80	20			
Mess	MC5	17-Sep-07	29.2	1	0.22	1.68	7.7	29.8	40	5	45	10	
Mess	MC5	17-Sep-07	62.5	0.5	0.35	1.5	4.2	25	90	5	5		
Mess	MC5	17-Sep-07	79	5.5	0.15	0.6	17	20	9	1	90		
Mess	MC5	17-Sep-07	112.3	0.5	0.55	1.7	4	30	50	20	30		
Mess	MC5	17-Sep-07	136.8	0.75	0.1	0.9	6	20	50	30	20		
Mess	MC5	17-Sep-07	167.6	0.2	0.3	0.6	3	15	85	10	5	_	
Mess	MC5	17-Sep-07	184.7	1 0.75	0.24	0.85	2	25 25	5 50	20	70 30	5 10	
Mess	MC5	17-Sep-07	204.9	0.75	0.25	0.9	2		50 10	10	30 60	10 10	
Mess Mess Trib	MC5 MT1	17-Sep-07 18-Sep-07	200 12.8	3 4	1 0.1	0.7	40 7	80 30	10 5	20 10	60 45	10 40	
Mess Trib	MT1	18-Sep-07	13.8	3	0.13	0.7	6	30	5 5	10	60	25	
Mess Trib	MT1	18-Sep-07	20.5	3	0.07	0.5	8	30	5	10	50	35	
Mess Trib	MT1	18-Sep-07	22	0.5	0.12	0.9	7	30	1	9	60	30	
Mess Trib	MT1	18-Sep-07	44.5	4	0.15	0.9	7	30	1	10	49	40	
Mess Trib	MT1	18-Sep-07	45.5	0.5	0.25	0.9	7	30	5	10	50	35	
Mess Trib	MT1	18-Sep-07	69.1	5	0.1	0.8	5	20		30	50	20	
Mess Trib	MT1	18-Sep-07	70.1	0.5	0.12	0.9	3	15	5	10	60	25	
Mess Trib	MT1	18-Sep-07	93.1	4	0.15	0.8	1.5	12			60	40	
Mess Trib	MT1	18-Sep-07	97.6	0	0.35	1.4	1.7	12	2	8	50	40	
Mess Trib	MT1	18-Sep-07	200	4	0.17	1	12		20	30	50		
Schaft	SC1	15-Sep-07	200	4	1	4	15	100			60	40	
Schaft	SC1	15-Sep-07	200		0.5	1.2	70	200	5	20	70	5	
Schaft	SC3	15-Sep-07	200	1.2	0.7	2	30	100	20	30	50		
Schaft	SC4	16-Sep-07	200	1	0.8	1.2	30	220	10	70	20		
Schaft	SC4	16-Sep-07							_				
Schaft	SC4	16-Sep-07	31	1.5	0.25	0.6	15	220	8	80	2		
Schaft	SC4	16-Sep-07	57	2.5	0.15	0.5	10	220	5	35	60		
Schaft	SC4	16-Sep-07	88	0.5	1.2	1.7	8	220	60	35	5		
Schaft	SC4	16-Sep-07	100	0.5	1.2	1.7	12	220	100	20	E 0	20	
Schaft Schaft	SC5 SC5	17-Sep-07	200 25.4	0.2	0.8 0.35	0.2 1.5	11.7	30	90	20 9	50 1	30	
Schaft	SC5	17-Sep-07 17-Sep-07	110	2	0.35	1.5	3	20	30	20	20	30	
Schaft	SC5	17-Sep-07	126.3	0.5	0.5	1.5	4	8	95	5	20	30	
Schaft	SC5	17-Sep-07	135.9	2	0.13	1.5	5	40	33	35	60	5	
Schaft	SC5	17-Sep-07	148.3	0.5	0.4	1.5	7	40	90	5	5	3	
Schaft	SC5	17-Sep-07	152.3	2	0.17	1.5	3	50	5	5	90		
Schaft	SC5	17-Sep-07	161.4	1	0.26	1.5	5	20	90	5	5		
Schaft	SC5	17-Sep-07	181.9	4	0.2	1.5	3	-	10	10	50	30	
Schaft	SC7	16-Sep-07	100	1	0.55	1.2	25	35	10	90			
Schaft	SC7	16-Sep-07	200	1	0.55	1.2	28	35	10	90			
Skeeter	SKC1	13-Sep-07	18.9	2	0.2	0.25	3		5	85	10		
Skeeter	SKC1	13-Sep-07	3.8	0	0.4	0.4	3		40	60			
Skeeter	SKC1	13-Sep-07	13.3	2	0.2	0.3	5.1		5	65	30		
Skeeter	SKC1	13-Sep-07	8.2	1	0.35	0.4	3.1	3.2	40	60			
Skeeter	SKC1	13-Sep-07	5.3	1	0.48	0.6	2.6	3.1	30	50	20		
Skeeter	SKC1	13-Sep-07	46	1.5	0.27	0.7	2.4	2.7	5	75	20		
Skeeter	SKC1	13-Sep-07	28.7	4	0.17	0.65	3.6	4.3	5	55	40		
Skeeter	SKC3	17-Sep-07	200	0	1.1	1.4	4	4	70	30			
Skeeter	SKC2	18-Sep-07	11.6	1	0.1	0.7	3	7	10	90			
Skeeter	SKC2	18-Sep-07	15.6	0	0.18	0.5	2	6	10	90	E		
Skeeter	SKC2	18-Sep-07	25.8	1	0.14	0.75	2	4	5 10	90 80	5 1	0	
Skeeter Skeeter	SKC2 SKC2	18-Sep-07 18-Sep-07	34.1	0.5 2	0.16 0.12	2	2 1.4	3 2.2	10 10	80 90	ı	9	
Skeeter	SKC2 SKC2	18-Sep-07 18-Sep-07	42 49.5	0.5	0.12	0.8	1.4	1.8	5	90	5		
Skeeter	SKC2	18-Sep-07	52.5	1	0.33	0.6	1.6	2	3	100	J		
Skeeter	SKC2	18-Sep-07	52.5 59.6	0.5	0.25	1	1.5	2 1.5	10	90			
Skeeter	SKC2	18-Sep-07	65.3	2	0.15	0.6	2	2.5	15	80	5		
Skeeter	SKC2	18-Sep-07	69.8	0.5	0.13	0.7	1.8	1.8	60	35	5		
Skeeter	SKC2	18-Sep-07	83.1	1	0.35	٠	1.5	1.5	39	60	1		
Failings C	TC1	15-Sep-07	12	1	0.4	0.45	4.8	6	80	5	10	5	
Failings C	TC1	15-Sep-07	47	4	0.2	0.45	3	-		-	50	50	
Γailings C	TC1	15-Sep-07	55	1	0.5	2.5	3						
Tailings C	TC1	15-Sep-07	75	3	0.4	0.5	15	50		30	40	30	
Tailings C	TC1	15-Sep-07	83	1.2	0.8	1.2	15	25	10	40	25	25	
		15-Sep-07		3	0.55	0.65	15	30			50	50	
Tailings C	TC1	13-3ep-01		0	0.00	0.00	10	00			30	30	

(continued)

Appendix 3.2-2
Fish Habitat Assessment Procedure Data for Schaft Creek Receiving Environment Sites (continued)

Watershed	Station ID	Survey Date	Pool Type	Max Pool Depth (m)	Min Pool Depth (m)	Barrier Type	T/P	LB Height	RB Height	LB Stah	RB Stah	% Pool	% Boulder	% Instream Vegetation
Hickman	HC1	14-Sep-07	ı ype	թենա (III)	pehm (m)	rype	1/5	0.55	0.4	S Stab	U Stab	/0 FUUI	% Boulder 10	vegetation
Hickman	HC2	14-Sep-07						0.45	0.4	Ü	S		15	
Hickman	HC2	14-Sep-07						0.2	0.2	Ū	S		10	
Hickman	HC2	14-Sep-07						0.45	0.2	Ū	S		10	
Hickman	HC3	14-Sep-07						0.6	0.55	S	Ü	20	5	
Mess	MC1	18-Sep-07						1	1.25	S	Ü		10	
Mess	MC10	13-Sep-07						0.8	0.4	S	Ü		10	
Mess	MC1a	18-Sep-07						0.3	0.4	S	S		5	
			0	0.25	0.27					S	S	100	3	
Mess 4	MC1a	18-Sep-07	S	0.35	0.27			0.3	0.6			100		
∕less	MC1a	18-Sep-07		0.40	0.07			0.28	0.65	S	S	400	00	
Mess	MC1a	18-Sep-07	S	0.43	0.27			0.61	0.74	S	S	100	90	
Mess	MC1a	18-Sep-07	_					0.33	0.7	S	S			
Mess	MC1a	18-Sep-07	S	0.34	0.32			0.3	0.7	S	S	100		
Mess	MC1a	18-Sep-07						0.33	0.74	S	S			
Mess	MC1a	18-Sep-07	S	0.52	0.34			0.3	0.7	S	S	100	50	
∕less	MC1a	18-Sep-07						0.4	0.38	S	S	60	20	
/less	MC2	19-Sep-07		1	0.4			1	1	S	S	100		5
/less	MC2	19-Sep-07						8.0	8.0	S	U	5		
Лess	MC2	19-Sep-07						1	1.1	S	S	100		
Лess	MC5	17-Sep-07						1.5	1.25	S	S		5	
Лess	MC5	17-Sep-07	S	0.45	0.17			0.6	1.4	S	S		100	
Mess	MC5	17-Sep-07						0.6	1.2	S	S			
Лess	MC5	17-Sep-07	S	0.6	0.2			0.6	1	Ū	S	50	1	
Иess	MC5	17-Sep-07						1.15	0.6	S	Ü		1	
less	MC5	17-Sep-07	S	0.4	0.3			1.1	0.6	S	Ü	80		
less	MC5	17-Sep-07	-					0.5	0.3	S	Ü		10	
less	MC5	17-Sep-07						0.6	0.8	S	Ü		5	
less	MC5	17-Sep-07						0.0	0.0	Ŭ	Ü		Ü	
ness Ness Trib	MT1	18-Sep-07						0.6	0.4	U	U	60	30	
less Trib	MT1	18-Sep-07	s	0.19	0.13			0.6	0.4	U	U	00	25	
			3	0.19	0.13							60		
Aess Trib	MT1	18-Sep-07 18-Sep-07	c	0.22	0.1			0.4	0.35	U U	U U	60	35 30	
less Trib	MT1		S	0.22	0.1			0.65	0.3					
/less Trib	MT1	18-Sep-07	_					0.8	0.5	U	U	70	30	
less Trib	MT1	18-Sep-07	S	0.28	0.15			0.63	0.4	U	U		40	
1ess Trib	MT1	18-Sep-07	_					0.68	0.35	U	U	80	30	
less Trib	MT1	18-Sep-07	S	0.3	0.15			0.6	0.5	U	U		25	
less Trib	MT1	18-Sep-07						0.65	0.55	U	U	80	20	
1ess Trib	MT1	18-Sep-07	S	0.44	0.3			0.63	0.87	U	U		40	
less Trib	MT1	18-Sep-07						0.6	1.5	U	U	100	30	
Schaft	SC1	15-Sep-07								U	U			
Schaft	SC1	15-Sep-07						0.75	0.75	U	U		1	
Schaft	SC3	15-Sep-07						0.75		S	S			
Schaft	SC4	16-Sep-07								U	U			
Schaft	SC4	16-Sep-07								Ū	U			
Schaft	SC4	16-Sep-07						0.3	0.5	Ū	Ū			
Schaft	SC4	16-Sep-07						0.3	0.5	Ū	Ü			
Schaft	SC4	16-Sep-07						0.25	0.3	Ü	Ü	95		
chaft	SC4	16-Sep-07						0.25	0.3	Ü	Ü	95		
Schaft	SC5	17-Sep-07								S	S			
chaft	SC5	17-Sep-07		0.55	0.17			1.3	0.7	U	U	40		
chaft	SC5	17-Sep-07		0.00	0.17			1.3	0.7	U	U	70		
	SC5	17-Sep-07 17-Sep-07		1	0.3			0.9	0.7	S	U	60		
Schaft Schaft				ı	0.3					S U	U	00	2	
Schaft	SC5	17-Sep-07		0.7	0.25			0.3	0.8			00	4	
chaft	SC5	17-Sep-07		0.7	0.25			0.8	1.1	S	U	90		
chaft	SC5	17-Sep-07						0.6	1.2	U	U	00		
chaft	SC5	17-Sep-07						1.3	1.3	U	U	80		
chaft	SC5	17-Sep-07						0.6	1.1	U	U			
chaft	SC7	16-Sep-07						0.55	0.6	U	S			
chaft	SC7	16-Sep-07						0.55	0.6	S	S	5		
keeter	SKC1	13-Sep-07						0.05	0.1	U	U			1
keeter	SKC1	13-Sep-07	S	0.4	0.2			0.1	0.1	U	U	20		
keeter	SKC1	13-Sep-07						0.1	0.1	U	U			
keeter	SKC1	13-Sep-07						0.15	0.2	U	U			10
keeter	SKC1	13-Sep-07	S	0.5	0.3			0.3	0.25	U	S	20		5
keeter	SKC1	13-Sep-07						0.65	0.45	U	S			5
keeter	SKC1	13-Sep-07						0.5	0.65	S	U	5		1
keeter	SKC3	17-Sep-07		2				0.1	0.3	S	S	100		30
keeter	SKC2	18-Sep-07						0.2	0.35	Š	S			
keeter	SKC2	18-Sep-07		0.28	0.15			0.1	0.33	S	S			
keeter	SKC2	18-Sep-07			2			0.3	0.55	S	S			
keeter	SKC2	18-Sep-07		0.3	0.2			0.45	0.3	S	S	95	5	
keeter	SKC2	18-Sep-07		0.0	0.2			0.45	0.25	S	S	55	J	
keeter keeter	SKC2	18-Sep-07		0.48	0.3			0.25	0.25	S	S	100		
keeter	SKC2	18-Sep-07		0.70	0.5			0.35	0.45	S	S	100		
				0.4	0.24							00		
keeter	SKC2	18-Sep-07		0.4	0.24			0.6	0.4	S	S	90		
Skeeter	SKC2	18-Sep-07		0.00	0.0			0.35	0.2	S	S	400		
keeter	SKC2	18-Sep-07		0.32	0.2			0.3	0.35	S	S	100		
Skeeter	SKC2	18-Sep-07						0.3	0.3	S	S	10		
ailings C	TC1	15-Sep-07		0.45	0.6									
ailings C	TC1	15-Sep-07		0.45	0.6									
ailings C	TC1	15-Sep-07												
ailings C	TC1	15-Sep-07												
ailings C	TC1	15-Sep-07												
ailings C	TC1	15-Sep-07												
		16-Sep-07						1.2	2.3	S	U		90	

Appendix 3.2-2
Fish Habitat Assessment Procedure Data for Schaft Creek Receiving Environment Sites (completed)

			% Overhanging					,	
Watershed		Survey Date	Vegetation	% UC Bank	% LWD	% SWD	Canopy (%)		RB Riparian (%)
Hickman	HC1	14-Sep-07	2		5		1	5	1
Hickman	HC2 HC2	14-Sep-07 14-Sep-07	85 90						80 80
Hickman Hickman	HC2	14-Sep-07 14-Sep-07	90					5	90
Hickman	HC3	14-Sep-07	50			5	40	80	30
Mess	MC1	18-Sep-07	10	1	2	1	5	100	
Mess	MC10	13-Sep-07	3	1	-	•	0	80	0
Mess	MC1a	18-Sep-07	10	•	10	5	30	100	100
Mess	MC1a	18-Sep-07	20		20	50	40	100	100
Mess	MC1a	18-Sep-07	30				60	100	100
Mess	MC1a	18-Sep-07	50	5	5	10	60	100	100
Mess	MC1a	18-Sep-07	15		2	5	50	100	100
Mess	MC1a	18-Sep-07	7		3	10	30	100	100
Mess	MC1a	18-Sep-07	10		5	5	25	100	100
Mess	MC1a	18-Sep-07	5				10	100	100
Mess	MC1a	18-Sep-07	5		10	10	15	100	100
Mess	MC2	19-Sep-07	1	2	1	1	50	100	100
Mess	MC2	19-Sep-07		5	10	10	50	100	100
Mess	MC2	19-Sep-07	_	5	15	10	10	5	40
Mess	MC5	17-Sep-07	5		4	2	2	85	100
Mess	MC5	17-Sep-07	60	6	1	5	40	00	100
Mess	MC5	17-Sep-07	5		20	5	5	90	100
Mess	MC5	17-Sep-07	50		30	5	20	90	100
Mess	MC5 MC5	17-Sep-07	1 15		5	1 10	2 10	50 100	
Mess Mess	MC5	17-Sep-07 17-Sep-07	5			5	5	90	
Mess	MC5	17-Sep-07 17-Sep-07	10		1	20	5 1	90 85	
Mess	MC5	17-Sep-07 17-Sep-07	10		'	20	'	00	
Mess Trib	MT1	18-Sep-07	2		1		5	100	100
Mess Trib	MT1	18-Sep-07	2			1	3	100	100
Mess Trib	MT1	18-Sep-07	2		1	2	2	100	100
Mess Trib	MT1	18-Sep-07	2		2	1	2	100	100
Mess Trib	MT1	18-Sep-07	2		1	1	2	100	100
Mess Trib	MT1	18-Sep-07	2		3	2	5	100	100
Mess Trib	MT1	18-Sep-07	2			1	3	100	100
Mess Trib	MT1	18-Sep-07	2		1	1	3	100	100
Mess Trib	MT1	18-Sep-07	2		2	3	1	100	100
Mess Trib	MT1	18-Sep-07	2		1	1	1	100	100
Mess Trib	MT1	18-Sep-07	2		20	1	1	100	100
Schaft	SC1	15-Sep-07							
Schaft	SC1	15-Sep-07			5	1	5	1	100
Schaft	SC3	15-Sep-07	5	5	1	2	5	100	100
Schaft	SC4	16-Sep-07							
Schaft	SC4	16-Sep-07							0
Schaft Schaft	SC4 SC4	16-Sep-07				5			2 2
Schaft	SC4	16-Sep-07 16-Sep-07				5			2
Schaft	SC4	16-Sep-07				5			5
Schaft	SC5	17-Sep-07	1	5	2	5			3
Schaft	SC5	17-Sep-07	20	Ü	5	20	10	80	
Schaft	SC5	17-Sep-07			5	25	10	80	
Schaft	SC5	17-Sep-07			5	25	10	80	
Schaft	SC5	17-Sep-07	30		5	20	20	100	
Schaft	SC5	17-Sep-07					5	100	
Schaft	SC5	17-Sep-07							
Schaft	SC5	17-Sep-07				5		5	
Schaft	SC5	17-Sep-07	5			5			
Schaft	SC7	16-Sep-07	15	2	5	10	2	90	90
Schaft	SC7	16-Sep-07	15	2	10	20	2	100	100
Skeeter	SKC1	13-Sep-07	5					5	5
Skeeter	SKC1	13-Sep-07	40					50	80
Skeeter	SKC1	13-Sep-07	10	-				5	70
Skeeter	SKC1	13-Sep-07	10	5		4		70	80
Skeeter	SKC1	13-Sep-07	5 10	10 15	E	1		60	50 80
Skeeter Skeeter	SKC1 SKC1	13-Sep-07 13-Sep-07	10 10	15 5	5 5	5 5		30 60	80 50
Skeeter	SKC3	13-Sep-07 17-Sep-07	10	2	5 10	5 5	5	100	100
Skeeter	SKC3	17-Sep-07 18-Sep-07	10	2 5	10	2	5 1	90	90
Skeeter	SKC2	18-Sep-07	2	10	'	4	10	100	100
Skeeter	SKC2	18-Sep-07	2	5	1	2	5	100	100
Skeeter	SKC2	18-Sep-07	80	2	•	5	80	100	100
Skeeter	SKC2	18-Sep-07	1	5	3	4	5	100	60
Skeeter	SKC2	18-Sep-07	5	10	-	1	2	100	100
Skeeter	SKC2	18-Sep-07	50	10		5	1	80	100
Skeeter	SKC2	18-Sep-07	40	15	5	2	1	80	80
Skeeter	SKC2	18-Sep-07	10	10		1	15	90	90
Skeeter	SKC2	18-Sep-07	20	10	30		10	100	100
Skeeter	SKC2	18-Sep-07	80	15	5	10			
Tailings C	TC1	15-Sep-07							
Tailings C	TC1	15-Sep-07							
Tailings C	TC1	15-Sep-07							
Tailings C	TC1	15-Sep-07							
Tailings C	TC1	15-Sep-07							
Tailings C	TC1	15-Sep-07							
Tailings C	TC3	16-Sep-07			5	5	2	70	20

APPENDIX 3.2-3 SUMMARY OF SAMPLING EFFORT AND FISH CATCH DATA AT SCHAFT CREEK RECEIVING ENVIRONMENT SITES



Appendix 3.2-3
Sampling Effort and Fish Catch in Receiving and Reference Environment Watersheds, 2007

																	;	Specie	s	
WATERSHED	STATION ID	SITE	DATE	MTD	#	H/P	TIME IN	TIME OUT	EF SECONDS	LENGTH	WIDTH	ENCL	VOLTAGE	FREQ	P/W	DV	СО	MW	CCG	RB
Hickman	HC1	502	2007/09/14	EF	1	1	1100	1130	633	200	1	0	475	30	4	0	0	0	0	0
Hickman	HC1	305	2007/06/14	EF	1	1	1135	1215	656	200	2	0	500	30	4	0	0	0	0	0
Hickman	HC2	503	2007/09/14	EF	1	1	1345	1400	760	60	2	0	525	30	4	0	0	0	0	0
Hickman	HC2	306	2007/06/14	EF	1	1	1345	1415	435	200	2	0	350	30	4	0	0	0	0	0
Hickman	HC3	504	2007/09/14	EF	1	1	1600	1620	646	100	1	0	500	30	4	0	0	0	0	0
Hickman	HC3	304	2007/06/14	EF	1	1	1000	1030	556	100	2	0	650	30	4	0	0	0	0	0
Mess	MC1	301	2007/06/13	EF	1	1	1315	1345	373	150	2	0	500	30	4	0	0	0	0	0
Mess	MC10	501	2007/09/13	EF	1	1	1350	1418	768	200	2	0	300	40	4	0	0	0	0	9
Mess	MC10	317	2007/06/17	EF	1	1	830	915	704	75	4	0	350	30	4	0	0	0	0	0
Mess	MC1a	599	2007/09/18	EF	1	1	1630	1705	957	160	4	0	450	40	4	0	0	0	0	4
Mess	MC2	302	2007/06/13	EF	1	1	1535	1615	775	180	1.5	0	300	30	4	0	0	0	0	2
Mess	MC5	512	2007/09/17	EF	1	1	955	1015	735	200	2	0	500	40	4	0	0	0	0	8
Mess Trib	MT1	516	2007/09/18	EF	1	1	1205	1250	678	180	2	0	400	40	4	0	0	0	0	0
Schaft	SC1	505	2007/09/15	EF	1	1	855	920	716	110	1	0	900	30	4	0	0	0	0	0
Schaft	SC1	303	2007/06/14	EF	1	1	815	900	671	190	3	0	550	30	4	0	0	0	0	0
Schaft	SC3	507	2007/09/15	EF	1	1	1245	1307	638	150	1	0	450	40	4	0	0	0	0	0
Schaft	SC3	308	2007/06/15	EF	1	1	830	915	506	200	2	0	500	30	4	0	0	0	0	0
Schaft	SC4	510	2007/09/14	EF	1	1	1210	1255	1336	200	1	0	600	40	4	0	0	0	0	15
Schaft	SC5	513	2007/09/17	EF	1	1	1250	1330	672	200	3	0	400	40	4	0	0	0	0	12
Schaft	SC5	320	2007/06/17	EF	1	1	1510	1540	478	120	4	0	650	30	4	0	0	0	0	5
Schaft	SC6	506	2007/09/15	EF	1	1	1015	1045	786	170	1	0	600	40	4	0	0	0	0	0
Schaft	SC6	307	2007/06/14	EF	1	1	1545	1615	435	200	2	0	500	30	4	0	0	0	0	0
Schaft	SC7	511	2007/09/18	EF	1	1	1505	1540	840	200	1	0	600	40	4	0	0	0	0	9
Schaft	SC7	316	2007/06/16	EF	1	1	1445	1515	523	110	4	0	350	30	4	0	0	0	0	4
Skeeter	SKC1	500	2007/09/13	EF	1	1	1215	1245	602	140	3	0	625	30	4	0	0	0	0	15
Skeeter	SKC1	314	2007/06/16	EF	1	1	1015	1100	642	150	3	0	300	30	4	0	0	0	0	8
Skeeter	SKC2	514	2007/09/17	EF	1	1	1640	1720	732	200	4	0	300	40	4	0	0	0	0	0
Skeeter	SKC2	315	2007/06/16	EF	1	1	1300	1330	364	50	10	0	300	30	4	0	0	0	0	0
Skeeter	SKC3	515	2007/09/18	EF	1	1	935	1000	666	150	2	0	450	40	4	0	0	0	0	0
Tailings	TC1	310	2007/06/15	EF	1	1	1230	1300	535	200	2	0	750	30	4	0	0	0	0	0
Tailings	TC1	310	2007/06/15	EF	2	1	1355	1430	349	200	2	0	650	30	4	0	0	0	0	0
Tailings	TC2	309	2007/06/15	EF	1	1	1115	1150	763	200	3	0	700	30	4	0	0	0	0	0
Tailings	TC2	309	2007/06/15	EF	2	1	1000	1050	778	200	4	0	850	30	4	0	0	0	0	2
Tailings	TC3	509	2007/09/16	EF	1	1	1007	1025	605	200	1	0	450	40	4	0	0	0	0	0
Tailings	TC3	311	2007/06/15	EF	1	1	1445	1515	436	150	2	0	650	30	4	0	0	0	0	0
Tailings	TC3	311	2007/06/15	EF	2	1	1110	1200	531	200	2	O	580	30	4	0	0	0	0	0
Walkout	W2	318	2007/06/17	EF	1	1	1110	1130	478	50	2	0	350	30	4	0	0	0	0	7
Yehiniko	Y1	300	2007/06/13	EF	11	1_	1030	1100	645	175	2	0	400	50	4	2	1_	1	2	1

APPENDIX 3.2-4 SUMMARY OF BIOLOGICAL DATA FOR FISH CAPTURED AT SCHAFT CREEK RECEIVING ENVIRONMENT SITES



Appendix 3.2-4
Summary of Biological Data for Fish Captured at Schaft Creek Receiving Environment Sites

					Ŭ		u. y 0		WEIGH1		LN		LN LN	AGE			GENETIC			
WATERSHED	STATION ID	SITE	DATE	MTD	#	H/P	SPECIES		(g)			CONDITIO	N (CONDITION)		E SAMPLE #	# AGE		E SAMPLE#	COMMENT	PHOTOS
Mess	MC10	501	2007/09/13	EF	1	1	RB	122	24.5	4.8	3.2	1.35	0.30	FR	1	3				
Mess	MC10	501	2007/09/13		1	1	RB	128	26.4	4.9	3.3	1.26	0.23	FR	2	2				
Mess	MC10	501	2007/09/13		1	1	RB	101	12.2	4.6	2.5	1.18	0.17	FR	3	2				
Mess	MC10	501	2007/09/13		1	1	RB	73	4.6	4.3	1.5	1.18	0.17	FR	4	0				
Mess	MC10	501	2007/09/13		1 1	1	RB	88	7.5	4.5	2.0	1.10	0.10	FR	5 6	1 1				
Mess	MC10 MC10	501 501	2007/09/13		1	1	RB RB	88 80	7.8 5.1	4.5	2.1	1.14	0.14	FR FR	6 7	0				
Mess Mess	MC10	501	2007/09/13 2007/09/13		1	1	RB	73	5.1 4.7	4.4 4.3	1.6 1.5	1.00 1.21	0.00 0.19	FR FR	8	0				
Mess	MC10	501	2007/09/13		1	1	RB	35	0.4	3.6	-0.9	0.93	-0.07	FR	9	U				
Mess	MC1a	599	2007/09/18		1	1	RB	280	200	5.6	5.3	0.91	-0.09	SC	1	4	FR	1	>200g	
Mess	MC1a	599	2007/09/18		1	1	RB	272	200	5.6	5.3	0.99	-0.01	SC	2	6	FR	2	>200g >200g	
Mess	MC1a	599	2007/09/18		1	1	RB	212	200	5.4	5.3	2.10	0.74	SC	3	4	FR	3	>200g	
Mess	MC1a	599	2007/09/18	EF	1	1	RB	187	200	5.2	5.3	3.06	1.12	SC	4	3	FR	4	>200g	
Mess	MC2	302	2007/06/13	EF	1	1	RB	54	2	4.0	0.7	1.27	0.24						Ü	
Mess	MC5	512	2007/09/17	EF	1	1	RB	195	73.4	5.3	4.3	0.99	-0.01	FR	1	3				
Mess	MC5	512	2007/09/17	EF	1	1	RB	204	87.1	5.3	4.5	1.03	0.03	FR	2	5				
Mess	MC5	512	2007/09/17	EF	1	1	RB	161	49.4	5.1	3.9	1.18	0.17	FR	3	4				
Mess	MC5	512	2007/09/17		1	1	RB	165	47.7	5.1	3.9	1.06	0.06	FR	4	3				
Mess	MC5	512	2007/09/17		1	1	RB	173	58.8	5.2	4.1	1.14	0.13	FR	5	4				
Mess	MC5	512	2007/09/17		1	1	RB	173	55.1	5.2	4.0	1.06	0.06	FR	6	4				
Mess	MC5	512			1	1	RB	148	33.8	5.0	3.5	1.04	0.04	FR	7	3				
Mess	MC5	512	2007/09/17		1	1	RB	154	37.5	5.0	3.6	1.03	0.03	FR	8	3				
Schaft	SC4	510	2007/09/14		1	1	RB	159	43.2	5.1	3.8	1.07	0.07	FR	1	2				
Schaft	SC4	510	2007/09/14		1 1	1	RB	167	54.4	5.1	4.0	1.17	0.16	FR	2	2				
Schaft	SC4 SC4	510 510	2007/09/14		1	1	RB RB	160	44.8	5.1	3.8	1.09	0.09	FR FR	3 4	3 4				
Schaft Schaft	SC4 SC4	510	2007/09/14 2007/09/14		1	1	RB	176 191	66.2 76.7	5.2 5.3	4.2 4.3	1.21 1.10	0.19 0.10	FR	5	3				
Schaft	SC4	510	2007/09/14		1	1	RB	171	51.7	5.1	3.9	1.03	0.03	FR	6	3				
Schaft	SC4	510	2007/09/14		1	1	RB	170	53.7	5.1	4.0	1.09	0.09	FR	7	3				
Schaft	SC4	510	2007/09/14		1	1	RB	123	19.3	4.8	3.0	1.04	0.04	FR	8	1				
Schaft	SC4	510	2007/09/14		1	1	RB	117	16.5	4.8	2.8	1.03	0.03	FR	9	3				
Schaft	SC4	510	2007/09/14		1	1	RB	117	17	4.8	2.8	1.06	0.06	FR	10	1				
Schaft	SC4	510	2007/09/14		1	1	RB	118	15.9	4.8	2.8	0.97	-0.03	FR	11	1				
Schaft	SC4	510	2007/09/14		1	1	RB	127	24.1	4.8	3.2	1.18	0.16	FR	12	2				
Schaft	SC4	510	2007/09/14	EF	1	1	RB	103	13.4	4.6	2.6	1.23	0.20	FR	13	2				
Schaft	SC4	510	2007/09/14	EF	1	1	RB	132	25.4	4.9	3.2	1.10	0.10	FR	14	4			very dark.	
Schaft	SC4	510	2007/09/14	EF	1	1	RB	116	17.8	4.8	2.9	1.14	0.13	FR	15	2				
Schaft	SC5	513	2007/09/17		1	1	RB	187	75.8	5.2	4.3	1.16	0.15	FR	1	3				
Schaft	SC5	513	2007/09/17		1	1	RB	208	93.2	5.3	4.5	1.04	0.04	FR	2	4				
Schaft	SC5	513	2007/09/17		1	1	RB	189	49.7	5.2	3.9	0.74	-0.31	FR	3	3				
Schaft	SC5	513	2007/09/17		1	1	RB	149	31.8	5.0	3.5	0.96	-0.04	FR	4	3				
Schaft	SC5	513	2007/09/17		1	1	RB	134	24.8	4.9	3.2	1.03	0.03	FR	5	2				
Schaft	SC5 SC5	513 513	2007/09/17		1	1	RB RB	172	32.7	5.1	3.5	0.64	-0.44 0.14	FR FR	6 7	3 3				
Schaft Schaft	SC5	513	2007/09/17 2007/09/17		1	1	RB	118 127	18.9 23.8	4.8 4.8	2.9 3.2	1.15 1.16	0.14	FR FR	8	2				
Schaft	SC5	513	2007/09/17		1	1	RB	132	21.9	4.6	3.1	0.95	-0.05	FR	9	3				
Schaft	SC5	513	2007/09/17		1	1	RB	122	19.7	4.8	3.0	1.08	0.08	FR	10	2				
Schaft	SC5	513	2007/09/17		1	1	RB	137	30.1	4.9	3.4	1.17	0.16	FR	11	3		r	nissing scales below dors	sal
Schaft	SC5	513	2007/09/17		1	1	RB	116	17.4	4.8	2.9	1.11	0.11	FR	12	2				
Schaft	SC5	320	2007/06/17		1	1	RB	128	25.5	4.9	3.2	1.22	0.20	FR	1	2				
Schaft	SC5	320	2007/06/17		1	1	RB	127	23.2	4.8	3.1	1.13	0.12	FR	2	2				
Schaft	SC5	320	2007/06/17		1	1	RB	181	68.9	5.2	4.2	1.16	0.15	FR	3	3				
Schaft	SC5	320	2007/06/17		1	1	RB	164	55.5	5.1	4.0	1.26	0.23	FR	4	3				
Schaft	SC5	320	2007/06/17		1	1	RB	125	21.7	4.8	3.1	1.11	0.11	FR	5	2				
Schaft	SC7	511	2007/09/18	EF	1	1	RB	169	54.2	5.1	4.0	1.12	0.12	FR	1	3				
Schaft	SC7	511	2007/09/18	EF	1	1	RB	172	53.9	5.1	4.0	1.06	0.06	FR	2	2				
Schaft	SC7	511	2007/09/18		1	1	RB	220	119.1	5.4	4.8	1.12	0.11	FR	3	4				
Schaft	SC7	511	2007/09/18		1	1	RB	139	33.3	4.9	3.5	1.24	0.22	FR	4	2				
Schaft	SC7	511	2007/09/18		1	1	RB	119	18.4	4.8	2.9	1.09	0.09	FR	5	2				
Schaft	SC7	511	2007/09/18		1	1	RB	88	7.5	4.5	2.0	1.10	0.10	FR	6					
Schaft	SC7	511	2007/09/18		1	1	RB	114	14	4.7	2.6	0.94	-0.06	FR	7	2				
Schaft	SC7	511	2007/09/18		1	1	RB	76	4.9	4.3	1.6	1.12	0.11	FR	8	0				
Schaft	SC7	511	2007/09/18		1	1	RB	85	6.2	4.4	1.8	1.01	0.01	FR	9	0				
Schaft	SC7	316	2007/06/16	EF	1	1	RB	169	46.4	5.1	3.8	0.96	-0.04	FR	1	3				

Appendix 3.2-4
Summary of Biological Data for Fish Captured at Schaft Creek Receiving Environment Sites (completed)

				Sun	nma	ry or				•		cnaft Cre			onment s	oites	(completed)		
								LENGTH	WEIGHT		LN		LN	AGE			GENETIC		
WATERSHED		SITE		MTD	#	H/P		(mm)	(g)						RE SAMPLE	# AGE	STRUCTURE SAMPLE#	COMMENT	PHOTOS
Schaft	SC7	316	2007/06/16		1	1	RB	76	5.7	4.3	1.7	1.30	0.26	FR	2	2			
Schaft	SC7	316	2007/06/16		1	1	RB	77	5.4	4.3	1.7	1.18	0.17	FR	3	1			
Schaft	SC7	316			1	1	RB	71	4.7	4.3	1.5	1.31	0.27	FR	4	0			
Skeeter	SKC1	500	2007/09/13		1	1	RB	137	30.6	4.9	3.4	1.19	0.17	FR	1	2		parasite on dorsal fin	
Skeeter	SKC1	500	2007/09/13		1	1	RB	148	42.8	5.0	3.8	1.32	0.28	FR	2	2			
Skeeter	SKC1	500	2007/09/13		1	1	RB	175	59.6	5.2	4.1	1.11	0.11	FR	3	2			
Skeeter	SKC1	500	2007/09/13		1	1	RB	120	23.2	4.8	3.1	1.34	0.29	FR	4	2			
Skeeter	SKC1	500	2007/09/13		1	1	RB	107	13.6	4.7	2.6	1.11	0.10	FR	5	1			
Skeeter	SKC1	500	2007/09/13		1	1	RB	101	11.4	4.6	2.4	1.11	0.10	FR	6	1			
Skeeter	SKC1	500	2007/09/13		1	1	RB	98	10.2	4.6	2.3	1.08	0.08	FR	7	1		parasite on dorsal fin	
Skeeter	SKC1	500	2007/09/13		1	1	RB	103	10.9	4.6	2.4	1.00	0.00	FR	8	1			
Skeeter	SKC1	500	2007/09/13		1	1	RB	134	24.1	4.9	3.2	1.00	0.00	FR	9	2			
Skeeter	SKC1	500	2007/09/13		1	1	RB	90	7.7	4.5	2.0	1.06	0.05	FR	10	1			
Skeeter	SKC1	500	2007/09/13		1	1	RB	70	3.8	4.2	1.3	1.11	0.10	FR	11				
Skeeter	SKC1	500	2007/09/13		1	1	RB	51	2.1	3.9	0.7	1.58	0.46	FR	12				
Skeeter	SKC1	500	2007/09/13		1	1	RB	80	7.6	4.4	2.0	1.48	0.39	FR	13	1			
Skeeter	SKC1	500	2007/09/13	EF	1	1	RB	81	7.1	4.4	2.0	1.34	0.29	FR	14	1			
Skeeter	SKC1	500	2007/09/13	EF	1	1	RB	131	24	4.9	3.2	1.07	0.07	FR	15	1			
Skeeter	SKC1	314	2007/06/16	EF	1	1	RB	161	46.2	5.1	3.8	1.11	0.10	FR	1	3			
Skeeter	SKC1	314	2007/06/16	EF	1	1	RB	63	2.8	4.1	1.0	1.12	0.11	FR	2	0			
Skeeter	SKC1	314	2007/06/16	EF	1	1	RB	85	6.5	4.4	1.9	1.06	0.06	FR	3	1			
Skeeter	SKC1	314	2007/06/16	EF	1	1	RB	63	3.1	4.1	1.1	1.24	0.21						
Skeeter	SKC1	314	2007/06/16	EF	1	1	RB	71	3.8	4.3	1.3	1.06	0.06						
Skeeter	SKC1	314	2007/06/16	EF	1	1	RB	61	2.9	4.1	1.1	1.28	0.25	FR	4				
Skeeter	SKC1	314	2007/06/16	EF	1	1	RB	79	6.1	4.4	1.8	1.24	0.21	FR	5	1			
Skeeter	SKC1	314	2007/06/16	EF	1	1	RB	65	3.2	4.2	1.2	1.17	0.15	FR	6	1			
Tailings	TC2	309	2007/06/15	EF	2	1	RB	233	158.5	5.5	5.1	1.25	0.23	FR	1	4			
Tailings	TC2	309	2007/06/15	EF	2	1	RB	171	64.7	5.1	4.2	1.29	0.26	FR	2	3			
Walkout	W2	318	2007/06/17	EF	1	1	RB	243	173.9	5.5	5.2	1.21	0.19	FR	1	4			
Walkout	W2	318	2007/06/17	EF	1	1	RB	219	122.3	5.4	4.8	1.16	0.15	FR	2	4			
Walkout	W2	318	2007/06/17	EF	1	1	RB	141	37.8	4.9	3.6	1.35	0.30	FR	3	1			
Walkout	W2	318	2007/06/17	EF	1	1	RB	149	42.3	5.0	3.7	1.28	0.25	FR	4	2			
Walkout	W2	318	2007/06/17	EF	1	1	RB	150	37.4	5.0	3.6	1.11	0.10	FR	5	3			
Walkout	W2	318	2007/06/17	EF	1	1	RB	123	22.2	4.8	3.1	1.19	0.18	FR	6	2			
Walkout	W2	318	2007/06/17	EF	1	1	RB	123	22.2	4.8	3.1	1.19	0.18	FR	7	1			
Yehiniko	Y1	300	2007/06/13	EF	1	1	CCG	114	13.8	4.7	2.6	0.93	-0.07						
Yehiniko	Y1	300	2007/06/13	EF	1	1	CCG	58	1.9	4.1	0.6	0.97	-0.03						
Yehiniko	Y1	300	2007/06/13	EF	1	1	CO	37	0.5	3.6	-0.7	0.99	-0.01						
Yehiniko	Y1	300	2007/06/13		1	1	DV	123	17.1	4.8	2.8	0.92	-0.08	FR	2	2			
Yehiniko	Y1	300	2007/06/13	EF	1	1	DV	85	6.8	4.4	1.9	1.11	0.10	FR	3	1			
Yehiniko	Y1	300	2007/06/13	EF	1	1	MW	55	1.6	4.0	0.5	0.96	-0.04						
Yehiniko	Y1	300	2007/06/13	EF	1	1	RB	92	7.9	4.5	2.1	1.01	0.01	FR	1	1			

APPENDIX 3.2-5 FISH SAMPLING CARDS COMPLETED FOR SCHAFT CREEK RECEIVING ENVIRONMENT SITES



Reach # ILP Map # ILP #

								١	VAT	ERB	O D Y	•						
	Projec WS Waterb	Code Code ody ID	: 600-0 : 600-3	NIKO CR 000000-00 324400-00	0000-0000			00-000		0-000-0	000		cal: Yo	ILP :	#:		Reach #: 1.1 om Date:	-
	Fish Pe	ermit #:	: SMO	7-34821	Da	te: 200	7/06/13	3	To:	2007/0	5/13	А	gency:	C660	Cre	ew: KMT	S Resam	ple:
								SI	TE .	ME	THC) D						
Site# 300) Мар G.073	300		JTM:Zone	/East/No		GP3			6	Cond 90	Т	id		С	omment	
Site#	МТ	D/NO	I H/P	Date I	n Tir	ne In	Date	Out I	Time O	ut					Comr	ment		
300	EF	1	1	2007/06	5/13 10	0:30 2	2007/0	6/13	11:00									
	C. ELECTROFISHER SPECIFICATIONS																	
Site#																Model		
300	EF	=	1	1	0	(645		75.0		2.0		400	50)	4	SR	LR-24
								FI	SH	SUM	MAF	RY						
Site#		MTD/N	NO	H/P	Species	Sta	ge	Age	Т	otal #	Lgth	(Min/	Max)	FishAct			Comment	
300	EF		1	1	CO	J				1	37		37	R				
300	EF		1	1	MW	J				1	56	_	56	R				
300	EF EF		1	1	CCG	J				2	58		114	R R				
300	EF		1	1	RB DV	J	_			2	92 85		92 123	R	+			
300			'	'	DV	J	IN	DIV	I D II	AL F			ATA	K				
Site#	MTC	/NO	I H/P	Species	Length	Weight	Sex		T	Age		Vch		netic	Roll#	Frame#	Comm	ent
O.Co.	2	,,,,		Ороско	20119411	o.g.n	Cox	····cat	Str	/Smpl#/	'Age			Smpl#		1 14111011		
300	EF	1	1	CCG	114	13.8	U	U										
300	EF	1	1	RB	92	7.9	U	U	SC	1			FR	1				
300	EF	1	1	CCG	58	1.9	U	U										
300	EF	1	1	DV	123	17.1	U	U	SC	2			FR	2				
300	EF	1	1	CO	37	.5	U	U						 				
300	EF	1	1	MW	55	1.6	U	U						\perp				
300	EF	1	1	DV	85	6.8	U	U	SC	3		<u> </u>	FR	3				

Reach # ILP Map # ILP #

						W	ATE	R B (ODY						
Gaz	etted Nam	e: MES	S CREEK							Local:	MC10				
Р	roject Cod	e: 630-0	000-000	000-00000-	0000-0000-	000-000-0	00-000-	000-0							
	WS Cod	e: 630-0	000-000	000-00000-	0000-0000-	000-000-0	00-000-	000-0	00						
W	aterbody II	D:				IL	P Map #	# :			IL	P #:	R	each #: 1	-
	Project II	D: 1741	5						La	ake/Stream	: S		Lake From	n Date:	
Fish Permit #: SM07-34821 Date: 2007/06/17 To: 2007/06/17 Agency: C660 Crew: KM TS Resample:															nple:
SITE / METHOD															
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment															
317	104G.03	6 300	35 9			GP3 E	F 1	5	5	150	Т				
						A. GI	EAR	SE	TTIN	IGS					
Site#	MTD/NC	H/P	Date In	Time	In Date	Out Ti	me Out					Cor	mment		
317	EF 1	1	2007/06/	17 08:3	30 2007/	06/17	09:15								
				С.	ELEC	TROF	ISHE	R	SPE	CIFIC	ATIO	NS			
Site#	MTD	/NO	H/P	Encl	Sec	Lenç	gth	Wic	dth	Voltage	Fre	quency	Pulse	Make	Model
317	EF	1	1	0	704	75	5.0	4	.0	350		30	4	SR	LR-24
						FIS	H S	UMI	MAR	Υ					
Site#	MTD	/NO	H/P	Species	Stage	Age	Tota	al#	Lgth (Min/Max)	FishA	ct		Comment	
317	EF	1	1	NFC				0					_	_	

Reach # ILP Map # ILP #

						W A	TEI	RBC	DΥ	Y							
Gazetted Name	: MESS	S CREEK								Loca	al: M	C1					
Project Code	630-0	00000-00	000-00000	-0000-0000)-000-00	00-000	-000-0	000-0									
•			000-00000						Ω								
		00000 00	000 00000	0000 0000	, 000 00				O			ILP	ш.		Reac	ch #: 1.1	
Waterbody ID						ILP I	Map #:						#.				-
Project ID	: 17415	5							L	Lake/Str	eam:	S		Lake F	From D	ate:	
Fish Permit #:	: SM07	'-34821	Date	e: 2007/06	5/13	То	o: 200	07/06/	13	Age	ency:	C660	C	Crew: KM	TS	Resan	nple:
	SITE / METHOD Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment																
301 104G.016	3000	03 9			GP3	EF	1	4		80	M						
					Α.	GEA	A R	SET	TI	NGS		•					
Site# MTD/NO	H/P	Date I	n Time	n Da	te Out	Time	e Out						Co	mment			
301 EF 1	1	2007/06	/13 13:	15 200	7/06/13	13:	:45										
			C	ELEC	TRO	FIS	3 H E	R S	PE	CIF	I C A	TIO	N S				
Site# MTD/N	OV	H/P	Encl	Sec		Length	1	Widt	th	Volt	tage	Freq	uency	Pulse		Make	Model
301 EF	1	1	0	373		150.0		2.	0	50	00	;	30	4		SR	LR-24
					F	ISH	ısι	JMN	1 A F	RY							
Site# MTD/N	VO	H/P	Species	Stage	Αg	je	Tota	l #	Lgth	n (Min/M	ax)	FishAc	t		Co	mment	
301 EF	1	1	NFC				(0				•				•	

Reach # ILP Map # ILP #

										W A	ATE	RBO	D١	Y						
	Projec	t Code	630-	S CREE 000000-0	0000)	Loca	al: M	IC2				
\	Waterb Pro	,	: : 1741	5						ILP	Map #	:	L	_ake/Str	eam:	ILF S	#:		Reach #: 1.2 om Date:	-
	Fish Pe	ermit #:	SM0	7-34821		Da	ite: 200	7/06/1	3	Т	o: 20	07/06/13	3	Age	ency:	C660	Cre	w: KMTS	S Resam	nple:
	Site# NID Map NID# UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment																			
Site#	Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 302 104G.036 30005 9 GP3 EF 1 9 200 T																			
	A. GEAR SETTINGS																			
Site#	MT	D/NO	H/P	Date	In	Tin	ne In	Date	Out	Tim	e Out						Comr	ment		
302	EF	1	1	2007/0	6/13			2007/0			6:15									
						С	. EL	E C	TRO	FI	SHE	R S	PΕ	CIF	I C A	TIO	NS			
Site#		MTD/N	10	H/P		Enc		Sec		.engtl		Width		_	tage	_	uency	Pulse	Make	Model
302	E	<u> </u>	1	1	丄	0		775		180.0		1.5		30	00	;	30	4	SR	LR-24
									F	ISI	H SI	UMM	ΑF	RY						
Site#		MTD/N	10	H/P		ecies	Sta	ge	Age	Э	Tota	ıl# L		(Min/M	,	FishAd	t		Comment	
302	E	<u> </u>	1	1	R	RB	А					1	18		80	R				
												L FIS	S H							
Site#	MT)/NO	H/P	Species	Ler	ngth	Weight	Sex	Ma	t -		Age npl#/Ag	je	Vch#	_	enetic /Smpl#	Roll #	Frame#	Comn	nent
302	EF	1	1	RB	5	54	2.0	U	U											
													_				-			·

Reach # ILP Map # ILP #

									WAT	ΈF	RBO	DΥ							
	•	Code:	630-0	00000	00-000	00-00000-							Local	: MC	C5				
W	aterboo Proje	•	1741	5					ILP Ma	ap #:	:	Lak	e/Stre	eam:	ILP#		R Lake Fror	each #: 1.5 n Date:	5 -
Fi	sh Perr	nit #:	SM07	7-348	21	Date	2007/06	/17	To:	200	07/06/17	7	Age	ncy: (C660	Cre	ew: KM TS	Resar	mple:
								S	ITE	/ [MET	НОГ)						
Site#	NIDI	Мар	NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 30039 9 GP3 VO 1 8 110 T																
319					9					1			-						
319	104G	104G.066 30039 9 GP3 EF 1 8 110 T																	
								Α.	GEA	R :	SET	TIN	G S						
Site#	MTD	/NO	H/P	D	ate In	Time	In Da	te Out	Time C	Out						Com	ment		
319	EF	1	1	200	7/06/1	7 13:4	5 200	7/06/17	14:1:	5									
319	VO	1	1	200	7/06/1	7 13:4	5 200	7/06/17	14:1	5									
						С.	ELE	TRO	FISI	ΗE	R S	PEC	IFI	C A	TION	S			
Site#	M	TD/N	Ю	H	I/P	Encl	Sec	L	ength		Width		Volta	age	Freque	ncy	Pulse	Make	Model
319	EF		1		1	0	547		120.0		4.0		38	0	30		4	SR	LR-24
								F	ISH	sι	J M M	ARY	′						
Site#	M	TD/N	Ю	H/	P	Species	Stage	Ag	e 7	Γotal	l# L	.gth (N	lin/Ma	ıx)	FishAct			Comment	
319	EF		1	·	1	NFC				()	•							•
319	VO		1 1 RB J 2 100 200 R												·				

Reach # ILP Map # ILP #

								,	WAT	ERB	O D	Y						
G			_	S CREEK		00-0000-0	0000-00	00-000	-000-00	0-000-	0	Loca	al: MO	C10				
	,			000000-00														
,	Waterb	ody ID:							ILP Mar	o #:				ILP	#:	F	Reach #: 2	-
	Pro	ject ID:	1741	5								Lake/Str	ream:	S		Lake Fro	om Date:	
	Fish Pe	ermit #:	SM0	7-34821	Da	ate: 200	7/09/13	3	To:	2007/0	9/13	Ago	ency: (2660	Cre	ew: KM MN	MRS Resan	nple:
								S	ITE /	ME	TH	0 D						
Site#	NII	О Мар	NID) # (JTM:Zone	e/East/No	rth/Mth	ıd	MTD/N	O Te	emp	Cond	Turb	id		Co	omment	
501	104	G.036	500	01 9				GP3	EF 1	1 7	7.5	193	Т					
							4	A. 0	EAF	SE	TTI	NGS						
Site#	МТ	D/NO	H/P	Date I	n Tir	ne In	Date C	Out	Time O	ut					Com	ment		
501	EF	1	1	2007/09	/13 1	3:50 2	2007/09	9/13	14:18									
					(C. EL	ECT	RO	FISH	ER	SPI	ECIF	I C A	TIOI	1 S			
Site#		MTD/N	10	H/P	End	ol :	Sec	Le	ength	W	idth	Vol	tage	Frequ	iency	Pulse	Make	Model
501	E	F	1	1	0		768	2	0.00		2.0	30	00	4	0	4	SR	LR-24
								FI	SH	SUM	M A	RY						
Site#	T	MTD/N	10	H/P	Species	Sta	ge	Age	To	otal #	Lgth	n (Min/M	ax)	FishAct	: [Comment	
501	E	F	1	1	RB	J				9	3	5 1	28	R				
							ΙN	DIV	IDU	AL F	ISF	I DA	TA					
Site#	MTE)/NO	H/P	Species	Length	Weight	Sex	Mat		Age		Vch#		netic	Roll #	Frame#	Comr	nent
									_	/Smpl#	/Age			Smpl#				
501	EF	1	1	RB	122	24.5	U	U	SC	1		-	FR	1				
501	EF	1	1	RB	128	26.4	U	U	SC	2			FR	2				
501 501	EF EF	1	1	RB RB	101 73	12.3 4.6	U	U	SC SC	3	1	-	FR FR	3				
501	EF	1	1	RB	88	7.5	U	U	SC	5		-	FR	5				
501	EF	1	1	RB	88	7.8	U	U	SC	6			FR	6				
501	EF.	1	1	RB	80	5.1	U	U	SC	7		1	FR	7				
501	EF.	1	1	RB	73	4.7	U	U	SC	8	1		FR	8		1 1		
501	EF	1	1	RB	35	.4	U	U	SC	9		1	FR	9				
											-			1		1 L		

Reach # ILP Map # ILP #

									WAT	ΓER	ВО	DΥ	•						
G	Projec	t Code	: 630-0	S CREEK 000000-00	0000-000							0	Loca	al: MC	C5				
,		ody ID:							ILP M	ap #:					ILP	#:		Reach #: 2.5	-
	Pro	ject ID:	: 1741	5								L	.ake/Str	eam:	S		Lake Fro	om Date:	
	Fish Pe	ermit #:	SM0	7-34821	D	ate: 20	07/09/	17	To:	2007	7/09/1	17	Age	ency: (C660	Cre	ew: MM R	S Resam	nple:
								S	ITE	/ M	ET	НО	D						
Site#		D Map	NID		UTM:Zon	e/East/N	lorth/M		MTD/		Temp	р	Cond	Turb	d		C	omment	
512	104	1G.066	500	26 9				GP3		1	5		120	Т					
									GEA		ЕТ	TII	NGS						
Site#		D/NO	H/P	Date		me In	Date		Time							Com	nent		
512	EF	1	1	2007/09		9:55	2007/		10:1										
						C. EI							-	_		-			
Site#	+-	MTD/N		H/P	En		Sec	_	ength	_	Width			age	Frequ		Pulse	Make	Model
512	E	F	1	1	С	<u> </u>	735		200.0	911	2.0 M M	-		00	4)	4	SR	LR-24
Site#	1	MTD/N	10	H/P	Specie	a C4				Total :			(Min/M	211	FishAct	1		Comment	
512	E		1	1 1	RB	S 51	age	Ag	е	10tar i	#	154	` .	04	R			Comment	
312	1 -				IND		-	יומע	/IDL		FI				IX				
Site#	MTE	D/NO	H/P	Species	Length	Weigh				Ag		•	Vch#		netic	Roll #	Frame#	Comm	nent
				'					S	tr/Smp		ge		Str/S	Smpl#				
512	EF	1	1	RB	195	73.4	U	U	SC	1				FR	1				
512	EF	1	1	RB	204	87.1	U	U	SC	2				FR	2				
512	EF	1	1	RB	161	49.4	U	U	SC	3				FR	3				
512	EF	1	1	RB	165	47.7	U	U	SC		1			FR	4				
512	EF EF	1	1	RB	173	58.8	U	U	SC	5				FR	5				
512 512	EF	1	1	RB RB	173 148	55.1 33.8	U	U	SC SC	7			-	FR FR	6 7				
512	EF	1	1	RB	154	37.5	U	U	SC	8			1	FR	8				
012	L - '	<u>'</u>	L '	I ND	107	07.0	J	J	00	1	<u> </u>		I		U				

Reach # ILP Map # ILP #

						V	ATE	RB	O D Y						
Gaz	etted Nam	e: SCH	AFT CREE	K						Local:	SC	1			
Р	roject Coc	le: 630-0	000-000	00-00000-	0000-0000-0	000-000-0	000-000	-000-0							
	WS Coo	le: 630-3	344000-000	00-00000-	0000-0000-0	000-000-0	000-000	-000-0	00						
W	aterbody I	D:				II	LP Map	#:				ILP #:	F	Reach #: 1.1	-
	Project I	D: 1741	5						L	ake/Strean	n:	S	Lake Fro	m Date:	
Fi	sh Permit	#: SM07	7-34821	Date	: 2007/06/1	4	To: 2	007/06	/14	Agency	y: C	660 (Crew: KM TS	Resar	nple:
						S1	TE /	ΜE	тно	D					
Site#	NID Ma) NID	# U	ΓM:Zone/Ea	ast/North/Mt	hd N	MTD/NC) Te	mp (Cond Tu	ırbic	t	Co	mment	
303	104G.03	5 300	07 9			GP3 E	≣F 1	3	3	70	T				
						A. G	EAR	SE	TTII	NGS					
Site#	MTD/NC	H/P	Date In	Time	In Date	Out T	ime Ou	t				Co	mment		
303	EF 1	1	2007/06/	14 08:1	5 2007/0	06/14	09:00								
				С.	ELEC	TROF	ISH	ER	SPE	CIFIC	Α٦	TIONS			
Site#	MTD	/NO	H/P	Encl	Sec	Ler	ngth	Wi	dth	Voltage)	Frequency	Pulse	Make	Model
303	EF	1	1	0	671	19	0.0	3	3.0	550		30	4	SR	LR-24
						FIS	SH S	UM	MAR	Y					
Site#	MTD	/NO	H/P	Species	Stage	Age	То	tal#	Lgth	(Min/Max)	F	FishAct		Comment	
303	EF	1	1	NFC				0							

Reach # ILP Map # ILP #

								W A	TEI	RBC	DY							
	roject	Code	: 630-0		0000-00000		-0000-000-00 -0000-000-0				00	Loca	al: S	C3				
W		ody ID ject ID	: : 1741	5				ILP I	Мар #	:	La	ke/Str	eam:	ILP#	:	R Lake Fror	each #: 1.3 n Date:	3 -
Fi	sh Pe	rmit #:	SM07	7-34821	Dat	e: 200	07/06/15	To	o: 200	07/06/	15	Age	ency:	C660	С	rew: KMTS	Resar	nple:
							5	ITE	E / I	ME	гно	D						
Site#																		
308																		
							Α.	GE	A R	SET	ГТІМ	GS						
Site#	MT	D/NO	H/P	Date I	n Tim	e In	Date Out	Time	e Out						Cor	nment		
308	EF	1	1	2007/06	715 08:	30	2007/06/15	09	:15									
					С	. EL	ECTRO	FIS	SHE	R S	SPE	CIF	I C A	TION	S			
Site#		MTD/N	VO	H/P	Encl		Sec	Length	1	Wid	th	Volt	tage	Freque	ency	Pulse	Make	Model
308	EF		1	1	0		506	200.0)	2.	.0	50	00	30		4	SR	LR-24
							F	ISH	เ รเ	NW	/ AR	Υ						
Site#		MTD/N	NO	H/P	Species	Sta	age Aç	je	Tota	I #	Lgth (Min/M	ax)	FishAct			Comment	
308	EF		1	1	NFC				(0								

Reach # ILP Map # ILP #

Gazetted Name: SCHAFT CREEK										W A 1	ΓER	BOD	Υ						
Project ID: 17415		Projec WS	t Code	630-0	000000-00	000-000				0-000-0	00-00		Loc	al: S		и.		Danah III	_
Site# NID Map	'		,		5					ILP IVI	ар #:		Lake/S	tream:		#:			o -
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment		Fish Pe	ermit #:	SM0	7-34821	D	ate: 200	7/06/17	7	To:	2007	7/06/17	Ą	gency:	C660	Cre	ew: KMT	S Resa	mple:
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment									S	ITE	/ M	IETH	O D						
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment	Site#	NIE) Мар	NID) # l	JTM:Zon	e/East/No	orth/Mth	nd	MTD/	NO	Temp	Cond	Turk	oid		С	Comment	
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment	320	104	G.066	300	41 9							•							
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment									Α. (GEA	R S	ETT	INGS	3					
Site# MTD/NO	Site#	MT	D/NO	H/P	Date	In Ti	me In	Date	Out	Time	Out					Com	ment		
Site# MTD/NO	320	EF	1	1	1 2007/06/17 15:10 2007/06/17 15:40														
320 EF 1						•	C. EL	EC1	RO	FIS	HEF	RSP	ECIF	ICA	TION	N S			
Site# MTD/NO	Site#		MTD/N	10	H/P	En	cl	Sec	L	ength		Width	Vo	ltage	Frequ	iency	Pulse	Make	Model
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 320 EF 1 1 RB INDIVIDUAL FISH DATA Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Str/Smpl# Roll # Frame# Comment 320 EF 1 1 1 RB 128 25.5 U U SC 1 FR 1 FR 1 Image: Str/Smpl# Image: Str/Smpl# <t< td=""><td>320</td><td>EF</td><td><u> </u></td><td>1</td><td>1</td><td>С</td><td></td><td>478</td><td></td><td></td><td>上</td><td></td><td></td><td>550</td><td>3</td><td>0</td><td>4</td><td>SR</td><td>LR-24</td></t<>	320	EF	<u> </u>	1	1	С		478			上			550	3	0	4	SR	LR-24
320 EF 1									F	ISH	SU	ММА	RY						
Site# MTD/NO				10			s Sta	ige	Age)								Comment	
Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Str/Smpl# Roll # Frame# Comment 320 EF 1 1 RB 128 25.5 U U SC 1 FR 1 1 320 EF 1 1 RB 127 23.2 U U SC 2 FR 2 320 EF 1 1 RB 181 69.0 U U SC 3 FR 3 320 EF 1 1 RB 164 55.5 U U SC 4 FR 4	320	EF	<u> </u>	1	1	RB	J								R				
Str/Smpl#/Age Str/Smpl# Str/Smpl#/Age Str/Smpl# Str/Smpl# 320 EF 1 1 RB 128 25.5 U U SC 1 FR 1 320 EF 1 1 RB 127 23.2 U U SC 2 FR 2 320 EF 1 1 RB 181 69.0 U U SC 3 FR 3 320 EF 1 1 RB 164 55.5 U U SC 4 FR 4										_							•		
320 EF 1 1 RB 127 23.2 U U SC 2 FR 2 320 EF 1 1 RB 181 69.0 U U SC 3 FR 3 320 EF 1 1 RB 164 55.5 U U SC 4 FR 4	Site#	MTC)/NO	H/P	Species	Length	Weight	Sex	Mat				Vch#			Roll#	Frame#	Com	ment
320 EF 1 1 RB 181 69.0 U U SC 3 FR 3 320 EF 1 1 RB 164 55.5 U U SC 4 FR 4	320	EF	1	1	RB	128	25.5	U	U	SC	1			FR	1				
320 EF 1 1 RB 164 55.5 U U SC 4 FR 4	320		1	1											2				
									_										
320 EF 1 1 RB 125 21.8 U U SC 5 FR 5									4										
	320	EF	1	1	RB	125	21.8	U	U	SC	5	5		FR	5				

Reach # ILP Map # ILP #

						W	ATE	RB	ODY						
Gaz	etted Nam	e: SCH	AFT CREE	K						Local:	SC	6			
Р	roject Cod	e: 630-0	000000-000	000-00000-	0000-0000-	000-000-0	000-000	-000-0)						
	WS Cod	e: 630-3	344000-000	000-00000-	0000-0000-	000-000-0	000-000	-000-0	000						
W	aterbody II	D:				IL	.Р Мар	#:				ILP #:	F	Reach #: 1.6	} -
	Project II	D: 1741	5						La	ake/Strear	m:	S	Lake Fro	m Date:	
Fi	Fish Permit #: SM07-34821 Date: 2007/06/14 To: 2007/06/14 Agency: C660 Crew: KM TS Resample: SITE / METHOD														
						SIT	ΓE /	ΜE	тно	D					
Site#	NID Map	NID	# U	TM:Zone/E	ast/North/M	thd M	ITD/NO	Te	mp (Cond T	urbic	b	Co	mment	
307	104G.03	5 300	16 9			GP3 E	F 1	6	3	110	Τ				
						A. G	EAR	SE	TTIN	IGS					
Site#	MTD/NC	H/P	Date Ir	n Time	In Date	Out Ti	ime Out	:				Co	mment		
307	EF 1	1	2007/06/	14 15:4	5 2007/	06/14	16:15								
				С.	ELEC	TROF	ISH	ER	SPE	CIFIC	A 7	TIONS			
Site#	MTD	/NO	H/P	Encl	Sec	Len	gth	Wi	dth	Voltage	е	Frequency	Pulse	Make	Model
307	EF	1	1	0	435	200	0.0	2	2.0	500		30	4	SR	LR-24
						FIS	SH S	UM	MAR	Υ					
Site#	MTD	/NO	H/P	Species	Stage	Age	Tot	al#	Lgth (Min/Max)	I	FishAct		Comment	
307	EF	1	1	NFC				0					•	•	

Reach # ILP Map # ILP #

										W A	A T E	RB	O D	Υ								
	Projec WS Waterb	t Code: Code: ody ID:	630-0 630-3	344000-0	0000	0-0000	0-0000- 0-0000-			0-00		-000-	000			il: SC	ILP	#:	Lake F	Reach		-
	Fish Pe	ermit #:	SM07	7-34821		Da	te: 200	7/06/1	6	Т	o: 2	007/0	6/16		Age	ency: C	660	Cı	ew: KM T	S	Resam	nple:
									S	ITI	E /	M E	ТН	O D								
Site#	NIE) Map	NID	#	UTN	И:Zone	/East/No	orth/Mt	hd	MT	D/NC) Te	emp	Con	nd	Turbi	d		(Comme	ent	
316	104	G.066	300	33 9	1				GP3	EF	1		7	90		Т						
									Α.	G E	ΑR	SE	TT	I N G	S							
Site#	MT	D/NO	H/P	Date	· In	Tin	ne In	Date	Out	Tim	e Ou	t						Con	nment			
316	EF	1	1	2007/0	6/16	3 14	1:45	2007/0	06/16	15	5:15											
						С	. EL	EC.	TRO	FI	S H	ΕR	SP	E C I	ΙF	I C A	TIOI	۱S				
Site#		MTD/N	10	H/P		Enc	ı	Sec	L	engtl	h	W	idth	,	Volt	age	Frequ	iency	Pulse		Make	Model
316	EF	=	1	1		0		523		110.0)		4.0		35	50	3	0	4		SR	LR-24
									F	ISI	H S	UM	МА	RY								
Site#		MTD/N	Ю	H/P	S	Species	Sta	ige	Age)	To	tal#	Lgt	h (Mir	n/Ma	ax)	FishAct	:		Con	nment	
316	EF	= [1	1		RB	J					4	7	'1	1	69	R					
								ΙN	IDI/	/ I D	U A	L F	ISI	1 [) A	ΤA						
Site#	MTD)/NO	H/P	Specie	s Le	ength	Weight	Sex	Ma	t		Age		Vc	:h#	Gei	netic	Roll #	Frame#		Comn	nent
											Str/S	Smpl#	/Age			Str/S	Smpl#					
316	EF	1	1	RB		169	46.4	U	U	S	C	1				FR	1					
316	EF	1	1	RB		76	5.7	U	U	S	С	2				FR	2					
316	EF	1	1	RB		77	5.3	U	U	S	С	3				FR	3					
316	EF	1	1	RB		71	4.7	U	U	S	C	4				FR	4					

Reach # ILP Map # ILP #

									WAT	ERB	0 D Y	1						
	Projec WS Waterb	t Code:	630-0	AFT CRE 000000-00 344000-00	000-000					0-000-0	000	Loca	al: S	ILF	· #:	Lake F	Reach #: 2.1	-
	Fish Pe	ermit #:	SM07	7-34821	С	ate: 20	07/09/1	3	To: 2	2007/09	9/13	Age	ency:	C660	Сг	ew: MM F	RS Resar	nple:
								S	ITE /	ME	THO	D D						
Site#	NII	О Мар	NID	# l	JTM:Zon	e/East/N	lorth/Mt	hd	MTD/N	O Te	mp	Cond	Tur	bid		C	Comment	
500	104	IG.046	500	35 9				GP3	EF 1		5	128	C)				
								A. (3 E A R	SE	TTI	NGS						
Site#	MT	D/NO	H/P	Date I	ln T	me In	Date	Out	Time O	ut					Con	ment		
500	EF	1	1	2007/09		2:15	2007/0		12:45									
						C. E	LEC.	TRO	FISH	ER	SPE	CIF	I C A	OITA	N S			
Site#		MTD/N	10	H/P	Er	ıcl	Sec	Le	ength	Wi	dth	Volt	tage	Freq	uency	Pulse	Make	Model
500	EI	F	1	1	()	602		40.0		3.0		25	,	30	4	SR	LR-24
								FI	SHS	SUM	MAI	٦Y						
Site#		MTD/N	10	H/P	Specie	s St	tage	Age	: To	otal #	Lgth	(Min/M	ax)	FishAc	t		Comment	
500	EI	F	1	1	RB	J				15	18		75	R				
							IN	IDIV	IDU	AL F	ISH	DA	TA					
Site#	MTE	D/NO	H/P	Species	Length	Weigh	t Sex	Mat		Age Smpl#/	Age	Vch#		enetic /Smpl#	Roll#	Frame#	Comr	nent
500	EF	1	1	RB	137	30.6	U	U	SC	1			FR	1			parasite on dor	sal fin
500	EF	1	1	RB	148	42.8	U	U	SC	2			FR	2				
500	EF	1	1	RB	175	59.6	U	U	SC	3			FR	3				
500	EF	1	1	RB	120	23.3	U	U	SC	4			FR	4				
500	EF	1	1	RB	107	13.7	U	U	SC	5		ļ	FR	5				
500 500	EF EF	1	1	RB RB	101 98	11.4 10.2	U	U	SC SC	6 7			FR FR	6 7			parasite on dors	nal fin
500	EF	1	1	RB	103	10.2	U	U	SC	8			FR	8			parasite on doi:	Sai IIII
500	EF	1	1	RB	134	24.1	U	U	SC	9			FR	9				
500	EF.	1	1	RB	90	7.7	U	U	SC	10		1	FR	10				
500	EF	1	1	RB	70	3.8	U	U	SC	11		1	FR	11		1	1	
500	EF	1	1	RB	51	2.1	U	U	SC	12		1	FR	12		1		
500	EF	1	1	RB	80	7.6	U	U	SC	13			FR	13				
500	EF	1	1	RB	81	7.1	U	U	SC	14			FR	14				
500	EF	1	1	RB	131	24.0	U	U	SC	15			FR	15				

Reach # ILP Map # ILP #

						W	VATE	RB	O D Y	1					
Gaz	etted Nam	e: SCH/	AFT CREE	K						Local: S	C1				
Р	roject Cod	e: 630-0	000-000	000-00000-	0000-0000-0	000-000-	000-000	-000-0)						
	WS Cod	e: 630-3	344000-000	000-00000-	0000-0000-0	000-000-	000-000	-000-0	00						
W	aterbody II	D:				II	LP Map	#:			ILP #:		R	each #: 2.1	-
	Project II	D: 1741	5						L	ake/Stream:	S		Lake Fror	n Date:	
Fi	sh Permit	#: SM07	7-34821	Date	: 2007/09/1	15	To: 2	007/09)/15	Agency:	C660	Cre	w: MM RS	Resan	nple:
						SI	TE /	ΜE	тнс) D					
Site#	NID Map	NID	# U	TM:Zone/E	ast/North/M	thd N	MTD/NC) Te	mp	Cond Turl	oid		Cor	mment	
505															
						A. G	EAR	SE	TTI	NGS					
Site#	MTD/NC	H/P	Date In	Time	In Date	Out T	ime Ou	t				Comr	nent		
505	EF 1	1	2007/09/	15 08:5	55 2007/	09/15	09:20								
				С.	ELEC	TROF	твн	ER	SPE	CIFICA	TION	S			
Site#	MTD	/NO	H/P	Encl	Sec	Ler	ngth	Wi	dth	Voltage	Freque	ncy	Pulse	Make	Model
505	EF	1	1	0	716	11	0.0	•	1.0	900	30		4	SR	LR-24
						FIS	SH S	UM	MAR	R Y					
Site#	MTD	/NO	H/P	Species	Stage	Age	То	tal#	Lgth	(Min/Max)	FishAct			Comment	
505	EF	1	1	NFC				0							

Reach # ILP Map # ILP #

						W	ATER	BOD	Υ						
Gaz	etted Nam	e: SCH	AFT CREE	K					Local:	SC	3				
Р	roject Cod	e: 630-0	000000-000	000-00000-	0000-0000-	000-000-0	00-000-00	0-0							
	WS Cod	e: 630-3	344000-00	000-00000-	0000-0000-	000-000-0	00-000-00	0-000							
W	aterbody II	D:				IL	P Map #:				ILP #:	R	teach #: 2.3	١-	
	Project II	D: 1741	5						Lake/Strea	am:	S	Lake From	m Date:		
Fi	Fish Permit #: SM07-34821 Date: 2007/09/15 To: 2007/09/15 Agency: C660 Crew: MM RS Resample: SITE / METHOD														
						SIT	E / M	ETH	O D						
Site#	NID Map	NID	# U	TM:Zone/E	ast/North/M	thd M	TD/NO	Temp	Cond	Turbi	d	Co	mment		
507	104G.04	5 500	09 9			GP3 E	F 1	6	60	Т					
						A. GI	EAR S	ETTI	INGS						
Site#	MTD/NC	H/P	Date Ir	n Time	In Date	Out Ti	me Out				Co	mment			
507	EF 1	1	2007/09/	15 12:4	5 2007/	09/15	13:07								
				С.	ELEC	TROF	ISHEF	SP	ECIFI	CA	TIONS				
Site#	MTD	/NO	H/P	Encl	Sec	Lenç	gth	Width	Voltaç	ge	Frequency	Pulse	Make	Model	
507	EF	1	1	0	638	150	0.0	1.0	450		40	4	SR	LR-24	
						FIS	H SU	ММА	RY						
Site#	MTD	/NO	H/P	Species	Stage	Age	Total #	‡ Lgtl	h (Min/Max	()	FishAct		Comment		
507	EF	1	1	NFC			0					•	•		

Reach # ILP Map # ILP #

									WAT	ERB	0 D Y	Y						
	Projec WS Waterb	t Code:	630-0	AFT CRE 000000-00 344000-00	000-000					0-000-0	000	Loca Lake/Str	al: S	ILF	· #:		Reach #: 2.4 om Date:	
	Fish Pe	ermit #:	SM07	7-34821	D	ate: 20	07/09/1	4	To:	2007/09	9/14	Age	ency:	C660	Cr	ew: MM R	S Resan	nple:
								S	ITE /	ME	THO	O D						
Site#	NII	О Мар	NID	# l	JTM:Zon	e/East/N	lorth/Mt	hd	MTD/N	O Te	mp	Cond	Tur	bid		C	omment	
510	104	IG.045	500	14 9				GP3	EF 1	١ ;	3	60	Т	-				
								Α. (G E A R	SE	TTI	NGS						
Site#	MT	D/NO	H/P	Date I	ln Ti	me In	Date	Out	Time O	ut					Com	ment		
510	EF	1	1	2007/09		2:10	2007/0		12:55									
					(C. EI	LEC.	ΓRΟ	FISH	ER	SPE	CIF	I C A	OITA	NS			
Site#		MTD/N	10	H/P	En	cl	Sec	L	ength	Wi	dth	Vol	tage	Freq	uency	Pulse	Make	Model
510	El	F	1	1	C)	1336		200.0		1.0		00	4	40	4	SR	LR-24
								F	SHS	SUM	MAI	RY						
Site#		MTD/N	10	H/P	Specie	s St	age	Age	е То	otal#	Lgth	(Min/M	ax)	FishAc	t		Comment	
510	EI	F	1	1	RB	J				15	10	_	91	R				
							١N		IDU	AL F	ISH							
Site#	MTE	D/NO	H/P	Species	Length	Weigh	t Sex	Mat		Age Smpl#/	Age	Vch#		enetic /Smpl#	Roll #	Frame#	Comn	nent
510	EF	1	1	RB	159	43.2	U	U	SC	1			FR	1				
510	EF	1	1	RB	167	54.4	U	U	SC	2			FR	2				
510	EF	1	1	RB	160	44.8	U	U	SC	3			FR	3				
510	EF	1	1	RB	176	66.2	U	U	SC	4			FR	4				
510	EF	1	1	RB	191	76.7	U	U	SC	5			FR	5				
510	EF	1	1	RB	171	51.7	U	U	SC	6			FR	6				
510 510	EF EF	1	1	RB RB	170 123	53.7 19.3	U	U	SC	7			FR FR	7	<u> </u>			
510	EF	1	1	RB	217	16.5	U	U	SC	9			FR	9				
510	EF	1	1	RB	117	17.0	U	U	SC	10			FR	10	<u> </u>			
510	EF	1	1	RB	118	15.9	U	U	SC	11		+	FR	11		1		
510	EF.	1	1	RB	127	24.1	U	U	SC	12		1	FR	12		1		
510	EF	1	1	RB	103	13.4	U	U	SC	13			FR	13		1		
510	EF	1	1	RB	132	25.4	U	U	SC	14		1	FR	14		1 1		
510	EF	1	1	RB	116	17.8	U	U	SC	15		1	FR	15		1		
•				-	-	•			-	-				•	-			

Reach # ILP Map # ILP #

									WAT	ΓER	RBO	O D Y	7							
	Projec WS Waterb	t Code:	630-6	344000-0	EEK 10000-000 10000-000					00-00	00-00		Loca	al: S	IL	.P #:			Reach #: 2.9	5 -
	Fish Pe	ermit #:	SM0	7-34821	D	ate: 20	07/09/1			200				ency:	C660		Cre	w: MM C	D Resa	mple:
								S	ITE	/ N	ΝE.	ТНС) D							
Site#	NII	О Мар	NID) #	UTM:Zon	e/East/N	lorth/Mt	thd	MTD/	NO	Ten	np	Cond	Turk	id			С	omment	
513	104	G.066	500	28 9				GP3	EF	1	4		70	N						
								Α.	GEA	RS	S E	TTI	NGS							
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment 513 EF 1 1 2007/09/17 12:50 2007/09/17 13:30																				
C. ELECTROFISHER SPECIFICATIONS																				
Site# MTD/NO H/P Encl Sec Length Width Voltage Frequency Pulse Make Mode															Model					
															LR-24					
513 EF 1 1 0 672 200.0 3.0 400 40 4 SR LR FISH SUMMARY															ı					
Site#	Т	MTD/N	IO	H/P	Specie	s St	age	Age		Total	#	Lath	(Min/M	lay)	Fish	\ct	Г		Comment	
513	EI		1	1	RB	A		7.9		12		116	`	208	R	101			Common	
			•	<u> </u>				1 D I /	/IDU					TA						
Site#	MTE	D/NO	H/P	Species	Length	Weigh					ge		Vch#		netic	Т	Roll#	Frame#	Com	ment
										tr/Sm	_	\ae	1		Smpl#					
513	EF	1	1	RB	187	75.8	U	U	SC		1	J -		FR	1					
513	EF	1	1	RB	208	93.2	Ü	Ū	SC	1	2			FR	2	+				
513	EF	1	1	RB	189	49.7	U	U	SC		3			FR	3	T				
513	EF	1	1	RB	149	31.8	U	U	SC		4			FR	4					
513	EF	1	1	RB	134	42.8	U	U	SC		5			FR	5					
513	EF	1	1	RB	172	32.7	U	U	SC		6			FR	6					
513	EF	1	1	RB	118	18.9	U	U	SC		7			FR	7					
513	EF	1	1	RB	127	23.8	U	U	SC		8			FR	8					
513	EF	1	1	RB	132	21.9	U	U	SC		9			FR	9					
513	EF	1	1	RB	122	19.7	U	U	SC		10			FR	10	I				
513	EF	1	1	RB	137	30.1	U	U	SC		11			FR	11					
513	EF	1	1	RB	116	174.0	U	U	SC	1	12			FR	12					· · · · · · · · · · · · · · · · · · ·

Reach # ILP Map # ILP #

						W	ATE	RB	ODY							
Gaz	etted Nam	e: SCH	AFT CREE	K						Local:	SC	6				
Р	roject Cod	e: 630-0	00-0000	000-00000-	0000-0000-	000-000-0	000-000	-000-0)							
	WS Cod	e: 630-3	344000-00	000-00000-	0000-0000-	000-000-0	000-000	-000-0	000							
W	aterbody II) :				IL	Р Мар	#:				ILP #:		R	each #: 2.6	-
	Project II	D: 1741	5						La	ke/Strea	m:	S	Lak	e Fron	n Date:	
Fi	sh Permit #	#: SM07	7-34821	Date	: 2007/09/	15	To: 2	007/09	9/15	Agend	cy: C	C660	Crew: M	M RS	Resan	nple:
						SII	ΓE /	ΜE	тно	D						
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment																
506	104G.03	5 500	20 9			GP3 E	F 1	6	6	60	Т					
						A. G	EAR	SE	TTIN	IGS						
Site#	MTD/NC	H/P	Date Ir	n Time	In Date	Out Ti	ime Ou	t				(omment			
506	EF 1	1	2007/09/	10:1	5 2007/	09/15	10:45									
				С.	ELEC	TROF	ISH	ER	SPE	CIFIC	A	TIONS				
Site#	MTD	/NO	H/P	Encl	Sec	Len	gth	Wi	dth	Voltag	е	Frequenc	y Puls	se	Make	Model
506	EF	1	1	0	786	170	0.0	,	1.0	600		40	4		SR	LR-24
						FIS	SH S	UM	MAR	Υ						
Site#	MTD	/NO	H/P	Species	Stage	Age	Tot	tal#	Lgth (Min/Max)		FishAct			Comment	
506	EF	1	1	NFC				0								

Reach # ILP Map # ILP #

									WAT	ERI	BOD	Υ						
	Projec	t Code:	630-0	AFT CRE 000000-00 344000-00	0000-0000							Lo	cal: S	C7				
١	Vaterb	ody ID:							ILP Ma					ILP	#:	F	Reach #: 2.7	-
	Pro	ject ID:	1741	5								Lake/S	tream:	S		Lake Fro	om Date:	
ı	Fish Pe	ermit #:	SM0	7-34821	Da	ate: 200	7/09/16	;	To:	2007/	/09/16	Α	gency:	C660	Cre	ew: MM RS	S Resam	nple:
								S	ITE /	/ M	ETH	O D						
Site#		O Map	NID		JTM:Zone	e/East/No		-	MTD/N		Temp	Cond	Turk			Co	omment	
511 104G.066 50012 9 GP3 EF 1 4 60 T A. GEAR SETTINGS																		
	1										EII	ING	•					
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment 511 EF 1 1 2007/09/16 15:05 2007/09/16 15:40																		
511	EF	1	1	2007/09							6 D	ECII		TIO	N C			
C. ELECTROFISHER SPECIFICATIONS																		
Site# MTD/NO H/P Encl Sec Length Width Voltage Frequency Pulse Make 511 EF 1 1 O 840 200.0 1.0 600 40 4 SR														Model LR-24				
311	1 -		'	<u> </u>			340		ISH :	SUI			500		FU	4	SIX	LIX-24
Site#	Т.	MTD/N	IO	H/P	Species	s Sta	ne T	Age		otal #		th (Min/l	(lav)	FishAc	+		Comment	
511	EI		1	1	RB	J	90	rige	<u> </u>	9	Ū	76	220	R			Common	
							IN	DIV	IDU.	A L	FIS	H D	АТА					
Site#	MTE)/NO	H/P	Species	Length	Weight	Sex	Mat	t	Age	е	Vch	# Ge	enetic	Roll #	Frame#	Comn	nent
										/Smpl	l#/Age		Str/	Smpl#				
511	EF	1	1	RB	169	54.2	U	U	SC	1			FR	1				
511	EF	1	1	RB	172	53.9	U	U	SC	2			FR	2				
511 511	EF EF	1	1	RB RB	220 139	119.1 33.3	U	U	SC SC	3			FR FR	3				
511	EF	1	1	RB	119	18.4	U	U	SC	5		-	FR	5				
511	EF	1	1	RB	88	7.5	U	U	SC	6			FR	6				
511	EF	1	1	RB	114	14.0	U	U	SC	7			FR	7				
511	EF	1	1	RB	76	4.9	U	U	SC	8			FR	8				
511	EF	1	1	RB	85	6.2	U	U	SC	9			FR	9				

Reach # ILP Map # ILP #

						١	NATI	ERB	ODY	7						
Gaz	etted Nam	ie:								Local:	SK	C2				
Р	roject Cod	le: 630-0	000-000	000-00000-	0000-0000-0	000-000	-000-000	0-000-0)							
	WS Cod	le: 630-3	344000-442	200-00000-0	0000-0000-0	000-000	-000-000	0-000-0	000							
W	aterbody I	D:					ILP Map	#:				ILP #:		Re	each #: 1.2	-
	Project I	D: 1741	5						L	.ake/Strea	m:	S	Lake	e From	n Date:	
Fi	Fish Permit #: SM07-34821 Date: 2007/06/16 To: 2007/06/16 Agency: C660 Crew: KM TS Resample: SITE / METHOD															nple:
						SI	TE /	ΜE	тно) D						
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment																
315	104G.04	6 300	31 9			GP3	EF 1	Ç	9	150	С					
						A. G	EAR	SE	TTII	NGS						
Site#	MTD/NO) H/P	Date In	Time	In Date	Out	Time Ou	ıt				C	omment			
315	EF 1	1	2007/06/	16 13:0	0 2007/0	06/16	13:30									
				С.	ELEC	TRO	FISH	ER	SPE	CIFIC	A	TIONS				
Site#	MTD	/NO	H/P	Encl	Sec	Le	ngth	Wi	dth	Voltag	е	Frequenc	y Puls	se	Make	Model
315	EF	1	1	0	364		50.0	10	0.0	300		30	4		SR	LR-24
						FI	SHS	UM	MAR	RY						
Site#	MTC	/NO	H/P	Species	Stage	Age	To	tal#	Lgth	(Min/Max))	FishAct		(Comment	
315	EF	1	1	NFC				0								

Reach # ILP Map # ILP #

						W	ATE	RBC	DDY						
Gaz	etted Nam	e:								Local:	SKC	C2			
P	roject Cod	e: 630-0	000000-000	000-00000-	0000-0000-	000-000-0	00-000-	0-000							
	WS Cod	e: 630-3	344000-442	200-00000-	0000-0000-	000-000-0	00-000-	00-00	00						
W	aterbody II	D:				IL	P Map #	:				ILP #:	F	Reach #: 2.2	<u> -</u>
	Project II	D: 1741	5						La	ke/Strear	n:	S	Lake Fro	m Date:	
Fi	sh Permit	#: SM07	7-34821	Date	: 2007/09/1	17	To: 20	07/09/	17	Agenc	y: C	660	Crew: MM CD) Resar	nple:
SITE / METHOD															
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment															
514 104G.046 50022 9 GP3 EF 1 9 190 C															
						A. GI	EAR	SEI	TTIN	GS					
Site#	MTD/NC	H/P	Date Ir	Time	In Date	Out Ti	me Out					Co	mment		
514	EF 1	1	2007/09/	17 16:4	0 2007/	09/17	17:20								
				С.	ELEC	TROF	ISHE	RS	SPE (CIFIC	ΑТ	TIONS			
Site#	MTD	/NO	H/P	Encl	Sec	Len	gth	Wid	th	Voltage	Э	Frequency	Pulse	Make	Model
514	EF	1	1	0	732	200	0.0	4.	.0	300		40	4	SR	LR-24
						FIS	H S	U M N	ΙAR	Υ					
Site#	MTD	/NO	H/P	Species	Stage	Age	Tota	ıl#	Lgth (Min/Max)	F	FishAct		Comment	
514	EF	1	1	NFC				0							

Reach # ILP Map # ILP #

							WAT	TER	BOD	Υ						
	etted Name		00000-00	000-00000-	0000-0000-	000-00	0-000-0	00-00	0-0	Loc	al: S	KC3				
	WS Code	: 630-3	344000-442	200-00000-	0000-0000	000-00	0-000-0	00-00	0-000							
Wa	aterbody ID):					ILP Ma	lap #:				ILP#	ŧ:	R	each #: 2.3	· -
	Project ID	: 1741	5							Lake/S	tream:	S		Lake Fror	n Date:	
Fis	sh Permit #	: SM07	7-34821	Date	2007/09/	18	To:	2007	/09/18	Ą	gency:	C660	С	rew: MM CD	Resan	nple:
						S	ITE	/ M	ETH	O D						
Site#																
515 104G.046 50030 9 GP3 EF 1 5 150 C																
						Α.	GEA	R S	ETT	INGS	3					
Site#	MTD/NO	H/P	Date Ir	Time	In Date	Out	Time (Out					Cor	nment		
515	EF 1	1	2007/09/	18 09:3	5 2007	/09/18	10:0	00								
				С.	ELEC	TRC	FIS	HER	SP	ECIF	ICA	TION	S			
Site#	MTD/	NO	H/P	Encl	Sec	L	Length		Width	Vo	ltage	Freque	ency	Pulse	Make	Model
515	EF	1	1	0	666		150.0		2.0	,	150	40		4	SR	LR-24
						F	ISH	SU	ММА	RY						
Site#	MTD/	NO	H/P	Species	Stage	Ag	je -	Total #	t Lgt	th (Min/N	Лах)	FishAct		•	Comment	
515	EF	1	1	NFC				0								

Reach # ILP Map # ILP #

Gazetted Name: Local: TC1	1.1 -													
Project ID: 17415 Lake/Stream: S Lake From Date:														
Project ID: 17415 Lake/Stream: S Lake From Date:														
SITE / METHOD														
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment 310 104G.045 30045 9 GP3 EF 2 4 30 T														
310 104G.045 30045 9 GP3 EF 2 4 30 T														
310 104G.045 30050 9 GP3 EF 1 4 30 T														
A. GEAR SETTINGS														
Site# MTD/NO H/P Date In Time In Date Out Time Out Comment														
310 EF 1 1 2007/06/15 12:30 2007/06/15 13:00														
310 EF 2 1 2007/06/15 13:55 2007/06/15 14:30														
C. ELECTROFISHER SPECIFICATIONS														
Site# MTD/NO H/P Encl Sec Length Width Voltage Frequency Pulse Ma	ke Model													
310 EF 1 1 0 535 200.0 2.0 750 30 4 SI	R LR-24													
310 EF 2 1 O 349 200.0 2.0 650 30 4 SI	R LR-24													
FISH SUMMARY														
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comme	nt													
310 EF 1 1 NFC 0														
310 EF 1 1 NFC 0														

Reach # ILP Map # ILP #

										W A	A T E	RB	O D	Υ							
	Project W:		630-0	000000-0 344000-6						0-000		-000			Loca	l: TC	C2	4 .		Reach #: 1.	2 -
		ject ID		5							тар			Lake	e/Stre	eam:			Lake Fro		_
	Fish P	ermit #:	SM0	7-34821		Dat	e: 20	07/06/	15	Т	o: 2	007/0	6/15		Age	ncy:	C660	Cre	w: KMTS	S Resa	mple:
									S	ITI	E /	M E	ΤH	O D)						
Site#		D Map	NID			:Zone/	East/N	orth/M			D/NC		emp	Co		Turb	id		C	omment	
309 309		IG.045 IG.045	300 300		_				GP3 GP3	EF EF	2	_	4	50	-	T M					
309	104	IG.045	300	20 9							1 A P		4 T T		-	IVI					
Site#	I M	D/NO	H/P	Date	In	Tim	o In	Date			e Ou			1 14 (3 3			Comr	nont		
309	EF		1	2007/0		111:		2007/			1:50							Com	Hent		
309	EF	2	1	2007/0	6/15	10:	:00	2007/	06/15	1(0:50	1									
						С	. El	EC	TRO	FI	S H	ΕR	SP	E C	IFI	CA	TION	S			
Site#		MTD/N	10	H/P		Encl		Sec	L	.engtl	h	W	'idth		Volta	age	Frequ	ency	Pulse	Make	Model
309	Е		1	1		0		763		200.0			3.0		70	•	30		4	SR	LR-24
309	E	F	2	1		0		778		200.0			4.0	DV	85	0	30)	4	SR	LR-24
										-	_	_	MA			, ,		1			
Site#	H _E	MTD/N	1	H/P 1		ecies	St	age	Ag	е	То	tal #	Lgt	h (M	in/Ma	ax)	FishAct			Comment	
309	E		2	1		RB	J					2	18	81	23	33	R				
000			_						N D I \	/ I D	U A			•	D A						
Site#	e# MTD/NO H/P Species Length Weight Sex Mat Str/Si								Age Smpl#	!/Age	V	ch#		netic Smpl#	Roll#	Frame#	Com	ment			
309	EF	2	1	RB		33	158.5	U	U	S	-	1				FR	1				
309	EF	2	1	RB	1	71	64.7	U	U	S	С	2				FR	2				

Reach # ILP Map # ILP #

									W A	ΤE	RBO	DΥ	1							
	•	ode:	630-0				0000-0000- 0000-0000-					0	Loca	al: TO	C3					
W	aterbod Projed	•	1741	5					ILP I	Map #	# :	L	_ake/Str	eam:		P #:	Lake		ach #: 1. Date:	3 -
Fi	sh Perm	nit #:	SM07	7-348	21	Date	2007/06/	15	Тс	: 20	07/06/1	15	Age	ency:	C660	C	Crew: KM	TS	Resa	mple:
								S	ITE	1	MET	HC	D D							
Site#	NID N	Лар	NID	#	UT	M:Zone/E	ast/North/M	lthd	MTD)/NO	Tem	р	Cond	Turk	oid			Com	ment	
311	104G.	045	3004	44	9			GP3	EF	2	5		40	Т						
311	104G.	045	3002	25	9			GP3	EF	1	5		40	М						
								Α.	G E /	A R	SET	TI	NGS							
Site#	MTD/	NO	H/P		ate In	Time		Out	Time							Co	mment			
311	EF	1	1		7/06/1			06/15		:15										
311	EF	2	1	200	7/06/1			06/15		:00										
						С.	ELEC	TRO	FIS	3 H E	ER S	PE	CIF	I C A	TIO	NS				
Site#	M	TD/N	Ю	F	H/P	Encl	Sec	L	_ength	I	Widt	h	Volt	age	Free	quency	Pulse)	Make	Model
311	EF		1		1	0	436		150.0		2.0	0	65	50		30	4		SR	LR-24
311	EF		2		1	0	531		200.0		2.0	0	58	30		30	4		SR	LR-24
								F	ISH	S	UMM	I A F	₹ Y							
Site#	M	TD/N	Ю	H/	/P :	Species	Stage	Ag	е	Tota	al#	Lgth	(Min/M	ax)	FishA	ct		С	omment	
311	EF		1	1	1	NFC	•				0									
311	EF		2		1	NFC	•			•	0				•			•		

Reach # ILP Map # ILP #

						'	WATE	RB	O D Y	1					
Gaz	etted Nam	e: HICK	MAN CRE	EK						Local: F	IC1				
Р	roject Cod	e: 630-0	000-000	000-00000-	0000-0000-	000-000	-000-000	0-000-0)						
	WS Cod	e: 630-3	344000-890	000-00000-	0000-0000-	000-000	-000-000	0-000-0	000						
W	aterbody II	D:					ILP Map	#:			ILP#:	:	R	each #: 1.1	-
	Project II	D: 1741	5						L	_ake/Stream:	S		Lake Fror	m Date:	
Fi	Fish Permit #: SM07-34821 Date: 2007/06/14 To: 2007/06/14 Agency: C660 Crew: KM TS Resample: SITE / METHOD														
						SI	TE /	ΜE	THC	D D					
Site#	NID Map	NID	# U	TM:Zone/E	ast/North/M	thd	MTD/NC) Te	mp	Cond Tur	bid		Cor	mment	
305	104G.03	5 300°	12 9			GP3	EF 1	4	4	120 1	-				
						Α. Θ	EAR	SE	TTI	NGS					
Site#	MTD/NC	H/P	Date In	Time	In Date	Out	Time Ou	ıt				Com	ment		
305	EF 1	1	2007/06/	14 11:3	35 2007/	06/14	12:15								
				С.	ELEC	TRO	FISH	ER	SPE	CIFICA	NOITA	S			
Site#	MTD	/NO	H/P	Encl	Sec	Le	ength	Wi	dth	Voltage	Freque	ncy	Pulse	Make	Model
305	EF	1	1	0	656	2	0.00	2	2.0	500	30		4	SR	LR-24
						FI	SHS	UM	MAF	۲ Y					
Site#	MTD	/NO	H/P	Species	Stage	Age	To	tal#	Lgth	(Min/Max)	FishAct			Comment	
305	EF	1	1	NFC				0							

Reach # ILP Map # ILP #

						W	ATE	RB	ODY						
Gaz	etted Nam	e: HICK	MAN CRE	ΞK						Local:	HC2				
Р	roject Cod	le: 630-0	000-000	00-00000-0	0-0000-0000	00-000-0	000-000	-000-0)						
	WS Coo	le: 630-3	344000-890	00-00000-0	0-0000-0000	00-000-0	000-000	-000-0	00						
W	aterbody I	D:				IL	_Р Мар	#:				ILP #:	R	each #: 1.2	? -
	Project I	D: 1741	5						L	ake/Strean	n: S		Lake Fro	m Date:	
Fi	sh Permit	#: SM07	7-34821	Date:	2007/06/1	4	To: 2	007/06	6/14	Agency	/: C66	60 C	rew: KMTS	Resar	nple:
						SII	TE /	ΜE	тно	D					
Site#															
306	104G.02	5 300	14 9			GP3 E	F 1	4	1	120	T				
						A. G	EAR	SE	TTII	NGS					
Site#	MTD/NC	H/P	Date In	Time	In Date	Out T	ime Ou	t				Cor	mment		
306	EF 1	1	2007/06/	14 13:4	5 2007/0	6/14	14:15								
				С.	ELECT	TR O F	ISH	ER	SPE	CIFIC	ΑT	IONS			
Site#	MTD	/NO	H/P	Encl	Sec	Len	gth	Wi	dth	Voltage		Frequency	Pulse	Make	Model
306	EF	1	1	0	435	200	0.0	2	2.0	350		30	4	SR	LR-24
						FIS	SH S	UM	MAR	RY					
Site#	MTD	/NO	H/P	Species	Stage	Age	То	tal#	Lgth	(Min/Max)	Fis	shAct		Comment	
306	EF	1	1	NFC				0							

Reach # ILP Map #

ILP#

						V	VATE	RB	O D Y	,					
Gaz	etted Nam	e: HICK	MAN CRE	ΞK						Local:	HC3				
Р	roject Cod	le: 630-0	000-000	00-00000-0	0000-0000-0	000-000-	000-000	0-000-0)						
	WS Coo	le: 630-3	344000-890	00-00000-0	0000-0000-0	000-000-	000-000	0-000-0	00						
W	aterbody I	D:				I	LP Map	#:			IL	P#:	R	teach #: 1.3	3 -
	Project I	D: 1741	5						L	.ake/Stream	: S		Lake Froi	m Date:	
Fi	sh Permit	#: SM07	7-34821	Date:	2007/06/1	4	To: 2	2007/06	6/14	Agency	: C660	C	rew: KMTS	Resar	nple:
						SI	TE /	ΜE	тно) D					
Site#	NID Ma) NID	# U	ΓM:Zone/Ea	ast/North/Mt	hd I	MTD/NC) Te	mp	Cond Tu	rbid		Co	mment	
304	104G.03	5 300	10 9			GP3	EF 1	4	1	120	Т				
						A. G	EAR	SE	TTII	NGS					
Site#	MTD/NC	H/P	Date In	Time	In Date	Out 7	Γime Ου	ıt				Cor	mment		
304	EF 1	1	2007/06/	10:0	0 2007/0	06/14	10:30								
				С.	ELEC.	TROF	ISH	ER	SPE	CIFIC	ATIC	NS			
Site#	MTD	/NO	H/P	Encl	Sec	Lei	ngth	Wi	dth	Voltage	Fre	equency	Pulse	Make	Model
304	EF	1	1	0	556	10	0.00	2	2.0	650		30	4	SR	LR-24
						FI	SH S	UM	MAR	RY					
Site#	MTD	/NO	H/P	Species	Stage	Age	То	tal#	Lgth	(Min/Max)	Fish/	Act		Comment	
304	EF	1	1	NFC				0					_		•

Reach # ILP Map # ILP #

								WAT	ΓER	BOD	Υ							
Gaze	etted Name	: HICK	MAN	CREEK	(Loc	al: H	C1					
Pr	oiect Code	e: 630-0	00000	0-0000	0-00000-0	0000-0000-	-000-00	0-000-0	00-00	0-0								
	•					0000-0000-												
\\/.			7400	0 0000	00000	0000 0000	000 00			0 000				> #:		Dag	ch #: 2.1	
VVa	aterbody ID							ILP Ma	ар #.					#.				-
	Project ID): 1741	5								Lake/S	ream:	S		Lake	From D	Date:	
Fis	h Permit #	: SM0	7-348	21	Date:	2007/09/	14	To:	2007	/09/14	Ą	jency:	C660	C	Crew: MM	IRS	Resan	nple:
							S	ITE	/ M	ETH	O D							
Site#	NID Map	NID	#	UTN	1:Zone/Ea	ast/North/M	1thd	MTD/N	NO	Temp	Cond	Turb	oid			Comm	nent	
503	104G.035	500	03	9			GP3	EF	1	5	60	Т						
							Α.	GEA	R S	ETT	INGS	;						
Site#	MTD/NO	H/P	D	ate In	Time	In Date	e Out	Time (Out					Co	mment			
503	EF 1	1	200	7/09/14	13:45	5 2007/	/09/14	14:0	00									
					С.	ELEC	TRC	FIS	HEF	R SP	ECIF	I C A	TIO	NS				
Site#	MTD/	NO	H	I/P	Encl	Sec	L	ength		Width	Vo	Itage	Fre	quency	Pulse	;	Make	Model
503	EF	1		1	0	760		60.0		2.0	į	525		30	4		SR	LR-24
							F	ISH	SU	ММА	RY							
Site#	MTD/	NO	H/	P S	pecies	Stage	Ag	e ·	Total #	‡ Lg	th (Min/N	/lax)	FishA	ct		Co	mment	
503	EF	1	1	1	NFC				0									

Reach # ILP Map #

ILP#

						V	ATE	RB	O D Y	,					
Gaz	etted Nam	e: HICK	MAN CRE	EK						Local:	HC2				
P	roject Coc	le: 630-0	000-000	000-00000-	0000-0000-0	000-000-0	000-000	-000-0							
	WS Coo	le: 630-3	344000-890	000-00000-	0000-0000-0	000-000-0	000-000	-000-0	00						
W	aterbody I	D:				II	LP Map	#:				ILP #:	R	Reach #: 2.2	! -
	Project I	D: 1741	5						La	ake/Stream	n: S		Lake Fro	m Date:	
Fi	sh Permit	#: SM07	7-34821	Date	: 2007/09/1	4	To: 2	007/09	/14	Agency	r: C66	0 C	rew: MM RS	Resar	nple:
						SI.	TE /	ΜE	тно	D					
Site#	NID Ma) NID	# U	TM:Zone/E	ast/North/Mt	hd N	MTD/NC) Te	mp (Cond Tu	ırbid		Co	mment	
502	104G.02	5 500	24 9			GP3 E	EF 1	2	2	60	Т				
						A. G	EAR	SE	TTI	NGS					
Site#	MTD/NC	H/P	Date In	Time	In Date	Out T	ime Ou	t				Cor	nment		
502	EF 1	1	2007/09/	14 11:0	0 2007/0	09/14	11:30								
				С.	ELEC	TROF	ISH	ER	SPE	CIFIC	ATI	ONS			
Site#	MTD	/NO	H/P	Encl	Sec	Len	ngth	Wi	dth	Voltage	F	requency	Pulse	Make	Model
502	EF	1	1	0	633	20	0.0	•	1.0	475		30	4	SR	LR-24
						FIS	SH S	UM	MAR	Y					
Site#	MTD	/NO	H/P	Species	Stage	Age	То	tal#	Lgth	(Min/Max)	Fisl	hAct		Comment	
502	EF	1	1	NFC				0							

Reach # ILP Map # ILP #

Gazetted Name: HICKMAN CREEK Local: TC1

Waterbody ID: ILP Map #: ILP #: Reach #: 3.1 -

WATERBODY

Project ID: 17415 Lake/Stream: S Lake From Date:

Fish Permit #: SM07-34821 Date: 2007/09/15 To: 2007/09/15 Agency: C660 Crew: MM RS Resample:

SITE / METHOD

ı											<u> </u>		
I	Site#	NID Map	NID#	U	TM:Zone/Ea	ast/North/Mthd		MTD	/NO	Temp	Cond	Turbid	Comment
ſ	508	104G.045	50016	9		GI	P3	EF	1	3	10	T	

Reach # ILP Map # ILP #

						W	ATE	R B (ODY						
Gaz	etted Nam	e: HICK	MAN CRE	EK						Local:	тсз	3			
P	roject Cod	e: 630-0	000000-000	000-00000-	0000-0000-	000-000-0	00-000	-000-0							
	WS Cod	e: 630-3	344000-89	000-00000-	0000-0000-	000-000-0	000-000	-000-0	00						
W	aterbody I	D:				IL	P Map	#:				ILP #:	F	Reach #: 3.3	3 -
	Project I	D: 1741	5						La	ke/Strear	n:	S	Lake Fro	om Date:	
Fi	Fish Permit #: SM07-34821 Date: 2007/09/14 To: 2007/09/14 Agency: C660 Crew: MM RS Resample: SITE / METHOD														
	SITE / METHOD														
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment															
504	104G.03	5 500	05 9			GP3 E	F 1	6	i	60	Т				
						A. GI	EAR	SE	TTIN	IGS					
Site#	MTD/NC	H/P	Date Ir	n Time	In Date	Out Ti	me Out					Co	omment		
504	EF 1	1	2007/09/	14 16:0	00 2007/	09/14	16:20								
				С.	ELEC	TROF	ISHE	ER :	SPE	CIFIC	AT	TIONS			
Site#	MTD	/NO	H/P	Encl	Sec	Len	gth	Wic	dth	Voltage	Э	Frequency	Pulse	Make	Model
504	EF	1	1	0	646	100	0.0	1	.0	500		30	4	SR	LR-24
						FIS	н ѕ	UMI	MAR	Υ					
Site#	MTD	/NO	H/P	Species	Stage	Age	Tot	al#	Lgth (Min/Max)	F	FishAct		Comment	
504	EF	1	1	NFC				0					•	•	

Reach # ILP Map # ILP #

						W	ATE	ВОІ	ΣY						
Gaz	etted Nam	e: HICK	MAN CRE	EK						Local: T	C3				
P	roject Cod	le: 630-0	000-000	000-00000-	0000-0000-	000-000-0	0-000-0	00-0							
	WS Cod	le: 630-3	344000-890	000-00000-	0000-0000-	000-000-0	0-000-0	00-000							
W	aterbody I	D:				IL	.P Map #:				ILP #:		R	each #: 3.3	3 -
	Project I	D: 1741	5						Lak	e/Stream:	S		Lake Fron	m Date:	
Fi	Fish Permit #: SM07-34821 Date: 2007/09/16 To: 2007/09/16 Agency: C660 Crew: MM RS Resample: SITE / METHOD														
	SITE / METHOD														
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment															
509	104G.04	5 500	07 9			GP3 E	F 1	1	2	:0 T					
						A. GI	EAR	SETI	ΓIN	G S					
Site#	MTD/NC	H/P	Date In	Time	In Date	Out Ti	me Out					Comr	ment		
509	EF 1	1	2007/09/	16 10:0	7 2007/	09/16	10:25								
				С.	ELEC	TROF	ISHE	R SI	EC	IFICA	TIONS	S			
Site#	MTD	/NO	H/P	Encl	Sec	Len	gth	Width		Voltage	Freque	псу	Pulse	Make	Model
509	EF	1	1	0	605	200	0.0	1.0		450	40		4	SR	LR-24
						FIS	я в	ММ	ARY	′					
Site#	MTD	/NO	H/P	Species	Stage	Age	Total	# L	gth (M	lin/Max)	FishAct			Comment	
509	EF	1	1	NFC			(

Reach # ILP Map # ILP #

										W A	ΤE	RВ	0 D '	Y						
	Projec WS Waterb	t Code	: 630-6 : 630-4	000000- 465700-	Y CREE 00000-0 00000-0	0000					-000	-000-0	000	Loc Lake/St	al: W	ILP	#:	l Lake Fro		1 -
	Fish Pe	ermit #:	SM0	7-34821		Date	e: 2007	7/06/1	7	То	: 20	007/06	6/17	Ag	ency:	C660	Cr	ew: KMTS	S Resa	mple:
									S	ITE	1	ΜE	THO	O D						
Site#	NII	О Мар	NID) #	UTM:Z	one/E	East/No	rth/Mt	hd	MTD	/NO	Те	mp	Cond	Turb	id		Co	omment	
318	104	IG.056	300	37 9	9				GP3	EF	1		5	50	L					
									Α. (G E A	٩R	SE	TTI	NGS						
Site#	MT	D/NO	H/P	Date	e In	Time	e In	Date	Out	Time	Out						Com	ment		
318	EF	1	1	2007/0	06/17	11:	10 2	2007/0	06/17	11:	30									
						C.	. EL	EC.	TRO	FIS	Н	ER	SPE	ECIF	I C A	TIOI	N S			
Site#		MTD/N	10	H/P)	Encl	5	Sec	L	ength		Wi	dth	Vo	tage	Freq	uency	Pulse	Make	Model
318	EI	F	1	1		0	4	178		50.0			2.0	_	50	3	0	4	SR	LR-24
									F	ISH	S	U M	MA	RY						
Site#		MTD/N	10	H/P	Spe		Stag	ge	Age)	Tot	al#		(Min/N		FishAc	t		Comment	
318	EI	F	1	1	RB		J					7	12		243	R				
					1.				IDIV		U A		ISF		TA			TT		
Site#	MTL	D/NO	H/P	Specie	s Leng	th \	Weight	Sex	Ma		21 /0	Age	/ A	Vch#		netic	Roll #	Frame#	Com	ment
240			4	DD	0.40	+	173.9	U	U	SC		mpl#/	Age		FR.	Smpl#		1		
318 318	EF EF	1	1	RB RB	243		173.9	U	U	SC		2			FR	2				
318	EF	1	1	RB	141		37.8	U	U	SC	_	3			FR	3				
318	EF.	1	1	RB	149		43.3	U	U	SC	_	4			FR	4				
318	EF	1	1	RB	150)	37.4	U	U	SC	;	5			FR	5				
318	EF	1	1	RB	123	3	22.2	U	U	SC	;	6			FR	6				
318	EF	1	1	RB	123	3	22.2	U	U	SC	;	7			FR	7				
																			_	_

Reach # ILP Map # ILP #

									WA	ΓER	ВС	DY	,						
Ga	Projec		630-0	000000-00 659300-00								00	Loca	al: SK	C1				
,		ody ID:		_					ILP M	ap #:					ILP	#:		Reach #: 1.1	-
	Pro	ject ID:	1/41	5								L	ake/Str	eam:	S		Lake Fro	om Date:	
	Fish Pe	ermit #:	SM0	7-34821	D	ate: 20	07/06/1	6	To:	2007	7/06/	16	Age	ency: (C660	Cre	ew: KMTS	S Resan	nple:
								S	ITE	/ N	1 E 1	гно	D						
Site#		O Map	NID		UTM:Zon	e/East/N	orth/Mt		MTD/	NO	Tem	np	Cond	Turbi	d		C	omment	
314	104	G.046	300	29 9				GP3		1	4		160	С					
								Α.	GEA		3 E 1	ГТІІ	NGS						
Site#		D/NO	H/P	Date		me In	Date		Time							Comr	ment		
314	EF	1	1	2007/06		0:15	2007/0		11:0										
						C. EL		TRO	FIS	HEI			CIF	ICA	TION	IS			
Site#		MTD/N		H/P	En		Sec		ength		Wid			age	Frequ		Pulse	Make	Model
314	E	-	1	1	С)	642		150.0	<u> </u>	3.			00	30)	4	SR	LR-24
									ISH										
Site#		MTD/N		H/P	Specie	_	age	Ag	е	Total	#		(Min/M	,	FishAct			Comment	
314	EI	<u> </u>	1	1	RB	J				8		61		61	R				
						T			VIDL			SH					T=1		
Site#	MIL)/NO	H/P	Species	Length	Weigh	t Sex	Ma			ge		Vch#		netic	Roll #	Frame#	Comr	nent
314	EF	1 1	4	RB	161	46.2	U	U	SC	tr/Sm	<u> </u>	ige		FR	Smpl#		}		
314	EF	1	1	RB	63	2.8	U	U	FR		1			FK	1				
314	EF	1	1	RB	85	6.5	U	U	SC		3			FR	3		-		
314	EF	1	1	RB	63	3.1	U	U	30	+	,			1 11	3				
314	EF	1	1	RB	71	3.8	U	U		+	\dashv								
314	EF	1	1	RB	61	2.9	U	U	FR		4								
314	EF	1	1	RB	79	6.1	U	U	SC	ţ	5			FR	5				
314	EF	1	1	RB	65	3.2	U	U	FR	6	6								

Reach # ILP Map # ILP #

							WAT	ERB	ODY							
Gaz	etted Nam	e:								Loca	al: MT	Γ1				
Р	roject Cod	e: 630-	000000-00	000-00000-	0000-0000-	000-00	0-000-00	0-000-0)							
	WS Cod	e: 630-	664900-00	000-00000-	0000-0000-	000-00			000							
W	aterbody I						ILP Ma	o #:				ILP #:			Reach #: 2.1	-
	Project I	D: 1741	5						La	ake/Str	eam:	S	L	Lake Froi	m Date:	
Fi	sh Permit	#: SM0	7-34821	Date	: 2007/09/	18	To:	2007/09	9/18	Age	ency: (C660	Crew:	MM CD) Resar	nple:
	SITE / METHOD Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment															
Site#	Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment															
516	104G.03	6 500	9			GP3	EF ′	1 4	.9	90	С					
						Α.	GEAF	R SE	TTI	N G S						
Site#	MTD/NC	H/P	Date I	n Time	In Date	Out	Time O	ut					Commer	nt		
516	EF 1	1	2007/09			/09/18	12:50									
				С.	ELEC	TRO	FISH	IER	SPE	CIF	ICA	TIONS	3			
Site#	MTD	/NO	H/P	Encl	Sec	L	-ength	Wi	idth	Volt	age	Frequen	ıcy F	Pulse	Make	Model
516	EF	1	1	0	678		180.0		2.0	40	00	40		4	SR	LR-24
						F	ISH	SUM	MAR	Y						
Site#	MTD	/NO	H/P	Species	Stage	Ag	e T	otal #	Lgth	(Min/Ma	ax)	FishAct			Comment	
516	EF	1	1	NFC				0								

Reach # ILP Map # ILP #

Gazetted Name:	WATERBODY																						
Project ID: 17415	Ga	Projec	t Code:	630-0	630-000000-00000-00000-0000-0000-000-000																		
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment						ILP Map #:																	
Site# NID Map NID # UTM:Zone/East/North/Mthd MTD/NO Temp Cond Turbid Comment	Fish Permit #:			SM07-34821 Date: 2007/09/18							To: 2007/09/18				Agency: C660 Crew: MM CD Resample:								
Site# MTD/NO H/P Date n Time n Date Out Time Out Comment	SITE / METHOD																						
Site# MTD/NO H/P Date In Time In Date Out Time Out	Site#	NIE	NID Map		NID# UT		ΓM:Zone/East/N		orth/Mthd		MTD/NO		Ten	np	Cond	nd Turbid			Comment				
Site# MTD/NO H/P Date In Time In Date Out Time Out	599	104	G.016	500	10 9)						•				С							
Site# MTD/NO																							
Site# MTD/NO	Site#	# MTD/NO		H/P	Date	Date In Time		ne In	Date (Out	Time Out				Comment								
Site# MTD/NO	599	599 EF 1		1	1 2007/09/18 16			6:30	2007/0	9/18	17:05												
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment	C. ELECTROFISHER SPECIFICATIONS																						
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment	Site#	ite# MTD/No		10) H/P		Enc	: :	Sec		ngth	ı Width		dth	Voltage		Frequency		Pulse	Mal	ke	Model	
Site# MTD/NO H/P Species Stage Age Total # Lgth (Min/Max) FishAct Comment 599 EF 1 1 RB A 4 187 280 R INDIVIDUAL FISH DATA Site# MTD/NO H/P Species Length Weight Sex Math Age Vch# Genetic Roll # Frame# Comment 599 EF 1 1 RB 280 200.0 U U SC 1 FR 1 599 EF 1 1 RB 272 200.0 U U SC 2 FR 2 599 EF 1 1 RB 212 200.0 U U SC 3 FR 3	599	599 EF		1	1		0 9		957	1	60.0	0.0		4.0 4		50) 40		4	SF	₹	LR-24	
Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Str/Smpl# Roll # Frame# Comment	FISH SUMMARY																						
Site# MTD/NO	Site#	# MTD/NO		Ю	O H/P		Species	Sta	Stage			Tota	tal# Lgf		n (Min/Max)		FishAct	:		Comment			
Site# MTD/NO H/P Species Length Weight Sex Mat Age Vch# Genetic Str/Smpl# Roll # Frame# Comment 599 EF 1 1 RB 280 200.0 U U SC 1 FR 1 1 599 EF 1 1 RB 272 200.0 U U SC 2 FR 2 599 EF 1 1 RB 212 200.0 U U SC 3 FR 3	599	9 EF		1	1	1 RI		RB A			4		4	187 280		80	R						
Str/Smpl#/Age Str/Smpl# 599 EF 1 1 RB 280 200.0 U U SC 1 FR 1 599 EF 1 1 RB 272 200.0 U U SC 2 FR 2 599 EF 1 1 RB 212 200.0 U U SC 3 FR 3									ΙN	DIV	IDU	JAL	_ F	ISH	DΑ	ΤA							
599 EF 1 1 RB 280 200.0 U U SC 1 FR 1 599 EF 1 1 RB 272 200.0 U U SC 2 FR 2 599 EF 1 1 RB 212 200.0 U U SC 3 FR 3	Site#	MTE)/NO	H/P	Specie	s Le	ength	Weight	Sex	Mat		F	∖ge		Vch#	Ge	netic	Roll #	Frame#		Comm	ent	
599 EF 1 1 RB 272 200.0 U U SC 2 FR 2 599 EF 1 1 RB 212 200.0 U U SC 3 FR 3											S	Str/Smpl#/Age				Str/S	Smpl#						
599 EF 1 1 RB 212 200.0 U U SC 3 FR 3	599		1	1	RB		280	200.0	U	U	SC		1			FR	1						
000 20 10 10 10 10 10 10	599	EF	1	1	RB		272	200.0	U	U	SC		2			FR	2						
599 EF 1 1 RB 187 200.0 U U SC 4 FR 4			1	1					_	_												· · · · ·	
	599	EF	1	1	RB		187	200.0	U	U	SC		4			FR	4						