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Environmental Research & Consulting

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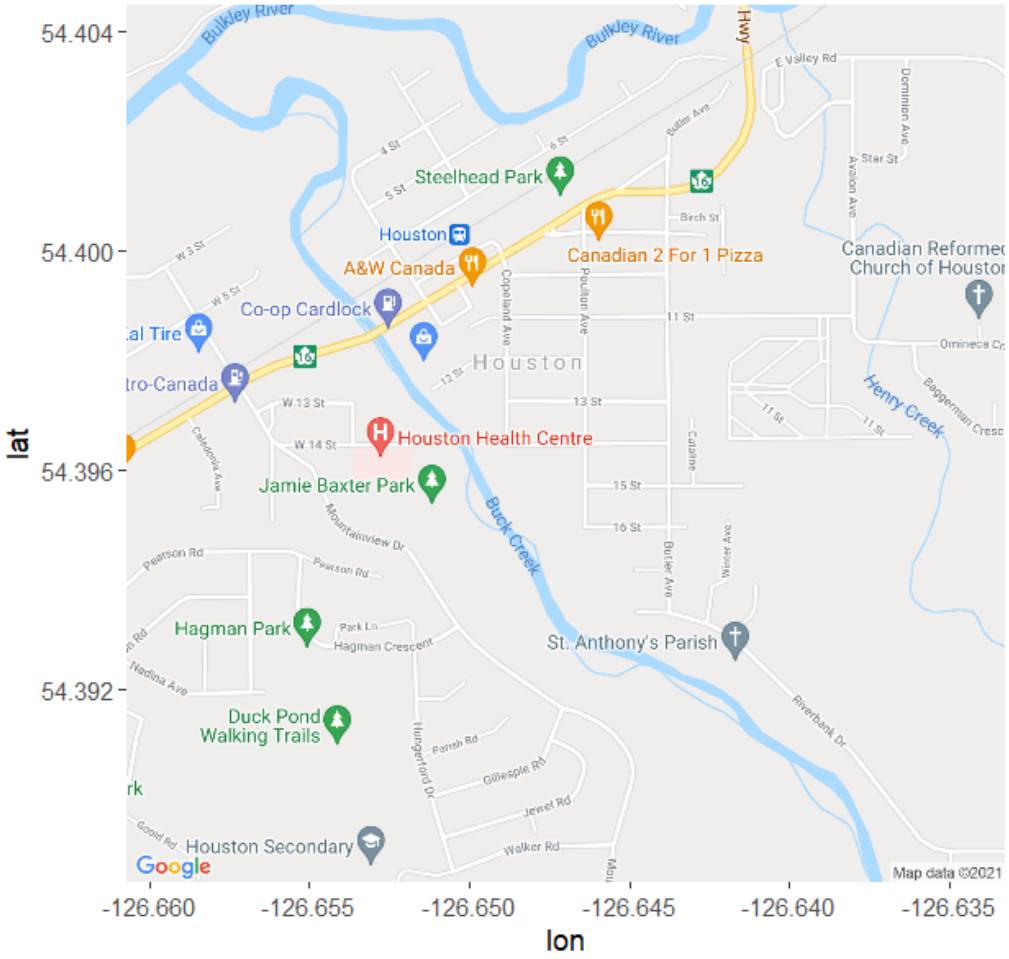
Date: 2021-07-23

Re: Safety Plan

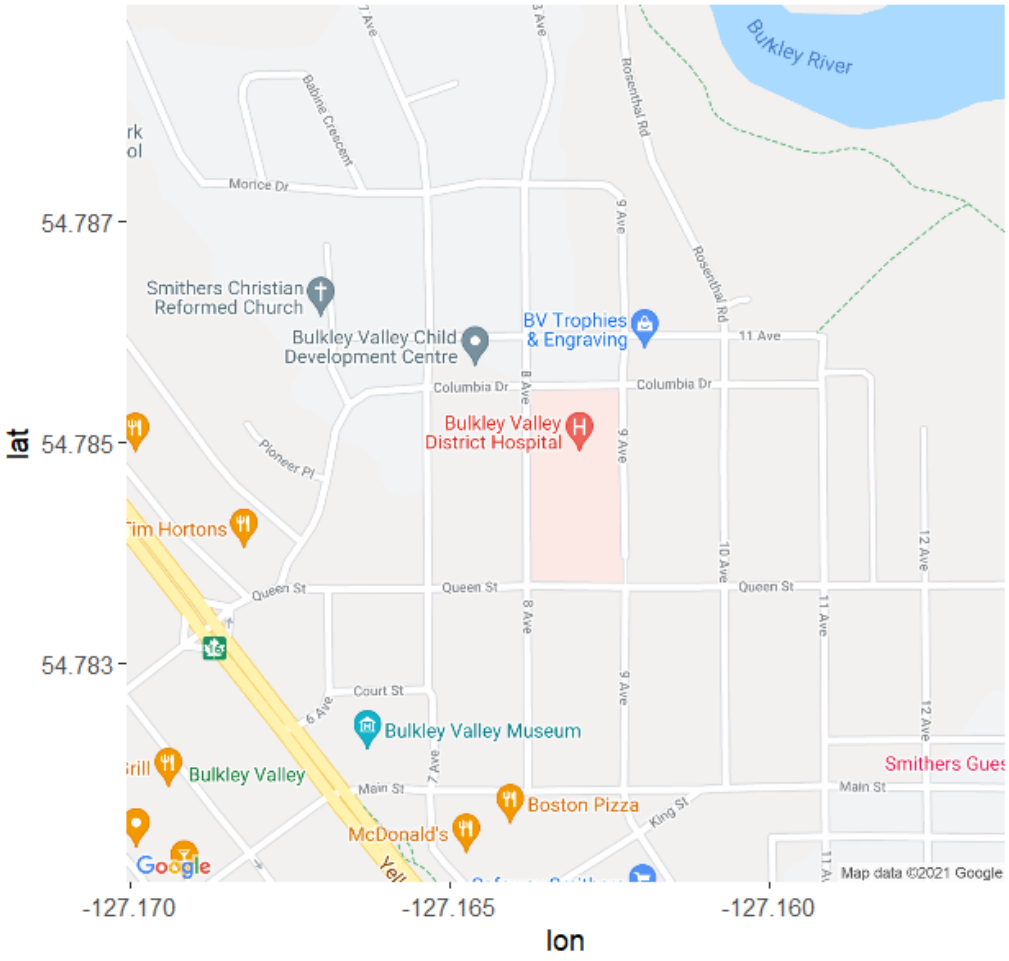
The latest version of this pdf can be downloaded here.

A zip file which includes kml (google earth) and gpx (garmin) files of the sites to be potentially assessed can be downloaded here. Georeferenced pdf maps can be accessed and downloaded for the Bulkley here and Morice here.

Nearest Hospitals



Houston Health Centre - 3202 14 St, Houston, BC V0J 1Z0 - 250-845-2294



(Smithers) Bulkley Valley District Hospital - 3950 8 Ave, Smithers, BC V0J 2N0 - 250-847-2611

Field Plan

Field work methods will generally follow procedures in

- fish passage assessments and
- habitat confirmations

Presence/absence of fish, species composition/density and distribution limits can be useful for prioritizing which crossings are a best fit for fish passage restoration and help inform follow up monitoring so electrofishing and minnowtrapping may be conducted. Standard Fish and Fish Habitat Inventory Standard Field Form site cards are used to gather habitat data.

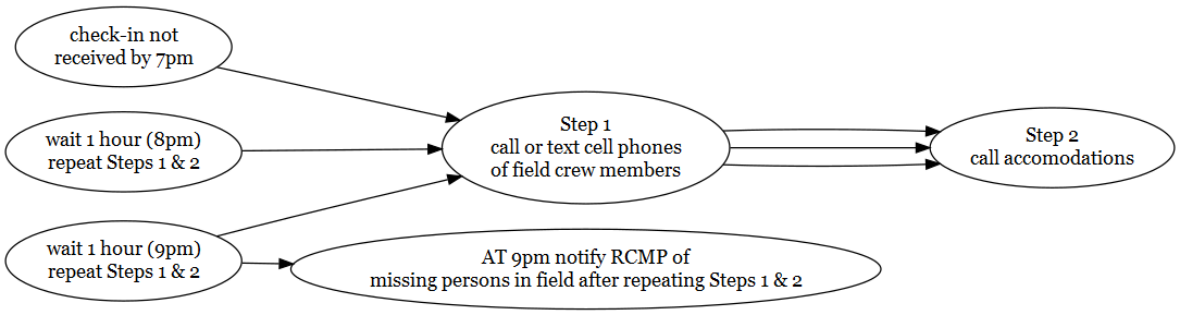
A summary of sites to be potentially assessed is included as Table 1 and an overview map of displaying potential sample locations is included as Figure 1.

Check In Procedures

Call, text or inreach Tara Stark (2505059854) each morning to share the plan for the day (i.e. name of roads and sites). Check in time is before 7 pm each evening although we regularly check in throughout the day (ex. at arrival to site, 1pm and 4pm) on the inreach or by text and report position/provide updates.

Procedures for Failed Check-In - for Check in person

Procedures are summarized in the following Figure. If phone call or inReach check-in is not received by 7pm send text to inreach units, call or text cell phones of field crew members. If no response please call accommodations then personal emergency contacts to see if they have heard anything. Wait 1 hour and text inreach, text or call cell phones and personal emergency contacts and accomodations again. Repeat after 2 hours (9 pm) - if no response then notify the RCMP of a missing persons in field.



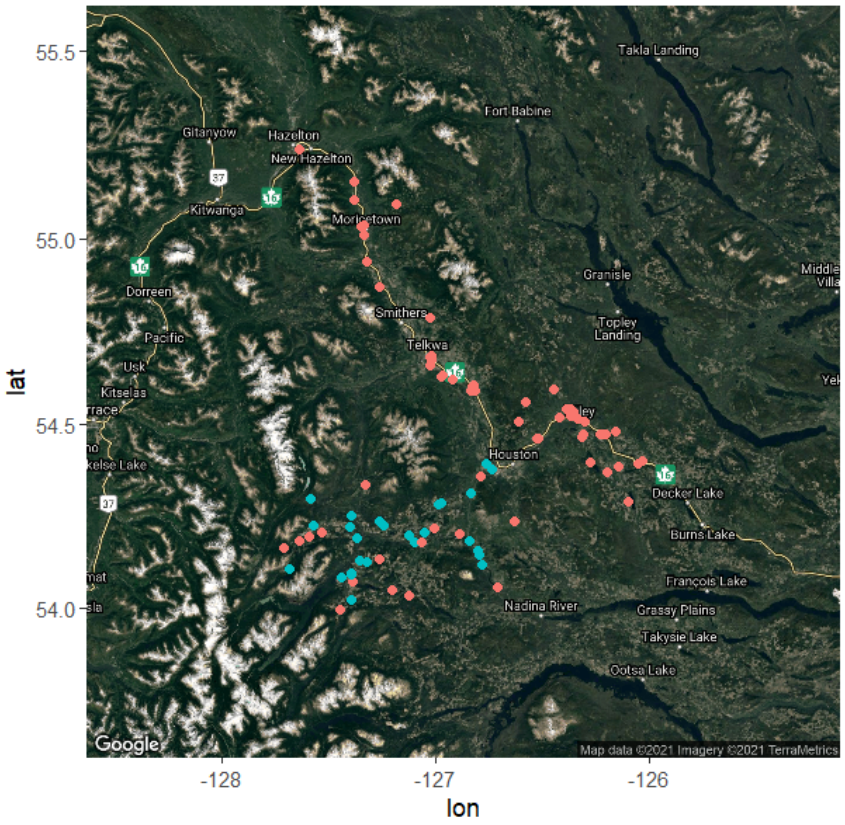


Figure 1. Map of potential sampling areas. High priority sites in red and moderate priority in green.

Table 1: Potential sample locations in the Bulkley River and Morice River watershed groups.

id_xing	Stream	lat	long	source	id_map	comments	sp_upstr
3042	Barren Creek	54.50932	-126.6142	2020	093L.114	–	–
3054	–	54.59474	-126.4478	2020	093L.114	–	{RB}
3139	–	54.56012	-126.5773	2020	093L.114	–	–
57944	Toboggan Creek	54.93977	-127.3183	cwf	093L.122	–	{CC,CH,CO,CT,DV,KO,L,LSU,MW,OS,PK,RB,SK,SST,ST}
58159	McDowell Creek	54.67521	-127.0204	2020	093L.118	–	{CO,RB}
123445	Tyhee Creek	54.68440	-127.0263	2020	093L.118	–	{BB,C,CAS,CC,CH,CM,CO,CT,GPW,LSU,MW,NSC,PCC,PK,PW,RB,RDC,RS
123446	Tyhee Creek	54.68713	-127.0218	2020	093L.118	–	{BB,C,CAS,CC,CH,CM,CO,CT,GPW,LSU,MW,NSC,PCC,PK,PW,RB,RDC,RS
123770	John Brown Creek	55.01008	-127.3326	cwf	093M.102	–	{BT,CH,CT,DV,RB}
123776	Corya Creek	55.03681	-127.3341	cwf	093M.102	–	{DV,RB}
123794	–	55.09398	-127.1806	2020	093M.103	–	{DV}
123795	–	55.09473	-127.1855	2020	093M.103	–	{SA}
124420	Station Creek	55.24045	-127.6375	cwf	093M.106	–	{BT,CO,CT,DV,PK,RB,SP}
124487	Porphyry Creek	55.15630	-127.3823	2020	093M.102	–	{DV,RB}
124500	Helps Creek	54.65954	-127.0228	2020	093L.118	–	{CT,DV,LNC,LSU,RB}
124501	–	54.63182	-126.9757	2020	093L.118	–	{DV,RB}
124504	Coffin Creek	54.62079	-126.9195	2020	093L.118	–	{CSU,CT,DV,LSU,MW,RB,RSC}
195288	Gibson Creek	54.59190	-126.8188	2020	093L.113	–	{CT,RB}
195290	Gibson Creek	54.59318	-126.8328	2020	093L.113	–	{CT,RB}
197360	Riddeck Creek	54.05795	-126.7093	2020	093L.104	–	{LSU,RB}
197365	–	54.15719	-126.8005	morice	093L.103	Smaller channel width.	–
197378	–	54.11705	-126.7802	morice	093L.104	Large wetland complex upstream.	{DV,LNC,MW,RB}
197379	–	54.18203	-126.8400	morice	093L.103	Less than 1km of potential habitat but very large channel width.	{CO,RB}
197640	–	54.23614	-126.6322	2020	093L.109	–	{RB}
197658	Byman Creek	54.51881	-126.4222	cwf	093L.114	–	{CO,CSU,LNC,LSU,RB,RSC,ST}
197662	Richfield Creek	54.51552	-126.3365	cwf	093L.115	–	{CH,CO,LKC,LNC,LSU,RB,SST,ST}
197663	Johnny David Creek	54.52188	-126.3696	cwf	093L.115	–	{RB}
197664	Barren Creek	54.46354	-126.5243	2020	093L.114	–	{CH,CO,CT,L,RB,SST,ST}

197665	–	54.46280	-126.5217	2020	093L.114	–	{BB,BMC,BT,CAS,CBA,CC,CH,CO,CSU,CT,DV,L,LKC,LNC,LSU,LT,LW,MW,N
197667	–	54.63316	-126.9690	2020	093L.118	–	{CT,DV,RB}
197668	Coffin Creek	54.62098	-126.9193	2020	093L.118	–	{CSU,CT,DV,LSU,MW,RB,RSC}
1001800048	Cesford Creek	54.50844	-126.3062	manual	093L.115	–	–
1001800050	Bulkley River	54.40228	-126.0352	cwf	093L.115	–	{BMC,CSU,LKC,LNC,LSU,NSC,RB,RSC}
1001800050	Bulkley River	54.40228	-126.0352	cwf	093L.115	–	{BMC,CSU,LKC,LNC,LSU,NSC,RB,RSC}
1001800355	Ailport Creek	54.47325	-126.2121	cwf	093L.115	–	{CO,CT,RB}
1001800356	Watson Creek	54.47603	-126.2159	manual	093L.115	–	{CO,RB}
1001800422	Ailport Creek	54.47269	-126.2294	cwf	093L.115	–	{CO,CT,RB}
1001800752	–	54.39789	-126.2769	cwf	093L.110	–	{BB,CSU,LSU,LW,NSC,PCC,RB,RSC}
1001801122	Ailport Creek	54.47578	-126.2090	cwf	093L.115	–	{CO,CT,RB}
1001801133	–	54.47401	-126.3094	cwf	093L.115	–	{BB,CBA,CC,CSU,LKC,LSU,LW,MW,NSB,NSC,PCC,RB,RSC}
1001801773	Boulder Creek	55.10651	-127.3787	cwf	093M.102	–	{BT,DV}
1001801969	–	54.46801	-126.3181	cwf	093L.115	–	{BB,CBA,CC,CSU,LKC,LSU,LW,MW,NSB,NSC,PCC,RB,RSC}
1001802044	Ailport Creek	54.48329	-126.1602	cwf	093L.115	–	{CT,RB}
1001802088	Robert Hatch Creek	54.54393	-126.3727	cwf	093L.115	–	{LSU,RB}
1001802089	Johnny David Creek	54.54204	-126.3894	cwf	093L.115	–	{RB}
1001802106	Robert Hatch Creek	54.53465	-126.3576	cwf	093L.115	–	{LSU,RB}
1001802760	Deep Creek	54.60713	-126.8238	cwf	093L.118	–	{C,CT,DV,RB}
1001802820	Deep Creek	54.60520	-126.8274	cwf	093L.118	–	{C,CH,CM,CO,CT,DV,PK,RB,SA,SK,ST}
1001803682	Crow Creek	54.37200	-126.1977	cwf	093L.110	–	{CAS,LNC,RB,RSC}
1001804694	–	54.29223	-126.1020	cwf	093L.110	–	{RB}
1001805529	Bulkley River	54.39509	-126.0545	cwf	093L.110	–	{BMC,CAS,CO,CSU,LKC,LNC,LSU,NSC,RB,RSC}
1001805529	Bulkley River	54.39509	-126.0545	cwf	093L.110	–	{BMC,CAS,CO,CSU,LKC,LNC,LSU,NSC,RB,RSC}
1001805532	Crow Creek	54.38684	-126.1460	cwf	093L.110	–	{CAS,CO,LNC,PL,RB,RSC}
1001805553	Glass Creek	54.87356	-127.2593	cwf	093L.122	–	{CC,CO,CT,DV,KO,LSU,MW,OS,RB,SK,ST}
1001805665	Canyon Creek	54.78797	-127.0237	cwf	093L.118	–	{CO,DV,RB,TR}
1014000009	–	54.38009	-126.7377	morice	093L.109	In Houston with rail upstream. Maybe very modified.	{RB}
1014000255	Nado Creek	54.13167	-127.2638	morice	093L.102	CBR - 2.2m culvert.	–
1014000271	–	54.39277	-126.7668	morice	093L.109	Just below Klinger Lake.	

Good for coho?	{EB,RB}						
1014000312	–	54.08456	-127.4368	morice	093L.102	Smaller stream potentially suitable for upstream migrating juvenile salmon. DV upstream.	{DV}
1014000379	–	54.25210	-127.3909	morice	093L.107	Cascade noted adjacent to crossing but no FISS sample sites. Coho in mainstem Thautil nearby. Stream splits to two tribs just upstream.	–
1014000507	–	54.22661	-127.5698	morice	093L.107	Low gradient with wetlands upstream and CO,CT and others downstream.	–
1014000509	–	54.12580	-127.3180	morice	093L.102	Channel width 1.5 m downstream at FISS site.	–
1014000565	–	54.33777	-127.3300	morice	093L.107	Stealhead and bulltrout nearby	–
1014000569	–	54.28134	-126.9841	morice	093L.108	FISS site downstream does not mention intermittent as is FWA tag.	–
1014000571	–	54.28765	-126.9767	morice	093L.108	Lots of low gradient habitat but split into many tribs.	{DV,RB}
1014000674	–	54.19924	-127.1256	morice	093L.103	Coho downstream.	–
1014000683	–	54.20767	-127.0517	morice	093L.108	Top end of lake.	–
1014000718	–	54.14672	-126.7971	morice	093L.104	Models as over 2m wide and has fish obs upstream.	{DV,RB}
1014000777	–	54.09047	-127.3922	morice	093L.102	Two small tribs upstream.	–
1014000788	–	54.09355	-127.3954	morice	093L.102	Steeper system.	–
1014000796	Fenton Creek	54.20165	-126.8913	morice	093L.108	Major culvert (5m wide).	{CC,CO,DV,RB,SP}
1014000798	Peacock Creek	54.36059	-126.7921	morice	093L.109	Fish way noted as having issues in Smith 2018.	–
1014000801	–	54.31559	-126.8358	morice	093L.108	Quite steep.	–
1014000908	–	54.22097	-127.3994	morice	093L.107	Steelhead and coho points just downstream.	–
1014000912	–	54.16261	-127.7088	morice	093L.101	Good sized lake upstream. Road not visible in aerial imagery. Follow up with foresters before headingout in field.	{DV,RB}
1014000931	–	53.99557	-127.4459	morice	093E.122	Very close to Naninka.	{CT,DV}
1014000991	–	54.17901	-127.1012	morice	093L.103	Steeper stream.	–

1014001002	–	54.19188	-127.3659	morice	093L.102	Smaller stream with coho upstream of crossing.	{CO}
1014001029	–	54.17869	-127.0657	morice	093L.103	Very close to Morice mainstem.	{CT,RB}
1014001080	–	54.02044	-127.3923	morice	093L.102	Smaller potential high value habitat gain but Nanika in Nanika system so in high value watershed.	{CT}
1014001161	McBride Creek	54.07139	-127.3875	morice	093L.102	CBR indicates “major culvert” at 4.5m width.	{BB,CAS,CO,CSU,CT,DV,LDC,LSU,LT,LW,MW,PCC,RB,RSC,WSU}
1014001195	–	54.12903	-127.3542	morice	093L.102	Low gradient and close to mainstem but low elevation watershed.	–
1014001198	–	54.10794	-127.6851	morice	093L.101	Models as a bit larger of a channel with 0.75km <5% and DV upstream.	{DV}
1014001222	Lamprey Creek	54.04738	-127.2029	morice	093L.102	Large lake headed system.	{CT,DV,LKC,RB,RB/CT}
1014001245	–	54.18341	-127.6371	morice	093L.101	Coho, steelhead and other species upstream.	{CO,CT,DV,LKC,SP}
1014001247	–	54.19550	-127.5928	morice	093L.102	Multiple species (including CO) noted upstream with lots of modelled habitat.	{CO,CT,DV,LKC}
1014001427	–	54.23806	-127.2653	morice	093L.107	Potentially fish bearing according to http://a100.gov.bc.ca/pub/acat/public/viewReport.do?reportId=50411.	–
1014001534	–	54.29848	-127.5862	morice	093L.107	Channel models as small. Flows into lake.	–
1014001542	–	54.20825	-127.5335	morice	093L.107	Many fish points upstream and downstream. Low grades.	{CT,DV}
1014001563	–	54.21925	-127.0061	morice	093L.108	Lots of low gradient and lake upsteam.	{CCT,CT,LKC}
1014001769	–	54.22487	-127.2404	morice	093L.107	Appears of highest value for rearing.	{CT}
1024704566	Corya Creek	55.03451	-127.3448	cwf	093M.102	–	{DV,RB}

1024740003	–	54.03348	-127.1239	morice	093L.103	Lots of lake upstream. {CAL,LKC,RB,RSC}