

AI Irvine  
New Graph Environment  
[al@newgraphenvironment](mailto:al@newgraphenvironment)  
250-777-1518  
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## Safety Plan - 2022-056-nupqu-elk-cwf

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 [here](#).

A summary of sites to be potentially assessed is included as Table [2](#).

### Accomodations

AI - 2013 Toyota Tundra black w/flatdeck and yellow can-am quad:

- 1500 McDonald Ave, Fernie, BC V0B 1M1 - Contact Melanie 1-250-423-8759

Mateo - 2007 Taoyota Tacoma - gold with canopy:

- 1500 McDonald Ave, Fernie, BC V0B 1M1 - Contact Melanie 1-250-423-8759

Table 1: Crew members details and emergency contacts

name	email	phone	satellite	emerg_name	emerg_email	emerg_phone
		250-				
Allan Irvine	<a href="mailto:al@newgraphenvironment.com">al@newgraphenvironment.com</a>	777-	<a href="mailto:allanirvine75@inreach.garmin.com">allanirvine75@inreach.garmin.com</a>	Tara Stark	<a href="mailto:tara.stark@gmail.com">tara.stark@gmail.com</a>	250-505-9854
		1518				
Mateo		672-				
Winterscheidt	<a href="mailto:matwint45@gmail.com">matwint45@gmail.com</a>	998-				

name	email	phone	satellite	emerg_name	emerg_email	emerg_phone
5293	807-790-7943	Felicitas Winterscheidt	<a href="mailto:fwinterscheidt@gmail.com">fwinterscheidt@gmail.com</a>	519-636-5251		

## Equipment Checklists

Personal Equipment Checklist	•
GPS	food
Sunscreen	gloves work
Bugspray	glasses safety
Polarized glasses	headlamp
Bear Spray	hard hat
phone/camera	steel toed boots
battery pack booster for phone	clinometer
Hat	field vest
first aid kit personal	note book
Waders	Extra clothes
Boots	rain gear
Ski poles	hand lens
water	—

Crew Equipment Checklist	•
Hand saw	pilon x 2
Linesman Gloves x 3	Measuring board
Backroads Mapbook	Scale
Locational maps	Permits
Background Documents	Fish ID book
radio road	Site Cards / Field Guide
Inreach	Minnow Traps
Field Safety Plan	Catfood
first aid kit level 1	Flagging
First Aid binder stocked	Laptop w/basecamp
Throw bags	GPS cable
polaski	Lazer level
shovel	Assessment cards fish passage
fire extinguisher backpack	UAV

Crew Equipment Checklist	
	•
fire extinguisher pressurized	Flow meter
Battery booster	ATV
Compressor 12V	bucket rigid x 2
Rubber boots (no-slip soles)	bucket foldable
Small BT Speaker (for bears)	clove oil kit w/ instructions
Oakton Multimeter	gloves leather
Backpack Electrofisher	sharpies
stop nets x 4	ATV gas
salt blocks	ATV lock
loose salt	UAV battery charger
dip nets x 2	wader disinfectant kit
tape measure hand	GPS batteries
tape measure eslon	ATV helmets

## Nearest Hospitals



Elk Valley Hospital - 1501 5 Ave, Fernie, BC V0B 1M0 - 250-423-4453



Elkford Health Centre - Interior Health Authority - 212 Alpine Way, Elkford, BC V0B 1H0 - 250-865-2247

## Field Plan

Field work methods will result in products feeding reporting formats such as [here](#) for 2020 and [here](#) for 2021. Still picking away at 2021 and just updating version IDs as I get through it and will generally follow procedures in:

- [fish passage assessments](#) (MoE 2011)
- [habitat confirmations](#) (Fish Passage Technical Working Group 2011).

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. Field guide is [here](#)

We have PIT tagging equipment so we could consider [tagging](#) fish captured at electrofishing sites to help us better understand population sizes and fish movement upstream and downstream of sites over the years.

We are running digital field form tests using a product called [Mergin Maps](#) which syncs with QGIS. Crews can access projects with a free account. Please send me your usernames and we can begin to share projects/forms.

A guide to freshwater fish id such as McPhail and Carveth (1993) can be useful and can be downloaded [here](#).

## **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 accommodations again. Repeat after 2 hours (9 pm) - if no response then notify the RCMP of a missing persons in field.

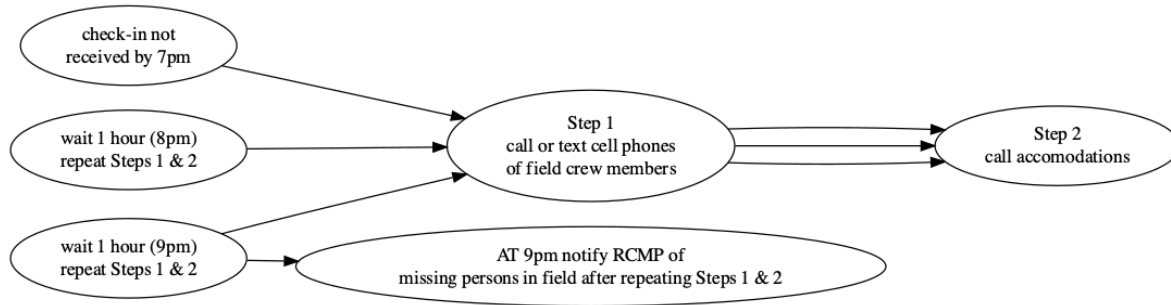


Table 2: Potential sample locations.

id	Stream	easting	northing	comments
1004603432	Trib to Cadorna	639196	5591178	unlikely to exist
1004605514 (197844)	Trib to Bighorn	657920	5452802	8.8% avg gradient but decent habitat upstream, Bighorn important WCT stream. Partial dewatering downstream.
1004605937 (197783)	Trib to Wigwam	662247	5431294	Not on shortlist, low quality habitat: dry with poorly defined channel downstream but Wigwam important WCT stream
1004606347 (197793)	Bean	650415	5463819	Large, dry channel, no fish records, abundant pools upstream of xing
1024735443	Abruzzi	638867	5591423	unlikely to exist



## References

Fish Passage Technical Working Group. 2011. "A Checklist for Fish Habitat Confirmation Prior to the Rehabilitation of a Stream Crossing." <https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/land-based-investment/forests-for-tomorrow/checklist-for-fish-habitat-confirmation-201112.pdf>.

McPhail, J. D., and R Carveth. 1993. "Field Key to the Freshwater Fishes of British Columbia." [https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/risc/field\\_key\\_to\\_freshwater\\_fishes\\_of\\_bc\\_field\\_size\\_water\\_resistant\\_version.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/nr-laws-policy/risc/field_key_to_freshwater_fishes_of_bc_field_size_water_resistant_version.pdf).

MoE. 2011. "Field Assessment for Determining Fish Passage Status of Closed Bottom Structures." BC Ministry of Environment (MoE). <https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/land-based-investment/forests-for-tomorrow/field-assessment-for-determining-fish-passage-status-of-cbs.pdf>.