

Mateo Winterscheidt
 New Graph Environment
mateo@newgraphenvironment
 672-998-5293
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Safety Plan - 2023-054-salmo-larl

The latest version of this pdf can be downloaded [here](#).

A kml file containing the location of site 1 at the end of Carney Mill Road in Salmo where we are going to carry out a snorkel survey can be downloaded [here](#). Site 2 in Salmo can be seen on this orthomosaic map that can be accessed [here](#). A table with site descriptions and locations is found below.

Table 1: Site Locations

| Id | Stream | Long | Lat | Description |
|----|-------------|-----------|----------|---|
| 1 | Salmo River | -117.2730 | 49.17137 | South end of Carney Mill Road in Salmo. Turn left onto Pearson Road to access the river. |
| 2 | Salmo River | -117.2655 | 49.18877 | At the confluence where Erie Creek drains into Salmo River. Approx. 750m downstream of Main St bridge in Salmo. |

Vehicles

Al and Mateo - 2013 Toyota Tundra black

Table 2: Crew members details and emergency contacts

| name | email | phone | satellite | emerg_name | emerg_email | emerg_phone |
|---------------------|--|--------------|--|-------------------------|--|--------------|
| 250- | | | | | | |
| Allan Irvine | al@newgraphenvironment.com | 777- | allanirvine75@inreach.garmin.com | Tara Stark | tara.stark@gmail.com | 250-505-9854 |
| 1518 | | | | | | |
| Mateo Winterscheidt | matwint45@gmail.com | 672-998-5293 | 807-790-7943 | Felicitas Winterscheidt | fhwinterscheidt@gmail.com | 519-636-5251 |

Equipment Checklists

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

| 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 |

| Crew Equipment Checklist | • |
|-------------------------------|-------------------------------|
| polaski | Lazer level |
| shovel | Assessment cards fish passage |
| fire extinguisher backpack | UAV |
| 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

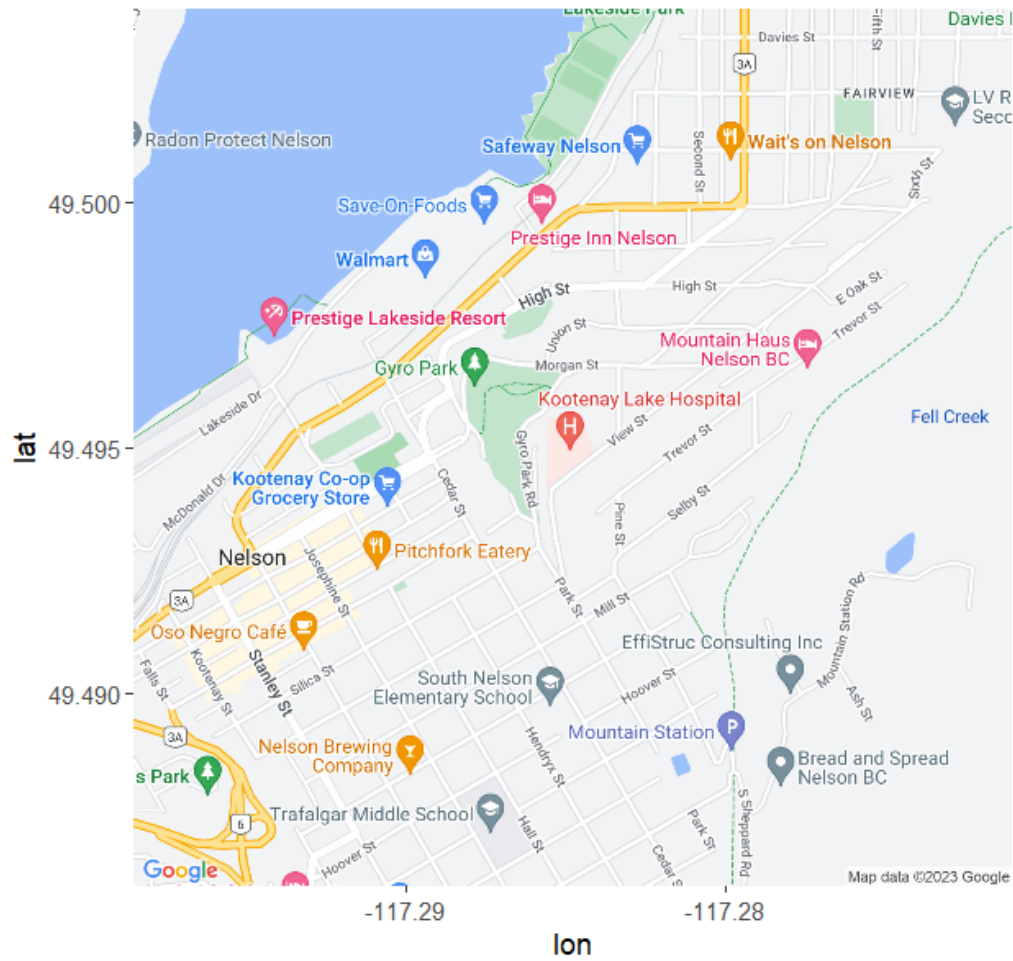


Figure 1: Kootenay Lake Hospital - 3 View St, Nelson, BC V1L 2V1 - 250-352-3111

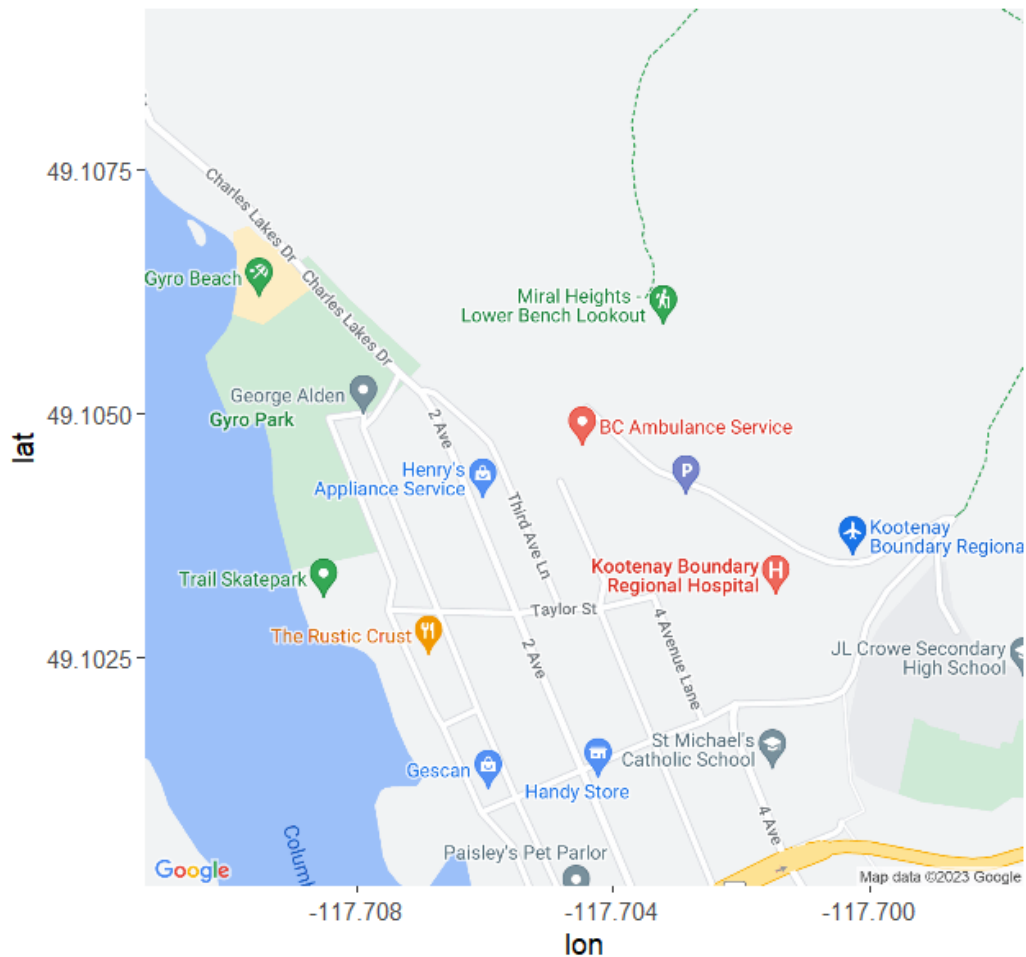


Figure 2: Kootenay Boundary Regional Hospital - 1200 Hospital Bench, Trail, BC V1R 4M1 - 250-368-3311

Field Plan

The primary goals of what we are doing in this project include:

- snorkel survey to determine fish distribution and density
- UAV survey to map fish habitat

General Field work methods 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 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) in the 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.

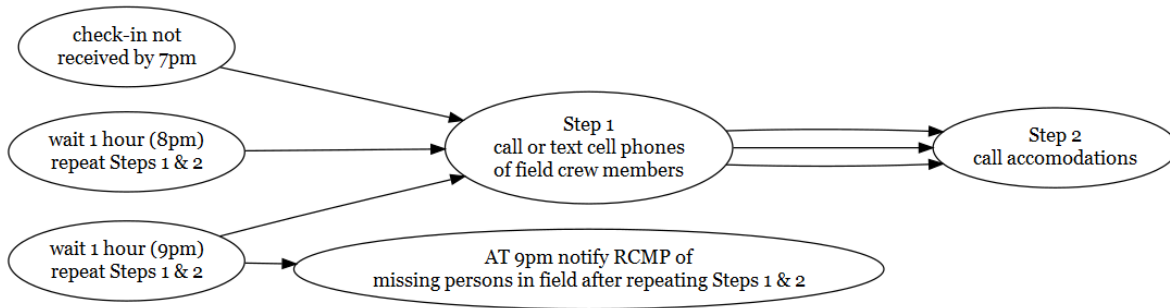


Figure 3: Procedures for failed check-in

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.
- 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>.