

Safety plan for Wolkovich Lab: Okanagan field work

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1 General overview

This research involves a small crew of two or three people visiting vineyards in the Okanagan valley to establish a phenology monitoring project that will run for at least a more two years. The Okanagan valley is not remote and the vineyards are all closely managed, so risk to fieldworkers is generally low. Potential hazards include walking over uneven ground, carrying equipment, exposure to cold and heat, and interactions with wildlife. There are also hazards associated with travel to and from field sites. In addition, the current COVID-19 situation creates additional hazards for both field workers and local communities, but we deem these risks to be low and are

taking appropriate action as recommended by WorkSafe BC <https://www.worksafebc.com/en/about-us/covid-19-updates/covid-19-industry-information/forestry>.

2 Personnel and Contact Information

2.1 Field Crew

There will be a main team of two field operatives (Faith Jones and Mira Garner) for the full three week period. Additionally, Lizzie Wolkovich and her partner Jonathan Davies will be present for the first week (longer if there are any safety concerns or issues). Jones and Garner will travel up in one UBC vehicle, and Wolkovich with Davies in their personal vehicle (BC plate FP254E). Wolkovich and Davies will also stay at a different location than Jones and Garner, although both locations will be within 10 km from Penticton.

2.2 Contact Details

Table 1: Field crew contact details

Name	Contact
Elizabeth Wolkovich	603 667 5099
Faith Jones	604 786 2574
Mira Garner	608 228 5215
Jonathan Davies	604 822 5486
Geoffrey Legault	778 952 2217

Table 2: Field crew emergency contact details

Field Crew Member	Name	Contact
Elizabeth Wolkovich	Jeanne Dearden (mother)	603 236 9370
Faith Jones	Peter Walton (spouse)	604 803 0664
Mira Garner	Hiam Garner (father)	608 576 5215
Jonathan Davies	Pedro Peres-Neto	514 825 5579
Geoffrey Legault	Caroline Tucker	919 904 1823

Table 3: Other contact details

Name	Contact
General Emergencies	911
Kelowna General Hospital	250 862 4000
Pat Bowen	250 494 6424
Carl Bogdanoff	250 490 9710
Quails Gate vineyard main office	250 769 4451
Arterra vineyard main office	250 498 4981

2.3 Nearest Hospitals

Penticton Regional Hospital
550 Carmi Avenue
Penticton, BC V2A 3G6
Phone: 250-492-4000
Open for emergencies 24/7

Kelowna General Hospital
2268 Pandosy Street
Kelowna, BC V1Y 1T2
Phone: 250-862-4000
Open for emergencies 24/7

Vernon Jubilee Hospital
2101 - 32nd Street
Vernon, BC V1T 5L2
Phone: 250-545-2211
Open for emergencies 24/7

2.4 General Safety Items

2.4.1 Overview

The field crew will be based in Penticton (49.481024, -119.587796; Figure1). Fieldwork will involve driving to various vineyards within a 30 km around the Okanagan valley. All sites are accessible by well maintained roads. Once on site, crew members will review vineyard locations for sampling (in consultation with Bowen and Bogdanoff and using maps provided by them) to plan which vines will be selected for phenological monitoring next year. This activity needs to take place this year because our contacts with the vineyards are retiring this year and so will be unavailable to facilitate project set up next year. This is also a critical time of year to view the buds and canes for selection, and because later in the year the vineyard employees are applying various management regimes in the vineyards. Working now is thus best for the research and most reduces the chances of coming into contact with vineyard employees.

2.4.2 Equipment and training

Vehicles have been recently serviced and contain a first aid kit. A printed copy of the lab emergency procedure, emergency contacts, MSP information, and the location of the nearest hospital or clinic will also be stored with the field safety equipment. Crew members will work in pairs, while practicing appropriate social distancing measures. They will also carry mobile phones with them, as mobile phone reception is not problematic in the Okanagan Valley, and the first aid kits will be easily accessible in the vehicles on site. All vehicles used for fieldwork will be properly maintained and include equipment such as jumper cables, a fire extinguisher,

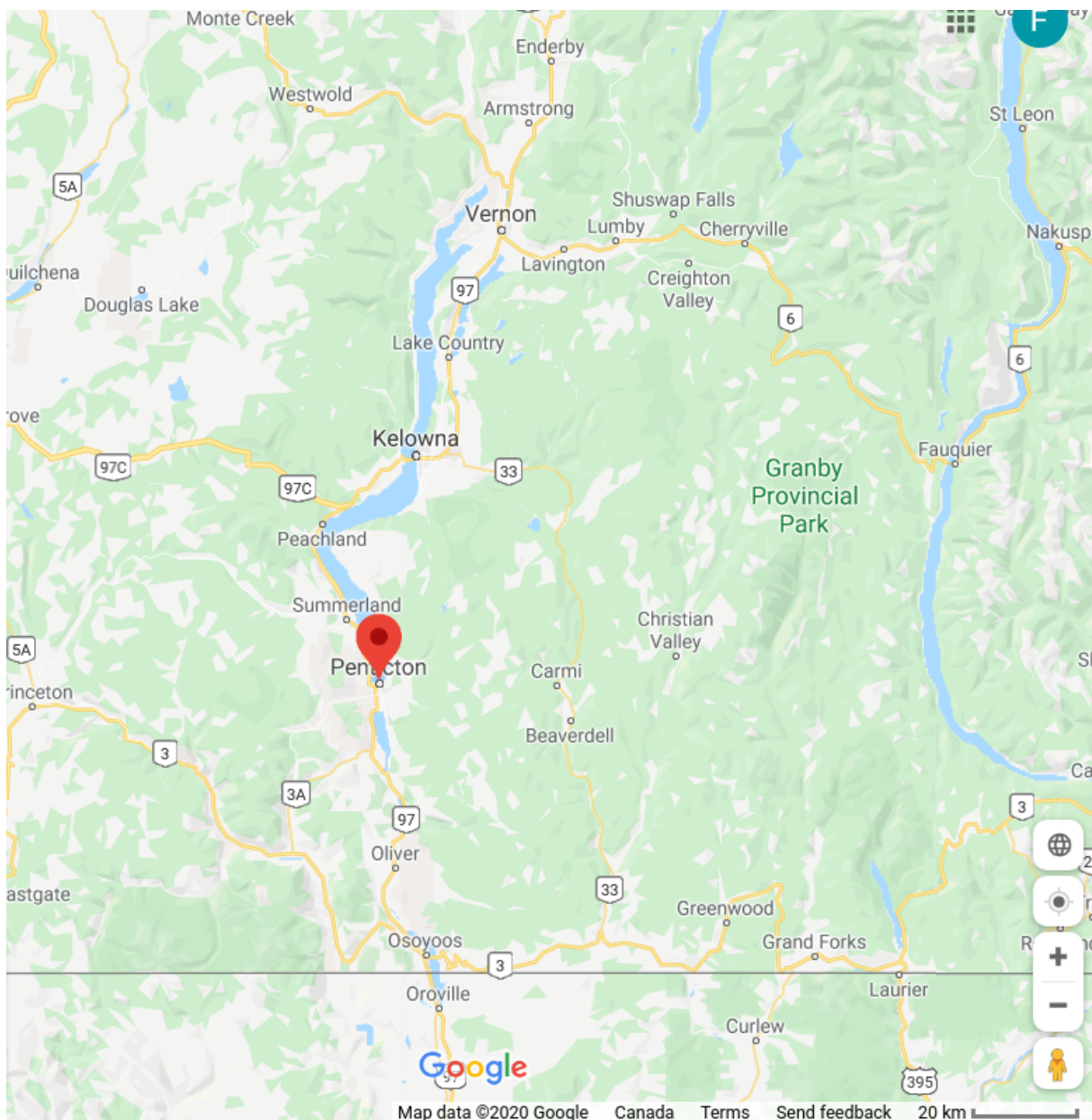


Figure 1: A map of the Okanagan Valley showing the location of Penticton, where the field crew will be based. Work will take place in the Valley from approximately Peachland to Oliver.

and a spare tire. To avoid fatigue, no driver will drive for long periods without breaks. All drivers have more than 5 years of experience. All individuals will wear appropriate clothing and have access to sunscreen and insect repellent. Workers will also carry ample food and water to avoid fatigue and dehydration.

2.4.3 Rattlesnake Safety

Crew will be alert to the danger of encountering rattlesnake in vineyards as they are occasionally found in vineyards. If bitten, crew will remain calm to slow spread of venom, immediately cease fieldwork, and go to the nearest hospital. All hospitals in the area have antivenom and addresses and phone numbers of nearby hospitals will be kept printed out in the glove compartment of field vehicle. Crew members will call ahead to the hospital to alert them of an incoming rattlesnake bite.

2.4.4 Wildfires

Crew will abide by all BC Government regulations around wildfire prevention listed in <https://www2.gov.bc.ca/gov/content/safety/wildfire-status/prevention>. In addition, during wildfire season the crew will check for wildfire risk using the government tracker <https://governmentofbc.maps.arcgis.com/apps/opsdashboard/index.html#/f0ac328d88c74d07aa2ee385abe2a41b>. No fieldwork will take place close to wildfires, and all requests to evacuate the vicinity of a wildfire will be complied with promptly.

3 Identifying and Addressing Specific Health and Safety Concerns

3.1 COVID-19

We are following the principles and guidelines laid out by WorkSafe BC specifically for Forestry and Agriculture field work and COVID-19 safety <https://www.worksafebc.com/en/about-us/covid-19-updates/covid-19-industry-information/forestry>.

3.1.1 Overview

The crew consists of three active field members plus an additional driver who will not be in the field. This additional driver is Wolkovich's partner Jonathan Davies, who will be available to share driving with Wolkovich but will not undertake active field duties in vineyards. Other than driving to and from the accommodation, and driving to the field sites, all of the work is outdoors, and there will be no difficulty in maintaining appropriate social distancing of two meter minimum distances. Any team meetings will take place outside to maintain physical distance. All team members will be responsible for ensuring physical distancing is maintained and any special COVID-19 precautions are strictly followed as per WorkSafe BC guidelines. Good hygiene will be practiced at all times, in line with the WorkSafe BC recommendations.

3.1.2 Location

Jones and Garner will stay in a large apartment near Penticton. They will have separate bedrooms and washrooms, and will sanitize communal space and equipment regularly and remain 2 meters apart at all times. Wolkovich and Davies will stay in a separate apartment close by, but will not need to maintain social distance as they are already isolating as a family unit.

Each crew member will have their own sanitizer and hygiene supplies for personal use for the duration of the field work. There will also be bulk liquid soap, water, and sanitizer that the crew can use to fill their personal containers if the need arises.

3.1.3 Travel

Lizzie will be in her own vehicle along with her partner Jonathan, while Jones and Garner will share a field vehicle. Lizzie and Jonathan are already isolating as a family unit so do not need to maintain social isolation from each other. In the vehicle shared by Jones and Garner the passenger will sit in the back-passenger seat, diagonally positioned relative to the driver to maintain a two meter distance ensuring physical distancing is in place as per WorkSafe BC guidelines. All crew will wash hands with soap and water (or with hand sanitizer) prior to entering the vehicles. The interior (e.g. seatbelts, headrests, door handles, steering wheels, and hand holds) and exterior door handles of both vehicles will be wiped down with sanitizing cleaner at the end of each day, or sooner if a member of the crew reports COVID-19 symptoms.

3.1.4 Tracking health before, during and after field work

Only healthy team members will be allowed to travel. Any crew member that has had a confirmed case of COVID-19 or who is unwell at the time of departure based, will not be allowed to take part in this research project. During field work and for two weeks after crew members will monitor closely for symptoms and maintain a record of daily personal temperatures. Temperature screening will be done with a properly calibrated thermometer, with temperature thresholds based on Health Canada guidelines. An indicator for possible COVID-19 infection is 37.5 °C. Active daily monitoring will be conducted using the Personal Health Daily Monitoring Form (from the BC Center for Disease Control), provided as an appendix (“COVID19-Contact-monitoring-form.pdf”).

3.1.5 Exhibiting COVID-19 symptoms

If a crew member exhibits COVID-19 symptoms (e.g. sore throat, fever, sneezing or coughing) they would be put into the far back seat of their truck, and instructed to put on a protective face mask and gloves. The other crew member of the pair, if not already the driver, would become the driver and they would put on a protective face mask and gloves. The inside of the vehicle (e.g. seatbelts, headrests, door handles, steering wheels, and hand holds) would then be wiped down with sanitizing cleaner. The vehicle would immediately head back to Vancouver not stopping along the way (there will be extra food/water in SUV). The drive time would be up to but likely not more than 6 hours. During the drive, the person with symptoms would continue

to monitor their situation using a thermometer and tracking other health metrics (see Personal Health Daily Monitoring Form provided as an appendix). The field crew have thermometers in the vehicles to enable effective monitoring. The vehicle interior and exterior door handles would be wiped down with sanitizing cleaner upon completion of the drive. Following the protocols set out by WorkSafe BC, both the person with symptoms and the driver would go into self-isolation in their homes for two weeks. The research supervisor would immediately notify the Public Health Authority in British Columbia by dialing 811 that someone with symptoms is self-isolating. We would notify the management of our field accommodation so that they could take necessary cleaning precautions. Any crew that has had a confirmed case of COVID-19 will not be allowed to come to work.

3.1.6 Interactions with collaborators

The field crew will need some interaction with local collaborators, but will maintain social distance from then as per the WorkSafe BC recommendations. To this end, all meetings will be kept to a minimum, and will take place outside where there is enough space for 2 meters between every person. The field crew will also practice good hygiene, including wearing face masks, not touching faces, washing hands often and for at least 20 seconds (or sanitizing hands if washing not possible) and sneezing/coughing into disposable tissues if needed.

3.1.7 Interactions with field workers in vineyards

The field crew will alert vineyards to our presence on site so the field crew and vineyard field workers will be aware of each other's presence. Our fieldwork does not require interaction with such workers, so if the field crew see any workers they will retreat to a safe distance until they have left the immediate area. Any surfaces the field crew and vineyard fieldworkers might come into contact with will be sanitized before and after contact. Our crew members will also maintain a 2 meter distance from each other at all times as per the WorkSafe BC guidelines.

3.1.8 Interactions with local communities

The field base will be close to the town of Penticton, where the field crew will obtain necessary groceries and gas. To reduce risk to local communities, shopping trips will be kept to a minimum (once a week), during shopping researchers will wear face masks, and sanitize hands before and after shopping, and maintain good hygiene. The field crew will only use self-service gas stations and prior to use we will wipe down the gas pump nozzle and PIN pad on the pump with sanitizing wipes. The field crew will not come into contact with any First Nation communities in the Okanagan Valley.