Department of Botany

Field Safety Plan Form

**(Date of Last Revision: October 22, 2020)**

**Part 1. Planning Record**

*Please provide basic information about the trip (who will travel, by what means, to where, when).*

|  |
| --- |
| Who will travel: Emily Adamczyk (PhD Candidate in Parfrey Lab) and Siobhan Schenk (PhD Student in Parfrey lab). Other members of the Parfrey lab may be approved by Laura Wegener Parfrey to join on the conditions that they 1) Provide full contact and emergency information, 2) Complete COVID training, 3) Acknowledge in writing that they have read and agree to abide by conditions set out in this field safety document and related COVID safety plan. At least one team member must have wilderness first aid certification (this will generally be Emily Adamczyk).    How: We will reserve a Botany vehicle or use the O’Connor Lab truck  When: Overnight trips 4-5x for the next year.  To where: Montague Harbour Marine Provincial Park, Galiano Island |

**Trip or Project Name**

|  |
| --- |
| Seagrass diatom project |

Nature of field activity

|  |
| --- |
| Field activities involve collecting seagrass from an intertidal seagrass meadow at Montague Harbour Marine Provincial Park, Galiano Island. We (Emily and Siobhan) will wade in the seagrass meadows wearing a drysuit or waders to collect the seagrass and also take water quality measurements using a multiparameter probe. In the event the water is too murky or deep to collect the seagrass leaves, we will use goggles and a snorkel to collect our samples (snorkel depth will be no deeper than 2 metres). We will have a non-UBC colleague on shore in case of emergency. |

Is trip for teaching or research? (If teaching, please complete Course Information below)

|  |
| --- |
| Research |

Is trip local to Vancouver, within BC, within Canada, or international?

|  |
| --- |
| Within BC – Galiano Island |

How many days is the trip?

|  |
| --- |
| 2-3 days |

Is this ongoing work[[1]](#footnote-1)?

|  |
| --- |
| Yes |

If not ongoing, trip start and end dates

|  |
| --- |
|  |

**Team Leadership**

Project Leader

|  |
| --- |
| Laura Wegener Parfrey |

Will the Project Leader participate in the trip?

|  |
| --- |
| On occasion Laura Parfrey will participate in the trip, but Emily Adamczyk will be the trip leader |

Trip Leader

|  |
| --- |
| Emily Adamczyk, Siobhan Schenk |

Field Safety Officer (if different from Trip Leader)

|  |
| --- |
| Emily Adamczyk, Siobhan Schenk, Mark Webber\*, Arjan van Asselt\*, Andrew Simon\*  \*Affiliated with IMERSS (Institute for Multidisciplinary Ecological Research in the Salish Sea) |

**Course Information (if applicable)**

Course number

|  |
| --- |
| N/A |

Course name

|  |
| --- |
| N/A |

Number of sections

|  |
| --- |
| N/A |

Number of students per section

|  |
| --- |
| N/A |

**Travel Information**

Country

|  |
| --- |
| Canada |

Immunizations Required   Yes/ No

|  |
| --- |
| No |

Geographical Site

|  |
| --- |
| Montague Harbour, Galiano Island, BC |

Nearest Town/City

|  |
| --- |
| Sturdies Bay, Galiano |

Means of Travel

|  |
| --- |
| Driving and BC Ferries |

Accommodations

|  |
| --- |
| Accommodation is provided by IMERSS and social distancing measures will be in place. |

List of Drivers[[2]](#footnote-2)

|  |
| --- |
| Emily Adamczyk, Laura Parfrey |

Travel Itinerary Details

|  |
| --- |
| Home – BC Ferries – Galiano Island (reverse for return trip)  All Galiano-bound personnel will use a Botany vehicle or the O’Connor lab truck to drive to the Tsawwassen BC Ferries terminal. Personal protection equipment (PPE, a mask, hand sanitizer) will be used for the duration of the transportation. BC Ferries is currently operating at 70% of normal capacity and is cleaning and disinfecting the interiors of all vessels between sailings.  Here is an example itinerary:  Day 1:   * Leave Vancouver and travel to Galiano Island (~4h) * Wait for low tide in accommodation * Leave accommodation 2 hours before lowest tide * Sample eelgrass (2-3h) during low tide period * Return to accommodation   Day 2:   * Return to Vancouver (~4h) * Deposit samples in Parfrey Lab at UBC   \*Day 3:   * If there is bad weather, especially during November/December, we may stay an extra night to ensure that sampling can be done without exposure to hazardous elements (extreme rain or wind). |

**Participants**

*Add lines to list all participants for a research field trip or a non-local, course-related field trip. For a course trip to a local field site (i.e., for which there are no required immunizations or visas and participants are covered by MSP), please list all participants who are not already registered in the course.*

| Name | Health Insurance  (y/n) | Required Immunization  (y/n/na) | Visa  (y/n/na) | First Aid Training Level | Email |
| --- | --- | --- | --- | --- | --- |
| Emily Adamczyk | Y | na | y | Wilderness First Aid | adamczyk@zoology.ubc.ca |
| Siobhan Schenk | Y | na | NA, Canadian citizen | No | sschenk@student.ubc.ca |
| Laura Wegener Parfrey | Y | na |  |  | lwparfrey@botany.ubc.ca |

**Part 2.** **Communication Plan**

**Internal Communication Plan**

*This describes how members of the field team will communicate with one another, in the event of a planned or unplanned separation while on the trip.*

Trip Leader Phone Number

|  |
| --- |
| Emily Adamczyk: 604-842-8657  Siobhan Schenk: 506-471-3607 |

Field Safety Officer Phone Number

|  |
| --- |
| Emily Adamczyk: 604-842-8657, Siobhan Schenk: 506-471-3607  Mark Webber: (250) 634-4507, Arjan van Asselt: (778) 965-0463, Andrew Simon: (250) 539-5089 |

Is cell phone coverage expected to be reliable? If not, what means of communication will be used?

|  |
| --- |
| Yes. |

Does the group plan to be separated into subgroups without visual contact? Yes/no

|  |
| --- |
| no |

If yes, please answer the following:

* What is the planned check-in interval?

|  |
| --- |
|  |

* What steps will be taken if a check-in is missed?

|  |
| --- |
|  |

* At what stage will someone outside the group be alerted if check-ins are missed?

|  |
| --- |
|  |

If no, please answer the following:

* What steps will be taken if the group becomes unintentionally separated?

|  |
| --- |
| We will first visually scan the area for the separated group member and then call a separated group member. Members will meet back at vehicle if they are unable to locate other members of the party for more than 5 minutes. |

* At what stage will someone outside the group be alerted if the group cannot reestablish contact?

|  |
| --- |
| If a group member cannot be located after 15 minutes of visual searching and calling to them, and is not at the vehicle check-in site, we will contact someone outside the group |

**External Communication Plan**

*This describes how a representative of the field team will communicate with someone at UBC who is not on the trip.*

Name and phone number of participant responsible for external check-in, if not the Trip Leader

|  |
| --- |
| Trip Leaders: Emily Adamczyk and Siobhan Schenk |

Project Leader Phone Number

|  |
| --- |
| Emily Adamczyk: 604-842-8657, Siobhan Schenk: 506-471-3607 |

Name and number of external contact person at UBC, if not the Project Leader

|  |
| --- |
| Laura Parfrey, 604-992-8397 in cases where Laura is not on field trip. Vincent Billy (604-767-7344), a PhD candidate in the Parfrey lab) will be the alternate contact if Laura is on the trip.  Parfrey lab #fieldtrip Slack channel |

How will the trip team maintain external contact with someone at UBC?

|  |
| --- |
| A trip leader will be checking in and out on Parfrey lab #fieldtrip Slack channel. |

External check-in schedule

|  |
| --- |
| In Transit: The trip leader(s) will post a Slack message to the Parfrey lab #fieldtrip Slack channel during transit to and from each leg of the outbound and inbound trip (Vancouver, BC Ferries Tsawwassen/Sturdies Bay terminals, Galiano Island).  Field Sessions at Montague Harbour: Participants will also check in before and after each field session with the external contact person and the Parfrey lab #fieldtrip Slack channel following existing safety guidelines for the site, including filing a daily field plan with explicit risk assessment, weather report, and contact information that is signed by all participants. |

If external contact is not made at the designated time, please describe the steps to be taken (i.e., what will be done and who will be alerted).

|  |
| --- |
| In Transit: The external contact will attempt to communicate with the team leaders if they do not hear from the team two hours after agreed upon check-in time (based on the exact travel itinerary). If they are unable to make contact at that time, they will contact the field safety officers. If they still cannot retrieve information on the whereabouts of the team, the external UBC contact will then notify RCMP and the Botany Department. If participants cannot be located, emergency contacts of participants will be contacted  Team leader emergency contacts:  Emily: 778-984-6930 (Martin Kuerbis – Partner)  Siobhan: 506-471-7962 (who is this number for?) |

**Site Contacts**

*Please list contact info for any local site contacts (e.g., field station managers, property owners, park staff) or local entities (e.g., park headquarters), if applicable.*

| Name/Entity | Title/Role | Email | Phone |
| --- | --- | --- | --- |
| **K2 Park Services Ltd.** | Contacts who operate Monatgue Harbour parc | [k2parks@shaw.ca](mailto:k2parks@shaw.ca) | 1 877 559-2115 |

**Departmental Contacts**

*Main departmental contacts are listed here. Please add other UBC staff contacts, if applicable.*

Department Head: Sean Graham, 604-822-3554 /personal # emergencies only: 604-714-1757

Admin Director: Alison Munro, 604-822-4882/personal # emergencies only: 604-817-9472

Assistant to the Head/Admin Support: Isabel Ferens, 604-822-8524

|  |
| --- |
|  |

**Emergency Contacts**

*Some typical emergency contacts are listed. Please provide additional contact information for local first responders and emergency services.*

General emergency hotline\*: 911

(\*note that this is not 911 in many countries; please edit accordingly)

|  |
| --- |
|  |

Canadian Coast Guard, 24-hr emergency line in BC: 800-567-5111 or #727 or VHF radio Ch. 16 or \*16 on cell phone

(for other locations in Canada, see <https://www.ccg-gcc.gc.ca/contact/emergency-urgence/search-rescue-recherche-sauvetage-eng.html>)

|  |
| --- |
|  |

Search and rescue, Canadian Pacific region: 250-413-8933

(for other locations, see <https://sarcontacts.info/>):

|  |
| --- |
|  |

Nearest hospital:

|  |
| --- |
| Lady Minto / Gulf Islands Hospital  135 Crofton Road Salt Spring Island, BC  V8K 1T1  250-538-4800 |

Police:

|  |
| --- |
| 911 |

Fire:

|  |
| --- |
| 911 |

**Part 3. Assessment of Risk**

**Description of activities**

*Please provide a brief description of the fieldwork activities.*

|  |
| --- |
| Transportation to Montague Harbour will be by car. The team leaders will collect intertidal seagrass leaves to investigate the epiphytic microbial (bacteria and diatoms) communities, wading or snorkeling in waters no deeper than 2 metres. The team leaders will also collect water samples. At the field site, we will preserve the leaves for later DNA sequencing and electron microscopy. |

**Risk Assessment**

*For your planned field activities, use the risk matrix (Table 1) to assist you in determining level of risk associated with each potential hazard (Table 2). Hazards may be site- or task-specific, they may be insidious or apparent, they may have interacting or cumulative effects, and they have the capacity to affect individuals differently. Additional guidance is in Appendix I. Keeping these considerations in mind, please score each potential hazard based on the anticipated combination of ‘consequence’ and ‘likelihood’, resulting in a determination of low, medium, or high level of risk (Table 1).*

**Table 1. Risk Matrix**

**Likelihood**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Continuously or many times daily, expected to occur regularly under normal circumstances | Very Likely | **Medium** | **High** | **High** | **High** |
| From once per day to once per month, expected to occur at some time | Likely | **Medium** | **Medium** | **High** | **High** |
| From once per month to once per year, may occur at some time | Moderate | **Medium** | **Medium** | **Medium** | **High** |
| It has been known to occur but not likely in normal circumstances | Unlikely | **Low** | **Medium** | **Medium** | **Medium** |
| Not known to have occurred, but considered remotely possible | Rare | **Low** | **Low** | **Medium** | **Medium** |
|  | **Consequence** | Minor | Moderate | Major | Extreme |
|  |  | Minor cuts, bruises, irritation or physical discomfort | Injury or illness requiring medical treatment | Injury or illness requiring hospital admission and/or temporary impairment (less than 6 months) | Injury or illness resulting in long-term or permanent impairment and/or one or more fatalities |

**Table 2. Potential Hazards**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **High** | **Med** | **Low** |
| **Natural Hazards** |  |  | v |
| Temperature Extremes |  |  | v |
| Uneven/Slippery Walking Surfaces |  | v |  |
| Sharp Objects—rocks, coral, vegetation |  |  | v |
| Heights/Drop-offs (including high elevation) |  |  | v |
| Falling Objects/Obstructions |  |  | v |
| Tight Spaces/Narrow Openings/Overhangs |  |  | v |
| Darkness/Low Light |  | v |  |
| Strong Sunlight (including sunburn) |  | v |  |
| Foul Weather—wind, rain, snow, lightning, flash flood |  |  | v |
| Fire Hazard |  |  | v |
| Smoke/Dust/Fog |  |  | v |
| Toxic/Allergic Sources (vegetation, pollen) |  |  | v |
| Animals—insects, reptiles, mammals, other |  |  | v |
| Water/Current—streams, waves, tides, depth |  | v |  |
| Elevation (low oxygen) |  |  | v |
| Unpredictability of environment |  |  | v |
| **Transportation Hazards** |  |  | v |
| Vehicular Traffic—roads, railroads |  |  | v |
| Bridges |  |  | v |
| Route Conditions – Weather extremes |  |  | v |
| Route Conditions - rough (inc. flat tires) |  |  | v |
| Vehicle Condition |  |  | v |
| **Field Work Hazards** |  |  | v |
| Getting lost |  |  | v |
| Hiking/Walking |  |  | v |
| Climbing |  |  | v |
| Lifting/Carrying |  |  | v |
| Swimming/Snorkeling/SCUBA/Boating |  | v |  |
| Digging/Trenching |  |  | v |
| Use of Tools (including chipping) |  |  | v |
| Fatigue/Dehydration |  |  | v |
| Animal bites |  |  | v |
| Research/location specific additional risks: |  |  | v |

**Mitigation Plan**

*For activities with hazards determined as 'High' or ‘Medium’ risk, please explain the protocols that will be followed to mitigate that risk. Following the hierarchy of risk control (Table 3), first consider removing activities determined to be ‘High’ risk. When it is not practicable or possible to eliminate a hazard with high risk, the next levels of control, such as substitution or administrative changes, can be applied. Note that the final level of control, personal protective equipment, is considered the least effective because it assumes that participants will be exposed to some level of risk.*

**Table 3. Hierarchy of risk control**

|  |  |
| --- | --- |
|  | Example |
| 1. Elimination | Remove the hazard   * e.g., use the 30-30 rule to cease activity if thunderstorms are approaching |
| 2. Substitution | Use an alternative   * e.g., choose a longer approach route if it avoids steep drop-offs |
| 3. Engineering Controls | Separation of hazard   * e.g., park to avoid crossing busy roads |
| 4. Administrative  Controls | Change the work practice   * e.g., require participants to have certain rest periods * e.g., set alarms for reapplying sunscreen |
| 5. Personal Protective  Equipment | Provide protective clothing and or equipment. |

|  |
| --- |
| **Risk 1: Uneven/Slippery Walking Surfaces**  We will be cautious and slowly walk around inter-tidal areas. Proper footwear will be worn.  **Risk 2: Strong Sunlight (including sunburn)**  We will apply sunblock before going to field and reduce exposed time (maximum 1.5 hours) and bring enough water for adequate hydration.  **Risk 3: Darkness**  During fall and winter low tides occur at night. All participants will be required to wear a headlamp and wear clothing with reflectors (e.g. rain gear or vest). The trip leader will carry a back up flashlight. Participants will maintain closer proximity (between 10 and 40 feet) and communicate frequently by talking.  **Risk 4: Currents/Waves/Tides**  Field trips will occur during low tides and be timed to start as tides are still going down to avoid the need to rush fieldwork. The time of low tide will be reviewed with all participants before each trip and again when participants meet on site so that participants are aware of how long they can work.  Tides at Montague Harbour are medium risk as the waves can be strong during stormy weather – we will not sample if the trip leaders deem the conditions are hazardous.  **Risk 5: Snorkeling**  In the event the tides are too high for intertidal sampling, we will snorkel to collect seagrass leaves. The snorkelling water depth will be no deeper than 2 metres. |

**Part 4. Emergency Response Plan**

*Please describe the appropriate procedures that are to be followed in the event of an emergency.*

**If a team member is injured and can communicate**

How will that member communicate their injury? Who will they communicate with, and how will that person respond?

|  |
| --- |
| Team members will always be within hearing range while also maintaining adequate (2 metre +) distancing. Emergencies will be verbally communicated; an injured member will communicate with the trip leader(s) & safety officer(s) at the field site and assess injury to decide appropriate treatments. |

How will emergency help (e.g., paramedic) be gained if necessary?

|  |
| --- |
| Call 911 |

**If a team member is injured and cannot communicate**

How will the other team members become alerted to this? Who will respond if this happens?

|  |
| --- |
| As mentioned, team members will stay within hearing range while maintaining 2m+ distance. They will also visually check on other participants every 5 minutes to confirm that other members are fine and have not strayed apart. If a team member notices that a team member is injured, we call 911 after assessing member’s physical condition. If the trip leader is incapacitated the participant will call 911 and the external contact (Laura Parfrey, 604-992-8397) or Vincent Billy (604-767-7344). The trip leader will call 911 if needed. |

How will emergency help (e.g., paramedic) be gained if necessary?

|  |
| --- |
| Call 911 |

**Evacuation plan**

Please list circumstances that could arise which would cause evacuation from the field.

|  |
| --- |
| **Extreme weather:** Heavy rain and wind, rising tides. If tides rise more quickly than expected participants will leave the site.  **Injuries:** This would include abrasions, broken bones, immersion in water, and other medical issues |

Can all of these circumstances be detected by the on-site team?  Yes/ No

|  |
| --- |
| Yes |

If no, fill out the following 2 sections:

Please give the name and contact information of the external contact who will communicate to the team that they must evacuate.

|  |
| --- |
|  |

Please give the name and contact information of the team contact who will receive this information from the external contact.

|  |
| --- |
|  |

Please describe the procedure for safe evacuation of all the team members. Include how it will be determined that each team member is safely evacuated.

|  |
| --- |
| 1. Participants will evacuate the intertidal area together. 2. As a team, we will return to the accommodation together. 3. Call an ambulance (911) for medical emergencies 4. Contact external UBC check-in person (Laura Parfrey or Vincent Billy)   Trip leaders will communicate with UBC by Slack message or cell phone when team has safely evacuated (e.g. reached accommodation/hospital)  Note: It is easy to evacuate this location as it is a flat beach. There is no risk of being cut-off from land, and there are many exit points from the beach back to the paved parking lot which has access to the main road on Galiano Island. |

1. Multiple trips to the same site(s) for the same activities by the same people can be covered by one Field Safety Plan, provided activities and participants remain as specified. When minor changes occur, an addendum to a previously submitted plan can be added. Any significant changes to the activity will require the Project Leader to reassess risks and submit a new Field Safety Plan. Any new Participants must submit Participant Forms, and changes to the Participant list should be reflected on a revised Planning Record. A Field Safety Plan is good for 12 months. For ongoing or long-term projects, the Project Leader should submit a new version each year*.* [↑](#footnote-ref-1)
2. Use of personal vehicles is strongly discouraged. If possible, UBC-owned fleet vehicles or rental vehicles are preferred. In the event of a motor vehicle accident in a personal vehicle, the individual’s ICBC personal insurance would be the primary coverage. The University’s ICBC insurance coverage would respond for an accident in a UBC fleet vehicle, provided the driver was a UBC authorized driver. For a rental vehicle, the driver should ensure they have third party liability coverage purchased either through the University, through their credit card, or through the rental company (see here for further details: <https://srs.ubc.ca/insurance/insurance-programs/automobile-insurance/>). [↑](#footnote-ref-2)