

The University of Victoria will never forget September 13, 2019 and we deeply honour the memories of our two students, Emma Machado and John Geerdes, who passed away on the road to Bamfield that night. We recognize the accident's aftermath for those closely involved will last well beyond these past 18 months and that, each time it is raised, it can weigh heavily on them.

September 2019 was meant to be the start of an exciting new term for 45 UVic students and two teaching assistants. Instead, we mourned the loss of two of our first-year students. The students who survived, their parents and the families of John and Emma experienced an extraordinarily harrowing time. To this day, we remain profoundly sorry for the immeasurable grief, hardships and ongoing challenges caused by this tragic accident and all aspects associated with it.

Learning from the tragic accident

Following the accident, UVic commissioned an independent report by external expert Ross Cloutier. As promised when we received the report, Conducting Field Schools to the Bamfield Marine Sciences Centre, in June 2020, the university has now fulfilled all the recommendations—except those contingent upon a return trip to Bamfield, which has not been possible during the pandemic—as well as other important improvements which go beyond these recommendations. (See detailed information in attached tables.)

UVic promised to those closely involved and our community that we would learn from this devastating accident and we are grateful to all who assisted in this essential work.

UVic also welcomes the opportunity to share what we have learned with other institutions, including our partner post-secondary institutions who study and learn at the Bamfield Marine Sciences Centre (BMSC).





West coast learning experiences

Learning outside the classroom is an essential part of the UVic student experience and one of the primary reasons students choose our university above others. Recommendations within the report and lessons learned have been used to make improvements broadly across UVic field programs so that our students can look forward to these experiences, knowing that their safety is our top priority.

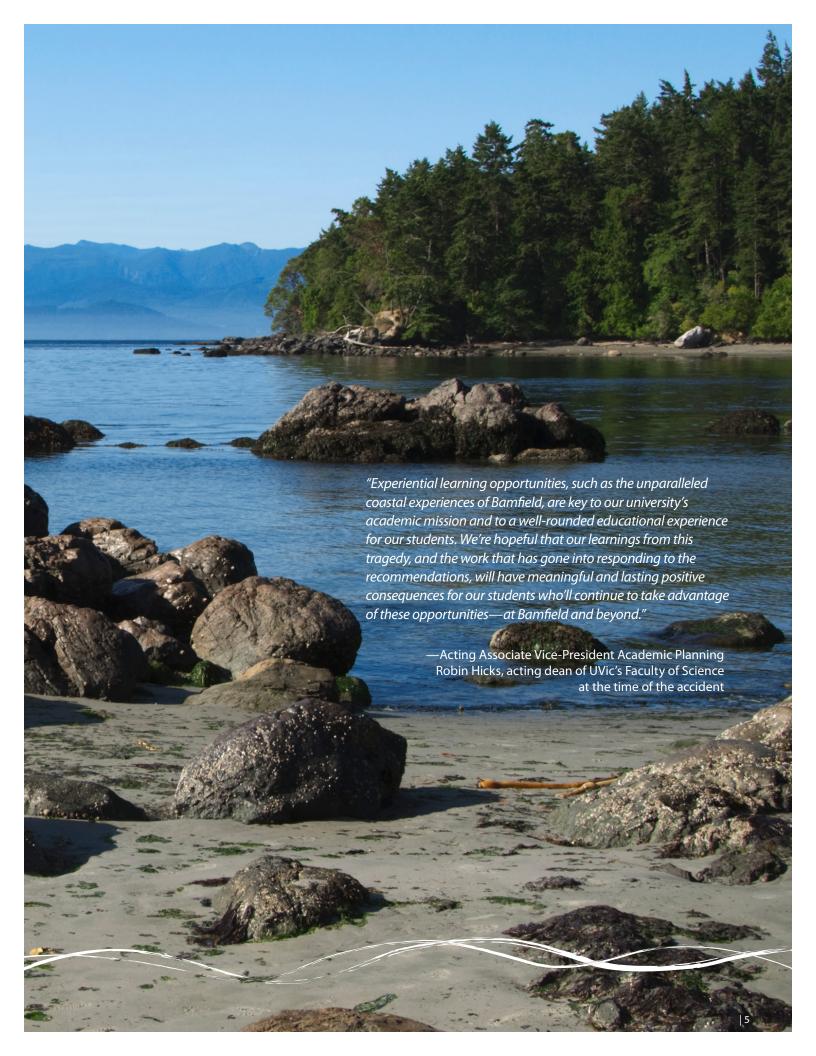
The report's recommendations for bus travel by road to Bamfield—all of which are now fully implemented—include, but are not limited to: traveling during daylight; enforcing a disciplined travel itinerary; adding to emergency communications capabilities; including a senior lab instructor or faculty staff member with relevant first-aid training on the bus; and having appropriate first-aid capacity in supplies and expertise for the group size. All of these steps, plus additional measures including overarching processes and risk assessment tools, are now fully in place.

With the ongoing refinement to travel programs, the university is poised and ready to train a new generation of leaders in safe practice for excursions and non-campus activities.

The lessons learned from the tragic accident and review have also been applied more widely by improving plans, procedures and training for a better response in the event of any future emergencies occurring off campus. This work has led to significant improvements to emergency plans at UVic, as well as enhancements to our emergency management training program. These improvements better prepare the university for on- and off-campus situations, providing better support to those experiencing a crisis event including our front-line personnel. We commit to continuously testing, refining and improving our response plans, procedures and processes.







Enhancing student support services

Through this, UVic has learned about managing large-scale critical incidents in relation to our students. We have learned a great deal about how best to work with young people who are just embarking on their own life journeys and confronting unexpected and difficult challenges.

We know that the changes the university has made as a result of the report's recommendations can never undo the pain and trauma experienced as a result of the accident.

We also recognize that this work transcends one faculty or department; therefore, the events of 2019 have been the foundation for an improved student support model in a complex student-based critical incident.

Among other measures and activities (outlined in the attached tables), UVic is establishing a new Student Critical Incident Response Team and a new role of Special Advisor for Academic Crisis Management at the university. This new position will ensure effective and rapid coordination between student support providers and faculties. Those supports will include navigating the academic concession process for students to continue their studies, as well as supporting any official leave from the university and subsequent return to UVic.

Once pandemic restrictions have sufficiently eased, UVic will begin planning an opportunity for the students who were on the September 2019 trip to visit Bamfield. In consultation with the Huu-ay-aht First Nations and the BMSC, a dedicated team will implement a student-centred approach to planning the trip that takes into account the wishes of the students.





Oceanside campus

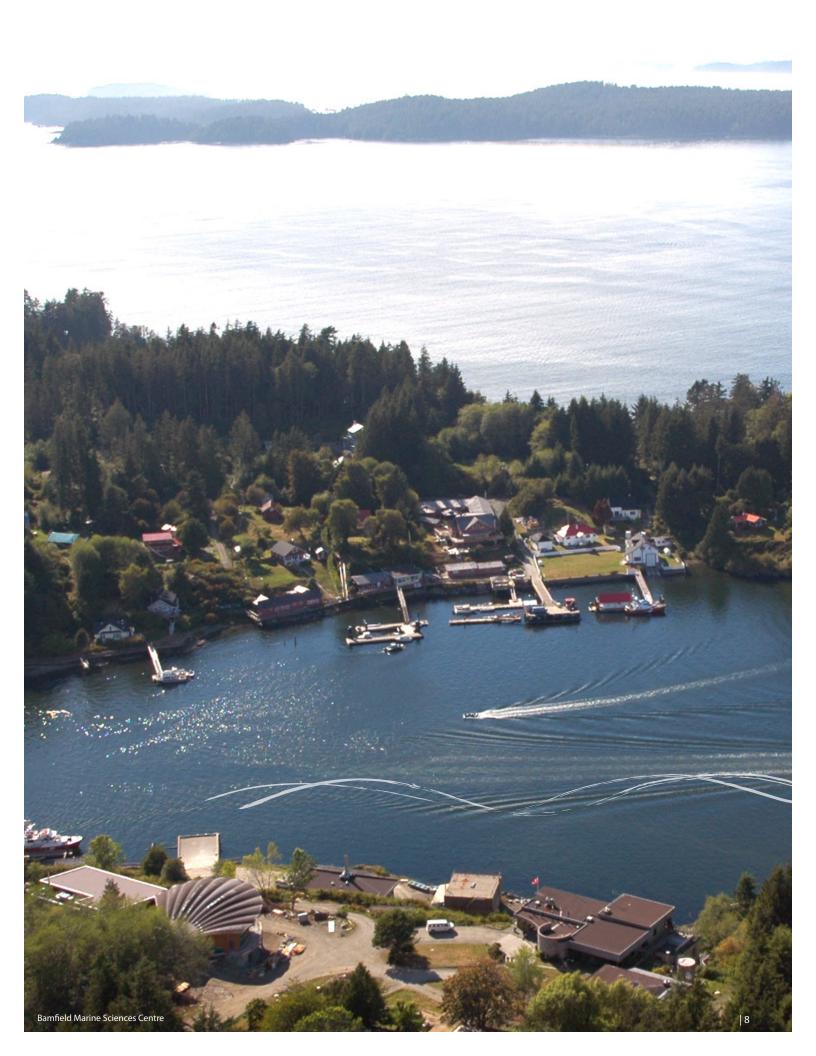
We value and support the BMSC as an exceptional learning, teaching and research venue of international stature. The oceanside campus also represents a valuable and strategic partnership between UVic and the University of British Columbia, Simon Fraser University, University of Alberta and University of Calgary, who together manage the not-for-profit research centre established in 1972.

It was founded on the vision of providing student field trip experiences where the ocean is the classroom. In the difficult months of reflection that followed the tragic accident, the BMSC worked closely with all communities and partners to ensure improved road safety for everyone.

In September 2020, the provincial government announced funding to improve the Bamfield Main Road in partnership with the Huu-ay-aht First Nations. Upgrades to the 76-kilometre stretch of unpaved logging road are expected to start this summer and are scheduled to be complete in 2023. It is important to recognize the hard work and actions of the Huu-ay-aht First Nations, the families, students, researchers and others who called on the provincial government to invest in improvements to the road.







Bamfield Recommendations Implementation Committee

Gayle Gorrill, as executive lead on UVic's response to the Bamfield accident, formed the Bamfield Recommendations Implementation Committee to implement changes resulting from the recommendations in the external report. The committee includes representation from UVic's Faculty of Science, Academic Planning, Student Affairs, Campus Security, Risk Management, University Communications and the BMSC.

The committee's work was undertaken with sincerity and heartfelt dedication, focused on doing everything possible so that an accident like this never happens again.

The university indicated in June 2020 that we aimed to implement Ross Cloutier's recommendations within 12 months. The committee is heartened by the contributions provided for the independent report by students and their families, as well as by faculty and staff, that have gone into achieving this goal.

The university also acknowledges and respects the Huu-ay-aht First Nations, upon whose traditional territories the BMSC stands and whose members came to the assistance of our students in time of such great need.





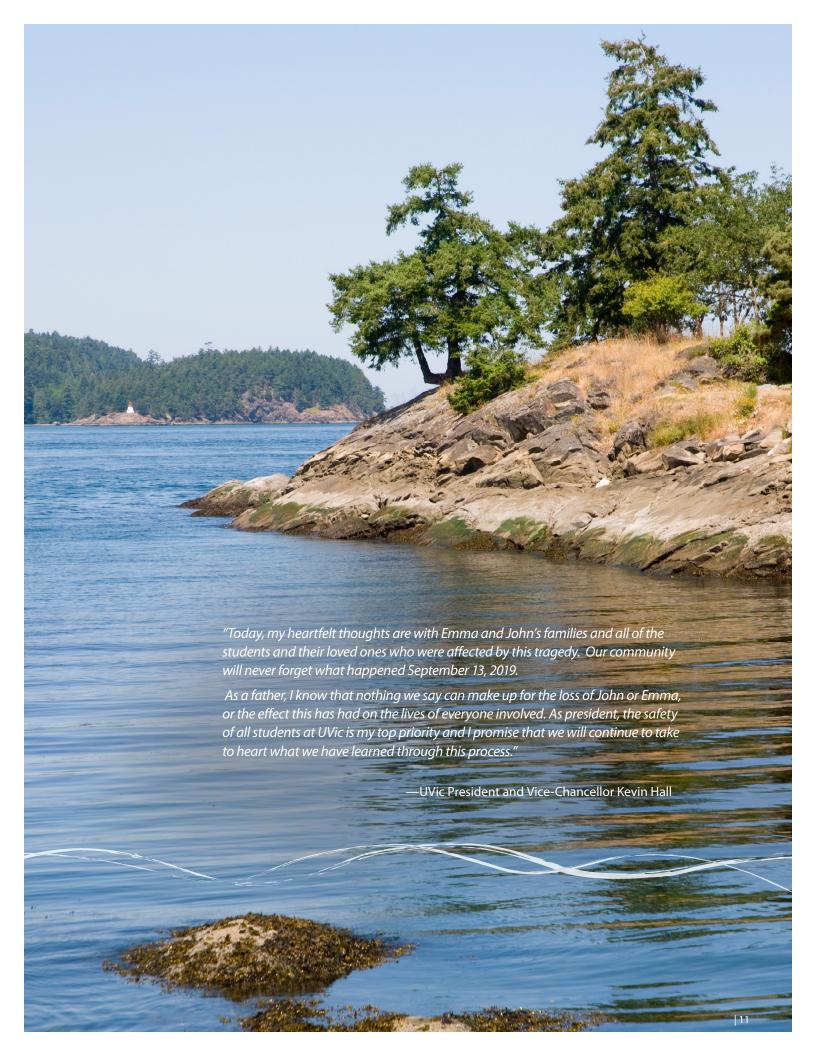
Introduction to attached tables

This report is the concluding update from the Bamfield Recommendations Implementation Committee to UVic's Board of Governors on implementation of findings from the external report.

Attached are details on implementation of the recommendations and associated activities. As outlined in previous reports to the Board, the committee reviewed the recommendations and grouped them into 11 projects to ensure the appropriate prioritization, sequencing and timeliness of implementation. The projects have been further refined since September 2020 once detailed planning and implementation were well underway.

In "Appendix A – Projects Table," the 43 recommendations are divided into 11 projects. In "Appendix B – Recommendation Table," some recommendations are shown in more than one project or category due to interdependencies.





Appendix A – Projects Table

Project Description		Recommendation Number Status		Commentary	
1	Planning Activity Standards: The university will develop resources to advise trip leaders on the documentation required when arranging group activities.	#1, #4, #6, #7, #11, #12, #23	Complete	The university has taken the hazard assessment and control document that was included in Ross Cloutier's report called "Conducting Field Schools to the BMSC" and has used it to create a field planning and risk assessment tool. This tool is now in use to guide field school leaders in determining key elements of risk including and not limited to training and experience requirements, detailed itineraries and scenario planning.	
2	Biology Planning Activities: Biology will review its field school planning and will implement the planning standards developed by the university.	#1, #2, #3, #5, #6, #7, #8, #9, #11, #12, #17, #23	Complete	The Department of Biology is utilizing the new hazard, risk and trip planning templates and training materials for field schools and off-campus activities. The department is poised to utilize these tools for the next trip to Bamfield when it reopens.	
3	Contract Management: The university will provide guidance to ensure that trip leaders understand contractual arrangements and their responsibility. The university will include this as part of the evaluation indicated in #16.	#17	Complete	Contract management processes have been developed and are now integrated into planning templates. Documents are now in use broadly.	
4	Response Planning: The university will review our existing response planning including ensuring that planning considers off-campus events.	#10, #24, #25, #26, #27, #28, #32, #33, #41, #42	Complete	Core emergency plans have been significantly revised as a result of this work and processes for continuous improvement are in place.	
5	Support and Resources for Impacted Community: Review and identify units on campus and how they may be involved in the response to incidents. Develop appropriate training requirements and orientation to be offered broadly. Determine our relationship and accountability for working with families in an incident. Identify resources for students, family, faculty and staff to support them in an emergency.	#38, #40	Complete	We have reviewed how units on campus are involved in response and incidents, and training programs have been developed. Protocols for resources and supports for family members have been developed, as well as resources for travel reimbursement and expenses.	

	Project Description	Recommendation Number	Status	Commentary
6	Response Debrief: Incorporate reflection and lessons learned into the work of all the groups implementing recommendations. Reflection should also include ideas that may not have been included in the report, but that we should consider moving forward.	#29	Complete	Debrief procedures are integrated into the UVic Emergency Plan and Emergency Operations Centre Procedures to identify gaps and improve procedures in the future. UVic also undertook a debrief process where 10 additional lessons learned and related activities were developed. Of these activities, 5 are now complete and 5 are in progress.
7	Waiver and Informed Consent Program: The Waiver and Informed Consent Program will be reviewed and communicated to departments across the university.	#2	Complete	The university has developed a set of principles when either a Waiver or Informed Consent will be used. Specifically related to field activities, this forms part of the review and approval process which is now in use.
8	Visiting Bamfield: Provide an opportunity for students to visit Bamfield. Incorporate feedback from students and university counsellors. Timing of trip will be dependant upon COVID-19.	#19	In progress	We will continue to work with students who were on the September 2019 trip to provide an opportunity for a future visit to Bamfield for those interested. This work was halted due to COVID-19. A dedicated team is developing a student-centred approach in consultation with the Huu-ay-aht First Nations and BMSC, to provide students an opportunity with appropriate supports in place. To be completed when Bamfield re-opens.
9	General Transportation to Bamfield: The university will review recommendations with BMSC to determine if a coordinated approach can be developed for all travellers to BMSC. The university will support the Huu-ay-aht First Nations, students, families, and the Bamfield community to advocate for the Government of BC to make improvements to the road.	#13, #14, #15, #21, #22	Complete	BMSC has launched a central website hub that includes communication tools and cell and satellite coverage information, best practices, resources for pilot car services offered by charters and resources for road conditions. In addition to updates on road conditions through social media, travellers can call BMSC during business hours for current road conditions. Outside of business hours the phone line will provide information on the most recent road conditions.
10	UVic Transportation to Bamfield: The university will require use of a field school hazard assessment and control program to assess the appropriateness of various modes of transportation for group student travel.	#16, #18, #20	Complete	The BMSC has been closed to the public and is expected to remain closed until at least summer 2021. UVic fully accepts recommendations #16, #18 and #20 and these recommendations formed our analysis for the other projects in this list.

Project Description		Recommendation Number	Status	Commentary
11	Student Affairs' Programming: Ensure that our response to critical events is integrated, scalable and connected to the Emergency Operations Centre (EOC). Ensure that we are effectively communicating with students and parents and incorporating principles of worker care into our interactions.	#30, #31, #34, #35, #36, #37, #39, #43	Complete	A detailed new Interdisciplinary Student Case Management Model has been developed. The model coordinates the institution's approach to student support following an incident, formalizes a staffing model to respond to critical incidents, defines clear lines of communication, and establishes when and how to use outside resources and supports. A Student Critical Incident Response Team will also be established that includes a new senior academic lead role as well as support structures for university personnel who are supporting students during and following a critical incident. The new academic lead role will also contribute to student academic success by coordinating support for students navigating the academic concession process.

Appendix B – Recommendation Table

	Recommendation	Project Linkage	Status
1	A detailed information package should be provided to students that includes more information about activities that will be participated in while at the BMSC and a link to the BMSC informational webpage. This should be available prior to the point in which students register and pay for the trip. The in-person information session held by the senior laboratory instructor is a very good practice and should form the basis for a more comprehensive written information package.	Planning Activity StandardsBiology Planning Activities	Complete – Department of Biology poised to implement for next Bamfield trip
2	The University's procedures for the administration of Waivers and Informed Consent should be reviewed and departments informed as to what is correct process, form structure, and content.	Waiver and Informed Consent ProgramBiology Planning Activities	Complete
3	The University should ensure that all future trips to the BMSC travel and arrive during daylight hours.	Biology Planning Activities	Complete/Accepted – Department of Biology poised to implement for next Bamfield trip
4	The University should require the collection of emergency contact information for each student.	Planning Activity Standards	Complete
5	The Department of Biology should renew the BMSC field school hazard assessment and control documentation.	Biology Planning Activities	Complete – Department of Biology poised to implement for next Bamfield trip
6	University Administration should provide direction to departments regarding suitable field school supervision standards and group leader qualifications.	Planning Activity StandardsBiology Planning Activities	Complete
7	The University should update their BMSC field school hazard assessment and control program.	Planning Activity StandardsBiology Planning Activities	Complete – Department of Biology poised to implement for next Bamfield trip
8	A refreshing of BMSC field school planning is necessary and should be undertaken by the Department of Biology and approved by the University's Administration.	Biology Planning Activities	Complete – Department of Biology poised to implement for next Bamfield trip
9	The Department of Biology should work with the BMSC to undertake a scenario planning exercise that looks at possible events at the BMSC and ensures that appropriate prevention and response systems are in place for each hypothetical event. Scenario planning is articulated in a hazard assessment and control document, (which could also be called a risk management plan).	Biology Planning Activities	Complete – Department of Biology poised to implement for next Bamfield trip

	Recommendation	Project Linkage	Status
10	The University's emergency response planning documentation should be reviewed and amended to better facilitate field school and off-campus emergency response.	Response Planning	Complete
11	The University should evaluate the level of emergency response equipment carried on field schools and the level of training required of group leaders.	Planning Activity StandardsBiology Planning Activities	Complete
12	The Department of Biology should be more attentive to the terms included in service provider contracts, ensure the terms are appropriate and consistent, and check to see that contracted services are provided.	Planning Activity StandardsBiology Planning Activities	Complete – Department of Biology poised to implement for next Bamfield trip
13	The University should review its communication protocols for BMSC field schools and provide telephone technology when possible. It may be necessary to carry out first-person research about where telephone technology works on the Bamfield Main road and where it does not. This could be mapped.	General Transportation to Bamfield	Complete
14	The University should ensure that VHF radio vehicle-to-vehicle communications are implemented on the Bamfield Main road. This will entail acquiring the proper radio equipment, a licensed radio operator, and permission from Western Forest Products (WFP) to use the posted radio frequency.	General Transportation to Bamfield	Complete
15	The WFP web page relies upon the occasional Twitter postings of WFP staff and a way to ensure these posts are at least daily should be found.	General Transportation to Bamfield	Complete WFP has committed to updating their Twitter feed to post road condition updates more frequently. Travellers can also phone the BMSC for current road conditions during business hours.
16	In many ways, the basis of this report revolves around an evaluation of whether buses are suitable transportation vehicles for groups on the Bamfield Main road. Buses clearly are and can be used safely when driven appropriately to road conditions, with driver spatial awareness, during daylight hours, with care, with enforced travel itineraries, and with applicable communication and safety technology. These factors are those that should be applied by the University for future transportation needs.	UVic Transportation to Bamfield	Complete/Accepted
17	Recognizing that charter transportation companies are not in charge of schedules, trip itineraries, or group discipline and enforcement, the University should develop bus transportation protocols and be sure that appropriate staff are on the bus to implement their use. The University should not look to the driver to enforce these procedures but should contract transportation providers who can provide what the University needs to achieve them, including safety equipment and seatbelts. These protocols will include such things as pre-determined itineraries, decision-making that adheres to these itineraries, resource road radio systems, and arrival during daylight hours, among other topics.	 Contract Management Biology Planning Activities 	Complete

	Recommendation	Project Linkage	Status
18	Using the MV Frances Barkley may be useful for some University of Victoria field schools and a review of a variety of schedules using this ship should be carried out.	 UVic Transportation to Bamfield 	Complete/Accepted
19	There is still a significant amount of trauma for some students and families around the University of Victoria's mode of transportation to the BMSC. For May 2020 field trips to the BMSC, it is worthwhile for the University to consider not compounding any negative impacts and to use an alternative mode of travel rather than a chartered bus. Additionally, be aware that September 2020 field schools to the BMSC may be associated with the anniversary of the 2019 accident and create similar impacts. The alternative is to use very conservative bus transportation methods as described in the Conclusion of this report. University counsellors who are working with the students presently will be able to give some perspective on student reaction to bus transportation in the short term.	Visiting Bamfield	In progress To be completed when Bamfield re-opens
20	Transportation methods to the BMSC should make use of professional charter bus companies or the Lady Rose Marine Service and the MV Frances Barkley.	UVic Transportation to Bamfield	Complete
21	The University should encourage the BMSC to take on the responsibility of developing a central information hub for the use of groups and transportation providers travelling to the BMSC. Such a site would fulfil a broader public safety purpose as well by serving the local First Nations communities, tourists, and local commercial services. Groups travelling to the BMSC should be provided access to this site and daily updates be pushed to both the institution and field school group leaders. It should provide broader information than current road conditions, such as all of the information found on the WFP site, information on cell phone and satellite telephone blackout areas, standard operating procedures, best practices for satellite telephone and emergency satellite communicator use, VHF radio use and call point information, driver protocols for road use (working vehicles have the right of way at single lane points, etc.), and BMSC travel updates and recommendations	General Transportation to Bamfield	Complete
22	The University should encourage the BMSC to develop a "pilot car" service from Port Alberni to and from the BMSC for groups who want this. This vehicle could provide local knowledge and expertise, advanced warning to oncoming traffic, provide vehicle-to-vehicle radio communication, advanced First Aid supplies, and be a safety net in the event of flat tires or other incidents along this section of the road.	General Transportation to Bamfield	Complete BMSC has not developed a "pilot car" service, however, they provide contact information for charter companies who do provide the service within their website hub.
23	The level of staffing provided for the September 2019 field school was inadequate and the University needs to clarify what is the appropriate employment status, qualifications, experience, training, and preparation for leading field schools. If there is a difference identified between curricular and extra-curricular trips this also needs to be clarified.	Planning Activity StandardsBiology Planning Activities	Complete

	Recommendation	Project Linkage	Status
24	 Reassess the management structure and decision-making process for the University's incident response. Establish a less subjective system for determining when a Critical Incident Response Team (CIRT) and EOC is formed and an SRT implemented. Adopt an organized incident management system such as an adapted Incident Command System (ICS) that includes roles for the functions of Student Services. (A normal command and control ICS structure may not be well received at a collegial academic institution and will need to be adapted). Provide EOC and IC training for the people who are to assume the roles, adapting the classical models to the university setting. The ICS structure is built for seamless inter-agency response and needs to be adapted for internal university response use (for example, including Student Service units). 	Response Planning	Complete
25	Identify who the Incident Commander (IC) should be as well as the membership of the Emergency Operations Centre (EOC). This needs to be skill- and ability-based in addition to role based. It is not enough to structure an IC and EOC only by the institutional title someone holds, and the relatively ad hoc response of who became the IC in this accident demonstrates this. Create more depth in the Incident Command function with formal acknowledgment of who should play this role in what kind of situation, and define a clear, delegated authority to go along with the role. Other peripheral Student Service units should acknowledge what their own supportive roles are and accommodate the delegated IC.	Response Planning	Complete
26	 Develop an Emergency Operations Centre (EOC) manual for off-campus incidents. Include checklists for different stages of a response, including notification, initial response, first week, first month, semester, and school year timelines. Define the roles of Executive, SRT, EOC, IC, and the roles and responsibilities of Student Service Units and Academic Departments. Modify documentation such as the Critical Incident Response Procedures, Critical Issue Response Coordination Protocol for Executive, and Emergency Response Plan to include pre-plans for BMSC-specific incidents, but the University might be best served by drafting amendments that would apply to all field school and off-campus incidents. Develop more robust crisis response protocols that include templates for off-campus and mass incident response. Develop crisis response role and responsibility definitions and job descriptions with task checklists. 	Response Planning	Complete
27	Implement a Site Response Team (SRT) and Emergency Coordination Centre (EOC) when an incident meets the established criteria.	Response Planning	Complete

	Recommendation	Project Linkage	Status
28	Implement a separate point-of-contact early in the response. Campus Security, while being a convenient first point-of-contact, is not the unit that should be handling parent and student inquiries for academic or service questions.	Response Planning	Complete
29	A University debriefing session should be held to provide the opportunity for units to share lessons learned, identify process gaps, and develop forward-looking best practices.	Response Debrief	Complete
30	Because the case management model worked well in this incident, affirmed by the different units, this model should be expanded to be more inclusive and more quickly implemented if needed.	Student Affairs Programming	Complete
31	Should the need arise in the future for the Department of Biology to support students in this manner, the Department of Biology should better coordinate its counselling, academic advice and course concessions with applicable Student Service units (see Academic Advising below).	Student Affairs Programming	Complete
32	Operational units such as Residence Services are a familiar point of contact for many students and their families. Residence Services should be incorporated into incident management considerations and their operating limits accounted for when decisions are made that may impact them.	Response Planning	Complete
33	In events of this nature, this unit should activate the case management system early, link families to external resources such as Insurance Corporation of British Columbia (ICBC) and Emergency Management British Columbia (EMBC), expect clarity of internal and external institutional procedures, ask for direction about what level of parental involvement and counselling is to be provided, and confirm the use of internal or external resources.	Response Planning	Complete
34	Counselling Services should be consulted for input into student interactions with the Machado and Geerdes families. Both students and families are interested in pursuing this interaction.	Student Affairs Programming	Complete
35	Develop an on-call and ramp-up strategy for Student Services.	Student Affairs Programming	Complete
36	Develop an organized and interdisciplinary student case management model with defined roles and responsibilities unit by unit and implement inter-unit case management sessions during the response.	Student Affairs Programming	Complete
37	Plan for the ability to quickly provide staffing resources to the Office of Student Life, Counselling, and other units to enable a rapid expansion of services and the reallocation of roles to meet emergency management needs.	Student Affairs Programming	Complete
38	Develop protocols for what resources can be provided to non-student and family stakeholders.	Support and Resources for Impacted Community	Complete
39	Provide direction to Student Service units for processes and timelines to "return to standard operating procedures."	Student Affairs Programming	Complete

Recommendation		Project Linkage	Status
40	Develop resource material that staff can share about the University's crisis event family travel reimbursement and expense policy, availability of public and private health services, various insurance resources, and Province of B.C. emergency funding.	Support and Resources for Impacted Community	Complete
41	Create a management process that recognizes that 16-hour workdays in a crisis for weeks on end are not sustainable. Protocols are needed to provide more support to staff, certainty of time off, and recognition of potential for personal and professional burn-out.	Response Planning	Complete
42	Acknowledge that a mass event has much higher levels of demands that cannot be carried out indefinitely without significant additional resources provided in a timely manner.	Response Planning	Complete
43	Balance the level of service provided to single-person events with that provided for multi-person events. Mass events tend to get more attention, but single-person events are just as urgent to that person.	Student Affairs Programming	Complete