Letter of Consent: Flood Risk, Fish and People: Discovering opportunities and barriers to flood hazard planning in the lower Fraser River region

Thank you for your time and contribution to this research by participating in a brief survey on issues related to the flood risk posed by the lower Fraser River. The primary investigator for this study is Stephanie Lasuik who is a fourth year Geography major student in the Honours program at UFV. The purpose of this survey is to help identify similarities and differences in perceptions and beliefs among a diverse group of parties with a common interest in the lower Fraser River.

Your unique perception on matters such as flood risk and protection measures, climate change, sediment management, and your sources of knowledge on these topics is an important area of research into understanding opportunities and barriers for flood hazard planning. Your time is greatly appreciated. The survey will take approximately 20-30 minutes to complete. The survey will remain open for participation until November 14, 2016.

As a participant in this research, a key benefit to you is that your unique perspective will be recorded in the aggregated results and may influence future flood hazard planning initiatives on the lower Fraser River. The general benefit of participating in this research is in its capacity and potential to help advance the safety of human settlements as well as fish habitat in the lower Fraser River region. The risks to participants of this research project are minimal.

The researcher understands that there may be pre-existing conflicts between participants over issues related to the lower Fraser River. Participants will remain anonymous by both name and title, unless they otherwise agree to be identified in the final report. Responses to survey questions will be aggregated and your individual responses will be kept confidential. You will have the opportunity to contribute more detailed comments at the end of the survey, and these responses will also be kept confidential unless you agree to be identified.

Your participation is voluntary and you reserve the right to withdraw from this study or to change your consent to be identified at any time after you have returned the survey by contacting Stephanie Lasuik at stephanie.lasuik@student.ufv.ca. If you wish to withdraw from this study after giving consent, please do so prior to November 15, 2016, and any data you have provided will be destroyed immediately. After November 15, 2016 your responses will become part of an aggregated data pool and will not be identifiable or extractable. If you choose to change your consent to be identified, please do so prior to November 30, 2016 by contacting Stephanie Lasuik at stephanie.lasuik@student.ufv.ca. After November 30, 2016, the final report will be in progress.

If you have any questions regarding your involvement in this study, wish to receive additional details, or if you wish to participate via hardcopy and postal system, please contact the researcher, Stephanie Lasuik at stephanie.lasuik@student.ufv.ca. If you have any ethical concerns about the study you can contact the AVP of Research, Engagement, & Graduate Studies, Dr. Adrienne Chan, at Adrienne.Chan@ufv.ca or 604-557-4074.

Upon conclusion of this research project, all data collected will be purged from the researcher's private, password protected computer and encrypted USB device, and all paper responses shredded. All participants will have the opportunity to receive a copy of the final research report which will be available in February 2017. Participants will be emailed at a later day to inform them of the report's availability, and participants choosing to receive a report will be emailed a PDF copy or may request a printed copy to be sent to their address.

The ethics of this study have been reviewed and approved by the UFV Research Ethics Board.

Thank you,

Stephanie Lasuik
Researcher
UFV Geography Honours Program
Email: Stephanie.lasuik@student.ufv.ca

Dr. Michelle Rhodes
Associate Professor, UFV
Social Sciences, Geography and the Environment
Email: michelle.rhodes@ufv.ca
Phone: 604-504-7441 ext. 4773

CONSENT to PARTICIPATE

By signing below, I agree to participate in this study, titled *Flood Risk, Fish and People: Discovering opportunities and barriers to flood hazard planning in the lower Fraser River region.*

I have read the information presented in the Letter of Consent on the research being conducted by Stephanie Lasuik in the Department of Geography and the Environment at the University of the Fraser Valley. I have had the opportunity to ask questions about my involvement in this study and to receive any additional details.

I understand that I have the right to withdraw from the study and that confidentiality and/or anonymity of all results will be preserved unless otherwise indicated. Any ethical concerns may be brought to Dr. Adrienne Chan, Associate Vice-President of Research, Engagement, & Graduate Studies (Adrienne.Chan@ufv.ca or 604-557-4074).

Name: _____

CONSENT to BE IDENTIFIED (optional)

Please check one:

☐ I agree to be identified as a study participant in the final report. I wish for my survey responses and comments to be kept anonymous.

☐ I agree to waive anonymity. I wish to be identified as a study participant in the final report and have my comments attributed to me within the final report but my individual survey responses will remain anonymous.

Date: _____

Survey: Flood Risk, Fish and People: Discovering opportunities and barriers to flood hazard planning in the lower Fraser River region

STUDY REGION

The study region includes all communities from Hope to Mission along the Fraser River and extends to include the fishery concerns of parties downstream.

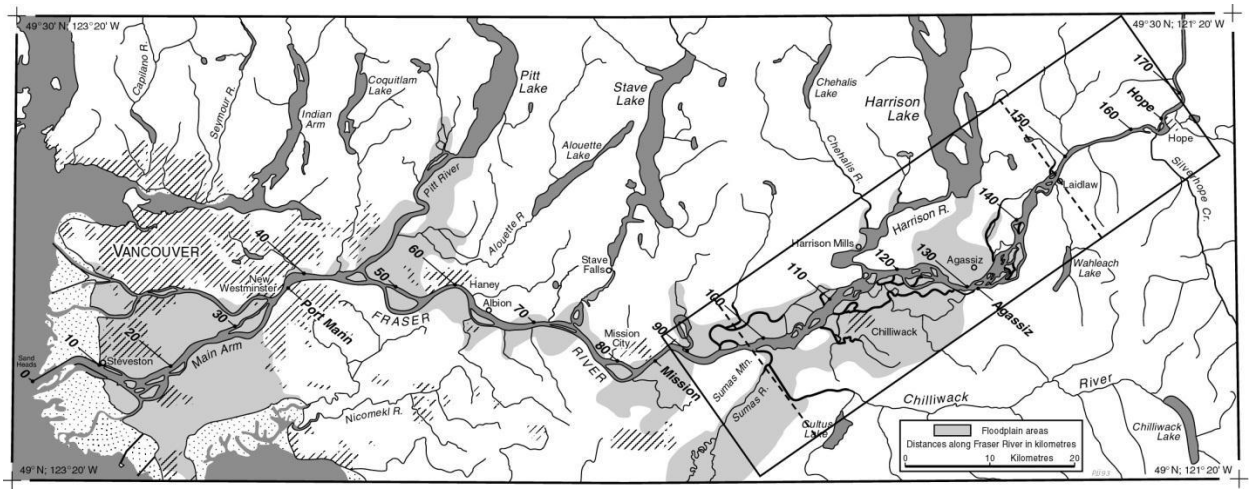

Figure 1 - Location map of the lower Fraser River including the gravel reach (inset box) from Hope to Mission. Source: Rempel, L.L., Healey, K. and Lewis, F.J.A. 2012. Lower Fraser River juvenile fish habitat suitability criteria. Can. Tech. Rep. Fish. Aquat. Sci. 2991: ix + 73 p.

WHICH OF THE FOLLOWING CATEGORIES DESCRIBES YOU? (please check all that apply)

☐ Indigenous Community Representative.

Community name: _____

☐ Elected Official.

Title: _____

☐ Federal or Provincial Public Servant.

Ministry name: _____

☐ Member of a non-government organization (NGO).

Name of NGO: _____

☐ Resident of a community located from Hope to Mission.

Community name: _____

☐ Self-identified Aboriginal person

☐ Professional Engineer (member of Association of Professional Engineers and Geoscientists of B.C.)

☐ Registered Professional Biologist (Member of the College of Applied Biology)

☐ Commercial fisher

☐ Recreational fisher

☐ Aboriginal fisher

FLOOD RISK AND PROTECTION MEASURES

1. I believe that the risk of flood from the Fraser River to the communities along the lower Fraser River located from Hope to Mission is:

☐ Very high	☐ Above average	☐ Average	☐ Below Average	☐ Very Low

2. In the event of a flood in the region under study, serious damage will result to my home, my community or my place of work.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

3. Communities along the lower Fraser River from Hope to Mission are well protected from potential flooding by infrastructure such as dykes, berms and/or flood gates, etc.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

4. Communities along the lower Fraser River from Hope to Mission are well protected from potential flooding by natural means such as wetlands, marshes and/or overflow channels etc.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

5. Rural communities are protected to the same extent as urban communities.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

6. Aboriginal communities are protected to the same extent as non-aboriginal communities.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

7. A lack of flood protection measures in any community along the lower Fraser River increases the risk of flood damage for neighbouring communities.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

CLIMATE CHANGE

8. I consider my level of knowledge on climate change implications for the Fraser River as:

☐ Very good	☐ Good	☐ Fair	☐ Poor	☐ Very poor

9. The impact of climate change on the risk of flood from the Fraser River will be:

☐ Climate change will greatly increase flood risk	☐ Climate change will somewhat increase flood risk	☐ Climate change will have no influence on flood risk	☐ Climate change will reduce flood risk	☐ Don't know/Unsure

10. The impact of climate change on the rate of erosion of lands adjacent to the lower Fraser River will be:

☐ Climate change will greatly increase erosion of adjacent lands	☐ Climate change will somewhat increase erosion of adjacent lands	☐ Climate change will have no influence on the erosion of adjacent lands	☐ Climate change will reduce erosion of adjacent lands	☐ Don't know/Unsure

11. Climate change will increase the rate of sediment accumulation in the lower Fraser River.

☐ Climate change will greatly increase the rate of sediment accumulation in the lower Fraser River	☐ Climate change will somewhat increase the rate of sediment accumulation in the lower Fraser River	☐ Climate change will have no influence on the rate of sediment accumulation in the lower Fraser River	☐ Climate change will reduce the rate of sediment accumulation in the lower Fraser River	☐ Don't know/Unsure

12. Climate change poses a significant risk to fish health in the lower Fraser River.

☐ Climate change will greatly increase the risk to fish health in the lower Fraser River	☐ Climate change will somewhat increase the risk to fish health in the lower Fraser River	☐ Climate change will have no influence on fish health in the lower Fraser River	☐ Climate change will reduce the risk to fish health in the lower Fraser River	☐ Don't know/Unsure

SEDIMENT ACCUMULATION

13. I consider my level of knowledge on sediment accumulation in the lower Fraser River as:

☐ Very good	☐ Good	☐ Fair	☐ Poor	☐ Very poor

14. Sediment is accumulating in the lower Fraser River between Hope and Mission.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

15. Sediment accumulation in the lower Fraser River increases the risk of flood from the Fraser River.

☐ Sediment accumulation will greatly increase the risk of flood from the Fraser River.	☐ Sediment accumulation will somewhat increase the risk of flood from the Fraser River	☐ Sediment accumulation will have no influence on the risk of flood from the Fraser River	☐ Sediment accumulation will reduce the risk of flood from the Fraser River	☐ Don't know/Unsure

16. Sediment accumulation in the lower Fraser River increases the risk of erosion damage from the Fraser River.

☐ Sediment accumulation will greatly increase the risk of erosion damage from the Fraser River	☐ Sediment accumulation will somewhat increase risk of erosion damage from the Fraser River	☐ Sediment accumulation will have no influence on the risk of erosion damage from the Fraser River	☐ Sediment accumulation will reduce the risk of erosion damage from the Fraser River	☐ Don't know/Unsure

17. Sediment accumulation in the lower Fraser River poses a risk to salmon health.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

18. Sediment removal from the lower Fraser River can reduce the risk of flooding.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

SEDIMENT MANAGEMENT AND REMOVAL

19. Sediment removal from the lower Fraser River can reduce the effects of erosion.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

20. Sediment removal from the lower Fraser River can enhance fish habitat.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

21. Sediment removal from the lower Fraser River should form part of a long-term flood management strategy for the region.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

22. Sediment removal from the lower Fraser River can be considered as a climate change adaptation strategy with benefits for human settlements.

☐ Sediment removal as a climate change adaptation strategy will greatly benefit human settlements.	☐ Sediment removal as a climate change adaptation strategy will somewhat benefit human settlements.	☐ Sediment removal as a climate change adaptation strategy will have no influence on human settlements.	☐ Sediment removal as a climate change adaptation strategy will have a negative influence on human settlements.	☐ Don't know/Unsure

23. Sediment removal from the lower Fraser River can be considered as a climate change adaptation strategy with benefits for fish habitat.

☐ Sediment removal as a climate change adaptation strategy will greatly benefit fish habitat.	☐ Sediment removal as a climate change adaptation strategy will somewhat benefit fish habitat.	☐ Sediment removal as a climate change adaptation strategy will have no influence on fish habitat.	☐ Sediment removal as a climate change adaptation strategy will have a negative influence on fish habitat.	☐ Don't know/Unsure

SOURCES OF KNOWLEDGE

24. My opinion on sediment removal from the lower Fraser River has been informed by newspaper articles and/or editorial pieces.

☐ Almost always	☐ Often	☐ Sometimes	☐ Seldom	☐ Never

25. I believe that newspaper reports on sediment removal from the lower Fraser River provide fair, balanced, and accurate information.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

26. My opinion on sediment removal from the lower Fraser River has been informed by scientific reports and/or academic journal articles.

☐ Almost always	☐ Often	☐ Sometimes	☐ Seldom	☐ Never

27. My opinion on sediment removal from the lower Fraser River has been informed by first-hand accounts of indigenous traditional knowledge.

☐ Almost always	☐ Often	☐ Sometimes	☐ Seldom	☐ Never

28. I believe that indigenous traditional knowledge is well represented in the scientific reports, the academic journal articles and/or in the newspaper articles I have read that have informed my opinion on sediment removal.

☐ Strongly Agree	☐ Agree	☐ Disagree	☐ Strongly Disagree	☐ Don't know/Unsure

29. What other questions should be asked in relation to creating a long term flood hazard strategy for the lower Fraser River region? (Optional)

Thank you for your time in completing this survey. We welcome any additional comments that you wish to provide. A box is included below for these comments. If additional space is needed, they may be emailed to the researcher at Stephanie.lasuik@student.ufv.ca.

Additional comments (optional): [up to 250 words]

If you have not already done so, please save this filled out Letter of Consent and Survey to your desktop and then attach it to an email to Stephanie.lasuik@student.ufv.ca. You will receive confirmation of receipt within 48 hours.

Again, my sincere thanks for your time in participating in this important research into discovering opportunities and barriers to flood hazard planning in the lower Fraser River region.