CanFlood Development Committee

Terms of Reference

1. **Vision**

As part of a commitment to better understand and manage flood risk in Canada, Natural Resources Canada (NRCan) has initiated the second phase of development of the CanFlood flood risk modelling toolset.  CanFlood is an easy-to-use open-source QGIS plugin intended to support flood risk modellers across Canada.  Through supporting and developing this tool, NRCan aims to reduce costs and improve the quality of flood risk assessments across Canada, with the ultimate goal of improving society’s co-existence with flooding.

NRCan has retained IBI Group (the Contractor) to continue the development of CanFlood.  To guide this work, NRCan is assembling an advisory committee of potential CanFlood users to provide feedback on the software and identify additional software needs of the flood risk modelling community in Canada.

1. CanFlood Summary

After surveying available flood modelling software, NRCan identified the need to develop and support a Canadian software solution to flood risk modelling.  Such a tool would allow NRCan to meet the needs of users and communities across Canada and connect with the other datasets and models available in Canada to help streamline the understanding of flood risk nationwide.

CanFlood Beta 0.3 was developed in early 2020 by IBI Group and NRCan (phase 1) based on IBI Group’s knowledge and expertise gained by developing similar platforms for the Government of Alberta.  CanFlood facilitates flood risk calculations with three basic steps or ‘toolsets’:

1. Building the model https://lh5.googleusercontent.com/y20ewozxbC7uhsgwx3JLc6DcV3mYkLLOhdqrcu9IKp-74gCzjjyGdSz13z4QN6s_IT5ZF_Waf8WVk9HK0Gz1WAUPiqYexvr0Axb0o6rRpZH5J5B7zy3_TEJYFfblXKUFazvva84
2. Running the model https://lh3.googleusercontent.com/U9PECdZ4jJ2LbyWPA0cKwC-l9vyp_FlAPtbbANPOpOW5Dtfn0RJNwtDDexaHryUDSMAA6XZaHuJlnHBrQpArjdKm2LFZfAcVG5SZ3_z3IJYHm9efBSyX1FeMbvgTMYD4n5UmKic
3. Visualizing/Analyzing the results https://lh5.googleusercontent.com/HnxVO9UG__C5ZpIRlSl7i4XXCcIgXkiVTlIAQloHgRhYyDtn1fsPR6m2YFEnEDInYB-Xwl9AVnaVDtLxXI1tje6-mZqpKi8n_spNePV27E_Ii_hQ551c0kPiWPNMedbnS6wbASk

Each of these steps has a suite of tools designed to assist the flood risk modeller in a wide range of flood risk modelling tasks as part of a spatial object-based flood risk assessment.  CanFlood is an object-based flood risk modelling platform to implement user provided vulnerability functions and data sets to estimate flood risk. More information is provided in the [User’s Manual](https://github.com/IBIGroupCanWest/CanFlood/blob/master/manual/CanFlood_UsersManual_031.pdf) and the latest distribution of CanFlood (Beta 0.3) can be obtained from the [project page](https://github.com/IBIGroupCanWest/CanFlood).

1. Phase 2 Development Scope

As part of phase 2 development, NRCan has identified a set of features for inclusion in CanFlood 1.0.  A primary goal of the advisory committee will be to provide feedback on how these features should be implemented and to identify additional features desired by Canada’s flood risk modelling community.

1. **Mandate**

The focus of the committee will be to represent the flood risk modelling community in Canada and advise NRCan on current and future development of CanFlood.

1. The primary goals of the Committee are to:
   1. Advise on user experience, functionality, and utility of CanFlood
   2. Identify new features for CanFlood
2. Responsibilities of the Committee are to:
3. Attend 2-3 committee meetings:
   1. Meeting 1: Introductions and presentation of CanFlood Beta 0.3. (early Dec.)
   2. Meeting 2: Provide feedback and suggestions on CanFlood Beta 0.3 (early Jan.)
   3. Meeting 3 (tentative): review CanFlood 1.0 and discuss future development (mid 2021)
4. Test, evaluate, and install CanFlood and follow the provided tutorials (before meeting 2; outside of meeting times)
5. **Membership**
6. Committee membership should be limited to potential users of the CanFlood plugin.
7. Members should have experience in performing spatial analysis for flood risk assessments in Canada.
8. Users should have experience in GIS platforms (e.g., ArcGIS) and some knowledge of QGIS.  Members will need the ability to install QGIS on their machines.
9. Members are NOT expected to be python or QGIS developers (although these skills are welcome).
10. Persons primarily engaged in implementing decisions or interpreting results from flood risk assessments or flood risk models  are welcome, but the primary committee focus will be technical.
11. Membership is expected to terminate mid 2021.
12. **Decision Making**

The committee members should work towards building a consensus to reach a common decision or recommendation.

NRCan will have the final decision on tasks undertaken by the Contractor.

Because CanFlood is open-source, committee members have the option to undertake their own development projects to implement any features not selected by NRCan.

1. **Communication**

NRCan will be responsible for any committee coordination and communication.

1. **Frequency of Meetings**

See 2.2.2