



QUESTIONS AND ANSWERS

Question #1

The M3 Mandatory requirement of 5 years continuous coastal flood modelling in Canada appears to be rare in the market, which could potentially eliminate much of the competition. Would NRCan continue allowing one of the following options to allow for a more fair and equitable procurement, and to bring best value to Canada:

- a. Open up to US coastal flood modelling experience, in addition to Canadian coastal flood modelling experience, to be able to offer a specialist with both Canadian and related US FEMA experience sought more generally in the RFP; or
- b. Allow coastal flood modelling to include modelling of related coastal hazards – all in Canada, as in the case for FEMA for which coastal hazards include coastal erosion, structural integrity and accreditation for flood control, and how these affect the coastal flooding, and more recently sea level rise; or
- c. Allow for both coastal flood modelling and coastal engineering design to satisfy the M3 requirement for continuous Canadian experience by a single professional, recognizing that industry specialists typically undertake coastal flood modelling and coastal engineering design as consecutive tasks for major projects.

Answer #1

General answer:

The M3 mandatory requirement is revised as follows, recognizing non-continuous experience (minimum 5 years in total) within the previous 10 years:

The Bidder **MUST** propose up to five (5) additional resources, and demonstrate they have each a minimum of 5 years of ~~continuous~~ experience within the previous 10 years of the bid solicitation closing date, in the following areas of expertise:

- Hydrological and hydraulic modelling for fluvial/riverine flooding in Canada
- Hydrological and hydraulic modelling for pluvial flooding in Canada
- Coastal flood modelling in Canada
- Climate modeling in a flood hazard mapping context
- Geospatial data analysis in a flood hazard mapping context

All areas of expertise **MUST** be covered by the team of additional resources. Different resources can be used for each of the five areas of expertise. One resource can combine multiple areas of expertise if it can be demonstrated that the resource meets the minimum experience requirement in each area.

The bidder **MUST** provide the résumé, which demonstrates the required experience of the resources proposed, including relevant project descriptions and their role & responsibilities in these projects. The bidder should **clearly indicate** the relevant areas in the resource's CV which correspond to the criteria described. The bidder should clearly identify which area of expertise is covered by which resource.

Specific answers to sub-questions a), b) and c):



- a) Only coastal flood modelling experience in Canada will be recognized. It can be noted that experience on large lakes (i.e. Great Lakes) or large rivers (i.e. parts of the St. Lawrence River) can be counted towards coastal flood modelling experience if coastal flood modelling processes, methods and approaches were employed in the process of evaluating flood levels and extents.
 - b) Experience recognized for coastal flood modelling in Canada can include modelling related to coastal hazards, if there is a clear indication that coastal flood models were developed as part of the process to evaluate flood levels and extents.
 - c) Experience in coastal engineering design in Canada will be accepted if there is a clear indication that coastal flood models were developed as part of the process to evaluate flood levels and extents.
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Question #2

We respectfully request an extension of 2 weeks from Tuesday October 3 to Tuesday October 17 to allow time for preparation of the best quality proposal for Canada. Since the RFP was issued on August 31, much time has been required to verify that we meet all of NRCAN's mandatory and point-rated criteria in this RFP. A 6-week federal proposal turnaround is typical of more complex national RFPs such as this one.

Answer #2

The closing date of October 3, 2023 is currently maintained for this procurement process.

Question #3

In the RFP, 6 d) on page 24 mentions that the proponent should develop regional flood hazard models for each case study site.

- i) For these case studies, would it be possible to have access to the historical satellite imagery database captured by the Government of Canada?
- ii) If additional data are required, will NRCAN proceed to make the purchases, or would it be the consultant's responsibility? May we also assume that this would be potentially an extra to our fixed price estimate, to allow for the bids to be more fairly compared?
- iii) The cost and efforts of regional flood hazard models are difficult to assess, since we don't have a clear understanding of the extent of each regional site and also whether it will be fluvial, coastal or pluvial flood hazard mapping. Would it be possible to obtain additional information on the case study requirements and also, obtain additional proposal preparation time to properly estimate the cost and effort?

Answer #3

- i) NRCAN will provide high-resolution satellite imagery for the case studies, if necessary.
- ii) The Contractor will be responsible for obtaining all data necessary for carrying out the study. NRCAN may provide assistance in obtaining some datasets (e.g., LIDAR topography, building



- footprints, satellite imagery, etc.) but it will be the Contractor's responsibility to obtain data products from authoritative sources (e.g., provincial authorities, municipalities, Canadian Hydrographic Service, Environment Canada, etc.). In general, the case study sites will be selected for regions where the required model input data is publicly available. The Contractor is not required to obtain new field data (e.g., topographic and bathymetric surveys, flow and water level measurements, etc.) for model development and validation/calibration.
- iii) The scope of work for the development of regional flood hazard models at each case study site is described in general terms in SW4.1(6). To standardize cost and efforts, bidders should refer to the following additional parameters:
- a. Two (2) case studies will consider both pluvial and fluvial flood hazards. One study area will be between 2,000 and 5,000 km², and the second between 5,000 and 10,000 km².
 - b. One (1) case study will consider pluvial, fluvial and coastal flood hazards; covering exposed inland and coastal communities in a coastal watershed. Between 50 and 200 km of coastline will be considered.
 - c. For fluvial and pluvial flood hazards, the Contractor will need to consider all rivers, tributaries, creeks and waterbodies present in the study watershed. Based on Digital Elevation Model (DEM) resolutions, drainage networks can be simplified with only streams with drainage areas in the order of 50 – 250 km² or greater being included (the final threshold will be determined with the NRCan Project Authority). The Contractor will propose methods to identify and model the most critical flood drivers in the study watersheds. This can include a combination of modeling methods if more than one driver is present (for example, heavy summer rainfall for small tributaries and spring freshet for larger river system within the watershed). Study sites will be selected where ice jam modelling is not required.
 - d. For pluvial flood hazards, detailed municipal stormwater infrastructure will not be directly modeled. The Contractor should propose assumptions and approximation methods for considering the impact of stormwater infrastructure on pluvial flooding, where present.

The closing date and time is modified to October 10th, 2023 at 14:00 EDT

Question #4

Our industry currently works with a variety of third party vendors who provide data relevant to performing flood hazard modeling efforts. To reduce uncertainties in the costs for data acquisition for the pilots, and to gain a better understanding of what data is available, can you provide an additional 2 weeks for us to reduce those uncertainties and provide a more competitive price.

Answer #4

There is no new field data acquisition planned as part of this contract.

The closing date and time is modified to October 10th, 2023 at 14:00 EDT.



Question #5

Please confirm that the M1 Lead Resource can also be presented as an additional resource to cover M3 requirements.

Answer #5

The M1 Lead Resource can also be presented as an additional resource to cover M3 requirements. Bidders are encouraged to include a matrix to clearly attribute M3 areas of expertise to the resources proposed.

Question #6

Regarding M4 (*“For a project to be considered, at least one of the proposed resources listed in the bid MUST have participated in the project”*), is the RFP referring only to the resources listed in M1/M3 or can this involve resources listed as relevant specialists elsewhere in our proposal?

Answer #6

At least one proposed resource from M1 or M3 criteria must have participated in the project for project experiences to be considered in criteria M4.

Question #7

For R1-R4 point-rated criteria in general, are points awarded for showing additional staff support (possibly supported by an org. chart)? For example, our approach may involve a workshop facilitator, a dedicated project manager, specialists with prior FEMA experience, QA/QC reviewers, etc.

Answer #7

The bidder may propose additional staff support deemed necessary to meet the study objectives. This additional staff support will be considered by the evaluation committee if it enhances the technical approach provided (point rated criteria R3).

Evaluation details for R3 indicate that the bidder is encouraged to provide a team structure with an organizational chart, work breakdown/hours per proposed resource, and clearly identified main point of contact.

Question #8

For R1, how will the 10 points be allocated for each of the 3 listed requirements? The Evaluation Grid on p. 31 of the RFP is not clear on what would achieve a perfect score for R1. For example, will full points



be awarded if all three areas are covered by the cv of one staff resource? If several cv's are presented, can we achieve a perfect score if the combined experience cover all 3 requirements? Or must we demonstrate that the staff resources listed in M1 and M3 (Lead + up to 5 additional) each have experience with all three requirements? In all cases, how many projects and/or years of experience must be presented to achieve 10 points for each of the 3 requirements?

Answer #8

Points will be awarded for each of the three sub-requirements in point-rated criteria R1, as follows:

- 10 points: three or more (3) projects meeting this sub-requirement, with experience distributed across two or more (2) resources
- 8 points: three or more (3) projects meeting this sub-requirement, with experience distributed across one resource
- 6 points: two (2) projects meeting this sub-requirement
- 4 points: one (1) project meeting this sub-requirement
- 0 points: no projects meeting this sub-requirement

Bidders are encouraged to use the form templates provided in Appendix 3 of the RFP to present the requested information for each resource. Projects listed to demonstrate experience don't have to be the same as the ones presented in criteria M4 or R2.

Question #9

For R2, should each of the 5 projects involve staff resources listed in the proposal? If so, must they be resources listed in M1 or M3, or can we consider other staff listed in the bid?

Answer #9

For point-rated criteria R2, projects can involve either proposed resources listed in mandatory criteria M1 & M3, or other staff presented in the bid.

Question #10

Can NRCan disclose the budget available for commission? This would be helpful to guide the approach and case studies to be included in the project.

Answer #10

The budget available for the study will not be disclosed.



Question #11

Please confirm if the projects listed for R2 can be academic / research projects.

Answer #11

Projects listed for R2 can be academic and research projects.
