



# Board Report

*June 19<sup>th</sup>, 2025 Regular Open Board Meeting*

## Flood Hazard Policy & Regulations Review

**Author:** Stephanie Johnson, Planner MCIP RPP  
**File Reference:** 10\5110\20\RDCK Floodplain Management  
**Electoral Area/Municipality:** All Electoral Areas and Village of Salmo  
**Services Impacted** Planning and Land Use/S104

### 1.0 STAFF RECOMMENDATION

That the Board approve the RDCK to enter into a Consulting Services Agreement with BGC Engineering Inc. and Pinna Sustainability Inc. for the Flood Hazard Policy and Regulations Review project;

AND FURTHER, that the Chair and Corporate Officer be authorized to sign the necessary documents to a maximum value of \$174,000.00 exclusive of GST;

AND FURTHER, that the funds be paid by the Service S104 Planning and Land Use.

### 2.0 BACKGROUND/HISTORY

The RDCK began its most recent floodplain work in 2017 by pursuing funding under the National Disaster Mitigation Program (NDMP) to better understand geohazards in the Region. The following activities have been completed either under this program or as a follow-up to the foundational work completed in 2019:

- 2019, Risk Prioritization Study – *“to characterize and prioritize flood and steep creek (debris-flood and debris-flow) geohazards in the RDCK that might impact developed properties”*<sup>1</sup> (NDMP, Stream 1).
- 2020, Floodplain and Steep Creek Study – *“detailed assessments and mapping of six floodplains and ten steep creeks... [focused] on high priority areas identified [in the Risk Prioritization Study]”*<sup>2</sup> (NDMP, Stream 2).
- 2021-2023, Flood and Geohazard Mitigation Planning – to explore and, where appropriate, design options to mitigate potential impacts from flood and geohazard in the highest risk locations identified during the NDMP Stream 1 & 2 studies (NDMP, Stream 3).

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<sup>1</sup> BGC Engineering Inc., March 31, 2019. *Regional District of Central Kootenay Flood and Steep Creek Geohazard Risk Prioritization*: <https://www.rdck.ca/assets/Government/Documents/RDCK%20Risk%20Prioritization%20Study%20-%20FINAL.pdf>

<sup>2</sup> BGC Engineering Inc., March 31, 2020. *RDCK Floodplain and Steep Creek Study*: [https://www.rdck.ca/assets/Government/Documents/2020-07-17-RDCK\\_Summary\\_Report.pdf](https://www.rdck.ca/assets/Government/Documents/2020-07-17-RDCK_Summary_Report.pdf)

Reviewing and updating the RDCK's Floodplain Management Bylaw was identified as a key consideration for long-term policy integration of the updated information contained in these studies. Additionally, having the proper regulatory tools in place, such as an up-to-date floodplain bylaw, was identified as a key recommendation for the RDCK and Village of Salmo in the Salmo River-Eerie Creek Flood Mitigation Approach and Concepts Study completed as part of the NDMP Stream 3 work in January 2023. Updating the RDCK's policies and regulatory framework for floodplains and steep creeks has been on the work plan since 2020.

On September 11, 2024 the Village of Salmo's Council passed the following resolution at its Regular meeting:

*R3-13-24 That Council provide approval for the Regional District of Central Kootenay (RDCK) to apply to the Ministry of Emergency Management and Climate Readiness Disaster Resilience and Innovation Funding (DRIF) Program, in support of updating the Village of Salmo's floodplain mapping and Floodplain Management Bylaw, for the full amount of eligible costs, and that such funding be received and managed by the RDCK in partnership with the Village of Salmo.*

Previous RDCK Board resolutions regarding the Ministry of Emergency Management and Climate Readiness's Disaster Resilience and Innovation Funding (DRIF) Program are provided below.

#### October 17, 2024 Regular Open Meeting

*564/24 That the Board direct staff to submit a full proposal to the Disaster Resilience and Innovation Funding (DRIF) Program, if invited to do so by the Ministry of Emergency Management and Climate Resilience, as described in the staff report "Floodplain Bylaw Review and Mapping Update – Disaster Resilience and Innovation Funding Grant Opportunity", dated October 2, 2024.*

#### February 20, 2025 Regular Open Meeting

*95/25 That the Board supports the January 31, 2025 Ministry of Emergency Management and Climate Readiness's Disaster Resilience and Innovation Funding (DRIF) Program proposal submission for the Flood Hazard Policy and Regulations Update; and that the Board supports the project and commits to cost overruns.*

The Board also provided the following direction to staff regarding at what dollar amount potential cost overruns would need to be brought back to the Board for direction on how best to proceed:

*The Board request staff bring a recommendation to the March 20, 2025 Board meeting to identify a certain limit.*

Given the nature of the project, RDCK staff do not anticipate cost overruns being an issue; however, through the direction provided above, there will be greater certainty that should cost overruns be an issue, they will be identified early on and minimized.

### **3.0 PROBLEM OR OPPORTUNITY DESCRIPTION**

The RDCK and Village of Salmo administer policies and bylaws that rely on flood hazard information and reference flood-related terminology. The main policy documents referencing flood hazard information include each local government's Floodplain Management and land use bylaws (e.g., Comprehensive Land Use Bylaws and Official Community Plans). The RDCK's Floodplain Management Bylaw was adopted in 2009 and last amended, with minor amendments, in 2019. The Village of Salmo's Floodplain Management Bylaw was adopted

in 1994. As such, the bylaws do not integrate the extensive hazard mapping and risk assessments completed since 2019 and contain outdated regulations and terminology about hazards and risk.

Not all of the RDCK’s electoral areas are zoned or have official community plans (OCPs), therefore development in floodplains is regulated by the Floodplain Management Bylaw, which applies to all rural areas of the RDCK. In addition to the Floodplain Management Bylaws, the RDCK and Village of Salmo’s OCPs have policies related to natural hazards. Policies and bylaws related to flood and steep creek hazards provide the essential instruments to improve disaster resilience through informed development decisions.

The project seeks to guide and modernize the RDCK and Village of Salmo’s community land use policies and regulations (and associated mapping) related to flood and steep creek hazards, which have not yet been updated to integrate the extensive hazard mapping and risk assessments completed since 2019 and contains outdated regulations and terminology about hazard and risk.

Upon completion, the Flood Hazard Policy and Regulations Review project through its high-level recommendations could be used as an opportunity to develop a consistent approach to floodplain management between the RDCK and its other interested member municipalities. This type of regional approach would also strengthen the ability across jurisdictions in striving toward more climate resilient communities.

The RDCK prepared a Request for Proposals (RFP) for the Flood Hazard Policy and Regulations Review and issued the RFP on April 14, 2025, to BC Bid and the RDCK Bid and Tenders website.

There were two bids received by the closing date of May 12, 2025. The results of the RFP are as follows (GST is excluded in the prices below):

Proponent	Ranking	Proposal Cost	Total Hours (All Staff)
BGC Engineering Inc. & Pinna Sustainability Inc.	1 <sup>st</sup>	\$174,000 (excl. GST)	633
Urban Systems Ltd.	2 <sup>nd</sup>	\$172, 897 (excl. GST)	920

The successful proponent was selected based on the following criteria:

- Project Team and Relevant Experience
- Methodology
- Cost and Schedule

After reviewing the submissions, the proposal review committee – comprised of the Village of Salmo’s Chief Administrative Officer, the RDCK’s General Manager of Development and Community Sustainability, Planning Manager and a Planner 2 — considered that BGC Engineering Inc. and Pinna Sustainability Inc. submitted the best proposal with a deep knowledge and extensive expertise of the region’s flood and steep creek hazards context.

### 3.1 Alignment to Board Strategic Plan

This work is consistent with the RDCK Strategic Plan (2024-2026)

- ✓ Strategic Priority – **Organizational Excellence**  
*“Our objective is to provide a resilient governance structure that fosters excellence in every aspect of service delivery.”*

Area(s) of Focus related to this project include:

- Continue to update our policies and processes to be responsive and adaptable.

✓ Strategic Priority – **Manage our Assets and Service Delivery in a Fiscally Responsible Manner**

*“Our objective is to optimize the utilization of our financial resources, ensuring maximum efficiency and delivering exceptional values.” provide a resilient governance structure that fosters excellence in every aspect of service delivery.”*

Area(s) of Focus related to this project include:

- Manage taxation by responding to residents’ needs and prioritizing projects.

✓ Strategic Priority – **Energy Efficiency and Environmental Responsibility**

*“Our objective is to diligently respond to the expectations of our residents by actively incorporating their perspectives and prioritizing environmental stewardship in all our actions.”*

Area(s) of Focus related to this project include:

- Ensuring our watersheds are protected and well governed.
- Proactively prepare for and mitigate the impacts of natural risks, (fire, floods, and slides) including preparedness at the community level.
- Support community resiliency with resident safety as our top priority

## 3.2 Legislative Considerations

Section 524 of the *Local Government Act* authorizes local governments to designate floodplains and set regulations, by bylaw, that regulate certain types of development in designated floodplains, such as the RDCK’s and Village of Salmo’s Floodplain Management Bylaws.

## 3.3 What Are the Risks

The RDCK has undertaken several studies to characterize flood and steep creek (debris-flood and debris flow) geohazards, including an initial regional scale study in 2019 under the National Disaster Mitigation Program (NDMP) that identified over 400 clear-water flood and steep creek geohazards across the entire District. From the prioritization work, six floodplains and ten alluvial fans were selected for detailed hazard mapping, completed in 2021, as well as risk assessment for Kootenay Lake inundation scenarios. Further risk assessment and mitigation option work was completed in 2023.

Flooding in 2018, 2020, 2021, and 2023, along with the fatal landslide at Johnson’s Landing and flooding along Kootenay Lake’s shoreline in 2012, have highlighted flood and steep creek hazard risks at community, regional, and provincial levels, lead to evacuation alerts, orders, and emergency response efforts. Flood and steep creek hazards continue to persist with events growing more frequent and potentially more damaging due to climate change. Flood and steep creek hazards have been characterized for the entire District, including an alluvial fan inventory for developed fans and flood inundation scenarios for Kootenay Lake. 16 areas have advanced to detailed (stream 3) hazard mapping, including 10 steep creeks and 6 floodplains with Flood Construction Level (FCL) maps. These studies provide the basis for updating regulation and adapting the hazard mapping to a regulatory context.

Floodplains often create habitats with very high ecological value. Regulating development in/near these areas, while being primarily concerned with the life safety of people and property, has the co-benefit of better protecting potentially high value habitats.

Effectively reducing the risks associated with flooding is a crucial component in building community resilience to natural hazards and climate change.

Dollars spent on flood prevention lead to a significantly larger cost savings over the long term when compared to the dollars spent on emergency response.

## **4.0 PROPOSED SOLUTION**

Policies and bylaws related to flood and steep creek hazards provide the essential instruments to improve disaster resilience through informed development decisions.

The project seeks to guide and modernize the RDCK and Village of Salmo's community land use policies and regulations (and associated mapping) related to flood and steep creek hazards, which have not yet been updated to integrate the extensive hazard mapping and risk assessments completed since 2019 and contains outdated regulations and terminology about hazard and risk.

### **4.1 Financial Considerations of the Proposed Solution**

The proposed project consultant costs are budgeted at \$174,000.00 exclusive of GST. After the RDCK's expression of interest and invitation to submit a full proposal to the Ministry of Emergency Management and Climate Readiness, the funding for this project is being provided through the Province's Disaster DRIF Program. The DRIF Program aims to enhance the ability of First Nations and local governments to withstand and adapt to natural and climate driven hazards through local projects and initiatives. A portion of the total DRIF Program funds have been reserved for a First Nations honoraria and an independent legal review, which are not included in the contract award budget.

### **4.2 Risks with the Proposed Solution**

The RDCK's Consulting Services Agreement, includes a variety of clauses whereby the Regional District can suspend or terminate a contract should there be an issue with the delivery of this project.

### **4.3 Resource Allocation and Workplan Impact**

While RDCK staff time would still be required to manage the project, it would be substantially less impactful on staff resources than the RDCK attempting to complete this work in-house. Project management is anticipated to require approximately 0.2 FTE, with the project being managed by a Planner 2.

### **4.4 Public Benefit and Stakeholder Engagement of Proposed Solution**

The project seeks to guide and modernize the RDCK and Village of Salmo's community land use policies and regulations (and associated mapping) related to flood and steep creek hazards, which have not yet been updated to integrate the extensive hazard mapping and risk assessments completed since 2019 and contains outdated regulations and terminology about hazard and risk.

A communication and engagement strategy will be created within the first phase of the project, and will identify how to engage key stakeholders, which may include but is not limited to:

- ✓ Member municipalities
- ✓ Local engineers and geoscientists
- ✓ Local government staff and Elected Officials
- ✓ First Nations

#### **4.5 Leveraging Technology**

This project seeks to adapt steep-creek hazard inventory and ratings (BGC 2019), detailed steep-creek hazard maps (BGC 2021), and detailed floodplain mapping (BGC 2021) into a format and with ratings amenable to bylaw integration and online display.

Floodplain, alluvial fan boundary, and steep-creek hazard maps would be completed using technology in a format suitable for use by RDCK staff

#### **4.5 Measuring Success**

The communication and engagement strategy will identify how to engage key stakeholders, including the RDCK and Village of Salmo Council and will include updates and opportunity for feedback throughout the various phases of the project. This will result in measuring success as each phase is completed with an outcome of a new flood hazard policy and regulations.

### **5.0 ALTERNATIVE SOLUTION(S)**

Do not award the contract for the RDCK Flood Hazard Policy and Regulations Review project and re-issue the Request for Proposals (RFP).

*That the Board not award the contract for the RDCK Flood Hazard Policy and Regulations Review project;*

*AND FURTHER, that the Board direct staff to re-issue the Request for Proposals for this project.*

#### **5.1 Financial Considerations of the Alternative Solution(s)**

Since the alternative solution includes directing staff to re-issue the RFP there would be minimal overall financial impact outside of additional staff time to post the RFP, respond to RFP inquiries, review the proposal submissions and potentially seek a funding extension since this project is being funded through the DRIF Program.

#### **5.2 Risks with the Alternative Solution(s)**

Risks associated with the alternative solution include: not receiving quality proposal submissions when the re-issued RFP closes; overall project timing delay; and not successfully obtaining a timeline extension from the Province's DRIF Program.

#### **5.3 Resource Allocation and Workplan Impact**

The alternative solution would not have a significant impact to resource allocation and general workplan other than the overall timeline being pushed back.

#### **5.4 Public Benefit and Stakeholder Engagement of Alternative Solution**

There would be no change to the proposed public benefit and stakeholder engagement by re-issuing the RFP for this project.

#### **5.5 Measuring Success**

Staff anticipate that there would be no change to measuring success if the RDCK Board chose the alternative option.

## 6.0 OPTIONS CONSIDERED BUT NOT PRESENTED

Not applicable.

## 7.0 OPTIONS SUMMARY

After reviewing the submissions, the proposal review committee considered that BGC Engineering Inc. and Pinna Sustainability Inc. submitted the best proposal with a deep knowledge and extensive expertise of the region's flood and steep creek hazards context. In response, staff recommend that the contract for the Flood Hazard Policy and Regulations Review project be awarded to BGC Engineering Inc. and Pinna Sustainability Inc.

**Option 1:** Award the contract for the Flood Hazard Policy and Regulations Review project BGC Engineering Inc. and Pinna Sustainability Inc.

**Recommendation:**

That the Board approve the RDCK to enter into a Consulting Services Agreement with BGC Engineering Inc. and Pinna Sustainability Inc. for the Flood Hazard Policy and Regulations Review project;

AND FURTHER, that the Chair and Corporate Officer be authorized to sign the necessary documents to a maximum value of \$174,000.00 exclusive of GST;

AND FURTHER, that the funds be paid by the Service S104 Planning and Land Use.

**Option 2:** Do not award the contract for the RDCK Flood Hazard Policy and Regulations Review project and re-issue the Request for Proposals (RFP).

**Recommendation:**

That the Board not award the contract for the RDCK Flood Hazard Policy and Regulations Review project;

AND FURTHER, that the Board direct staff to re-issue the Request for Proposals for this project.

## 8.0 RECOMMENDATION

That the Board approve the RDCK to enter into a Consulting Services Agreement with BGC Engineering Inc. and Pinna Sustainability Inc. for the Flood Hazard Policy and Regulations Review project;

AND FURTHER, that the Chair and Corporate Officer be authorized to sign the necessary documents to a maximum value of \$174,000.00 exclusive of GST;

AND FURTHER, that the funds be paid by the Service S104 Planning and Land Use.

Respectfully submitted,

Stephanie Johnson, MCIP RPP

## CONCURRENCE

Planning Manager – Nelson Wight

General Manager Development & Sustainability – Sangita Sudan

Chief Administrative Officer – Stuart Horn