

Bearspaw South Feeder Main Break Independent Review

Draft Guidelines

1. Background

On 2024 June 5, a critical water main break occurred to the Bearspaw South Feeder Main. This incident impacted water availability to Calgary and regional municipalities. In response to the water main break, Calgarians, businesses and regional neighbours were asked to reduce their indoor water use by 25%, Stage 4 Outdoor Water Restrictions were enacted, and a city-wide fire ban was put in place. While inspecting and repairing the pipe, five additional 'hotspots' were discovered, and a State of Local Emergency was declared on 2024 June 17.

2. Purpose

An independent third-party review (Review) of the Bearspaw South Feeder Main Break will aim to understand what happened and why. It will also assess the response to the Feeder Main break. The review will consider factors that contributed to the break, identify possible root cause of the pipe break, and assess current asset management practices of the water distribution system. Further, the review will look to improve Water system distribution resilience moving forward.

The review will be conducted by an independent Panel (the Review Panel) with consulting support. The Review Panel will have flexibility to confirm these guidelines, including the objectives, scope and guiding principles. Any changes will be communicated to City Council.

3. Objectives

The objectives are:

- 1) Learn from this incident to ensure continuous improvement of how The City responds to and manages future emergency events,
- 2) Maintain and enhance public trust and confidence in the drinking water distribution system, and
- 3) Confirm long-term, reliable delivery of drinking water and continuous improvement of The City's drinking water system

4. Scope

Proposed Scope of Work:

- 1) Response to the Bearspaw South Feeder Main break,
- 2) Water distribution system asset management, and
- 3) Water distribution system resilience

The Review Panel will prepare a report, assess Calgary's performance to industry standards and best practices (i.e. benchmarking). The Chair will deliver a report including prioritized recommended actions to Administration and City Council.

The proposed scope of work includes the following:

- 1) Response to the Bearspaw South Feeder Main break:
 - a) Timeframe: From June 5, 2024 to the date the State of Local Emergency is rescinded, or the date the South Bearspaw Feeder Main is returned to service, whichever is later.
 - b) Review the effectiveness of actions to respond to and complete the repairs to the initial watermain break and the five hotspots that were subsequently discovered, including the implementation of the Municipal Emergency Plan and the State of Local Emergency.
 - c) Review the contingency plans that were put in place during the response and repair of the Bearspaw South Feeder Main.
 - d) Review communication plans put in place to communicate with Council, City staff, Contractors, Regional customers, and the Public.
 - e) Make clear and implementable recommendations on improvements in these areas that can be applied broadly to The City's emergency response in the event of a service disruption.

- 2) Asset management scope:
 - a) Timeframe: historical to present as deemed appropriate by the Review Panel.
 - b) Determine the cause and/or contributing factors of the initial feeder main break and the five hotspots that were subsequently discovered in the Bearspaw South Feeder Main.
 - c) For this Bearspaw South Feeder Main, and for the water distribution system generally, evaluate and make recommendations for The City's:
 - o asset management practices and programs, including inspection and monitoring programs,
 - o asset standards and specifications, and
 - o risk modelling and mitigation strategies.

- 3) Water distribution system resilience:
 - a) Timeframe: historical to present as deemed appropriate by the Review Panel.
 - b) Make recommendations for specific, implementable actions to improve water supply resilience.
 - c) Assess system redundancy (water distribution system assets) and validate standards of resilience in the case of major infrastructure failure (management of system).
 - d) Assess the planning criteria (i.e. levels of service, cost, regulatory requirements, customer demand, risk tolerance, operations response, etc.) to ensure system function in the event of major infrastructure failure.

- 4) Out of scope for this review and to be confirmed by the Review Panel:
- a) Non-water distribution asset classes
 - b) Water demand management (outside of this incident)
 - c) City and regional growth plans, including water license capacity
 - d) Water efficiency and water loss
 - e) Water quality

5. Guiding Principles

The guiding principles of the Review Panel will be confirmed by the Review Panel once established. The guiding principles, however, should be reflective and focused on the review's objectives, outlined above. It is the responsibility of the Chair to define the guiding principles with members of the Review Panel.

6. Timeline

Timeline	Deliverable
July 2024	Select a Review Panel Chair and Review Panel members
September 2024	Panel Chair provide a progress update to Council
October 2024	Final report from the Panel Chair to CAO
November 2024	Panel Chair presentation of Panel Recommendations to Council

7. Review Panel Selection and Membership

An independent Selection Committee will select and appoint a Review Panel Chair. The Selection Committee will comprise four to five (4-5) individuals, including representatives from The Calgary Chamber of Commerce and the Utilities Sector. Once a Chair is in place, the selection committee will remain as an advisory body to provide support as needed to the Chair in the selection of Review Panel members. Once the Review Panel is convened, the Selection Committee will disband.

The Review Panel should consist of expert representatives from private industry, professional associations, academia, and government entities to ensure a neutral and rigorous review.

The Review Panel will consist of no more than 12 members, including the Chair.

The eligibility criteria and desired skills and experience for the Chair is outlined in Appendix A. The eligibility criteria and desired skills and experience for the Review Panel members is outlined in Appendix B.

All information about members of the Review Panel is subject to the *Freedom of Information and Protection of Privacy Act*. The list of members, their credentials and their organizational affiliations will be made public in the spirit of openness and transparency.

8. Roles and Responsibilities

Selection Committee

- Select and appoint a Review Panel Chair.
- Support the Chair in the selection of the Review Panel Members.
- Provide advice on the Guidelines to the Chair.

Review Panel Chair

- Understand the purpose and objectives of the Panel Review
- Confirm objectives, scope, and guiding principles with the Review Panel members, amend and refine as necessary, and provide that information to City Council.
- Select Review Panel members, in consultation with the Selection Committee
- Provide leadership to the Review Panel to achieve its objectives and organize the Review Panel's work so it is carried out in an orderly and timely manner.
- Retain consulting and technical resources as necessary.
- Chair all meetings of the Review Panel.
- Assign the taking of notes and minutes to a Review Panel member to act as Secretary
- Lead the development of the Review Panel work plan and be accountable for delivery according to objectives and timelines.
- Ensure resources are available for timely coordination and administration of the Review Panel.
- Obtain from Administration the information and data to deliver on the objectives and scope of work.
- Deliver a report, including prioritized recommended actions, to City Council and Administration.
- Act as the designated Council presenter and media spokesperson for the Review Panel.
- The Chair may name a Vice Chair from the Review Panel members to act in their absence.

All Review Panel members, including the Chair

- Contribute expertise and experience to the review.
- Adhere to the guiding principles of the review.
- Attend all meetings, review information provided by The City in advance of meetings and provide timely feedback and input on components of the review.

- Provide objective perspectives and perform functions that will not place or be seen to place Review Panel members in real or perceived conflict with the objectives and scope of the review. Members must declare any private interests they have and recuse themselves from making recommendations or decisions that would impact those private interests.
- Maintain confidentiality by not releasing personal and/or confidential information obtained through their membership of the Review Panel and/or use it to further private interest or those of friends, relatives, or colleagues. Review Panel members will be bound by a non-disclosure agreement.
- The Review Panel members are not to communicate or provide comments to media outlets without consultation with the Chair.

City of Calgary Administration

- Provide timely information, data, and artifacts for the review, as requested by the Review Panel.
- Enable Review Panel updates and progress to Council, including the final report.
- Provide support and resourcing necessary for the Review Panel to deliver on the objectives and scope of the Review.
- Prepare an Administration response and implementation plan to address the Review Panel recommendations.
- Review and approve budget and expenditures.

9. Level of Authority

The Review Panel members will not represent themselves as having any authority beyond what is outlined in these guidelines. The Review Panel will provide final recommendations to City Council and Administration. City Council retains authority related to Service Plans and Budgets, and the ability to direct Administration. Administration retains the authority to propose implementation plans and strategies to address the recommendations of the Review Panel.

10. Policy

The Review Panel will be expected to adhere to all applicable City of Calgary policies and procedures. The Review Panel may be required to complete City of Calgary training to comply with City policies. This training, if necessary, will be arranged and coordinated by appropriate City staff.

11. Communication with The City

The Chair will communicate with City Administration through the Chief Administrative Officer (CAO), the CAO's Administrative Liaison, or other Administration officers as determined by the CAO. The Review Panel will communicate with members of Council through the Committee or Council meeting process.

12. Review Panel Funding and Budget

A budget for the Review will be jointly established by the Panel Chair and the CAO. Budget funding will be provided by The City.

13. Remuneration and Expenses

The remuneration payable to the Chair and Review Panel members will be determined by the CAO, in line with public sector norms for boards, commissions and committees.

The Chair and Review Panel members are eligible to claim reasonable expenses, including travel to meetings where an on-line remote meeting is not suitable, as determined by the Chair. These expenses will be approved by the CAO and paid by The City through a process consistent with City policies.

14. Meetings, Organization and Decision-Making

Led by the Chair, the Review Panel is expected to decide and document how it will organize itself. The Review Panel is expected to meet at minimum on a bi-weekly (every two weeks) basis and more frequently if required.

Decisions will be made by consensus and a quorum of two-thirds of the Review Panel is required for decision making.

15. Information Management

All materials, written reports and information produced by the Review Panel, consultants or sub-contractors will become the property of The City of Calgary and subject to the Freedom of Information and Protection of Privacy Act (Alberta), and The City records management policies.

16. Term

Once the Review Panel's final report is shared with Council and the Public, the Review Panel membership and mandate will be reassessed to determine if the objectives of the Review have been met or if there is need for continued work.

Appendix A: Eligibility and Selection Criteria for the Review Panel Chair

Appendix B: Eligibility and Selection Criteria for Review Panel Members

Appendix A: Eligibility and Selection Criteria for the Review Panel Chair

Chair Selection Criteria	
Must meet	
Eligibility	<ul style="list-style-type: none"> Member of APEGA or other related professional association in good standing Not a current or former employee of The City of Calgary Not an elected official Holds no personal or commercial interest in the Review Panel findings or recommendations Has not been previously engaged by The City as a contractor or consultant on projects related to this scope of work (i.e. construction or maintenance of the Bearspaw Feeder Main, water utility asset management, system resilience, emergency response) Not engaged in the emergency response or restoration activities for the Bearspaw South Feeder Main break
Desired Skills and Experience	
Expertise and experience	<ul style="list-style-type: none"> Experience in utility, pipeline, major construction, or other large asset-intensive industry Experience and credibility related to risk management Government Relations Emergency management Academia Analytical skills Affiliation with a professional association, such as, Canadian Society of Civil Engineers (CSCE), Canadian Water Resources Assoc. (CWRA), Canadian Water and Wastewater Assoc. (CWWA), American Society of Civil Engineers (ASCE), American Water Works Assoc. (AWWA), International Water Assoc. (IWA), Water Research Foundation, and Canadian Water Network (CWN).
Leadership	<ul style="list-style-type: none"> Demonstrate integrity and high ethical standards Significant senior leadership experience in a large organization Strong decision-making skills Public service orientation 3-5 years previous Board of Director experience
Communication	<ul style="list-style-type: none"> Strong written and verbal communication skills Media / public relations spokesperson training and experience Presentation experience to boards, commissions, or committees

Appendix B: Eligibility and Selection Criteria for Review Panel Members

The Chair has the discretion to choose Review Panel Members with the appropriate skill sets to deliver on the objectives and scope of work outline in these Guidelines. The Chair may consult with the Selection Committee throughout this process.

Review Panel Selection Criteria	
Must meet	
Eligibility	<ul style="list-style-type: none"> • Not a current or former employee of The City of Calgary • Not an elected official • Holds no personal or commercial interest in the Review Panel findings or recommendations • Has not been previously engaged by The City as a contractor or consultant on projects related to this scope of work (i.e. construction or maintenance of the Bearspaw Feeder Main, water utility asset management, system resilience, emergency response) • Not engaged in the emergency response or restoration activities for the Bearspaw South Feeder Main break
Desired Skills and Experience (include but not limited to)	
Expertise and experience of Review Panel members	<ul style="list-style-type: none"> • Asset management • Condition assessment • Risk management • Hydraulic design • Expertise in PCCP pipe • Local condition knowledge and experience (i.e. soil conditions, construction methods and materials) • Capital budget planning and investment • Emergency management • Communications • Experience on a board, committee or working group
General skills	<ul style="list-style-type: none"> • Demonstrate integrity and high ethical standards • Public service orientation • Strong decision-making skills • Strong written and verbal communication skills • Analytical skills • Teamwork and collaboration