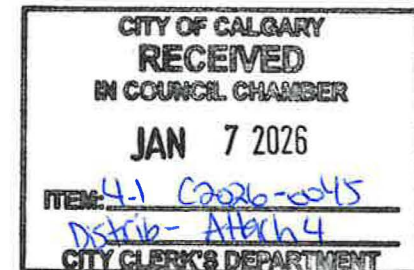

BPSFM Failure: Panel Presentation to Council

ISC: Unrestricted





Context & Today's Discussion

Context:

- June 2024 Bearspaw South Feedermain (BPSFM) failure triggered city-wide water restrictions lasting nearly four months
- In response, City Council convened an Independent Review Panel to investigate causes and make recommendations to address risks
- Panel conducted a nine-month independent investigation using document review, interviews, workshops, and third-party expertise
- While Panel's mandate did not cover December 2025 failure, recommendations remain relevant

Today's Discussion:

- Share a summary of Panel findings and recommendations
- Outline implications for Council
- Answer questions from Council on our proposed path forward

Panel members and approach

Members

- **Siegfried W. Kiefer (Chair)** | *Infrastructure & Utility Governance*
 - Former CEO of Canadian Utilities and senior ATCO executive
 - Led regulated infrastructure projects & utility governance initiatives
- **Michael J. Crothers (Vice Chair)** | *Operations & Risk Governance*
 - Former President and Country Chair of Shell Canada
 - Extensive experience with large-scale facilities, safety, and governance
- **Gordon M. Engbloom** | *Utility Economics & Regulation*
 - Over 45 years advising governments, regulators, and utilities
 - Expert in pricing, regulation, and market design
- **Nancy F. Foster** | *Governance, Safety & Risk*
 - Former senior executive at Husky Energy and Nexen
 - Deep experience in organizational leadership and crisis management
- **Bob B. Kerr** | *Asset Integrity & Incident Investigation*
 - Former ExxonMobil Canada executive focused on asset integrity systems
 - Led investigations into major industrial incidents
- **Stephen Stanley** | *Municipal Water Utility Operations*
 - Former SVP, Water Services at EPCOR
 - Led large municipal water treatment and distribution systems

Approach

- **Comprehensive nine-month review, including:**
 - Review of **250+ documents and historical records**
 - **50+ interviews and 10 workshops with 90+ City staff**, consultants, and external experts
 - **Site visits** to major water, wastewater, and emergency facilities
 - **Comparative benchmarking** against Canadian and international peers
 - **Independent experts engaged** to evaluate BSPFM risks and better understand best practice



Key Messages

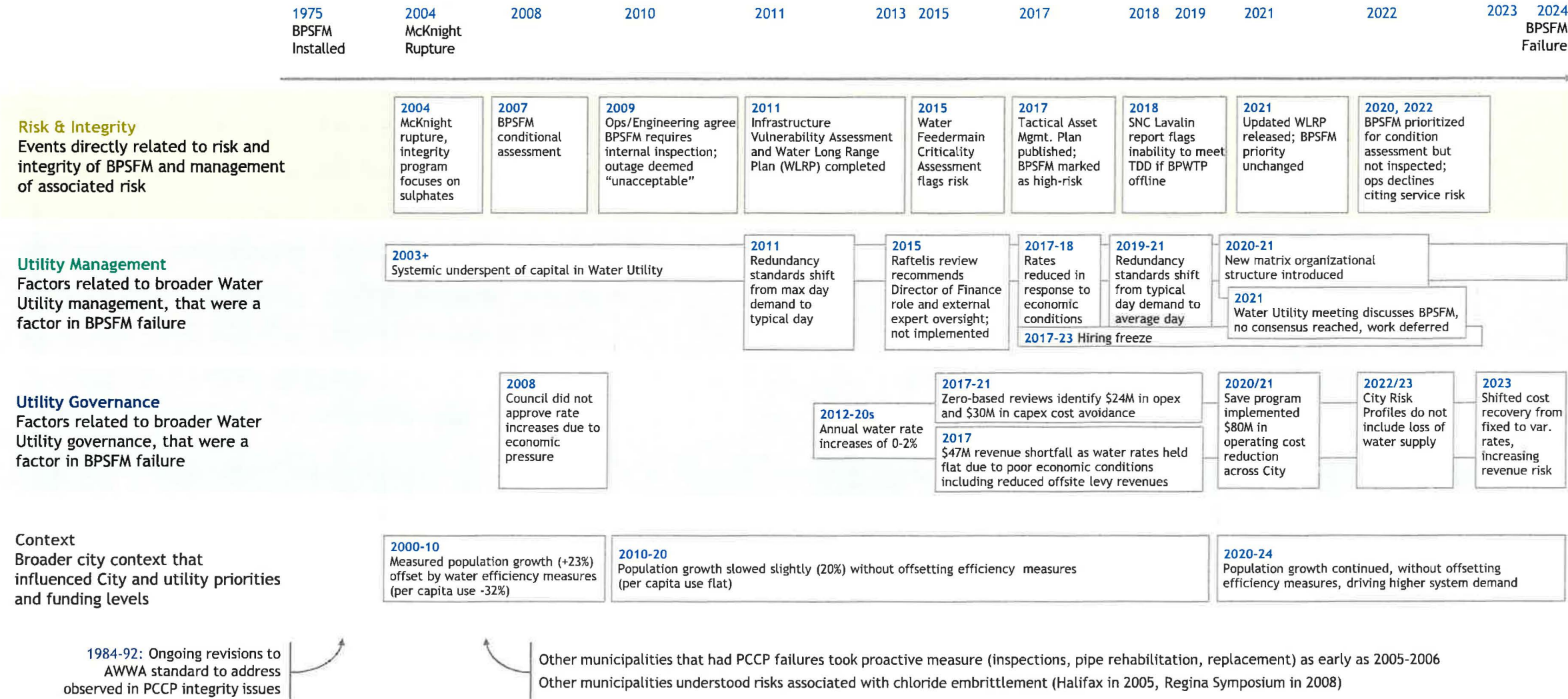
Panel found systemic gaps in risk and asset management processes, unclear accountability, and lack of expert oversight that led to inaction on known risks

In response, the Panel has developed recommendations to address the immediate cause of risk & underlying factors:

- Urgent: **Mitigate immediate risk** of BPSFM failure
- Near-term: **Address underlying causes** of BPSFM failure
- Long-term: **Durably embed management & governance** changes

Proposed next step for Council is to **stand-up governance oversight body**, and **support Administration** in implementation of recommendations

BPSFM asset integrity risk first identified two decades before 2024 failure



Urgent recommendations: Mitigate immediate risk of more BPSFM failures

Why the Risk Remains





- BPSFM remains the **highest-risk asset in Calgary's water system**
- While 2024 repairs stabilized the line, they **did not arrest ongoing deterioration**
- Current monitoring relies primarily on acoustic fibre, which **captures only ~50% of PCCP failures**
- Wire breaks **occurring at ~6x industry experience**
- **Location specific risk analysis needed** to take into account full range of factors, beyond wire breaks
- The **BPSFM remains at material risk**, and pressure transients could trigger another catastrophic failure at any time

Urgent Actions Recommended by the Panel


- Establish a **dedicated task force** to:
 - **Expand condition monitoring** and location specific segment-level assessment
 - Accelerate **installation of pressure transient monitoring**
 - Apply **strict operational controls** to prevent pressure events
 - Conduct **targeted emergency response planning** and preparedness
- **Use emergency procurement and private sector expertise to accelerate BPSFM steel line duplication**, target completion within 12-14 months

Near-term recommendations: Address underlying causes of BPSFM failure


Risk & Asset Integrity

-  Strengthen risk assessment across the Utility
-  Renew and follow Asset Management Plans
-  Develop an Integrated Resource Plan
-  Set water rates through transparent, cost-based economic regulation

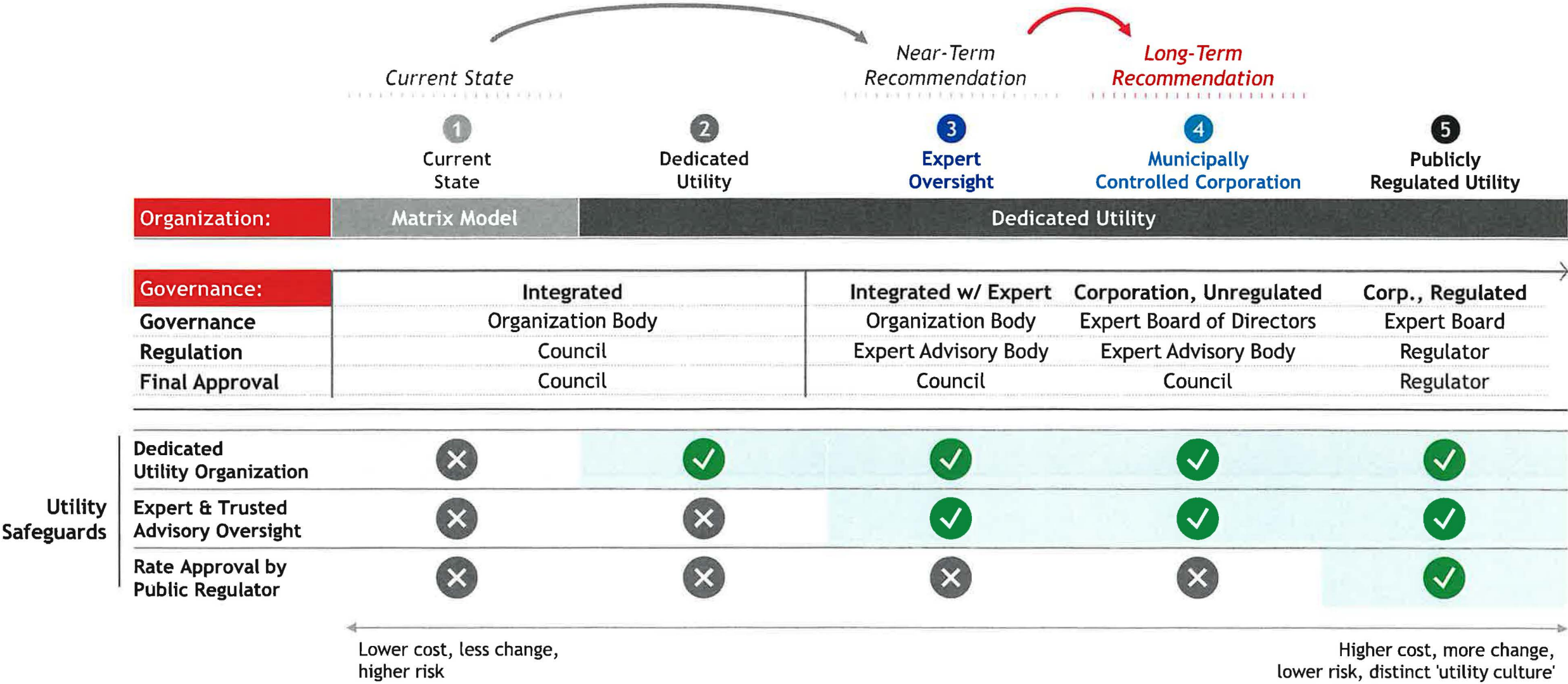
Management

-  Create a dedicated Water Utility department with clear accountability for all core functions
-  Appoint a single Chief Operating Officer (COO) of Water accountable for all service, cost, and reliability decision-making

Governance

-  Establish an independent Water Utility Oversight Board (WUOB) to strengthen expert oversight - provide independent evaluation of management work, and elevate key risks and trade-offs for Council consideration

Long-term recommendations: Durably embed mgmt. & governance changes





Next steps for Council across three horizons

Urgent recommendations: Mitigate immediate risk of new BPSFM failure

- Authorize additional budget required to implement the Panel's urgent recommendations, including accelerated duplicate steel line of the BPSFM

Near-Term recommendations: Address underlying causes of BPSFM failure

- Establish a WUOB to support Council with independent and expert advice
- Support Administration in implementing near-term organizational changes, including creation of a dedicated Water Utility department with a single accountable Chief Operating Officer responsible for end-to-end performance

Long-term recommendations: Durably embed management & governance changes

- Provide strategic direction to advance a transition of the Water Utility to a Municipally Controlled Corporation (MCC) model over time