

# Welcome to Lunch



# The MENU

## OCWA SERVICES

### *Main Course*

- Contract Operations & Maintenance

### *Today's Special*

- Planning Linear Infrastructure
- Optimizing Energy Use

### *Dessert*

#### **A wide range of technical support services:**

- Engineering/Project Management
- Process Optimization
- Alternative Delivery
- Organics Management
- Funding Application Assistance
- Climate Resiliency and GHG Mitigation

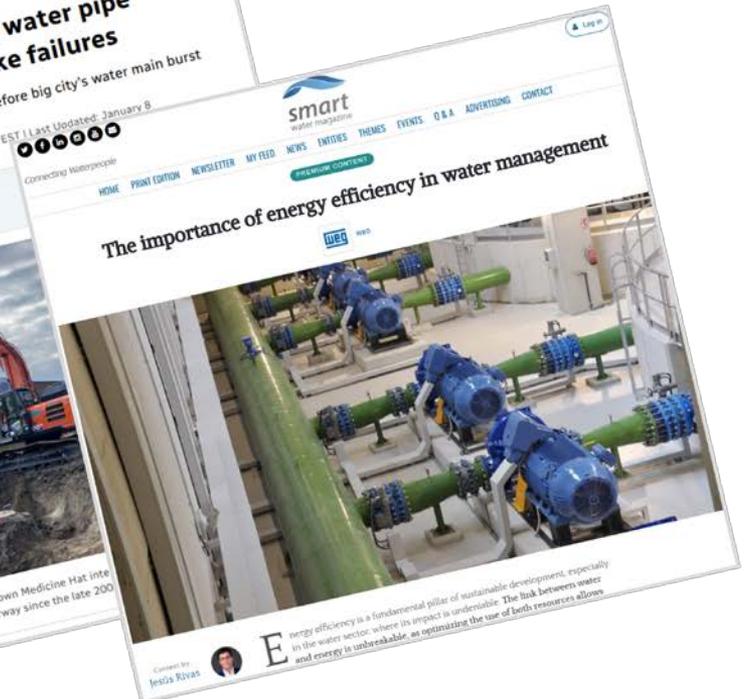
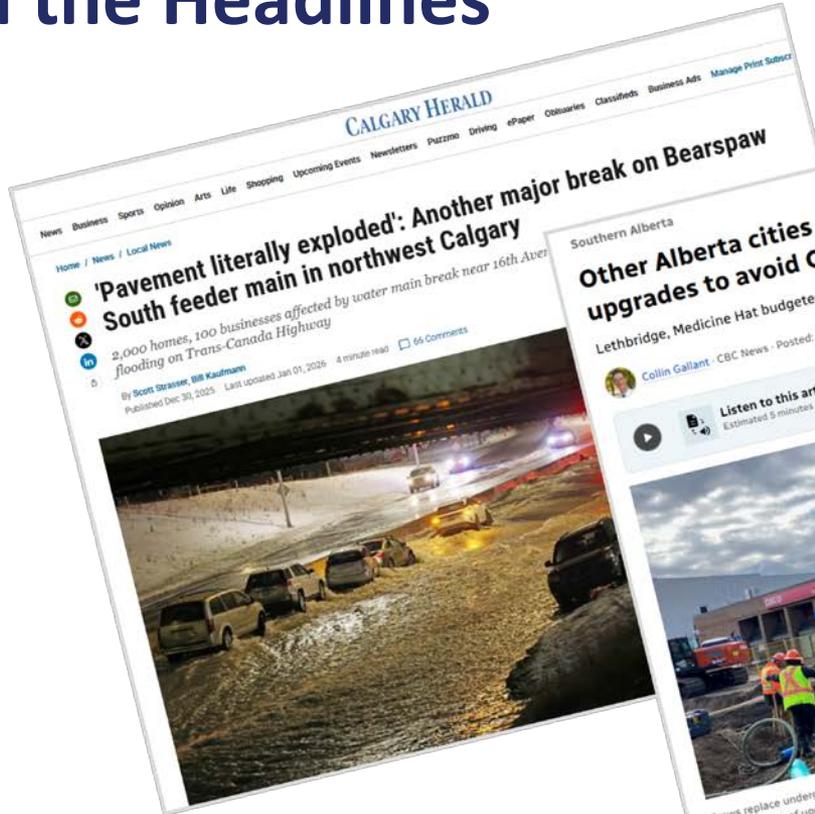


Visit us at Booth 706.

Operating in  
communities  
across Ontario  
for 30+ years,  
we've seen a lot.



# In the Headlines



A vibrant blue sky filled with fluffy white clouds. A bright sunburst is positioned on the right side, with rays of light radiating across the sky. The overall scene is bright and optimistic.

**There IS good news!**

# Introducing Our Experts



**Sonya M Semanuik, P.Eng. PMP, ENV SP**

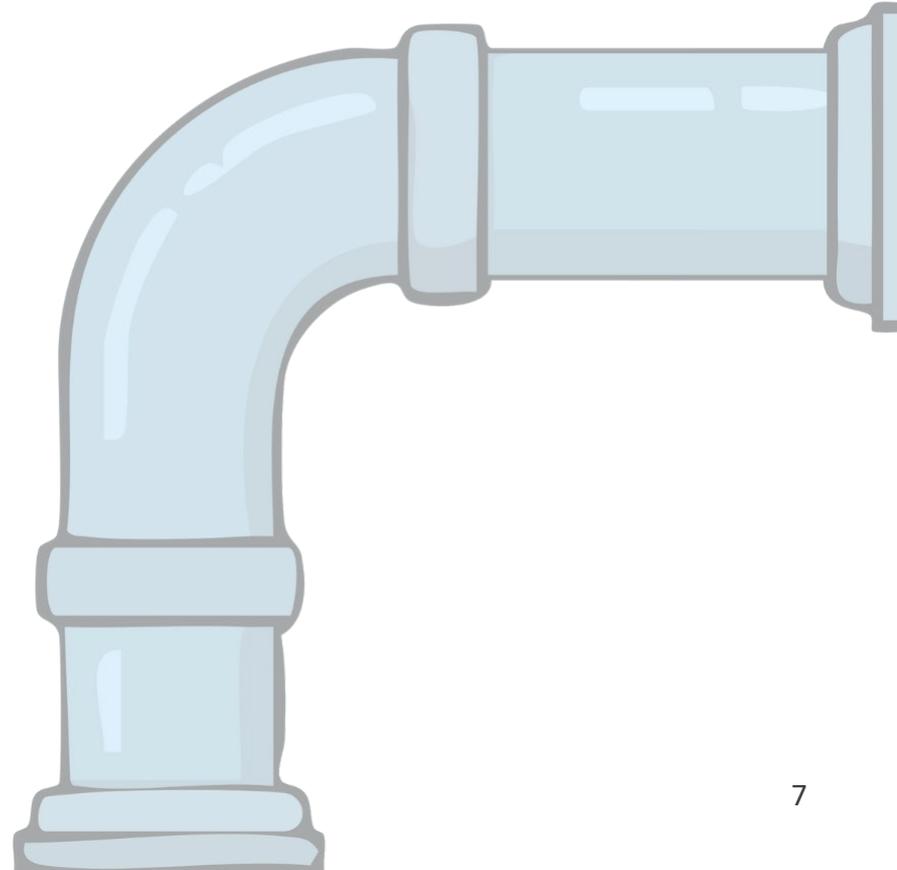
Senior Project Manager, Studies &  
Condition Assessments



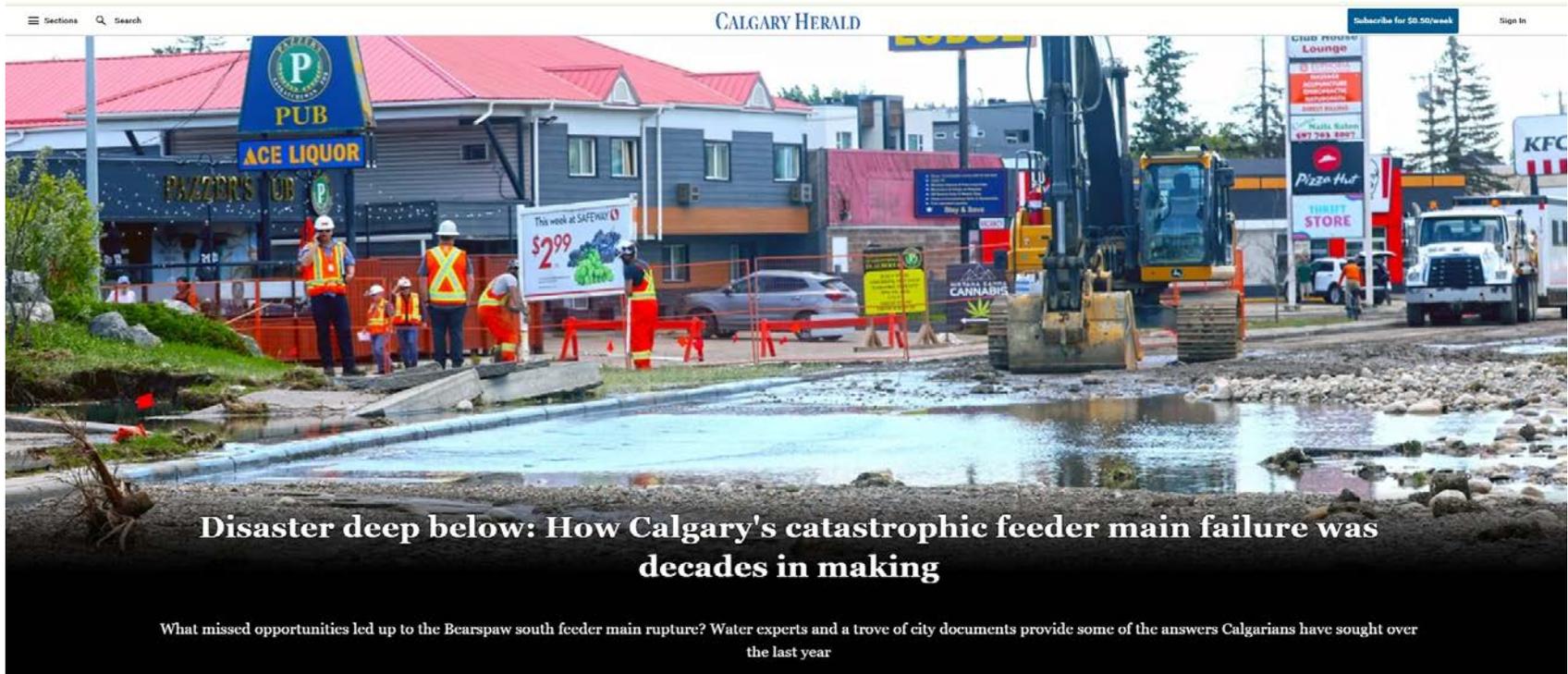
**Kerry Tuyen, P.Eng, CMVP**

Director – Innovation, Technology and  
Alternative Delivery

# Planning & Pipes



# Can What Happened in Calgary Happen To Me?



Source: Calgary Herald (June 4, 2025)

# Risk Management

## What if?

- The hospital in town consumes an entire block and has 3 separate feeds from 3 different streets. It can function as long as two feeds are available at all times.
- A main break occurs on Street A but 1 of the 2 valves required to isolate does not work meaning more valves will be required to shut down to perform the repair.



Source: MSCopilot

# Long(er) Term Planning – Case Study

## Township of McGarry – Population 579

- Approx 8km of distribution piping
- Approx 8km of sanitary sewer
- Water: Producing 1,500 L/p/day (2013)
- Sewer: 168% of rated capacity (2014)



# Approach

## OCIF Intake (2015)

- Leak Detection on watermains
- CCTV, MH inspections & smoke testing on sewers
- Identify infrastructure upgrade projects
- Start Upgrading!

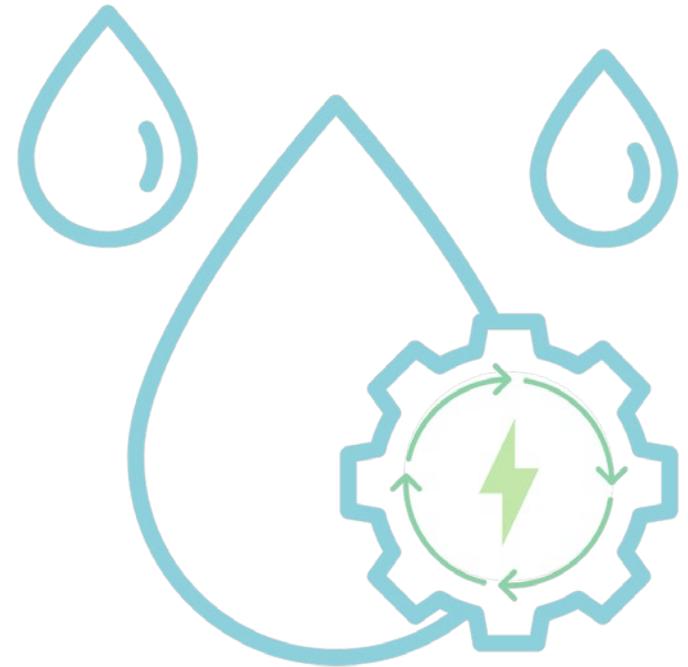


# Results

- Replaced 17% of the water / sanitary sewers
- Installed 700m new storm sewers
- Water: 1500 L/p/day  
--> 702 L/p/day
- Sewer: 168% (2015) of rated capacity  
--> 61-109% of rated capacity (2020-24)



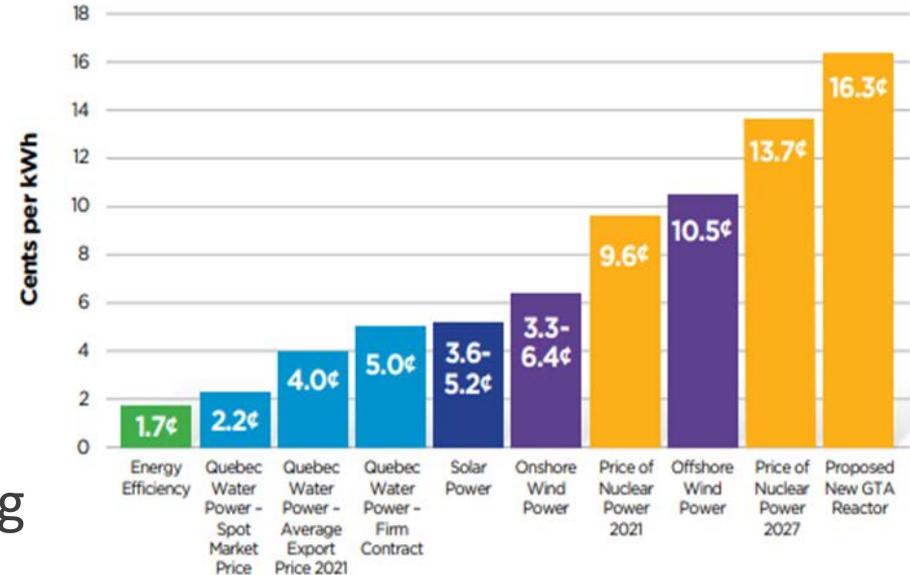
# Energy & Innovation



# Energy Consumption in Ontario

- Water infrastructure accounts for **33% of annual electricity consumption within a municipality's portfolio**
- Demand anticipated to increase **75% by 2050**
- Costs **10x more** to build a new nuclear reactor vs. implementing energy efficiency measures

Ontario's Electricity Options: A cost comparison



# Energy Optimization



## Step 1: Understand your energy profile

- Energy audit
- Energy intensive areas
- Seasonal energy baselines

## Step 2: Upgrade existing equipment

- More efficient equipment
- Installing additional equipment to optimize energy (i.e. VFDs, LED lighting, etc.)

## Step 3: Implement alternative energy sources

- BESS (battery storage)
- Renewable technology (i.e. biogas turbine, solar panels, etc.)

# Funding & Incentives to Support Energy Optimization Initiatives



Environment and  
Climate Change Canada  
Environnement et  
Changement climatique Canada



# Other Challenges in Water & Wastewater

- Governance options
- Trade challenges
- Money – Funding and Financing
- Technology/Innovation
- Developers vs. Municipal approaches to infrastructure
- Protecting your Assets
- Climate Change



# Levelling the playing field

BIG

Small  
Small  
Small



**Sharing services.  
Great idea. Difficult to execute.**



- 
- **170 Ontario municipalities**
  - **1000+ facilities**
  - **1000+ employees**
  - **1000 Olympic swimming pools of water treated every day**

# Get in touch

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