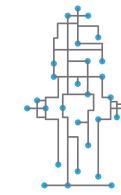




by **CLOW**
CLOW CANADA



POWERFUL ANALYTICS,
ACTIONABLE INSIGHTS.

**Smart Hydrants for a
Smarter Future:
Water Pressure Monitoring
System**

ABOUT US

1834

Thomas McAvity and Company:
Established May 19, 1834 in Saint John NB.



1903

First hydrant built.

1990

McWane Family purchases McAvity and Concord and establishing Clow Canada.



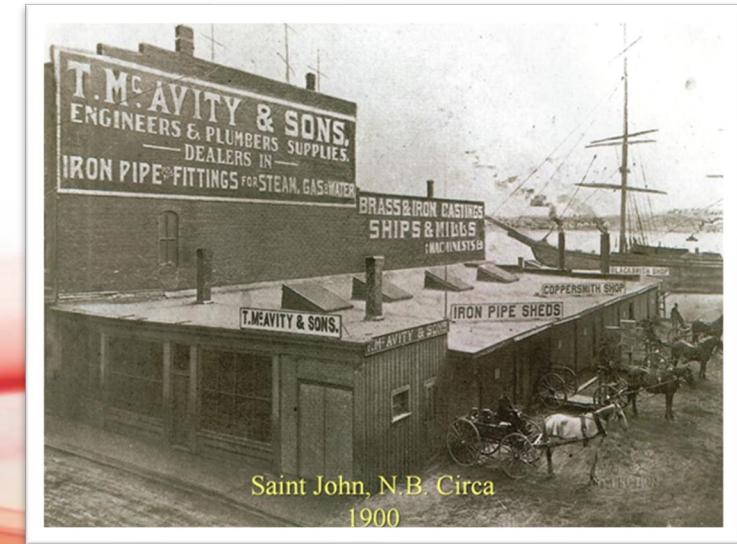
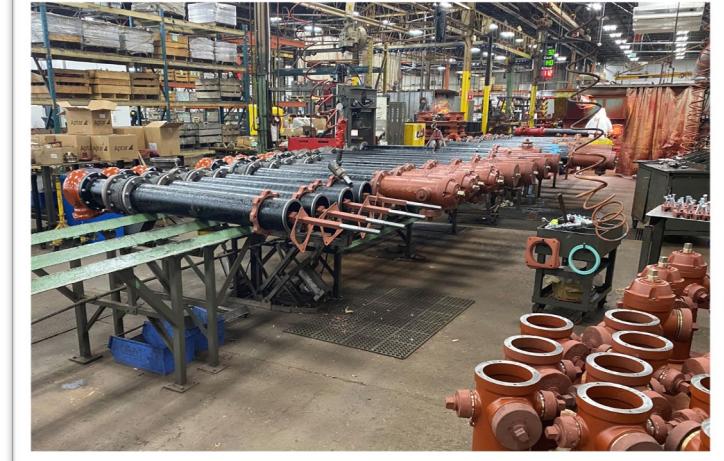
2012

Acquired Nighthawk Control (iHydrant™) & entered Smart City technology

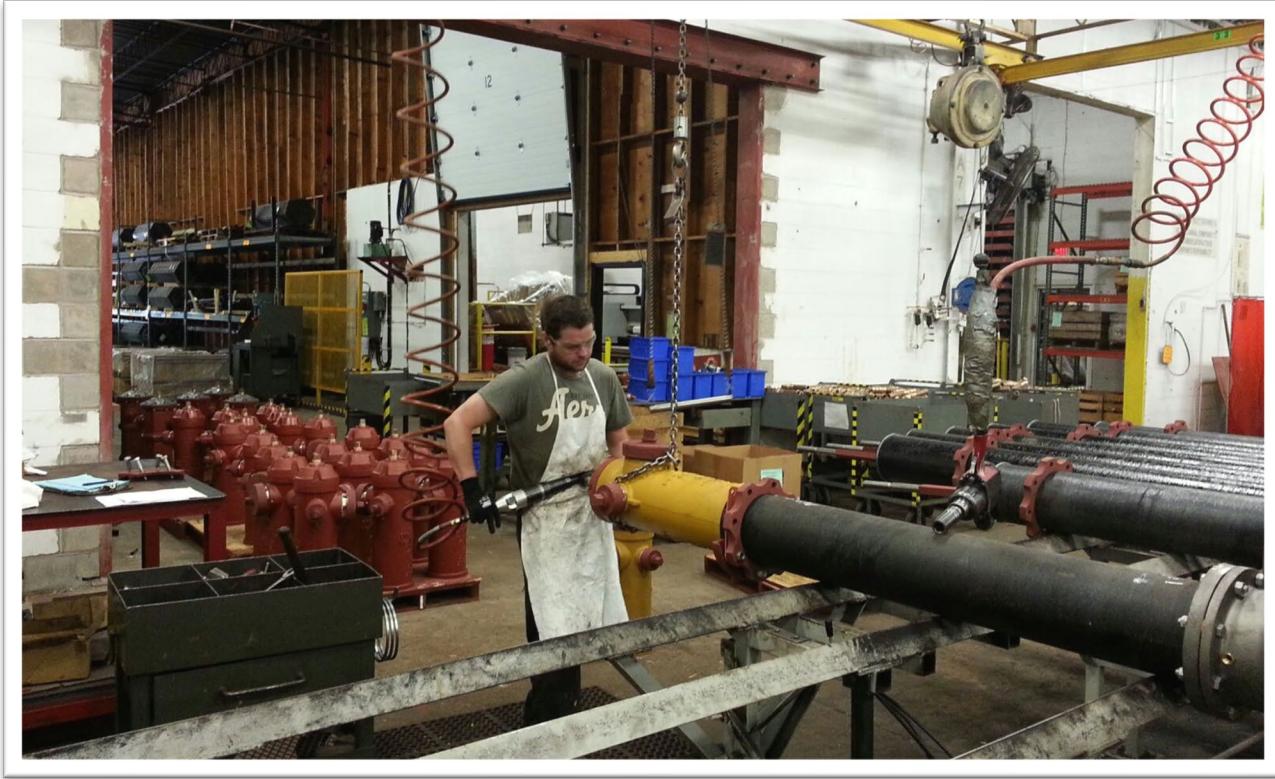


2021

iHydrant product line is launched in Canada (*Produced for Canada*), in Saint John, NB

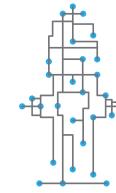


Clow Canada...The only Canadian National Fire Hydrant Manufacturer



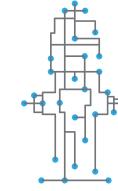


Canadian Made For Canadian Climates!



POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.



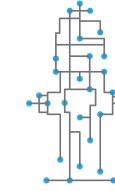


POWERFUL ANALYTICS,
ACTIONABLE INSIGHTS.

iHydrant® - Mission

“Revolutionize water systems by leveraging powerful real time analytics and actionable insights to detect and prevent water loss and evolve the way your utility looks at water. ”

[Innovative "Smart" Hydrants](#)



POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

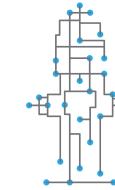
iHydrant®

**Pressure and Temperature Monitoring:
How Real Time Intelligence can Empower Data Driven Solutions**

Water Audits and Loss Control Programs

Fourth Edition

By effectively managing and optimizing pressure in the water distribution system, water main and service connection leakage can be reduced, and pipeline asset life can be extended.



POWERFUL ANALYTICS,
ACTIONABLE INSIGHTS.

Pressure Monitoring



Pressure Optimization

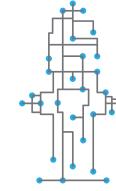


Extended Asset Life



American Water Works
Association

Pressure Monitoring Blindspot Problem



POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

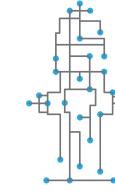
Pressure monitoring data has historically been limited to pump locations and water reservoirs exclusively, leaving a massive pressure measurement blindspot.

“You can’t manage what you can’t measure”

Why Manage Pressure? Think ROI



- ☞ Below 20 PSI requires a boil water advisory.
- ☞ Less water loss
 - Faster damage repair
 - Detection of water theft or unauthorized use
 - Pressure management – leak index
- ☞ Speed of intervention – less damage (day and night)
 - Less complaints from customers
- ☞ Identify water hammer zones – prevent breakage
- ☞ Better monitoring of your equipment (valves, pump, etc.)
 - Adjustment
 - Repair
 - Replacement

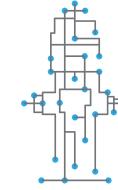


POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

iHydrant® Solution

Real-time Intelligence. Insightful Analytics.

iHydrant® Solution to Blindsight Problem



POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

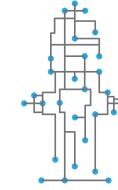
iHydrant™ sensors located in the hydrant boot are in constant contact with the water and Always On.

Data gathering in real time and continuously for Pressure and Temperature

Real Time Alerts (breakage, theft, abnormal use, etc.)

Measurement data is presented as visual graphics, alerts and reports

iHydrant® Solution to Blindsight Problem



POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

Converting existing hydrant assets provide an economical remote monitoring solution.

Excavation not necessary with conversion kits.

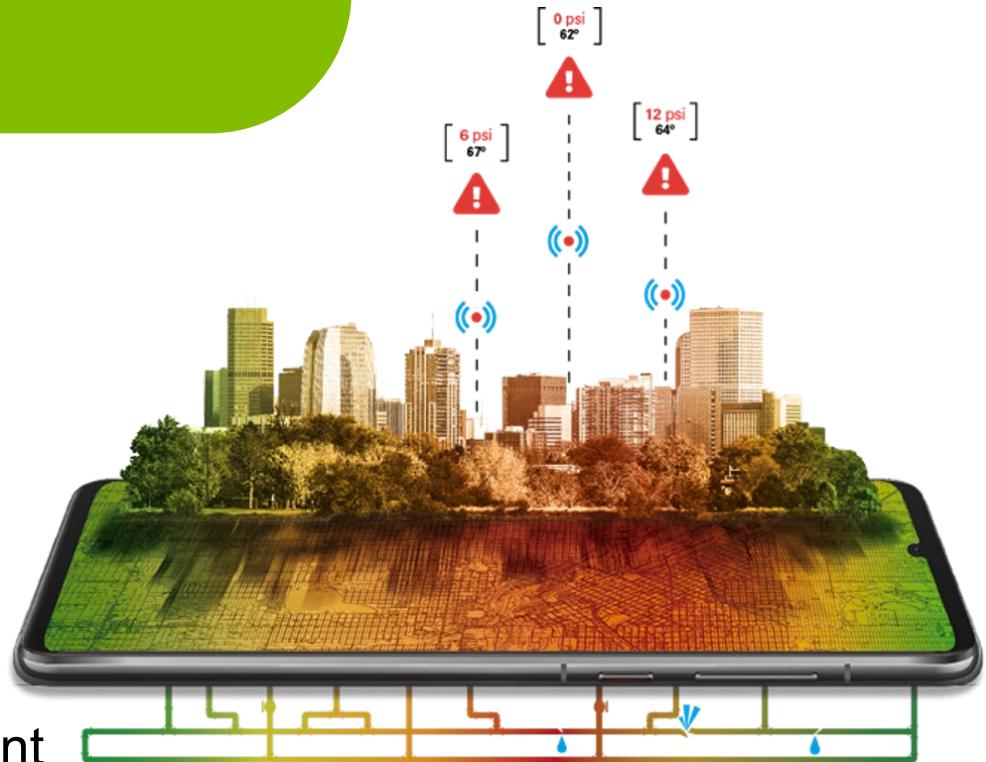
No electricity required.

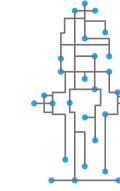
A dual-purpose hydrant, fight fires AND acquires data providing vision throughout the network.

Improves overall system performance.

Deployment Strategies

- 1 iHydrant for 15 to 20 hydrants (depending on network)
- Areas with known issues
- Low traffic areas
- Near pumping stations, valve chambers, etc.
- Have municipality specs in new construction / development projects
- Dead ends





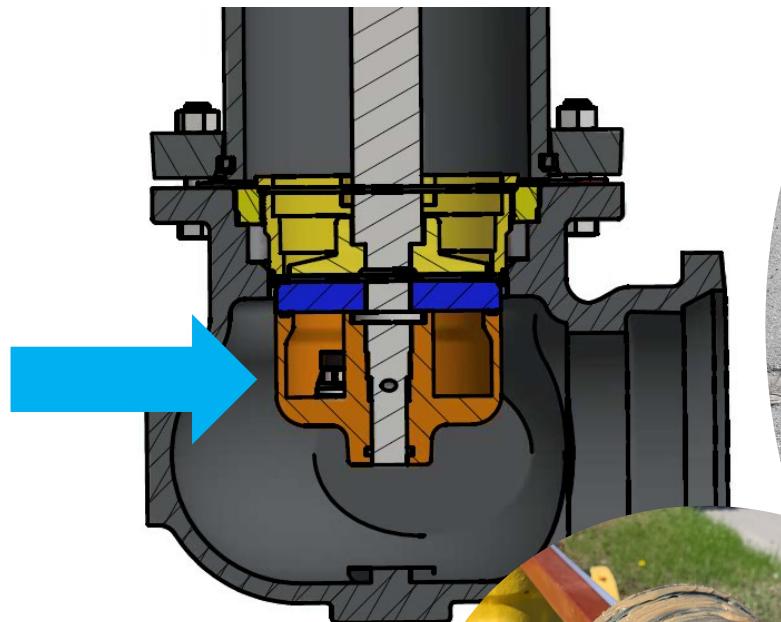
POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

Mechanical Design

Real-time Intelligence. Insightful Analytics.

Patented OEM Sensors

- hydrant Located at the base
- hydrant Reading Network Data
- hydrant In real time – 24hr / 7days
- hydrant No Handling



Cast Iron Spool



Shroud with Electronics

- Data transmission via cellular network

LTE CAT 1 (Rogers)

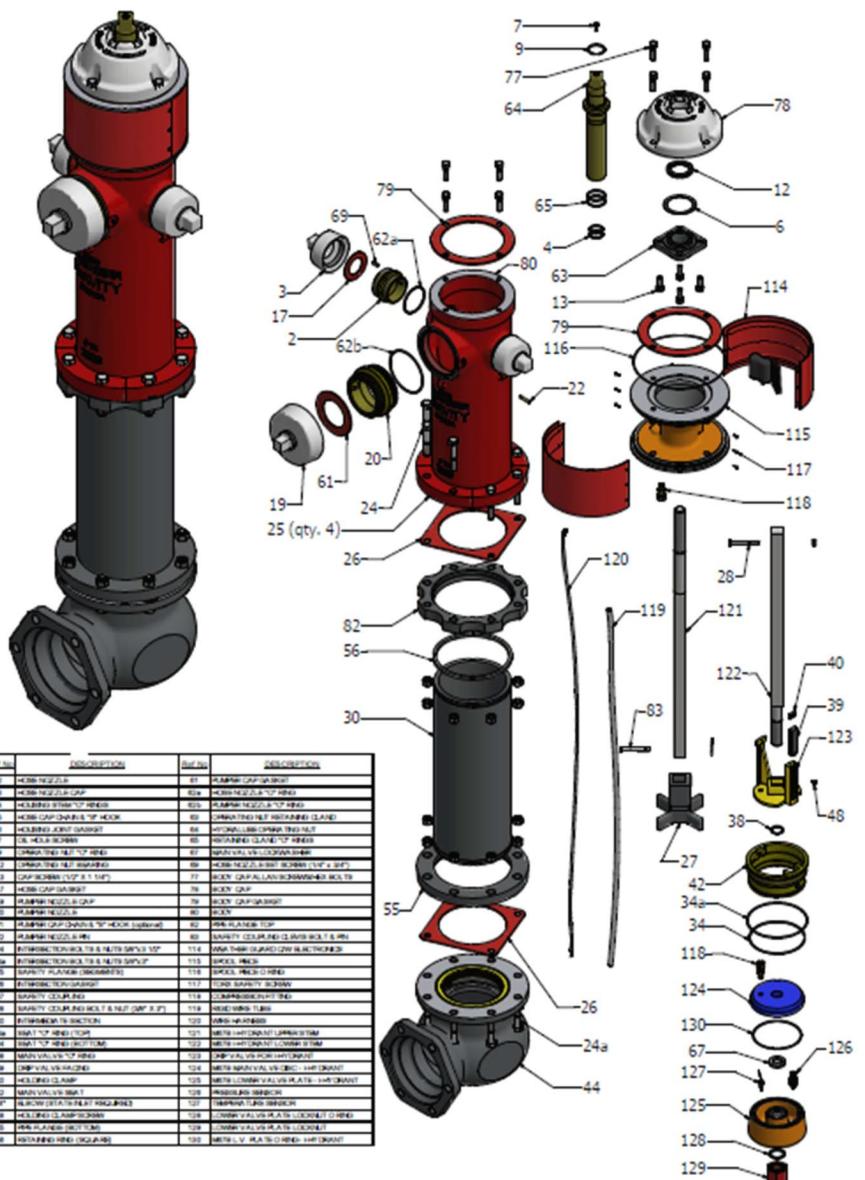
- Long-lasting battery

Lithium



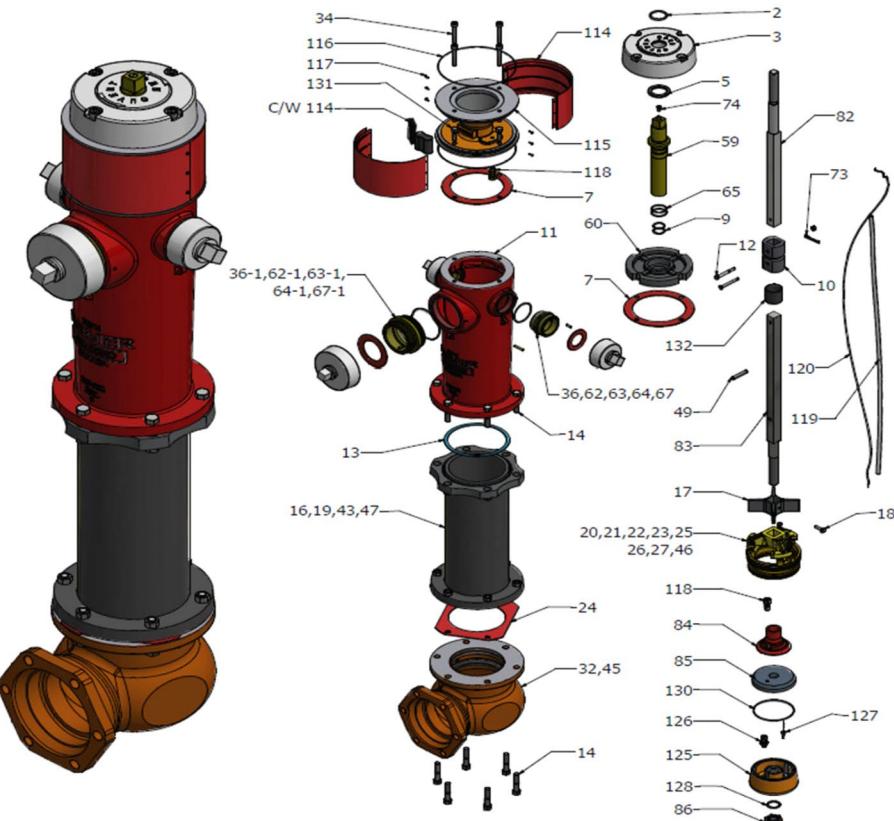


M67B BRIGADIER I-HYDRANT



Clow Canada

D67M-P PREMIER iHYDRANT



Conversion to an existing Clow Hydrant

Conversion
45-60 minutes



CLOW
CLOW CANADA

M67B BRIGADIER CONVERSION TO iHYDRANT

Ref No **DESCRIPTION**

67	MAIN VALVE LOCKWASHER
79	BODY CAP GASKET (qty 2)
114	WEATHER GUARD C/W ELECTRONICS
115	SPROK. PIECE
116	SPROK. PIECE O RING
117	TORX SAFETY SCREW (qty 5)
118	COMPRESSION FITTING (qty 2)
119	RIGID WIRE TUBE
120	WIRE HARNESS
121	M67B HYDRANT UPPER STEM W/SAFETY CPLG.
122	DRIP VALVE ASSEMBLY FOR HYDRANT
123	M67B MAIN VALVE DISC - HYDRANT
124	M67B LOWER VALVE PLATE - HYDRANT
125	PRESSURE SENSOR
127	TEMPERATURE SENSOR
128	LOWER VALVE PLATE LOCKNUT O RING
129	LOWER VALVE PLATE LOCKNUT
130	M67B L.V. PLATE O RING - HYDRANT
131	M67B M.V. SEAT W/O RINGS

MADE IN CANADA www.clowcanada.com

CLOW
CLOW CANADA

D67M-P PREMIER CONVERSION TO iHydrant

Ref **Description**

7	BONNET GASKET
10	BONNET COUPLING
11	STEM GUIDE
12	STEM GUIDE SET SCREW
20	VALVE STEM
26	VALVE STEM O RING
75	COLLING CLAVES BOLT AND PIN
80	HYDRANT/DRINKER COUPLED STEM
85	HYDRANT/DRINKER LOWER STEM
94	HYDRANT/DRINKER VALVE CARTRIDGE
95	HYDRANT/DRINKER VALVE CARTRIDGE
96	HYDRANT/DRINKER VALVE PLATE
110	HYDRANT/DRINKER VALVE PLATE O RING
111	HYDRANT/DRINKER C/W ELECTRONICS & BATTERY
115	SPROK. PIECE
116	SPROK. PIECE O RING
117	TEMPERATURE SENSOR
118	COMPRESSION FITTING
119	RIGID WIRE TUBE
120	WIRE HARNESS
121	HYDRANT/DRINKER LOWER VALVE PLATE FOR HYDRANT
122	DRIP VALVE ASSEMBLY FOR HYDRANT
123	HYDRANT/DRINKER LOWER VALVE PLATE O RING
124	HYDRANT/DRINKER LOWER VALVE PLATE O RING HYDRANT
125	SPROK. PIECE SCREW & BOLT
126	VALVE STEM O RING

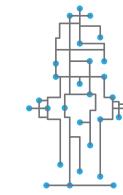
MADE IN CANADA www.clowcanada.com



POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.



Model	<ul style="list-style-type: none">1100-XXX03, 1100-XXX04, 1100-XXX05
Description	<ul style="list-style-type: none">Wireless Pressure and Temperature Monitor for Dry Barrel Hydrants
Pressure Sensor	<ul style="list-style-type: none">Pressure Range: -15-500 psiOver Pressure: 1000 psiBurst Pressure: 2500 psiAccuracy: +/-0.75% Full Scale
Temperature Sensor	<ul style="list-style-type: none">Accuracy: +/-1.0° C
Data Logging	<ul style="list-style-type: none">Sample Rate: Configurable up to 256 samples/secData Captured: Minimum, maximum, and average pressure and temperatureInterval Read: Five minute anchor readsMemory: Greater than 100,000 data values
Event/Alert Monitoring	<ul style="list-style-type: none">Configurable minimum/maximum pressure, temperature and transient thresholdsThirty second pre and post event detail capturePressure, temperature alerts sent via email or text
Battery	<ul style="list-style-type: none">38 Ah Lithium
Communication	<ul style="list-style-type: none">Cellular: LTE Rogers
Software	<ul style="list-style-type: none">iHydrant® Cloud based software platform
Enclosure	<ul style="list-style-type: none">IP 65 rated advanced polycarbonate shieldOEM ductile iron spoolRetrofittable kit or factory installed with new hydrant
Dimensions	<ul style="list-style-type: none">Spool and Enclosure Height: 6"Clow Canada Brigadier: 10" Diameter SpoolClow Canada Premier: 10" Diameter Spool

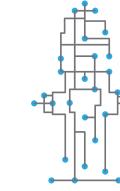


POWERFUL ANALYTICS,
ACTIONABLE INSIGHTS.

Warranties

- ※ 2 years on electronic components
- ※ 12 years for the hydrant





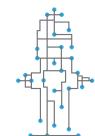
POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

Software / Data

Real-time Intelligence. Insightful Analytics.

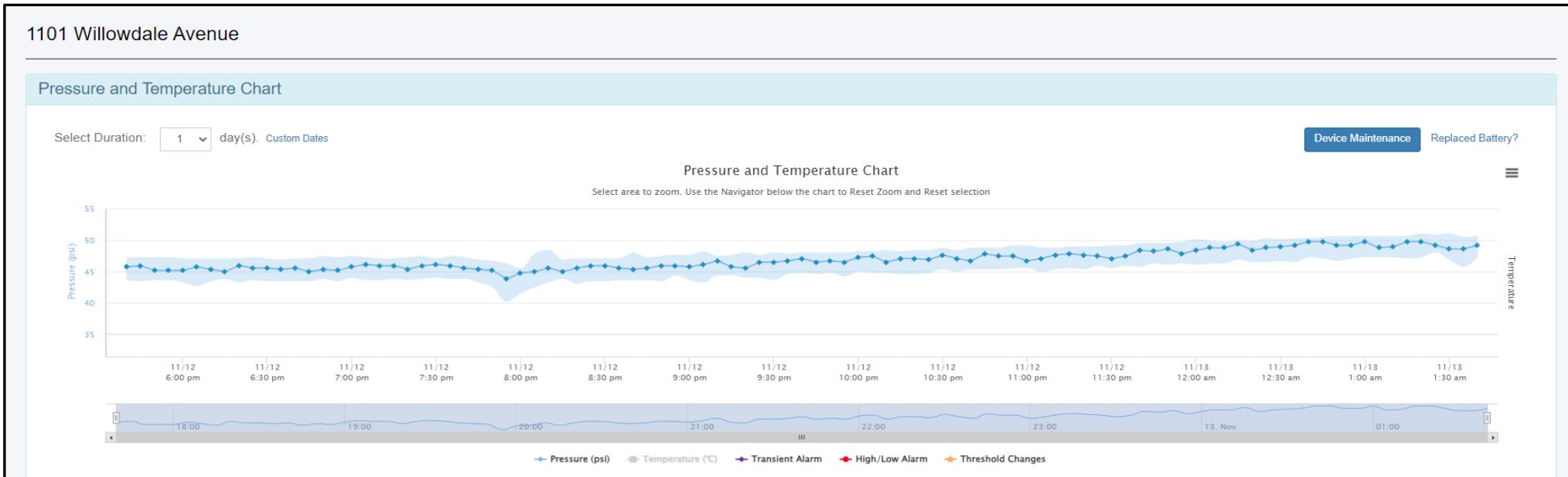
Software Package

- Hosted, cloud-based platform
- Accessible via internet
- No downloads



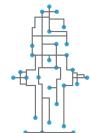
POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

Pressure Readings



Settings

- 💡 1 to 256 readings per second
- 💡 1 average reading every 5 minutes
- 💡 Download every 12 hours



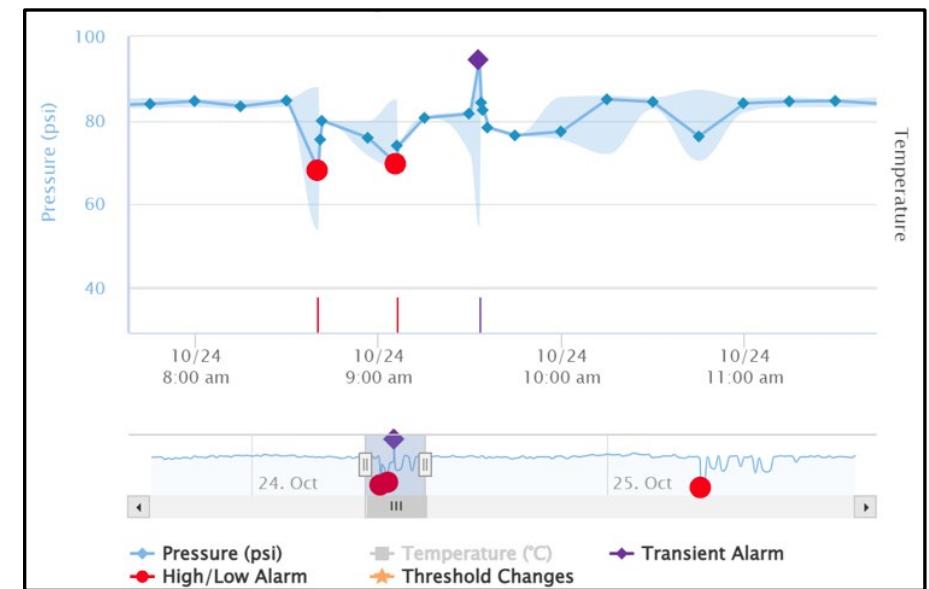
POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

Alerts

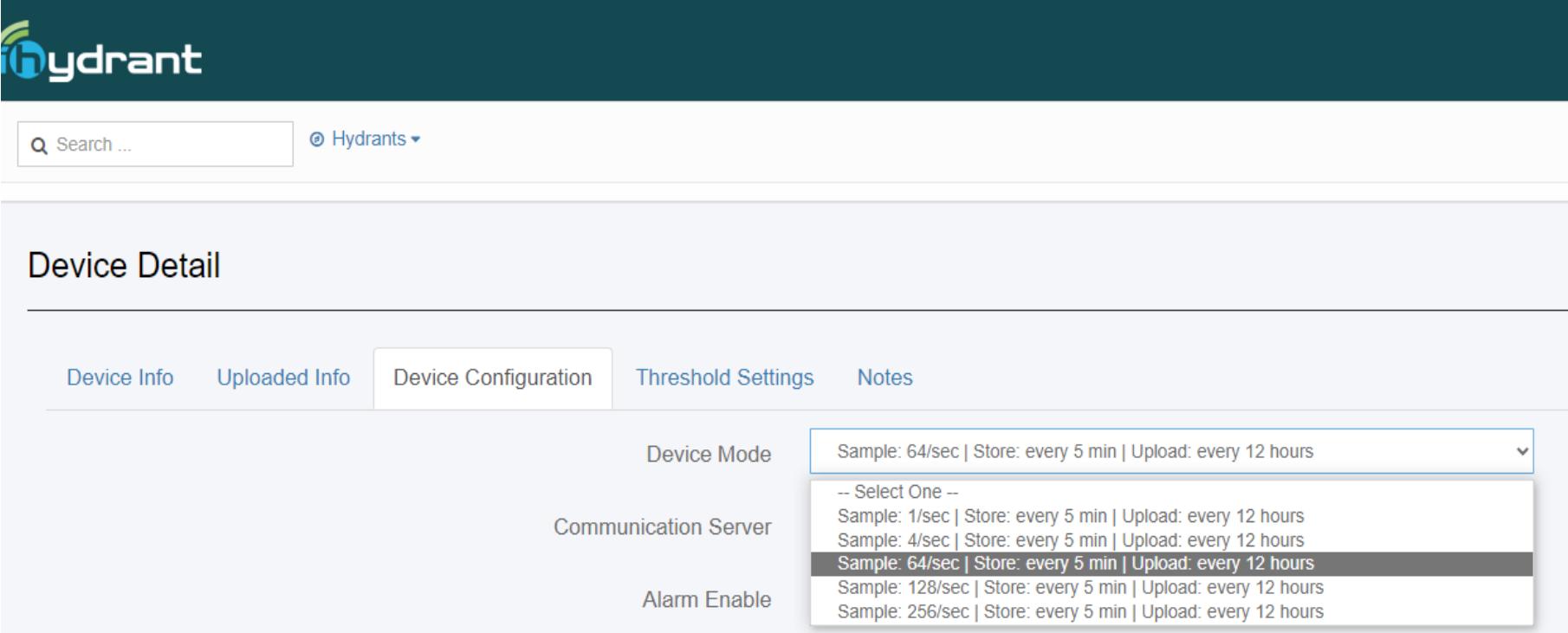
Low Battery Alert Feature

Pinned Hydrants	
Pinned Fire Hydrants	Device Status
1 Brimley Road	✓
100 Jutland Road	✓
1101 Willowdale Avenue	✗
118 Milford Haven Drive	✓
212 Victoria Park Avenue	✓

Pressure, Temperature and Transient Alerts can be customized according to municipality needs



Optimizing Battery Life



The screenshot shows the iHydrant web interface for managing device configurations. The top navigation bar includes the iHydrant logo, a search bar, and a dropdown menu for 'Hydrants'. The main content area is titled 'Device Detail' and features a tab navigation bar with 'Device Info', 'Uploaded Info', 'Device Configuration' (which is selected and highlighted in blue), 'Threshold Settings', and 'Notes'. Below the tabs, there are three configuration fields: 'Device Mode', 'Communication Server', and 'Alarm Enable'. The 'Device Mode' field is currently set to 'Sample: 64/sec | Store: every 5 min | Upload: every 12 hours'. A dropdown menu is open, showing several options for Device Mode, with 'Sample: 64/sec | Store: every 5 min | Upload: every 12 hours' highlighted in grey.

Device Mode
Sample: 64/sec Store: every 5 min Upload: every 12 hours
-- Select One --
Sample: 1/sec Store: every 5 min Upload: every 12 hours
Sample: 4/sec Store: every 5 min Upload: every 12 hours
Sample: 64/sec Store: every 5 min Upload: every 12 hours
Sample: 128/sec Store: every 5 min Upload: every 12 hours
Sample: 256/sec Store: every 5 min Upload: every 12 hours



POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

Alerts - Notifications

From: Admin <admin@ihydrant.com>
Sent: Monday, December 18, 2023 12:10:25 PM
To: Adrian Sloan <adrian.sloan@mcwane.com>; Austin Turner <austin.turner@clowcanada.com>; Melanie Lebel <melanie.lebel@clowcanada.com>;

Subject: iHydrant Alert : kingstonon: Low Pressure 39.47 PSI at 1429 Sydenham Road

ATTENTION: This email came from an EXTERNAL SENDER and should be CHECKED CAREFULLY BEFORE OPENING!

Alert Low Pressure Pressure Range 37.56 PSI - 69.03 PSI

Device Threshold : Min Pressure 40 PSI

Location : 1429 Sydenham Road, IMEI:89302720395914296832

Time : Dec 18 2023 5:09PM (UTC) / Dec 18 2023 12:09PM (EST)

Action Required.



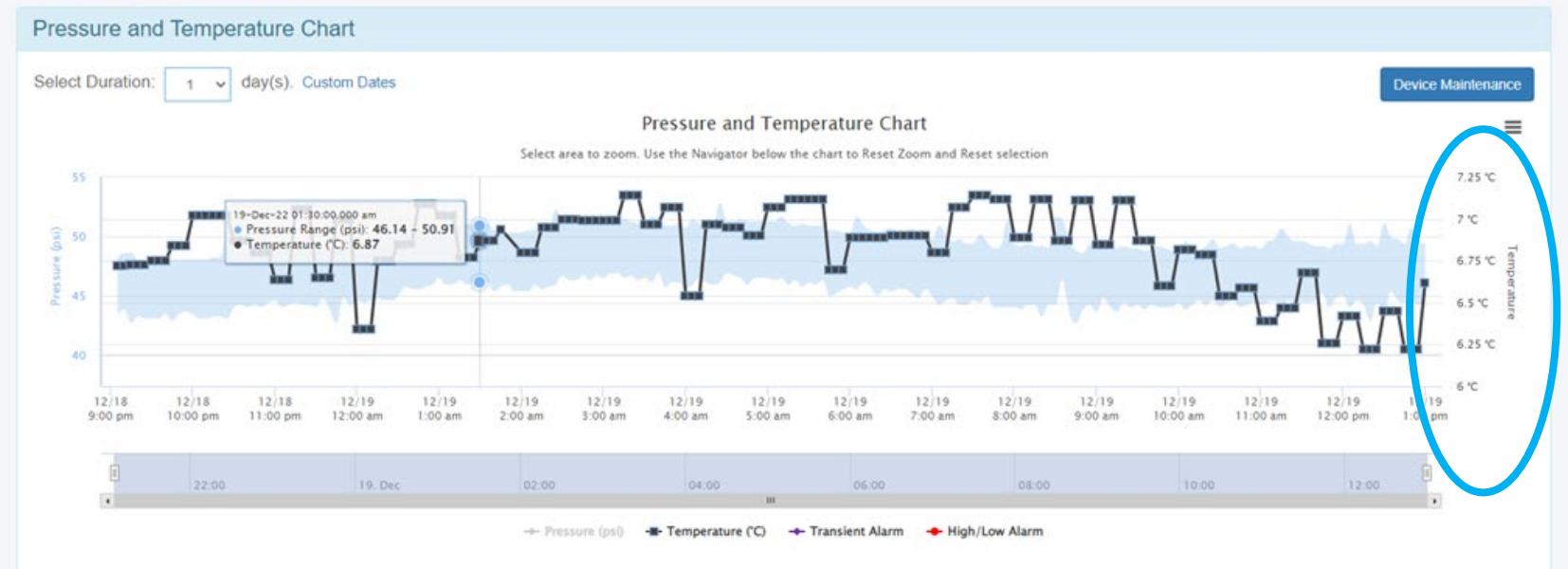
- ☞ Instant Data Downloads for Pressure and Temperature
- ☞ Text message or email
- ☞ Allows you to intervene before complaints from citizens
- ☞ Reduces the amount of water loss



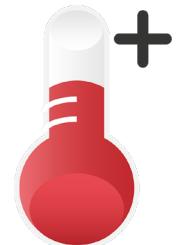
POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

And why the temperature?

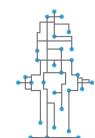
1101 Willowdale Avenue

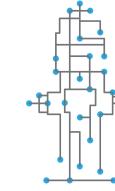


Risk of frost



Bacteriological proliferation to be monitored





POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.

Examples...



Abnormal High-Pressure Alarm – Rosser

Summit Road

Pressure and Temperature Chart

Start Date: 10/24/2023 01:20 AM

End Date: 10/28/2023 01:20 AM

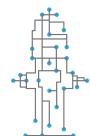
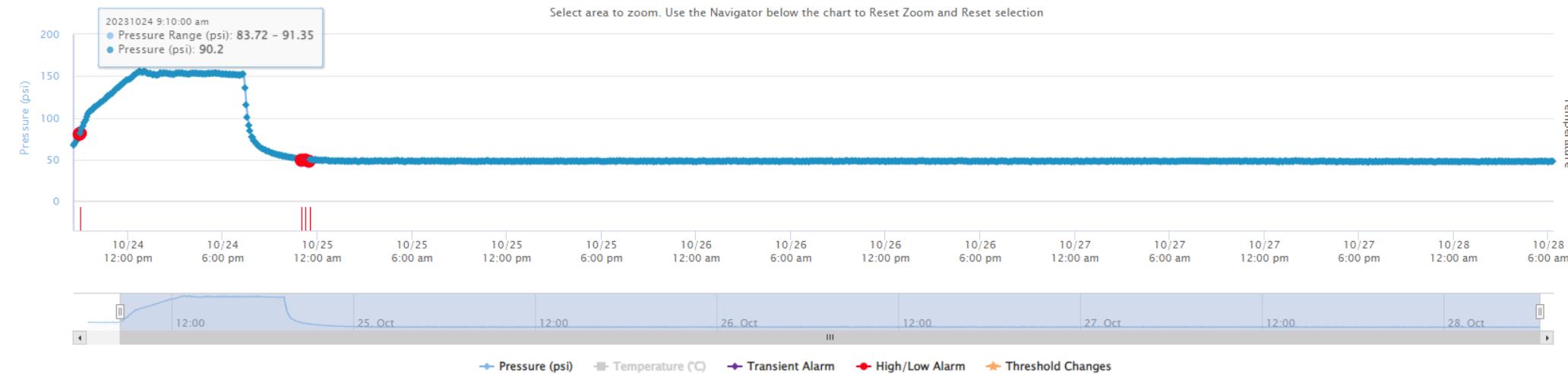
[Update chart with revised date](#) [Hide Custom Dates](#)

[Device Maintenance](#)

Replaced Battery?

Pressure and Temperature Chart

Select area to zoom. Use the Navigator below the chart to Reset Zoom and Reset selection



POWERFUL ANALYTICS.
ACTIONABLE INSIGHTS.



THE RURAL MUNICIPALITY OF
HEADINGLEY
YOUR COMMUNITY - YOUR FUTURE

Water Theft – Headingley Manitoba

4250 Portage Avenue

Pressure and Temperature Chart

Start Date: 10/23/2023 08:10 AM

End Date: 10/25/2023 12:10 PM

[Update chart with revised date](#)

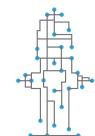
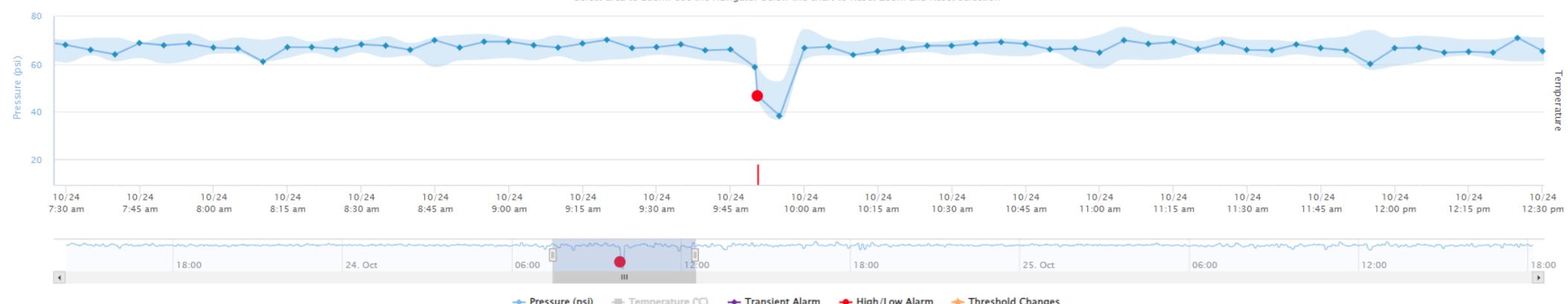
[Hide Custom Dates](#)

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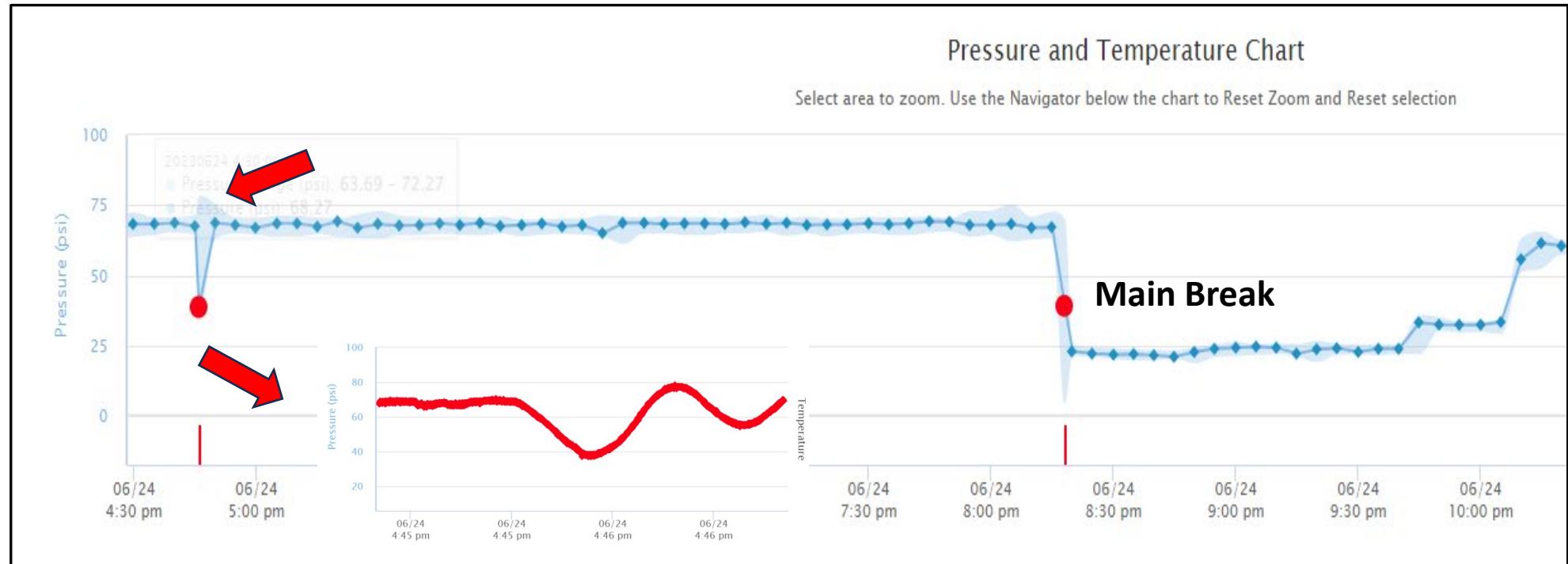
Select area to zoom. Use the Navigator below the chart to Reset Zoom and Reset selection



POWERFUL ANALYTICS,
ACTIONABLE INSIGHTS.

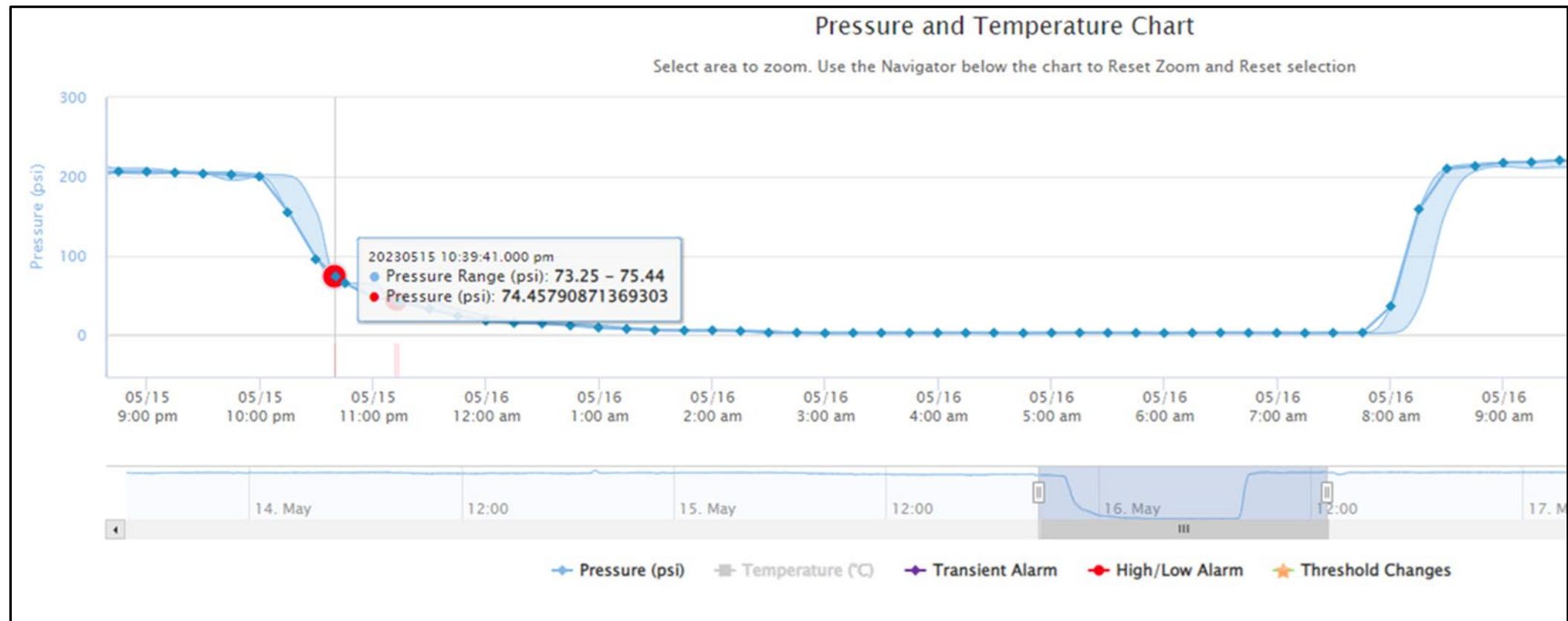
Transient caused Main Break – Ontario

Transient detected a few hours before the 16" PVC main break



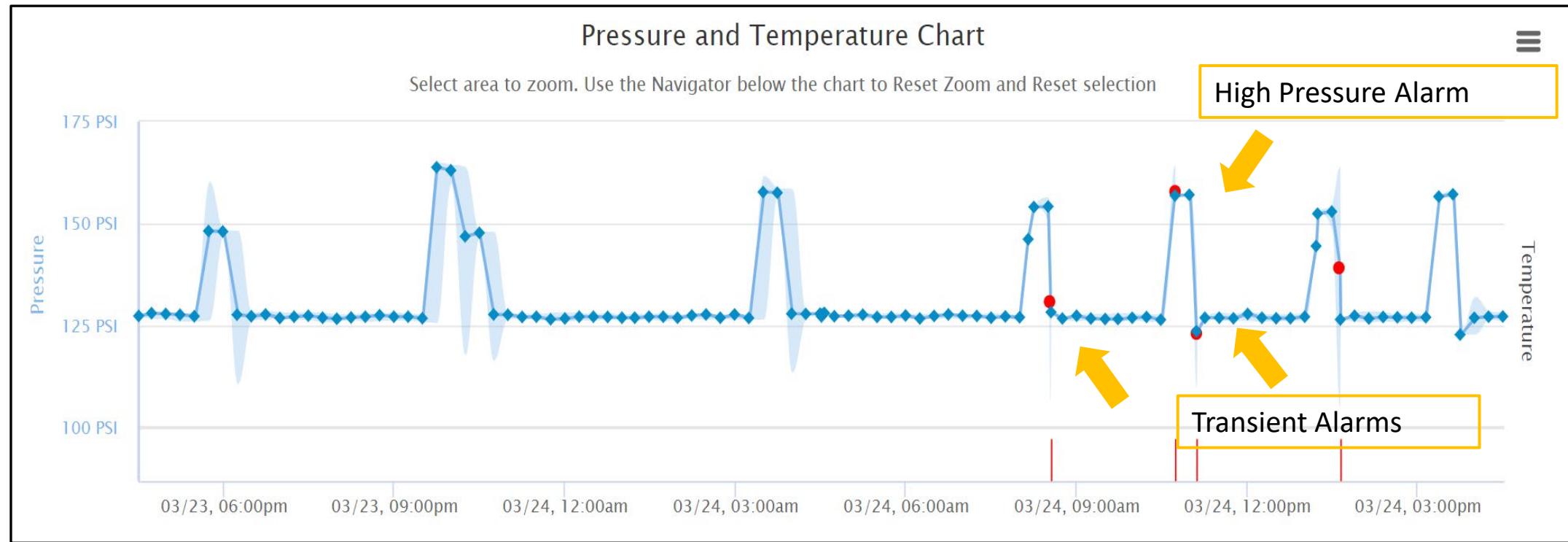


Penticton BC – Plugged Screening System



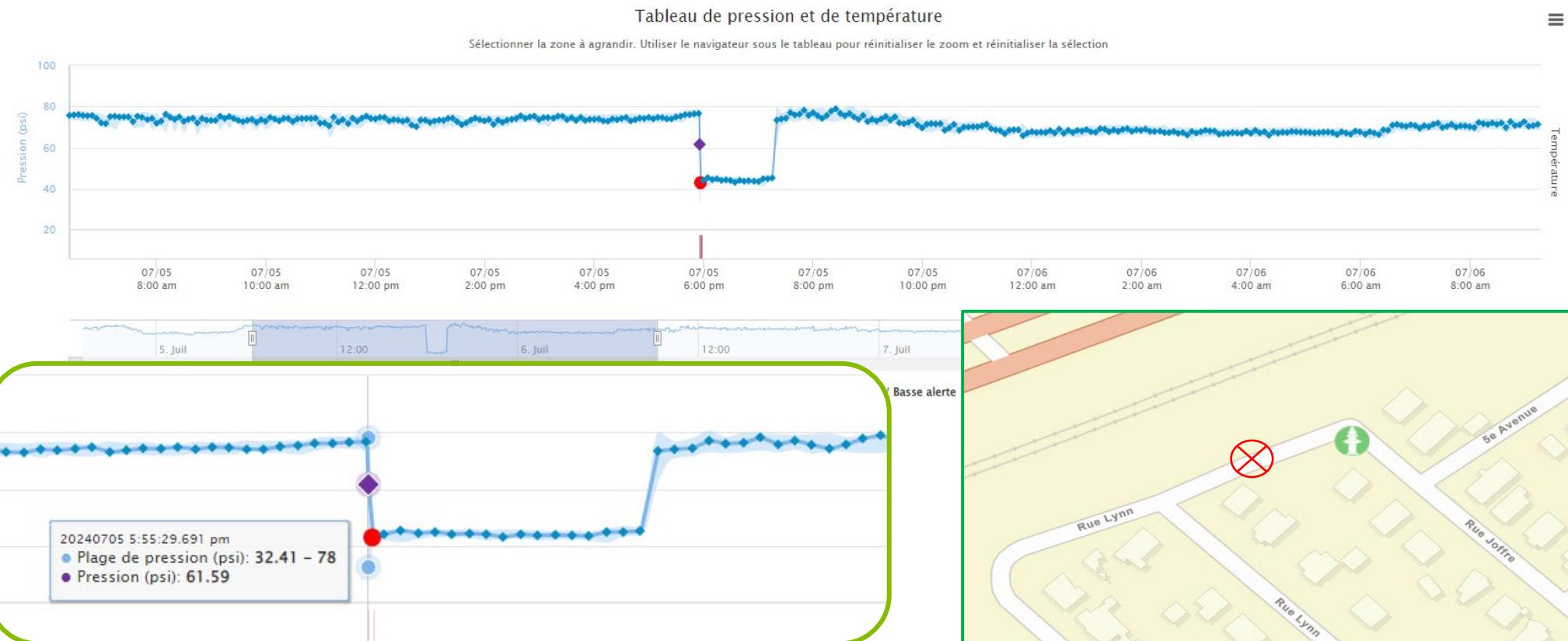


Identify Unknown Issue - British Columb





McMasterville QC



GRAND MONTREAL



Agglomération de Longueuil

Avis d'ébullition d'eau dans deux secteurs



Un avis d'ébullition d'eau pour Saint-Bruno-de-Montarville et une portion de l'arrondissement de Saint-Hubert a été émis par la Ville de

Longueuil, mercredi en fin d'après-midi. Les personnes visées ne doivent pas boire l'eau du robinet jusqu'à nouvel ordre.

Publié hier à 19h09



FANNIE ARCAND
La Presse



L'eau du robinet n'est pas adéquate pour la consommation sécuritaire, à Saint-Bruno-de-Montarville et dans une portion de Saint-Hubert, depuis qu'une baisse de pression d'eau est survenue pendant des travaux dans le réseau d'eau potable de la Ville de Longueuil.

**Pressure drop below 20 psi
was detected by the iHydrant**



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ACTIONABLE INSIGHTS.

You have questions?

Martin Phinney, P.Eng

McWane Canada

Atlantic Sales Engineer

C 506-961-9229

Martin.Phinney@canadapipe.com



THANK YOU!

