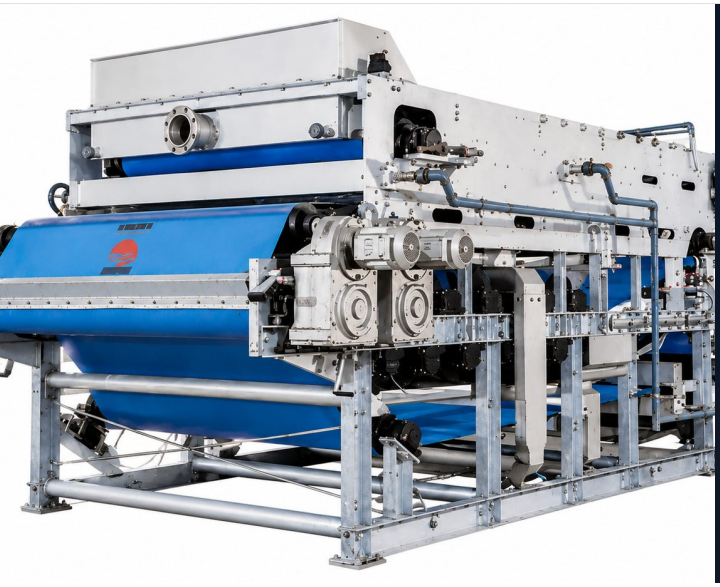


WASTEWATER

Belt Press Struvite Control Case Study Guelph, Ontario, Canada

At Guelph WWTP, a *Hydro*FLOW® i160 trial recorded no new struvite build-up over 60+ days, while maintenance downtime fell from three days to six hours.

60+ days	92%	$16–40k	✓
No New Struvite Build-Up	Less Maintenance Downtime	Annual Contractor Costs Avoided	Discharge Blockages Virtually Ended

⇄ BEFORE & AFTER

BEFORE

- Centrate discharge piping could block completely
- Hard deposits built up on press components
- Maintenance downtime lasted three days

AFTER

- ✓ No new struvite build-up over 60+ days
- ✓ Struvite-related operating issues reduced
- ✓ Maintenance downtime reduced to six hours

🏭 OVERVIEW

Guelph Wastewater Treatment Plant serves the City of Guelph and the surrounding Guelph and Eramosa townships in Ontario. The plant treats domestic, commercial, institutional and industrial wastewater through preliminary, primary, secondary and tertiary treatment, followed by disinfection. Ashbrook belt presses are used for sludge dewatering.

⚠️ CHALLENGE

Hard struvite deposits interfered with sludge dewatering and made belt press maintenance costly and labour-intensive.

- Six-inch centrate discharge piping could become completely blocked.
- Deposits accumulated on rollers, drains, bearings, pistons and drums.
- Removing hard deposits required extensive cleaning and prolonged shutdowns.

SOLUTION

A *Hydro*FLOW® i160 was installed on the steel feed pipe upstream of an Ashbrook belt press to reduce struvite build-up in the press and centrate discharge system.

UNIT INSTALLED
1 × *Hydro*FLOW® i160

PIPE
150 mm (6 in) OD steel pipe

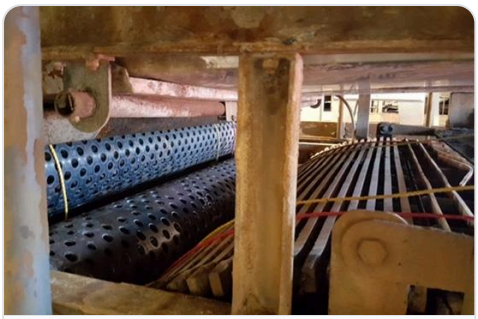
INSTALLATION POINT
Upstream of Ashbrook belt press inlet

TRIAL DURATION
60 days



INSTALLATION

HydroFLOW® i160 installed on feed pipe



SYSTEM

Ashbrook belt press inlet and drum



SYSTEM

Belt press components and pipework

RESULTS

No New Struvite Build-Up
No new deposits were reported during more than 60 days of continuous operation.

92% Less Maintenance Downtime
Reported downtime fell from three full days to just six hours.

Outside Washing No Longer Needed
Outside pressure-wash contractors, previously costing $16,000–$40,000 a year, were no longer needed.

Discharge Problems Reduced
Struvite issues in the belt press and centrate discharge were virtually eliminated.

TESTIMONIAL

> *"After 60 days of continuous operation the result was significantly positive, the build-up of Struvite was eliminated"*
>
> — Rony George, Plant Maintenance Supervisor

KEY TAKEAWAY

Summary

At Guelph WWTP, *Hydro*FLOW® prevented new struvite build-up over 60+ days. Maintenance downtime fell from three days to six hours, and outside pressure-wash contractors were no longer needed.

🖼️ ADDITIONAL PHOTO EVIDENCE



BEFORE

Struvite deposits around belt press components



BEFORE

Deposits inside belt press housing



SYSTEM

Belt press equipment and pipework



AFTER

Belt press drains after 60 days



AFTER

Drum openings after 60 days



AFTER

Belt press following the trial

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