Case Study

Bow River Water Bypass

Product Overview

With a design life of over 100 years, Infra Pipes' HDPE Solid Wall Pressure Pipe, known as Sclairpipe®, is engineered for peak performance in demanding municipal and industrial applications. Sclairpipe's applications include potable water distribution, sewage systems, mining, deep water intakes and outfalls, and irrigation lines.

Sclairpipe is widely selected due to its numerous benefits, such as leak-resistant joints, high cyclic surge tolerance, resistance to seismic loading, and durability against harsh chemicals and sewage effluent.

In this case study, the City of Calgary sought Infra Pipes' Sclairpipe product for wastewater management.

Project Overview & Background

On March 19, 2025, staff at the City of Calgary's Bonnybrook Wastewater Treatment Plant (WWTP)-the largest WWTP in Alberta, which serves over 600,000 citizens-noticed a significant drop in the plant's average daily wastewater inflow.

Nine days later, elevated levels of E. coli were reported from the Bow River, across from the Bonnybrook WWTP near the Ogden Road bridge, indicating that high volumes of wastewater from Bonnybrook had accidentally leaked into the river. Subsequent investigations revealed that approximately 150 million liters of sewage, which accounted for 1.3% of the river's total flow, had seeped into the Bow River.

The leak, traced to a faulty pipe, posed risks to biodiversity and public health.

To address this issue, Infra Pipes Solutions Ltd. manufactured two 24" (610mm) diameter High-Density Polyethylene (HDPE) Solid Wall Pressure Pipe, known as Sclairpipe®, totaling 8,300 feet (2530m) in length, as a replacement for the leaky pipe. The repair project was completed in six weeks, and water inflow to Bonybrook WWTP has returned to normal.

The incident highlights the dangers of outdated infrastructure and underscores the need for more sustainable and durable infrastructure, such as HDPE piping, to prevent future issues. Unlike other piping materials, HDPE is recognized for its leak-free system, which eliminates the risk of joint leakage. Additionally, its high resistance to corrosion, abrasion, and harsh chemicals ensures reliable performance throughout its 100+ year life cycle.

Partners & Timeline

Owner	Engineer	Contractor	Distributor	Installation Timeline
City of Calgary	Associated Engineering & Stormtec Water Management	LBCO Contracting	Sandale Utility Products - Calgary	2025

STORAGE SYSTEM REQUIREMENTS

- Two 24" (610mm) diameter IPS HDPE DR 17 pipes, totaling 8,300' (2560m) in length