



## INTRODUCTION

The ATCO Heartland Industrial Water System is a sophisticated network of pump stations, pipelines, and storage facilities representing an evolution in the management of water assets in Alberta's Industrial Heartland (AIH), Canada's largest hydrocarbon processing region.

In 2007, the Government of Alberta (GOA) implemented the Water for Life strategy as part of an initiative to help preserve the province's water resources for future generations. To be successful, the GOA recognized local solutions were critical and further developed the Water Management Framework for AIH and the Capital Region (WMF). This framework is specific to the industrial-heavy stretch of North Saskatchewan River (NSR) extending from Devon to Pakan.

With more than 40 companies engaged in major industrial operations in AIH, a primary consideration of the WMF was the number of water intake structures along the affected section of the NSR. In addition to the quantity of water being withdrawn by these industrial facilities, the ecological footprint of having multiple intake structures on the NSR could not be ignored.

While the WMF emphasized the need for a regional solution to water management, its success relied upon the emergence of a willing proponent to take on the challenge.

ATCO was able to be that proponent. ATCO had a distribution system equipped with an existing intake on the NSR that they used for their own purposes. To position themselves as a water services provider for industrial clients, ATCO needed to upgrade the capacity of their intake and build a pump station to distribute water to other users.

With this in mind, ATCO stepped forward to help realize the WMF vision with their plans for a multi-use, regional, industrial water system. While there are many municipal regional water systems, this would be the first system of its kind to provide process water to industry on a significant scale in Alberta.

## THE SYSTEM

There were significant logistical and practical challenges in developing a regional industrial water system in AIH. Historically, from a logistical perspective, industrial companies in the area have been inclined to construct, own, and operate

their own intakes and associated water supply systems. Reliance on others for delivery of a critical process element, water, is often viewed as an operational risk.

From a practical perspective, AIH is an extremely congested area. There are literally hundreds of existing pipelines, rail crossings, and industrial developments that need to be considered when constructing new infrastructure. To be considered a viable alternative to dedicated intakes for

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pumps discharge to the Heartland Water Pipeline and two  
250 horsepower vertical turbine pumps discharge to the  
Sturgeon Water Pipeline. The station will eventually be  
upgraded to include four 600 horsepower pumps at full