ARROW UTILITIES

FLOW FACTS: YOUR USED WATER SYSTEM AT WORK

FLOW FACTS BYPASS

What happened?

Between June 20 and 22, the Edmonton region experienced a significant rainfall event, with many communities receiving 100–130 mm of rain over a 72-hour period. Across the region, local municipal wastewater systems experienced significant inflow and infiltration, resulting in localized flooding and sewer backups in some communities. The same conditions also drove exceptionally high flows through ARROW's regional transmission system. To manage these flows and maintain service, ARROW implemented bypasses within its regional system, while several municipalities issued emergency alerts requesting residents reduce non-essential water use.

RAINFALL

June 20: 29 mm
June 21: 64 mm

By June 21, 2026 the Edmonton region has already received about **150%** of a typical June's rainfall.

As of June 23, Edmonton's Blatchford weather station measured **203mm** of rainfall, coming close to breaking a 111-year-old record of 216.5mm set in 1914.

Source: edmonton.weatherstats.ca accessed on June 24.

What is a bypass?

A bypass is a temporary operational measure used to redirect wastewater around a portion of the system during unusually high flow conditions. It helps protect infrastructure and reduce the risk of more significant impacts elsewhere in the system. In some circumstances, including significant rainfall events, a bypass may involve the temporary release of wastewater to a local water body when system capacity is exceeded. These events are reported to regulators and managed in accordance with established procedures and environmental requirements. There are two types of bypass: secondary and raw.

What is a secondary bypass?

A secondary bypass occurs when wastewater has already received some treatment before being discharged. At ARROW's treatment plant, a secondary bypass is the preferred option during extreme flow events. However, this option is only available at the treatment plant and not at regional pump stations. During the June rainfall event, ARROW initially used a secondary bypass on Saturday evening. Early Sunday morning, rising flows and a blockage at the treatment plant required a transition to a raw bypass.

What is a raw bypass?

A raw bypass occurs when untreated wastewater is released from the system during extreme flow events. Because ARROW's regional pump stations do not have treatment processes on site, wastewater cannot be treated before discharge. During the June rainfall event, exceptionally high flows led to raw bypasses at the Parkland, Gibbons, and St. Albert pump stations to protect infrastructure. While these bypasses contained untreated wastewater, the flows were significantly diluted by the large volumes of rainwater and groundwater that entered wastewater systems during the rainfall event.