

OVERLAND FLOW PROTECTION

Stormwater Backflow Prevention



During flooding events in the South Saskatchewan River, Seven Persons, and Ross Creeks, flood waters can back flow into the City's Storm Sewer System – even with the Overland Flow Protection Dykes. Storm Sewer backups as a result of flood waters can cause street and private property flooding.

In order to stop the flood waters from backing up into the storm sewer system, back flow prevention measures on existing outfalls must be implemented.

Backflow prevention will generally consist of installing valves on existing outfalls that close automatically or manually when river and creek levels rise above the outlet.

There are approximately 75 storm outfalls along the South Saskatchewan River, Ross Creek, and Seven Persons Creeks that may require backflow prevention valves to limit backflow during extreme river flows and levels.

The City currently has several backflow valves installed.

This is a Tide Flex valve installed in an outfall on Seven Persons Creek. It is a duckbill style check valve that seals itself when downstream water levels rise above the sewer outlet.



Outfall with No Backflow Prevention:



Outfall with Backflow Prevention (Flap Gate):



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Considerations in Storm Gate Selection

- Maintenance Requirements
- Reliability
- Ability to Operate Valve Manually During an Event
- Environmental Concerns
- Stormwater Management Requirements
- Feasibility & Site Access
- Costs
- Flow Efficiency
- Suitability to Existing Outfall



Typical Backflow Valve Types for Consideration:

Slide Gate



Flap Gate Valve



Tideflex / Duck Bill Check Valve



Inline Backflow Prevention

