REGIONAL MUNICIPALITY OF WOOD BUFFALO

Subject: Sanitary Sewer Backwater Prevention Program	
APPROVALS:	Jamie Doyle
_____	_____
Director	Chief Administrative Officer

Recommended Motion:

THAT the Sanitary Sewer Backwater Prevention Program – Policy OPE-50, as outlined in Attachment 2, be approved, to come into effect March 1, 2021; and

THAT $1,000,000 be allocated from the Emerging Issues Reserve to fund the Backwater Prevention Program.

Summary:

On September 15, 2020 while discussing the Flood Mitigation and Community Resilience for Downtown, Council passed the following resolution:

"THAT Administration be directed to bring forward a backflow preventer program, including estimated costs, similar to that of the City of Edmonton, within 90 days."

This report and the accompanying presentation are provided in response to this resolution to provide a recommended sanitary sewer backwater prevention program for Council's consideration.

Background:

During the 2020 flood, overland flow entered the sanitary sewer system through manholes, causing sanitary backups in some buildings within the lower townsite. The suggestion of backwater prevention valves, among other measures, was identified as an opportunity to increase flood protection for residences.

As previously presented to Council, backwater valves are in-line valves installed on the sanitary service to a property that can help to prevent basement flooding caused by surcharging in the sanitary system. Backwater valves and other in-line manually operated valves can be effective flood protection measures when properly installed and maintained. The National Plumbing Code has required backwater valves on all new buildings since the early 2000's. The RMWB's Sanitary Sewer Utilities Bylaw (Bylaw No. 85/51) does not expressly mandate backwater valves on main services, however the

bylaw does mandate adherence to all relevant plumbing codes. As a result, all homes built in the community from the early 2000's onward should have backwater valves already installed. Many homes within the downtown were constructed well before this and therefore do not have backwater valves, or they may be in sub standard working condition.

Although backwater valves are a flood protection measure generally installed on private property, and therefore the responsibility of the property owner, many municipalities across Canada have implemented programs that provide both educational resources and financial support for property owners. Encouraging owners to take steps to protect their property from flooding where possible is part of providing responsible governance.

Administration has researched similar programs in other communities, and specifically connected with relevant staff at EPCOR, who run the backwater valve program within the City of Edmonton. Based on this research, and the recent 2020 flooding event, Administration has proposed a Sanitary Sewer Backwater Prevention Program for Council's consideration.

The proposed program would provide a subsidy to property owners to install a backwater valve on their sanitary service. Properties in areas at risk of experiencing overland flooding from the regional river network would also be eligible to install a manual valve. A subsidy of up to $1,500 (plus $100 for a manual valve) would be provided. It is also recommended that eligibility within the first year of the program be limited to higher risk areas within the community, expanding the program eligibility to the broader community in subsequent years.

The second element of the program, and arguably most important part, would consist of developing and making available educational resources to provide information to the public on the various actions they can take to protect their property and reduce the risk of basement flooding.

Alternatives:

1) **Do not implement a sanitary backwater prevention program**: This alternative would leave the implementation of backwater valves and any additional manually operated valves up to individual property owners, at their own cost.

2) **Change the proposed subsidy amount for the program**: This would impact the estimated budget/financial implications outlined below. It should also be noted that other municipalities experienced a correlated rise in the apparent cost of installing a backwater valves when the program subsidy was increased. Increasing the subsidy amount may not decrease the out-of-pocket costs for program participants. On the other hand, decreasing the subsidy amount may reduce overall program participation.

3) **Do not limit program eligibility to high risk areas within the first year**: This would allow greater participation in the program from the onset, but should a

budget cap be established for the annual program, it may result in some higher risk property owners not able to receive a subsidy within the first year.

Budget/Financial Implications:

To provide adequate opportunity for residents to participate in the program, while managing cash flow, Administration proposes a set budget allocation for the program on an annual basis. The current recommendation supports limiting eligibility to property owners within high overland flood risk areas (i.e. Downtown) within the first year. Based on the estimated number of homes within these areas that would be eligible to participate in the program, a budget of $1,000,000 in 2021 would allow roughly 65% of properties to participate. Program uptake rates in other communities are often well below 50%, with the most successful programs achieving a participation rate around 50%.

In subsequent years of the program, as it is made available to the broader community, an annual budget of $275,000 would provide a subsidy for approximately 180 properties. This is same amount that the City of Edmonton currently budgets for their program, with a much larger number of eligible properties

Rationale for Recommendation:

As a result of the 2020 flood, many downtown properties were impacted by flooding in the sanitary system. All properties, especially those without a backwater sanitary valve, are subject to basement flooding from sanitary system surcharging. As part of responsible governance, the RMWB should consider providing dedicated educational material and financial resources to support property owners in protecting their properties from flooding. Over 20 other municipalities across Canada have implemented similar programs, in supporting the resilience of their communities.

Strategic Priorities:

Responsible Government

Attachments:

Sanitary Sewer Backwater Prevention Program PowerPoint

Sanitary Sewer Backwater Prevention Program - Policy OPE-050