

**AREA REDEVELOPMENT PLAN NEIGHBORHOODS
(BRITANNIA-YOUNGSTOWN, CANORA, WEST JASPER PLACE AND GLENWOOD)**

Executive Summary

Britannia-Youngstown, Canora, West Jasper Place and Glenwood are located in the City's west end. The City is undertaking an Area Redevelopment Plan process in these four neighbourhoods that will help guide future growth and change in the area. This study was undertaken to evaluate how potential future redevelopment may impact the local drainage systems. The drainage systems in these neighborhoods were analyzed together as the four neighborhoods share common outlet trunks.

Current Conditions

The four neighborhoods are serviced by separate storm and sanitary sewer systems. The neighborhoods are relatively flat with a general slope from west to east towards the North Saskatchewan River. This slope is more pronounced in east Canora and West Jasper Place. There are scattered sag areas throughout the neighborhoods that indicate a lack of a defined major drainage system. There are six sag areas with depths between 0.5 m and 1 m where surface ponding may be a concern during heavy rainfall events.

The storm sewer system in these neighborhoods drain to the Quesnell, MacKinnon Ravine or MacKenzie Ravine storm trunk systems, all of which discharge to the North Saskatchewan River. The storm sewer systems generally provide less than a 1:5 year level of service, with some sections providing less than a 1:2 year level of service as is typical in most of Edmonton's mature neighbourhoods. In Britannia-Youngstown and Canora, which primarily discharge to the MacKinnon Ravine storm trunk on 100 Avenue and Stony Plain Road, the primary cause of storm sewer surcharge based on simulation results is backup of flow from the outlet trunk. In West Jasper Place and Glenwood which discharge to the MacKenzie Ravine trunk on 95 Avenue, the primary cause of storm sewer surcharge is bottlenecks in the local storm sewer system. Twinning the MacKinnon Ravine trunk on 100 Avenue and Stony Plain Road and several storm sewer capacity upgrades in the local system have been suggested to increase the level of service. The potential for construction of dry ponds to store surcharge storm runoff was investigated; dry ponds in Canora Park and Allin Park may be feasible.

The existing sanitary sewer system in the four neighborhoods generally provides a 1:100 year level of service. However, there are three locations where the level of service is slightly lower and sewer upgrades have been suggested to alleviate the basement flooding risk at these locations.

Outcome of Potential Future Redevelopment

For modelling purposes, the highest growth scenario (scenario 3, 30%) was used to assess the potential impacts of redevelopment on the storm and sanitary sewer systems. The proposed redevelopment, which will result in a higher population (higher dry weather flow) and more impervious surfaces (higher storm runoff potential), is likely to result in relatively insignificant



**AREA REDEVELOPMENT PLAN NEIGHBORHOODS
(BRITANNIA-YOUNGSTOWN, CANORA, WEST JASPER PLACE AND GLENWOOD)**

impacts on the existing storm and sanitary sewer systems in the four neighborhoods. The redevelopment may provide an opportunity for the City to implement low impact development (LID) features that reduce the peak flow of storm runoff.

EPCOR Power, Shaw Cable and Telus do not foresee any constraints in their existing systems due to the proposed increase in population, and any issues that may arise can likely be resolved by adding additional infrastructure. EPCOR Water completed an analysis of the water distribution system for existing and potential future conditions, which has been reported separate from this report. ATCO Gas did not raise any concerns to the potential future redevelopment.