

Evaluation of Alternative Solutions

Option 1: Do Nothing
Description: • Does not address drainage issues. • Removed from consideration.
Option 2: Maintain Existing Storm Relief System
Description: • Requires two pumping stations (one north, one south). • Can use existing outlet to the Harbour. • Has high pumping rates (280 litres per second and 780 litres per second). • No secondary benefits in terms of drainage remedial measures. • No capital cost to change stormwater system (uses existing infrastructure). • Cost to construct two pumping stations is higher than constructing one larger station. • Higher annual operating costs than having one larger pumping station. • No impacts to surface water or aquatic habitat. • Not within a regulation area. • No impacts to significant wildlife/vegetation. • No species at risk identified in the area. • No impacts to cultural heritage resources. • No impacts to archaeological sites. • No impacts during construction. • Property will be required for two pumping stations. Would impact either the dog park or parking at the Public Works Facility. • Viable but not selected.
Option 3: Low Impact Development Measures
Description: • Construction of a storm relief line/ infiltration chambers within the hydro corridor. • As Hydro One requires a 15-metre buffer zone around hydro corridors, this option is not feasible and is removed from consideration.

Option 4: Increase Capacity Along Existing Alignment**Description:**

- Requires two pumping stations (one north, one south).
- Can use existing outlet to the Harbour.
- Provides 5-year level of service to Birch Avenue.
- Reduces pumping at underpasses.
- Capital costs associated with constructing an upgraded 2.4 m by 1.8 metre relief sewer (~810 metres).
- Cost to construct two pumping stations is higher than constructing one larger station.
- Higher annual operating costs than having one larger pumping station.
- No impacts to surface water or aquatic habitat.
- Not within a regulation area.
- Possible impacts to trees located on the east side of Birch Avenue to provide for the wider sewers.
- No species at risk identified in the area.
- No impacts to cultural heritage resources.
- No impacts to archaeological sites.
- Lane closures and/or road closures likely along Birch Avenue in order to allow for construction of the upgrade sewer.
- Property will be required for two pumping stations. Would impact either the dog park or parking at the Public Works Facility.
- Viable but not selected.

Option 5: Diversion to New Sherman Relief Sewer at Princess Street - Preferred Solution**Description:**

- Requires one pumping station (north).
- Requires new outlet to the harbour.
- Benefits study area but does not provide 5-year level of service due to additional flows from upstream areas.
- Reduces pumping at underpasses.
- Provides relief to upstream areas.
- Force main to pumping station can be turned into gravity sewer.
- Capital costs associated with constructing the 1.8 x by 1.8 metre Princess Street diversion (~ 1 km).
- Cost to construct one larger pumping station is less than constructing two smaller pumping stations.
- Lower operating costs than that required for two pumping stations.
- No impacts to surface water or aquatic habitat.
- Additional outlet would be within the Hamilton Conservation Authority regulated areas.
- No impacts to significant wildlife/vegetation.
- No species at risk identified in the area.
- No impacts to cultural heritage resources. Mitigation may be required to the building located at 241 Gibson.
- No impacts to archaeological sites.
- Lane closures and/or road closures likely along Princess Street in order to allow for construction of the diversion.
- Property only required for one pumping station to the north. Removes impact associated with south station (e.g. dog park).
- This option has been identified as the preferred solution.