



**BURNSIDE**

[ THE DIFFERENCE IS OUR PEOPLE ]



## Appendix E

### Evaluation of Alternative Solutions

# John St. WWPS Environmental Assessment

## Evaluation of Alternative Solutions

CRITERIA FOR EVALUATING ALTERNATIVES		Alternative 1: Do Nothing	Alternative 2: Upgrade at the Existing Location with Emergency Storage and Overflow	Alternative 3: Replacement Station at the Existing Location with Emergency Storage and Overflow	Alternative 4: Replacement Station at a New Location with Emergency Storage and Overflow
<b>A</b>	<b>NATURAL ENVIRONMENT</b>				
<b>1</b>	<b>Existing trees and vegetation communities</b>	No Impact to the existing tree and/or vegetation communities.	<p>High impact to existing trees and vegetation communities.</p> <p>Detailed construction envelopes are required to complete a comprehensive assessment of impacts to existing vegetation. If construction is scheduled to remain within the limits of the roadway on John St, existing trees are anticipated to be sufficiently setback that impacts are expected to be minimal. Risk of impacts to private trees along John St. will increase as the construction envelope extends toward and beyond the sidewalk. Impacts will be minimized along John St. by conducting construction (trenchless) within the limits of the roadway to avoid interference with the trees root zone.</p> <p>Trees immediately adjacent the existing pumping station may be subject to impacts or removal. A Black Walnut-dominated mixed upland forest has been identified south of the existing pumping station. No impacts to this woodlot are expected. Mitigation in the form of replantings for removed individuals can be proposed.</p> <p>Emergency overflow option A will require the removal of trees within the Fresh - moist Red Oak - Sugar Maple Deciduous Forest adjacent to the Credit River. Mitigation in the form of replantings for removed individuals can be proposed. Additionally, a wetland complex of Floating-leaved Shallow Aquatic and sedge/Jewelweed dominated Meadow Marsh areas was identified around the open-water features south of the Credit River. These areas are protected by the Provincial Policy Statement, and the Halton Region Official Plan requires a 30 m development buffer around all wetland ecosites. No impacts are permitted within this buffer.</p>	<p>High impact to existing trees and vegetation communities.</p> <p>Detailed construction envelopes are required to complete a comprehensive assessment of impacts to existing vegetation. If construction is scheduled to remain within the limits of the roadway on John St, existing trees should be sufficiently setback that impacts are expected to be minimal. Risk of impacts to private trees along John St. will increase as the construction envelope extends toward and beyond the sidewalk. Impacts will be minimized along John St. by conducting construction (trenchless) within the limits of the roadway to avoid interference with the trees root zone.</p> <p>An increased development footprint is required to replace the existing pumping station. As such, an increased number of trees adjacent to the existing pumping station will need to be removed. A Black Walnut-dominated mixed upland forest has been identified south of the existing pumping station. No impacts to this woodlot are expected. Mitigation in the form of replantings for removed individuals can be proposed.</p> <p>Emergency overflow options A will require the removal of trees within the Fresh - moist Red Oak - Sugar Maple Deciduous Forest adjacent to the Credit River. Mitigation in the form of replantings for removed individuals can be proposed. Additionally, a wetland complex of Floating-leaved Shallow Aquatic and sedge/Jewelweed dominated Meadow Marsh areas was identified around the open-water features south of the Credit River. These areas are protected by the Provincial Policy Statement, and the Halton Region Official Plan requires a 30 m development buffer around all wetland ecosites. No impacts are permitted within this buffer.</p>	<p>Highest impact to existing trees and vegetation communities.</p> <p>Development of a replacement station at Barber Mill Park will require the removal of a number of individual trees within an established public park. Further construction details are required to assess specific impacts. Although, given the density of trees in the park, it is anticipated that more individuals will likely require removal for the replacement pumping station when compared to Alternatives 2 and 3.</p> <p>Detailed locations of proposed forcemains along Mountainview Rd, River Dr, and John St should be provided as impacts to surrounding trees will vary. Similar to Alternatives 2 and 3, If construction is scheduled to remain within the limits of the roadways, existing trees should be sufficiently setback that impacts are expected to be minimal. Risk of impacts to private trees will increase as the construction envelope extends toward and beyond the sidewalk. Impacts will be minimized by conducting construction (trenchless) within the limits of the roadway to avoid interference with the trees root zone.</p> <p>Emergency overflow (option D) will require the removal of trees within the forest adjacent to the Credit River. Mitigation in the form of replantings for removed individuals can be proposed.</p>
	<i>Rating</i>				
<b>2</b>	<b>Avian Wildlife</b>	No Impact to breeding birds/Species at Risk/Area-sensitive birds.	<p>Highest Impact to breeding birds/Species at Risk/Area-sensitive birds (Alts 2, 3 &amp; 4 have equal impact).</p> <p>Impacts to Species at Risk and their habitat and area-sensitive (AS) birds within forested riparian corridor for all emergency overflow discharge options A., Eastern Wood-pewee (Special Concern); White-breasted Nuthatch (AS); American Redstart (AS).</p> <p>Impacts to birds potentially breeding in landscaped trees or vegetation along the roadway. Contravention of the federal Migratory Birds Convention Act, 1994 can be mitigated by removing vegetation outside of the breeding bird window (broadly, April 1st to August 31st of any calendar year).</p>	<p>Highest Impact to breeding birds/Species at Risk/Area-sensitive birds (Alts 2, 3 &amp; 4 have equal impact)</p> <p>Impacts to Species at Risk and their habitat and area-sensitive (AS) birds within forested riparian corridor for all emergency overflow discharge option (A). Eastern Wood-pewee (Special Concern); White-breasted Nuthatch (AS); American Redstart (AS).</p> <p>Impacts to birds potentially breeding in landscaped trees or vegetation along the roadway. Contravention of the federal Migratory Birds Convention Act, 1994 can be mitigated by removing vegetation outside of the breeding bird window (broadly, April 1st to August 31st of any calendar year).</p>	<p>Highest Impact to breeding birds/Species at Risk/Area-sensitive birds (Alts 2, 3 &amp; 4 have equal impact)</p> <p>Impacts to Species at Risk and their habitat and area-sensitive (AS) birds within forested riparian corridor for emergency overflow discharge option D. Eastern Wood-pewee (Special Concern); White-breasted Nuthatch (AS); American Redstart (AS).</p> <p>Impacts to birds potentially breeding in landscaped trees or vegetation along the roadway. Contravention of the federal Migratory Birds Convention Act, 1994 can be mitigated by removing vegetation outside of the breeding bird window (broadly, April 1st to August 31st of any calendar year).</p>
<b>2</b>	<b>Amphibians (Frogs)</b>	No impact to breeding amphibians or Species at Risk (SAR)	No Impacts at Station location, Potential impacts to breeding amphibians at overflow location A (moderate). The existing station location does not include any breeding amphibian habitat, therefore no impact is predicted. The overflow locations include several ponds which contain breeding habitat for frog species and should be avoided. No SAR were documented during the frog call surveys.	No Impacts at Station location, Potential impacts to breeding amphibians at overflow location A (moderate). The existing station location does not include any breeding amphibian habitat, therefore no impact is predicted. The overflow locations include several ponds which contain breeding habitat for frog species and should be avoided. No SAR were documented during the frog call surveys.	Lowest impact at Alternative pumping station, Potential impacts to breeding amphibians at overflow location D (moderate). Impacts associated with the new location will not result in impacts to breeding frogs. No SAR were documented during the frog call surveys.
<b>2</b>	<b>Bats</b>	No impact to roosting habitat for Species at Risk (SAR) bats or myotis anticipated.	<p>High impact to potential roosting habitat for At-Risk bat/myotis species at proposed overflow location A.</p> <p>Little Brown Myotis and Northern Myotis will make use of mature trees that feature cavities, crevices, or loose bark in which they can take shelter to roost. Tri-colored Bat roosts in the foliage of oak and maple species. All species are more likely to occur near/adjacent to wetter areas or sources of open water with high quality forage for invertebrates.</p> <p>The proposed overflow location will potentially result in the removal of cavity and/or oak and maple trees on the southern forested slope of the Credit River Valley. The removal of potential roosting habitat and the fragmentation of continuous forest will result in a net loss/degradation of roosting habitat. No impacts to forest communities is anticipated at existing or proposed pumphouse locations.</p>	<p>High impact to potential roosting habitat for At-Risk bat/myotis species at proposed overflow location A.</p> <p>Little Brown Myotis and Northern Myotis will make use of mature trees that feature cavities, crevices, or loose bark in which they can take shelter to roost. Tri-colored Bat roosts in the foliage of oak and maple species. All species are more likely to occur near/adjacent to wetter areas or sources of open water with high quality forage for invertebrates.</p> <p>The proposed overflow location will potentially result in the removal of cavity and/or oak and maple trees on the southern forested slope of the Credit River Valley. The removal of potential roosting habitat and the fragmentation of continuous forest will result in a net loss/degradation of roosting habitat. No impacts to forest communities is anticipated at existing or proposed pumphouse locations.</p>	<p>High impact to potential roosting habitat for At-Risk bat/myotis species at proposed overflow location D.</p> <p>Little Brown Myotis and Northern Myotis will make use of mature trees that feature cavities, crevices, or loose bark in which they can take shelter to roost. Tri-colored Bat roosts in the foliage of oak and maple species. All species are more likely to occur near/adjacent to wetter areas or sources of open water with high quality forage for invertebrates.</p> <p>The proposed overflow location will potentially result in the removal of cavity and/or oak and maple trees on the southern forested slope of the Credit River Valley. The removal of potential roosting habitat and the fragmentation of continuous forest will result in a net loss/degradation of roosting habitat. No impacts to forest communities is anticipated at existing or proposed pumphouse locations.</p>
	<i>Rating</i>				

3	<b>Aquatic habitat</b>	No impact to aquatic habitat.	No impacts at Station location. Potential impacts to aquatic and direct coldwater fish habitat at overflow discharge location A. Alternatives 2 and 3 have equal impact.  The existing station location does not include any aquatic or fish habitat, therefore no impact is anticipated.  The overflow locations include several private ponds that contain direct fish habitat and the Credit River which contains direct coldwater fish habitat. [Potentially look at new overflow location D. The new location could potentially minimize impact to aquatic habitat. Discharge pipe could alter aquatic habitat.]	No impacts at Station location. Potential impacts to aquatic and direct coldwater fish habitat at overflow discharge location A. Alternatives 2 and 3 have equal impact.  The existing station location does not include any aquatic or fish habitat, therefore no impact is anticipated.  The overflow locations include several private ponds that contain direct fish habitat and the Credit River which contains direct coldwater fish habitat. [Potentially look at new overflow location D. The new location could potentially minimize impact to aquatic habitat. Discharge pipe could alter aquatic habitat.]	No impacts at proposed new Station location. Potential impacts to aquatic and direct coldwater fish habitat at overflow discharge location D.  The new station location does not include any aquatic or fish habitat, therefore no impact is anticipated.  The overflow location D will minimize impact to aquatic habitat and the Credit River upstream of the Barber Paper Mill Dam (compared to A). Discharge pipe could alter aquatic habitat.
	<i>Rating</i>				
4	<b>Disturbance to Soil/Subsurface</b>	Existing infrastructure could deteriorate over time, potentially impacting soil quality through wastewater leaching into soil.	Potential impacts to soil/subsurface during construction at existing Station location and construction of overflow and discharge development. Alternatives 2 and 3 generally have equal impact.  With the exception of the Credit Valley River area, the soil/subsurface in the area of the emergency overflow line is anticipated to have been historically disturbed through previous land development.	Potential impacts to soil/subsurface during construction at existing Station location and construction of overflow and discharge development. Alternatives 2 and 3 generally have the equal impact.  With the exception of the Credit River Valley River area, the soil/subsurface in the area of the emergency overflow line is anticipated to have been historically disturbed through previous land development.	Potential impacts to soil/subsurface during construction as part of the new Station location, the tie in with existing sanitary infrastructure, and the construction of overflow and discharge development.  Due to the additional earthworks associated with the new Station, this Alternative is less desirable than the other Alternatives. With the exception of the Credit Valley River area, the soil/subsurface in the area of the emergency overflow line is anticipated to have been historically disturbed through previous land development.
	<i>Rating</i>				
5	<b>Surface water quality and drainage</b>	No impact to surface water quality and drainage.	Potential minor impacts to surfacewater during construction of upgraded station, overflow line and forecmain . Potential impacts to surfacewater quality associated with emergency wastewater discharge to the Credit River.	Potential minor impacts to surfacewater during construction of new station, overflow line and forecmain . Potential impacts to surfacewater quality associated with emergency wastewater discharge to the Credit River.	Potential minor impacts to surfacewater during construction of new station, overflow line and forecmain . Potential impacts to surfacewater quality associated with emergency wastewater discharge to the Credit River.  The overflow location D, approximately 20 m upstream of the River Road crossing of the Credit River would potentially minimize impact to the Credit River upstream of the Barber Paper Mill Dam (compared to A).
	<i>Rating</i>				
6	<b>Groundwater quality</b>	Existing infrastructure could deteriorate over time, potentially impacting groundwater quality.	Potential temporary minor impacts to groundwater. Potential impacts to downstream groundwater quality associated with emergency wastewater discharge to the Credit River.	Potential temporary minor impacts to groundwater. Potential impacts to downstream groundwater quality associated with emergency wastewater discharge to the Credit River.	Potential temporary minor impacts to groundwater (longer forcemain compared to alternative 2 and 3). Potential impacts to downstream groundwater quality associated with emergency wastewater discharge to the Credit River.
	<i>Rating</i>				
<b>SUMMARY NATURAL ENVIRONMENT</b>					

CRITERIA FOR EVALUATING ALTERNATIVES		Alternative 1: Do Nothing	Alternative 2: Upgrade at the Existing Location with Emergency Storage and Overflow	Alternative 3: Replacement Station at the Existing Location with Emergency Storage and Overflow	Alternative 4: Replacement Station at a New Location with Emergency Storage and Overflow
<b>B SOCIO-CULTURAL ENVIRONMENT</b>					
1	<b>Compatibility with surrounding land uses</b>	No impacts over existing conditions.	Compatible with surrounding land use.	Compatible with surrounding land use.	Compatible with surrounding land use.
	<i>Rating</i>				
2	<b>Temporary disruption to local residents and community during construction</b>	No impacts over existing conditions.	Moderate short term impacts including disruptions to existing land uses, traffic, access and noise.  Park use may be impacted.	Moderate short term impacts including disruptions to existing land uses, traffic, access and noise.  Park use may be impacted.	Highest short term impacts including disruptions to existing land uses, traffic, access and noise due to extent of the construction work.  Very wide disturbance area of local residence and community during construction and very high level of disturbance caused by deep and long linear work (excavation and emplacement of the re-direction of the flow to Victoria St. MH)
	<i>Rating</i>				
3	<b>Visual / aesthetic impact on existing local residents and community</b>	No impacts over existing conditions.	The upgrade at the existing location would not have a major visual/aesthetic impact on the local residents and the community as the front view of the lot will not subject to major changes through the upgrades.	The new pumping station at the current location would not have a major visual/aesthetic impact on the local residents and the community.	Major Visual / aesthetic impact on existing local residents and community as the park and the playground may be gone and the pumping station will be occupying the whole lot.
	<i>Rating</i>				
4	<b>Health and safety of operations and maintenance staff</b>	Will not address the current system deficiencies. The system may become unsafe to operate and maintain and will eventually require replacement	Safe to operate and maintain	Safe to operate and maintain	Safe to operate and maintain
	<i>Rating</i>				
5	<b>Ability to meet the needs of the local residents and community</b>	Will not be able to address the local resident's, mainly the residents in the proximity of the pumping station, need for lowering the risk of sewer surcharging under extreme wet weather conditions	Will be able to address the local resident's, mainly the residents in the proximity of the pumping station, need for lowering the risk of sewer surcharging under extreme wet weather conditions.	Will be able to address the local resident's, mainly the residents in the proximity of the pumping station, need for lowering the risk of sewer surcharging under extreme wet weather conditions.	Will be able to address the local resident's, mainly the residents in the proximity of the pumping station, need for lowering the risk of sewer surcharging under extreme wet weather conditions.
	<i>Rating</i>				

6	<b>Provision for emergency services</b>	No impacts over existing conditions.	Temporary disruption to emergency services and access due to increased traffic and construction .	Temporary disruption to emergency services and access due to increased traffic and construction .	Temporary disruption to emergency services and access due to increased traffic and construction . Higher impact compared to alternative 2 and 3 due to the extent/duration of the construction.
	<i>Rating</i>				
7	<b>Long term impact on local residents and community (operation activities, noise and odour)</b>	No impacts over existing conditions.	Minimal impact due to the considerations made for the upgraded pumping station to minimize the disruption to local residents and community	Minimal impact due to the considerations made for the new pumping station to minimize the disruption to local residents and community	Minimal impact due to the considerations made for the new pumping station to minimize the disruption to local residents and community
	<i>Rating</i>				
8	<b>Impacts to archaeological resources</b>	No impacts over existing conditions.	No impacts anticipated for the work associated with pumping station upgrade as all work to be conducted in previously disturbed area on the existing site. Potential significant impacts to archaeological resources where emergency overflow discharge options are being considered. Pending Stage 2 Archaeological Study at the detailed design stage.	No impacts anticipated for the work associated with pumping station as all work to be conducted in previously disturbed area on the existing site. Potential significant impacts to archaeological resources where emergency overflow discharge options are being considered and location of new pumping station, if beyond footprint of current pumping station site. Pending Stage 2 Archaeological Study at the detailed design stage.	Potential significant impacts to archaeological resources where emergency overflow discharge options are being considered and at location of new pumping station. Pending Stage 2 Archaeological Study at the detailed design stage.
	<i>Rating</i>				
9	<b>Impacts on Indigenous lands, treaty rights, archaeological sites, and land claims</b>	No impacts over existing conditions.	No impacts on Indigenous lands, treaty rights, archaeological sites have been identified.	No impacts on Indigenous lands, treaty rights, archaeological sites have been identified.	No impacts on Indigenous lands, treaty rights, archaeological sites have been identified.
	<i>Rating</i>				
	<b>SUMMARY SOCIO-CULTURAL ENVIRONMENT</b>				

CRITERIA FOR EVALUATING ALTERNATIVES		Alternative 1: Do Nothing	Alternative 2: Upgrade at the Existing Location with Emergency Storage and Overflow	Alternative 3: Replacement Station at the Existing Location with Emergency Storage and Overflow	Alternative 4: Replacement Station at a New Location with Emergency Storage and Overflow
<b>C</b>	<b>LEGAL AND JURISTICTIONAL ENVIRONMENT</b>				
1	<b>Supports planned development (Planning permits)</b>	No impacts over existing conditions.	Supports planned development	Supports planned development	Supports planned development
	<i>Rating</i>				
2	<b>Land acquisition/easement requirements/complexity</b>	No impacts over existing conditions.	Easement required over private property for emergency overflow, Land Acquisition / Easement for WWPS	Easement required over private property for emergency overflow, Land Acquisition / Easement for WWPS	Easement may be required over private property for emergency overflow, Land Acquisition / Easement for WWPS
	<i>Rating</i>				
3	<b>Complexity of approval processes and ability to meet regulatory constraints</b>	No approvals permits or regulatory constraints.	Potential permits may be needed including but not limited to: - CVC permit for working in the regulated area - DFO request for review/authorization - MOECC ECA (pumping station) - Town of Halton Hills (site and building permits) - MNRF approval under public lands act	Potential permits may be needed including but not limited to: - CVC permit for working in the regulated area - DFO request for review/authorization - MOECC ECA (pumping station) - Town of Halton Hills (site and building permits) - MNRF approval under public lands act	Potential permits may be needed including but not limited to: - CVC permit for working in the regulated area - DFO request for review/authorization - MOECC ECA (pumping station) - Town of Halton Hills (site and building permits) - MNRF approval under public lands act
	<i>Rating</i>				
	<b>SUMMARY LEGAL AND JURISTICTIONAL ENVIRONMENT</b>				

CRITERIA FOR EVALUATING ALTERNATIVES		Alternative 1: Do Nothing	Alternative 2: Upgrade at the Existing Location with Emergency Storage and Overflow	Alternative 3: Replacement Station at the Existing Location with Emergency Storage and Overflow	Alternative 4: Replacement Station at a New Location with Emergency Storage and Overflow
<b>D</b>	<b>TECHNICAL/OPERATIONAL ENVIRONMENT</b>				
1	<b>Ease/complexity of Construction</b>	No complexity associated with this alternative.	The facility must remain fully operational while upgrades are made resulting in significant constructability challenges. May involve some complexity associated with upgrades and compatibility with the old system.	The facility must remain fully operational while the new facility is being constructed posing constructability challenges as the current site may be part of the needed footprint for the new facility.	Deep long new forcemains would substantially add to the potential complexity of the construction
	<i>Rating</i>				
2	<b>Reliability</b>	Since the current facility does not provide adequate emergency storage and an emergency overflow, in case of any major storm events the facility provides minimal reliability with high risk of system failure and sewage surcharge increase	The upgrades will eliminate the major risk associated with storm events.	The new facility will eliminate the major risk associated with storm events.	The new facility will eliminate the major risk associated with storm events.
	<i>Rating</i>				
3	<b>Ability to meet Halton Region's latest wastewater pumping station design standards</b>	Does not meet the Halton Region's latest wastewater pumping station design standards in various aspects	Will meet the Halton Region's latest wastewater pumping station design standards provided that a twin forcemains, emergency storage, and emergency overflow be considered as part of the upgrades.	Will meet the Halton Region's latest wastewater pumping station design standards	Will meet the Halton Region's latest wastewater pumping station design standards
	<i>Rating</i>				

4	<b>Implementation phasing</b>	No impacts over existing conditions.	Alternative 2 would have to be staged such that the upgrade of the PS is implemented standalone and capable of operating independent of the existing process equipment and electrical, and allows the existing equipment to be taken offline for upgrades or replacement	Alternative 3 would have to be staged such that the new PS is constructed as a standalone unit and capable of operating independent of the existing process equipment and electrical	Alternative 4 would need minimal consideration in terms of the construction staging and existing facility can remain operational with relative ease during construction. However, there might be some minimal phasing required through the linear work stage of the construction
	<i>Rating</i>				
5	<b>Ability to maximize existing infrastructure</b>	No impacts over existing conditions.	Will partially provide the opportunity to use of the existing infrastructure and assets.	Could maximize the use of the existing infrastructure and assets toward meeting the Region's standards. Some existing components and systems maybe usable as part of the new pumping station	There would not be any opportunity to maximize the existing infrastructure.
	<i>Rating</i>				
6	<b>Impacts to utilities</b>	No impacts over existing conditions.	Potential impact on the underground utilities. Potential impacts through the implementation of the emergency overflow.  The trenchless construction will remain within the limits of the roadway on John St, and so the existing hydro poles are anticipated to be sufficiently setback that impacts are expected to be minimal.	Potential impact on the underground utilities. Potential impacts through the implementation of the emergency overflow.  The trenchless construction will remain within the limits of the roadway on John St, existing hydro poles are anticipated to be sufficiently setback that impacts are expected to be minimal.	Highest potential impact are anticipated due to additional deep/long linear work compared to alternative 2 and 3. Potential impact on the underground utilities including the potential impacts through the implementation of the emergency overflow and implementation of the additional gravity/force mains  The trenchless construction will remain within the limits of the roadway on John St, Mountainview Rd., and River Dr., existing hydro poles are anticipated to be sufficiently setback that impacts are expected to be minimal.
	<i>Rating</i>				
7	<b>Complexity/ease of operation and maintenance</b>	The operation and maintenance may become more complex as the pumping station ages.	The upgrades and meeting the Region's design standards will minimize the complexity of the O&M for this alternative.	The design of the new pumping station and meeting the Region's design standards will minimize the complexity of the O&M for this alternative.	The design of the new pumping station and meeting the Region's design standards will minimize the complexity of the O&M for this alternative.  However, the additional/longer linear work would result in increased maintenance.
	<i>Rating</i>				
<b>SUMMARY TECHNICAL/OPERATIONAL ENVIRONMENT</b>					

CRITERIA FOR EVALUATING ALTERNATIVES		Alternative 1: Do Nothing	Alternative 2: Upgrade at the Existing Location with Emergency Storage and Overflow	Alternative 3: Replacement Station at the Existing Location with Emergency Storage and Overflow	Alternative 4: Replacement Station at a New Location with Emergency Storage and Overflow
<b>E</b>	<b>ECONOMIC ENVIRONMENT</b>				
1	<b>Capital construction cost (including cost of land acquisition)</b>	No capital costs.	Moderate capital cost when considering structural and equipment upgrades, as well as the new emergency storage and overflow (plus the addition of twin forcemain)	Moderate capital cost + pumping station decommissioning cost. as well as the new emergency storage and overflow (plus the addition of twin forcemain)	High capital cost considering the current elevations, as the depth and the length (including the twin forcemain) of the linear work would substantially add to the capital cost. The new twin service mains should be directed to the Victoria and John st. MH
	<i>Rating</i>				
2	<b>Lifecycle [capital + O&amp;M] cost profile</b>	Life cycle cost will be incurred due to operational and safety risks, and maintaining aged equipment	Lowest life cycle cost due to the longest service life	Lower life cycle cost due to the longest service life (only slightly more costly, compare to alternative 2)	High life cycle cost (compared to alternative 2 and 3) . Higher O&M related to additional forcemain and gravity.
	<i>Rating</i>				
3	<b>Impact on nearby businesses (short-term)</b>	No impacts over existing conditions.	Moderate potential impacts during the construction phase mainly due to the excavation/installation of the emergency overflow, specifically to the businesses located at John st. and mountainview.	Moderate potential impacts during the construction phase mainly due to the excavation/installation of the emergency overflow, specifically to the businesses located at John st. and Mountainview.	Highest impacts during the construction phase mainly due to the excavation/installation of the emergency overflow as well as the new forcemain from Old Mill Park up through mountainview to John St. and Victoria MH. The construction may involve deep excavation and wider ditruption due to the length of the new forcemains and more complex process and would last longer compare to the other alternatives.
	<i>Rating</i>				
<b>SUMMARY ECONOMIC ENVIRONMENT</b>					

CRITERIA FOR EVALUATING ALTERNATIVES		Alternative 1: Do Nothing	Alternative 2: Upgrade at the Existing Location with Emergency Storage and Overflow	Alternative 3: Replacement Station at the Existing Location with Emergency Storage and Overflow	Alternative 4: Replacement Station at a New Location with Emergency Storage and Overflow
<b>G</b>	<b>Adherence to Problem and Opportunity Statement</b>				
1	<b>Meet Halton Region's latest wastewater pumping station design standards</b>	Does not meet the Halton Region's latest wastewater pumping station design standards	Will largely meet the Halton Region's latest wastewater pumping station design standards	Will meet the Halton Region's latest wastewater pumping station design standards	Will meet the Halton Region's latest wastewater pumping station design standards
2	<b>Adequately manages any potential surcharging in the nearby sanitary collection system</b>	Will not manage any potential surcharging in the nearby sanitary collection system	Will reduce risk of potential surcharging in the nearby sanitary collection system	Will reduce risk of potential surcharging in the nearby sanitary collection system	Will reduce risk of potential surcharging in the nearby sanitary collection system
<b>SUMMARY Adherence to Problem and Opportunity Statement</b>		Not Preferred	Preferred	Preferred	Preferred

CRITERIA FOR EVALUATING ALTERNATIVES	Alternative 1: Do Nothing	Alternative 2: Upgrade at the Existing Location with Emergency Storage and Overflow	Alternative 3: Replacement Station at the Existing Location with Emergency Storage and Overflow	Alternative 4: Replacement Station at a New Location with Emergency Storage and Overflow
<b>OVERALL SUMMARY</b>	<b>Not Preferred</b>	<b>More Preferred</b>	<b>Most Preferred</b>	<b>Least Preferred</b>

**ORDER OF PREFERENCE**

- Most Preferred
- More Preferred
- Somewhat Preferred
- Less Preferred
- Least Preferred