APPENDIX C: NORWOOD OUTDOOR POOL- OPTIONS ANALYSIS

	Invest in Existing Pool Options				New Pool Options		Decommission Option
Criteria	**Option 1** **Status Quo** **Repair existing pool tank each spring until complete failure of the asset (estimate 3 to 5 years)**	**Option 2** **Install de-watering wells connected to a new land drainage system and river outfall. Replace existing pool tank with similar tank plus accessible ramp.**	**Option 3** **Pool within pool:** **Install concrete within existing tank to bring bottom level of the pool above ground water level, raises deck level of the pool by 2 to 3 feet.**	**Option 4** **Pool within pool, with de-watering wells. Install concrete within existing tank to bring bottom level of the pool above ground water level, raises deck level of the pool by 2 to 3 feet.**	**Option 5** **Construct a new 3 to 5ft. depth pool above the ground water level, with ramp/beach entry, similar size to existing, built up within the flood bowl, accessed from street level.**	**Option 6** **Construct a new 3 to 5ft. depth pool above the ground water level, with ramp/beach entry, similar size to existing, at an alternate location on the site**	**Option 7** **Decommission the pool and potentially replace with alternate recreation amenities.**
Technical	Hydrostatic pressure from the water table and annual freeze thaw cycles adversely affects concrete patches and repairs making them very temporary fixes. Operating permit is at risk each spring.	Requires installation of 4 to 6 de-watering wells with pumps that must run 24/7, 365 days /yr. pumping between 100 and 200 gallons per minute. New land drainage sewer line connecting to existing storm relief sewer and outfall at the Red River will be required. Concern that year round flow will impact winter ice trail on Red River.	**Not technically feasible as ground water condition is often above current level of the shallow end.** Ground water pressure on new concrete will negatively affect the asset life cycle. The existing pool tank is severely deteriorated and provides limited value to this scenario.	Requires installation of 4 to 6 de-watering wells with pumps that must run 24/7, 365 days /yr. pumping between 100 and 200 gallons per minute. New land drainage sewer line connecting to existing storm relief sewer and outfall at the Red River will be required. Concern that year round flow will impact winter ice trail on Red River.	Will require a retaining wall or substantial installation of fill material to transition the grade elevation from the new pool deck level to the flood bowl level. This will reduce the amount of usable greenspace and may affect some playing fields. Will require new change/pump building at deck level.	May require re-location of amenities such as hockey pen into the flood bowl which could be a challenge from an operational perspective ice making, access for skaters). Will require new change/pump building at deck level.	Assume a new spray pad will be installed to replace the outdoor pool. Note: it is recommended that a community process be initiated to confirm any alternate recreation facilities within reasonable budget expectations.
Operational efficiency (Additional challenges/costs)	Significant staff time required to deal with tank repairs throughout the operating season in order to maintain safe conditions and operating permit. E.g. divers are required for in-season concrete patching and crack repair.	Anticipated pump maintenance, including mitigation of siltation is expected to be significant and beyond the capability of pool maintenance staff. Additional year round flows in sewer will have maintenance impacts on the sewer line.	It is anticipated that the life of the asset will be reduced due to ground water pressures and greater operational requirements will be needed as the asset deteriorates.	Anticipated pump maintenance, including mitigation of siltation is expected to be significant and beyond the capability of pool maintenance staff. Additional year round flows in sewer will have maintenance impacts on the sewer line.	Assumed that a new pool with new mechanical systems will be an improvement from the end of life asset.	Assumed that a new pool with new mechanical systems will be an improvement from the end of life asset.	Spray pads are unsupervised assets that require daily inspection for glass and other safety issues.
Capital Cost 2018 City wide Budget:$120,000 2019 Forecasted City wide Budget: $169,000	Based on previous years and current estimates, concrete repairs are expected in the $30,000 to $50,000 range annually. These Capital repair costs are anticipated to increase each year as the concrete continues to deteriorate. Risk of not receiving annual operating permit will continue to increase. Expect failure of the tank within 3-5 yrs. **Estimated Capital cost: $30k to $50k annually, plus $2M in deferred investment**	Based on 2014 Stantec & 2018 Friesen Drilling estimate, plus contingency, fees, inflation., De-watering wells estimated capital cost: $650,000 Pool tank replacement at an additional $1.4M **Estimated Capital cost: $2.05M, plus deferred investment**	Expected cost of $1.4M including redeveloped tank at 3 to 5' depth, new mechanical tie-ins, accessible ramp entry in pool and accessibility upgrades to raised pool deck height. **Estimated capital cost: $1.4M, plus deferred investment**	Expected cost of $1.4M including redeveloped tank at 3 to 5' depth, new mechanical tie-ins, accessible ramp entry in pool and accessibility upgrades to raised pool deck height. Plus estimated initial capital cost for de-watering wells $650,000 **Estimated capital cost: $2.05M, plus deferred investment**	Based on recent projects in Transcona and St. Vital, expected capital cost for a new pool and change/pump building is in the $4M to $6M range. The community may look to private fundraising and grants from other levels of government. **Estimated capital cost: $4M to $6M**	Based on recent projects in Transcona and St. Vital, expected capital cost for a new pool and change/pump building is in the $4M to $6M range. The community may look to private fundraising and grants from other levels of government. **Estimated capital cost: $4M to 6M**	Decommissioning including demolition, backfill, tipping fees and site restoration is estimated at $150,000. Base on the available space adjacent to the existing playground, a $750,000 spray pad is deemed as a suitable capital budget. Additional $25k for community consultation. **Estimated capital cost: $150k to $975k**
Operating cost 2019 Norwood Pool operating budget: $139,100	Average annual operating cost (maintenance, utilities, staff) is approx. $135k to $175k/yr**.** These costs are anticipated to rise for Norwood Pool as staff is required to mitigate deteriorating conditions of the pool tank throughout the operating season. **Estimated Annual operating cost: $130k to $170k and increasing**	Average annual operating cost (maintenance, utilities, staff) is $135k-170k/yr. Additional operating costs for maintenance of pumps, hydro, new land drainage and sewer outfall estimated at $25,000 to $35,000 per year. Permit and discharge fees could range from $64k to $240k per year depending on actual flows and discharge. **Estimated Annual operating cost: $224k to $410k and increasing**	Average annual operating cost may be reduced from existing $135k to $175k in initial years due to reduced pool depth and volume, but is anticipated to increase as the pool deteriorates due to ground water pressure. **Estimated Annual operating cost: $135k to $170k and increasing**	Average annual operating cost may be reduced from existing $135k to $175k in initial years due to reduced pool depth and volume. Additional operating costs for maintenance & hydro for pumps estimated at $25,000 to $35,000 per year. Permit and discharge fees could range from $64k to $240k per year depending on actual flows and discharge. **Estimated Annual operating cost: $224k to $410k and increasing**	Annual operating costs should be similar or slightly less than existing as water consumption, chemicals should be the same or reduced for smaller volume pool. Assume some reduced routine maintenance. Number of lifeguards may increase if new amenities added (slides) **Estimated Annual operating cost: $135k to $170k**	Annual operating costs should be similar or slightly less than existing as water consumption, chemicals should be the same or reduced for smaller volume pool. Assume some reduced routine maintenance. Number of lifeguards may increase if new amenities added (slides) **Estimated Annual operating cost: $135k to $170k**	No annual operating costs if asset is removed and not replaced with new amenity. Neighbourhood spray pad operating costs range from $25k to $35k annually. **Estimated Annual operating cost: $0 to $35k**
Environmental (environmental risks/costs)	No significant environmental issues.	De-watering wells will only affect ground water conditions in immediate area of the pool. Pumping of water into the river may have environmental impacts that have not yet been assessed and may not be permitted by the Province and Department of Fisheries & Oceans.	No significant environmental issues.	De-watering wells will only affect ground water conditions in immediate area of the pool. Pumping of water into the river may have environmental impacts that have not yet been assessed and may not be permitted by the Province and Department of Fisheries & Oceans.	No significant environmental issues.	No significant environmental issues.	Due to MB Health requirements for regular water quality testing throughout the day and insufficient staffing to accommodate this, most spray pads incorporate a straight to drain design which dumps water into the sewer system.
Community Benefits (social, health, recreational)	Provides recreational/play value historically enjoyed by the community at this site. Note: diving boards have been removed to meet current MB Health requirements. Community benefits include enhanced quality of life, sense of community, public health (e.g. addiction, obesity, diabetes reduction), crime reduction.	Provides recreational/play value historically enjoyed by the community at this site. Note: diving boards have been removed to meet current MB Health requirements. Community benefits include enhanced quality of life, sense of community, public health (e.g. addiction, obesity, diabetes reduction), crime reduction.	Provides less recreational value than present due to reduced pool depth, which could be supplemented by additional features such as a water slide. Community benefits include enhanced quality of life, sense of community, public health (e.g. addiction, obesity, diabetes reduction), crime reduction.	Provides less recreational value than present due to reduced pool depth, which could be supplemented by additional features such as a water slide. Community benefits include enhanced quality of life, sense of community, public health (e.g. addiction, obesity, diabetes reduction), crime reduction.	Anticipate similar and potentially increased recreation value depending on design, budget and additional amenities provided such a slides, climbing wall, spray features, beach entry.	Anticipate similar and potentially increased recreation value depending on design, budget and additional amenities provided such a slides, climbing wall, spray features, beach entry.	Reduced recreation/community benefit for the immediate neighbourhood . Spray pad provides a different recreational/ play experience from the existing outdoor pool. For younger children (3-12) the play experience may be viewed as enhanced, while the experience will likely be reduced for all other ages.
Level of Service (equitable/sustainable level of City-wide service delivery)	City wide expected service level exceeded. St. Boniface Ward has more outdoor pools than any other area of the City. Provencher Outdoor Pool and Happyland Outdoor Pool are within 2 km walking/cycling distance. Redeveloped St. Vital Pool is within 3.5km. Location does serve other neighbourhoods.	City wide expected service level exceeded. St. Boniface Ward has more outdoor pools than any other area of the City. Provencher Outdoor Pool and Happyland Outdoor Pool are within 2 km walking/cycling distance. Redeveloped St. Vital Pool is within 3.5km Location does serve other neighbourhoods.	City wide expected service level exceeded. St. Boniface Ward has more outdoor pools than any other area of the City. Provencher Outdoor Pool and Happyland Outdoor Pool are within 2 km walking/cycling distance. Redeveloped St. Vital Pool is within 3.5km Location does serve other neighbourhoods.	City wide expected service level exceeded. St. Boniface Ward has more outdoor pools than any other area of the City. Provencher Outdoor Pool and Happyland Outdoor Pool are within 2 km walking/cycling distance. Redeveloped St. Vital Pool is within 3.5km Location does serve other neighbourhoods.	City wide expected service level exceeded. St. Boniface Ward has more outdoor pools than any other area of the City. Provencher Outdoor Pool and Happyland Outdoor Pool are within 2 km walking/cycling distance. Redeveloped St. Vital Pool is within 3.5km	City wide expected service level exceeded. St. Boniface Ward has more outdoor pools than any other area of the City. Provencher Outdoor Pool and Happyland Outdoor Pool are within 2 km walking/cycling distance. Redeveloped St. Vital Pool is within 3.5km	Provision of a spray pad in this location is not necessarily warranted from a service level perspective based on the proximity of the spray pads at Provencher Park (2km) and the Forks (1.2km)
Public Service Recommendation	**Not recommended due to age / condition of asset, ground water conditions and the proximity of other pools within the ward.**	**Not recommended due to operating costs and risks with maintaining the pool within the ground water conditions.**	**Not recommended as not technically feasible as ground water condition is often above current level of the shallow end.**	**Not recommended due to operating costs and risks with maintaining the pool within the ground water conditions.**	**Not recommended due to financial constraints and equitable/sustainable level of service provision factors.**	**Not recommended due to financial constraints and equitable/sustainable level of service provision factors.**	**Recommend Decommissioning.**