

Review of Three Storm Pond Options

Option 1 – Off-site pond within surplus Road Right-of-way

Features	66,000m ³ storage volume 8 ac PUL (portion of available surplus road right-of-way)										
Opportunities	<ul style="list-style-type: none"> • All landowners participate in redevelopment • Provides 7 ac additional development within Cell D to support complete community opportunities objectives and share infrastructure costs • Timing of pond construction not reliant of acquisition of private lands 										
Challenges	<ul style="list-style-type: none"> • Pond elevations and longer piping network requires higher final road grades and results in significant need for fill in south half of Cell D • No source of fill material onsite • Importing fill expensive and requires locations to store it • There will be land costs to acquire surplus right-of-way from The City • More costly connecting pipes from Cell D to pond and back to outlet connections (assumed tunnelling to reduce closing of Métis Trail) 										
Cell D - Net Developable Area (NDA)	99.4 acres (40.3 Ha)										
Total Costs Cost per NDA	\$84.4 million \$850,000/NDA										
Stormpond and connection costs ¹	<table> <tr> <td>Pond :</td><td>\$ 1.5 million</td></tr> <tr> <td>Connections under Métis Trail (2)</td><td>\$ 1.3 million</td></tr> <tr> <td>Land costs:</td><td>\$ 1.6 million*</td></tr> <tr> <td>Onerous Grading:</td><td><u>\$ 1.9 million</u></td></tr> <tr> <td>Total:</td><td>\$ 6.3 million</td></tr> </table> <p>*subject to valuation</p>	Pond :	\$ 1.5 million	Connections under Métis Trail (2)	\$ 1.3 million	Land costs:	\$ 1.6 million*	Onerous Grading:	<u>\$ 1.9 million</u>	Total:	\$ 6.3 million
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Total:	\$ 6.3 million										
Conclusion	Feasible option. Uncertainties over grading impacts significantly impact cost estimates. Recommend any pursuit of this option commence with more design investigation to reduce amount of fill required in south half of Cell D.										

¹ Do not include Engineering and Contingency Costs

Option 2 – On-site pond in Cell D (lots 29 and 30)

Features	66,000m ³ storage volume 8 acre PUL on-site (lots 29 and 30)										
Opportunities	<ul style="list-style-type: none"> • Pond can be located immediately adjacent to outlet connection to minimize connecting infrastructure • Design grades of pond minimize need for significant fill in Cell D • On-site pond excavation creates immediate source of fill 										
Challenges	<ul style="list-style-type: none"> • Requires two lots in SW portion of Cell D • If landowners not willing to participate in joint development program, lands has to be acquired by other landowners • Reduces net developable land • Other servicing costs in Cell D are shared by fewer landowners • Pond timing could be delayed by having to acquire two privately owned lots. • Pond excavation materials at outset will need to be stored if landowners not ready to redevelop 										
Cell D - Net Developable Area (NDA)	92.2 acres (37.3 Ha)										
Total Costs Cost per NDA	\$76.3 million \$830,000/NDA										
Stormpond and connection costs ²	<table> <tr> <td>Pond :</td><td>\$1.5 million</td></tr> <tr> <td>Outfall connection:</td><td>\$ 0.1 million</td></tr> <tr> <td>Land:</td><td>\$ 0 * (assumes cooperative model)</td></tr> <tr> <td>Grading:</td><td>\$ 0</td></tr> <tr> <td>Total:</td><td>\$1.6 million</td></tr> </table>	Pond :	\$1.5 million	Outfall connection:	\$ 0.1 million	Land:	\$ 0 * (assumes cooperative model)	Grading:	\$ 0	Total:	\$1.6 million
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Land:	\$ 0 * (assumes cooperative model)										
Grading:	\$ 0										
Total:	\$1.6 million										
Conclusions	Feasible option. Would require concerted efforts by landowners to work together to secure two lots within the SW portion of Cell D. Would require detailed cost sharing agreement up front, or significant capital investment at outset to purchase two lots.										

² Do not include Engineering and Contingency Costs

Option 3 – Regional Pond

Features	88,000m ³ storage volume (to be confirmed) 8 ac PUL (City surplus lands) + portion of Triovest land (area to be confirmed)
Opportunities	<ul style="list-style-type: none"> Land for pond is mostly surplus City road r/w and owned by adjacent developer Adjacent developer could construct pond in 2015, and oversize to include capacity for Cell D Need to lower pond by 1-2m to serve industrial lands reduces need for import of fill to Cell D
Challenges	<ul style="list-style-type: none"> Pond oversize costs would be borne by industrial developer. Recouping of oversize costs reliant on Cell D development timing, and does have a 20 year sunset clause to recover. Identifying Cell D owners to begin discussions with the industrial developer.
Cell D - Net Developable Area (NDA)	99.4 acres (40.3 Ha)
Total Costs Cost per NDA	\$81.4 million \$819,000
Stormpond and connection costs ³	<p><u>Regional Pond Total Costs</u></p> <p>Pond + Outfall trunk: \$ 3.5 million</p> <p>Land (City) \$ 1.6 million*</p> <p>Triovest \$ million* area to be determined</p> <p>Total: \$ 5.1 million</p> <p><u>Cell D Costs</u></p> <p>Cell D ptn. of above (est. 50%) \$2.6 million</p> <p>Plus: Pond connection under</p> <p>Métis Tr. from Cell D \$ 0.7 million</p> <p>Onerous Grading: \$ 0</p> <p>Total: \$ 3.3 million</p> <p>*subject to valuation</p>
Conclusions	Feasible option. Approving authority reviewing pond and downstream connection details. OLSH can continue to work with Cell D landowners to finalize oversize costs, Cell D share of regional storm infrastructure and to facilitate introduction between motivated Cell D owners and industrial developer.

³ Costs being finalized by others. Do not include Engineering and Contingency Costs