Mill Creek Water Quality Study Stakeholder Input November 2016

Mill Creek Water Quality Study

As part of ongoing efforts to improve stormwater quality across Edmonton, the City is working to address water quality and erosion issues in Mill Creek, a small tributary of the North Saskatchewan River in the southeast part of Edmonton. To continue improving water quality in Mill Creek, the City has considered oil and grit separators, stormwater ponds, wetlands and sewer diversions. After evaluating the technical feasibility of the options, several options are being recommended to be carried forward to design, including a series of oil and grit separators throughout the basin contributing to the lower reach of Mill Creek, a sewer diversion to reduce erosion and possibly a small stormwater pond or wetland north of Argyll Road and west of 83 Street.

Project staff received feedback about the public's opinion of the proposed water quality and erosion improvements in Mill Creek during an open house on November 3, 2016 and an online survey that ran from November 3 to 20, 2016. The information collected through these avenues will be used by City staff to help prioritize water quality and erosion improvement projects. The City is particularly interested in feedback related to the proposed pond or wetland north of Argyll Road and west of 83 Street that could impact use of the area as a toboggan hill and other activities.

This open house and survey was the second of two public engagement activities. The first was held in June, 2016 and focused on introducing the public to the issues related to water quality and erosion in Mill Creek, and to determine what the public values the most about Mill Creek and its surrounding park and trail system.

Summary of Open House

An informal drop-in style community information session was held on Thursday, November 3, 2016 at the C3 Church on 76 Avenue just west of Mill Creek from 5:00 to 7:00 PM. Attendees were presented with information regarding the issues currently being observed in the Mill Creek ravine (poor water quality and erosion), comparison of the options that were considered, the preferable options to address water quality and erosion issues, justification for the preferable options and the timelines for next steps in the project. Representatives from the Mill Creek Daylighting Project also attended the session to provide information about that initiative.

A total of approximately 100 stakeholders attended the event to learn about the project. Attendees were asked to provide feedback directly to the project team using comment cards, flip charts and open house evaluation cards provided at the event. The comments were sorted into themes related to the options that are being considered to address water quality and erosion in Mill Creek:

- *Oil and grit separators throughout the Mill Creek basin (to address water quality)*
- *Optional pond or wetland north of Argyll Road and west of 83 Street (to address water quality from adjacent residential neighborhoods)*
- *Tunnel connection (to divert high flows around the creek, and return creek flows to a more natural state, to address erosion)*
- *Other comments*

A summary of the comments is provided here:

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Oil and Grit Separators

Oil and grit separators were not discussed a lot in the comments, likely because they are scattered throughout the basin and are underground. A few comments were received in support of the two oil and grit separators that could be constructed north of Argyll Road instead of the proposed pond or wetland. The comments received specific to oil and grit separators include:

- *Oil & grit separators make more sense than a pond. Well done.*
- *I strongly support the 2 oil and grit separators over a pond.*
- *I think the pond is not a great idea considering the oil and grit separators option*

Pond/Wetland near Argyll Road and 83 Street

The proposed pond north of Argyll Road and west of 83 Street was by far the most talked about option at the open house. A summary of the comments is below, and it is evident that there are many opposing opinions about the pond, which is located in the "Argyll Bowl", an area used for tobogganing and other recreational activities. A total of 9 comments were received in support of the pond, and 11 comments were received in opposition to and/or concerned about the pond.

- *I like the idea of a wetland where the toboggan hill currently is. The overall ecological health of the park is more important that the maintenance of one toboggan hill. The City has other toboggan hills.*
- *I like the idea of restoring wetland/pond north of Argyll Rd. in toboggan area. These wetlands were removed in the 1960's.*
- *Like the pond concept (near the Velodrome) but unsure how well it will treat industrial run off water.*
- *Keep it all underground - no wet pond.*
- *A storm water pond will negatively impact the quality of life and recreation activities, create a safety issue, and otherwise negatively impact the Argyll neighborhood. I strongly support the 2 oil and grit separators over a pond. The area proposed for the storm water pond occupies one of the City's key toboggan destination areas known as the 'Half Pipe'. The entire bowl is the length of this section, the 'valley' is used by tobogganers, sled boards, cross-country ski and practicing downhill ski. They use both sides of slope.*
- *Do not remove the toboggan hill at Argyll & 83rd. The pond is not necessary.*
- *As I listen to the public at the meeting, I am struck by the inertia this project is facing as participants resist change. Have the wetland concept to re-establish habitat & potential nesting site.*
- *Do not ruin the toboggan hill @ Argyll! A pond will only remove 2 of 30 oil & grit separators - That's too expensive!! Look at spot in the creek where there used to be ponds - further north of Whyte Ave, and after the "Y". Close to the old Gainer site.*
- *I like the idea of a pond in the Argyll bowl.*
- *Oil & grit separators make more sense than a pond. Well done.*
- *Leave toboggan hill as it exists with no pond.*
- *I like the pond plan*
- *I like the wetlands idea. It would help bring the creek area back to a more natural state*
- *Wetlands are important contributors to biodiversity and ecological health. Way more important than a tobogganing hill.*
- *No pond - area is recreationally used!! Winter and Summer*
- *The wetland option is fantastic! Nesting sites, migratory stop over and habitat for regional plant and animal*

species leaves a legacy for future families in the neighborhood and beyond
- *…NOT a pond*
- *Pond would increase the number of mosquitos in summer. Plant decay would affect air quality*
- *I think the pond is not a great idea considering the oil and grit separators option. It would add little ecologically and destroy the tobogganing hill*
- *Do not wreck the toboggan hill by Argyle!*

Tunnel Connection

Several commenters addressed the proposed tunnel connection to reduce high flows in Mill Creek and return the flows to a more natural level, which will improve erosion issues. Several comments were in favour of the tunnel connection, while several others were concerned, or thought there might be a better approach.

- *I certainly support the tunnel idea. I believe that this is a very good investment for the future.*
- *Not enough info why a tunnel is necessary in the first place. Bad flooding of the creek happened 5 years ago, not since. There is high water for 2 weeks in Spring.*
- *Shocked about the extent of the creek/stream tunnels in the SE part of Edmonton. Tunnel concept appears sound to reduce creek flows/very expensive.*
- *Regarding the erosion issue, the tunnel should be considered despite the high cost. Doing nothing is not an option! Is it possible to proceed in stages with the tunnel and see the improvement as we go along?*
- *Is there a way to not build the tunnel but fix erosion?*
- *It seems that the decision has been made to install a connection tunnel. My concern is with the destruction of the area, how long will it take, and whether/how it will be restored to a natural area following construction.*
- *Fix what the city caused by placing storm sewers in the ravine by completing a drainage tunnel*
- *The current plan to build a tunnel looks sensible and causes the least disruption (as explained verbally)*

Other Comments

There were several other comments received, some about the "Mill Creek Daylighting" project, some about water quality and erosion in general, and some feedback on the open house session itself. Comments are summarized below.

Mill Creek Daylighting Comments:

- *Overall it was excellent. I have a better understanding of the issues and potential solutions. However, I think the "day light" project is a waste of money - nice idea but not needed when we have no money, other previous issues - i.e. housing, roads, etc.*
- *Why not daylight all of Mill Creek? The unpaved trails are getting muddy in places - needs more gravel.*
- *Daylighting the creek is a "nice to have"*
- *No to daylighting.*
- *Daylight Mill Creek - the high flows can be mitigated by combining its current flow (via the existing tunnels and the newly daylighted creek)*

General Water Quality/Erosion Comments:

- *Low Impact Drainage Design shall be implemented to help reduce peak flows wherever possible.*
- *LID should definitely be considered - in stages - residents and industry would certainly be interested implementing same improvements as these would not only help Mill Creek but the whole environment. An education piece should also be implemented.*

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- *Costly problem appears to be a result of poor planning by Drainage many decades ago. Does not appear to be quantitative measure of which options are most – least desirable.*
- *Water quality – what are the results of water quality testing for hydro-carbons? Is the creek safe for dogs? If Creek Watch deemed Mill Creek 6th worst out of 7 creeks tested, where is the education for creek users? How do off-leash dog walkers to know that the creek is polluted? There is no signage indicating this anywhere in the creek. Is this not a liability issue?*
- *Re-establish ponds that have disappeared in the last 15 years before constructing new ones; amphibians and other wildlife will benefit. Control salt concentrations in spring. Re-establish slews and oxbows. This is more about economic control than about "water quality" which encompasses many other aspects as well.*
- *Keep the Mill Creek as natural as possible. The Mill Creek is a jewel in this city (so any changes would not necessarily better)*
- *Re-establish lost ponds at 92 Ave access (west side) for amphibian populations that have been lost as well*
- *Bioswales in new developments*
- *Water Quality – Are the results of hydrocarbon testing available to the public? Where? Is the creek water safe for dogs? How do we know?*
- *Option? Both – water treatment and pond*
- *Low impact development (LID) means swales in residential areas should not have been dismissed. Ideal solution for new development!! Re: establish areas, LID was successful in Vancouver at Musqueam Creek, so can be done*
- *Use old mine sites for wetlands*
- *In 30 years of walking MC. I've not seen exceptionally high water levels, except during the 2012 unusual flooding. Av flow >> than 70's and 80's!*
- *High flows during rain is a safety hazard for dogs and people.*

Other Comments:

- *Really enjoyed talking to the well-informed and enthusiastic project representatives.*
- *What on earth makes City put trails on the outside bend of a creek anyway?*
- *Not much option for project input. This was more to inform what is going to happen.*
- *For those of us who are "map challenged" a big N, S, E, W would be helpful. Also simplified drawings of plans would be helpful. Actual aerial maps are very busy and confusing.*
- *Stairs in/out of ravine currently in disrepair.*
- *Address the sewer stink at the paved trail at about 80th Ave. Spend as much on the ravine as you do on a rec-center. Do repairs, not just orange paint. Please maintain the infrastructure, bridges, fencing and picnic tables. These are important to the quality of life around here.*
- *These are wonderful. People need to see info like this before/as they're happening to feel connected. Maybe show successful similar projects in other cities also.*
- *It would be useful for local Councillors to attend and receive feedback directly.*
- *The ravine is as important as a rec-center. How about some maintenance?*
- *Will any of this work improve the sewage smell particularly on the trail under 82 Ave bridge?*
- *Check out NYC volunteer warden program for central park. We could monitor the creek infrastructure better than city employees using a system like this*
- *Early blue violets/native wildflowers, abundant in grassy top of hill and toboggan area.*

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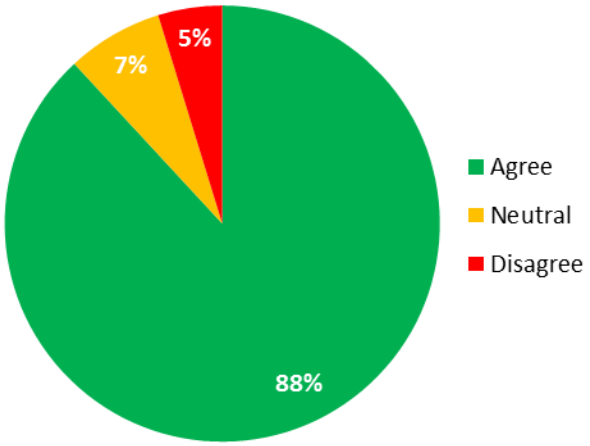
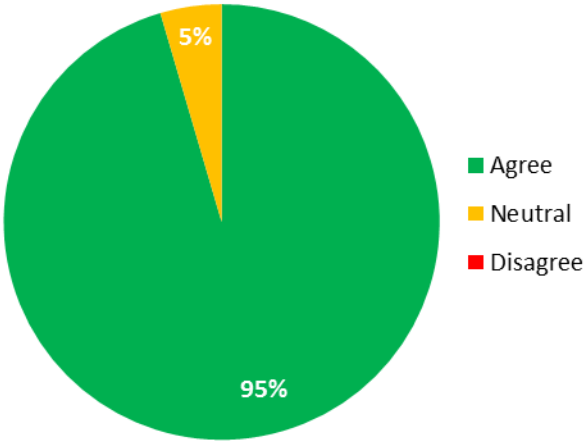
In general, attendees agreed that they were able to find the answers to their questions and that they have a better understanding of the project after attending the open house:

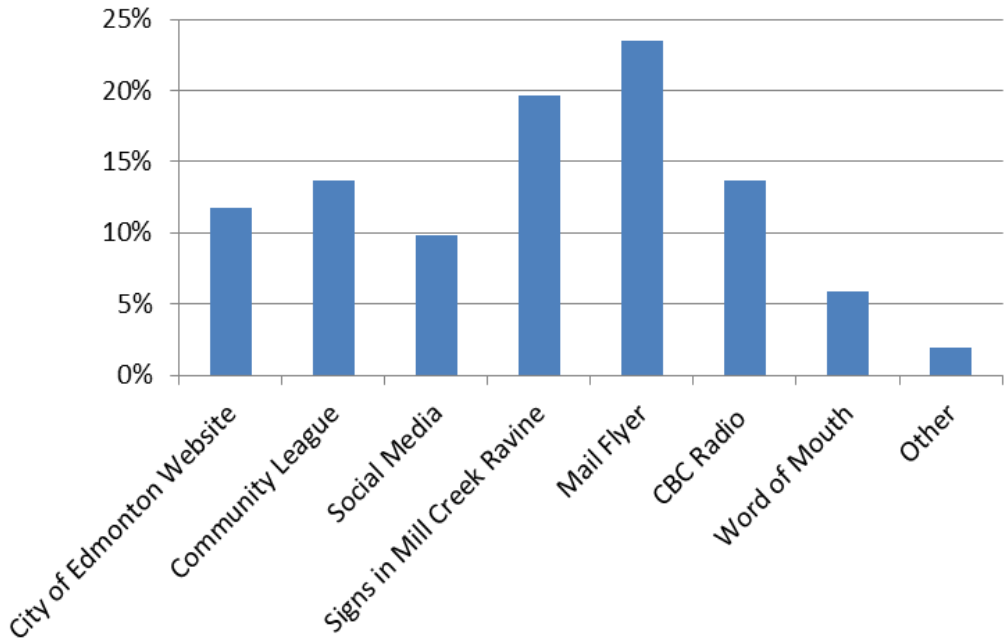
I was able to find answers to my questions



I have a better understanding of the project because of my attendance at this meeting



Participants were also surveyed to determine how they heard about the session. The mail flyer and signs posted in Mill Creek Ravine appear to be the most effective advertising methods. The results are shown in the graph below:



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Summary of Online Survey

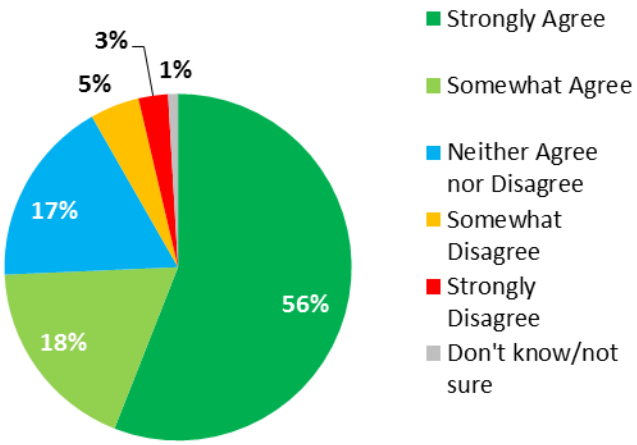
A total of 120 people completed the survey. The primary focus of the survey was to determine the level of agreement with the proposed water quality and erosion improvements in Mill Creek. The following is summary of the demographics of the survey respondents:

- 92% of respondents live in one of the seven neighborhoods that border the lower reach of Mill Creek (Old Strathcona, Bonnie Doon, Ritchie, King Edward Park, Hazeldean, Avonmore and Argyll).
- 73% of respondents indicated that they had enough background information to properly fill out the survey, while 27% wished they had more information.
- 81% of respondents have visited Mill Creek more than 20 times in the past year. The top reasons for visiting the Mill Creek Ravine were for use of the trails, proximity to home, off leash dog park, Mill Creek Pool and for attending an organized event.
- 87% of respondent were aware of the erosion and water quality issues in Mill Creek before taking the survey.
- 92% of respondents thought that the erosion issues in Mill Creek Ravine were a moderate or significant concern, and only 8% indicated that they were a minor concern.
- 96% of respondents thought that the water quality issues in Mill Creek were a moderate or significant concern, and only 3% indicated that it was a minor concern (1% were not sure).
- 78% of respondents were significantly concerned about the possibility that ongoing erosion in Mill Creek Ravine could lead to closure or realignment of some of the trails. 11% were moderately concerned.

Oil and Grit Separators

74% of respondents either somewhat agreed or strongly agreed with the City's proposed approach of installing a series of oil and grit separators to improve water quality in Mill Creek. Only 8% disagreed with this approach, and the rest were indifferent or not sure.

The City is considering creating a network of up to 30 oil and grit separators across the study area over several years to improve water quality in Mill Creek. Rate your agreement with this proposed initiative.



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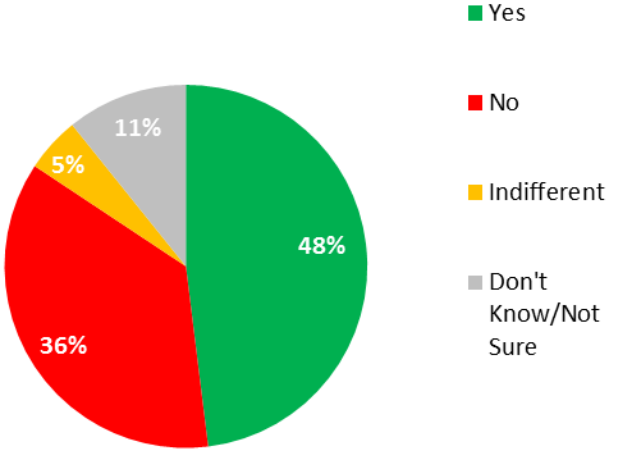
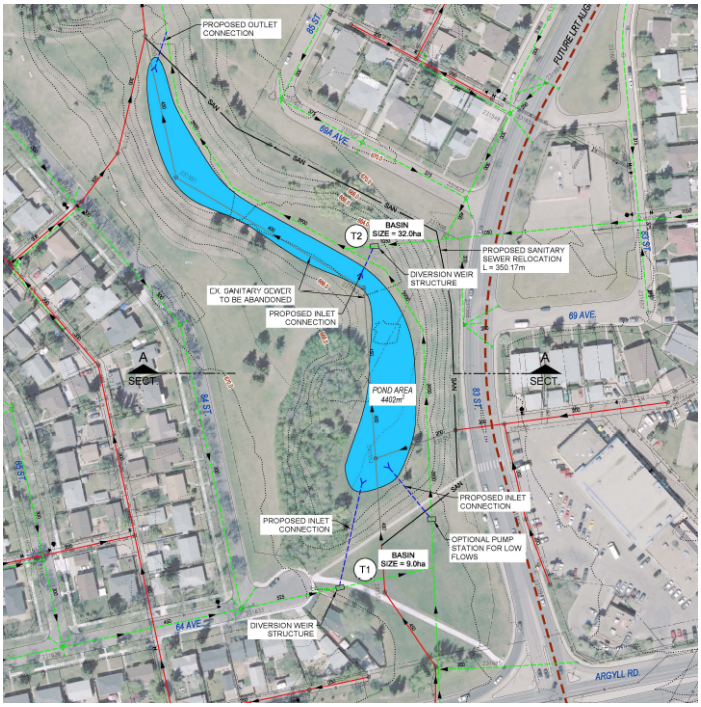
Pond/Wetland near Argyll Road and 83 Street

As with the comments received at the open house, there are varying opinions of the proposed pond north of Argyll Road and west of 83 Street, which would replace two of the oil and grit separators. Only 48% of respondents agreed that the pond was a good idea. 36% are opposed to the pond, and the rest are indifferent or not sure. Although lots of people agree with the pond, there are lots of people that do not agree. Most concerns about the pond, based on comments received in the survey, are related to the possibility that the pond will take up the space that is currently used as a toboggan hill and for other activities. Others were concerned about the higher cost (compared to the two oil and grit separators) and public safety. Similar feedback was received at the open house.

A small stormwater pond/wetland could replace two proposed separators, but at twice the cost. The pond will add habitat and education opportunities for the same water quality improvements. Do you support a stormwater pond/wetland as shown on the map?





Tunnel Connection

There was generally good support for the City to pursue the proposed tunnel connection to divert high flows around Mill Creek and return the flows in the creek to a more natural level. 76% of respondents agreed (strongly or somewhat) with this approach, whereas only 5% somewhat disagreed (no one responded “strongly disagree”. The remainder (19%) were indifferent or not sure.

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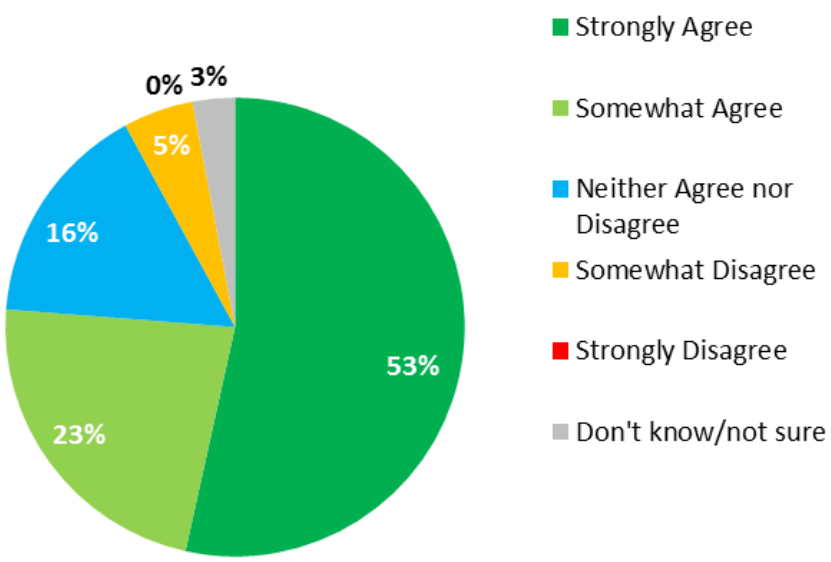
Our study has found that the only way to significantly reduce erosion in Mill Creek is to remove high storm flows with a new storm sewer connection/bypass, leaving the natural flows in the creek. Would you support this solution?



Next Steps

The City will determine using technical criteria as well as public input which improvements in Mill Creek to pursue further. The City will attempt to acquire funding for the preferred improvements from City Council. If funding is approved, design of the upgrades can begin. Construction is likely in 2018 and beyond.