
Storm Water Pond Safety Review

Recommendations:

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

That the Administration proceed with implementing the recommendations outlined in the attached Storm Water Pond Safety Review – Recommendation Summary.

Topic and Purpose

The purpose of this report is to present the findings of the Storm Water Pond Safety Review.

Report Highlights

1. The Storm Water Pond Safety Review identifies design standards for future storm ponds and measures for education and awareness, signage, maintenance, and recreation, to increase safety around storm ponds throughout the city.
2. Partial fencing between the Dundonald storm pond and nearby schools is recommended to create a visual and physical barrier to further mitigate safety risks.

Strategic Goal

This report supports the Strategic Goal of Quality of Life by supporting safety, and the passive natural and active recreation opportunities offered by storm ponds.

Background

In September 2017, the City initiated a comprehensive review of safety risks, policies, standards, and procedures to increase pond safety. Added focus was given to the Dundonald and Lakeview storm ponds due to their proximity to schools and the September 2017 drowning at the Dundonald storm pond.

Report

Overview of Storm Water Pond Safety Review

A steering committee with members from several City divisions and representatives from the Saskatoon Public and Greater Saskatoon Catholic school divisions oversaw the review, which incorporated evaluations by three multi-disciplinary task teams, onsite pond inspections, consideration of other jurisdictions' storm pond safety reports and practices, and citizen and stakeholder input. The City currently follows several best practices for pond safety, including designs that help control sedimentation, standards for edging and vegetation to deter access, and safety education for citizens living near ponds.

Storm Water Pond Safety Review – Recommendation Summary (Attachment 1) provides a summary of key recommendations and Storm Water Pond Safety Review (Attachment 2) provides further details.

Dundonald Storm Pond

Other jurisdictions' storm pond safety reviews concluded that fencing should be discouraged and only used after other safety measures are considered. As Dundonald and Lakeview storm ponds are located close to schools, all options for mitigating safety risks were assessed, including three fencing options as barriers:

1. Fences around school properties.
2. Fences around storm pond perimeters.
3. Partial fences as barriers between schools and storm ponds.

For each option, the safety implications including advantages and disadvantages of various factors were assessed. Based on the assessments, partial fencing between the Dundonald storm pond and the pathway is recommended to provide visual and physical barriers to delineate the different uses and prevent unintended access to the pond.

Options to the Recommendation

Option 1

Construct a partial fence by the Lakeview storm pond. Fencing is not recommended for Lakeview because other safety measures are in place and the risks and other disadvantages of fences outweigh the safety benefits. The characteristics of the Lakeview storm pond (pond location relative to the playground, pond design, and visual barriers) help to mitigate the risks.

Option 2

Fence the full perimeter of the Dundonald storm pond. Perimeter fencing creates other safety risks (e.g. reducing response times in the event of an accident) and has several disadvantages, including impeding access for recreational use and maintenance and is therefore not recommended.

Option 3

Incorporate no new fencing near the Dundonald storm pond. This would have no impact on safety risk mitigation and is therefore not recommended.

Public and/or Stakeholder Involvement

- Meetings with parents of students attending Dundonald School (September 19, 2017 and March 6, 2018).
- Participation of Saskatoon Public and Greater Saskatoon Catholic school divisions' representatives on the steering committee.
- Input from school administrators.
- Dundonald and Lakeview Community meetings (March 7, 2018).
- Review of comments on traditional and social media.

Views about a fence near the Dundonald storm pond were diverse and included opposition to any fence, support for a partial fence on the school side of the path, preference for a partial fence on the storm pond side of the path, support for fencing the storm pond, and support for fencing the school playground. Other comments advocated for modification to the edging design including maintenance of cattails and more lighting around the pond.

Feedback from Lakeview residents strongly supported the recommendation to not install a fence near the Lakeview storm pond. Storm Water Pond Safety – What We Heard (Attachment 3) summarizes the feedback.

Communication Plan

Finalized recommendations will be added to the City's website and communicated to the public through the Community Associations and the news media. Changes in storm water pond design standards will be directly communicated to developers.

Financial Implications

- The estimated capital cost to install the partial fencing at the Dundonald storm pond is \$63,000 (including GST and PST). There is sufficient funding available in Capital Project #1621 – TU – Storm Sewer Pond Preservation.
- Additional annual expenses for hand-trimming and snow clearing around the Dundonald fence are estimated to be \$5,600, and will be incurred in the Parks division Operating Budget.
- Annual maintenance expenses for the Dundonald fence are estimated to be approximately 5% of capital costs (\$3,150), and will be incurred in the Facilities & Fleet Management division's Operating Budget for recreation facilities.
- The estimated cost of \$35,000 for the new signage will be funded from Water & Waste Stream division's Storm Sewer Maintenance 2018 Operating Budget.
- The cost and funding source to implement a plan for modification of the edging design and cattail control at the Dundonald storm pond will be determined as part of the plan development.

Environmental Implications

In addition to detaining runoff from larger rain events and reducing flooding, storm ponds have environmental benefits, including improving the quality of runoff entering the South Saskatchewan River; providing natural areas to support biodiversity of plants, birds, and insects; and providing passive recreation opportunities for watching and interacting with nature. Cattails and other vegetation help to reduce nutrient growth to improve water quality and prevent algae. Environmental benefits of storm ponds will be balanced with safety in developing the Green Infrastructure Strategy.

Safety/Crime Prevention Through Environmental Design (CPTED)

The CPTED Committee evaluated the partial fence near the Dundonald storm pond, and made recommendations for fence design. Their recommendations were incorporated to minimize risks of entrapment, offer better sight lines, minimize choke points, and enhance the image to support the neighbourhood culture. The CPTED

Committee supported the recommendation not to construct a fence near the Lakeview storm pond.

Other Considerations/Implications

There are no policy or privacy implications or considerations.

Due Date for Follow-up and/or Project Completion

The partial fence will be installed by September 1, 2018.

Public Notice

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

Attachments

1. Storm Water Pond Safety Review – Recommendation Summary
2. Storm Water Pond Safety Review – March 2018
3. Storm Water Pond Safety – What We Heard

Report Approval

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