Conservation Halton

Board of Directors

Conservation Halton

MEETING PACKAGE

OCT 2019

Kelso boardwalk

Conservation Halton

October 2019

MEETING NO: # 10 19

DATE: October 24, 2019

TIME: 3:00 p.m.

PLACE: **CH Admin. Office, 2596 Britannia Road West, Burlington ON 905.336.1158 x 2236**

AGENDA

PAGE #

1. Acceptance of Agenda as distributed

2. Disclosure of Pecuniary Interest for Board of Directors

3. Delegations

Positively Green
Ed McDonnell of the Friends of the Greenbelt Foundation
Shelley Petrie, Program Director

Expansion of Fossil Fuel Infrastructure
Hamilton 350 Committee
Don McClean, Coordinator For the Hamilton 350 Committee

4. Presentations

Investing in Canada Infrastructure Program-Grant Funding requests (Action Item: #6.2)
Lawrence Wagner, Senior Director, Corporate Services
Hassaan Basit, CAO

5. Consent Items

Roll Call & Mileage
Approval of CH Board of Director Meeting Minutes dated September 26, 2019 — 4-10

5.1 Kelso Dam Update — 11-12
Report #: CHBD 10 19 01

5.2 Proposed Revisions to the Aggregate Resources Act — 13-14
CH File No.: PPO 052
Report #: CHBD 10 19 02

5.3 Update on the Development of Conservation Halton Technical Submission Guidelines — 15
Report #: CHBD 10 19 03

6. Action Items

6.1	Aggregate Resources Act (ARA) Licence Application: Reid Road Reservoir Quarry, James Dick Construction Limited CH File No. PQ 18 Report #: CHBD 10 19 04	16-32
6.2	Investing in Canada Infrastructure Program-Grant Funding requests (Presentation by Lawrence Wagner) Report #: CHBD 10 19 05	33-34
6.3	Facilities Asset Management Plan Report #: CHBD 10 19 06	35-91
6.4	Amendment to CH By-law 2018-01 Report #: CHBD 10 19 07	92-93

7. In Camera

7.1	Legal Matter Report #: CHBD 10 19 08	94-95

8. CAO Verbal Update

9. Other Business

9.1 CH Foundation Update (Jim Sweetlove)

10. Adjournment

MEETING NO: # 09 19

MINUTES

A meeting of the Conservation Halton Board of Directors was held on Thursday, September 26, 2019 beginning at 3:05 p.m. at Conservation Halton's Administration Office, Burlington.

Members Present:
Rob Burton
Mike Cluett
Rick Di Lorenzo
Joanne Di Maio
Cathy Duddeck
Dave Gittings
Zeeshan Hamid
Moya Johnson
Gordon Krantz
Bryan Lewis
Rory Nisan
Gerry Smallegange
Jim Sweetlove
Jean Williams

Absent with regrets:
Hamza Ansari
Steve Gilmour
Allan Elgar
Zobia Jawed
Marianne Meed Ward

Guests present:
Dr. David Galbraith, Head of Science at RBG and Chair of the EcoPark System
Tomasz Wiercioch, Coordinator, Cootes to Escarpment EcoPark System, RBG

Guest observers:
Jennifer Lawrence
L. O'Loughlin

Staff present:
Hassaan Basit, CAO/Secretary-Treasurer
Garner Beckett, Director, CH Foundation
Adriana Birza, Manager, Office of the CAO
Niamh Buckley, Administrative Assistant
Meghan Hunter, Manager, Risk and Lands
Gene Matthews, Director, Parks & Recreation
Kellie McCormack, Senior Manager, Planning & Regulations
Marnie Piggot, Director, Finance
Plezzie Ramirez, Senior Manager, Human Resources

Jill Ramseyer, Director, Corporate Compliance
Melissa Silber, Manager, Accounting
Lawrence Wagner, Senior Director, Corporate Services
Janelle Weppler, Associate Director, Engineering
Amanda Zhang, IT Helpdesk Technician

Chair Gerry Smallegange noted that the agenda had been amended to pull reports #4.6 – #4.8 out of the consent agenda and into action items and report #5.3 from action items to consent items. A copy of the AMENDED agenda had been provided to all members present and posted online.

1. Acceptance of AMENDED Agenda

CHBD 09 01 Moved by: Rob Burton
Seconded by: Mike Cluett

That the AMENDED Agenda **be approved.**

Carried

2. Disclosure of Pecuniary Interest for Board of Directors

There were **NONE**

3. Presentation: Cootes to Escarpment
Dr. David Galbraith, Head of Science at RBG and Chair of the EcoPark System
Tomasz Wiercioch, Coordinator, Cootes to Escarpment EcoPark System, RBG

Tomasz Wiercioch advised that they are working on the 2020 Strategic Plan and would like to present this to the Board in the Spring 2020.

4. Consent Items

Roll Call & Mileage
Approval of Conservation Halton Board of Director Meeting minutes dated June 27, 2019
Approval of Conservation Halton Board of Directors Special Meeting minutes dated August 28, 2019

4.1 Kelso Dam Update
Report #: CHBD 09 19 01

4.2 CN Milton Logistics Hub Project
Report #: CHBD 09 19 02

4.3 Proposed New Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health

Report #: CHBD 09 19 03

4.4 Quarterly Permits & Letters of Permission issued under Ontario Regulation 162/06
June 1 to August 31, 2019
Report #: CHBD 09 18 04

4.5 Provincial Flood Advisor
Report #: CHBD 09 19 05

4.6 Conservation Halton Regulation Mapping – 2019 Minor Updates
Report #: CHBD 09 19 06

4.7 Purchasing Report April 1 to July 31, 2019
Report #: CHBD 09 19 10

4.8 Property Disposition- Strip of Property over the Morrison Wedgewood Channel for Halton Region's Trafalgar Road Reconstruction Project
Report #: CHBD 09 19 13

Consent items were adopted.

5. Action Items

5.1 Proposed construction of a new dwelling including covered porches, patio/deck, and Swimming pool within 15 metres of a wetland
4468 Escarpment Drive, City of Burlington, Regional Municipality of Halton
(CH File # A/19/B/79)
Report #: CHBD 09 19 11

CHBD 09 02 Moved by: David Gittings
Seconded by: Zeeshan Hamid

THAT the Conservation Halton Board of Directors **approve the issuance of a permit for the construction of a new dwelling including covered porches, patio/deck, and swimming pool within 15 metres of a wetland at 4468 Escarpment Drive (Lot 9), City of Burlington, Regional Municipality of Halton (CH File # A/19/B/79).**

Carried

5.2 Conservation Halton Hearing Procedures, Revised, September 26, 2019
Report #: CHBD 09 19 12

CHBD 09 03 Moved by: Gordon Krantz
Seconded by: Rob Burton

THAT the Conservation Halton Board of Directors **approve the Conservation Halton Hearing Procedures, Revised, September 26, 2019.**

Carried

5.3 Provincial Policy Statement Review – Proposed Policies (ERO # 019-0279)
CH File No.: PPO 058PPS - Comments
Report #: CHBD 09 19 14

CHBD 09 04 Moved by: Rob Burton
Seconded by: Joanne Di Miao

THAT the Conservation Halton Board of Directors **receives for information the staff report entitled "Provincial Policy Statement Review – Proposed Policies (ERO # 019-0279)".**

AND

THAT the Conservation Halton Board of Directors **approves the Halton Area Planning Partnership (HAPP) report and the CH staff comments specific to Section 3.1 – Natural Hazards and directs staff to include both submission to the Province on the Provincial Policy Statement Review – Proposed Policies (ERO # 019-0279).**

Carried

5.4 Tremaine Dundas (Evergreen) Scoped Subwatershed Study (2018) and Secondary Plan, City of Burlington
CH File No.: MPR 452
Report #: CHBD 09 19 07

CHBD 09 05 Moved by: Rory Nisan
Seconded by: Gordon Krantz

THAT the Conservation Halton Board of Directors **receives for information the staff report entitled "Tremaine Dundas (Evergreen) Scoped Subwatershed Study (2018) and Secondary Plan, City of Burlington";**

AND

THAT the Conservation Halton Board of **Directors endorses the Tremaine Dundas (Evergreen) Scoped Subwatershed Study (2018), specifically the management recommendations that relate to areas regulated by CH;**

AND

THAT the Conservation Halton Board of Directors **direct staff to send staff report entitled "Tremaine Dundas (Evergreen) Scoped Subwatershed Study (2018) and Secondary Plan, City of Burlington" to the City of Burlington and Region of Halton for information.**

Carried

5.5 Premier Gateway Phase 1B Employment Area Secondary Plan and Scoped

Subwatershed Study, Town of Halton Hills
CH File No.: MPR 654
Report #: CHBD 09 19 08

CHBD 09 06 Moved by: Rob Burton
Seconded by: Moya Johnson

THAT the Conservation Halton Board of Directors **receives for information the staff report entitled "Premier Gateway Phase 1B Employment Area Secondary Plan Study and Scoped Subwatershed Study, Town of Halton Hills";**

AND

THAT the Conservation Halton Board of Directors **endorses the Premier Gateway Phase 1B Employment Area Scoped Subwatershed Study, specifically the management recommendations that relate to areas regulated by CH;**

AND

THAT the Conservation Halton Board of Directors **directs staff to send staff report entitled "Premier Gateway Phase 1B Employment Area Secondary Plan Study and Scoped Subwatershed Study, Town of Halton Hills" to the Town of Halton Hills and Region of Halton for information.**

5.6 Budget Variance Report for the Period Ended July 31, 2019 and 2019 Projected Year End Forecast
Report #: CHBD 09 19 09

CHBD 09 07 Moved by: Rory Nisan
Seconded by: Rob Burton

THAT the Conservation Halton Board of Directors **receive for information the staff report dated September 26, 2019 on the Budget Variance Report for the period ended July 31, 2019 and 2019 Projected Year End Forecast;**

AND

That the Conservation Halton Board of Directors **approve transfers from the Conservation Areas capital reserve of up to $40,000 consisting of $25,000 for the completion of park master plans and $15,000 for park information technology infrastructure;**

AND

That the Conservation Halton Board of Directors **approve the closing of the $50,000 Channel Naturalization Study capital project.**

Carried

Chair noted that reports under 8.1 Other Business would be reviewed prior to moving In Camera.

8. Other Business

8.1 Re-Appointment of Members to the Conservation Halton Foundation Board of Directors
Report #: CHBD 09 19 18

CHBD 09 08 Moved by: Moya Johnson
Seconded by: Rory Nisan

THAT the Conservation Halton Board of Directors approve the re-appointment of the following individuals, as members to the Conservation Halton Foundation Board of Directors for a two-year term:

- Mr. Jim Sweetlove
- Ms. Suzanne Bevan

Carried

8.2 Appointment of Members to the Conservation Halton Foundation Board of Directors
Report #: CHBD 08 19 19

CHBD 09 09 Moved by: Jim Sweetlove
Seconded by: Moya Johnson

THAT the Conservation Halton Board of Directors approve the appointment of the following individuals, as members to the Conservation Halton Foundation Board of Directors for a two-year term:

- Adam van Koeverden
- Jane Wilcox
- Galen Naidoo Harris
- George Caines
- Catherine Mulvale
- Bryden Tait
- Ed Wells

Carried

7. CAO Verbal Update

Hassaan Basit introduced Lawrence Wagner, the new Senior Director, Corporate Services to the Board.

The CAO announced that Gene Matthews, Director, Parks & Operations will be leaving Conservation Halton and administration is working on a transition plan.

The CAO provided an update on recent events following the letter to the CA's from the MECP on August 16, 2019. CH sent a letter responding to this in September which was signed by the Chair and the Mayors from the four municipalities. Hassaan expressed his thanks to the Board for their input and support. MP Parm Gill, on behalf of the Province had met with Hassan and there will be a further meeting with MECP staff for consultation.

Kellie McCormack provided an update on the Reid Road Quarry at the request of Board Member, Rick DiLorenzo. CH staff are working collectively with Halton Region and the Town of Milton as part of a technical review committee to review the application to reopen the quarry and a joint response has been sent to the MNRF. CH will be providing a report for information at the October 24 Board Meeting.

7.1 CAO Mid Year update presentation.

6.0 In Camera

CHBD 09 10 Moved by: Jean Williams
Seconded by: Rob Burton

That the Conservation Board of Directors **convene In Camera**

Carried

6.1 Legal Matter
Report #: CHBD 09 19 15

6.2 Legal Matter
Report #: CHBD 09 19 16

6.3 Legal Matter
Report # CHBD 09 19 17

CHBD 09 11 Moved by: Jean Williams
Seconded by: Jim Sweetlove

That the Conservation Board of Directors reconvene in public forum.

Carried

9. Adjournment

CHBD 09 12 Moved by: Moya Johnson

That the meeting **be adjourned at 4:50 p.m.**

Carried

Conservation Halton

October 2019

TO: Conservation Halton Board of Directors

REPORT: # CHBD 10 19 01

FROM: Janelle Weppler, Associate Director, Engineering

DATE: October 24, 2019

SUBJECT: **Kelso Dam Update**

MEMO

This briefing memo is in response to the following resolutions that were made during the Conservation Halton Board of Directors meeting on April 28, 2016:

- The Conservation Halton Board of Directors **direct staff to provide monthly updates as to the status of Kelso Dam, including water levels, plume sightings, project progress and any remedial actions being undertaken;** and
- The Conservation Halton Board of Directors **direct staff to work with the Ministry of Natural Resources and Forestry, Halton Region and Hatch to expedite, to the extent possible, the permanent remedial measures required to mitigate the dam breach risk at the Kelso Dam.**

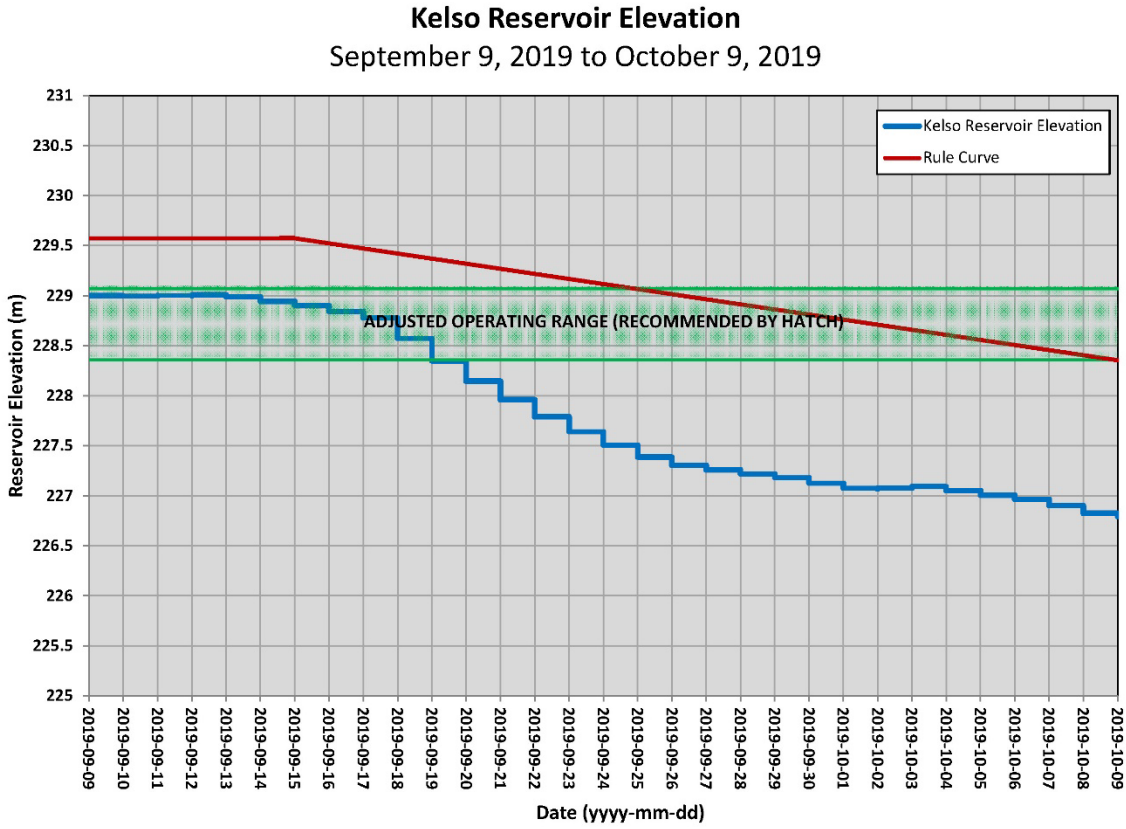
Kelso Reservoir Water Levels and Monitoring

Conservation Halton staff are monitoring and recording the conditions at the Kelso dam as follows:

- Automated and continuous piezometer (groundwater) readings within the earthen embankment with automated alarming of programmed thresholds;
- Ongoing monitoring onsite on as-needed basis relative to reservoir elevation, as recommended by Hatch; and
- Review of photographic records of the identified boil area taken every 30 minutes throughout the day (visible during daylight hours) has been discontinued given that the boil location within the channel is now dry to accommodate construction.

No visible observation of sedimentation from the boil area (e.g., no plume sightings) was found within the channel since June, 2015, up until dewatering to accommodate construction (late April, 2019).

The following chart illustrates the recorded water levels within the Kelso reservoir relative to the water level operating range recommended by Hatch.



Recent Work & Next Steps

Phase 2 of construction at the Kelso Dam continues with the operation of environmental and dewatering controls, engineering mitigation measures, completion of majority of reinforced concrete works and initiation of backfilling. Return of flows to the original channel and removal of temporary diversion channel is currently ongoing. Phase 2 of construction is scheduled for completion by the end of 2019 with some demobilization efforts and landscaping details to be completed in early 2020.

Conservation Halton

October 2019

TO:	Conservation Halton Board of Directors
REPORT: #	CHBD 10 19 02
FROM:	Barbara J. Veale, Director, Planning and Watershed Management
DATE:	October 24, 2019
SUBJECT:	**Proposed Revisions to the *Aggregate Resources Act*** **CH File No.: PPO 052**

MEMO

On September 20, 2019, the Ministry of Natural Resources and Forestry (MNRF) posted a Proposal Notice (ERO Number 019-0556) to the Environmental Registry entitled "Proposed Amendments to the *Aggregate Resources Act*". The MNRF deadline for comments is November 4, 2019.

The Province did not release specific details or changes to the *Aggregate Resources Act* (*ARA)*, rather a "Summary of Proposed Changes" was released along with some high-level proposed regulatory changes. Wording of the proposed amendments and regulations to the *ARA* has not been made public. Therefore, it is difficult to assess the implications until more details are released.

From a municipal perspective, the proposed changes would reduce municipal involvement in quarry applications and operations, particularly with regards to municipal input on site plan amendments and reduce the ability of the Minister and the Local Planning Appeal Tribunal (LPAT) to impose conditions on haul route agreements.

Aggregate operators can currently amend existing aggregate licenses to move extraction from above the water table to below the water table by making a request to the Minister of Natural Resources and Forestry. This does not involve a public process as it is not mandatory for the Minister to solicit comments and there is no right to object. The proposed change would provide opportunities for input from municipalities, conservation authorities, and the public which would trigger a hearing where experts can provide opinions regarding the suitability of extraction below the water table and the potential impacts to drinking water quality and quantity, resulting in enhanced protection of water resources, including drinking water sources.

Conservation Halton will not be forwarding comments to the Ministry of Natural Resources and Forestry (MNRF) but has provided comments to Conservation Ontario (CO) for consideration. CO is putting together a joint submission on behalf of all conservation authorities. In addition to the above comments, CH suggested to CO in their comments, that further discussion take place between MNRF and conservation authorities regarding the review of technical information submitted to MNRF as part of an ARA licence application.

Most conservation authorities have considerable professional expertise in identifying, assessing and mitigating potential impacts of aggregate extraction and the feasibility and effectiveness of rehabilitation plans. In Halton Region, these proposals tend to be highly complex, given their proximity to the Niagara Escarpment and other sensitive environmental features. Unless a planning application is required for an ARA permit, it is difficult to obtain compensation for the time and effort it takes to do an adequate review of the technical studies submitted with the application. Conservation authorities can assist MNRF staff in providing expert advice regarding environmental impacts, mitigation and rehabilitation strategies. In this regard, it may be beneficial for conservation authorities and MNRF to consider entering into an agreement (including compensation) for the review of these applications, where provincial resources are limited.

Conservation Halton

October 2019

TO: Conservation Halton Board of Directors

REPORT: # CHBD 10 19 03

FROM: Barbara J. Veale, Director, Planning and Watershed Management

DATE: October 24, 2019

SUBJECT: **Update on the Development of Conservation Halton Technical Submission Guidelines**

MEMO

Conservation Halton's (CH) Strategic Plan established targets and measures for a range of CH programs and services, including targets for planning and permit response times. In order to achieve these targets, the Planning & Watershed Management team has been streamlining plan review and permitting processes and service delivery.

CH staff are currently working on the first set of updated or new technical submission guidelines. These guidelines are intended to provide applicants with a clear and transparent understanding of CH's requirements and expectations for technical submissions. They provide direction and outline approaches that can be used to satisfy CH's permitting requirements and relevant Board-approved policies. The hope is that they will lead to better quality submissions, quicker and more consistent reviews, fewer resubmissions, and faster approval times. The guidelines are specific to CH and do not replace or supersede federal, provincial or municipal requirements.

In 2019, staff has advanced draft technical submission guidelines for:

- Landscaping and Rehabilitation Plans (update)
- Tree Preservation/Protection Plans (update)
- Stormwater Management Engineering Submissions (new)
- Slope Stability Assessments for Valleys (new)

Staff are also re-formatting the November 2014 Board-approved *"Requirements for completion of hydrogeological studies to facilitate Conservation Halton's reviews,"* to reflect a consistent style among all CH guidelines.

Throughout the summer of 2019, staff engaged in focused consultations with municipal partners, neighbouring conservation authorities, and select BILD-identified consultants. Valuable feedback was obtained through meetings, discussions, and written correspondence. Further focused consultations are scheduled for Fall 2019. Broader, public consultation will occur during the winter months. This will include posting the draft documents to CH's website for a comment period of at least 30 days. Staff anticipates that these guidelines will be finalized and brought forward to CH's Board of Directors by June 2020.

Conservation Halton

October 2019

REPORT TO: Conservation Halton Board of Directors

REPORT NO: # CHBD 10 19 04

FROM: Barbara J. Veale, Director, Planning & Watershed Management
905-336-1158 x. 2273

DATE: October 24, 2019

SUBJECT: ***Aggregate Resources Act*** **(ARA) Licence Application: Reid Road Reservoir Quarry, James Dick Construction Limited**
CH File No. PQ 18

Recommendation

THAT the Conservation Halton Board of Directors **receives for information the staff report entitled "Aggregate Resources Act (ARA) Licence Application: Reid Road Reservoir Quarry, James Dick Construction Limited";**

AND

THAT the Conservation Halton Board of Directors **directs staff to send the staff report entitled "Aggregate Resources Act (ARA) Licence Application: Reid Road Reservoir Quarry, James Dick Construction Limited" to the Region of Halton and Town of Milton for information.**

Report

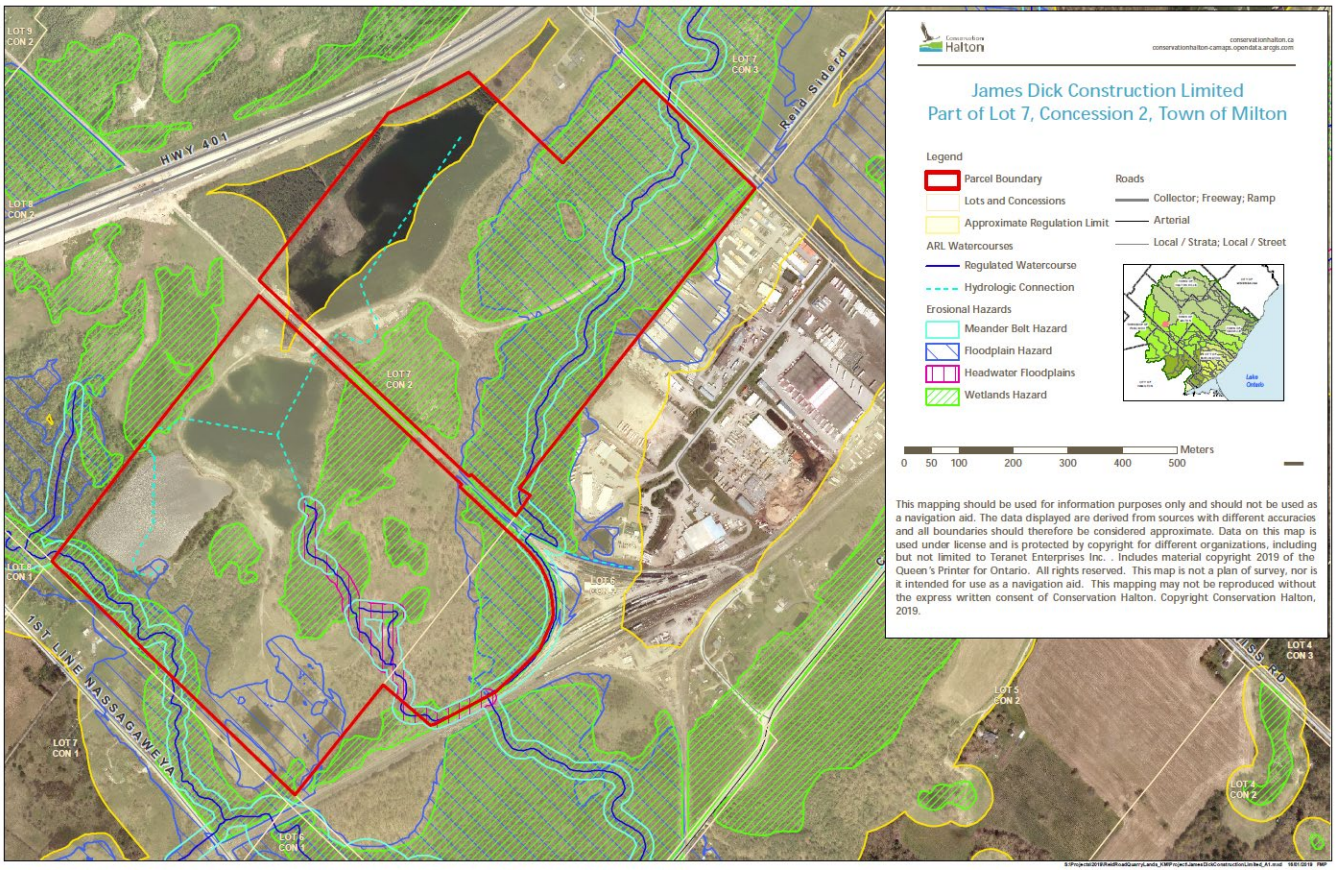
Executive Summary

- In August 2018, James Dick Construction Limited (JDCL) submitted an *Aggregate Resources Act* (ARA) Licence Application to the Ministry of Natural Resources and Forestry (MNRF) for a Category 1 & 2, Class A Licence for a pit and quarry below the water table. The subject site is located at 9210 Twiss Road in the Town of Milton and is referred to as 'Reid Road Reservoir Quarry'.
- A Joint Agency Review Team (JART) was established with staff from the Region of Halton, Town of Milton and CH. The JART has reviewed and responded to the ARA application in a comprehensive and co-ordinated manner, specifically on the following key areas: 1) hydrogeology and water resources; 2) natural heritage; 3) noise; 4) blasting; 5) air quality; and 6) Provincial, Regional planning policy and land use compatibility.
- CH filed a letter of objection to the ARA Application in September 2018 and a subsequent letter was filed in May 2019 to confirm CH's objector status. A comprehensive JART review and response was provided to the MNRF and JDCL in July 2019.
- JDCL is currently working to resolve some of the concerns raised by JART, other agencies and the public. A site visit and a series of technical working sessions with JART members and JDCL's consulting team is scheduled for a few dates in October 2019.

Background

In August 2018, Conservation Halton (CH) received a Notice of Application for a Licence pursuant to the *Aggregate Resources Act* (ARA) on behalf of James Dick Construction Limited (JDCL), to the Ministry of Natural Resources and Forestry (MNRF). The application is for a Category 1 & 2, Class A Licence for a pit and quarry below the water table on lands located at 9210 Twiss Road, Part of Lot 7, Concession 2, former Township of Nassagaweya in the Town of Milton (refer to Figure 1). CH owns land immediately adjacent to this site, south of Highway 401, east of the railway.

Figure 1: Proposed Location of Reid Road Reservoir Quarry, James Dick Construction Limited



The subject site is traversed by tributaries of Bronte Creek, as well as the associated floodplain. The site also contains sensitive groundwater features, Provincially Significant Wetlands and significant woodlands, as well as provides habitat for fish and wildlife.

The site was formerly known as the 'Campbellville Pit' and has been owned by several companies over the past 50 years, including Springbank Sand and Gravel and Woodlawn Guelph Ltd. From 1976 to 2008, various ARA licences existed until the licence was revoked by the MNRF. The property was purchased by JDCL in July 2016 and the proposal is now referred to as 'Reid Road Reservoir Quarry'.

The lands are located within the Greenbelt Plan Area and are designated 'Agricultural Area' in the Region's Official Plan (OP) and 'Mineral Resource Extraction Area' in the Town of Milton's OP. The

proposed extraction area is zoned Extractive Industrial (MX) according to the Town's Zoning By-Law. This zone permits both extractive uses and an aggregate recycling facility. Other portions of the property are located within the Greenlands A (GA) and Greenlands B (GB) zones.

The area proposed to be licensed for the pit and quarry is approximately 29.4 hectares (72.6 acres); however, the extraction area is proposed to be 25.7 hectares (63.5 acres). The maximum annual tonnage is proposed to be 990,000 tonnes per year. It is estimated that the lands contain approximately 12.54 million tonnes of limestone and 500,000 tonnes of sand and gravel resources. Dewatering is not proposed as part of this operation, as extraction will instead occur via underwater blasting.

ARA Licence Application

After the Notice of ARA Licence Application was posted in August 2018, all circulated agencies and the public had 45 days to provide a written notice of objection, including reasons for the objection, to both the Ministry and the applicant. CH staff filed a letter of objection on September 17, 2018 (Attachment 1). The basis of the objection was that the notification and consultation period did not allow for adequate review, given the scale, scope and potential implications of the application. CH raised high level concerns about the potential impacts to groundwater, surface water and natural heritage resources. The Region of Halton and Town of Milton issued similar letters of objection.

Following the submission of objection letters, staff from the Region of Halton, Town of Milton and CH initiated a Joint Agency Review Team (JART). The purpose of the JART is to share information and expertise, as well as to review and respond to the application and submitted materials in a comprehensive and co-ordinated manner. The JART's role is to steer and manage the technical review process, including co-ordinating all agency technical review efforts and responding to the public and government decision-makers on issues and concerns. The JART process reduces duplication, promotes better government decision-making, and provides the MNRF and applicant with a coordinated, streamlined response on the following key areas: 1) Hydrogeology and Water Resources; 2) Natural Heritage; 3) Noise; 4) Blasting; 5) Air Quality; and 6) Provincial, Regional Planning Policy and Land Use Compatibility.

In December 2018, JART members each received a letter from JDCL with a response to the filed objection letters. JART met with JDCL's planning consultant in January 2019 to discuss the application and some of the JART's preliminary concerns. Throughout the Winter and Spring of 2019 JART members undertook a detailed review of the application and supportive materials prepared by JDCL. CH staff engaged in numerous technical and planning sessions in order to prepare a coordinated and detailed response to the ARA application. In May 2019, CH staff submitted a letter to the MNRF and applicant to confirm CH's objector status, along with the Region and Town (Attachment 2). A comprehensive JART response was provided to the MNRF and JDCL in July 2019 (Attachment 3; cover letter attached; detailed comment table available upon request).

Among other things, some of the key issues outlined in the JART's July 2019 letter relate to insufficient/incomplete data and analysis, lack of integration among the studies/plans, provincial or local standards, protocols and policies not being met, improper identification/evaluation of potential impacts, inappropriate or insufficient mitigation measures, and inadequate monitoring plan or adaptive/contingency management plan.

It is CH staff's understanding that JDCL is currently working to resolve some of the concerns that have been raised by JART, other agencies and the public. The applicant is required to try to resolve the concerns of the objectors, if objections are received. However, if the objections cannot be resolved, the applicant is required to submit a list of the unresolved objections, documentation of its attempts to resolve the objections, recommendations for resolving the objections and a notice that a response is required within 20 days. Objectors are then provided with a further opportunity to respond to the applicant and the Ministry, providing their recommendations for resolution of all outstanding issues.

Select JART members travelled to Aurora in September 2019 to meet with MNRF staff to discuss the application and some of the broad concerns outlined in the July 2019 JART letter. A site visit and a series of technical working sessions with the JART and JDCL's consulting team are scheduled for a few dates in October 2019. CH staff will keep the Board apprised on the outcomes of these meetings.

MPP Parm Gill has requested that the Minister of Environment, Conservation, and Parks undertake an Environmental Assessment for the proposed Reid Road Reservoir Quarry, prior to the ARA License being considered. Staff is currently unaware of the status of this request.

Impact on Strategic Goals

This report supports the Metamorphosis strategic theme of Taking care of our growing communities The theme is supported by the objective to remain dedicated to ecosystem-based watershed planning that contributes to the development of sustainable rural, urban and suburban communities.

Financial Impact

There is no financial impact resulting from this report.

Signed & respectfully submitted:

Barbara Veale

Barbara Veale, Ph.D, MCIP, RPP
Director, Planning & Watershed Management

Approved for circulation:

Hassaan Basit
CAO/Secretary-Treasurer

FOR QUESTIONS ON CONTENT: Kellie McCormack, Senior Manager, Planning & Regulations
905-336-1158 ext. 2228, kmccormack@hrca.on.ca

Attachments (3)

Conservation Halton

905.336.1158
Fax: 905.336.7014
2596 Britannia Road West
Burlington, Ontario L7P 0G3
conservationhalton.ca

Protecting the Natural Environment from Lake to Escarpment

September 17, 2018

BY EMAIL AND MAIL

Mr. Greg Sweetnam
James Dick Construction Limited
144442 Highway 50
Bolton, ON
L7E 5T4

AND

Mr. Ben Keen
Ontario Ministry of Natural Resources and Forestry
50 Bloomington Road
Aurora, ON
L4G 0L8

Dear Mr. Sweetnam and Mr. Keen:

Re: Application under the *Aggregate Resources Act* for a Category 1 & 2, Class 'A' Licence (below water table)
James Dick Construction Limited - Reid Road Reservoir Quarry
Part of Lot 7, Concession 2 (Nassagaweya)
Town of Milton, Regional Municipality of Halton
Conservation Halton File No: PQ 18

Conservation Halton has reviewed the above-noted Aggregate Resources Act (ARA) application and objects to the application for the following reasons:

1. The 45 day notification and consultation period does not allow for adequate review, given the scale, scope and potential implications of the application. The submitted studies (e.g., Hydrogeological Assessment, Natural Environment Report) require detailed technical review and Conservation Halton's review is still ongoing.

2. Notwithstanding the above, based on Conservation Halton's preliminary review of the information submitted, a number of key issues and/or deficiencies have been identified, including, but not limited to the following:
    a. Insufficient detail has been provided to determine what impacts the proposed quarry may have on the surrounding surface water and groundwater resources, as well as natural heritage features, functions and areas including, but not limited to, the Bronte Creek and its tributaries, provincially significant wetlands, endangered species / species at risk, significant wildlife habitat, significant woodlands and fish habitat. Further, it is not clear whether the proposed mitigation measures will

adequately ensure that the features and their functions will not be impacted over the long term.

b. The study area(s) identified in the submitted reports may not be sufficient to fully assess potential impacts of the proposed quarry on surrounding features (e.g., entire complex of surrounding wetlands should be evaluated not just those within 120m of site).
c. Insufficient detail has been provided to determine that the proposal will not pose a threat to water quality. Further, the cumulative effects of multiple water takings in the subwatershed and the potential distribution of flows between the Bronte Creek and Sixteen Mile Creek watersheds has not been considered.
d. The submitted reports inadequately consider climate change / climate change scenarios.

3. Conservation Halton owns lands that are adjacent to the subject site. Potential impacts and mitigation measures to address any potential impacts on neighbouring properties, specifically Conservation Halton's properties, should be addressed.

4. Additional planning approvals to permit aggregate extractions on this site may be required. Further, it is not clear whether the proposed operation/extraction area or natural heritage features have been zoned appropriately.

5. The required review fee of $85,000.00 ($75,221.24 plus HST) for ARA applications, as per Conservation Halton's 2018 Fee Schedule, has not been received and is required prior to staff's review. Furthermore, please be advised that additional fees may be requested to cover any necessary technical peer reviews.

Conservation Halton is participating in the review of the proposal through the Region of Halton's Joint Agency Review Team (JART) process. The JART has agency representation from the Region of Halton, Town of Milton and Conservation Halton. Representation from the Province will be confirmed in the coming weeks. Additional comments will be provided through the JART review process.

Based on the reasons outlined above, Conservation Halton is of the opinion that the ARA application should not be approved.

We trust that these comments are of assistance. Should you have any questions, please contact the undersigned via email kmccormack@hrca.on.ca or phone 905-336-1158 ext. 2228.

Yours truly,

Kellie McCormack

Kellie McCormack, MA, MCIP, RPP
Senior Manager, Development Planning

Cc: Joe Nethery, Region of Halton
Barbara Koopmans, Town of Milton
Steven Strong, MNRF Aurora District
James Parkin, MHBC Planning

Conservation Halton

905.336.1158
Fax: 905.336.7014
2596 Britannia Road West
Burlington, Ontario L7P 0G3
conservationhalton.ca

Protecting the Natural Environment from Lake to Escarpment

May 15, 2019

BY EMAIL AND COURIER

Mr. Greg Sweetnam
James Dick Construction Limited
144442 Highway 50
Bolton, ON
L7E 5T4

AND

Mr. Ben Keen
Ontario Ministry of Natural Resources and Forestry
50 Bloomington Road
Aurora, ON
L4G 0L8

Dear Mr. Sweetnam and Mr. Keen:

Re: Application under the *Aggregate Resources Act* for a Category 1 & 2, Class 'A' Licence (below water table)
James Dick Construction Limited - Reid Road Reservoir Quarry
Part of Lot 7, Concession 2 (Nassagaweya)
Town of Milton, Regional Municipality of Halton
Conservation Halton File No: PQ 18

Conservation Halton has received and reviewed the letter dated April 19, 2019 from James Dick Construction Limited (JDCL) and the enclosed Objector Response Form.

This letter is to confirm that Conservation Halton wishes to maintain its objector status and that Conservation Halton continues to object to the approval of the above-referenced ARA Licence for a Category 1 and 2, Class A Licence, as proposed by JDCL.

As noted previously, Conservation Halton is participating in the review of the proposal through the Region of Halton's Joint Agency Review Team (JART) process with the Region of Halton and the Town of Milton. The collective knowledge base of the JART includes many years of aggregate review experience across a wide variety of disciplines, including several technical experts with local knowledge. Conservation Halton and its partner municipalities are working cooperatively so that we can provide the Ministry of Natural Resources and Forestry (MNRF) and JDCL with a comprehensive and coordinated set of comments.

The JART has significantly advanced its review of the application and associated studies and is working to finalize detailed comments. Once the comments are considered complete, the JART will provide them to the MNRF and JDCL and, shortly thereafter, will endeavor to arrange a series of meetings to discuss the comments.

Notwithstanding the above, outlined below are several high-level items that Conservation Halton has identified as matters that need to be resolved before the ARA application is approved. Conservation Halton reserves the right to raise additional issues through the JART response and/or once more information becomes available.

Provincial and local standards, protocols and policies

1. The ARA application and submitted studies should be consistent with current provincial or local standards, protocols and policies for natural heritage and water resources, including source water. The ARA Licence Application Natural Environment Report standards, current provincial guidance material (e.g., Natural Heritage Reference Manual) and the policies of the Greenbelt Plan should, among other items, be considered.

   In light of the above, natural heritage and water resources have not been adequately evaluated nor have the potential impacts of the proposed site activities been properly assessed. The proposed mitigation measures may not be justified or sufficient to mitigate potential negative impacts.

   Conservation Halton can point to several examples in the application and associated studies where current provincial standards, protocols and policies have not been met. For example, the Significant Wildlife Habitat Technical Guide (2000) was followed rather than the Significant Wildlife Habitat Ecoregion Criteria Schedule 6E (2015). Further, the application has not considered Conservation Halton's regulated allowance (i.e., required 30 m buffer or setback) from the limit of the Provincially Significant Wetlands. Finally, there is a lack of discussion on the potential negative impacts of proposed site activities on the quantity or quality of drinking water sources.

Limited data, analyses and justification

2. There is insufficient data, incomplete analyses and/or a lack of justification to support a number of the proposed targets, measures or conclusions in the submitted reports. Examples include, but are not limited to, the following:
   - No surface flow data was provided (either from monitoring or through modelling) and the impacts on surface water were not discussed in the submitted reports.
   - An analysis of the impact of surface water being directed to groundwater fed systems was not provided.
   - The groundwater modelling report does not identify how the buffers and trenches were modelled. Borehole drilling shows that there is up to 10 metres of sands and gravels, which suggests that it may be challenging to avoid seepage back into the ponds.
   - No justification was provided to support the proposed drawdown in the wetlands and surrounding features.

3. In addition to the above, there a number of examples in the submitted reports where the targets may not be appropriate to demonstrate that the works or measures will not pose an unacceptable risk or impact to the natural features or their functions or to water quality. For example, a 10% inundation threshold is proposed for all wetlands. It is critical that a

threshold/target be established for each wetland based on its specific features/functions (i.e., those wetlands that dry up regularly should have a different threshold than the ones that stay wet).

Comprehensive monitoring, mitigation and contingency plans

4. The baseline monitoring data is limited (i.e., less than 2 years of data); therefore, it is challenging to substantiate many of the conclusions of the reports, particularly the proposed mitigation measures. Further, there is a lack of discussion about the proposed monitoring program moving forward (i.e., during operation) or about the contingency measures that are proposed to address issues that arise. Examples include, but are not limited to, the following:
    - The proposed groundwater monitoring program was not integrated with ecological, stream or groundwater thresholds.
    - Private wells were not included in the proposed water quality or quantity monitoring program but should be monitored at minimum on an annual basis.
    - There is no discussion in the Natural Environment report about monitoring either during operation or post-extraction.

5. An adaptive management plan, or a comprehensive monitoring program, which includes a mitigation and contingency plan, is strongly recommended. An adaptive management plan should be developed in consultation with the agencies. The plan should document triggers, response protocol, operational procedures and proposed measures to address issues, including the protection of the natural environment. The JART has a number of examples of how a plan could be developed, which can be shared with the proponent.

Integration of studies

6. A key concern of Conservation Halton is that the studies and plans are not integrated. There are numerous instances where an action is proposed in one report but the impact of that action has not been assessed in another report. Examples include, but are not limited to, the following:
    - The Noise Impact Study states that acoustic berms will be installed onsite. However, there is no discussion in the noise impact study on the any potential impacts to drainage patterns or natural features and their functions resulting from these additions. There is limited to no discussion of potential impacts in the other related reports either.
    - The Blast report states that "the generation of suspended solids within the watercourse as a result of the blasting activities will be negligible and grossly subordinated to suspended solids generated as a result of spring runoff and rain activity." However, there is no data in the Blast report or the Natural Environment report to support this claim.
    - Although there is some discussion in the Groundwater Report that impacts on private well water quality are not expected, there is no discussion on the possible ecological receptors and potential negative impacts.

7. Furthermore, overarching environmental objectives should be established, beyond those that have been presented in the Environmental report. The objectives should integrate all disciplines and be considered as part of each study. Further, the objectives should reflect provincial policies and direction and should be developed in consultation with relevant agencies before advancing.

Delineation/staking of natural features

8. A site visit should be arranged with Conservation Halton, MNRF and Regional staff to stake the limits of a number of natural features on the site (e.g., wetlands, top of bank, woodlands). This will help to establish the limit of the feature but also help to identify where buffers/setback should be applied.

Climate change

9. The submitted reports inadequately consider the scenarios that are most likely anticipated as a result of climate change (e.g., more intense rain storms, warmer winter with more rain, more extreme temperatures in summer, more drought periods). Although a 25 year simulation period was used for the groundwater model, no specific climate change scenarios were used to assess potential impacts relative to the proposed works/operations.

Impacts to surrounding lands

10. The submitted reports inadequately consider the potential impacts of the proposed quarry operations on surrounding lands/neighbours. For example, water levels are proposed to be raised in Wetland P5 by 0.5 metres, which cannot be supported as most of P5 is not on lands owned by the proponent.

Although Conservation Halton received a response from JDCL in December 2018, a number of Conservation Halton's concerns have yet to be addressed. Until the above matters have been fully addressed, in addition to the forthcoming JART detailed comments, Conservation Halton continues to object to the application on the basis that it has not had sufficient regard to the matters listed in s. 12(1) of the *Aggregate Resources Act*, does not constitute good planning, and is not in the public interest.

We trust that these comments are of assistance. Should you have any questions, please contact the undersigned via email kmccormack@hrca.on.ca or phone 905-336-1158 ext. 2228.

Sincerely,

Kellie McCormack

Kellie McCormack, MA, RPP, MCIP
Senior Manager, Planning & Regulations

cc: Joe Nethery, Region of Halton
Stirling Todd, Town of Milton
Steven Strong, MNRF
Aurora McAllister, MECP
James Parkin, MHBC Planning

July 31, 2019

Gregory Sweetnam
Executive Vice-President
James Dick Construction Limited
14442 Regional Road 50, PO Box 470
Bolton, ON L7E 5T4

Ben Keen
Aggregate Technical Specialist
Ministry of Natural Resources and Forestry
50 Bloomington Road
Aurora, ON L4G 0L8

RE: Application under the *Aggregate Resources Act* for a Category 1 & 2, Class 'A' Licence (below water table)
James Dick Construction Limited ('JDCL'), Reid Road Reservoir Quarry Proposal - Part of Lot 7, Concession 2 (Nassagaweya)
Detailed JART Comments from the Town of Milton, Regional Municipality of Halton, and Conservation Halton

Dear Messrs. Sweetnam and Keen:

Further to the letters of objection submitted by the Town of Milton, the Regional Municipality of Halton, and Conservation Halton, please find attached the detailed technical comments promised by the joint agency review team (JART). As noted in our May 2019 Letters of Objection (Reply Letters), a JART approach has been initiated to ensure that materials submitted in support of the Reid Road Reservoir Quarry (RRRQ) application are reviewed in a co-ordinated manner. This is the first comprehensive review of the technical reports by the JART and is intended to elaborate on the letters of objection filed by each of our respective agencies.

In preparing the technical comments, a number of key themes emerge upon review of the various reports:

1. The studies and plans for the RRRQ are not fully aligned. There are numerous instances where a statement or action is proposed in one report, but the impact of that statement or action has not been assessed or acknowledged in another report. The application and associated studies need to be supported by an integrative and comprehensive set of technical reports and plans, including any associated recommendations, as well as monitoring and contingency measures.
2. There are several examples in the application and submitted studies where current provincial standards, protocols and policies have not been met. As a result, the potential impacts may not have been properly identified or evaluated, and the mitigation measures as currently proposed by the applicant may not be appropriate or sufficient. The supportive background studies need to be updated to reflect the current Provincial materials or protocols to ensure all issues are appropriately addressed and that the proposed quarry application meets Provincial, Regional, and local policy and all applicable standards.
3. There is insufficient baseline data, incomplete analyses or a lack of justification to support a number of the proposed targets, measures and conclusions as submitted in a number of reports. The implications of this baseline issue have significant ramifications on the accuracy, completeness and recommendations provided in the reports.

Beyond these quality of submission issues, the detailed comments provided by the agencies are generally categorized below to align with s. 12(1) tests of the *Aggregate Resources Act* for Ministerial consideration:

a) The potential effects of the operation of the proposed pit and quarry on the environment have not been adequately addressed.

1. It is difficult to ascertain the potential effects given the insufficiency of baseline data and the incomplete analyses leading to improper justification of conclusions, proposed targets and measures contained in a number of reports. For example, the ecological and hydrological needs of each wetland and watercourse have not been adequately assessed. Consequently, the potential impact to wetland features, plant species, aquatic and wildlife species, and adjacent lands cannot be determined, and require further and integrative assessment.
2. The environmental objectives presented in the environmental report should reflect all disciplines and be considered as part of each study. Further, the objectives should reflect current provincial direction, policies, and protocols for natural

heritage as this is key for identifying potential impact and appropriateness of proposed mitigation measures and should be developed in consultation with relevant agencies before advancing. Of particular note, water quality is missing from environmental objectives.

3. It is unclear how the proposed mitigation and/or contingency measures would mitigate impacts on the natural environment. There should be an ecological justification for any of the proposed mitigation.
4. The proposed process for demonstrating efficacy of mitigation measures pre-extraction is insufficient.
5. The monitoring program for during and post extraction is inadequate. No adjustment mechanism is provided in the monitoring and mitigation program, should the natural features not respond to the proposed mitigation measures.
6. An adaptive management plan, or a comprehensive monitoring program, which includes a mitigation and contingency plan, is needed and should be developed in consultation with the agencies. The plan should document triggers/targets, response protocol, operational procedures and proposed measures to address issues, including the protection of the natural environment.
7. A site visit should be arranged with Regional, Town, Conservation Halton, MNRF and MECP staff to stake the limits of a number of natural features on the site (e.g., wetlands, top of bank, woodlands). This will help to establish the limit of the features but also help to identify where buffers/setback should be applied.

b) The potential effects of the operation of the proposed pit and quarry on nearby communities have not been adequately addressed.

1. The submitted reports inadequately consider the potential impacts of the proposed quarry operations on surrounding lands uses and neighbouring communities. As an example, more work is required by the applicant to ensure the Noise Impact Study has identified all sensitive receptors within proximity of the proposed quarry.
2. The Blast Impact Assessment should be updated to assess “worst case” overpressure scenarios, particularly in the context of the “cumulative length of time” argument proposed, in order to identify any potential mitigation measures for inclusion on the site plan.
3. Assumptions made and the methodologies used need to be revisited for the Air Quality Assessment completed for the project. The effect of these incorrect assumptions has the potential to underestimate air quality emissions from the

proposed quarry, and the combined effect of those emissions in the local area needs to be confirmed.

4. There are significant issues with the assumptions made and the methodology used in the Noise Impact Study conducted for the project. As a result, the potential noise impact of the quarry is underestimated.
5. Water levels in Wetland P5 are proposed to be raised by 0.5 metres, which cannot be supported as most of P5 is located on lands not owned by the proponent.
6. The impacts from the increase number of trucks on Reid Side Road and the 401/ Guelph Line interchange will be significant and these facilities are not currently designed to accommodate the traffic generated by the proposed quarry.

c) Comments provided by a municipality in which the site is located have not been adequately addressed.

1. Halton Region and the Town of Milton have each submitted Letters of Objection and Reply letters on the quarry application. The applicant has not adequately addressed the issues raised to date. The attached table provides further clarity and detail on the significance of these deficiencies.

d) The suitability of progressive and final rehabilitation plans have not been adequately addressed.

1. There are inconsistencies in the submitted Site Plan and the Site Plan may be subject to significant changes based on input received through the ARA review process
2. Actions for long-term closure are not adequately addressed. There is no reference to, or discussion on, need or structure of the post closure monitoring and/or contingency plan.
3. As indicated in a), the proposed monitoring program for during and post extraction is inadequate. No adjustment mechanism is provided in the monitoring and mitigation program, should features not respond to the proposed mitigation measures.
4. There is no indication of how rehabilitation proposed occurs in accordance with MNRF best practices, including the 2006 Aggregate Resources Program Policies and Procedures.

e) The potential effects on ground and surface water resources, including drinking water sources, have not been adequately addressed.

1. Potential impacts on water resources and water supplies have not been properly evaluated. Private wells were not included in the proposed water quality or quantity monitoring program and should be part of a baseline and long-term monitoring plan. Groundwater quality impacts due to proposed operations were not fully considered or addressed. Proposed mitigation measures may not be sufficient to protect water resources and water supplies.
2. The proposed annual extraction limit is unclear, as the limit proposed in each report/plan differs. As such, these inconsistencies put the proposed water management and mitigation system in question.
3. Proper identification of the potential effects depends on and requires accurate and complete baseline data and related analyses, feature-by-feature groundwater modelling, and more fulsome study of groundwater-surface water interaction.
4. As indicated in a) and d), the monitoring program for during and post extraction is inadequate. No adjustment mechanism is provided in the monitoring and mitigation program, should the natural features not respond to the proposed mitigation measures.
5. As indicated in a), an adaptive management plan or a comprehensive monitoring program, which includes a mitigation and contingency plan, is needed and should be developed in consultation with the agencies.

f) Planning and land use considerations have not been adequately addressed.

1. The agencies disagree with MHBC's opinion that the Provincial Policy Statement and Greenbelt Plan are not relevant to the review of this application. The ARA Licence Application requirements, Natural Environment Report Standards and current provincial guidance material (e.g., MNRF policies and procedures, Natural Heritage Reference Manual) indicate that the Provincial Policy Statement and the policies of the Greenbelt Plan need to be considered. This consideration needs to be demonstrated and documented.
2. The proposed use does not conform to the Region's Official Plan.
3. It is unclear whether all lands proposed for extraction are zoned for the proposed use. It should be demonstrated that all components of the use can be undertaken within the lands currently zoned Extractive Industrial (MX).

g) The potential effects on main haulage routes and proposed truck traffic to and from the site have not been adequately addressed.

1. No information was provided by the applicant to confirm the accuracy of load estimates of 33 tonnes per truck, and to verify assumptions around site activity based on a proxy site (Erin Pit).
2. The existing transportation infrastructure is not currently designed to accommodate the proposed quarry generate truck traffic.
3. A geotechnical investigation is required to examine and address the suitability of Reid Side Road to accommodate the anticipated traffic volumes, vehicle weights, and loading associated with the proposed quarry.

h) Questions related to the quantity of aggregate on the site have not been adequately addressed.

1. There are discrepancies within the reports on the amount of aggregate to be extracted annually. The reports and recommendations should be based upon the same figure—the maximum proposed amount of extraction, being 990,000 tonnes per annum.

i) Other matters as appropriate have not been adequately addressed.

1. It is the agencies' understanding that the previous licence was revoked by the Ministry over a decade ago. Matters relating to any outstanding remedial or rehabilitation works need to be addressed.

Conclusion

As indicated in the individual letters submitted by Halton Region, the Town of Milton, and Conservation Halton, the agencies continue to object to the proposed RRRQ application in its present form as the applicant has not had sufficient regard to the matters listed in s. 12(1) of the *Aggregate Resources Act*. The application does not constitute good planning and is not in the public interest. Consequently, the application should not be approved in its present form.

Finalization of comments and notes on the site plan should not occur before the comments provided in the attached table have been addressed to the JART agencies' satisfaction.

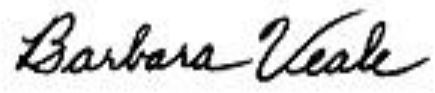
Once you have had time to review this letter and the attached comment table, we would like to meet to discuss our comments and any questions you may have. Joe Nethery from Halton Region should be the first point of contact for JDCL for coordinating the scheduling of these meetings.

If there are further questions, please contact Halton Region's project lead, Joe Nethery (joe.nethery@halton.ca, 905-825-6000, ext.3035).

Sincerely,

Curt Benson, MCIP, RPP
Director, Planning Services and Chief Planning Official
Halton Region

Barb Koopmans, MCIP, RPP
Commissioner, Planning & Development
Town of Milton



Barb Veale, MCIP, RPP
Director, Planning and Watershed Management
Conservation Halton

cc: James Parkin, MHBC (by email)
Parm Gill, MPP for Milton (by email and mail)

Encl.

Conservation Halton

October 2019

REPORT TO: Conservation Halton Board of Directors

REPORT NO: # CHBD 10 19 05

FROM: Lawrence Wagner, Senior Director Corporate Services

DATE: October 24, 2019

SUBJECT: **Investing in Canada Infrastructure Program-Grant Funding requests**

Recommendation

THAT the Conservation Halton Board of Directors **receives for information the staff presentation (to be presented at the CH Board meeting on October 24, 2019) on the Federal/Provincial Infrastructure Grant Funding business case(s);**

AND

THAT the Conservation Halton Board of Directors **approves Conservation Halton staff to apply for Investing in Canada Infrastructure Program funding to support both Crawford Lake and Kelso Glen Eden projects;**

AND

THAT the Conservation Halton Board of Directors **approves the use of developer contribution funds collected by the Halton Region to fund eligible project expenses.**

Report

The Investing in Canada Infrastructure Program (Federal/Provincial Grant) offers Conservation Halton a unique opportunity to leverage external funding to advance the organizations goals. A combined $76.4M is available if we leverage both the Federal/Provincial grants ($56.4M) and developer contribution funds (approx. $20M).

Staff have prepared a presentation that outlines the business cases for the Crawford Lake and Kelso/Glen Eden projects, and this will be brought to the Board at the meeting on October 24, 2019.

Impact on Strategic Goals

This report supports the Metamorphosis strategic theme of Creating opportunities to connect with nature.

This project aligns with multiple objectives:

Sustainability will be evident by effectively providing opportunities for Conservation Halton to enter into new revenue streams with the addition of the larger facilities as well as execute other priorities identified in park master plans.

Education & Communication by increasing interior space that will enable Conservation Halton to provide more educational programming sessions during operating hours as well as allow for more participants within the community to utilize the new spaces, facilities and infrastructure at their own pace.

Recreation & Tourism by providing opportunities to improve customer experience by completing upgrades identified in Conservation Halton's park Master Plans for Crawford Lake and Kelso. These improvements may attract more visitors to the park as well as provide incentives for new annual memberships.

Customer Satisfaction will be improved due to the upgrades that were identified in the Master Plans as requiring improvements to enhance experience.

Digital Transformation can be integrated into these projects to build a better digital experience for its customers, streamline operational processes and provide more information and capabilities to park visitors. The projects identified in this funding request will give the opportunity to Conservation Halton to lead the digital transformation within its park system as well as within industry.

Financial Impact

There is no financial impact on Conservation Halton for these projects. Funding for all eligible project costs will come from 2 sources 1) Federal/Provincial Grant funding and 2) Developer Contribution funds (up to $20M) if we are successful in our grant applications.

Signed & respectfully submitted:

Meghan Hunter
Manager, Risk and Lands

Approved for circulation:

Hassaan Basit
CAO/Secretary-Treasurer

Lawrence Wagner
Senior Director, Corporate Services

FOR QUESTIONS ON CONTENT: Lawrence Wagner, Senior Director Corporate Services; 905-336-1158, ext. 2250; lwagner@hrca.on.ca

Conservation Halton

October 2019

REPORT TO: Conservation Halton Board of Directors

REPORT NO: # CHBD 10 19 06

FROM: Marnie Piggot, Director Finance

DATE: October 24, 2019

SUBJECT: **Facilities Asset Management Plan**

Recommendation

THAT the Conservation Halton Board of Directors **approves the Facilities Asset Management Plan attached to the staff report dated October 24, 2019.**

Executive Summary

With the approval of the 2017 Budget, Region of Halton Council requested Conservation Halton's Board of Directors to prepare an Asset Management Plan. Conservation Halton staff have been working towards meeting this request with the Asset Management Plan being completed in phases.

The first phase focussed on dams and channels and was completed and approved by the Conservation Halton Board of Directors in 2017. Dams and channels assets represent the largest category of amortized assets with net book value of $10.9 million at December 31, 2018 accounting for 36% of total net book value excluding land of $30.1 million. The dams and channels are also considered the largest area of risk.

The second and current phase of the Asset Management Plan process considered all Conservation Halton facilities, the second largest group of amortized assets at 34% of net book value of $10.3 million. The remaining amortized assets will be included in the third phase to be completed in 2020 to develop a comprehensive Asset Management Plan.

The Asset Management Plans are being developed following the requirements established for municipalities through the Province's guide *Building Together – Guide for Municipal Asset Management Plans.*

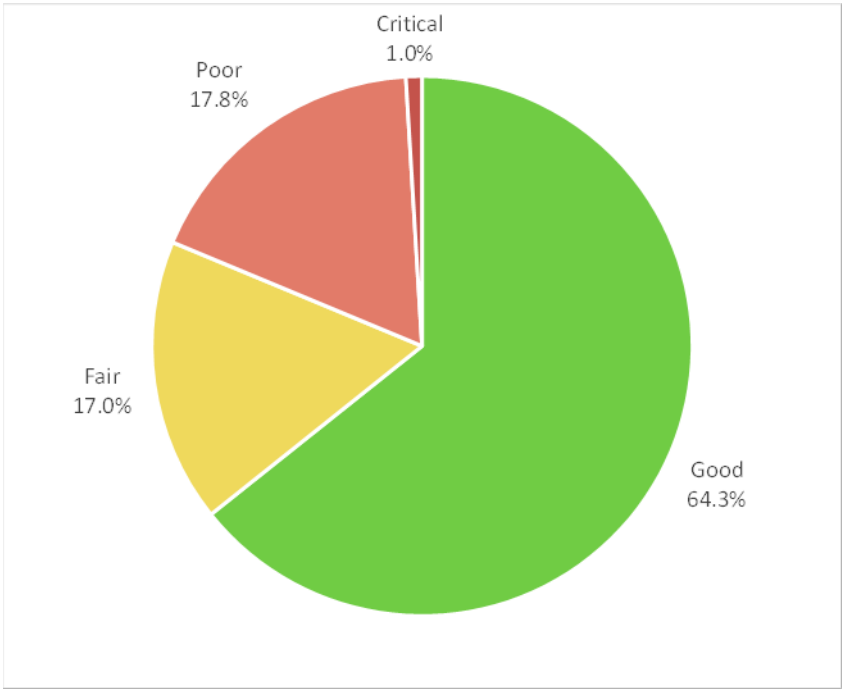
The Facilities Asset Management Plan outlines the recommended amounts to financially sustain Conservation Halton's 136 facilities over a forecast period of 20 years based on facility condition assessment reports. According to the Facilities Asset Management Plan, the State of Good Repair Levy for Watershed Management and Support Services (WMSS) facilities would need to be increased to $159,000 from the $100,000 proposed in the 2020 budget and capital forecast. Phasing in the increase to the State of Good Repair Levy in future budgets will be considered to minimize the impact on municipal funding increases.

Report

The attached Facilities Asset Management Plan prepared by Watson and Conservation Halton staff contains details on Levels of Service, Lifecycle Management Strategy and Financial Strategy for a total of 136 Conservation Halton facilities. The goal of the Facilities Asset Management Plan is to assist Conservation Halton ensure that its facilities continue to support the needs of visitors and staff in a financially sustainable manner.

The replacement cost in 2019 dollars for the 136 facilities is $25.8 million. The Facilities Asset Management Plan covers a forecast period of 20 years with information partially provided by a facility condition assessment completed by McIntosh Perry for 40 facilities in 2018. The 40 facilities assessed represent approximately 74% of the total replacement value.

An analysis of the condition of Conservation Halton facilities was done based on the total facility repair or upgrade needs to the current replacement costs from the Facility Condition Assessment reports and staff assessments. Four rating categories were used – Good, Fair, Poor and Critical. Based on the costs and replacement values the facilities condition ratings are distributed as follows:



Facilities noted with a facility condition index rating of Critical are located at the Operations Centre. A space capacity and feasibility study including the overall Operations Centre facilities is included as a capital project in the 2020 budget.

Levels of Service

Conservation Halton facilities deliver a variety of services that meet different needs of park visitors and staff. Levels of services help to clarify service level targets that inform asset management decisions for different types of spaces.

In order to develop levels of service, the types of functional spaces and concerns of users of the space were first defined. Seven types of functional spaces were identified and are listed in Table 2-2 of the Facilities Asset Management Plan as follows:

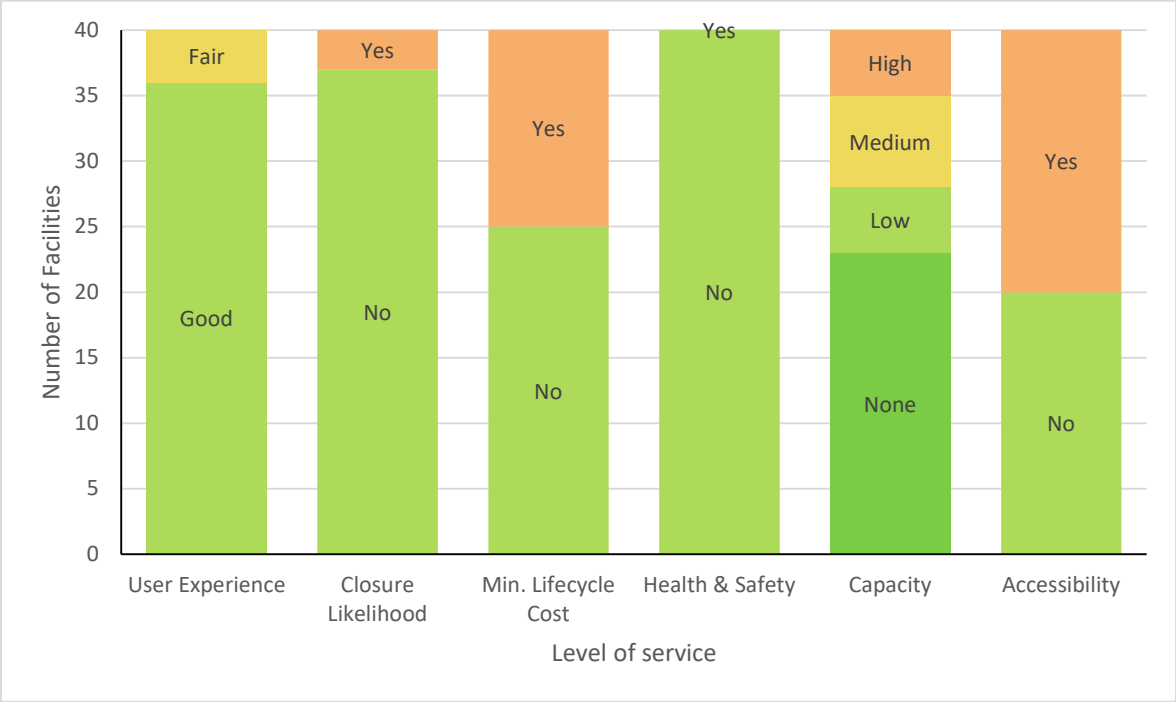
1. Washrooms
2. Office and presentation space
3. Retail and gathering space
4. Food preparation and eating space
5. Operations space
6. Animal care and presentation space
7. Storage.

Based on the types of spaces and user concerns identified, levels of service were developed for facilities that are defined in the report in Table 2-12 as follows:

1. User experience
2. Likelihood of temporary closure
3. Minimize lifecycle cost
4. Health & safety
5. Capacity
6. Accessibility.

Fifteen user concerns related to the facilities were identified ranging from Appropriate Lighting to Accessibility. The user concerns were mapped to the six levels of service. All user concerns are covered by at least one of the level of service categories.

The Asset Management Plan provides a summary of the Levels of Service analysis in Figure-2.



Overall Conservation Halton facilities are doing quite well according to the levels of service analysis and ratings provided. Many of the buildings have accessibility issues. A third of the buildings have components in poor condition associated with minimizing lifecycle cost. Issues were also identified with capacity that will need to be addressed in future master planning.

Lifecycle Management Strategy

The lifecycle management strategy identifies the repairs or renewal efforts that are required throughout the life of the facilities so Conservation Halton can meet the levels of service targets established. The facility condition assessments provided by McIntosh Perry and staff were the main inputs to lifecycle planning.

The facility condition assessments included a detailed plan for facility component replacements based on current condition and typical intervals for repairs or renewal. The Facilities Asset Management Plan recommends that facility condition assessments be completed at least every five years. The 2020 budget and forecast includes the updating of the Asset Management Plan every five years which will include the assessing the condition of assets through staff or external consultants as needed.

Financial Strategy

The Facilities Asset Management Plan provides the financing strategy that would fund the estimated lifecycle management repair or renewal activities based on current facilities. The plan does not incorporate the costs associated with growth related capital. The financing strategy was developed for a twenty-year forecast period.

The financing strategy forecast in Appendix E of the plan was segregated into Conservation Halton's two budget categories established in its Budget Principles, Watershed Management and Support Services (WMSS) and the Conservation Areas, according to the funding sources for these programs. The WMSS program receives some municipal funding. The Conservation Areas recreation program generate park annual operating surpluses that are derived through fees charged to park visitors. Park operating surpluses fund the Conservation Area capital reserve used to fund park capital project expenditures.

The capital expenditures provided in Appendix E are projected for a twenty-year forecast period from 2020. The amounts reported on Appendix E under the WMSS program for the ten-year budget period from 2020 to 2029 totals approximately $1.5 million. Based on Appendix E forecast expenditures, the contribution to the WMSS Building reserve should be $159,000 in 2020 and increase annually with inflation.

In the 2019 budget $75,000 was included as the State of Good Repair (SOGR) levy as a contribution to the Building Reserve for WMSS facilities. This amount is proposed to increase by $25,000 to $100,000 in the 2020 budget.

The capital expenditures included in the ten-year period in the 2020 budget and forecast to 2029 are based on priority needs identified by staff and total approximately $858,000. This amount is significantly less than the $1.5 million identified above included in the Facilities Asset Management Plan based on facility condition assessments Some facility condition assessment expenses for the Operations Centre buildings have not been included in the 2020 budget and forecast pending a space capacity/feasibility study planned in 2020 that will include this location. Conservation Halton staff will be working towards further aligning the repair and renewal needs in the facility condition assessment report with the budget capital forecast and the State of Good Repair Levy reserve contribution amount in the 2021 budget in conjunction with this review.

The 2020 budget State of Good Repair levy of $100,000 for facilities has been submitted to the Region of Halton and discussions have occurred with Halton Region staff based on this amount. The SOGR levy contribution to the Building Reserve of $100,000 is sufficient to meet the SOGR expenditures included in the 2020 budget and forecast. Based on the discussions with Halton Region staff, Conservation Halton staff will be recommending in the 2019 year-end report the establishing of a separate reserve to fund State of Good Repair facility expenses to segregate building improvements related to growth and master plan initiatives.

For the Conservation Areas, the total estimated contribution to the park reserves should be approximately $1.4 million in 2020 including $447,485 for facilities that would increase with inflation annually. The 2020 budget includes an estimated operating surplus for the parks of $968,411. The 2018 year-end surplus for the parks was approximately $1,128,000. The $1.4 million is based on the park capital forecast amounts included in Appendix E that also includes estimated repair and renewal needs for other assets such as Glen Eden machinery and equipment. Based on the capital forecast the contribution to the parks reserve will catch up with estimated needs by 2024. The parks capital reserve contribution amount of $1.4 million may increase with the completion of phase 3 of the Asset Management Plan.

Impact on Strategic Goals

This report supports the Metamorphosis strategic theme of Striving for service excellence and efficiency. This theme is supported by the objective to provide clear financial data and analysis to support informed strategic and operational decision-making for budget development and long-term planning.

Financial Impact

There is no financial impact for the 2020 budget as a result Facilities Asset Management Plan. Reserve contributions funded by State of Good Repair municipal funding for WMSS facilities and park annual operating surpluses for Conservation Area facilities will be considered in the preparation of future budgets to ensure reserve levels are sufficient to fund facility lifecyle management repair and renewal activities.

Signed & respectfully submitted:

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Director, Finance

Approved for circulation:

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Facilities Asset Management Plan

Conservation Halton

October 9, 2019

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1. Introduction

1.1 Overview

Conservation Halton's vision is to sustain a healthy watershed with clean streams, vigorous forests, abundant green space and balanced growth that results in strong livable communities. Conservation Halton has three main areas of focus: Water resource management, forest resource management, and lifelong education and recreation. This report focuses on assets that support the third objective: lifelong education and recreation.

Conservation Halton's lifelong education and recreation programs are primarily carried out in its eight parks: Rattlesnake Point, Hilton Falls, Mount Nemo, Kelso, Crawford Lake, Mountsberg, Robert Edmondson, and Glen Eden. There is a wide variety of facilities in these parks to serve visitors and support the work of Conservation Halton staff. Examples of facilities used by visitors include the chalet at Glen Eden, visitor centres, and picnic shelters. Examples for Conservation Halton staff include offices, workshops and storage sheds.

For park facilities to meet the needs of visitors and park staff, they need to be actively maintained. Surfaces exposed to the elements degrade over time and need to be replaced. Day-to-day wear and tear affects the functionality and appearance of interior spaces. Even facility components not exposed to obvious stress slowly degrade over time as they age. Conservation Halton needs to have a strategy for how to manage the replacement of facility components that ensures the facilities will continue to support the needs of visitors and staff. This is the purpose of this facilities asset management plan.

The main objective when developing a facilities asset management plan is to use the organization's best available information to develop a comprehensive long-term plan for facilities. The plan is intended to be a tool for staff to use during various decision-making processes, including the annual budgeting process and working with other stakeholders. In particular, the plan will help Conservation Halton work with municipalities located in the watershed that provide financial support, Halton Region being the largest municipal funder. In addition, the plan should provide a sufficiently documented framework that will enable continual improvement and updates of the plan, to ensure its relevancy over the long term. Ultimately, the goal is for Conservation

Halton to be able to manage its facilities in a manner that will support the sustainable provision of services to park visitors.

Watson & Associates Economists Ltd. (Watson) was retained by Conservation Halton to develop an asset management plan for its facilities. This plan will serve as a road map for sustainable infrastructure planning going forward. Through the implementation of the asset management plan, Conservation Halton's practice should evolve to provide services at levels proposed within this document. Moreover, facilities should be maintained at condition levels that provide a safe and functional environment for visitors and staff. Therefore, the asset management plan and the progress with respect to its implementation will be evaluated based on Conservation Halton's ability to meet these goals and objectives.

This facilities asset management plan is Phase 2 of Conservation Halton's three-phase strategy to develop a comprehensive asset management plan. The first phase for dams and channels has been completed. The remaining assets will be covered in Phase 3. For clarity, the analysis of roads and parking lots has been deferred to Phase 3.

1.2 Asset Management Plan Development

The asset management plan was developed using a program that leverages staff input in identifying current levels of service and proposed asset management strategies.

The development of this asset management plan is based on the steps summarized below:

1. Compile available information pertaining to Conservation Halton's capital assets to be included in the plan, including attributes such as size, material type, useful life, age, and current valuation. Update the current valuation, where required, using benchmark costing data or applicable inflationary indices.

2. Define and assess current asset conditions, based on a combination of staff input and a recently completed facility condition assessment of 40 facilities.

3. Define and document current levels of service based on discussions with staff.

4. Develop an asset management strategy that identifies the lifecycle activities required to sustain the levels of service discussed above. The strategy

summarizes these activities in the forecast of annual capital and operating expenditures required to achieve these level of service outcomes.

5. Develop a financing strategy to support the lifecycle management strategy. The financing plan informs how the capital and operating expenses arising from the asset management strategy will be funded over the forecast period.

6. Document the asset management plan in a formal report to inform future decision-making and to communicate planning to stakeholders.

Asset management plans are developed in an iterative process. This plan has been developed based on current data and understanding of how facilities are used. Future updates to this plan may need to revisit assumptions used in the development of this plan to better reflect new data and insights on how facilities are being used. Instead of simply presenting the final results of the work that has been done, intermediate steps have been included so that they can be reviewed in the future.

1.3 Maintaining and Integrating the Asset Management Plan

This report covers a forecast period of 20 years. In this context, the asset management plan should be updated as the strategic priorities and capital needs of Conservation Halton change. Further integration into other financial and planning documents would help to ensure the ongoing accuracy of the asset management plan, as well as the integrated financial and planning documents.

When developing the asset management plan, it should be noted that the state of facilities, lifecycle management strategy and financing strategy are integrated and impact each other. For example, the financing strategy outlines how the asset management strategy will be funded. The lifecycle management strategy illustrates the costs required to maintain expected levels of service at a sustainable level.

1.4 Facilities Overview

This section provides an analysis of Conservation Halton's facilities.

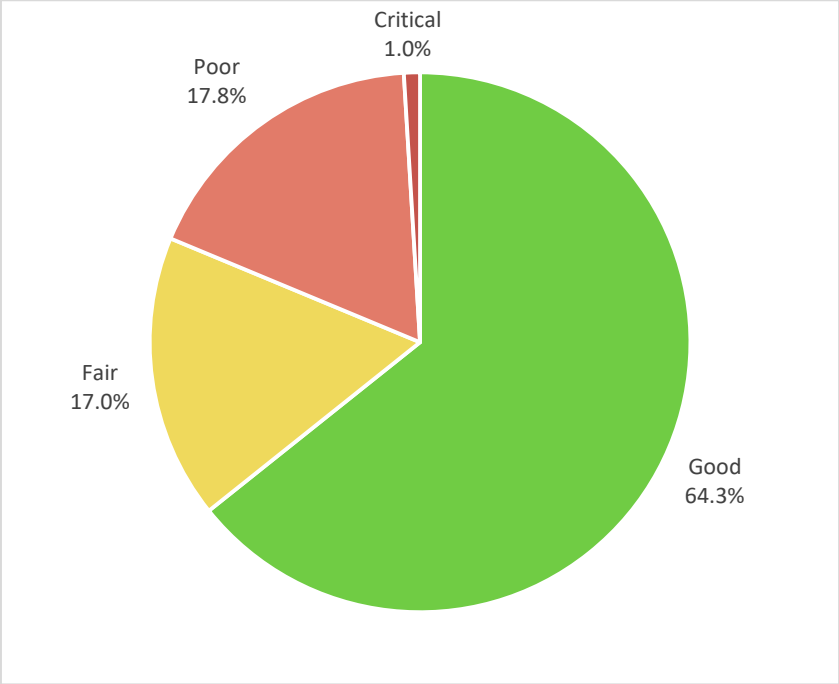
This plan covers 136 facilities. The current replacement value of these facilities is $25.8 million – all values in this section are in 2019 dollars. Buildings range in value from $3.0 million for the administration office to $1,000 for a garden shed. The value of parking lots and roadways is excluded from this replacement value and the remainder of the analysis in this report. As noted earlier, these assets will be covered in Phase 3 of the development of Conservation Halton's comprehensive asset management plan.

Forty facilities, representing approximately 74% of the total replacement value, were assessed in 2018 by McIntosh Perry. These facilities have a replacement value of $19.1 million. The assessments provided a 5-year and a 20-year forecast of renewal and replacement needs for these assets. The 5-year forecast identified average annual investment needs of $334,000. The 20-year forecast identified average annual investment needs of $389,000. This indicates that investment needs will grow modestly over time.

The remaining 96 buildings that were not assessed have a replacement value of $6.8 million. Staff identified 17 of these unassessed buildings as being of a similar level of complexity as the assessed buildings. Complexity in this context means having substantial internal structure and services such as hydro, water, or HVAC. To effectively manage these buildings, a component level condition assessment will be needed in the future. These 17 buildings have a replacement value of $5.2 million (20% of the total facility asset portfolio). The remaining 79 buildings are simpler structures with a total replacement cost of about $1.5 million (6% of the total facility asset portfolio).

A preliminary analysis of condition can be done at the facility level based on the facility condition assessment reports for the 40 assessed facilities and staff assessments for the remaining 96 facilities. Four rating categories were used – Good, Fair, Poor, and Critical. Table 1-1 shows the distribution of replacement value by these categories.

Table 1-1
Distribution of Replacement Cost by Facility Level Condition Assessment



In summary, Conservation Halton has 57 complex facilities that will need to be managed at the component level. These buildings represent 94% of the replacement value of Conservation Halton's buildings. The management of the remaining 79 simpler buildings will be more straight-forward, mostly involving maintaining and replacing exterior components that are exposed to the elements.

From a functional standpoint, Conservation Halton facilities support a wide range of activities. Visitors to parks need washroom facilities at a minimum. Other facilities are needed to support programs and services offered by Conservation Halton. Staff need a variety of workspaces, including offices, workshops, storage, and animal care areas.

The goal of this asset management plan is to help Conservation Halton ensure that its facilities continue to support the needs of both visitors and staff in a financially sustainable manner.

2. Levels of Service

2.1 Introduction

Levels of service qualitatively and quantitatively describe the outputs assets deliver to the people who use them. They are key drivers for asset management because assets are not ends in themselves. What matters to an organization is the activities that the assets enable. Levels of service help clarify what these services are and include targets for service levels that inform asset management decisions.

Levels of service are important because they:

- Monitor facets of building performance that are important to users;
- Contain targets for performance that help identify where work needs to be done; and
- Give assurance that facilities are meeting the needs of the people who use them.

Conservation Halton's facilities deliver a variety of services that meet different needs of park visitors and staff. The art of developing levels of service is to go into enough detail to cover most of the services delivered by facilities without becoming too onerous to maintain and interpret. Watson worked with Conservation Halton staff to develop levels of service through the following steps:

1. Identified users and activities that facilities support;
2. Identified main types of spaces that support these activities;
3. Developed user levels of service for each type of space;
4. Combined and simplified identified levels of service to ensure they are manageable;
5. Where appropriate, chose technical levels of service that will be used to measure whether or not the user levels of service are being achieved.
6. Identified targets for technical levels of service for different types of spaces.

2.2 Development of Levels of Service

The levels of service were developed in a workshop with a Conservation Halton working group. The following people were members of the group:

- Marnie Piggot
- Gene Matthews
- Craig Machan
- Linda Scott
- Brian Coombs
- Pauline Wozniakowski
- Violet Posthumus
- Carl Patten
- Kimberly O'Malley
- Melissa Silber
- Megan Hunter
- Lawrence Wagner

The working group was facilitated by Peter Simcisko and Stephen Monrad from Watson.

2.3 Users and Activities That Facilities Support

The working group identified two distinct user groups for facilities: visitors and staff. Lists of activities that facilities support were developed for each.

Table 2-1
Activities Supported by Facilities

Visitor Activities	Staff Activities
• Hand washing, toileting, and showering • Purchasing food and refreshments • Purchasing souvenirs and retail • Viewing exhibits • Paying park fees and registering for services • Participating in lectures, activities, programming, and other learning opportunities • Renting equipment • Sheltering from inclement weather • Acquiring information • Visitor staging	• Interacting with park visitors • Doing office work • Doing skilled trades work, e.g. carpentry and auto repair and lift maintenance • Taking breaks and eating lunch • Storing vehicles, equipment and supplies • Meeting • Caring for animals • Toileting • Staff staging

To be successful, Conservation Halton's facilities need to support all these activities.

2.4 Types of Functional Spaces and Concerns of Users of the Space

The goal of asset management is to ensure that facilities support the activities of users. Different activities have different requirements for facilities. For example, a gathering area in a visitor centre should not look like a storage room. To evaluate how effective a space is at meeting the needs of its users, it is important to understand what the space is being used for and what would interfere with the use of the space. Instead of evaluating each space in each facility individually, a more systematic approach is taken where different types of functional spaces are considered. The assumption is that users of spaces in different facilities that support similar activities will have similar concerns about the space.

The working group identified seven types of functional spaces for the levels of service analysis. They are listed in Table 2-2. Some of these functional spaces are subcategorized when setting level of service targets in section 2.7Table 2-7. In a few instances, spaces with seemingly different uses were grouped together because the needs of the people using the spaces are similar. The concerns of users of a space were categorized as either major or minor. Major concerns are things that would interfere with the functionality of the space or dissuade people from using the space. Minor concerns are nuisance issues.

Table 2-2
Functional Spaces for Levels of Service Analysis

Functional Space
• Washrooms • Office and presentation space • Retail and gathering space • Food preparation and eating space • Operations space • Animal care and presentation space • Storage space

2.4.1 Concerns Common to All Facilities

For any facility to be functional, it needs to have the following core attributes. These apply to all facilities and are categorized as major.

Table 2-3
User Concerns: All Facilities

Major Concerns	Minor Concerns
• Structural integrity • Absence of health and safety issues • Waterproofing • Functional design • Sufficient capacity • Accessibility	• None

2.4.2 Washrooms

Washrooms are used for handwashing, toileting, and in a couple of cases for showering. In general, users of a washroom will be in the space for a short period of time performing a task that does not require focused attention.

Table 2-4
User Concerns: Washrooms

Major Concerns	Minor Concerns
• Odour free • Hygienic • Effective plumbing	• Aesthetics • Comfortable temperature

2.4.3 Office and Presentation Space

Office and presentation space were grouped together because users of both types of space will be there for medium to long periods of time and need to be able to focus on what they are doing.

Table 2-5
User Concerns: Office and Presentation Space

Major Concerns	Minor Concerns
• Aesthetics • Comfortable temperature • Appropriate noise level • Appropriate lighting • Function specific furnishing and equipment	• None

2.4.4 Retail and Gathering Space

Space is used mostly for short and medium lengths of time by users who do not need to focus on what they are doing.

Table 2-6
User Concerns: Office and Presentation Space

Major Concerns	Minor Concerns
• Appropriate lighting • Comfortable temperature • Aesthetics	• Appropriate noise level

2.4.5 Food Preparation and Eating Space

Space is used for a medium length of time by users for a specific goal that does not require focused attention.

Table 2-7
User Concerns: Food Preparation and Eating Space

Major Concerns	Minor Concerns
• Odour free • Hygienic • Aesthetics	• Comfortable temperature

2.4.6 Operations Space

Operations space is used by staff for longer periods of time to meet specific goals. Sharp focus on work is often necessary.

Table 2-8
User Concerns: Operations Space

Major Concerns	Minor Concerns
• Appropriate lighting	• Comfortable temperature

2.4.7 Animal Care and Presentation Space

Animal care and presentation space has special needs because the comfort and well-being of the animals needs to be ensured.

Table 2-9
User Concerns: Animal Care and Presentation Space

Major Concerns	Minor Concerns
• Appropriate lighting • Comfortable temperature • Odour free • Hygienic • Aesthetics	• Information technology • Purpose-specific furniture

2.4.8 Storage Space

Users of storage space are rarely in the space for long periods of time. There are no major concerns other than those common to all facilities covered in section 2.4.1 above.

Table 2-10
User Concerns: Storage Space

Major Concerns	Minor Concerns
• None	• Appropriate climate controls

2.5 Summarizing Concerns into User Levels of Service

To develop a levels of service framework, the list of all user concerns needs to be considered as a whole.

Table 2-11
User Concerns: Amalgamated

User Concerns	
• Absence of health and safety issues • Accessibility • Aesthetics • Appropriate lighting • Appropriate noise level • Comfortable temperature • Effective plumbing • Function specific furnishing and equipment	• Functional design • Hygienic • Information technology • Odour free • Structural integrity • Sufficient capacity • Waterproofing

To develop user levels of service, a decision needs to be made on the level of effort that Conservation Halton wants to invest collecting and analyzing data. Each of these 20 user concerns could generate a number of user levels of service and each user of level of service could generate multiple technical levels of service measures. This would

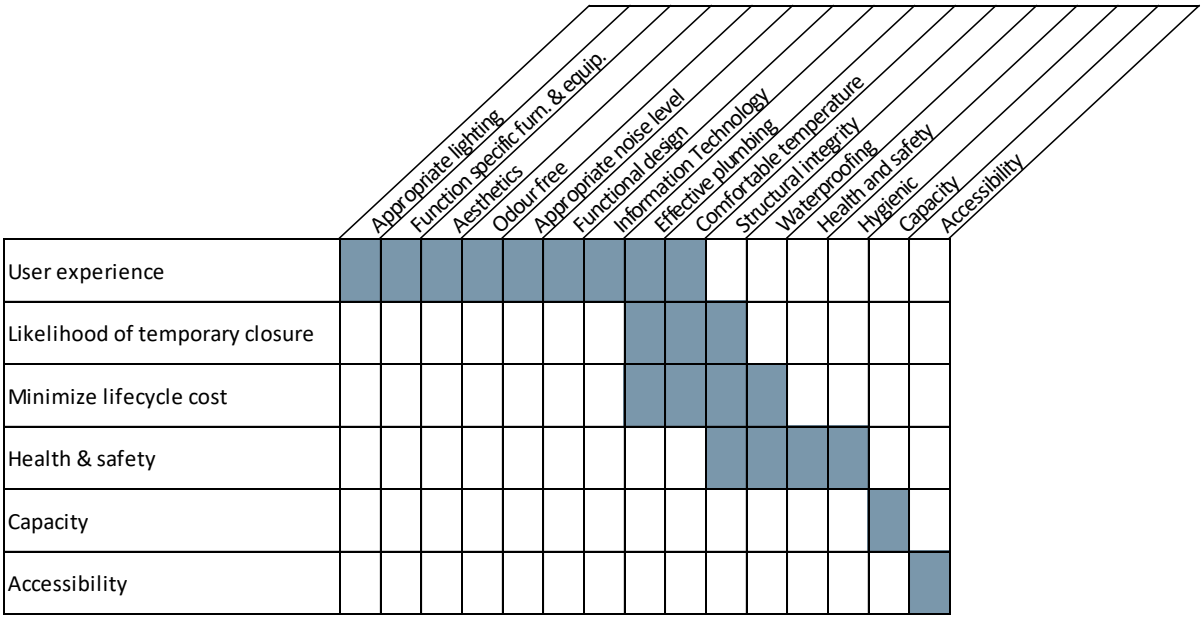
result in dozens of technical levels of service to track. Alternatively, the concerns could be grouped together, perhaps into just one high-level user level of service. Staff indicated that simplicity was important. In the end, six user level of service were arrived at that the working group felt could capture the full range of needs of facility users. The plain language user level of service statements are provided in Table 2-12.

Table 2-12
Six User Level of Service Statements

Level of service	Description
User experience	The overall experience of users of facilities is acceptable to them.
Likelihood of closure	The likelihood of a space being unusable because of an unanticipated failure is managed based on the importance of the space and availability of alternative facilities.
Minimize lifecycle cost	Repairs and replacement projects identified by staff or contractors that repay their costs over time are completed. Examples include timely replacement of roofs to prevent water damage and energy efficiency projects that reduce utility bills.
Health & safety	Users of facilities should not face undue risk to their immediate safety or long-term health.
Capacity	Facilities should accommodate users without undue crowding or wait times.
Accessibility	Facilities should be accessible to people with disabilities.

Figure 2-1 shows that all 15 of the user concerns identified are covered by one or more of the six user levels of service described above.

Figure 2-1
Mapping From User Concerns to Levels of Service



2.6 Technical Levels of Service

Each of the six user levels of service developed in section 2.5 needs at least one associated technical level of service to help Conservation Halton staff identify where they might be falling short of their goals. Through discussions with the working group it was determined that in order for the asset management plan to be workable, the technical levels of service needed to be straight forward. This would reduce the burden of collecting data and help with communication of the results. In this asset management plan, one technical level of service will be identified for each of the six user levels of service.

In this section, technical levels of service will be developed that do not currently have the required data to report on outcomes now. The data needs and collection process will be described to guide future collection of the data. Later in the report, existing data and the working group members' judgement will be used as a proxy to produce a preliminary evaluation of performance. This work is presented in section 2.8.

2.6.1 User Experience

The working group agreed that the best way to assess user experience was to use a five-point rating scale as shown in Table 2-13. The advantage of using a scale to rate user experience is that it does not require technical expertise. It also does not limit the scope of what might be considered to have an impact on user experience. A rating scale is flexible and easy to use.

The price of this flexibility is the unavoidable reliance on subjective judgement. People respond differently to building defects. One person may find the clatter of an unbalanced fan distracting while another doesn't even notice it at all until it is pointed out. This subjectivity should be kept in mind when comparing assessments done by different people and at different times.

Table 2-13
User Experience, Technical Level of Service Measure – Five-Point Scale

Rating	Description
1 Very good	Nothing about space detracts from user experience.
2 Good	Minor issues present that have only minimal impact on user experience.
3 Fair	Activities can be performed, but users would prefer to be in better-maintained space.
4 Poor	Space is unpleasant to be in or activities need to be modified to be completed.
5 Very poor	Space is barely tolerable to be in or can only support user activities with major effort on the part of the user.

2.6.2 Likelihood of Closure

Estimating the probability of a future event such as the unexpected need to close a space is difficult. Precision cannot be expected. As with the user experience, a qualitative assessment based on a scale is used. Table 2-14 provides a three-point scale to assess likelihood of closure. Each level has a mathematical statement for the

likelihood of closure and a more intuitive statement for what it would feel like if an unexpected closure happened for a space assessed at that level.

As with the user experience technical level of service measure, some subjectivity is unavoidable when assessing likelihood of closure using a rating scale. This should be kept in mind when comparing assessments done by different people and at different times.

Table 2-14
Likelihood of Closure, Technical Level of Service Measure – Three-Point Scale

Likelihood of Closure		Probability of Temporary Closure Within One Year
	1 Low	1 in 20 or lower "Component failure is a surprise"
	2 Medium	1 in 20 to 1 in 5 "Knew of issue; didn't think it was that serious"
	3 High	Greater than 1 in 5 "I told you the component was going to fail"

2.6.3 Minimize Lifecycle Cost

Identifying projects that can reduce total lifecycle costs requires some technical knowledge of the building components involved. For example, deciding when to replace a roof depends on being able to assess the current ability of the roof to handle rain and an understanding of the options available to address issues that would not warrant a full replacement. While not explicitly stated, many of the recommendations in the facility condition assessments completed by McIntosh Perry in 2018 are intended to reduce total lifecycle costs. Part of the value of having an engineer do a facility condition assessment is that they have the expertise needed to identify work that would reduce overall lifecycle costs. Conservation Halton will need advice in the future from technical experts such as McIntosh Perry to update its list of projects that will decrease lifecycle costs.

It is possible to rank projects aimed at minimizing lifecycle costs based on measures such as payback period and internal rate of return. Calculating these measures is time consuming and involves estimating future costs that may be uncertain. A simpler

approach is to rely on the judgement of experts and do the projects they recommend that reduce lifecycle costs. Failure to undertake these types of projects leads to higher overall costs in the long run.

With this goal in mind, a good technical level of service for minimizing lifecycle costs is to track and report any backlog of identified projects to reduce lifecycle costs that are carried over from one year to the next. This will be reported as the total dollar value of these projects that have not been completed.

2.6.4 Health & Safety

Conservation Halton has a health & safety policy in place. This policy involves regular inspection of facilities to identify hazards. When hazards are identified that are the result of deficiencies of assets, repair or replacement of those assets should be a top priority. If projects cannot be done immediately, they should be tracked to ensure that they are ultimately addressed. As with the minimize lifecycle cost level of service, the goal should be to keep the list of uncompleted health & safety projects as short as possible. The technical level of service for health & safety can be the same as that for minimizing lifecycle cost. Report the total value of health & safety projects that are carried over from one year to the next.

2.6.5 Capacity

Lack of capacity is a major concern for visitors and staff alike because it leads to crowding, wasted time waiting for access to a space, or having to accept inferior alternative spaces. Addressing capacity issues generally involves major expansions or new construction and is generally addressed as part of a master plan in the context of broader strategic objectives and financial constraints.

Capacity issues can be assessed on two complementary scales: frequency and impact. The more often capacity issues arise, the worse the problem. The more the capacity issues affect users of a facility, the worse the problem. These two dimensions are combined in Table 2-15 to create a four-point scale of the severity of capacity issues at a facility. This is the technical level of service measure for capacity.

Table 2-15
Capacity, Technical Level of Service Measure – Four-Point Scale

Rating		Description
	0 None	No capacity constraints.
	1 Low	Capacity issues exist but are infrequent and have low impact on users of a facility.
	2 Medium	Minor capacity issues are frequent OR there are occasional capacity issues that significantly affect users of a facility.
	3 High	Capacity issues are common AND significantly affect the users of a facility.

2.6.6 Accessibility

Ontario Regulation 191/11: Integrated Accessibility Standards requires Conservation Halton to have a multi-year accessibility plan that is updated at least once every five years. In this plan, Conservation Halton outlines its strategy to prevent and remove barriers and meet its requirements under the regulation. Following this plan is a priority for Conservation Halton. As with the minimize lifecycle cost and health & safety levels of service, no backlog of projects should be carried over from year to year. The technical level of service measure is the dollar value of projects identified in the multi-year accessibility plan that are carried over from one year to the next.

2.7 Targets for Technical Levels of Service

Not all spaces need the same levels of service. Even within a facility, spaces that serve different purposes need to be managed differently. For example, the requirements of a basement storage room will be different from a main floor gathering area in a visitor centre. Five of the eight types of functional space developed in section 2.4 were further refined for the purposes of setting level of service targets. For example, the washroom category was split in two, because the expectations of users of a plumbed washroom in a visitor centre may be higher than their expectations of a vault toilet on a trail. They

have the same concerns in both situations but will likely accept lower levels of service on the trail.

Three of the technical levels – minimize lifecycle cost, health & safety, and accessibility – were evaluated based on the value of projects carried over from one year to the next. The target for these levels of service is $0, in other words no projects carried over from one year to the next. This target is the same for all space types. For the remaining three levels of service, different space types do have different targets. Table 2-16 shows illustrative level of service targets for the expanded space type breakdown. These level of service targets are preliminary, because current performance on these levels of service can only be approximated based on current data and the cost of achieving targets is not known now. Better data is needed to ensure that targets that are set are achievable. The intent of Table 2-16 is to provide a starting point for discussion with the knowledge that the targets will need to be refined over time as more data is gathered.

Table 2-16
Technical Level of Service Targets

Space Types	User Experience	Likelihood of Closure	Capacity
Washrooms - plumbed	2 Good	1 Low	1 Low
Washrooms - vault	3 Fair	1 Low	2 Medium
Office	2 Good	1 Low	1 Low
Presentation	2 Good	1 Low	2 Medium
Retail	2 Good	1 Low	2 Medium
Gathering - heated	2 Good	1 Low	2 Medium
Gathering - unheated	3 Fair	2 Medium	3 High
Staff food preparation	2 Good	1 Low	1 Low
All other food space	2 Good	1 Low	2 Medium
Operations	3 Fair	2 Medium	1 Low
Animal care & presentation	2 Good	1 Low	1 Low
Storage	4 Poor	2 Medium	2 Medium

2.8 Current Levels of Service

2.8.1 Methodology

To properly evaluate current levels of service, the six technical levels of service will need to be evaluated directly. For example, instead of reporting on the condition of building components as was done in the 2018 facility condition assessment, each of the six technical levels of service would be reported for each functional space in a facility. In the time available, this data cannot be collected for this iteration of the asset management plan.

Instead, data from the facility condition assessment and working group members' knowledge have been used to do a preliminary assessment of the 40 buildings covered by the condition assessment studies. The analysis will be done at the facility level because the condition assessment data is not broken down by functional areas.

To use the facility condition assessment data, each building component is mapped to the level of service that is most likely to motivate rehabilitation or replacement of the component. For example, a carpet is most likely to be replaced because it is worn and is affecting the user experience of the space. Eventually, if a carpet is left long enough, it may pull away from the floor and cause a tripping hazard that would motivate replacement based on health & safety concerns. It is unlikely that a carpet would be left long enough to become a health & safety concern because it would look unacceptable much earlier.

Appendix A shows the level of service most likely to motivate the repair or replacement of a building component. Building components are identified by Uniformat II level 3 categories. Only the categories used in the condition assessments are mapped to avoid having to categorize elements that are not present in Conservation Halton facilities. The accessibility and capacity technical levels of service were not included because the condition assessment data does not provide insight into performance in these areas.

The methodology section of the facility condition assessment explained the rating system used in the assessments. Table 2-17 reproduces their rating system.

Table 2-17
Rating Scale Used in Facility Condition Assessments

Condition	Description
Very good	The infrastructure in the system or network is generally in very good condition: typically new or recently rehabilitated. A few elements show general signs of deterioration that require attention.
Good	The infrastructure in the system or network is in good condition; some elements show general signs of deterioration that require attention. A few elements exhibit significant deficiencies.
Fair	The infrastructure in the system or network is in fair condition; it shows general signs of deterioration that require attention. Some elements exhibit significant deficiencies.
Poor	The infrastructure in the system or network is in poor condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration.
Very poor	The infrastructure in the system or network is in unacceptable condition with widespread signs of advanced deterioration. Many components in the system exhibit signs of imminent failure, which is affecting service.

For the user experience level of service, the condition assessments of components that are most likely to be replaced to improve user experience were used to evaluate user experience. The assessed ratings were mapped onto the user experience technical levels of service with the same label, “Good” to “2 Good,” “Fair” to “3 Fair,” “Poor” to “4 Poor.” The numbers associated with each rating were then averaged for each facility to provide an estimate of the user experience.

For the closure likelihood level of service, it was not possible to use the three-point rating scale presented in section 2.6.2. Instead, it is simply noted if any of the components that were most likely to be replaced to avoid unexpected closures were rated as being in poor condition, the lowest rating given. It is not certain that this rating

means there is a significant likelihood of closure. Instead, it should be seen as an indicator that further investigation is needed to directly assess the likelihood of closure.

To understand why an average was not used as with the user experience level of service, consider the lifecycle of a roof. Midway through its life, say ten years after installation, a roof can be expected to show some signs of deterioration. An assessor would reasonably rate the condition of the roof as fair. The likelihood of the roof leaking at this point and causing a flood and temporary closure, however, is not any higher than for a new roof. This is because roofs are designed to be water-tight even after some deterioration is visible. The rating of fair means that the roof is part-way through its life. It doesn't mean that a flood is more likely.

The minimize lifecycle cost level of service was treated in the same way as the likelihood of closure level of service. The measure indicates whether any of the components that are most likely to be replaced to reduce lifecycle costs were assessed as being in poor condition, the lowest rating given. As before, this does not mean that there is definitely an opportunity to reduce lifecycle costs. It should be seen as an indicator that further investigation is needed to see if an opportunity exists.

The health & safety level of service was again assessed by identifying the presence of components that are most likely to be replaced to address health & safety concerns that were assessed as being in poor condition. Unlike the prior two levels of service that were evaluated this way, the cost of replacing the identified components is low. These components should be replaced based on the assessment.

The capacity and accessibility levels of service were based on working group assessments made in one of the asset management workshops. The four-point capacity rating scale presented in section 2.6.5 was used as a basis for the staff assessment for the capacity level of service. The accessibility level of service was limited to a yes/no response based on the working group's awareness of existing accessibility issues.

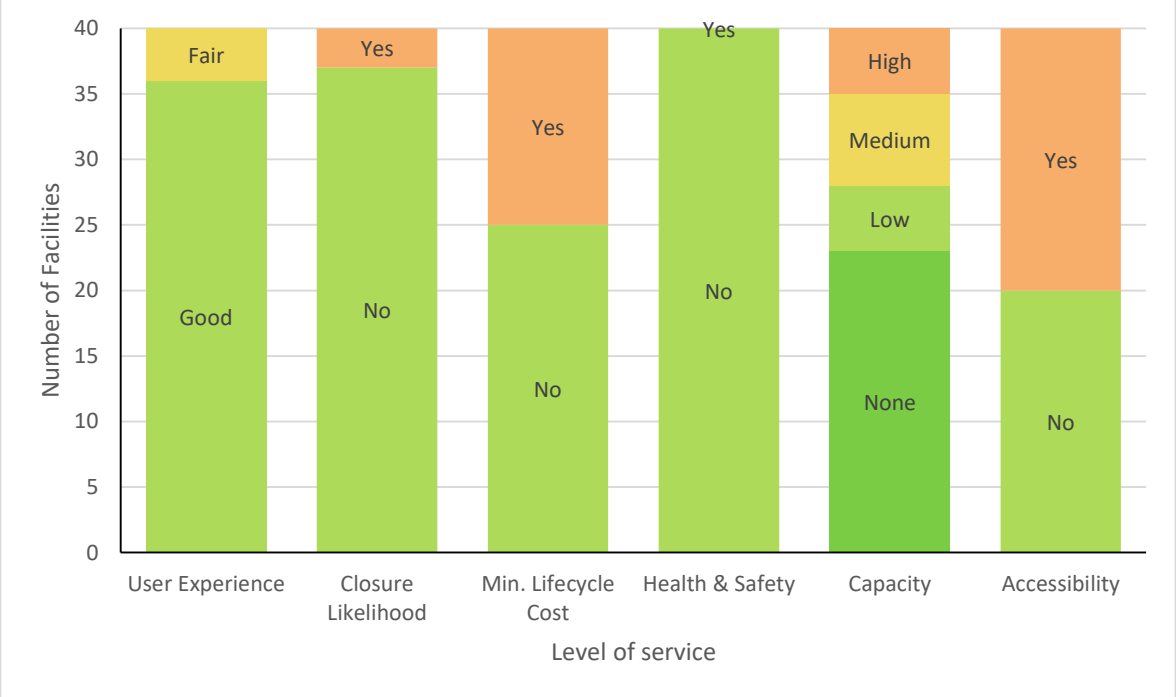
2.8.2 Results

The detailed results for the initial assessment of all six levels of service as described above are presented in Appendix B. For the user experience and capacity levels of service, the summary row presents the average of the rating across all facilities. For the other four levels of service, the summary row presents a count of the yesses. Two

buildings had all levels of service in the best rating category: Deer Clan Longhouse at Crawford Lake and the New Barn at Mountsberg. It is difficult to say which facilities have done the worst because no facility got the lowest rating in all six levels of service. The boat rental facility at Kelso had three out of six of its level of service measures in the worst category. Interestingly, though, its user experience and risk of closure levels of service were good.

Figure 2-2 summarizes the service levels showing the count of facilities in each rating category. The first thing to notice is that there is a lot of green. This indicates that overall, Conservation Halton's facilities are doing quite well. Many buildings had accessibility issues. Adding things like ramps and automatic door openers is not costly, however. One third of the buildings had components related to minimizing lifecycle cost that were in poor condition. These components include things like roofs that can be expensive to replace. Significant issues with facility capacity were identified. Plans to increase capacity would be addressed as part of future work on Conservation Halton's master plan.

Figure 2-2
Summary of Preliminary Levels of Service Analysis



3. Lifecycle Management Strategy

3.1 Introduction

At a high level, a lifecycle management strategy documents how an organization plans to deliver the levels of service it has targeted. The lifecycle management strategy identifies the activities that need to take place throughout an asset's life, provides a decision making process for determining when each activity should take place, and either provides an estimate of the cost of each activity or a process for estimating the cost. Where possible, alternative approaches to managing assets are considered so that the desired levels of service can be achieved at lowest cost. This lifecycle management strategy summarizes the workshop discussions on lifecycle management.

The main inputs to lifecycle planning available are the facility condition assessments completed by McIntosh Perry in 2018. They included a detailed plan for component replacements driven by current condition and typical intervals between lifecycle activities. The condition of a component was used to estimate its age. The age identified where the asset was in its lifecycle and what activities would need to happen over the 20-year time-frame of the study. For example, if a component has a typical lifespan of 15 years and is currently 13 years old, it will likely need to be replaced in year 2 and again in year 17 of the forecast. This analysis is the basis for the 5, 10, and 20-year capital plans in the facility condition assessments.

Following assessors' recommendations can be expected to lead to high levels of service from facilities. Good outcomes can be expected for the identified levels of service except for the capacity and accessibility levels of service which usually are not evaluated in the context of a condition assessment. Addressing these levels of service requires input from other planning processes. Following the facility condition assessment recommendations would keep Conservation Halton's facilities in a good state of repair where all facility components are functioning as intended. Based on the workshop discussion, the current plan is to follow the recommendations in the facility condition assessments for the assessed facilities, at least in the short term.

3.2 Lifecycle Management Strategy for Assessed Facilities

The facility condition assessments are implicitly using an age-based lifecycle management strategy. Each lifecycle activity for a component is scheduled to a particular year in the lifecycle. Often this is done at a specified interval: every five years for example. The assumptions for the strategy are thus limited to setting the intervals of interventions. They are documented in Appendix C. In the assumptions section of the facility condition assessments, it states that the estimated lifespans are based on technical literature of manufacturers, technical publications, and the experience of the assessors.

While Conservation Halton could simply follow a time-based replacement schedule for building components, this is not advisable. The condition assessment reports state that the assessment should not be used as "a specification for undertaking work." Further testing and planning is needed to properly scope and cost projects. The report indicates that costs forecast after the first few years are speculative.

Conservation Halton should plan to:

- Do facility condition assessments every five years, ideally evaluating the performance of facilities using the levels of service developed in this report;
- Evaluate work identified in the condition assessments against the levels of service developed in this report. If the proposed work does not address shortcomings in achieving identified service level targets, Conservation Halton should consider postponing the work; and
- Ensure that there are clear mechanisms to identify and address failures to meet service level targets that develop between facility condition assessments.

3.3 Lifecycle Management Strategy for Non-Assessed Facilities

In the absence of a component level analysis, the lifecycle management strategy for facilities that were not formally assessed focuses primarily on estimating long-run funding needs. This was done separately for complex facilities similar to those that were assessed and simpler structures such as sheds and picnic shelters.

Complex facilities with services such as plumbing, electrical and HVAC were assumed to have long-term average annual funding needs as a proportion of replacement cost that are similar to the facilities that were assessed. From the condition assessment data, the average annual need is 1.7% of replacement cost over a five-year time horizon. Over 20-years it is slightly higher at 2.1% of replacement cost.

The simpler facilities were conceptually broken into two parts, one that wears out and needs replacing and one that has an indefinite lifespan. The part that wears out over time is mainly the exterior closure that degrades because of exposure to the elements. This part was given an effective lifespan of 25 years, consistent with the lifespan of many roof systems. The part that does not degrade over time includes components such as the foundation and internal structure that are expected to last many decades. The average annual renewal needs for these facilities were estimated by determining what fraction of the replacement cost of the building would need to be replaced more frequently. For simplicity, three levels were used: 50%, 75%, and 90%. The assumptions for all non-assessed facilities are reported in Appendix D.

Conservation Halton should plan to:

- Include the more complex facilities that are currently unassessed in future facility condition assessments to help identify work that needs to be done; and
- Ensure that there is a process in place to identify work that needs to be done on simpler facilities to maintain service levels.

4. Financial Strategy

4.1 Introduction

This chapter details the financing strategy that would sustainably fund the lifecycle management strategies presented in Chapter 3. The strategy presented is a suggested approach that should be examined and re-evaluated during the annual budgeting processes to ensure the sustainability of the Conservation Halton's financial position as it relates to its assets.

The financing strategy in this asset management plan has been developed for a 20-year forecast period to enable Conservation Halton to evaluate the sustainability of its assets over this time horizon.

The financing strategy forecast (including both expenditure and revenue sources) was prepared, broken down into two primary budget categories established by Conservation Halton in its Budget Principles, Watershed Management and Support Services (WMSS) and the Conservation Areas, based on the funding sources for these programs. The WMSS program receives funding from municipalities whereas the Conservation Areas recreation programs are self-sufficient, funded through program fees charged to park visitors. The recommended financing strategy identifies rehabilitation and replacement activities required over the forecast period, as described in preceding sections of this plan.

4.1.1 Future Improvements

This plan does not incorporate the costs associated with the lifecycle activities and maintenance of growth-related capital. These costs should be explored and implemented into the financing strategy in the future. Examining these growth-related capital needs and their impacts on the financing strategy will provide for a comprehensive assessment of the sustainability of the overall asset management system.

4.2 Annual Costs

The capital expenditures projected for the 2020-2039 forecast period are shown in Table E-1. The expenditure forecast for facilities is based on the lifecycle activities

identified in preceding sections of this plan. The capital expenditures identified for the other three Conservation Areas categories – Vehicles & Equipment Replacement, Ski/Snowboarding, and Information Technology – are based on the 2019 Capital Budget forecast. Inflated averages were used for years beyond 2028.

The expenditure forecast uses a capital inflation factor of 3.7% annually, which aligns closely with the historical 20-year annual average rate of inflation as witnessed in Statistics Canada's Building Construction Price Index.[1]

4.3 Funding

Full details of the recommended strategy to finance the asset lifecycle costs are provided in Appendix E. The funding forecast was based on the funding sources identified in Conservation Halton's 2019 budget.

The lifecycle costs required to sustain established level of service targets are being funded from two major sources:

- Contributions from municipal partners supported from their tax levy; and
- User fees.

In 2019, $75,000 was budgeted to be contributed to capital reserves for WMSS facilities. Based on the investment needs identified for these facilities in this report, the contribution to reserves for WMSS facilities should be approximately $159,000 in 2020 and should increase with inflation every year thereafter. This represents an increase of approximately 33% relative to the level of municipal funding budgeted for WMSS. The precise number $158,963, shown in Table E-2 of Appendix E, was produced by assuming an inflation rate of 3.7% for capital, a 2% interest rate on reserves, and solving for the contribution level that would result in a reserve closing balance in 2039 of $635,549, the inflated equivalent of the opening balance of $307,308.

Conservation Halton is budgeting to contribute $366,608 to capital reserves for Conservation Areas capital in 2020. Based on the investment needs identified in this report, the contribution to reserves for Conservation Areas capital should be approximately $1.4 million in 2020, with approximately $447,485 (31.8%) of that

[1] Statistics Canada. Table 18-10-0135-01 Building construction price indexes, by type of building. Toronto series, Non-residential buildings [2362], Q1-1998 to Q1-2018.

supporting facility needs. Table E-3 shows that this would require an 8% increase in revenue for Conservation Areas, with operating included in the calculation – $14,133,532 in revenue needed for 2020 compared to the budgeted $13,093,841. The analysis shows that funding will catch up with the estimated needs by 2024, based on the existing budget forecast.

Appendices

Appendix A
Primary Technical Level of Service, by Uniformat II Level 3

Appendix A: Primary Technical Level of Service, by Uniformat II Level 3 Code

Uniformat II Code	Description	User Exp.	Closure Likelihood	Minimize Lifecycle Cost	Health & Safety
A1011	Standard Wall Foundations			X	
A1012	Column Foundations and Pile Caps			X	
A1013	Perimeter Drainage and Insulation			X	
A1031	Standard Slab on Grade			X	
A1032	Structural Slab on Grade			X	
A1034	Trenches, Pits & Bases			X	
A1035	Trenches, Pits & Bases			X	
A2021	Basement Wall Construction			X	
A2022	Moisture Protection			X	
B1012	Upper Floors Construction			X	
B1015	Exterior Stairs and Fire Escapes				X
B1021	Flat Roof Construction			X	
B1022	Pitched Roof Construction			X	
B1023	Canopies	X			
B1029	Other Roof Systems			X	
B2011	Exterior Wall Construction			X	
B2018	Exterior Sealants			X	
B2021	Exterior Windows			X	
B2031	Glazed Doors and Entrances	X			
B2032	Solid Exterior Doors	X			
B2034	Overhead Doors		X		
B3011	Roof Covering			X	
B3014	Flashings and Trim			X	
B3015	Roof Eaves and Soffits			X	
B3016	Gutters and Downspouts			X	
B3021	Glazed Roof Openings			X	
C1011	Fixed Partitions	X			
C1017	Interior Windows	X			
C1021	Interior Doors	X			
C1031	Toilet Partitions	X			
C1037	Cabinetry	X			
C2011	Regular Stairs	X			
C2014	Stair Handrails and Balustrades				X

Uniformat II Code	Description	User Exp.	Closure Likelihood	Minimize Lifecycle Cost	Health & Safety
C2021	Stair, Tread and Landing Finishes	X			
C3011	Interior Wall Finishes	X			
C3022	Traffic Membranes			X	
C3024	Flooring	X			
C3025	Carpeting	X			
C3031	Ceiling Finishes	X			
D1011	Passenger Elevators				X
D2011	Water Closets	X			
D2012	Urinals	X			
D2013	Lavatories	X			
D2014	Sinks	X			
D2017	Showers	X			
D2018	Drinking Fountains and Coolers	X			
D2021	Cold Water Service		X		
D2022	Hot Water Service		X		
D2023	Domestic Water Supply Equipment				X
D2031	Waste Piping		X		
D2032	Vent Piping	X			
D2033	Floor Drains			X	
D2034	Sanitary Waste Equipment			X	
D2041	Roof Water Drainage Piping			X	
D3011	Oil Supply System			X	
D3012	Gas Supply System		X		
D3021	Boilers	X			
D3025	Forced Air Furnaces	X			
D3025	Heat Recovery Ventilators (HRV) Units			X	
D3026	Unit Heaters	X			
D3027	Electric Heaters	X			
D3028	Electric Heaters	X			
D3028	Infra-Red Heaters	X			
D3033	Condensing Units	X			
D3041	Air Distribution Systems	X			
D3042	Exhaust Ventilation Systems				X
D3044	Hot Water (Hydronic) Distribution	X			
D3051	Terminal Self-Contained Units	X			
D3052	Package Units	X			
D4010	Sprinklers				X

Uniformat II Code	Description	User Exp.	Closure Likelihood	Minimize Lifecycle Cost	Health & Safety
D4031	Fire Extinguishers				X
D4095	Hood and Duct Fire Protection				X
D5010	Electrical Service and Distribution				X
D5020	Lighting and Branch Wiring				X
D5030	Communications and Security				X
D5037	Fire Detection and Alarm Systems				X
D5092	Emergency Lighting and Power Systems				X
G2030	Pedestrian Paving				X
G2031	Pedestrian Walkways				X
G2031	Pedestrian Paving				X
G2033	Exterior Steps				X
G2042	Retaining Walls			X	
G2044	Signage	X			
G2050	Landscaping	X			
G3013	Well Systems				X
G3023	Septic Systems		X		
G4010	Electrical Distribution		X		
G4020	Site Lighting	X			

Appendix B
Levels of Service Analysis for 40 Assessed Facilities

Appendix B: Levels of Service Analysis for 40 Assessed Facilities

Building	User Experience		Closure Likelihood	Minimum Lifecycle Cost	Health & Safety	Capacity	Accessibility
	Average of Condition 2 - Good 3 - Fair 4 - Poor		Has a Component in Poor Condition	Has a Component in Poor Condition	Has a Component in Poor Condition	Severity/ Frequency of Capacity Issues?	Concerns About Accessibility Exist
CL - Crawford Lake Gathering Place	2.19	Good (1.5 - 2.5)	No	No	No	1 - Low	No
CL - Crawford Lake Visitors' Centre	2.29	Good (1.5 - 2.5)	No	Yes	No	1 - Low	Yes
CL - Deer Clan Longhouse	2.00	Good (1.5 - 2.5)	No	No	No	0 - None	No
GE - Compressor Building - Kelso/Glen Eden	2.43	Good (1.5 - 2.5)	No	No	No	2 - Medium	Yes
GE - East Chalet - Glen Eden	2.21	Good (1.5 - 2.5)	No	Yes	No	3 - High	Yes
GE - Milton Heights Ski Club	2.11	Good (1.5 - 2.5)	No	No	No	2 - Medium	Yes
GE - Ski School - Glen Eden	2.11	Good (1.5 - 2.5)	No	No	No	3 - High	Yes
HF - Hilton Falls Visitor Centre	2.11	Good (1.5 - 2.5)	No	No	No	1 - Low	Yes
HF - Hilton Falls Workshop	2.00	Good (1.5 - 2.5)	No	No	No	0 - None	No
K - Boat Rental - Kelso/Glen Eden	2.21	Good (1.5 - 2.5)	No	Yes	No	3 - High	Yes
K - Kelso Beach Concession and Washrooms	2.07	Good (1.5 - 2.5)	No	Yes	No	0 - None	No
K - Kelso East Washrooms	2.08	Good (1.5 - 2.5)	No	No	No	0 - None	Yes
K - Kelso Museum Visitor Centre	2.13	Good (1.5 - 2.5)	No	No	No	0 - None	Yes
K - Kelso Quarry Hydro Building	3.17	Fair (2.5 - 3.5)	No	Yes	No	0 - None	No
K - Kelso Quarry Main Building	2.73	Fair (2.5 - 3.5)	Yes	Yes	No	0 - None	No
K - Kelso Visitors' Centre	2.00	Good (1.5 - 2.5)	No	No	No	2 - Medium	No
K - Kelso West Washrooms	2.07	Good (1.5 - 2.5)	No	No	No	0 - None	No
K - Picnic Area #4 Pavilion Washroom - Glen Eden	2.00	Good (1.5 - 2.5)	No	No	No	0 - None	No

Building	User Experience		Closure Likelihood	Minimum Lifecycle Cost	Health & Safety	Capacity	Accessibility
	Average of Condition 2 - Good 3 - Fair 4 - Poor		Has a Component in Poor Condition	Has a Component in Poor Condition	Has a Component in Poor Condition	Severity/ Frequency of Capacity Issues?	Concerns About Accessibility Exist
K - Picnic Area #8 Pavilion Washroom - Glen Eden	2.13	Good (1.5 - 2.5)	No	Yes	No	0 - None	Yes
K - Workshop - Glen Eden	2.06	Good (1.5 - 2.5)	No	No	No	2 - Medium	No
Misc - Administration Centre	2.39	Good (1.5 - 2.5)	No	Yes	No	3 - High	Yes
MO - Cameron Barn - Operations Centre	2.43	Good (1.5 - 2.5)	Yes	No	No	0 - None	Yes
MO - Mountsberg Birds of Prey Centre	2.09	Good (1.5 - 2.5)	No	No	No	1 - Low	No
MO - Mountsberg Cameron House	2.23	Good (1.5 - 2.5)	No	Yes	No	0 - None	Yes
MO - Mountsberg Discovery Centre	2.18	Good (1.5 - 2.5)	No	No	No	2 - Medium	No
MO - Mountsberg Evaporator Building	2.00	Good (1.5 - 2.5)	No	No	No	0 - None	Yes
MO - Mountsberg Implement Drive Shed	2.00	Good (1.5 - 2.5)	No	No	No	0 - None	No
MO - Mountsberg Kelly New Pavilion	2.29	Good (1.5 - 2.5)	No	No	No	2 - Medium	No
MO - Mountsberg New Barn	2.00	Good (1.5 - 2.5)	No	No	No	0 - None	No
MO - Mountsberg Shrike Building	2.00	Good (1.5 - 2.5)	No	No	No	0 - None	No
MO - Mountsberg Workshop	2.44	Good (1.5 - 2.5)	No	Yes	No	0 - None	Yes
OC - Carpenter's Shop and Barn - Operations centre	2.24	Good (1.5 - 2.5)	Yes	No	No	0 - None	Yes
OC - Driveshed - Operations Centre	3.00	Fair (2.5 - 3.5)	No	Yes	No	1 - Low	No
OC - Field Office - Operations Centre	2.31	Good (1.5 - 2.5)	No	No	No	0 - None	Yes
OC - Forestry Shop - Operations Centre	2.00	Good (1.5 - 2.5)	No	No	No	3 - High	Yes
OC - McDonald House - Operations Centre	2.39	Good (1.5 - 2.5)	No	Yes	No	0 - None	No

Building	User Experience Average of Condition 2 - Good 3 - Fair 4 - Poor		Closure Likelihood Has a Component in Poor Condition	Minimum Lifecycle Cost Has a Component in Poor Condition	Health & Safety Has a Component in Poor Condition	Capacity Severity/ Frequency of Capacity Issues?	Accessibility Concerns About Accessibility Exist
OC - Mechanic Shop - Operations Centre	2.27	Good (1.5 - 2.5)	No	Yes	No	0 - None	No
OC - Office and Lunchroom - Operations Centre	2.11	Good (1.5 - 2.5)	No	Yes	No	0 - None	Yes
OC - Saw Mill/Storage - Operations Centre	3.00	Fair (2.5 - 3.5)	No	Yes	No	0 - None	No
RP - Rattlesnake Point Comfort Station	2.17	Good (1.5 - 2.5)	No	No	No	2 - Medium	Yes
Summary	2.36	Good (1.5 - 2.5)	3	15	0	1.00	20

Appendix C
Lifecycle Activity Intervals

Appendix C: Lifecycle Activity Intervals

Uniformat II	Description	Activity	Interval (Years)
A1011	Standard Wall Foundations	Repair	20
A1012	Column Foundations and Pile Caps	Repairs	20
A1013	Perimeter Drainage and Insulation	Repair	20
A1013	Perimeter Drainage and Insulation	Regrade adjacent ground	20
A1031	Standard Slab on Grade	Repair	20
A1032	Structural Slab on Grade	Repair	20
A1034	Trenches, Pits & Bases	Repair	20
A2021	Basement Wall Construction	Repair	25
A2022	Moisture Protection	Repair	25
B1012	Upper Floors Construction	Repair	25
B1015	Exterior Stairs and Fire Escapes	Repair	15
B1021	Flat Roof Construction	Repair	25
B1022	Pitched Roof Construction	Repair	25
B1023	Canopies	Replacement	25
B2011	Exterior Wall Construction	Replace wood siding	20
B2011	Exterior Wall Construction	Repair concrete block walls	15
B2011	Exterior Wall Construction	Repair wood board siding	20
B2011	Exterior Wall Construction	Repair brick work	20
B2011	Exterior Wall Construction	Replace metal siding	30
B2011	Exterior Wall Construction	Repair timber beams and posts	20
B2011	Exterior Wall Construction	Repair the brickwork	15
B2011	Exterior Wall Construction	Repair masonry veneer	15
B2011	Exterior Wall Construction	Repair stone masonry wall	30
B2011	Exterior Wall Construction	Replace board and batten	10
B2011	Exterior Wall Construction	Repair concrete masonry walls	25
B2011	Exterior Wall Construction	Repair metal siding	15
B2011	Exterior Wall Construction	Repair chimney	20
B2011	Exterior Wall Construction	Repair fabric liner	25
B2011	Exterior Wall Construction	Repair EIFS panels	10
B2011	Exterior Wall Construction	Replace timber beams and posts	20
B2011	Exterior Wall Construction	Repair opening	30
B2011	Exterior Wall Construction	Repair	30
B2011	Exterior Wall Construction	Paint metal siding	25
B2011	Exterior Wall Construction	Replace weathered plywood	20
B2018	Exterior Sealants	Replace	10

Uniformat II	Description	Activity	Interval (Years)
B2021	Exterior Windows	Replace	25
B2031	Glazed Doors and Entrances	Replace	35
B2032	Solid Exterior Doors	Replace exterior door	35
B2032	Solid Exterior Doors	Replace sliding door	20
B2034	Overhead Doors	Replace	25
B3011	Roof Covering	Replace metal panel	35
B3011	Roof Covering	Replace modified bitumen membrane	20
B3011	Roof Covering	Replace asphalt shingle	15
B3011	Roof Covering	Green roof	20
B3011	Roof Covering	Replace TPO membrane	20
B3011	Roof Covering	Replace BUR	20
B3011	Roof Covering	Paint sloped metal panels	20
B3011	Roof Covering	Replace	20
B3011	Roof Covering	Repair	20
B3011	Roof Covering	Replace corrugated plastic panels	20
B3011	Roof Covering	Repair metal panel	35
B3014	Flashings and Trim	Repair	20
B3015	Roof Eaves and Soffits	Replace	25
B3016	Gutters and Downspouts	Replacement	25
B3021	Glazed Roof Openings	Replace	20
C1011	Fixed Partitions	Repair	20
C1011	Fixed Partitions	Replace	35
C1021	Interior Doors	Replace	35
C1031	Toilet Partitions	Replace	25
C1037	Cabinetry	Replace	22
C2011	Regular Stairs	Repair	25
C2014	Stair Handrails and Balustrades	Repair	15
C2021	Stair, Tread and Landing Finishes	Replace	30
C3011	Interior Wall Finishes	Repaint	10
C3011	Interior Wall Finishes	Replace tile board	15
C3011	Interior Wall Finishes	Replace ceramic tile	30
C3011	Interior Wall Finishes	Replace wallpaper	10
C3011	Interior Wall Finishes	Repair transite panels	20
C3011	Interior Wall Finishes	Repairs	15
C3022	Traffic Membranes	Re-install maintenance coating	15
C3022	Traffic Membranes	N/A	25
C3022	Traffic Membranes	Repair epoxy coating	25
C3022	Traffic Membranes	Repaint	10

Uniformat II	Description	Activity	Interval (Years)
C3024	Flooring	Replace ceramic tile	35
C3024	Flooring	Replace vinyl tile	25
C3024	Flooring	N/A	35
C3024	Flooring	Replace quarry tile	35
C3024	Flooring	Replace linoleum	35
C3024	Flooring	Replace wood laminate	25
C3024	Flooring	Refinish hardwood	20
C3024	Flooring	Reinstall maintenance coating	20
C3024	Flooring	Replace vinyl sheet	15
C3024	Flooring	Replace wood subfloor	25
C3024	Flooring	Repair epoxy coating	25
C3024	Flooring	Replace	25
C3025	Carpeting	Replace	15
C3031	Ceiling Finishes	Refinish	20
D1011	Passenger Elevators	Upgrade	20
D2011	Water Closets	Replace	24
D2012	Urinals	Replace	24
D2012	Urinals	N/A	24
D2013	Lavatories	Replace	24
D2014	Sinks	Replace	20
D2017	Showers	Replace	24
D2018	Drinking Fountains and Coolers	Replace	25
D2018	Drinking Fountains and Coolers	N/A	25
D2021	Cold Water Service	Repairs	10
D2022	Hot Water Service	Repair	10
D2023	Domestic Water Supply Equipment	Replace	12
D2031	Waste Piping	Repair	20
D2032	Vent Piping	Repair	20
D2033	Floor Drains	Repair	20
D2034	Sanitary Waste Equipment	Replace	15
D2041	Roof Water Drainage Piping	Repair	20
D3011	Oil Supply System	Replace	25
D3021	Boilers	Replace heating boiler	20
D3025	Forced Air Furnaces	Replace	20
D3025	Heat Recovery Ventilators (HRV) Units	Replace	20
D3026	Unit Heaters	Replace	20
D3027	Electric Heaters	Replace	25
D3028	Infra-Red Heaters	Replace	20

Uniformat II	Description	Activity	Interval (Years)
D3033	Condensing Units	Replacement	20
D3042	Exhaust Ventilation Systems	Replace	20
D3044	Hot Water (Hydronic) Distribution	Repair	20
D3051	Terminal Self-Contained Units	Replace	20
D3052	Package Units	Replace	20
D4010	Sprinklers	Repair and upgrade	10
D4031	Fire Extinguishers	Replace	15
D5010	Electrical Service and Distribution	Repairs and upgrades	20
D5020	Lighting and Branch Wiring	Repair and upgrade	20
D5030	Communications and Security	Replacement	10
D5030	Communications and Security	N/A	10
D5037	Fire Detection and Alarm Systems	Replace	10
D5037	Fire Detection and Alarm Systems	N/A	10
D5092	Emergency Lighting and Power Systems	Replace	10
G2020	Pedestrian Paving	Repair interlocking paving stones	10
G2020	Pedestrian Paving	Repair poured concrete	15
G2020	Pedestrian Paving	Repair wood deck	25
G2020	Pedestrian Paving	Replace wood deck	25
G2020	Pedestrian Paving	Repair unit paving stone	15
G2020	Pedestrian Paving	Repair slab on grade	25
G2020	Pedestrian Paving	Repair	10
G2031	Pedestrian Walkways	Repair	10
G2031	Pedestrian Walkways	Replace	15
G2033	Exterior Steps	Repair	10
G2033	Exterior Steps	Replace	20
G2042	Retaining Walls	Repair	25
G2044	Signage	Repair	10
G2044	Signage	Replace	10
G2050	Landscaping	Repair and maintenance	5
G3013	Well Systems	Replace pump	15
G3023	Septic Systems	Repair	20
G3023	Septic Systems	Replace	15
G4010	Electrical Distribution	Repairs and upgrades	20
G4020	Site Lighting	Replace	15

Appendix D
Lifecycle Assumptions for Non-Assessed Facilities

Appendix D: Lifecycle Assumptions for Non-Assessed Facilities

Name	Unique ID	Location	Replacement Value	Renewal Needs Methodology	% Degrading
Adventure Centre	0047	GE	439,200	A - Use FCA Average	
Chapman Barn	0113	MO	244,125	A - Use FCA Average	
Chapman House	0112	MO	300,000	A - Use FCA Average	
Gatehouse	0043	CL	63,000	A - Use FCA Average	
Gatehouse	0077	HF	18,000	A - Use FCA Average	
Gatehouse	0090	K	28,800	A - Use FCA Average	
Gatehouse	0109	MN	25,000	A - Use FCA Average	
Gatehouse	0119	MO	46,800	A - Use FCA Average	
Gatehouse	0139	RP	36,000	A - Use FCA Average	
Pedestrian Bridge	0046	GE	1,719,000	A - Use FCA Average	
Pro Patrol Building	0049	GE	120,000	A - Use FCA Average	
Service House	0082	K	470,400	A - Use FCA Average	
South Bird Pen	0114	MO	129,600	A - Use FCA Average	
Summit Gatehouse	0088	K	36,000	A - Use FCA Average	
Sunset Lodge	0048	GE	370,260	A - Use FCA Average	
Turtle Clan Longhouse	0042	CL	477,675	A - Use FCA Average	
Wolf Clan Longhouse	0041	CL	572,400	A - Use FCA Average	
Attendant Building (Caterpillar Summit)	0063	GE	6,460	B - Portion degrades	50%
Attendant Building (Limestone Summit)	0070	GE	4,505	B - Portion degrades	50%
Attendant Building (Little Dipper Summit)	0064	GE	6,460	B - Portion degrades	50%
Attendant Building (Racing Ramp Summit)	0051	GE	20,000	B - Portion degrades	50%
Attendant Building (Ridge Summit)	0065	GE	5,440	B - Portion degrades	50%
Attendant Building (Tube Summit)	0074	GE	2,380	B - Portion degrades	50%
Attendant Building (Updraft Summit)	0066	GE	5,440	B - Portion degrades	50%
Candy House/Elves Workshop	0116	MO	65,250	B - Portion degrades	50%
Carpet Transformer Centre Building	0071	GE	4,335	B - Portion degrades	50%
Country Store/Santa's Cabin	0115	MO	77,250	B - Portion degrades	50%
Fuciarelli Building (Leased?)	0100	Misc	157,500	B - Portion degrades	50%

Name	Unique ID	Location	Replacement Value	Renewal Needs Methodology	% Degrading
Hawk Shelter	0118	MO	50,000	B - Portion degrades	50%
Hydro Distribution Building (Caterpillar)	0061	GE	8,160	B - Portion degrades	50%
Hydro Distribution Building (New Learning Area)	0060	GE	8,160	B - Portion degrades	50%
Hydro Distribution Building (Tube)	0067	GE	5,440	B - Portion degrades	50%
North Bird Pen	0117	MO	57,600	B - Portion degrades	50%
Office Trailer	0076	HF	52,612	B - Portion degrades	50%
Panabode Office	0085	K	47,520	B - Portion degrades	50%
Portable Classroom	0044	CL	54,900	B - Portion degrades	50%
Portable Classroom	0050	GE	54,000	B - Portion degrades	50%
Standard Vault Toilets	0122	MO	6,375	B - Portion degrades	50%
Terminal Buildings (Limestone Base)	0052	GE	14,280	B - Portion degrades	50%
Terminal Buildings (Racing Ramp Base)	0058	GE	10,200	B - Portion degrades	50%
Terminal Buildings (Ridge Base)	0059	GE	8,500	B - Portion degrades	50%
Terminal Buildings (Updraft Base)	0056	GE	11,900	B - Portion degrades	50%
Walk-in Freezer	0054	GE	13,800	B - Portion degrades	50%
YMCA Building	0097	K	4,050	B - Portion degrades	50%
Buffalo Loading Chute	0134	MO	1,000	B - Portion degrades	75%
Central Pumping Station	0123	MO	5,000	B - Portion degrades	75%
Chemical Storage Building	0136	OC	13,600	B - Portion degrades	75%
Concessions	0053	GE	14,250	B - Portion degrades	75%
Culvert Vault Toilet	0080	HF	3,500	B - Portion degrades	75%
Culvert Vault Toilet	0111	MN	3,000	B - Portion degrades	75%
Culvert Vault Toilet	0129	MO	3,000	B - Portion degrades	75%
Culvert Vault Toilet (3)	0095	K	9,000	B - Portion degrades	75%
Lifeguard Building	0092	K	15,045	B - Portion degrades	75%
New Unisex Vault Toilets	0124	MO	4,800	B - Portion degrades	75%
Planet Kids	0091	K	27,880	B - Portion degrades	75%
Sand Storage	0096	K	5,400	B - Portion degrades	75%
Unisex Vault Toilet	0045	CL	4,800	B - Portion degrades	75%
Unisex Vault Toilet	0078	HF	4,800	B - Portion degrades	75%
Unisex Vault Toilet	0110	MN	5,528	B - Portion degrades	75%
Unisex Vault Toilet (7)	0089	K	33,600	B - Portion degrades	75%
Unisex Vault Toilet x3	0140	RP	14,400	B - Portion degrades	75%

Name	Unique ID	Location	Replacement Value	Renewal Needs Methodology	% Degrading
Beach Concession Storage	0099	K	1,000	B - Portion degrades	90%
Bird Blind	0121	MO	16,250	B - Portion degrades	90%
Campbellville Gazebo	0107	Misc	18,000	B - Portion degrades	90%
Carlisle Picnic Shelter	0105	Misc	44,100	B - Portion degrades	90%
Drive Shed	0081	HF	1,000	B - Portion degrades	90%
Drive Shed/Pole Barn	0084	K	75,640	B - Portion degrades	90%
Evaporator Wood Shed	0131	MO	2,400	B - Portion degrades	90%
Filter Building Storage	0086	K	41,500	B - Portion degrades	90%
Garden Shed	0135	MO	1,000	B - Portion degrades	90%
Gatehouse/Kiosk	0098	K	2,700	B - Portion degrades	90%
Kelly New Wood Shed	0130	MO	2,800	B - Portion degrades	90%
Kiosk	0055	GE	12,600	B - Portion degrades	90%
Kiosk	0079	HF	3,740	B - Portion degrades	90%
Kiosk	0128	MO	3,740	B - Portion degrades	90%
Kiosk	0142	RP	3,740	B - Portion degrades	90%
Lookout B	0120	MO	21,500	B - Portion degrades	90%
North Paddock Horse Shelter	0125	MO	4,320	B - Portion degrades	90%
Picnic Area Pavilion #11	0087	K	41,400	B - Portion degrades	90%
Picnic Area Pavilion #12	0093	K	9,000	B - Portion degrades	90%
Picnic Area Pavilion #9	0083	K	76,800	B - Portion degrades	90%
Picnic Area Pavilion/Campsite B	0094	K	9,000	B - Portion degrades	90%
Picnic Shelter - North Side	0132	MO	1,000	B - Portion degrades	90%
Picnic Shelter - South Side	0133	MO	1,000	B - Portion degrades	90%
Picnic Shelter A	0137	RP	84,000	B - Portion degrades	90%
Picnic Shelter B	0138	RP	44,100	B - Portion degrades	90%
Rail Car Storage	0057	GE	11,250	B - Portion degrades	90%
Shelter	0127	MO	4,320	B - Portion degrades	90%
Ski Club Storage Building	0062	GE	7,055	B - Portion degrades	90%
Ski/Snow School Storage Building	0072	GE	4,335	B - Portion degrades	90%
Ski/Snow School Storage Building	0073	GE	3,825	B - Portion degrades	90%
South Paddock Horse Shelter	0126	MO	4,320	B - Portion degrades	90%
Terrain Park Building	0068	GE	5,280	B - Portion degrades	90%
Tube Pool Shed Building	0069	GE	5,280	B - Portion degrades	90%
Wood Shed	0075	GE	1,530	B - Portion degrades	90%
Wood Storage	0141	RP	4,300	B - Portion degrades	90%

Appendix E
Financing Strategy Tables

Appendix E – Financing Strategy Tables

Table E-1 Capital Budget Forecast (Inflated $)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Capital Expenditures																				
Watershed Management and Support Services (WMSS)																				
Capital Expenditures	$500,684	$57,877	$89,287	$116,505	$57,011	$184,468	$170,595	$60,633	$225,179	$84,936	$632,826	$65,161	$279,101	$195,908	$82,511	$337,652	$121,016	$559,290	$202,912	$420,613
Subtotal WMSS	$500,684	$57,877	$89,287	$116,505	$57,011	$184,468	$170,595	$60,633	$225,179	$84,936	$632,826	$65,161	$279,101	$195,908	$82,511	$337,652	$121,016	$559,290	$202,912	$420,613
Conservation Areas																				
Facilities	700,968	175,300	298,906	475,014	212,678	699,463	492,884	399,051	504,808	351,707	1,312,402	394,139	783,632	760,309	349,337	1,261,429	429,073	838,176	725,741	862,111
Vehicles & Equipment Replacement	108,372	100,620	104,137	107,711	93,998	74,120	123,788	108,500	108,372	124,292	128,891	133,660	138,605	143,734	149,052	154,567	160,286	166,216	172,366	178,744
Ski/Snowboarding	550,000	450,000	775,000	500,000	1,600,000	0	2,000,000	775,000	2,200,000	1,138,844	1,180,981	1,224,677	1,269,990	1,316,980	1,365,708	1,416,239	1,468,640	1,522,980	1,579,330	1,637,765
Information Technology	32,000	71,000	48,000	50,000	50,000	50,000	50,000	50,000	50,000	60,285	62,515	64,828	67,227	69,714	72,294	74,969	77,742	80,619	83,602	86,695
Subtotal Conservation Areas	$1,391,340	$796,920	$1,226,043	$1,132,725	$1,956,676	$823,583	$2,666,672	$1,332,551	$2,863,180	$1,675,128	$2,684,789	$1,817,304	$2,259,455	$2,290,737	$1,936,391	$2,907,204	$2,135,741	$2,607,991	$2,561,039	$2,765,315
Total Expenditures	$1,892,024	$854,797	$1,315,330	$1,249,230	$2,013,687	$1,008,050	$2,837,268	$1,393,184	$3,088,359	$1,760,064	$3,317,615	$1,882,465	$2,538,556	$2,486,645	$2,018,902	$3,244,856	$2,256,757	$3,167,281	$2,763,951	$3,185,928
Capital Financing																				
Reserve - WMSS	500,684	57,877	89,287	116,505	57,011	184,468	170,595	60,633	225,179	84,936	632,826	65,161	279,101	195,908	82,511	337,652	121,016	559,290	202,912	420,613
Reserve - Conservation Areas	1,391,340	796,920	1,226,043	1,132,725	1,956,676	823,583	2,666,672	1,332,551	2,863,180	1,675,128	2,684,789	1,817,304	2,259,455	2,290,737	1,936,391	2,907,204	2,135,741	2,607,991	2,561,039	2,765,315
Total Capital Financing	$1,892,024	$854,797	$1,315,330	$1,249,230	$2,013,687	$1,008,050	$2,837,268	$1,393,184	$3,088,359	$1,760,064	$3,317,615	$1,882,465	$2,538,556	$2,486,645	$2,018,902	$3,244,856	$2,256,757	$3,167,281	$2,763,951	$3,185,928
Total Capital Expenditures less Financing	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Table E-2 Reserves and Reserve Fund Continuity Schedule

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
WMSS																				
Opening Balance	$307,308	-$31,685	$75,718	$159,705	$224,270	$356,840	$370,200	$404,962	$558,869	$557,322	$705,335	$311,177	$491,021	$467,240	$536,196	$730,588	$681,055	$859,579	$609,640	$725,661
Transfer From Operating	158,963	164,844	170,944	177,268	183,827	190,629	197,682	204,997	212,581	220,447	228,603	237,062	245,833	254,929	264,361	274,143	284,286	294,804	305,712	317,024
Transfer to Capital	500,684	57,877	89,287	116,505	57,011	184,468	170,595	60,633	225,179	84,936	632,826	65,161	279,101	195,908	82,511	337,652	121,016	559,290	202,912	420,613
Interest	2,729	436	2,331	3,802	5,754	7,198	7,675	9,543	11,051	12,502	10,064	7,943	9,488	9,935	12,542	13,977	15,254	14,547	13,221	13,477
Closing Balance	-$31,685	$75,718	$159,705	$224,270	$356,840	$370,200	$404,962	$558,869	$557,322	$705,335	$311,177	$491,021	$467,240	$536,196	$730,588	$681,055	$859,579	$609,640	$725,661	$635,549
Conservation Areas																				
Opening Balance	1,917,645	1,971,106	2,678,554	3,021,235	3,521,534	3,258,255	4,194,907	3,351,795	3,904,637	2,990,372	3,328,035	2,725,573	3,062,799	3,038,571	3,063,535	3,531,169	3,115,032	3,560,382	3,631,653	3,849,232
Transfer From Operating	1,406,299	1,458,332	1,512,290	1,568,245	1,626,270	1,686,442	1,748,840	1,813,547	1,880,648	1,950,232	2,022,391	2,097,219	2,174,816	2,255,285	2,338,730	2,425,263	2,514,998	2,608,053	2,704,551	2,804,619
Transfer to Capital	1,391,340	796,920	1,226,043	1,132,725	1,956,676	823,583	2,666,672	1,332,551	2,863,180	1,675,128	2,684,789	1,817,304	2,259,455	2,290,737	1,936,391	2,907,204	2,135,741	2,607,991	2,561,039	2,765,315
Interest	38,502	46,036	56,434	64,780	67,127	73,794	74,720	71,846	68,267	62,558	59,937	57,311	60,410	60,417	65,294	65,804	66,093	71,208	74,068	77,378
Closing Balance	$1,971,106	$2,678,554	$3,021,235	$3,521,534	$3,258,255	$4,194,907	$3,351,795	$3,904,637	$2,990,372	$3,328,035	$2,725,573	$3,062,799	$3,038,571	$3,063,535	$3,531,169	$3,115,032	$3,560,382	$3,631,653	$3,849,232	$3,965,914

Table E-3 Operating Budget Forecast (Inflated $)

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
WMSS																				
Operating Expenditures	$170,775	$176,752	$182,938	$189,341	$195,968	$202,827	$209,926	$217,273	$224,878	$232,749	$240,895	$249,326	$258,053	$267,085	$276,433	$286,108	$296,121	$306,486	$317,213	$328,315
Transfers to Capital Reserves	158,963	164,844	170,944	177,268	183,827	190,629	197,682	204,997	212,581	220,447	228,603	237,062	245,833	254,929	264,361	274,143	284,286	294,804	305,712	317,024
Net Impact on Municipal Funding	$329,738	$341,596	$353,882	$366,610	$379,796	$393,456	$407,608	$422,270	$437,459	$453,196	$469,498	$486,388	$503,886	$522,013	$540,794	$560,250	$580,407	$601,290	$622,925	$645,339
Conservation Areas																				
Operating Expenditures	12,727,233	12,992,216	13,262,813	13,539,145	14,030,125	14,539,146	15,066,882	15,614,030	16,153,587	16,836,169	17,542,641	18,273,840	19,030,631	19,813,910	20,624,603	21,463,671	22,332,106	23,230,936	24,161,225	25,124,074
Transfers to Capital Reserves	1,406,299	1,458,332	1,512,290	1,568,245	1,626,270	1,686,442	1,748,840	1,813,547	1,880,648	1,950,232	2,022,391	2,097,219	2,174,816	2,255,285	2,338,730	2,425,263	2,514,998	2,608,053	2,704,551	2,804,619
Net Impact on Other Funding Grants and Program Fees	$14,133,532	$14,450,548	$14,775,103	$15,107,390	$15,656,395	$16,225,588	$16,815,722	$17,427,577	$18,034,235	$18,786,401	$19,565,032	$20,371,060	$21,205,448	$22,069,194	$22,963,333	$23,888,934	$24,847,103	$25,838,988	$26,865,776	$27,928,693
WMSS Funding Analysis																				
WMSS Funding Projected in 2019 Budget	$248,400	$257,094	$266,092	$275,406	$285,045	$295,021	$305,347	$316,034	$327,095	$338,543	$350,392	$362,656	$375,349	$388,486	$402,083	$416,156	$430,722	$445,797	$461,400	$477,549
Additional WMSS Funding Relative to 2019 Budget Forecast	81,338	84,502	87,790	91,204	94,751	98,435	102,261	106,236	110,364	114,652	119,106	123,732	128,537	133,527	138,711	144,094	149,686	155,493	161,525	167,790
Per Cent Increase	**33%**	**33%**	**33%**	**33%**	**33%**	**33%**	**33%**	**34%**	**34%**	**34%**	**34%**	**34%**	**34%**	**34%**	**34%**	**35%**	**35%**	**35%**	**35%**	**35%**
Conservation Areas Funding Analysis																				
Conservation Areas Revenues Projected in 2019 Budget	$13,093,841	$13,703,187	$14,341,414	$15,009,910	$16,238,647	$16,998,544	$17,794,616	$18,628,605	$19,502,343	$20,184,925	$20,891,397	$21,622,596	$22,379,387	$23,162,666	$23,973,359	$24,812,427	$25,680,862	$26,579,692	$27,509,981	$28,472,830
Additional Conservation Areas Revenue Relative to 2019 Budget Forecast	1,039,691	747,361	433,689	97,480	-582,252	-772,956	-978,894	-1,201,028	-1,468,108	-1,398,524	-1,326,365	-1,251,537	-1,173,940	-1,093,471	-1,010,026	-923,493	-833,758	-740,703	-644,205	-544,137
Per Cent Increase	**8%**	**5%**	**3%**	**1%**	**-4%**	**-5%**	**-6%**	**-6%**	**-8%**	**-7%**	**-6%**	**-6%**	**-5%**	**-5%**	**-4%**	**-4%**	**-3%**	**-3%**	**-2%**	**-2%**

Conservation Halton

October 2019

REPORT TO: Conservation Halton Board of Directors

REPORT NO: # CHBD 10 19 07

FROM: Hassaan Basit, CAO/Secretary - Treasurer

DATE: October 24, 2019

SUBJECT: **Amended Conservation Halton By-law**

Recommendation

THAT the Conservation Halton Board of Directors **approves an amendment to the Halton Region Conservation Authority General Membership By-law No. 2018-01, Section 9, Signing Officers, as outlined in the report.**

Report

Conservation Halton's new By-Law's were approved by the Conservation Halton Board of Directors on November 22, 2018. In line with Conservation Halton's Board of Directors governance practices, the By-Law's are to be reviewed by the organization on a yearly basis and any necessary amendments are to be brought in front of the Board for review and approval. Due to recent senior level staff departures/changes a gap has been identified in the provisions of the By-Law regarding signing officers when a signing officer position becomes vacant and until such position(s) is filled.

To mitigate this gap the Chief Administrative Office/Secretary-Treasurer proposes the following update to the By-Law:

- Section 9. Signing Officers **to be amended as follows**.

9. Signing Officers
All deeds, transfers, assignments, contracts, and obligations entered into by the Authority shall be signed by the signing officers of the Authority. Signing Officers of the Authority are as follows:
Chair; Vice Chair; CAO/Secretary-Treasurer; Senior Director, Corporate Services; Director, Parks and Recreation; and Director, Finance as the Signing Officers for the Authority **and their delegates when a Signing Officer position becomes vacant**;

The Chief Administrative Officer/Secretary-Treasurer may delegate approval of signing authority to positions to enable decisions to be made by those persons who are in the most appropriate position to do so within Conservation Halton, in terms of their accountability, control and knowledge. Once the vacant Signing Officer position is filled/no longer vacant the delegated authority goes back to the Signing Officer of the Authority.

A Signing Officer cannot assign responsibility to someone else for temporary absences or vacations.

Any delegation of signing authority will be signed off by the Chief Administrative Officer / Secretary- Treasurer and the duration (if known) should be agreed upon at the time when the need for delegation arises.

The Delegation of Signing Authority must be kept on file in the office of the Signing Officer and be readily available as required by Internal Audit and/or Finance.

Any two of the named Signing Officer positions shall be required for signing bank documents and agreements that bind the Authority and any other document or agreement that requires two signatures. In all other circumstances where the contract or agreements are necessarily incidental to the works approved by the Authority, a single signature of the CAO/Secretary-Treasurer, or his/her delegate, will be sufficient to bind the Authority. Signing authority that was authorized by any previous Administration Regulation or By-law is superseded by this By-law.

- By-law Section 9. Signing Officers now states:

"9. Signing Officers
All deeds, transfers, assignments, contracts, and obligations entered into by the Authority shall be signed by the signing officers of the Authority. Signing Officers of the Authority are as follows:
Chair; Vice Chair; CAO/Secretary-Treasurer; Senior Director, Corporate Services; Director, Parks and Recreation; and Director, Finance as the Signing Officers for the Authority;
Any two of the named Signing Officer positions shall be required for signing bank documents and agreements that bind the Authority and any other document or agreement that requires two signatures. In all other circumstances where the contract or agreements are necessarily incidental to the works approved by the Authority, a single signature of the CAO/Secretary-Treasurer, or his/her delegate, will be sufficient to bind the Authority. Signing authority that was authorized by any previous Administration Regulation or By-law is superseded by this By-law.''

Resolution

The CAO recommends that the Board of Directors:

1. Approve the amended **Halton Region Conservation Authority General Membership By-law No. 2018-01** as included in Attachment 1 (The Halton Region Conservation Authority General Membership).

Signed & respectfully submitted:

Hassaan Basit
CAO/Secretary-Treasurer

Approved for circulation:

Hassaan Basit
CAO/Secretary-Treasurer

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