

## MINUTES

A meeting of the Conservation Halton Board of Directors was held on Thursday, April 26, 2018 beginning at 3:00 p.m. at Conservation Halton's Administration Office, Burlington.

Members Present:

- Rob Burton
- Mike Cluett
- Joanne Di Maio
- Cathy Duddeck
- Rob Duvall
- Allan Elgar
- Dave Gittings
- Moya Johnson
- Gord Krantz
- Bryan Lewis
- Gerry Smallegange
- Jim Sweetlove
- John Vice
- Marianne Meed Ward
- Ed Wells
- Jean Williams

Absent with Regrets: Sue McFadden  
Stephen Gilmour

Absent: Rob Duval

1. **Acceptance of proposed AMENDED Agenda.**

**CHBD 03 01** Moved by: Marianne Meed Ward  
Seconded by: Jean Williams

THAT the Conservation Halton Board of Directors **accept the AMENDED Agenda.**  
Carried

2. **Disclosure of Pecuniary Interest** **None**

There was no disclosure of pecuniary interest

3. **Consent Items**

The Consent Items were adopted

#### 4. Action Items

##### 4.1 Greenbelt Golden Horseshoe Conservation Authorities Collaborative Report #: CHBD 03 18 02

**CHBD 03 02** Moved by: Cathy Duddeck  
Seconded by: Mike Cluett

THAT the Conservation Halton Board of Directors **endorse Conservation Halton's participation in the Greenbelt Golden Horseshoe Conservation Authorities Collaborative and authorize the CAO to sign the attached Memorandum of Understanding.**

Carried

##### 4.2 Delegation of Approval Authority for Permissions under Ontario Regulation 162/05 Report #: CHBD 03 18 03

**CHBD 03 03** Moved by: Allan Elgar  
Seconded by: Dave Gittings

THAT the Conservation Halton Board of Directors **approve the following staff positions be delegated the authority to approve permissions under Ontario Regulation 162/06:**

- **CAO/Secretary Treasurer**
- **Senior Director, Corporate and Strategic Initiatives**
- **Director, Planning and Watershed Management**
- **Senior Manager, Development Planning**

THAT the Conservation Halton Board of Directors **reaffirm that permissions will generally be granted for a period of 24 months (2 years);**

THAT the Conservation Halton Board of Directors **continue to consider permissions for a period of up to 60 months (5 Years) for major municipal infrastructure where it has been demonstrated to the Board's satisfaction that, due to the scope of the project, an extended implementation period is warranted;**

AND FURTHER THAT the Conservation Halton Board of Directors **consider permissions for a period of up to 60 months (5 Years) for infrastructure maintenance using standard operating practices, where it has been demonstrated to the Board's satisfaction that an extended implementation period is warranted.**

Carried

##### 4.3 Appointment of Provincial Offences Officer under Ontario Regulation 162/06 pursuant to the *Conservation Authorities Act* Report #: CHBD 03 18 04

**CHBD 03 04** Moved by: Jean Williams  
Seconded by: Cathy Duddeck

THAT the Conservation Halton Board of Directors **approve the appointment of Cassandra Connolly as a Provincial Offences Officer, as set out in the *Conservation Authorities Act* and Ontario Regulation 162/06.**

Carried

4.4 **Re-appointment of Member to the Conservation Halton Foundation Board of Directors**  
Report #: CHBD 03 18 06

**CHBD 03 05** Moved by: Gord Krantz  
Seconded by: Allan Elgar

THAT the Conservation Halton Board of Directors **approve the re-appointment of Don Ford to the Conservation Halton Foundation Board of Directors until May 2020.**  
Carried

4.5 **Kelso Dam Construction** Phase 2 Funding Support Request to Halton Region  
Report #: CHBD 03 18 07

**CHBD 03 10** Moved by: Rob Burton  
Seconded by: Marianne Meed Ward

THAT the Conservation Halton Board of Directors **request Halton Region Council to provide additional funding in the amount of \$1,857,881, in support of Phase 2 construction at the Kelso Dam.**  
Carried

*Bruce McTavish, Project Manager for HATCH presented the status of Kelso Dam and repairs recommendations.*

5. **In Camera Items**

5.1 Legal Issue – Report #: CHBD 03 18 05

**CHBD 03 06** Moved by: Marianne Meed Ward  
Seconded by: Rob Burton

THAT the Conservation Halton Board of Directors **convene In Camera.**  
Carried

**CHBD 03 07** Moved by: Jean Williams  
Seconded by: Marianne Meed Ward

THAT the Conservation Halton Board of Directors **reconvene in public forum.**  
Carried

**CHBD 03 08** Moved by: Jean Williams  
Seconded by: Marianne Meed Ward

THAT the Conservation Halton Board of Directors **direct staff to proceed as discussed In Camera.**  
Carried

6. **Board of Directors Strategy Session / Business Planning**

7. **Other Business**

- a. *CH to present a legal update to Board of Directors on rights of farmers over lands and the right of cities to decide the use of land.*

*b. CAO to send a congratulatory message on behalf of the Board of Director to Patricia Vickers on her retirement.*

*The Board would like to acknowledge Patricia's contribution.*

**8. Adjournment**

**CHBD 03 09**

Moved by: John Vice

THAT the Conservation Halton Board of Directors **adjourn at 4.40 p.m.**

**REPORT TO:** Board of Directors

**REPORT NO: #** 03 18 07

**FROM:** Janelle Weppler, Associate Director, Engineering  
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Sheryl Ayres, Senior Director, Corporate and Strategic Initiatives  
905.336.1158 x2250, [sayres@hrca.on.ca](mailto:sayres@hrca.on.ca)

**DATE:** April 26, 2018

**SUBJECT:** Kelso Dam Construction Phase 2 Funding Support Request to Halton Region

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### Recommendation

THAT the Conservation Halton Board of Directors **request Halton Region Council to provide additional funding in the amount of \$1,857,881, in support of Phase 2 construction at the Kelso Dam.**

### Executive Summary

Phase 1 of *Kelso Dam, Urgent Repairs and Rehabilitation Projects* has been completed and Phase 2 (the final phase), is ready to commence. Increased project costs have been identified for Phase 2 due to required engineering mitigation measures needed to support dewatering during construction. Unprecedented federal and provincial funding has been secured to fund a portion of the increased project costs and additional municipal funding is required to fund the balance.

Discussions with Halton Regional staff have occurred in regards to the increased project costs and additional funding required. A request to Halton Region Council in the amount of \$1,857,881 is required to secure funding for the balance of the additional project costs. As a result of discussions with Halton Region staff, we expect the budgetary impacts of this additional funding amount to be mitigated through the asset management financing plan. Conservation Halton and Halton Region staff will continue to work together to develop a financing plan to fund the State of Good Repair Levy for rehabilitation of assets as identified through the Asset Management Plan for Dams & Channels.

### Report

#### Background

The Kelso Dam has been subjected to a number of dam safety inspections, assessments, investigations, evaluations and reviews. These various studies identified deficiencies related to the original design of the dam including seismic loading, the lack of energy dissipation downstream of the concrete spillway structure and the potential for the emergency spillway flows to cause erosion that might threaten the dam embankment. In addition, on June 11, 2015 and June 23, 2015, a boil and evidence of turbid discharge was observed within the channel, immediately downstream of the outlet works.

An engineering consulting company (Hatch) was immediately retained following the turbid discharge observation on June 11, 2015, to complete investigations and to provide engineering advice and recommend mitigation measures that included lowering of the water level within the reservoir and monitoring through site visits, cameras and onsite equipment. Hatch subsequently provided repair and rehabilitation designs, and completed tender documents for the *Kelso Dam, Urgent Repairs and Rehabilitation Projects*.

#### Construction Phasing

Given the need to proceed with the works at the Kelso Dam and that the original award was contingent upon receiving approval for all required permits, Conservation Halton staff obtained approval from the Conservation Halton Board of Directors to award the contract for construction to Dufferin Construction Company in two phases, contingent on approval of outstanding permits and funding. Phase 1 included works that did not require the outstanding permits, where Phase 2 award remained pending obtaining outstanding permits.

Phase 1 works were completed by March 31, 2018 and included the following items:

- Utility pole relocation;
- Groundwater investigations;
- Re-grading of emergency spillway;
- Re-leveling of precast slabs on upstream embankment of dam;
- Installation of eleven (11) new piezometers and decommissioning of non-functional instrumentation; and
- Removal of grouted riprap on upstream embankment of dam and replacement of riprap.

Proposed Phase 2 works include the following:

- Site Preparation
- River Control, Diversion and Dewatering
- Cut off Grouting at Dam Crest
- Stilling Basin
- Site Restoration
- Asphalt Resurfacing of Dam Crest
- Engineering Support (Contract Administration)

Conservation Halton has since received the MNRF LRIA permit and is currently working on the MOECC Permit to Take Water (PTTW). PTTW requirements are dependent on engineering mitigation measures and the ability to reduce dewatering needs.

#### Groundwater Investigation

Groundwater investigations completed in Phase 1, through a pump test carried out by GHD (engineering consultant) identified a large amount of groundwater seepage and the subsequent need to mitigate and support dewatering during construction excavation in Phase 2, through engineering controls. A summary of the findings is as follows:

- The site is primarily underlain by a thick sand, and sand and gravel deposit which forms an unconfined aquifer within the Kelso Dam rehabilitation area.
- The sand, and sand and gravel deposit has a very high groundwater yield.
- The long term steady state groundwater seepage to the excavation is estimated to be approximately 20,000,000 litres per day (requires PTTW from MOECC if not mitigated).

- The area of influence is estimated to be 790 metres from the construction excavation.
- Pre-treatment of the discharge is required that may include filtration or sedimentation/settling or a sediment curtain to reduce turbidity levels.
- Engineering controls will be required to mitigate groundwater takings during the construction of the stilling basin.

Conservation Halton staff carried out an evaluation of engineering controls with expertise from Hatch, GHD and Dufferin Construction and identified alternatives to mitigate dewatering during construction of the stilling basin. Alternatives included pumping, cut-off walls and grouting (alone and in combination), were evaluated based on technical, environmental, social/economic and financial criteria. The optimal mitigation alternative was estimated to have a total cost of \$3,100,000.

### Impact on Strategic Goals

This report supports the Metamorphosis strategic theme of Preparing for the effects of climate change.

This strategic initiative supports the objective to Enhance public safety through maintenance and upgrades of flood control structures and modernization of flood management operations to protect communities from severe weather and natural hazards.

### Financial Impact

The construction cost for the Kelso Dam was initially estimated at \$5,265,000.

The total construction cost for the Kelso Dam has been updated to include the additional engineering mitigation controls required to support dewatering during construction excavation, with an estimated cost of \$3,100,000, resulting in a total estimated construction cost of \$8,365,000.

Total construction expenditures to date (Phase 1) on the *Kelso Dam Urgent Repairs and Rehabilitation Projects* is \$697,560 which was funded 50% municipally through debt financing provided by the Region of Halton, and the balance by provincial WECI funding.

Conservation Halton was successful in obtaining federal funding support through the National Disaster Mitigation Program (NDMP) in the amount of \$1,500,000 for construction of Phase 2 works at the Kelso Dam, which is the maximum potential funding available per project.

Conservation Halton was also recently successful in obtaining additional provincial funding support through the Water and Erosion Control Infrastructure (WECI) 2018-19 program in the amount of \$1,870,308 for construction of Phase 2 works at the Kelso Dam. The Ministry of Natural Resources and Forestry (MNR) and WECI Committee received and reviewed 126 applications from 27 conservation authorities. The MNR and WECI Committee prioritize projects based on safety and distribute \$5,000,000 annually in total provincial funding. The Kelso Dam was recognized as a high priority project and was supported by the MNR and WECI Committee through approval of nearly 40% of the total WECI annual funding available.

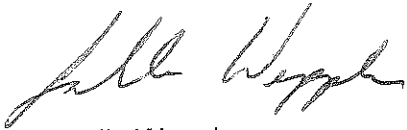
Together, NDMP and WECI programs support 44% of project funding for the Kelso Dam works and require the balance to be provided by the proponent. The initially estimated construction budget of \$5,265,000 includes \$2,632,500 in approved municipal funding through debt financing with Halton Region. Increased costs to support engineering mitigation needs during dewatering result in the need for additional funding of \$1,857,881; resulting in a total municipal funding need of \$4,490,381.

A summary of estimated costs and funding sources are outlined in the tables below.

	Budget
Approved Budget	\$ 5,265,000
Groundwater Engineering Measures Estimate	3,100,000
Revised Budget	\$ 8,365,000

	Funding				
	Budget - Expenditures	NDMP	WECI	CH Deferred Revenue	Municipal
Phase 1 Construction	\$ 697,560	\$ -	\$ 348,780		\$ 348,780
Phase 2 Construction	7,667,440	1,500,000	1,870,308	155,531	4,141,601
Total	\$ 8,365,000	\$ 1,500,000	\$ 2,219,088	\$ 155,531	\$ 4,490,381

Signed & respectfully submitted:

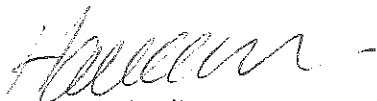


Janelle Wepler  
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Sheryl Ayres  
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Approved for circulation:



Hassaan Basit  
CAO/Secretary-Treasurer

FOR QUESTIONS ON CONTENT:

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