



Board Meeting

Video-conference

1:00 pm

June 17, 2020

AGENDA

ROLL CALL

Agenda Review

Declarations of Interest (written)

Items

1. Watershed Condition and Outlook (Jenn North)
2. Carp River University of Ottawa Study (Elizabeth Blenkarn)
3. Carp River Living Classroom Update (Janet Mason)
4. Approval of Minutes – Board Meeting, May 20, 2020. See attached.
5. Business arising:
 - a. Outcome of 2019 WECl Grant Application, Report 3059/20 (Sally McIntyre)
6. Shabomeka Dam – Rehabilitation Project Update, Report 3060/20 (Juraj Cunderlik)
7. Summer Work Plan and COVID-19 Status Update, Report 3061/20 (Sally McIntyre)
8. Interim Financial Update, Report 3062/20 (Angela Millar)
9. Appointment of Emma Deyo as an officer to enforce Section 28 regulations, Report 3063/20 (Matt Craig)
10. County of Frontenac Proposal – Septic Services, Report 3064/20 (Sally McIntyre)
11. Watershed Plan Public Advisory Committee (PAC) Engagement Update (Alyson Symon)
12. Canada Wildlife Services – operational support at Mississippi Lake National Wildlife Area, Report 3065/20 (Sally McIntyre)
13. Bell Canada Easement Renewal, Report 3066/20 (Ross Fergusson)

Other Business

ADJOURNMENT

MISSISSIPPI VALLEY CONSERVATION AUTHORITY

BOARD OF DIRECTORS TELECONFERENCE

Mississippi Valley Conservation Centre
Carleton Place

MINUTES

May 20, 2020

MEMBERS PARTICIPATING:

J. Mason, Chair
G. Gower, Vice-Chair;
J. Atkinson;
F. Campbell;
E. El-Chantiry;
B. Holmes;
J. Inglis;
J. Karau;
W. King;
P. Kehoe;
C. Lowry;
P. Sweetnam;
K. Thompson.

MEMBERS UNAVILABLE:

E. Burke;
R. Darling;
T. Fritz;
G. McEvoy.

STAFF PRESENT:

S. McIntyre, General Manager;
A. Millar, Treasurer;
S. Gutoskie, Community Relations Coordinator;
M. Craig, Manager, Planning and Regulations;
J. Cunderlik, Director, Water Resource Engineering;
J. North, Water Resources Technologist;
A. Tenbult, Stewardship Technician;
S. Lickley, Recording-Secretary.

J. Mason called the teleconference to order at 1:00 p.m.

B05/20/20-1

MOVED BY: E. El-Chantiry

SECONDED BY: F. Campbell

Resolved, That the Agenda for the May 20, 2020 Board of Directors Meeting be adopted.

1. Watershed Condition and Outlook

J. North noted that the log operations teams are replacing the last few logs in the dams in the upper watershed. She stated that flows in the watershed are at their normal rates for the start of the summer. Specifically, Crotch Lake is at target levels. There is no worry about drought at this time as there is sufficient water for redistribution. The Ottawa River is at normal levels. Water management targets are on track and we hope to have an uneventful summer as the long-range forecast shows any average summer.

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2. Approval of Minutes – Board of Directors Meeting May 20, 2020

B05/20/20-2

MOVED BY: J. Atkinson

SECONDED BY: P. Kehoe

Resolved, That the Minutes of the Mississippi Valley Board of Directors meeting held on April 15, 2020 be received and approved as printed.

“CARRIED”

3. Approval of Minutes – Special Board of Directors Meeting May 20, 2020

B05/20/20-3

MOVED BY: P. Sweetnam

SECONDED BY: C. Lowry

Resolved, That the Minutes of the Mississippi Valley Special Board of Directors meeting held on April 15, 2020 be received and approved as printed.

“CARRIED”

4. Lower Mississippi Flood Plain Mapping Update

S. McIntyre explained that the Lower Mississippi Flood Plain Mapping was uploaded onto the website and is available to the public. She also stated that MVCA had notified municipal clerks and planners so they are informed of the changes.

COVID-19 Update

S. McIntyre explained that all MVCA Conservation Areas are now open, except the beach at Palmerston Lake. The province now allows washrooms and first aid areas to be open. Small weddings may be allowed but we are awaiting confirmation. In the last 24 hours they have announced summer camps and daycares may be able to open soon. Cleaning procedures at Conservation Areas are under review, and staff are exploring what level of service they can offer safely.

With respect to the summer monitoring programming, the City of Ottawa Stream Watch program is on hold; and no lake monitoring programs will be conducted this year. However, staff are planning a citizen science / stewardship program to be offered to lake associations and community groups.

The partner of a staff member tested positive for COVID-19 and our staffer was placed on leave for 14 days in accordance with Lanark Leeds Grenville Health Unit directives. We are checking in with staff regularly to make sure everyone is taken care of.

S. McIntyre added that the watershed lies within the jurisdiction of multiple Health Units and that each is dealing with pandemic measures differently.

J. Karau asked for more information about the new monitoring program. S. McIntyre replied that it is currently under development. She encouraged board members to share their input with her after the meeting if they had suggestions. J. Inglis commented that a citizen-based monitoring program presents an opportunity to engage local lake associations and for the community to take more ownership of their lakes. He asked that board members be kept in the loop about community engagement.

B. Holmes announced that Tea on the Lawn at the Mill of Kintail is cancelled due to exposure risks to the elderly that attend the event.

P. Sweetnam asked if MVCA is eligible for COVID-19 related government funding. S. McIntyre replied that CAs are receiving mixed information. It may be worth applying in case regulations or opinions change and MVCA becomes eligible. MVCA would set aside funds until we have confirmation of eligibility.

5. Kashwakamak Lake Dam Risk Assessment Results

Juraj Cunderlik, Director of Water Resources Engineering reviewed Staff Report #3057/20, attached.

F. Campbell asked for clarification on the term topo-bathymetric survey. J. Cunderlik answered that it is the measure of the bottom elevation of a water body—an underwater survey. J. Inglis asked whether the new dam structure is planned for downstream of the current structure. J. Cunderlik answered that downstream is where they are anticipating it will be built and that the existing dam could potentially be used as a coffer dam.

S. McIntyre clarified that WECI funding has not yet been confirmed, however unofficially MVCA has been told that none of their projects qualified this year. J. Mason asked if replacement could be postponed for 5 or more years. J. Cunderlik responded that a comprehensive review will give more insight and information into the condition of the dam. He added that there may be opportunities to salvage parts of the existing structure.

J. Karau asked if MVCA was ensuring insurability. S. McIntyre replied that MVCA strives to match industry standards regarding dam maintenance and safety to maintain insurability. If WECI funding continues to be denied, the Board of Directors may need to 100% self-fund the project in order to adequately mitigate risk and liability to the corporation.

B04/15/20-3

MOVED BY: J. Karau

SECONDED BY: P. Sweetnam

Resolved, That the Board direct staff to:

- a) **Postpone major repair of the Kashwakamak Lake Dam overflow weir for up to five years;**
- b) **Carry out topo-bathymetric survey and underwater dam inspection in 2020 and finalize the Dam Safety Review update in 2021; and**
- c) **Complete an Environmental Assessment and detailed design for replacement of the entire structure within the next five years.**

“CARRIED”

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6. Regulatory Permits 2020 (January to April 2020)

M. Craig reviewed Staff Report # 3058/20 summarizing the permits processed in regards to Ontario Regulation 153/06, Development, Interference with Wetlands and Alterations to shorelines and Watercourses for informational purposes.

J. Karau asked about instances where people have built within a regulated wetland. M. Craig responded that this can occur because every regulated wetland has a buffer which is also regulated. He added that often people will do minor work like site grading and the planning group works with them to have them become compliant with the regulations.

7. 2019 Poole Creek Stewardship Project

A. Tenbult presented on the 2019 Poole Creek Stewardship Project, presentation attached.

G. Gower commented that Poole Creek is one of Ottawa's most undervalued natural resources. F. Campbell asked if Poole Creek is classified as a municipal drain. S. McIntyre answered that the upper portion, above West Ridge, is a municipal drain.

J. Karau commented that a parallel project to Poole Creek is the University of Ottawa Carp River Restoration and Low Impact Development study. He requested that at a future meeting a presentation be made to the board on the Carp River.

J. Mason added that she would like to talk more about municipal drains at a future meeting. E. El-Chantiry suggested that Dave Ryan from the City of Ottawa could assist or present. S. McIntyre committed to arrange for a presentation at a future board meeting.

J. Karau suggested that the next meeting include an update on the Watershed Plan Public Advisory Committee.

ADJOURNMENT

The meeting was adjourned at 3:00 p.m.

B04/15/20-3

MOVED BY: F. Campbell

SECONDED BY: B. Holmes

Resolved, That the Board of Directors meeting be adjourned.

“CARRIED”

“S. Lickley, Recording Secretary

J. Mason, Chair”

REPORT

3059/20

TO:	Board of Directors, Mississippi Valley Conservation Authority
FROM:	Sally McIntyre, General Manager
RE:	Outcome of 2020 Grant Application – Water Erosion Control Infrastructure (WECI)
DATE:	June 10, 2020

RECOMMENDATION

That the Board direct staff to:

1. Write the Minister of Natural Resources & Forestry and area Members of Provincial Parliament (MPPs) regarding funding of the WECI program and the need for improvements as recommended by the WECI Committee in its letter dated April 23, 2020 and by Doug McNeil, Ontario's Special Advisor on Flooding in his Final Report to the Premier.
2. Write federal ministers and area Members of Parliament (MPs) endorsing the letter sent by Conservation Ontario (CO) regarding the need for federal stimulus funding dated May 28, 2020 in partnership with Rideau Valley Conservation Authority (RVCA) and South Nation Conservation (SNC).
3. Share the above letters with member municipalities and county councils and encourage them to support this initiative.
4. Prepare an analysis of past WECI grant applications and funded projects and develop and updated strategy for grant submission in 2021.
5. Prepare a report for the Finance & Administration Committee that contains:
 - o methodology for prioritizing MVCA capital projects
 - o potential grant opportunities
 - o alternative funding approaches with potential impacts on the 10-year capital program

1.0 PURPOSE

The purpose of this report is to inform the Board that *none of the projects* submitted this year were approved for WECI funding, and to obtain direction to address this systemic problem in underfunding. Refer to Attachment 1 for the letter received from the Ministry of Natural Resources & Forestry (MNRF) and the list of approved and unapproved projects.

2.0 BACKGROUND

The provincial WECl program provides \$5 million annually to support the maintenance of water and erosion control infrastructure in Ontario. This dollar amount has not changed in 17 years. As has become the norm, the program was significantly oversubscribed in 2020 with a total of 102 projects submitted from 30 conservation authorities valued at a total of \$19 million.

In February 2020, MVCA applied to the WECl program for 50% funding of the following projects:

- Shabomeka Lake Dam Reconstruction and Earth Embankment Rehabilitation, \$950,000
- Kashwakamak Lake Dam Weir Stabilization and Repair, \$320,000
- Kashwakamak Lake Dam Class Environmental Assessment, \$150,000

Considerable effort was made to address evaluation criteria, and several discussions were had with the MNR representative to ensure that the best possible application was submitted. Despite this, including serious documented concerns regarding the integrity of the Shabomeka and Kashwakamak dams, the three MVCA projects were unable to secure funding.

WECl applications were screened and evaluated by a committee comprised of the following:

Conservation Authority Representatives

- Chris Tasker, P.Eng., Upper Thames River CA
- Craig Mitchell, B.Sc., Toronto and Region CA
- Sandra Mancini, P.Eng., South Nation Conservation

Conservation Ontario Representatives

- Bonnie Fox, Policy and Planning
- Rick Wilson, Information Management

MNR Representative

- Scott Bates, Water Budget Program Analyst

The WECl Committee recognizes the inadequacy of the funding envelope and key challenges in program design and wrote to the Minister of MNR in April to express concerns in this regard.

3.0 DISCUSSION

The WECl program was established in 2003 with an annual budget of \$5 million. Over the past 17 years the value of the program has never increased to address matters such as inflation, aging infrastructure, changes in regulations, the impacts of extreme flood events, or the annual excess of applications that underscores persistent and growing program needs. Had the fund been increased annually at the rate of inflation it would now be worth ~\$6.6 million.

Each year, \$1 million is dedicated to studies and \$4 million to capital projects. Until 2019, mid-year reporting was used by the Ministry to identify unspent monies that were used to fund projects that had not received grants due to program oversubscription. Last year, the Ministry cancelled this practice resulting in almost \$821,000 in unspent funds being returned to the province. Note, this well exceeds the funding sought by MVCA this year.

As mentioned above, the WECl Committee wrote to the province to request that in-year reallocations be reinstated, emphasizing persistent and significant oversubscription to the program. In a similar vein, Conservation Ontario recently wrote key federal Ministers requesting that bilateral (Ontario/Federal) economic stimulus programs support the full suite of conservation authority projects stating that “investments in the existing critical flood and erosion control infrastructure managed by conservation authorities protects life and property and avoids significant costs associated with flooding in Ontario.” And, in his November 2019 report to the Premier, the Special Advisor on Flooding Doug McNeil suggested that “a multi-year budget be established for some larger maintenance projects that may span many years to provide flexibility for future potential fluctuations in funding requests.”

In order to encourage increased provincial funding and ensure stimulus program availability to CAs, it is recommended that MVCA reinforce key messages conveyed by Conservation Ontario, the WECl Committee, and the Special Advisor on Flooding by writing Ministers and local members of provincial and federal government; and encourage local councils to do likewise through letters to MVCA member municipalities.

Due to the critical role MVCA infrastructure has in protecting people and property, the significant regulatory requirements imposed on dam owners/operators, and the financial pressures being experienced by all levels of government, a transparent method for prioritizing capital projects and options for financing them should be prepared, and a preferred approach identified prior to development of the 2021 Budget. It is recommended that the methodology and alternative approaches be tabled at the next Finance & Administration Committee meeting, with potential impacts on the 10-year Capital Plan and a recommendation provided to the Board. The outcome of the Board’s decision would be used to inform development of the 2021 Budget.



**Ministry of Natural Resources and
Forestry**

Regional Operations Division
Integration Branch
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**Ministère des Richesses naturelles et
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Direction de l'intégration
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June 1, 2020

Sally McIntyre
General Manager
Mississippi Valley Conservation Authority
10970 Highway 7
Carleton Place, ON K7C 3P1

SUBJECT: Water and Erosion Control Infrastructure Program

Dear Ms. McIntyre:

Thank you for applying to the 2020-2021 Water and Erosion Control Infrastructure (WECI) program. This year the Ministry of Natural Resources and Forestry (MNR) and the WECI Committee received and reviewed 115 project applications from 30 conservation authorities. A total of 59 projects have been approved for funding.

The WECI program was oversubscribed again this year with a total funding request that exceeded the \$5 million MNR grant allocation. Unfortunately, using the established WECI scoring guidelines, the Mississippi Valley Conservation Authority was not successful in the selection of projects.

If you have any questions regarding the WECI program please contact Scott Bates at (705) 868-2856 or scott.bates@ontario.ca.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dave Burritt".

Dave Burritt, P.Eng.
Supervisor,
Surface Water Monitoring Centre

WECI PROGRAM 2020-2021 - PRELIMINARY LIST OF APPROVED PROJECTS

Count	Project Type	ProjectID	Conservation Authority	Project Name	Structure	Total Cost	MNRF Grant	Final Score
1	Repair - Safety	R.20.070	Hamilton Conservation Authority	Safety Fencing Installation - Christie Lake Dam	Christie Dam	\$10,000.00	\$5,000.00	160
2	Repair - Safety	R.20.065	Cataraqui Region Conservation Authority	Sydenham Lake Dam (SLD) Railing Replacements	Sydenham Lake Dam	\$69,000.00	\$34,500.00	155
3	Repair - Safety	R.20.042	Lower Trent Conservation	Replacement Log Lifting System	Warkworth Dam	\$40,000.00	\$20,000.00	150
4	Repair - Safety	R.20.064	Cataraqui Region Conservation Authority	Broome-Runciman Dam (BRD) Railing Replacements	Broome-Runciman Dam	\$42,600.00	\$21,300.00	125
5	Repair - Safety	R.20.069	Cataraqui Region Conservation Authority	Wilton Road Dam Safety Signage Installation	Wilton Road Dam	\$5,100.00	\$2,550.00	125
6	Repair - Safety	R.20.041a	Kettle Creek Conservation Authority	Dalewood Dam Log Lifter and Safety Measures	Dalewood Dam	\$35,500.00	\$17,750.00	125
7	Repair - Safety	R.20.062	Crowe Valley Conservation Authority	Marmora Dam Fencing/Signage	Marmora (Crowe Lake) Dam	\$17,695.00	\$8,847.50	105
8	Repair - Safety	R.20.040	Long Point Region Conservation Authority	Deer Creek Dam – Operations Chamber Rehabilitation	Deer Creek Dam	\$25,000.00	\$12,500.00	105
9	Repair - Safety	R.20.068	Cataraqui Region Conservation Authority	Marsh Bridge Dam Signage Repair and Installation	Marsh Bridge Dam	\$8,800.00	\$4,400.00	75
						\$253,695.00	\$126,847.50	

Project Type	ProjectID	Conservation Authority	Project Name	Structure	Total Cost	MNRF Grant	Final Score	
1	Repair	R.20.058	Conservation Halton	Hilton Falls Dam Diversion Construction (Phase 1)	Hilton Falls Dam	\$220,000.00	\$110,000.00	175
2	Repair	R.20.009	Upper Thames River Conservation Authority	West London Dyke Phase 7 Reconstruction	West London Dykes	\$3,400,000.00	\$1,700,000.00	170
3	Repair	R.20.016	Grand River Conservation Authority	Conestogo Dam Downstream Concrete Repairs - Phase 2 of 3	Conestogo Dam	\$900,000.00	\$450,000.00	160
4	Repair	R.20.018	Grand River Conservation Authority	Conestogo Dam Gate Refurbishment - Phase 2 of 3	Conestogo Dam	\$90,000.00	\$45,000.00	160
5	Repair	R.20.010	Upper Thames River Conservation Authority	Wildwood Dam MCC Replacement	Wildwood Dam	\$250,000.00	\$125,000.00	160
6	Repair	R.20.019	Grand River Conservation Authority	New Dundee Dam - Gate and Embankment Rehabilitation	New Dundee Dam	\$200,000.00	\$100,000.00	150
7	Repair	R.20.020	Raisin Region Conservation Authority	Fly Creek Pumping Station Repairs	Fly Creek	\$49,500.00	\$24,750.00	150
8	Repair	R.20.021	Raisin Region Conservation Authority	Garry River Dam Upgrades	Alexandria Dam	\$2,500.00	\$1,250.00	150
9	Repair	R.20.008	Toronto and Region Conservation Authority	Stouffville Dam Concrete Spillway Concrete Repair	Stouffville Dam	\$50,000.00	\$25,000.00	150
10	Repair	R.20.035	Grand River Conservation Authority	Shand Dam - Gate Motor	Shand Dam	\$50,000.00	\$25,000.00	150
11	Repair	R.20.039	Grand River Conservation Authority	Shand Dam - Superstructure Deflection Monitoring	Shand Dam	\$30,000.00	\$15,000.00	150
12	Repair	R.20.031	Toronto and Region Conservation Authority	Claireville Dam HVAC Repair	Claireville Dam	\$35,000.00	\$17,500.00	145
13	Repair	R.20.066	Cataraqui Region Conservation Authority	Sydenham Lake Dam (SLD) Repair Steel Components	Sydenham Lake Dam	\$6,400.00	\$3,200.00	145
14	Repair	R.20.067	Cataraqui Region Conservation Authority	Sydenham Lake Dam (SLD) Winch Repair	Sydenham Lake Dam	\$3,700.00	\$1,850.00	145
15	Repair	R.20.060	Conservation Halton	Hilton Falls Electrical Upgrades	Hilton Falls Dam	\$40,000.00	\$20,000.00	145
16	Repair	R.20.014	Toronto and Region Conservation Authority	Bolton Berm Repair Project Phase 1	Bolton Channel	\$400,000.00	\$200,000.00	140
17	Repair	R.20.012	Upper Thames River Conservation Authority	Wildwood Dam Generator Modifications	Wildwood Dam	\$15,000.00	\$7,500.00	140
18	Repair	R.20.055	South Nation Conservation	Mitigating Flood Risk at the Chesterville Dam – Phase 2	Chesterville Dam	\$80,000.00	\$40,000.00	135
19	Repair	R.20.044	Conservation Halton	Scotch Block DSR Repairs	Scotch Block Dam	\$300,000.00	\$150,000.00	135
20	Repair	R.20.017	Toronto and Region Conservation Authority	Claireville Dam Control Room Roof Repair	Claireville Dam	\$30,000.00	\$15,000.00	135
21	Repair	R.20.013	Upper Thames River Conservation Authority	Pittock Dam Generator Modifications	Pittock Dam	\$20,000.00	\$10,000.00	135
22	Repair	R.20.003	Nickel District Conservation Authority	Maley Dam Rehabilitation (partial funding at cutoff line)	Maley Dam	\$1,619,950.00	\$809,975.00	135
						\$7,792,050.00	\$3,896,025.00	

Project Type	ProjectID	Conservation Authority	Project Name	Structure	Total Cost	MNRF Grant	Final Score	
1	Study	S.20.014	Grand River Conservation Authority	Shand Dam - Stop log design and emergency gate handling	Shand Dam	\$60,000.00	\$30,000.00	120
2	Study	S.20.015	Grand River Conservation Authority	Conestogo Dam - DSR implementation - MCC design	Conestogo Dam	\$60,000.00	\$30,000.00	110
3	Study	S.20.003	Upper Thames River Conservation Authority	Fanshawe Dam Safety Review	Fanshawe Dam	\$100,000.00	\$50,000.00	110
4	Study	S.20.028	Conservation Halton	Kelso Dam DSR Update	Kelso Dam	\$110,000.00	\$55,000.00	105
5	Study	S.20.012	Grand River Conservation Authority	Woolwich Dam - Inundation Mapping and HPC determination	Woolwich Dam	\$35,000.00	\$17,500.00	100
6	Study	S.20.002c	Quinte Conservation	Dam Seepage Study - Third Depot Lake	Third Depot Lake Dam	\$25,000.00	\$12,500.00	100
7	Study	S.20.040	Conservation Halton	Hilton Falls DSR Update	Hilton Falls Dam	\$110,000.00	\$55,000.00	95
8	Study	S.20.013	Grand River Conservation Authority	Brantford Dyke - Ice Jam Flood Mitigation Feasibility study	Brantford Dykes	\$150,000.00	\$75,000.00	95
9	Study	S.20.005	Upper Thames River Conservation Authority	Pittock Dam Safety Review	Pittock Dam	\$100,000.00	\$50,000.00	95
10	Study	S.20.011	Grand River Conservation Authority	Bridgeport Dyke - Seepage, Stability and Capacity Improvements Design EA	Grand River - Kitchener Channel (Bridgeport)	\$300,000.00	\$150,000.00	90
11	Study	S.20.044	Hamilton Conservation Authority	Public Safety Assessment & Public Safety Plan	Christie Dam & Valens Dam	\$20,000.00	\$10,000.00	90
12	Study	S.20.022	Raisin Region Conservation Authority	Garry River Dam Assessments	Alexandria Dam	\$15,000.00	\$7,500.00	90
13	Study	S.20.010	Toronto and Region Conservation Authority	Stouffville Dam Emergency Spillway Repair Final Design Study	Stouffville Dam	\$45,000.00	\$22,500.00	90
14	Study	S.20.004a	Upper Thames River Conservation Authority	London Erosion Control Study	West London Dykes	\$15,000.00	\$7,500.00	90
15	Study	S.20.017	Grand River Conservation Authority	Cambridge Dyke - Block Wall and Pump Room Outlet Final Design	Grand River - Cambridge Channel	\$60,000.00	\$30,000.00	85
16	Study	S.20.026	Long Point Region Conservation Authority	Norwich Dam - Dam Safety Review	Norwich Dam	\$90,000.00	\$45,000.00	80
17	Study	S.20.024	Kettle Creek Conservation Authority	Dalewood Dam Geotechnical Investigations and Slope Stability Assessment	Dalewood Dam	\$40,000.00	\$20,000.00	75
18	Study	S.20.039	Nickel District Conservation Authority	Junction Creek Box Culvert System Rehabilitation Strategy	Junction Creek Concrete Box Culvert	\$35,000.00	\$17,500.00	75
19	Study	S.20.036	Catfish Creek Conservation Authority	Formal Engineering Inspection	Springwater Dam	\$5,000.00	\$2,500.00	70
20	Study	S.20.027	Lower Trent Conservation	Warkworth Earthen Embankment Erosion Study	Warkworth Dam	\$10,000.00	\$5,000.00	70
21	Study	S.20.030	Conservation Halton	Channel Replacement and Repair Study	Hager-Rambo Diversion Channel	\$50,000.00	\$25,000.00	65
22	Study	S.20.042	Crowe Valley Conservation Authority	Marmora Dam Safety Assessment Update	Marmora (Crowe Lake) Dam	\$24,255.00	\$12,127.50	65
23	Study	S.20.033	Essex Region Conservation Authority	Belle River Flood Control - Detailed Assessment Study	Belle River Flood Control	\$45,000.00	\$22,500.00	65
24	Study	S.20.016	Lakehead Region Conservation Authority	Kam River Erosion Sites Inventory - Phase II - Victor Street Risk Assessment	Kam River Bank Stabilization	\$140,000.00	\$70,000.00	65
25	Study	S.20.001	Quinte Conservation	McLeod Dam - Dam Safety Review & Public Safety Risk Assessment	McLeod Dam	\$160,000.00	\$80,000.00	65
26	Study	S.20.002b	Quinte Conservation	Dam Seepage Study - McLeod	McLeod Dam	\$20,000.00	\$10,000.00	65
27	Study	S.20.029	Conservation Halton	Morrison Wedgewood Channel Spill Study	Morrison-Wedgewood Diversion Channel	\$100,000.00	\$50,000.00	60
						\$1,924,255.00	\$962,127.50	

1	Administration	CO.20.001	Conservation Ontario	WECI Database Administration, Support and Infrastructure for CA's & MNRF	All CA Structures		\$15,000.00	N/A
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WECI PROGRAM 2020-2021 - PRELIMINARY LIST OF NON-APPROVED PROJECTS

Count	Project Type	ProjectID	Conservation Authority	Project Name	Structure	Total Cost	MNRF Grant	Final Score
1	Repair	R.20.032	Conservation Halton	Milton Channel Site A - Retaining Wall Replacement	Milton Channel	\$127,964.00	\$63,982.00	130
2	Repair	R.20.045	Essex Region Conservation Authority	Belle River Flood Control - Repairs	Belle River Flood Control	\$96,000.00	\$48,000.00	125
3	Repair	R.20.056	South Nation Conservation	Casselman Weir Concrete Assessment and Remediation	Casselman Weir	\$60,000.00	\$30,000.00	125
4	Repair	R.20.030	Grand River Conservation Authority	Cambridge Dyke - East bank upstream wall repair	Grand River - Cambridge Channel	\$175,000.00	\$87,500.00	125
5	Repair	R.20.041b	Kettle Creek Conservation Authority	Dalewood Dam Stop Logs	Dalewood Dam	\$12,000.00	\$6,000.00	125
6	Repair	R.20.061	Mississippi Valley Conservation	Kashwakamak Lake Dam Weir Stabilization and Repair	Kashwakamak Lake Dam	\$320,000.00	\$160,000.00	125
7	Repair	R.20.047	North Bay-Mattawa Conservation Authority	Chippewa Creek - Oak Street Repair - Part 2	Lower Chippewa Creek	\$350,000.00	\$175,000.00	125
8	Repair	R.20.057	South Nation Conservation	Crysler Dyke Integrity Assessment	Crysler Dyke	\$38,500.00	\$19,250.00	125
9	Repair	R.20.051	St. Clair Region Conservation Authority	McKeough Dam - Culvert, slump, erosion repairs	W. Darcy McKeough Dam	\$56,000.00	\$28,000.00	125
10	Repair	R.20.033	Conservation Halton	Milton Channel Site B - Concrete Slab Replacement	Milton Channel	\$127,964.00	\$63,982.00	120
11	Repair	R.20.059	Lower Thames Valley Conservation Authority	6th Street Dam Generator Cable and Connection Replacement	Sixth Street Backwater Dam and Pump Station	\$10,210.00	\$5,105.00	120
12	Repair	R.20.050	St. Clair Region Conservation Authority	Sarnia Shoreline Protection Repair - Phase 3	Sarnia Erosion Control Project	\$800,000.00	\$400,000.00	120
13	Repair	R.20.048	Essex Region Conservation Authority	Grand Marais Drain Flood Control Channel Improvements	Turkey Creek Channel	\$1,189,100.00	\$594,550.00	120
14	Repair	R.20.053	Nottawasaga Valley Conservation Authority	Pretty River Dyke Major Vegetation Removal	Pretty River Dyke	\$60,000.00	\$30,000.00	120
15	Repair	R.20.023	Grand River Conservation Authority	Wellesley Dam - Embankment and Gate Repair	Wellesley Dam	\$190,000.00	\$95,000.00	115
16	Repair	R.20.054	Mississippi Valley Conservation	Shabomeka Lake Dam Reconstruction and Earth Embankment Rehabilitation	Shabomeka Lake Dam	\$950,000.00	\$475,000.00	115
17	Repair	R.20.029	Grand River Conservation Authority	Caledonia Dyke - Erosion Repair	Grand River - Caledonia Channel	\$120,000.00	\$60,000.00	110
18	Repair	R.20.026	Toronto and Region Conservation Authority	Beaucourt Road Major Maintenance Project (MCD2)	14 Beaucourt Road	\$570,000.00	\$285,000.00	110
19	Repair	R.20.022	Long Point Region Conservation Authority	Deer Creek Dam - Concrete Repair	Deer Creek Dam	\$175,000.00	\$87,500.00	105
20	Repair	R.20.025	Otonabee Region Conservation Authority	Hope Dam Earth Embankment Erosion Mitigation	Hope Dam	\$65,000.00	\$32,500.00	105
21	Repair	R.20.028	Grand River Conservation Authority	Caledonia Dam - Stop Log gain construction	Caledonia Dam	\$75,000.00	\$37,500.00	100
22	Repair	R.20.011	Niagara Peninsula Conservation Authority	Shriners Creek Dam 'B' Erosion Repair	Shriners Creek Dam 'B'	\$120,000.00	\$60,000.00	100
23	Repair	R.20.024	Toronto and Region Conservation Authority	Long Branch Park Major Maintenance Project	Long Branch Park (HP1)	\$1,819,200.00	\$909,600.00	95
24	Repair	R.20.038	Grand River Conservation Authority	St.Jacobs Dam - Embankment Erosion Repair and Crest repair	St. Jacobs Dam	\$75,000.00	\$37,500.00	95
25	Repair	R.20.046	Essex Region Conservation Authority	John R. Park Homestead Shoreline Repair	JRPH Conservation Area Shore Protection	\$350,000.00	\$175,000.00	90
26	Repair	R.20.037	Grand River Conservation Authority	Wellington Dam - Motor refurbishment	Wellington Street Dam	\$12,000.00	\$6,000.00	90
27	Repair	R.20.005	Quinte Conservation	Thirteen Island Lake Replacement	Thirteen Island Lake Dam	\$265,000.00	\$132,500.00	80
						\$8,208,938.00	\$4,104,469.00	

Project Type	ProjectID	Conservation Authority	Project Name	Structure	Total Cost	MNRF Grant	Final Score	
1	Study	S.20.025	Long Point Region Conservation Authority	Deer Creek Dam - Dam Safety Review	Deer Creek Dam	\$90,000.00	\$45,000.00	55
2	Study	S.20.043	Mississippi Valley Conservation	Kashwakamak Lake Dam Class EA	Kashwakamak Lake Dam	\$150,000.00	\$75,000.00	55
3	Study	S.20.032	Saugeen Valley Conservation Authority	Upper Durham Dam Structural Stability and Safety Assessment	Upper Durham Dam	\$100,000.00	\$50,000.00	50
4	Study	S.20.004b	Upper Thames River Conservation Authority	London Erosion Control Study	Nelson Clarence	\$2,500.00	\$1,250.00	50
5	Study	S.20.019	Grand River Conservation Authority	Wellesley Dam - Inundation Mapping and HPC determination	Wellesley Dam	\$35,000.00	\$17,500.00	45
6	Study	S.20.018	Maitland Valley Conservation Authority	Gorrie Dam Decommissioning Study	Gorrie Dam	\$40,000.00	\$20,000.00	45
7	Study	S.20.007	Niagara Peninsula Conservation Authority	Virgil Dams Safety Review	Upper Virgil Reservoir Flow Control Structure	\$100,000.00	\$50,000.00	45
8	Study	S.20.009	Upper Thames River Conservation Authority	Harrington Dam Cultural Heritage Evaluation & Impact Assessment	Harrington Dam	\$18,000.00	\$9,000.00	40
9	Study	S.20.038	Nottawasaga Valley Conservation Authority	Tottenham Dam Safety Review	Tottenham Dam	\$58,000.00	\$29,000.00	35
10	Study	S.20.004c	Upper Thames River Conservation Authority	London Erosion Control Study	Becker St	\$22,500.00	\$11,250.00	30
11	Study	S.20.002a	Quinte Conservation	Dam Seepage Study - Bell Rock	Bell Rock Main Dam	\$20,000.00	\$10,000.00	25
12	Study	S.20.037	St. Clair Region Conservation Authority	Head St. & Coldstream Dam Decommissioning Study	Coldstream C.A. Dam	\$120,000.00	\$60,000.00	20
13	Study	S.20.031	Toronto and Region Conservation Authority	Lakeland Drive Major Maintenance Slope Stabilization Project (HR23)	37-43 Lakeland Drive	\$80,000.00	\$40,000.00	15
14	Study	S.20.006	Upper Thames River Conservation Authority	Fullarton Dam Environmental Assessment	Fullarton Conservation Area Dam	\$50,000.00	\$25,000.00	10
15	Study	S.20.008	Upper Thames River Conservation Authority	Embro Dam Cultural Heritage Evaluation Report	Embro Conservation Area Dam	\$9,000.00	\$4,500.00	10
16	Study	S.20.041	Crowe Valley Conservation Authority	Crowe Bridge Safety Assessment	Crowe Bridge Weir	\$17,345.00	\$8,672.50	5
					\$912,345.00	\$456,172.50		

WECI PROGRAM 2020-2021 - INELIGIBLE & WITHDRAWN PROJECTS

Count	Status	Project Type	ProjectID	Conservation Authority	Project Name	Structure	Total Cost	MNRF Grant	Final Score	Rationale
1	Ineligible	Repair	R.20.049	Sault Ste. Marie Region Conservation Authority	Marks Bay Conservation Area Erosion Protection Work	Marks Bay Conservation Area	\$100,000.00	\$50,000.00	145	New structures are ineligible
2	Ineligible	Repair	R.20.071	Ausable Bayfield Conservation Authority	Morrison Dam Concrete Repairs	Morrison Dam	\$36,000.00	\$18,000.00	110	Late application submission
3	Ineligible	Repair - Safety	R.20.072	Ausable Bayfield Conservation Authority	Morrison Dam Safety Railings	Morrison Dam	\$39,000.00	\$19,500.00	110	Late application submission
4	Ineligible	Repair	R.20.073	Ausable Bayfield Conservation Authority	Armstrong West Erosion Control Emergency Repair	The 49 Cut	\$15,000.00	\$7,500.00	100	Late application submission
5	Ineligible	Repair	R.20.043	Rideau Valley Conservation Authority	Standby Generator	Britannia Village Flood Control System	\$90,000.00	\$45,000.00	75	Ineligible item
6	Ineligible	Study	S.20.034	Catfish Creek Conservation Authority	Springwater Dam Safety Equipment	Springwater Dam	\$650.00	\$325.00	70	Safety equipment PPE is ineligible
7	Ineligible	Study	S.20.035	Catfish Creek Conservation Authority	Install Water Level Recorder	Springwater Dam	\$500.00	\$250.00	70	Temporary monitoring equipment is ineligible
8	Ineligible	Study	S.20.046	Ausable Bayfield Conservation Authority	Walker Drain Repair- Phase 1 Engineering Study	Walker Drain Erosion Control	\$25,000.00	\$12,500.00	40	Late application submission
9	Withdrawn	Repair	R.20.052	Credit Valley Conservation	Island Lake South Dam Phase 2, Project Extension	Island Lake South Dam	\$100,000.00	\$50,000.00	155	Project withdrawn by CA
10	Withdrawn	Repair	R.20.004	Quinte Conservation	Third Depot Lake IDF Improvements (Phase II)	Third Depot Lake Dam	\$600,000.00	\$300,000.00	150	Project withdrawn by CA
11	Withdrawn	Repair	R.20.036	Grand River Conservation Authority	Woolwich Dam - Automatic gate operator replacement	Woolwich Dam	\$25,000.00	\$12,500.00	130	Project withdrawn by CA
12	Not Project	Repair - Safety	R.20.063	Cataragui Region Conservation Authority	Broome-Runciman Dam (BRD) Railing Replacements	Broome-Runciman Dam	\$42,600.00	\$21,300.00	115	Duplicate database entry with R.20.064
13	Not Project	Repair	R.20.001	Ausable Bayfield Conservation Authority	Parkhill Dam Rip Rap resurfacing	Parkhill Dam	\$100,000.00	\$50,000.00	95	Incorrect database entry; Not submitted by CA
							\$1,173,750.00	\$586,875.00		

REPORT

3060/20

TO:	Board of Directors, Mississippi Valley Conservation Authority
FROM:	Juraj Cunderlik, Director, Water Resources Engineering
RE:	Shabomeka Lake Dam Rehabilitation Update
DATE:	June 10, 2020

Recommendations:

That the Board direct MVCA staff to:

- a) Complete detailed design of the Shabomeka Lake Dam water control structure using a manually operated mechanical (bascule) gate for water level regulation;
- b) Commence regular monthly inspections of the Shabomeka Lake Dam as described in this report until construction begins; and
- c) Develop a financing plan to ensure completion of the Shabomeka Lake Dam rehabilitation in 2021.

1.0 PURPOSE

The purpose of this report is to summarize the main advantages and disadvantages including cost implications of two design options for replacement of the Shabomeka Dam; and to provide a revised project schedule and recommended next steps in light of the denial of MVCA's provincial grant application under the Water Erosion Control Infrastructure (WECI) program for this project.

2.0 BACKGROUND

Shabomeka Lake Dam is located on the southwest shore of Shabomeka Lake in the Township of North Frontenac. The dam was originally built with timber cribbing around the turn of the last century to help move lumber down the river. As the lumber trade declined, the dam fell into disrepair. During the 1950's, the Mississippi River Improvement Company assumed ownership of the structure and rebuilt it with earth embankments and a wooden sluice gate. In 1959, the wooden sluice gate was replaced with a concrete structure.

Substantial rehabilitation of the Shabomeka Lake Dam was completed by Ontario Hydro in 1988. Deteriorated concrete was replaced, and steel reinforcing bars were installed on the control structure. Steel cross braces were installed between the abutments to stabilize the control section. A clay core was added to reduce seepage and rock filled gabion baskets were installed between the abutments to reduce erosion. In 1989, Ontario Hydro stated that the repairs completed in 1988 were of a temporary nature and that the concrete structure should be replaced.

MVCA took ownership of the structure in 1991. MVCA engaged Trow in 2005 to complete a dam safety review and geotechnical analysis of the dam. The analysis concluded that the factor of safety against failure of the downstream face of the embankment did not meet Ontario safety standards.

More recent dam inspections revealed several structural, erosion, and seepage deficiencies, including settlement and dip in the top of the earth embankments, seepage and erosion along the downstream face of the earth embankments, and longitudinal cracks on the top of the north earth embankment. The inspections concluded that the dam *does not* meet current Ontario dam safety standards.

Due diligence and standard of care must be exercised at all stages of a dam’s life cycle. In response to the findings of recent dam inspection studies, MVCA initiated a Class Environmental Assessment (EA) for the Shabomeka Lake Dam rehabilitation. In 2019, the Class EA was approved and MVCA proceeded with the detailed design.

In October 2019, MVCA submitted an application under the *Lakes and Rivers Improvement Act* (LRIA) for the reconstruction of the Shabomeka Lake Dam to MNRF and is currently waiting for approval. Once approval is obtained, MVCA can complete detailed design.

Table 1 itemizes provincial grants received under the WECl program for the dam.

Table 1: WECl grants received for Shabomeka Lake Dam

Year	Project Scope	WECl Grant Value
2015	Geotechnical study	\$15,000
2016	Replacement of decking	\$7,700
2017-18	Preliminary design and environmental assessment	\$40,000
Total		\$62,700

The 2020 grant application was in the amount of \$475,000, representing 50% of the cost estimate prepared in 2018 for like-for-like replacement of the dam.

3.0 EXISTING DAM AND OPERATION

The Shabomeka Lake Dam is the first major water control structure on the Mississippi River system. The dam is located in a remote part of the watershed and the long driving times combined with manual stoplog operation do not allow for fast response times during emergency situations.

The dam consists of a single concrete sluiceway containing eight 0.25 m x 0.25 m x 2.44 m stoplogs. The concrete structure, measuring 3.8 metres wide by 3.2 metres high, is founded at an elevation of 268.5 m, and has a deck elevation of 271.7 m. An earth embankment on either side of the sluice forms the remainder of the dam. The stoplogs are operated by a steel overhead gantry using two 1-ton chain fall hoists to manipulate the logs.

The north and south embankments are 50 m and 20 m long, respectively, and vary in height to a maximum of 3 m. The shoreline portion of the embankments were built using local materials. The other sections were built with wooden cribs and aluminum sheeting on the upstream surface and are impervious with fill on top of the cribs. Wing walls on the upstream facing embankments are wire mesh gabion baskets filled with rocks.

The dam is used to regulate water levels for flood control, recreational purposes, and fish habitat protection. Summer water levels are maintained between 270.90 m and 271.10 m. After the level drops below 270.93 m there is virtually no outflow from the lake until the fall drawdown. The drawdown begins mid-September with six of the eight stoplogs in the dam being removed by early October. Stable minimum winter water levels are targeted to reach 269.60 m to 269.80 m by early November. The number of operations per year vary between 15 to 25.

4.0 DAM DESIGN OPTIONS AND ANALYSIS

Two design options were considered for the control structure: a stoplog gate and a mechanical gate design.

Stoplog gate is a traditional control structure that was used frequently in the past. Stoplogs are usually wooden beams or steel or aluminium units stacked one upon the other to the desired height. They form a bulkhead that is supported in grooves recessed into the supporting piers at each end of the span. Water is controlled in the gate by manually adding or removing individual stoplogs. All dams owned by MVCA use wooden stoplogs that are operated manually.

Bottom-hinged crest gates, (basculer gates), are one of the simplest and most frequently used mechanical types of regulating gates. They were originally developed as a replacement for wooden flashboards. A hydraulic cylinder, cable drum hoist, or electric motor-driven cylinder is attached to the arm of the gate with a stem for operation. Basculer gates can be operated

manually or equipped with an automatic controller for remote operation. Mechanical gates have established history in Ontario with successful applications in Thornbury Dam, Wasdell Falls Dam, Omemee Dam, Earl Rowe Dam, Burks Falls Dam, and many others.

The main advantages and disadvantages of the stoplog and bascule gate options are provided in Table 2, which addresses the following considerations: operational aspects, performance in regulating water levels, maintenance requirements, and safety.

If the new Shabomeka Lake Dam was only designed for current operation, staff would recommend the stoplog gate design. However, the service life of the new dam will reach well into the next century and as such MVCA has an obligation to consider future operational needs to make sure the dam has the functionality required over time.

It is expected that the dam operation will need to address the following factors in future:

- Increased water demand, which will require more precise water level regulation,
- Climate change and extreme events, which will require more frequent water level regulation and faster operation response times,
- Integrated watershed management, which will require automated operation,
- Environmental considerations, which will require reduced footprint of field operations,
- Enhanced work safety, which will require more stringent safety measures and protocols.

The mechanical gate provides several advantages over the stoplog gate in all of these categories—it provides precise water level regulation, can support frequent and automated operation, requires reduced operation and maintenance in the field, and offers safe operating procedures. In contrast, stoplog gates are best suited to infrequent operation due to their high operation requirements, provide imprecise water regulation, and their operation can pose greater health and safety risks.

For these reasons, staff recommend a manually operated bascule gate design for the Shabomeka Lake Dam rehabilitation. The manual operation can be easily retrofitted for remote operation in the future once the supporting automation system is in place.

Table 2: Comparison of Stoplog and Bascule Gate Systems

Category	Stoplog Gate	Bascule Gate
Operation	<p>Advantages:</p> <ul style="list-style-type: none"> - Same as MVCA's other dams, in-house operation knowledge and experience - Existing overhead gantry could be reused in new design <p>Disadvantages:</p> <ul style="list-style-type: none"> - More labor-intensive, two operators required - Requires operator to enter the bay for jacking - Logs are difficult to remove under high flows - Debris often gets lodged between logs - Stoplogs and pike poles can be lost during operations - Limited access across dam because of overhead gantry 	<p>Advantages:</p> <ul style="list-style-type: none"> - Requires only one operator - No equipment stored on site (no theft/vandalism) - Opportunity to automate operation in the future - Does not require jacking - Debris can be easily flushed - Allowance for easy access/crossing - Operating mechanism provides effort only when raised <p>Disadvantages:</p> <ul style="list-style-type: none"> - No previous operation experience, will require training - Complex operation in ice conditions
Performance	<p>Advantages:</p> <ul style="list-style-type: none"> - Simple, robust mechanism, few parts could fail <p>Disadvantages:</p> <ul style="list-style-type: none"> - Imprecise water level regulation - Not suitable for short-term and frequent operation - Seepage problems - Stoplogs can jam 	<p>Advantages:</p> <ul style="list-style-type: none"> - Precise water level regulation under all flow conditions - Better sealing, low seepage - Remote operation offers faster response times <p>Disadvantages:</p> <ul style="list-style-type: none"> - Mechanical parts can malfunction - Sensitive to aeration demand and vibration - Can become locked in ice during winter conditions
Maintenance	<p>Advantages:</p> <ul style="list-style-type: none"> - In-house knowledge, can be completed by MVCA staff - Spare parts readily available <p>Disadvantages:</p> <ul style="list-style-type: none"> - Overhead gantry system must be inspected by a structural engineer every 3 years - Stoplogs are replaced every 5-10 years - Chain falls must be replaced every 5 years. 	<p>Advantages:</p> <ul style="list-style-type: none"> - Low annual maintenance - No trash accumulation in sluice <p>Disadvantages:</p> <ul style="list-style-type: none"> - No previous experience, will require training - Difficult inspection of hinge bearings - Mechanical parts more expensive to replace - Major refurbishment required every ~30 years
Safety	<p>Advantages:</p> <ul style="list-style-type: none"> - Not known <p>Disadvantages:</p> <ul style="list-style-type: none"> - Extensive procedures and PPE required for operation - Overhead gantry is prone to lightning strikes - Swinging cables can pose hazard - Operation (hooking logs) during high flows unsafe - Fall risk during operation - Entering gains to jack can be hazardous 	<p>Advantages:</p> <ul style="list-style-type: none"> - Safer operation, low risk of injury - Reduced safety training required for staff - Failsafe condition lowers gate during emergency <p>Disadvantages:</p> <ul style="list-style-type: none"> - Not known

5.0 COST PROJECTIONS

Class-D cost projections for the two dam gate options are provided in Table 3. The cost difference between the two options is approximately \$195,000 (18% cost increase) for the manually operated bascule gate and \$227,500 (21% cost increase) for a remotely operated bascule gate. The incremental cost of the remote bascule gate design is approximately \$32,500 which can be undertaken at a later time once the supporting system is in place.

Table 3: Cost Comparison – Capital (\$2020)

Cost Item	Stoplog Gate	Bascule Gate	
		Manual Operation	Remote Operation
Detailed design	\$40,000	\$50,000	\$60,000
Tendering	\$5,000	\$5,000	\$5,000
Construction	\$780,000	\$920,000	\$935,000
Administration and Inspection	\$20,000	\$20,000	\$20,000
Contingency (30%)	\$253,500	\$298,500	\$306,000
Total	\$1,098,500	\$1,293,500	\$1,326,000
<i>Difference over Stoplog Option</i>		<i>\$195,000</i>	<i>\$227,500</i>

Table 4 provides operation and maintenance (O&M) cost projections for the two design options. Operation of stoplogs at Shabomeka Dam requires 2 MVCA staff, whereas a bascule gate can be operated by one person; and if equipped for automated operation, field work would be limited to maintenance only. Initially annual maintenance costs would be low, however, the shorter service life of its mechanical parts would necessitate major repairs twice during the life of the dam structure.

Table 4: Cost Comparison – Annual Operating & Maintenance (\$2020)

Cost Item	Stoplog Gate	Bascule Gate	
		Manual Operation	Remote Operation
Annual Operation	\$4,500	\$2,500	\$500
Annual Maintenance	\$1,500	\$2,500	\$3,000
Total	\$6,000	\$5,000	\$3,500

The costs are approximate and exclude any repairs that will be needed for the concrete structure and embankments which would be similar for all options, as well as the cost of dam safety inspection studies.

In summary, while the capital cost for the mechanical gate option is approximately 20% higher than the stoplog gate design, the reduced operation requirements, especially when equipped for automated operation in the future, will provide long-term cost saving opportunity. At the end of the life cycle the total capital cost associated with both design options is expected to be similar.

6.0 PROJECT FUNDING, APPROVALS, AND SCHEDULE

As MVCA did not obtain a WECI grant for the Shabomeka Lake Dam this year, staff will explore other provincial and federal funding opportunities and develop a strategy for the WECI application as well as a financing plan that will allow for its construction in 2021.

In the meantime, staff recommend regular visual inspections be carried out to identify and record any hazards, deficiencies or changes to the structure from previous visits, including signs of dislocation, settlement, erosion, cracks, and seepage.

An updated project schedule for the Shabomeka Lake Dam rehabilitation project is provided below. The schedule assumes that MVCA will be successful in securing MNRF approval of its preliminary design under the LRIA by the end of July; and sufficient funding for the project in 2021. All design work will be completed this year to enable eligibility for any shovel-ready funding opportunities that may arise. Construction is planned for the fall 2021 period and would commence after the mid-September drawdown. Post-construction site restoration works and facility monitoring will take place in 2022.

Task	2020							2021												2022
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1 Land Ownership/Easements	█	█																		
2 Access and Safety	█	█																		
3 Detailed Design			█	█	█	█														
4 Permitting/Approvals					█	█	█													
5 WECI Application								█	█	█	█	█								
6 Tendering													█	█						
7 Bid Evaluation and Award															█					
8 Mobilization																█				
9 Construction																	█	█	█	
10 Site Restoration																				█
11 Monitoring and Maintenance																				█

REPORT

3061/20

TO:	Board of Directors, MVCA
FROM:	Sally McIntyre, General Manager
RE:	Summer Work Plan and COVID-19 Status Update
DATE:	June 12, 2020

Recommendation:

That the Board approve:

1. Reallocation of up to \$5,100 in unspent funds from the monitoring and education programs to enable delivery of an enhanced stewardship and outreach program.
2. Introduction of a new wedding rental rate of \$250 for parties of 10 or fewer.

1.0 PURPOSE

The purpose of this report is to update the Board on how the COVID-19 pandemic is impacting MVCA and the actions being taken to mitigate operational and financial impacts while ensuring business continuity, and employee and public health and safety. Furthermore, to present alternative programming in light of government and health unit restrictions and obtain approval for their funding.

2.0 BACKGROUND

On March 17 the Province of Ontario declared a State of Emergency due to the COVID-19 pandemic. The next day the Board met by teleconference to review and approve-in-principle an Epidemic/Pandemic Preparedness and Response Plan that allowed management to immediately implement measures to adhere to provincial orders and protect staff. The plan was subsequently adopted by the Board on April 15 along with changes to governing by-laws that allow the Board to meet electronically and govern effectively during emergencies. A verbal update on the state of operations was provided to the Board at its May 20 meeting. This report sets out actions taken to date and those planned for the summer in response to on-going directives issued by the province and programs announced by the federal government. These have occurred with tremendous frequency and this report is based upon information available at the time of drafting.

3.0 GENERAL HEALTH AND SAFETY IN THE WORKPLACE

The office has been closed to the public and almost all staff have worked from home since announcement of the pandemic, with a weekly schedule used to minimize the number of people working at the office to meet operational needs. As a result of recent provincial announcements, Managers are currently working with staff to arrange for employees to attend the office one day per week to allow for more in-person meetings and resumption of normal operations over time.

Standard operating procedures (SOPs) were developed to educate staff on the virus, how they can protect themselves and others, and the actions to be taken in the office and in the field to mitigate risks to employees and the public:

- Cleaning & Disinfecting Washrooms in a Public Setting During COVID-19 Pandemic
- Vehicle & Equipment Use COVID-19
- Preventing Exposure to COVID-19
- Inspections on Private Property COVID-19
- Wearing of Facemasks and Face Coverings

Additional SOPs will be drafted to address situations as they arise, e.g. reopening of the Museum.

Regular updates are issued to staff to apprise them of changes occurring in the office and the field in response to government directives and updates from local health units; and SOPs are issued as they are finalized for review and sign-off by employees.

4.0 DAM OPERATIONS

Proceeding as normal in accordance with the above SOPs.

5.0 PLANNING AND PERMITTING

Proceeding as normal in accordance with the above SOPs. Most applicants are understanding of SOP requirements governing site inspections. While there has been no noticeable change in the volume of work as a result of COVID-19, there is a challenge in connecting with colleagues at other agencies to confirm details or consult on matters in a timely manner.

6.0 WATER RESOURCE ENGINEERING

Proceeding as normal in accordance with the above SOPs with the same operational challenges noted for planning and permitting. There was a delay in commencing some field maintenance such as at gauge stations due to COVID-19 restrictions, however, this work is now underway.

7.0 CONSERVATION AREAS (CAs)

All CAs are now open, with most washrooms and outhouses scheduled to open June 19, which are to be cleaned twice daily. COVID-19 signage is installed at all locations reminding people to

maintain social distances and to limit their stay to allow others to use the facility. Where appropriate, directional signage is being used to minimize opportunities for the intersection of people. And, a very limited number of picnic tables are being set out in accordance with the current provincial limit on groups to 10 or fewer. Parking meters have been covered, however, these will be uncovered once washrooms are opened at the CAs.

Morris Island CA

The CA was closed from April 8 to May 1 in accordance with provincial directives and on the advice of Ottawa Public Health. Normally, this facility is operated in partnership with residents belonging to the Morris Island Volunteer Group who share in washroom cleaning and waste management duties. However, due to COVID-19 residents withdrew their support this year and staff are currently developing a schedule that will allow washrooms to be open 7 days a week and weekly pick-up of garbage.

Purdon CA

This facility is normally closed for the winter and reopens the May long-weekend. This year opening was delayed to June 16. Normally, the outhouse on site is maintained once per week, however this is being increased to twice daily. Due to the narrow boardwalks, visitors are being advised to use face masks when attending the site.

Palmerston-Canoto CA

Both the trail and beach are leased to and maintained by the Township of North Frontenac in partnership with the Canoto Lake Association. In consultation with the Township, the facility was closed from April 8 to May 13. At present, only the trail is open however the Township has indicated that it will reopen the beach as a result of recent announcements from the province.

Mill of Kintail CA

The CA was closed from April 8 to May 16 in accordance with provincial directives and in consultation with the Municipality of Mississippi Mills. Normally this facility is operated year-round with frequent rentals of the Gate House; the Museum open from the May long-weekend through to Thanksgiving; year-round educational programming; daily cleaning of several washrooms and outhouses; and with both the upper and lower parking lots open for use.

Currently, the facility is operating as follows:

- The Gate House is closed and all rentals cancelled and refunded.
- The lower parking lot is open, and the upper lot closed but scheduled to open June 19 by vehicles with valid Accessibility Permits only.
- The Museum is scheduled to open June 19 (see below for details)

- All educational programming including summer camp were cancelled and refunded (see section 9.0 for additional information)
- Most weddings cancelled or rescheduled (see below for additional information)
- Maintenance and small capital projects proceeding as planned with modest limitations.

Just this week that province announced that museums can open. As no summer students were hired due to program uncertainty and the loss of a grant, the Museum will only be open Friday-Monday, 10am to 4pm, with groups up to 4 allowed to enter at 15-minute intervals. A flow pattern will be established through the building to limit opportunities for people to intersect. Per provincial directives, people will need to register before entering in order to allow for easy tracking should a museum visitor subsequently test positive for COVID-19.

Also announced by the province was permission to hold weddings with parties up to 10 people. While many people chose to cancel or reschedule their bookings at the Mill of Kintail to next year, some people who have contracts at full price¹ are still hoping to proceed. Given that far less effort is required to set up and reinstate the site for weddings of 10 people, staff recommend that weddings of 10 or fewer participants be charged \$250.

8.0 NATURAL SYSTEM MONITORING PROGRAM

MVCA is reducing field monitoring this season due restrictions previously in place, the challenge of maintaining safe physical distances and using some PPE, and staff limitations. Activities are being modified as described below.

Annual Lake Monitoring Program

This program monitors 45 lakes on a rotational basis. Ten lakes were to be sampled in 2020 with a focus on the Buckshot Creek subwatershed and four sites along the Mississippi River. Instead, a total of 6 lakes (12 sites) have been prioritized for monitoring this year: 3 major lakes located on the main stem of the Mississippi River (Mississippi Lake, Dalhousie Lake, and Kashwakamak Lake) Buckshot Lake (a cold-water lake) and, 2 other lakes in the Buckshot Creek subwatershed that haven't been sampled in five years (Mississagagon Lake and Grindstone Lake).

Normally, three samples are taken per season beginning in May and ending in September. Only two samples will be taken this year as we could not obtain spring samples, and just one summer student was hired due to program uncertainty and H&S field limitations. Sites are usually tested for the following parameters:

- Total phosphorus (TP)—the leading nutrient of concern for algae blooms;
- Water clarity—using the Secchi depth method; and

¹ \$500 for up to 50 participants and \$750 for more than 50.

- Dissolved oxygen and temperature at 1 m depth intervals—indicators of cold to cool water fish habitat

City Stream Watch Program

This program involves hosting members of the public at different waterfront sites to conduct in-stream monitoring as well as shoreline restoration projects and remove urban garbage. Due to the need to maintain safe physical distances the program has been cancelled by all three of the CAs within the City of Ottawa.

City of Ottawa Water Quality Monitoring Program

In April, the City informed local CAs that the program was cancelled but would resume in July pending approval of such activities by the province. Given the recent lifting of restrictions, MVCA will resume this work next month. In summary, the program involves gathering surface water samples from 17 sites. These samples are sent to the City of Ottawa lab for processing to assess nutrients, metals and other water quality parameters.

Fish Survey Program

This program has been cancelled due to field safety concerns. Areas scheduled for sampling this year were the following: Buckshot Creek subwatershed in the west and Watts Creek, Kizzell Drain and Feedmill Creek in the City of Ottawa.

Cold Water Stream Monitoring Program

This program is proceeding as normal. This program involves temperature monitoring of known cold and cool water habitat in the watershed.

Spring Headwater Program

This program proceeded with a reduced assessment protocol in April due to COVID-19 restrictions.

9.0 EDUCATION AND OUTREACH

As noted in section 7.0, all summer camp programming has been cancelled. This decision was taken following surveying of parents, consultation with Lanark Leeds Grenville Health Unit, and discussions with program staff. In short, the operational requirements proved to be largely unfeasible or very difficult to maintain given the nature and staffing of our camps. All 55 families affected were notified and we have received understanding and supportive messages from several.

As outlined at the May meeting, staff have developed alternative programming that will enable the Authority to achieve the following education and outreach objectives:

- Inform the public about the watershed;
- Engage the residents and visitors in discussing watershed issues relevant to them while on or near water; and
- Encourage and support lake residents to participate in monitoring their lake, sharing results, and looking for and understanding trends.

The proposed program comprises the following elements:

- Develop a video that demonstrates typical monitoring activities carried out by MVCA staff and demonstrating what lake residents can do.
- Encourage lake associations and lake stewards to sign-up for the Water Ranger program; fund and distribute Water Ranger kits²; and train and support volunteers in using the kits and in uploading and understanding results.
- Offer retraining to lake associations and volunteers that already participate in the Water Ranger program.
- Host a travelling pop-up tent at boat launches to share information with boat owners on good boating etiquette to mitigate migration of invasive species between lakes.
- Host a travelling pop-up tent at municipal, provincial, and CA waterfront venues to engage visitors in learning about the watershed and how they can be good stewards.

The North Frontenac Lake Associations Alliance has already expressed interest in supporting MVCA in outreach to members based upon earlier communications. Water Rangers has been contacted and is “excited” to partner with MVCA on this initiative. Each kit costs approximately \$390 including tax. Staff has identified nine lakes with lake stewards or lake associations that are not currently enrolled in Water Rangers that are viewed as good candidates for the program. If all nine signed up, the total purchase cost would be approximately \$3,600. Another \$400 is estimated as needed to help existing program participants to restock some items in their kits.

Staff has contacted member municipalities and provincial parks to identify interest and support for the travelling pop-up tent programs. All were very supportive of the concept, but have questions regarding safety measures to be put in place and the need for approval from senior management or their Council. The manager for Sharbot and Silver Lake Provincial Parks, and program staff from Mississippi Mills and North Frontenac indicated the greatest support, and between these and MVCA’s own facilities we are confident that we can move forward with these programs. In order to address safety concerns and facilitate approvals, staff are developing a 1-2 pager that will outline and illustrate how the booth will be set up and operated to meet H&S requirements.

² Water Ranger kits include a thermometer, secchi disc, test strips and container, conductivity meter with instructions and solution, notepad, waterproof phone case, gloves, field guide, oxygen kit, stickers and badges, reacher stick, pen and magnets.

Most of the supplies needed to implement a travelling pop-up tent program are already in place, however, approximately \$1,000 is needed for signage and promotion, to address “wind” issues with the display, and to facilitate easy transport of equipment/materials at site by one person.

Given good support expressed by municipal staff, Board members are encouraged to contact municipal management to encourage approval for MVCA to attend municipal boat launches and beaches over the summer.

10.0 FINANCIAL IMPACTS

Table 1 lists current and projected costs and savings associated with the COVID-19 event, pending approval by the Board*.

Table 1: COVID-19 Related Costs and Savings

Costs to Date (as of May 31, 2020)	
Computer hardware and software for working remotely	(\$4,017)
Extra travel, cleaning products and time, signage, and PPE	(\$2,900)
Projected Additional Costs/Lost Revenues to Year-end	
Reduced grant from City of Ottawa	(\$24,968)
Additional travel, cleaning products and time, signage, and PPE, hardware and software requirements	(\$28,950)
Lost parking revenues from CAs	(\$18,800)
Lost Revenues from Gate House, Museum, and Educational programs	(\$52,750)
Water Ranger Outreach Program*	(\$4,000)
Travelling Pop-up Tent Outreach Program*	(\$1,100)
Loss in wedding revenues due to reduced rate*	(\$1,750)
Projected Savings 2020	
Summer Students for Education and Museum	\$22,850
Camp expenses (consumables)	\$8,000
Monitoring expenses (testing and mileage including the Ottawa Baseline Monitoring program)	\$17,740
Net Projected Loss	\$90,645

REPORT

3062/20

TO:	Board of Directors, Mississippi Valley Conservation Authority
FROM:	Angela Millar, Treasurer and Sally McIntyre, GM
RE:	Interim Financial Update Report – up to May 31, 2020
DATE:	June 8, 2020

Recommendations:

That the Board receive this Interim Financial Update Report for information purposes.

1.0 PURPOSE

The purpose of this report is to provide a comparison of year-to-date expenditures and revenues to the approved 2020 Budget; and to provide an update to the Q1 Budget Control Report provided to the Board in April 2020.

Table 1: Operations Budget	2019 Actual	2020 Budget	YTD as of May 31 2020	%YTD
Expenditures				
Corporate Services	\$774,952	\$606,469	\$254,367	42%
Watershed Management	\$1,529,063	\$1,485,131	\$532,044	36%
Flood and Erosion Control	\$644,557	\$705,579	\$295,364	42%
Conservation Services	\$638,727	\$849,262	\$255,426	30%
Total Operating	\$3,587,299	\$3,646,441	\$1,337,201	37%
Revenues				
Municipal Levy	\$2,358,073	\$2,650,214	\$1,131,150	43%
Provincial Transfer Payment	\$128,438	\$128,438	\$0	0%
Special Grants	\$25,161	\$25,161	\$11,974	48%
User Fees & Contract Revenue	\$513,617	\$412,000	\$132,126	32%
Special Reserves	\$118,229	\$115,368	\$25,780	22%
Other	\$443,781	\$315,260	\$36,171	11%
Total Revenues	\$3,587,299	\$3,646,441	\$1,337,201	37%

2.0 FINDINGS

As of May 31, 2020, revenues are slightly below average for this time of year, and expenditures are tracking normally as shown in Table 1. Planning and permit revenues continue to be strong despite COVID impacts on the economy.

We have received notification that MVCA was unsuccessful in securing funding through the Water and Erosion Control Infrastructure (WECI) grant program. MVCA submitted applications to complete the Shabomeka Lake Dam Reconstruction, repair of the Kashwakamak Lake Dam weir, and to conduct an environmental assessment (EA) study for replacement of the Kashwakamak Lake Dam. Staff are currently reviewing alternative funding opportunities / options for these specific projects and will provide these options to the Board for consideration at a future meeting. There is no plan to proceed with them in 2020 at this time.

MVCA continues to monitor user fees and other revenues that have been affected by COVID-19 and the declared state of emergency. Revenues considered at risk include the following:

- User fees to deliver educational programs and other services - program has now been cancelled for 2020 and staff have been redeployed
- Mill of Kintail Conservation Area rental fees and gift shop revenues – outcome and impact on revenues are still pending
- Parking revenues from conservation areas - revenues are beginning to resume with the opening of conservation areas
- Planning and regulations fees – remain strong but due to historical trends, anticipated to decline slightly in the next quarter

The Q1 Budget Control Report identified that the Canadian Museum Operating Grant (CMOG) annual funding was uncertain. Staff have since submitted this application and notifications are pending.

MVCA secured funding from Canada Summer Jobs for two student positions. The funding provides 100% of hourly wage costs but the employer expenses (i.e. premiums for Employment Insurance, Canada Pension Plan, Workplace Safety and Insurance Board) for these positions will be incurred by MVCA. This funding will secure one student for Watershed Monitoring and one for Flood Forecasting and Warning (Automated Sensing Technician).

The Water Quality Baseline Monitoring Project with the City of Ottawa has been reduced for 2020. Therefore, reducing the Special Levy amount to be received by \$24,968. As this program was at risk due to the pandemic and resulting budget constraints, staff have been redeployed through a work share agreement with the Rideau Valley Conservation Authority for the Septic

Inspection / Re-Inspection programs. RVCA will reimburse MVCA for staff costs and this agreement is estimated to generate \$22,262 in revenue.

As identified in the Q1 Budget Control Report, some projects/expenditures included in the 2020 Budget are no longer viewed as priorities or possible given current circumstances, specifically:

- Timesheet software for managing anticipated regulatory changes, \$10,000
- Attendance by Board members and staff at the Latornell Conference, \$14,000
- Summer student positions will not be filled at Mill of Kintail for Museum and Education program, \$22,850

Expenses have increased due to the pandemic response and include: additional cleaning products; personal protection equipment; mileage for staff to travel to and from job sites individually; computer hardware and software requirements for staff working remotely; and increased staff time to perform additional cleaning responsibilities. The costs associated with these COVID-19 responses are estimated to cost \$43,000 for 2020 and have been included in the Table below. The additional cleaning responsibilities performed by MVCA staff will result in increased TOIL balances for those performing those tasks.

At present, all office staff continue to work from home or on a rotating basis in the office and are completing tasks according to their job descriptions.

Table 2 illustrates how expenditures and revenues may be impacted this year based upon information available today.

Table 2: Operations Budget	2020 Budget	At Risk Revenues	Increased Expenses / Revenues	Projected Savings	Projected YE Surplus/(Deficit)
Expenditures					
Corporate Services	\$606,469		\$4,017	(\$24,000)	\$586,486
Watershed Management	\$1,485,131			(\$17,740)	\$1,467,391
Flood and Erosion Control	\$705,579		\$12,059		\$717,638
Conservation Services	\$849,262		\$34,123	(\$30,850)	\$852,535
Total Operating	\$3,646,441				\$3,624,050
Revenues					
Municipal Levy	\$2,650,214	(\$24,968)			\$2,625,246
Provincial Transfer Payment	\$128,438				\$128,438
Special Grants	\$25,161		\$12,600		\$37,761
User Fees & Contract Revenue	\$412,000	(\$101,000)	\$22,262		\$333,262
Special Reserves	\$115,368				\$115,368
Other	\$315,260	(\$5,300)			\$309,960
Total Revenues	\$3,646,441				\$3,550,035
Projected YE Surplus/(Deficit)					(\$74,015)

3.0 RESERVES

As previously stated in the Q1 Budget Control Report, Table 3 shows the 2019 year-end balance and 2020 budgeted allocations.

TABLE 3: Expenditures	Dec 31 2019 Balance	2020 Budget Allocations FROM Reserves	2020 Budget Allocations TO Reserves	Projected Dec 31 2020 Balance
Building Reserve	\$338,701	0		\$338,701
Information Technology Reserve	\$32,000	\$15,700		\$16,300
Museum Building & Art Reserve	\$4,398	0		\$4,398
Sick Leave Reserve	\$73,843	0		\$73,843
Vehicles & Equipment Reserve	\$95,403	0		\$95,403
Water Control Structure Reserve - MVCA	\$208,885	\$40,000	\$89,761	\$258,646
Water Control Structure Reserve - Glen Cairn	\$578,771	\$485,668		\$93,103
Conservation Areas Reserve	\$17,000	0	\$25,000	\$42,000
Operating Reserve	\$918,969	\$10,000		\$908,969
Total	\$2,267,970	\$551,368	\$114,761	\$1,831,363

The COVID-19 pandemic is one of the most extreme and impactful events of this generation. Therefore, it is reasonable that during this time a draw down of reserves is made if required. Management continues to explore options to further minimize expenditures and the need to draw down reserves at year-end to meet operational deficits.

REPORT

3063/20

TO:	The Chair and Members of the Mississippi Valley Conservation Authority Board of Directors
FROM:	Sally McIntyre, General Manager
RE:	Appointment of Emma Deyo to enforce CA Regulations
DATE:	June 11, 2020

Recommendation:

That the Board of Directors appoint Emma Deyo to enforce Ontario Regulation 153/06 and Ontario Regulation 120/90 of the *Conservation Authorities Act*.

Under the direction of the Manager of Planning and Regulations, regulation staff play an important role in the Authority's objectives to prevent, eliminate, or reduce risks to life and property, and to encourage the protection, enhancement and enjoyment of natural systems.

Regulations staff are responsible for conducting inspections, investigations, and enforcing regulations under the *Conservation Authorities Act*, specifically Section 28 of the Development, Interference with Wetlands and Alternations to Shorelines and Watercourses Regulation, O.Reg. 153/06 and Section 29 of the Conservation Area Regulation, O.Reg 120/90.

Due to workload demands and compliance obligations, it is recommended that additional enforcement staff be designated in accordance with Section 10 of O.Reg. 153/06 wherein the authority may appoint officers to enforce the Regulation.

Emma Deyo has been employed as an Environmental Technician with MVCA since 2018 and recently completed the Conservation Authority Compliance Training – Level 1. This course provides the basic foundation for Conservation Authority staff to acquire the skills, knowledge and behaviors required to be appointed as a Provincial Offences Officer to enforce and monitor compliance under Section 28 and/or 29 of the *Conservation Authorities Act*.

Ms. Deyo will work under the guidance of the existing Regulations Officer (A. Moore) to assist in violations and compliance of permits. Currently the MVCA has 2 designated staff to enforce Regulations (M. Craig and A. Moore). Ms. Deyo currently works in a variety of roles within the Planning and Regulations Department including monitoring, permitting and compliance.

REPORT

3064/20

TO:	The Chair and Members of the Mississippi Valley Conservation Authority Board of Directors
FROM:	Sally McIntyre, General Manager
RE:	Septic System Program Delivery Proposal
DATE:	June 12, 2020

Recommendation:

That the Board authorize staff to offer and provide septic system services on a full cost-recovery basis to areas currently serviced by the Kingston, Frontenac, Lennox & Addington Health Unit in partnership with other conservation authorities.

1.0 BACKGROUND

Part 8 of the *Ontario Building Code* (OBC) governs the design, construction, operation and maintenance of various classes of sewage systems serving one lot with a design flow of up to 10,000 liters per day.¹ The administration of Part 8 of the OBC is delegated to municipalities under the *Building Code Act* (BCA). Some municipalities perform these services in-house while others rely on public health units, conservation authorities, or private consultants to perform the services.

Since 1995, the MVCA has administered Part 8 on behalf of the City of Ottawa through the Ottawa Septic System Office (OSSO) which is a partnership with South Nation Conservation (SNC) and Rideau Valley Conservation Authority (RVCA.) Since 2004, MVCA has administered Part 8 on behalf of Tay Valley Township through the Mississippi-Rideau Septic System Office (MRSSO) which is a partnership with Rideau Valley Conservation Authority. It also provides a combination of voluntary and mandatory reinspection services to the townships of North Frontenac and Central Frontenac, and Drummond North Elmsley (DNE.)

In the western part of the watershed, the Kingston, Frontenac, Lennox & Addington Health Unit (KFL&AHU) has delivered Part 8 services to area municipalities since 1997. Earlier this year, the KFL&AHU gave notice that it will no longer provide septic services effective the end of 2020, with several municipalities now looking for cost-effective solutions to meet this need. There is an

¹ Systems larger than 10,000 liters/day are regulated by the Ministry of the Environment under the *Ontario Water Resources Act*.

opportunity to expand the MRSSO program to meet the needs of communities currently served by the KFL&AHU in partnership with Cataraqui River Conservation Authority (CRCA) and Quinte Conservation (QC).

2.0 DISCUSSION

Malfunctioning septic systems can impact human health, the environment and local economy. Bacteria and nutrient-rich effluent can travel through fractured bedrock and soil to contaminate ground and surface water—impacting drinking water sources, aquatic environments, and recreational use of lakes. Property owners are required to ensure that septic systems are working properly and that inspections, approvals, and re-inspections (where locally municipalities) are implemented. The MRSSO supports municipalities in delivering those services to property owners by providing the following:

- Over-the-counter, drop-in service to landowners and contractors
- Part 8 review and approval of septic system permit applications
- Inspection of construction of septic systems
- Reinspection of existing systems where mandated by a municipality
- Issuance of occupancy permits and orders where there is non-compliance
- Information on Part 8 of the Ontario Building Code
- Compliance and abatement actions
- Investigation and resolution of complaints
- Commencement of prosecution and court actions
- Records management
- Performance monitoring and reporting
- Collection of fees in partnership with municipality to fully cost-recover the program
- Integration of septic system reviews with other regulatory reviews or requirements (Section 28 of the Conservation Authorities Act and/or Planning Act).
- As conservation authorities we also provide in-house knowledge of other environmental legislation to applicants.

In 2019, over 640 septic re-inspections and 165 OBC inspections were carried out by the MRSSO including the following in the Mississippi watershed:

Tay Valley

- sewage system permits – 16
- Re-Inspection – 13 (8 mandatory / 5 Voluntary)

North Frontenac

- Re-Inspection – 17 Voluntary

(NOTE: Earlier this year Central Frontenac placed its program on hold due to COVID-19; and DNE's program on Otty Lake is also currently on hold.)

The RVCA manages most activities for the MRSSO in order to streamline program delivery and minimize overhead. The RVCA has agreed to continue to perform those functions (billing, staff training and oversight) over an expanded service area should there be municipal interest. While the RVCA manages the program, Eric Kohlsmith, the Upper Watershed Regulations Inspector, works out of our office and has strong working relationships with MVCA planning and permit staff, and is able to combine site visits for the purposes of both Part 8 of the OBC and Section 28 permits under the *Conservation Authorities Act*, O.Reg 153/06. Emma Deyo, of MVCA, is currently supporting Eric in this work on interim basis on a cost-recovery basis.

Attachment 1 is the Conservation Authority Septic System Program Delivery Proposal. The fee schedule provides for full cost of the program so there are no budget implications for the MVCA or burden on the municipal levy.² All four conservation authorities are now in the process of bringing this proposal to their Boards of Directors for approval. The proposal is an excellent opportunity for conservation authorities to show consistency across watersheds and to leverage in-house expertise to support municipalities in eastern Ontario. MVCA's extensive experience in septic inspections coupled with long standing working relationships with area planners and contractors makes this proposal a good fit for our organization.

3.0 NEXT STEPS

Upon approval by the Board, MVCA in partnership with RVCA, CRCA and QC will submit the service proposal to one or more municipalities currently serviced by the KFL&AHU and report back to the Board with the results.

² The Province of Ontario requires that building permit fees for building, renovation, construction and other projects must fully offset the cost of servicing building permits and enforcing the *Building Code Act* and *Ontario Building Code*.



Septic System Program Delivery

Inspection, Approval
and Re-inspections



An option for
delivery through
your local
Conservation
Authorities

Conservation Authorities An Option for Delivery

Since January 1998, municipalities have been responsible for the delivery of private septic system inspection, approval and re-inspection. The challenge is to provide an effective program that suits their municipality and the needs of their residents.

Conservation Authorities are inter-municipal environmental protection agencies accountable to the public and the municipalities through appointed membership. Locally, Conservation Authorities have provided Part 8 Septic review services to Eastern Ontario municipalities since 1995. We offer a professional, experienced delivery option by administering all or part of *Ontario Building Code* (OBC) Part 8 services on behalf of partnering municipalities and look to successfully support municipal interests.

Municipal interests include:

- Ensure mandatory obligations to oversee Part 8 of the *Ontario Building Code* are met.
- Qualified staff for consistent delivery that ensures systems are properly designed, installed and maintained.
- Seamless transfer of information of hard copy and electronic approvals to Building Officials to improve communications and expedite turnaround times.
- Provide knowledgeable, experienced service and resources to municipal residents.
- Ensure quick turnaround times and cost-effective, economical delivery.
- Safeguard groundwater (wells) and surface water resources.
- Protect homeowner health, system investment and property values.



Our experienced staff bring many extra benefits to your municipality.

Fast, Cost-effective, Professional, Experienced One-Window Service

Talk to any contractor or homeowner and they are looking for fast, cost-effective, professional service — we offer just that. Septic system services delivered by your local Conservation Authorities provide:

- Fast turnaround and processing of approvals.
- Fair pricing based on a cost-recovery, not-for-profit basis.
- Experienced staff with local knowledge of environmental and business features.
- Consolidated and consistent delivery that minimizes municipal exposure to risk and liability.
- Efficient delivery through one site visit with integrated reviews (one-window approach) for additional regulatory reviews or requirements such as applications circulated to the *Conservation Authorities Act*, under Section 28 and issues related to septic systems under the *Ontario Planning Act*.
- Strong emphasis on education through in-person and online access to information and resources for property owners.

Value-Added Features

Our experienced staff bring many extra benefits to your municipality, including:

- Full or partial services tailored to suit your municipal needs.
- Access to an industry leading inspection protocol developed and tested by Conservation Authorities for 25 years.
- Solid working relationships with municipal staff, including building officials.
- Proven relationships with septic professionals (installers, haulers and designers).
- Established relationships with provincial (particularly MMAH) and federal staff.
- An emphasis on public information and education (public information sessions, webpage support, printed materials, training courses for real estate professionals and other interest groups).

Our Conservation Authority partnership provides valuable access to a network of skilled conservation professionals, including:

- Inspectors who are also trained as Provincial Offences Officers under Section 28 of the *Conservation Authorities Act*.
- Senior staff and inspectors are professional engineers or technicians, and all are certified Part 8 OBC Onsite Sewage System Inspectors.
- A Chief Building Official under the *Ontario Building Code*.
- Qualified environmental staff including hydrologist, engineers, biologists, ecologists, etc.
- Environmental technicians providing stewardship services and grant programs that support property owners/landowner activities.



- Founding and active members of the Ontario Onsite Wastewater Association – bringing professionalism to the world of onsite treatment and representation for provincial industry management issues.
- Principal contacts with the Ontario Rural Wastewater Centre (ORWC) – including Ottawa’s ORWC Demonstration Facility to promote alternative onsite technologies.
- Staff who deliver ORWC Part 8 training courses including advanced design and evaluation of treatment system classes for those preparing for provincial examinations, and a “septic 101” course for real estate agents.
- Important link to Part 8 Sub-Committee of the Golden Triangle Building Official Association.

Our Service

Full-Service Septic Approvals

We are currently doing this work in neighbouring communities.

Conservation Authorities review, approve and inspect new and replacement septic system permits on behalf of the City of Ottawa and the Tay Valley Township under Part 8 of the *Ontario Building Code*. Staff also respond to violations and complaints. We work closely with our municipal staff to ensure the service suits municipal needs and local interests.

Septic System Re-inspection

Conservation authorities currently administer both voluntary and mandatory septic system re-inspection programs on behalf of Central Frontenac, North Frontenac, Rideau Lakes and Tay Valley Townships. The program looks to protect environmental and human health by ensuring systems are working properly and not leaching contaminants into ground or surface water.

Exceptional Turn-Around Times

On-site sewage systems are an integral part of rural homes, businesses and industry. We understand that home construction and repair is a deadline-focused business and we strive to provide exceptional response times to the applicant to help meet the needs of the property owner. Our service provides quicker turnaround times than OBC minimum requirements – with at many inspections being at least 50% faster than the OBC minimum requirements.

Ontario Building Code Minimum Requirement	Turn-around Time	Our Target
New Sewage System Permits	10 days	5 days
Clay Seal Inspection	5 days	48 hours
Scarification Inspection	5 days	48 hours
Installation Inspection	5 days	48 hours
Final Grading Inspection	5 days	48 hours

Full-Service Septic Approvals

(approximately 750 permits annually)

- City of Ottawa (since 1995)
- Tay Valley Township (since 2004)

Re-inspection Services

(approximately 700 re-inspections annually)

- Central Frontenac (since 2010)
- North Frontenac Township (since 2005)
- Rideau Lakes Township (since 2007)
- Tay Valley Township (since 2005)



Meeting All Building Code Requirements

Our inspection protocol meets all Building Code requirements. The following inspections are carried out by Conservation Authority inspectors:

1. Initial Site Inspection
2. Scarification Inspection or Clay Seal Inspection
3. Installation Inspection
4. Final Grading Conservation Authority delivery

Over the last 25 years, staff have used their experience and technical knowledge to develop an industry leading inspection program. These inspections help ensure compliance with the Building Code and support the construction of a well-functioning system that is designed and built to provide reliable treatment over many years.

Exceptional Service, Fair Price

Our septic system delivery program operates 100% on user fees. There are no costs to participating municipalities. The program not-for-profit, cost-recovery basis. Services and their costs have been refined over the years to represent their true value and savings are passed on to the end-user – your municipal residents.

Services and Fees

Fee Category	Conservation Authority Delivery	*KFL&A Delivery
Permit - Class 2	\$410	\$950
Permit - Class 3	\$410	\$950
Permit - Class 4	\$840	\$950
Permit - Class 5	\$840	\$950
Additional Inspections	\$180	\$250
Alteration – Tank only	\$350	\$750
Renewal/Cancellation – Renewal	\$150	\$150
Renovation/Change of Use (Pt 10/11) – Permit renovation/additions to buildings	\$290	\$500
Renovation/Change of Use (Pt 10/11) – Permit add pool/shed/garage	\$290	\$250
Written Response – File Search	\$150	\$150
Written Response – Planning comment (Minor Variance or Zoning By-Law)	\$220	\$450
Written Response – Planning comment (Minor Variance or Zoning By-Law with Pt 10/11)	\$220 + \$275 = \$495	\$700
Written Response – Planning comment (Minor Variance or Zoning By-Law with Pt 10/11)	\$220 + \$725 = \$945	\$1,150
Written Response – Severance (1st application)	\$330	\$500
Written Response – Severance (add. Application)	\$150	\$500

*2020 fees

Work Plan

Conservation Authority staff work with the partnering municipal to develop a service model and work plan that suits local needs. Services include:

- Customer Service and Accessibility
- Information Management
- Process for Standard Permits
- Renovation Permits
- Complaints
- Plan Review and Input(Part 8 OBC)
- Education/Homeowner Awareness and Public Relations
- Service Standards
- Septic Re-Inspection Program



Our Team

Terry K. Davidson, P.Eng., RVCA Director of Engineering and Regulations

Terry K. Davidson graduated in Engineering Science from the University of Guelph in 1987. As Director of Regulations at Rideau Valley Conservation Authority (RVCA), Terry's responsibilities include Chief Building Official for Part 8 for the City of Ottawa and Tay Valley Township, Risk Management Official for Part IV of the *Clean Water Act* in the Rideau Valley, Director for Section 28, *Conservation Authorities Act* in the RVCA jurisdiction, and Manager of Water & Erosion Control Structures in the Rideau Valley watershed. Prior to joining the Conservation Authority, he was employed with OMAFRA in South Western Ontario. He came to the RVCA in 1989 as Manager of the Clean-Up Rural Beaches Program (CURB), a clean water program run in association with the Ontario Ministry of the Environment. Terry assumed management of the septic approvals program in 1995 within the City of Ottawa. He has been active in providing advice to the Province with respect to the transfer of the septic approvals function to the *Ontario Building Code* as well as on Code compliance issues related to site servicing. He has also served as the Ottawa Manager of the Ontario Rural Wastewater Centre, an industry learning and training centre set up in co-operation with the University of Guelph at the RVCA's Baxter Conservation Area. Terry was instrumental in forming the Ontario Onsite Wastewater Association and was the inaugural President. Terry was a key author and technical advisor for the development of Septic Smart I & II that provides provincial-wide information on the function, care and maintenance of septic systems for landowners.

Eric Kohlsmith, Upper Watershed Regulations Inspector

Eric Kohlsmith graduated from Sault College as a Fish and Wildlife Technician in 2006. Eric was introduced to sewage system care and maintenance through the Conservation Authorities Re-inspection program in 2005. Since 2007, Eric has been a Part 8 Building Official working in Tay Valley Township in Eastern Ontario. Over the last 13 years, Eric has also administered sewage system re-inspections programs in five local municipalities. Eric is a valued instructor with the Ontario Rural Wastewater Centre. He delivers course to related to onsite sewage systems to installers and members of the general public. In 2017, Eric was a member of the Technical Advisory Committee for the

proposed code changes for Part 8. Eric is a proud member of the OBOA Golden Triangle Chapter Part 8 Committee. Eric has developed the Ontario Onsite Wastewater Association (OOWA) regional meeting template and be part of the initial organizing committee looking to drive professionalism and learning within the onsite wastewater community.

Summary – Advantages of Program Delivery through Conservation Authorities

Accountability

Conservation Authorities are inter-municipal environmental protection and advisory agencies, accountable to the public and member municipalities through their municipally appointed members.

Competent, Qualified and Responsive

Conservation Authorities employ qualified professional engineers, technologists, and planners and invest in required training and professional development. Personnel are designated provincial offenses officers and have professional accreditations. Conservation Authorities are committed to providing responsive, knowledgeable and courteous customer service.

Integration

Able to integrate sewage system reviews with other regulatory reviews or requirements such as applications circulated to the *Conservation Authorities Act* and under the Ontario *Planning Act*. We also have in-house knowledge of other environmental legislation.

Value

Conservation Authorities have a proven track record of providing quality service at a reasonable cost to the user. Cost recovery represents good value to the landowner/applicant paying for the service/application review and to the municipality.

Consistency

Consistent application of standards within and between geographical areas (a level playing field) is important to contractors, landowners and municipalities.

Low Risk

The liabilities and risks associated with the delivery of a septic program are assumed by the Conservation Authorities and protected by employing competent and qualified staff.



Contact Us:

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REPORT

3065/20

TO:	Board of Directors, Mississippi Valley Conservation Authority
FROM:	Sally McIntyre, General Manager
RE:	O&M Support to Canada Wildlife Services – Mississippi Lake National Wildlife
DATE:	June 8, 2020

1.0 PURPOSE

The purpose of this report is to inform the Board of on-going negotiations with Canada Wildlife Services (CWS) to provide operational and maintenance (O&M) support at the Mississippi Lake National Wildlife Area.

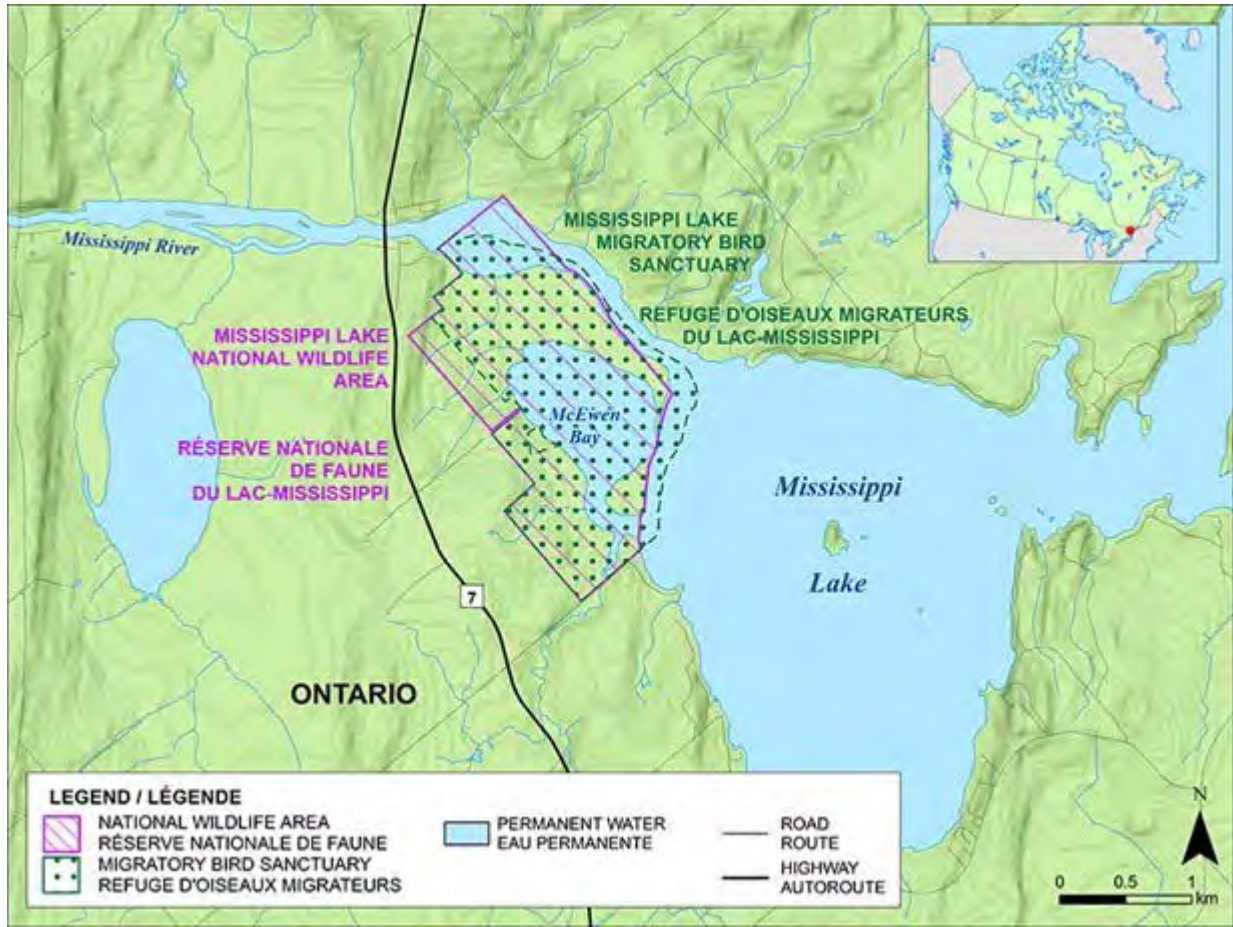
2.0 BACKGROUND

Earlier this year CWS, a division of Environment and Climate Change Canada (ECCC), approached MVCA to provide O&M support at the Mississippi Lake National Wildlife Area, located roughly half way between MVCA head office and Perth, as shown on Figure 1. CWS requested assistance with activities that MVCA staff carry out in conservation areas, namely lawn clipping, washroom cleaning and trail inspections. MVCA management examined the feasibility of providing those services to our federal partners and determined that the requested services could be performed with limited impact on MVCA operations. Management also contacted Marsh, MVCA's insurance broker, to determine whether there would be additional costs or liabilities associated with performing this work. Marsh responded that any increases to premiums would be nominal, and provided contract wording that would see MVCA held harmless and indemnified in our favour for activities outside our responsibility and control. On this basis, MVCA prepared a full-cost recovery estimate to CWS valued at \$10,000-\$15,000 for the season.

3.0 NEXT STEPS

CWS is reviewing MVCA's cost estimate. Should MVCA's price be accepted, management will negotiate and execute the agreement; inform the Board at the next scheduled meeting; and commence providing this service to CWS on a full cost-recovery basis.

Figure 1: Mississippi Lake National Wildlife Area



Source: <https://www.canada.ca/en/environment-climate-change/services/national-wildlife-areas/locations/mississippi-lake.html>

REPORT

3066/20

TO:	Board of Directors, Mississippi Valley Conservation Authority
FROM:	Ross Fergusson, Operations Manager
RE:	Bell Canada Easement Renegotiation
DATE:	June 12, 2020

1.0 PURPOSE

The purpose of this report is to inform the Board of on-going negotiations with Bell Canada regarding an easement on the K&P Trail.

2.0 BACKGROUND

In 2006 MVCA granted Bell Canada a 3.3 km easement over the K&P Trail Conservation Area for a buried cable. The easement is in Lanark Highlands Township between Lavant Station and Folger as shown in Figure 1. The easement was last renewed in 2015 for a period of 5 years at a rate of \$1650/year. To the best of our knowledge there have been no increases to the value of compensation paid by Bell since 2015. The current easement expires July 31, 2020.

3.0 NEXT STEPS

Staff have begun to review the easement agreement and intend to seek Cost of Living increases. Staff will return to the Board for approval of the Easement Agreement upon completion of the negotiations.

Figure 1: Easement

