

Full Authority Agenda

September 20, 2023 KCCA Admin Centre

10:00 a.m.

This meeting will be a hybrid meeting. The recording and draft minutes will be posted to KCCA's web site on September 21, 2023. The meeting will be streamed live at the following link:

Facebook Page - https://www.facebook.com/KettleCreekCA/

Audio/Video Recording Notice

"Board members, staff, guests and members of the public are reminded that the Full Authority Board/Committee meeting is being recorded, and will be posted to the Authority's web site along with the official written minutes. As such, comments and opinions expressed may be published and any comments expressed by individual Board members, guests and the general public are their own, and do not, represent the opinions or comments of the Full Authority and/or the KCCA Board of Directors.

The recorded video of the Full Authority meeting is not considered the official record of that meeting. The official record of the Full Authority meeting shall consist solely of the Minutes approved by the Full Authority."

Introductions and Declarations of Pecuniary Interest

Hearing Board

Minutes of Meetings	
a) August 16, 2023 Full Authority Meeting	3
Recommendation: That the minutes of the August 16, 2023 Full Authority meeting be	5
approved.	
Matters Arising	
a) Media Report (Marianne)	
b) Project Tracking (Elizabeth)	
c) Watershed Conditions (Jennifer)	12
d) Forestry and Invasive Species Management Update (Jeff/Brandon)	14
Recommendation: That Matters Arising a) through d) be received.	
<u>Correspondence</u>	
a) From CO to the Ministry of Natural Resources And Forestry Re: "Technical Bulletin – Flooding	g
Hazards: Data Survey and Mapping Specifications" September 5, 2023	19
b) From Hon. Paul Calandra, MMAH Re: Proposal to Return Lands in Ajax to the Greenbelt	
September 6, 2023	29

Recommendation: That the correspondence be received.



Full Authority Agenda

September 20, 2023 KCCA Admin Centre

10:00 a.m.

Statement of Revenue and Expenses

No Statements

New Business

a) Dalewood Dam Options Assessment (Jennifer/GD Vallee)	31
b) Apportioning Agreement Update/Quarterly Progress Report (Betsy/Elizabeth)	ner that
c) Kettle Creek Clean Water Initiative Project (Betsy)	
d) City of London Budget – Business Case (Elizabeth)	
e) Kirk Cousins Management Area Parking Lot (Elizabeth/Joe/Jeff)	66
f) September Planning and Regulations Activity Report (Joe)	

Closed Session

- a) Closed Session Minutes August 16, 2023
- b) Property Matter Potential Acquisition
- c) Property Matter Security of Property

Up Coming Meetings

Board Members Watershed Tour KCCA Full Authority Meeting

September 22, 2023 October 18, 2023

3 Hybrid

10:00 a.m.



Full Authority Minutes

August 16, 2023

A meeting of the Full Authority of the Kettle Creek Conservation Authority was held on Wednesday, August 16, 2023 at 10:00 a.m. The meeting was streamed live to Facebook.

Audio/Video Record Notice

Board members, staff, guests and members of the public are advised that the Full Authority Board/Committee meeting is being video/audio recorded, and will be posted to the Authority's web site along with the official written minutes. As such, comments and opinions expressed may be published and any comments expressed by individual Board members, guests and the general public are their own, and do not represent the opinions or comments of the Full Authority and/or the KCCA Board of Directors.

The recorded video of the Full Authority meeting is not considered the official record of that meeting. The official record of the Full Authority meeting shall consist solely of the Minutes approved by the Full Authority.

Members Present:

Lori Baldwin-Sands (Vice Chair) St. Thomas In Person In Person Frank Berze Middlesex Centre Grant Jones (Chair) Southwold In Person Sharron McMillan Thames Centre In Person Todd Noble Central Elgin In Person Jerry Pribil London In Person London Sam Trosow Virtual John Wilson Malahide In Person

Members Absent:

Jim Herbert St. Thomas

Staff Present:

Jennifer Dow Water Resources Supervisor In Person Joe Gordon Manager of Planning and Development In Person GIS/Information Services Coordinator Jessica Kirschner Virtual Brandon Lawler Forestry and Lands Technician Virtual Jeff Lawrence Forestry and Lands Supervisor Virtual **Public Relations Supervisor** Virtual Marianne Levogiannis Betsy McClure Stewardship Program Supervisor Virtual Elizabeth VanHooren General Manager/Secretary Treasurer In Person As some members and guests attended virtually, all votes were recorded and are included in the Recorded Vote Registry.

Introductions & Declarations of Pecuniary Interest

There were no declarations of pecuniary interest.

Hearing Board

There was no Hearing required.

Minutes of Meeting

FA91/2023

Moved by: Todd Noble Seconded: Frank Berze

That the minutes of the June 21, 2023 Full Authority meeting be approved.

Carried

FA92/2023

Moved by: Lori Baldwin-Sands

Seconded: Todd Noble

That the minutes of the August 2, 2023 Executive Committee meeting be approved.

Carried

Matters Arising

FA93/2023

Moved by: Sharron McMillan

Seconded: Todd Noble

That Matters Arising a) through c) be received.

Carried

Correspondence

a) From the City of London to Honourable Graydon Smith (MNRF) Re: Municipal Appointments to Conservation Authorities August 8, 2023

FA94/2023

Moved by: Frank Berze

Seconded: Sharron McMillan That the correspondence be received.

Carried

Full Authority Meeting Minutes August 16, 2023 Page 2 of 5

Statement of Revenue and Expenses

FA95/2023

Moved by: Lori Baldwin-Sands

Seconded: Todd Noble

That the Statement of Revenues and Expenses for June 30, 2023 be approved.

Carried

New Business

a) Administrative By-Law Update

FA96/2023

Moved by: John Wilson Seconded: Todd Noble

That the Amendments to the Administrative By-Law be approved.

Carried

b) City of London Budget Submission

FA97/2023

Moved by: Sam Trosow Seconded: Jerry Pribil

That the Draft City of London Budget Submission be accepted as presented; and further

That staff continue to develop Draft Budgets for 2024-2027 based on a 7.5% general levy increase in 2024 and 2025 and 4% in 2026 and 2027.

Carried

c) July/August Planning and Regulations Activity Report

FA98/2023

Moved by: Lori Baldwin-Sands Seconded: Sharron McMillan

That the July/August Planning and Regulations Activity Report be received.

Carried

The Full Authority meeting recessed at 10:37 a.m. to conduct the Kettle Creek Source Protection Authority meeting. The Kettle Creek Source Protection Authority adjourned at 10:46 a.m. and members resumed the Full Authority meeting moving immediately into Closed Session.

Closed Session

Full Authority Meeting Minutes August 16, 2023 Page 3 of 5

The Closed Session meeting began at 10:47 a.m.

FA99/2023

Moved by: Sharron McMillan Seconded: Frank Berze

That the Full Authority move to Closed Session to discuss legal, Personnel or Property matters.

Carried

FA100/2023

Moved by: Sharron McMillan Seconded: Lori Baldwin-Sands

That the Full Authority revert to open session and report.

Carried

The Open Session resumed at 10:57 a.m.

a) Minutes

FA101/2023

Moved by: John Wilson Seconded: Todd Noble

That the minutes of the Closed Session meeting of the June 21, 2023 Full Authority Meeting and the minutes of the Closed Session meeting of August 2, 2023 Executive Committee Meeting be approved.

Carried

b) Property Matter – Possible Land Acquisition

No report.

c) Legal Matter

No Report.

Upcoming Meetings

September 20, 2023 Full Authority Meeting.

Members also expressed interest in scheduling a watershed tour on September 22, 2023. Staff will follow-up with further information.

The meeting adjourned at 11:02 a.m.

Elizabeth Van Hoover		
 Elizabeth VanHooren	Grant Jones	
General Manager/Secretary Treasurer	Chair	

Recorded Vote Registry FA91/2023 to FA97/2023

A=Absent Y=Yes N=No

Board Member	FA91/2023	FA92/2023	FA93/2023	FA94/2023	FA95/2023	FA96/2023	FA97/2023
Baldwin-Sands	Υ	Υ	Υ	Υ	Υ	Υ	Υ
Berze	Υ	Υ	Υ	Υ	Υ	Υ	Υ
Herbert	Α	Α	Α	Α	Α	Α	Α
Jones	Υ	Y	Υ	Υ	Υ	Υ	Υ
McMillan	Υ	Υ	Y	Υ	Υ	Υ	Y
Noble	Υ	Υ	Y	Υ	Υ	Υ	Υ
Pribil	Υ	Υ	Υ	Υ	Υ	Υ	Y
Trosow	Υ	Υ	Υ	Υ	Υ	Υ	Υ
Wilson	Υ	Υ	Υ	Υ	Υ	Υ	Υ
Result	Carried						

Recorded Vote Registry FA98/2023 to FA101/2023

A=Absent Y=Yes N=No

Board Member	FA98/2023	FA99/2023	FA100/2023	FA101/2023
Baldwin-Sands	Υ	Υ	Υ	Υ
Berze	Υ	Υ	Υ	Υ
Herbert	Α	Α	Α	Α
Jones	Υ	Υ	Υ	Υ
McMillan	Υ	Υ	Υ	Υ
Noble	Υ	Υ	Υ	Υ
Pribil	Υ	Υ	Υ	Υ
Trosow	Υ	Υ	Υ	Υ
Wilson	Υ	Υ	Υ	Υ
Result	Carried	Carried	Carried	Carried



Media Report



Meet Audrey from <u>Dalewood Conservation Area</u> and Maya from <u>Lake Whittaker Conservation Area</u>—our 2023 Ambassadors of the Year! Both Maya and Audrey went above and beyond this season with their exceptional customer service, positive attitudes and friendliness. Thanks for being such great additions to the Kettle Creek crew team!

A heartfelt goodbye to some of our wonderful summer staff! Your hard work, dedication, and friendly smiles have made this a great season at Dalewood and Lake Whittaker. Thank you for being a vital part of our team, and we wish you all the best. Until we meet again!











00

Facebook/Instagram
Summary
September 2023

Facebook Followers: 3,562

Instagram Followers: 1,270

Facebook Post Reach: 15,688

Instagram Reach: 639

Page 8 of 72



Kettle Creek CA @KettleCreekCA · Aug 23

Promote

...

It was great to showcase this recent wetland creation project and hear the landowner's perspective on the @ElginCleanWater Program Bus Tour. Reach out to your local Conservation Authority today to start planning your wetland project! elgincleanwater.ca/contact-us #LoveMyWatershed







KCCA is pleased to host a TD Tree Days event on Sat. Oct 14 at 9am at Waterworks Park in St. Thomas! We're providing 300 trees and shrubs to help increase the urban tree canopy and provide wildlife habitat. Community volunteers can register here: tdtreedays.com/en-ca/events/5...



@TDFEF



Twitter Summary
September 2023

Impressions: 2,023

Tweets: 9

Followers: 1,386

Page 9 of 72



Corporate Services

- Collection of payments and Intention to Camp for the 2024 season from returning seasonal campers completed Sept 15
- Reconciliation of daily campground financial sessions and monthly campground reports
- Implementation of Mergin Maps survey program to assist field staff in data collection
- Design work: A-frame signs designed and sent to production for use at LWCA/DWCA, replacement overlays for LWCA signs ordered for September install.
- Staff uniform inventory analysis completed.
- Preparing for the September 22, 2023 watershed tour

Flood Forecasting/Environmental Monitoring

- Completed the beach monitoring program at Lake Whittaker for the 2023 operating season.
- Completed the fall benthic invertebrate sampling throughout the watershed.
- Completed the fish survey field work for the 2023 municipal drain classification project.
- Managing the Flood Hazard Identification and Mapping Program (FHIMP) project to update floodplain mapping in the Dodd Creek subwatershed. Staff submitted a progress report to the MNRF on September 15, 2023.
- Working with GD Vallee engineering consultants to develop an options assessment for the Dalewood Dam. A full report is included in the board package and a representative from GD Vallee will attend the September board meeting to provide a presentation and answer questions.
- Issued a Watershed Conditions Statement—Water Safety on August 2, 2023, and a Watershed Conditions Statement—Flood Outlook on August 24, 2023, due to significant rain.
- Ongoing monitoring and maintenance of the three Lake Whittaker Small Drinking Water Systems. Chlorine checks are completed daily, and water sample collection is completed twice a month during the operating season.
- Attended the virtual engagement session to "Identify Restoration Priorities and Opportunities in the Lake Erie Watershed" hosted by DFO on August 17, 2023.
- Attended virtual training on the installation, operation and maintenance of the Axiom telemetry system (GOES Satellite) presented by FTS and hosted by MECP as part of the (PGMN) groundwater monitoring program on September 11, 2023.
- Collected August surface water samples for the ongoing Lake Whittaker monitoring program.
- Collected surface water samples throughout the KCCA watershed for the month of August as part of the ongoing (PWQMN) surface water monitoring program.
- Reviewing municipal drain maintenance notifications and new drainage works proposals and attending site visits as needed.

Stewardship and Outreach

- Planning underway for the October 2-5, 2023 Carolinian Forest Festival coordinating buses, recruiting and training volunteers, organizing site logistics etc.
- Attending municipal council meetings to present the KCCA's Cost Apportioning Agreements for Category 3 programs and services.
- Hosted an Elgin Clean Water Program Review Committee meeting on September 13 where 11 projects were awarded \$29,317.36 in funding.
- Wetland project in Central Elgin completed with 2 wetland cells excavated. Tree planting and tallgrass prairie planting will take place on the surrounding lands in 2024.
- Site visits completed with landowners and contractors for upcoming wetland creation projects.

Forestry

- Ordering large stock trees for fall community volunteer planting events
- Mowing spotted knapweed and removing autumn olive and European buckthorn at Kirk Cousins Management Area.
- Treating European buckthorn and spotted knapweed at the Administration Centre.
- Treatment of Canada thistle at Deer Ridge Conservation Area.
- Completing interim reporting for the Invasive Species Action Fund grant.
- Volunteer planting event being held at Lake Margaret on October 7, 2023 at 9:00 a.m. Interested volunteers should email betsy@kettlecreekconservation.on.ca for more details.
- TD Tree Days volunteer planting event will be held at Waterworks Park in St. Thomas on October 14, 2023. Volunteers can register here: https://www.tdtreedays.com/en-ca/events/5236-waterworks-park

Conservation Areas and Maintenance

- Prepared Dan Patterson Conservation Area for Elgin Historical Show and Drumfest.
- Continuing work on entrance at Deer Ridge Conservation Area (driveway, signage, barriers, landscaping).
- Preparing fall work plan which will include trail inspections, hazard tree identification among others.
- Dalewood and Lake Whittaker pools closed for the season on September 4.
- Labour Day Long Weekend both campgrounds at full capacity.
- Preparing to close campgrounds for September 30.

TO: Board of Directors

FROM: Jennifer Dow

Date: September 20, 2023

Subject: September 2023 Watershed Conditions Report

Recommendation: For information



PURPOSE

To inform the Board of Directors of the current and seasonal watershed conditions.

REPORT SUMMARY

- Lake Erie and watershed watercourses are fluctuating with rain events.
- Watershed Conditions Statement—Water Safety released on August 2, 2023, due to high flows from significant rain.
- Watershed Conditions Statement—Flood Outlook released on August 24, 2023, due to significant rainfall in the forecast.
- Staff conducted fish surveys in 15 watershed locations as part of the 2023 Drain Classification project.

BACKGROUND

As of September 11, 2023, Lake Erie's static water level daily mean was 174.58m. This water level is 36cm above Lake Erie's period-of-record (1918-1922) average and 10cm higher than what was recorded at the same time last year, and 32cm lower than the 2019 record high. This level does not account for any increase in water levels due to storm surge or wind driven waves. Lake Erie rose 1cm over the month of August, where normally, Lake Erie experiences an 8cm long-term average decline. Water levels in Lake Erie are expected to remain above average over the next few months.

The KCCA watershed historically receives 82mm of rain during the month of August. The watershed received 82% of the average total rain for the month of August. The three-month precipitation levels are well above normal for June to August. The Environment Canada outlook for September to November indicates above normal temperatures and below normal precipitation for the region.

As of September 11, 2023, only the Grand River CA is in a confirmed Level 1 Low Water Condition in the Southern Region.

Municipal drains are classified into several categories to facilitate the review and approval of drain maintenance activities with respect to fish and fish habitat. Using a protocol developed by Fisheries and Oceans Canada (DFO) that is based on the type of fish present in the drain the presence or absence of aquatic species at risk and permanency of flow, staff conducted electrofishing surveys in 15 sites throughout the watershed. This work builds on the surveys completed in 2016-2022 with funding support from DFO. Staff identified several species of fish including Largemouth Bass, Green Sunfish, Spotfin Shiner and one sensitive species, the Golden Redhorse. Staff also identified a new species collected as part of this project: the Bowfin.

The Bowfin is one of Ontario's living fossils! This prehistoric fish has remained relatively unchanged for millions of years. The bowfin is a common (but unusual), warm water fish native to Ontario. Its long dorsal fin extends along the top of its body, ending at a rounded tail (caudal) fin. Bowfins are predators that hunt crayfish and frogs in the weedy waters of southern Ontario. They go by many names including freshwater dogfish, mudfish, grindle and beaverfish (poisson-castor).



RECOMMENDATION

For information.

TO: Full Authority

FROM: Jeff Lawrence, Betsy McClure, Brandon Lawler

Date: September 13, 2023

Subject: 2023 Tree Planting and Invasive Species Program Update

RECOMMENDATION:

That this report be received for information purposes.

BACKGROUND

TREE PLANTING SUMMARY

KCCA was responsible for the planting of 43,000 tree seedlings in 2023 including over 20 species of trees and shrubs. The Greening Communities program which allows landowners in St. Thomas, Malahide, Central Elgin and Southwold to purchase smaller quantities of larger seedling trees than KCCA's over the counter program had another successful year with over 68 landowners participating and 4,100 trees sold.

Community Planting Events

Staff organized a number of community tree planting events in the spring of 2023 totalling 200 larger stock trees and shrubs and 2,100 seedling trees and shrubs planted in the watershed. Two additional events are planned for October.

These events included:

- Volunteers planted 200 potted shrubs along the north shore of Lake Margaret.
- Volunteers from the Green Party planted 400 seedling trees at a property in Central Elgin
- Volunteers from Fanshawe College planted 700 seedling trees and shrubs in the Bucke Field
- Volunteers from Central Elgin Collegiate planted 1,000 seedling trees in the Bucke Field

KCCA staff secured 160 potted trees for the City of St. Thomas Tree-Giveaway Event in the spring. We understand City staff considered this event very successful and hope to find funding to run it annually.

The KCCA tree planting crew also planted 200 seedlings and 4 larger stock trees on behalf of the Muncipality of Central Elgin at a site in Union to finish off an erosion repair project completed by the Municipality.

Forests Ontario

KCCA is a planting delivery agent for Forests Ontario. Through the 50 Million Tree Program, KCCA planted, 13,725 trees and received \$32,940 in funding. In addition, \$6,787 in funding was received to support the 27,150 trees sold for the KCCA "Over The Counter" program and other KCCA tree planting sites.

Weather/Survival

Soil conditions at the beginning of May were wetter than normal at many sites and required almost daily re-scheduling of planting locations.



Soil conditions got drier throughout the month leading to almost ideal planting conditions for the latter half of May. Unfortunately, drought-like conditions continued into early July and post-plant survival assessments conducted in late June found higher than normal mortality for that time of year. Heavy and consistent rains throughout the remainder of the summer provided much needed moisture necessary for those newly planted trees and early indications are that mortality rates plateaued. Year one survival assessments will be conducted in late September. Staff will assess replant needs and investigate funding sources for undertaking replanting as required.

INVASIVE SPECIES SUMMARY:

Lake Margaret

KCCA staff were successful in obtaining habitat restoration funding through the Great Lakes Local Action Fund to undertake invasive species removal and new plantings at Lake Margaret and into Pinafore Park in the City of St. Thomas.

Volunteers from St. Thomas Rotary Club and the KCCA Environmental Youth Corp assisted with the manual removal of Autumn Olive, invasive Honeysuckles and European Buckthorn over an area of approximately 3.5 acres on the north shore of Lake Margaret. KCCA staff did treat the stumps to reduce re-growth. As noted in the Tree Planting Summary volunteers planted 200 potted shrubs in the invasives removal area.



As part of these funding proposals, KCCA staff treated smaller stands of Japanese Knotweed within Pinafore Park woods in an effort to prevent this aggressive invasive weed from becoming a bigger issue.

KCCA Environmental Youth Corp manually pulled almost 7 garbage bags of invasive Garlic Mustard in Pinafore Park woods, over a distance of only 75 metres adjacent the main trail! KCCA Environmental Youth Corp also planted 1,000 tall grass prairie plugs to create pollinator habitat along the north shore of Lake Margaret.

KCCA Lands and Private Properties

Phragmites management efforts were undertaken at 4 private landowner's properties, as well as Authority properties including LWCA, DWCA and the Bucke pond utilizing funding obtained through the Invasive Phragmites Control Fund.

Funding obtained through the Invasive Phragmites Control Fund was used to initiate control approximately 16 acres of invasive phragmites in Dalewood Reservoir in Fall of 2022.



When weather conditions cooperated over the early winter months of 2023, KCCA staff undertook cutting of the treated phragmites





KCCA staff plan to treat re-growth of invasive Phragmites this September on all KCCA properties including Dalewood Reservoir, Lake Whittaker and Bucke Pond as well as on the 4 private landowner's properties where control efforts were initiated last year.

KCCA staff continue to undertake control activities to reduce Spotted Knapweek populations on KCCA owned properties, including the administration property, Dan Patterson CA. Control efforts for Spotted Knapweed aim to prevent annual seed production and reduce the seed bank. It is anticipated that a reduction in Spotted Knapweed populations will be observed after 4-6 years of annual control efforts on these properties.

Invasive species control efforts have been initiated at Kirk Cousins Management Area as a result of funding received through the Invasive Species Action Fund. Targeted species include Autumn Olive, European and Glossy Buckthorn, and Spotted Knapweed. Funding provided through this program will allow staff to fully tackle these invasive species in the area immediately north and west of the parking lot and to develop a more comprehensive management plan for the remainder of the property.

Staff continue to treat European (Common) buckthorn around the administrative office and at Dalewood CA.







September 5, 2023

Ministry of Natural Resources and Forestry

Submitted via the Environmental Registry of Ontario (ERO#019-4706)

Re: Conservation Ontario's Comments on the "Technical Bulletin - Flooding Hazards: Data Survey and Mapping Specifications" (ERO# 019-4706)

Thank you for the opportunity to provide comments on the "Technical Bulletin - Flooding Hazards: Data Survey and Mapping Specifications". Conservation Ontario is the network for Ontario's 36 Conservation Authorities (CAs). These comments are not intended to limit the comments submitted by individual CAs.

As part of their mandatory programs related to the risk of natural hazards (O. Reg. 686/21) all Conservation Authorities may collect and manage information enabling the Authority to delineate and map areas of natural hazards (including flooding hazards). The provision of these maps assists CAs with administration and enforcement of their Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulations ("Section 28 Regulations") under the *Conservation Authorities Act*, as well as manage the risks related to natural hazards within their watershed jurisdiction. In addition, CA flood plain mapping supports emergency management, watershed planning, flood risk reduction and remediation.

Since 2020, Conservation Ontario and several Conservation Authorities have participated in the Ministry of Natural Resources and Forestry (MNRF) Multi-Partner Flood Mapping Technical Team which was established to support implementation of Ontario's Flooding Strategy, specifically to:

- Develop a multi-year approach to updating flood mapping;
- Identify flood-related foundational geospatial data;
- Establish a provincial elevation mapping program; and,
- Update provincial standards for flood mapping.

Conservation Ontario has appreciated the opportunity to be involved in this important initiative and contribute to the work completed to date.

Conservation Ontario applauds the Province's commitment to updating existing technical guidance used to support implementation of the natural hazard policies outlined in the Provincial Planning Statement, 2023. As noted by the Province in the Environmental Registry posting, existing technical guidance was created between 1996 and 2002, and updates are required to ensure guidance continues to reflect advancements in science, technology and mitigative measures. The proposed "Technical Bulletin – Flooding Hazards: Data Survey and Mapping Specifications" (the "Technical Bulletin") would replace Appendix J of the existing "River & Stream Systems: Flooding Hazard Limit" technical guidelines, which have not been updated in over 20 years.

Conservation Ontario is supportive of the proposed Technical Bulletin as useful guidance which clarifies the necessary data considerations and mapping specifications, the importance of various data sets, and how data collected is used when preparing flood plain modeling and mapping products. The guidance and resulting data will be particularly useful for Conservation Authorities as they undertake work to delineate flood hazards through the creation of new, or updates to existing, flood plain maps.

As the Province works to finalize the Technical Bulletin, Conservation Authorities have identified the following additional topics for consideration:

- Capacity The jurisdictional size and staff capacity of Conservation Authorities and their partner Municipalities varies widely across Ontario and their ability to implement the recommendations in this Technical Bulletin will vary accordingly. It is important to emphasize that the scope of this document is derived from commonly accepted and recommended best practices and presents guidance rather than mandatory instructions or methodologies to be rigidly applied in all circumstances. Conservation Authorities will meet and exceed these recommendations where resources permit. While Conservation Ontario is grateful for this updated technical guidance, resources from the Province to support and ensure consistency in the implementation of all best practices will be needed.
- Climate Change It is recommended that guidance be provided in the Technical Bulletin as it relates to climate change and mapping of climate change events. Consideration of climate change is identified as a priority in Ontario's Flooding Strategy, the Provincial Planning Statement, and O.R. 686/21 Mandatory Programs and Services (Section 1(2) and (3)). Many Conservation Authorities are recipients of funding for flood plain mapping through the federal Flood Hazard Identification and Mapping Program (FHIMP) which requires identification of additional significant flood events such as climate change considerations, as well as mapping for flood lines in climate change scenarios.
- **Technical Specifications for Drone Surveys** As an increasing number of Drone surveys are submitted across the province, it is recommended that this Technical

Bulletin provide guidance on technical specifications to provide consistency for proponents. It is recommended that technical specifications be included in Section 3.4.3.4 (Unmanned Aerial Vehicles (UAV)) of the proposed Technical Bulletin.

- Requirements for 2D Modelling As written, the proposed Technical Bulletin lacks
 information related to mapping requirements for 2D modelling. There has been a
 proliferation of 2D modelling across the Province given the advantages over 1D
 models for complex flow areas, including spill areas. Additional details and direction
 on how flood elevation data should be displayed on a flood plain map where flood
 lines are derived through 2D modeling exercises is necessary.
- Application It is recommended that the Province clarify the intent and application of the Technical Bulletin for different forms of flood mapping (e.g., pluvial (urban) flood mapping vs riverine flood plain mapping). It is recommended that the document clarify that the data requirements and mapping specifications have been developed to support riverine flood plain mapping, as modelling and mapping of pluvial flooding would require consideration of various other datasets related to defining the urban drainage network, which is beyond the scope of this document.

In addition to these general comments, Attachment 1 provides detailed comments on the individual sections of the proposed Technical Guide.

Once again, thank you for the opportunity to provide comments on "Technical Bulletin - Flooding Hazards: Data Survey and Mapping Specifications" (ERO #019-4706). Conservation Ontario appreciates collaborating with the Province, Municipalities and the Federal government through the multi-partner flood mapping technical team. Both Conservation Ontario and Conservation Authorities would appreciate the opportunity to continue working with the MNRF through this multi-staged approach to updating existing technical guidance. Please contact the undersigned should you have any questions regarding these comments.

Sincerely,

Rick Wilson

Rick Wilson

Data and Analytics Manager

c.c.: All CA CAOs/GMs

Conservation Ontario 120 Bayview Parkway, Newmarket ON L3Y 3W3 WWW.conservationontario.ca

Attachment 1: Conservation Ontario's Detailed Feedback on the proposed Technical Bulletin – Flooding Hazards: Data Survey and Mapping Specifications

Technical Bulletin Section / Subsection	Detailed Comments
(1) Introduction	 Section 1 – Text in paragraph 2 states that "additional information can be found in other available MNRF Natural Hazard Technical Bulletins". It is recommended that the MNRF be more specific on what information is available and identify where to access these additional Technical Bulletins. Section 1.2 – It is recommended that language from paragraph 2 in this section be inserted into paragraph 1 to clarify that the proposed Technical Bulletin presents "commonly accepted and recommended best practices". Consider amending paragraph 1 to read, "It is not intended to be a list of mandatory instructions or methodologies to be rigidly applied in all circumstances, but commonly accepted and recommended best practices."
	 Recommended Edits (Grammar, Terminology, Formatting, etc.) Page 2 – Text should read "water resources" rather than "waters resources" in paragraph 1. Page 3 – No acronym provided for MMAH (Ministry of Municipal Affairs) within the List of Acronyms; Page 4 – Reference in the final paragraph is lost; Page 5 – Within Figure 1.1: Text should read "High Resolution DEM" rather than "Hi Resolution DEM". Text should read "Initial Hydraulic Model" rather than "Initial Hydraulics Model" The proposed Technical Bulletin does not cover the approval process for flood plain mapping and use of mapping for regulation. It is therefore recommended the stage "Land Use Planning (and Regulation)" be removed.
(2) Flood Hazard Mapping Framework	Recommended Edits (Grammar, Terminology, Formatting, etc.)

Technical Bulletin Section / Subsection	Detailed Comments
(3) Data Acquisition	 Page 7 – Within paragraph 3, it is recommended that each of the five steps outlined in the first sentence be appropriately numbered to help clarify the numbering used later in the paragraph (e.g., Data Collection (Step 1), Data Processing (Step 2), etc.). Page 8 – Within Figure 2-1: To assist with clarity, and to distinguish key actions/processes from sub-tier processes, it is recommended that sub-tier processes be organized with the same symbols or with the same-coloured outline. It is recommended that "Building Footprints" be added to the list under "Project Deliverable Recommendations". Processing, Deliverables and Associated Recommendations
(3.1) Scope	No comments.
(3.2) Georeferencing and Metadata	 Section 3.2.1 – Text states that the current horizontal datum is NAD83 CSRS Version 6 Epoch 2010.0, and that the Office of the Surveyor General is reviewing the appropriateness of NAD83 CSRS Ver. 7 Epoch 2010.0. However, Section 3.2.3 makes reference that the six-degree Universal Transverse Mercator (UTM) is projected from NAD83 CSRS, Version 7 Epoch 2010.0. It is recommended that MNRF review these sections for consistency and clarity on which version is currently appropriate. Section 3.2.2 –The document states that datasets related to the CGVD28-78 vertical datum. Clarification is requested on whether it is necessary for older Flood Hazard mapping that used the CGVD28-78 vertical datum to be converted to the CGVD2013 vertical datum.
(3.3) Data Quality and Accuracy Recommendations	No comments.
(3.4) Data Acquisition and	Section 3.4.1 - Professional judgement should be applied whether additional information is required for bathymetry. Bathymetry should be required where beaver dams are

Technical Bulletin Section / Subsection	Detailed Comments
Collection Recommendations	present, flow depths are significant, or the watercourse is wide or cloudy. Small creeks may not require additional bathymetry if an adequate Digital Elevation Model (DEM) is available. • Section 3.4.1.1 – Clarification on the representative location and the amount of surveyed cross sections is recommended. For example, details regarding whether surveyed sections need to extend the full extent of the flood plain when an adequate DEM is available would be useful. In many or most cases, the DEM can be better than survey in overbank areas. It is further noted that the guidance provided in this section is specific to 1D modelling. Coupled models (1D and 2D) have specific cross-section orientation and spacing requirements. It is recommended this section be revised to include cross section guidance for coupled models. • Section 3.4.1.2 – The bulleted list outlines that all cross sections must include "bank elevations to the channel bed and the deepest part of the stream must be measured". While this is certainly a best practice given the importance of representation for the stream channel, it may not be practical or feasible to survey the stream bed at every cross section.
	 Recommended Edits (Grammar, Terminology, Formatting, etc.) Page 30 – Insert a comma to separate section numbering at the end of the paragraph in section 3.4.3.4.
(3.5) Data Processing and Derivative Products	 Section 3.5.1 - Hydraulic models such as HEC-RAS do not require flow paths through structures to be enforced. Section 3.5.1 - A hydroenforced DEM is not necessary for a hydraulic HEC-RAS model (e.g., flow paths through structures) and may cause problems when plotting flood lines and flood depths and is not necessary for 1D or 2D models. It is recommended that the modeler have discretion as to whether a bridge deck should be removed.

Technical Bulletin Section / Subsection	Detailed Comments
	 Section 3.5.4 - Clarification is appreciated as to whether smoothed contours from a DEM are acceptable when stated in the map that the contour data is for reference only? Contours output from full resolution LiDAR can be a problem cartographically as there is more 'noise'. Using 'smoothing' on the source DEM can create a more cartographically pleasing product. Section 3.5.4 - The bulleted text appears to indicate that contours must be derived from a TIN. Where current LiDAR is readily available, it is recommended the bulletin include language permitting that contours be extracted from LiDAR DTM.
(3.6) Accuracy Assessment, Validation and Checking Recommendations	No comments.
(3.7) Accuracy Accounting, Quantification and Reporting Recommendations	Text in the document appears to alternate between "Flooding hazard limit (line)," and "Flood hazard limit (line)". It is recommended that only one term be used.
(3.8) Project Deliverables, Metadata and Data Storage	Section 3.8.1 – Text in (b) notes that a digital stamp from the responsible surveyor on the completion of the survey portion must be included with the final product. Clarification is requested as to whether a digital seal/stamp from an Ontario Land Surveyor is required for elevation data acquired from aerial LiDAR where data checks and validations have been reported. (4) Data Update Recommendations
(4.1) Scope	No comments.
(4.2) Update Schedule	Table 4-1 outlines recommended review and update schedules for mapping of 5-10 years in urban areas and 10-15 years in rural areas. These recommended schedules will require substantial and sustained funding for organizations such as Conservation Authorities to complete these updates.

Technical Bulletin Section / Subsection	Detailed Comments
	It is recommended that that Province consider providing resources to support this work to ensure mapping remains current, particularly in rapidly developing areas.
(4.3) Update Process	Greater clarity is required on how to document revisions if only a small portion of an area in a previously mapped and stamped area is updated. For example, would revision text be added in the original map sheet documenting what has been done and who has completed update work? Alternatively, would a revision block circle be added outlining where revisions occurred on the map, coupled with text in a revision block documenting what has been done and who has completed update work? Recommended direction would be appreciated in this section.
	oducts: Flood Hazard Map Dissemination and Sharing
(5.1) Scope	 As previously stated, additional guidance is necessary for flood plain maps generated using the 2D modelling approach. Generally, what is displayed on the map sheets should be consistent, however, clarification on matters such as how flood elevation data is to be displayed in an area where no cross sections exist would be useful. Recommended Edits (Grammar, Terminology, Formatting, etc.) Page 50 – Consider replacing "communication
	products" with "public facing products or documents"
(5.2) Digital Maps	Clarity is requested as to whether it is acceptable to have the engineer seal/stamp only on the original map document and not on the product which is consumed by the public/external agents (e.g., online/digital maps).
(5.3) Paper Maps	No comments.
(5.4) Web Mapping and other Online Formats	Guidance would be appreciated regarding content for web maps vs. digital and paper mapping products. For example is it acceptable for web maps to display a subset of the information that is shown on the official flood plain map (i.e., just the flood line and cross sections)?
(5.5) Map Content	• Section 5.5.2 – As a point of clarification, the Ministry should consider adding text in this section to note that features to be shown on the maps such as communities, streets, parks,

Technical Bulletin Section / Subsection	Detailed Comments
	etc. should conform to the names used by local administrative authorities/municipalities. Section 5.5.3 – Text in the bulleted list under (a) states that "upstream and downstream study limits and mapping limits" are map elements which should be included on flood hazard maps. Recommendations for study limits, such as the general guideline of extending flood plain mapping to a minimum of a 125ha drainage area, would be appreciated in the final guidance. Section 5.5.3 – Under (i) (Title) it is recommended that the content also include the project title and the watershed name. Section 5.5.4 – Text in the bulleted list under (a) states that all cross sections used in the hydraulic model "will be shown with jurisdictional regulatory flood, water surface elevations in the label, as well as the 100-year flood (if the 100-year flood is not the regulatory flood)". Historically, the 100-year flood elevation has been included in the cross section "bubble" with the regional flood elevation. Clarification is requested that, per this proposed Bulletin, it will be the expectation that flood plain maps display two flood lines in areas where the 100-year flood is not the regulatory flood. Section 5.5.4 – Text in the bulleted list under (a) states that for all cross sections used in the hydraulic model reads "All circular labels will be placed on one side of the map in ascending order". Achieving this is often difficult, time consuming and inefficient. Instead, it is recommended that this text be modified to read "Care should be taken to place section labels in an organized way which provides all necessary information". Section 5.5.4 – The final sentence under item (e) appears to be out of place in relation to flood plain spills. It is recommended that the sentence starting with "In maps showing contour data, spot elevations" form a new item (f) for this section.

Technical Bulletin	Detailed Comments
Section / Subsection	
(6) Glossary of Terms	 Definitions for the following terms used within the proposed Technical Guide are requested: "Hydroenforcement" (appears in section 3.5.1); "Hydro-flattening" (appears in section 3.5.3); and, "Hydro-conditioning" (appears in section 3.8);=.
(7) References	No comments.
APPENDIX 1	 Within Figure A1-1, it is recommended that the term "storm sewer" be removed and replaced with "sewer shed mapping". Using the term "storm sewers" implies these systems will be integrated into the hydrologic model which would require additional data input requirements and specifications from the Province. If it is the Province's intent to include these systems into flood plain mapping studies there needs to be further direction on modelling requirements and policy direction. To support previous comments related to requests for guidance for 2D modelling, it is recommended that a figure similar to A1-1 and A1-2 be developed specific to 2D modelling.
	Recommended Edits (Grammar, Terminology, Formatting,
	etc.)
	 Page 66 – Correct spelling errors in the title of Figure A1-1 ("hydrologicall" and "workflowl").
APPENDIX 2	No comments.
APPENDIX 3	No comments.

Ministry of Municipal Affairs and Housing

Office of the Minister 777 Bay Street, 17th Floor Toronto ON M7A 2J3 Tel.: 416 585-7000

Ministère des Affaires municipales et du Logement

Bureau du ministre 777, rue Bay, 17e étage Toronto ON M7A 2J3 Tél.: 416 585-7000



234-2023-4434

September 6, 2023

Dear Clerks, CAOs, and Conservation Authority Administrators:

Re: Proposal to return lands in Ajax to the Greenbelt

In December 2022, to accommodate Ontario's unprecedented growth by supporting the building of more homes, our government removed or redesignated 15 areas of land totaling approximately 7,400 acres from the edge of the Greenbelt Area. At the same time, a portion of the Paris Galt Moraine was added to the Greenbelt, along with 13 Urban River Valleys, totalling 9,400 acres, for an overall expansion of approximately 2000 acres.

The government was clear that owners of the lands removed from the Greenbelt would be expected to develop detailed plans to build housing with landowners also being responsible for paying for the full cost of housing-enabling and community-building infrastructure. It is the government's expectation that significant progress on approvals and implementation be achieved by the end of 2023.

It has come to the government's attention that the discussions surrounding the development of the lands removed from the Greenbelt located at 765 and 775 Kingston Road East in the Town of Ajax were at an early stage, and that a 104-acre parcel within the lands was recently listed for sale. These actions run counter to the government's objective of building homes quickly. The government is now seeking feedback on a proposal to return these lands, amounting to approximately 133 acres, to the Greenbelt Area through an amendment to the Greenbelt Area boundary regulation (O. Reg. 59/05) and an amendment to the Greenbelt Plan.

Further information on the proposal to amend the Greenbelt Plan and Greenbelt Area boundary regulation, can be found at:

- ERO #019-7561 Proposal to return lands to the Greenbelt (Amendment to the Greenbelt Plan)
- ERO #019-7562 Proposal to return lands to the Greenbelt (Amendment to Greenbelt Boundary Regulation O. Reg. 59/05)

Information and mapping on the 2022 decision to amend the Greenbelt Plan can be found here:

- ERO #019-6216 Amendments to the Greenbelt Plan
- Greenbelt Maps

The comment period on the Environmental Registry of Ontario is open for 45 days and will close on October 20, 2023. I look forward to receiving your input on this proposal.

In the meantime, my ministry is working to prepare a review of the Greenbelt to ensure that it is appropriately accommodating Ontario's significant growth, as is mandated in provincial legislation. This review will be informed by the recommendations of the Auditor General's report

and will include an evaluation of the remaining properties that were removed from the Greenbelt late last year.

As ministry officials design and launch this review, the non-partisan Provincial Land and Development Facilitator will continue to work with proponents of the remaining sites to ensure that progress on these lands continues, including the obligation to provide community benefits such as parks, community centres, schools and hospitals. This work will be an important input into the mandated review into the Greenbelt, as will meaningful consultation with municipalities, Indigenous communities and regular people living in these areas who deal with the negative impacts of the housing supply crisis the most. The properties that were removed from the Greenbelt will have to stand on their own merits: If the review finds these properties cannot support the government's objective of building homes quickly, they will be returned to the Greenbelt.

We have been clear that progress on these sites must meet the government's expectations. If planning and approvals have not significantly progressed by the end of this year and if shovels are not in the ground by 2025, the government will return these lands to the Greenbelt.

Sincerely,

The Hon. Paul Calandra

Minister of Municipal Affairs and Housing

c. Martha Greenberg, Deputy Minister, Municipal Affairs and Housing Sean Fraser, Assistant Deputy Minister, Municipal Affairs and Housing, Planning and Growth Division TO: Board of Directors

FROM: Jennifer Dow

Date: September 20, 2023, 2023

Subject: Dalewood Dam Options Assessment

Recommendation: That the full Authority accept the Dalewood Dam

Options Report as presented.



PURPOSE

To update the Boad on the completed Dalewood Dam Options Report prepared by GD Vallee.

REPORT SUMMARY

- The 102-year-old Dalewood Dam requires costly repairs to the concrete structure, in particular to the spillway and wingwalls.
- GD Vallee was retained to complete an options report to investigate the advantages and disadvantages of a variety of options ranging from a "do-nothing" approach to decommissioning/removal.
- The report also provides interim maintenance and operational recommendations, cost, and next steps.
- Representatives from GD Vallee will provide a presentation at the meeting.

BACKGROUND

Under the direction of the Board at the May 17, 2023, meeting, KCCA reached out to engineering firms with a request for quote to prepare an Options Report for the Dalewood Dam. Staff received three quotes and selected GD Vallee to complete the project.

GD Vallee prepared the "Dalewood Dam Options Report" attached. The report reviews the background on the Dalewood Dam, including operations, recent inspections, studies, projects and improvements as well as historical information. The report also summarizes the Municipal Class Environmental Assessment requirements for each alternative presented (Exempt, Schedule B and Schedule C).

Option	Municipal Class EA	Cost	Lifespan	Note
Do Nothing	Exempt	\$3k (+/-30%)	1-2 years	Does not satisfy the problem statement
Repair (Critical/Urgent)	Exempt	\$300k (-30% to +50%)	2-5 years	Short-term "band-aid" solution; does not adequately address the problem statement
Minor Rehabilitation	Exempt	\$900k (-30% to +50%)	10 (+/-) years	Partially addresses the problem statement
Major Rehabilitation	Exempt or Schedule B	\$1.4M (-30% to +50%)	25 (+/-) years	Addresses the problem statement
Replace Structure (Reduced Capacity)	Schedule B	\$1.9M (-30% to +50%)	75 (+/-) years	Addresses the problem statement
Replace Structure (Like-for-Like)	Exempt or Schedule B	\$4.2M (-30% to +50%)	75 (+/-) years	Addresses the problem statement
Removal (Decommissioning)	Schedule B	\$1.3M (-30% to +50%)	Indefinite/per manent	Addresses the problem statement

According the to the Options Report, the engineering consultant is recommending three viable options for KCCA to consider:

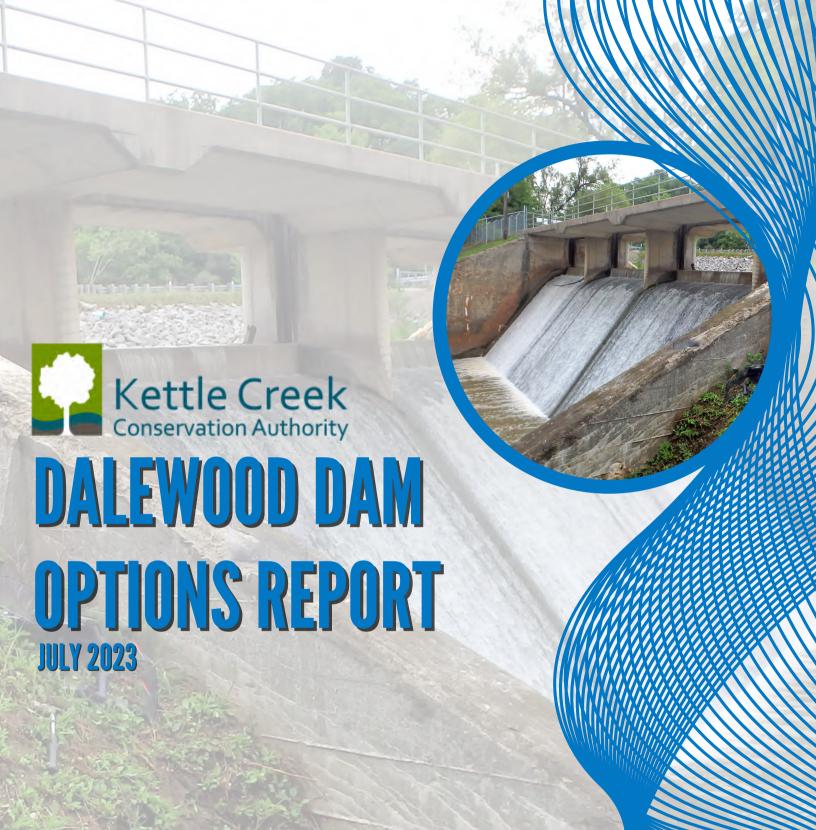
- 1. Major Rehabilitation
- 2. Dam Replacement (Reduced Capacity)
- 3. Dam Removal (Decommissioning)

In addition, the consultant recommends that in the interim, due to the continued deterioration of the existing dam, KCCA continues with the seasonal inspections until the selection of the preferred alternative is decided.

GD Vallee also recommends that regardless of the alternative selected, an accurate IDF Forecast Model with redundant process for removing the stop logs in the event of a predicted incoming IDF should be implemented as soon as possible.

Recommendation:

That the full Authority accept the Dalewood Dam Options Assessment report as presented.



Prepared by:



Page 33 of 72

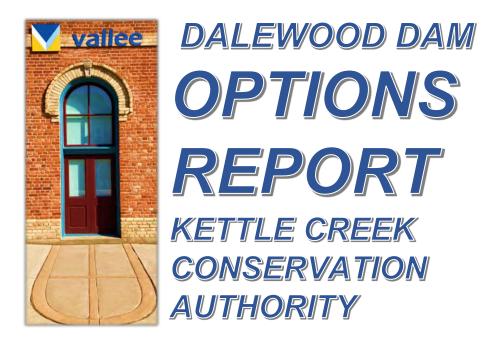


TABLE OF CONTENTS

1.	INTRODUCTION & BACKGROUND				
	1.1 Location				
	1.2 Background				
	1.3 Inspection Record				
2.	MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT				
	2.1 MCEA Schedule				
	2.2 MCEA Process				
3.	ALTERNATIVE SOLUTIONS				
	3.1 Problem Statement				
	3.2 Alternative 1 - Do Nothing				
	3.3 Alternative 2 - Repair				
	3.4 Alternative 3 - Minor Rehabilitation				
	3.5 Alternative 4 - Major Rehabilitation				
	3.6 Alternative 5 - Replace (Reduced Capacity)				
	3.7 Alternative 6 - Replace (Like-for-Like)				
	3.8 Alternative 7 - Remove				
4	CONCLUSION				

G. DOUGLAS VALLEE LIMITED Consulting Engineers, Architects & Planners





1. INTRODUCTION & BACKGROUND

The Kettle Creek Conservation Authority (KCCA) has engaged G. Douglas Vallee Limited (VALLEE) to prepare an Options Report for the Dalewood Dam. This Options Report is intended to provide a comprehensive summary of the available options for the dam which range from 'do nothing' to 'full replacement' considering environmental assessment, lifespan, and cost implications.

The purpose of this report is to provide information to the KCCA to aid in the decision making process with respect to the future of the Dalewood Dam. This options report will draw upon information provided in previous studies and reports, which include but are not limited to:

- Inspection Report prepared by Watech Services dated June 2018;
- Hazard Potential Classification (HPC) prepared by GHD dated February 5, 2020;
- Geotechnical Investigations and Slope Stability Assessment prepared by GHD dated January 20, 2021;
- Various seasonal condition review updates prepared by VALLEE (i.e.: Aug 2022, Dec 2022, June 2023).

This report will provide options for consideration and is intended as a precursor to a Municipal Class Environmental Assessment (MCEA) process.

1.1 LOCATION

The Dalewood Dam is situated at the southwest downstream end of the Dalewood Reservoir, in the northern portion of the City of St. Thomas. The reservoir is partially within the limits of the City of St Thomas and the municipality of Central Elgin, all within the County of Elgin.

The dam itself is approximately 40m west of and parallel to Dalewood Road, and 130m south of and perpendicular to Water Tower Line. The Dalewood Bridge on Dalewood Road was replaced in 2019 with



steel tube stay structure design with deep foundation abutments and a centre pier fully within the reservoir. The downstream watercourse is Kettle Creek, which flows south to Port Stanley where it drains into Lake Erie.

The surrounding land uses include recreational (i.e. Dalewood CA, trails, etc.), agricultural, and sub-urban residential.

G. DOUGLAS VALLEE LIMITED Consulting Engineers, Architects & Planners





1.2 BACKGROUND

The dam was originally constructed circa 1921 to provide a reservoir for a drinking water supply to the City of St Thomas. Drinking water is no longer supplied by the reservoir being made redundant by the current drinking water treatment and distribution system which is supplied via a Lake Erie pipeline. The HPC notes that the reservoir has limited capacity for flood control yet provides beneficial habitat for various terrestrial and marine species.

The HPC prepared by GHD in 2020 indicates a low hazard potential for the dam. The HPC also identified that the current dam presently does not meet MNRF* guidelines for freeboard and hydraulic capacity. Modifications to the embankments are suggested in the HPC and their subsequent geotechnical investigation and slope stability assessment. It was noted by KCCA staff that the freeboard requirement can be met when the stop logs are removed. This method of meeting the freeboard requirement would necessitate an Inflow Design Flood (IDF) forecast model that can provide KCCA with enough warning time to have staff operate the structure and remove the logs.

The geotechnical investigation and slope stability assessment prepared by GHD in 2021 indicates the embankments are stable but reiterates the option to modify the embankments to meet MNRF guidelines as noted above.

Subsequent to the GHD reports, KCCA engaged VALLEE to design and tender concrete rehabilitation repairs for the dam. The scope of work included removal and repair of deteriorated concrete on the dam deck, spillway, abutments, wingwalls, piers and retaining walls both above and below the waterline. The project was tendered in the spring of 2022 with a view to complete construction prior to October of the same year. Only 2 bids were submitted, indicative of an insufficient competitive process for a procurement of this nature. The lowest bid was also significantly higher than the pre-tender construction cost estimate. As a result, the project was cancelled without awarding a contract.

It was recommended that the structure be inspected seasonally in the absence of repair work to monitor ongoing deterioration and identify any significant changes in condition that may be occurring.

1.3 INSPECTION RECORD

Following the cancellation of the concrete rehabilitation project, VALLEE has provided seasonal updates on the condition of the dam on a per request basis. To date, the site has been inspected in August 2022, December 2022, and June 2023; an autumn/winter season inspection is anticipated in late 2023.

Approximate results of the inspections are summarized below:

- August 2022: estimated 6% increase in deterioration over original work tendered.
- December 2022: estimated an additional 6% increase in deterioration from August 2022 inspection.
- June 2023: estimated an additional 4% increase in deterioration from December 2022 inspection.

It is recommended that the dam continue to be monitored seasonally or prior to/following significant weather events until rehabilitation work is undertaken.

*Ministry of Natural Resources & Forests (MNRF) is now known as the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF) but will continue to be referred to as MNRF for the purpose of this report.

G. DOUGLAS VALLEE LIMITED Consulting Engineers, Architects & Planners





2. MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

A municipal class environmental assessment (MCEA) will be required for all options considered apart from choosing to 'do nothing'. The choice of option to undertake will have an associated schedule which outlines the process required under the Environmental Assessment Act. The MCEA process was recently updated in March 2023; former Schedule A and A+ undertakings have been replaced by the categories of 'Exempt' projects and 'Eligible for Screening to Exempt' projects. Schedule B and C undertakings have also been updated in this recent revision.

2.1 MCEA SCHEDULE

The streamlined MCEA process provides for specific classes of undertakings to follow a planning and decision-making process that is prescribed in the Municipal Engineers Association's MCEA Manual (March 2023). Following the approved streamline process, undertakings conducted in this manner can proceed with implementation if all other approvals have been obtained. Under the Municipal Class EA process, municipal road projects are categorized according to four schedules of classification types (ie: A, A+, B and C).

The schedules are summarized in excerpts from the MCEA Manual as follows:

Exempt Projects

These projects, most of which were formerly classified as Schedule A and A+ projects, include various municipal maintenance, operational activities, rehabilitation works, minor reconstruction or replacement of existing facilities, and new facilities that are limited in scale and have minimal adverse effects on the environment. These projects are exempt from the requirements of the Environmental Assessment Act (EAA).

The undertakings considered in this report that would fall into this category may include:

- Do nothing;
- Minor or major rehabilitation or reconstruction of the existing facility where the purpose, use, and capacity remains unchanged.

(Reference MCEA Manual, p.184, Table B: Municipal Water and Wastewater Projects – Shoreline/In Water Works – Project Description 48)

Eligible for Screening to Exempt

Some projects may be eligible for exemption based on the results of a screening process. Proponents may choose to complete the applicable screening process to determine whether their project is eligible for exemption from the EAA or proceed with the applicable Schedule B or C process. Proponents must fully and accurately complete the relevant screening process to proceed pursuant to the exemption.

None of the undertakings considered in this report fall into this category.





Schedule B

These projects have the potential for some adverse environmental effects. The proponent is required to undertake the first two phases of the assessment process, involving mandatory contact with directly affected public and relevant review agencies, to ensure that they are aware of the project and that their concerns are identified and considered. A Project File must be prepared and made available for review by any interested person or party. If there are no outstanding concerns, then the proponent may proceed to implementation once the regulatory process has been completed. Schedule B projects generally include improvements and minor expansions to existing facilities or smaller new projects.

The undertakings considered in this report that would fall into this category may include:

• Works undertaken in a watercourse for the purpose of flood control or erosion control, which may include reconstruction of a weir or dam.

(Reference MCEA Manual, p.184, Table B: Municipal Water and Wastewater Projects – Shoreline/In Water Works – Project Description 51)

This appears to conflict with the exempted Project Description 48 noted previously.

- Reconstruction of the existing facility where the purpose, use, and capacity are changed.
 (Reference MCEA Manual, p.185, Table B: Municipal Water and Wastewater Projects Shoreline/In Water Works Project Description 54)
- Removal of an existing weir or dam.
 (Reference MCEA Manual, p.185, Table B: Municipal Water and Wastewater Projects Shoreline/In Water Works Project Description 55)

Schedule C

These projects have the potential for more significant environmental effects than a Schedule B project and as such a proponent is required to complete the full planning and documentation process set out in the MCEA. For Schedule C projects, proponents are required to prepare an Environmental Study Report for review by the public and review agencies. If there are no outstanding concerns, the proponent may proceed to implementation once the regulatory process has been completed. Schedule C projects generally include the construction of new facilities and major expansions to existing facilities.

The construction of a new dam or weir in a watercourse where one had not previously existed would fall into this category. Since this is not the case for this project, none of the undertakings considered in this report fall into this category.



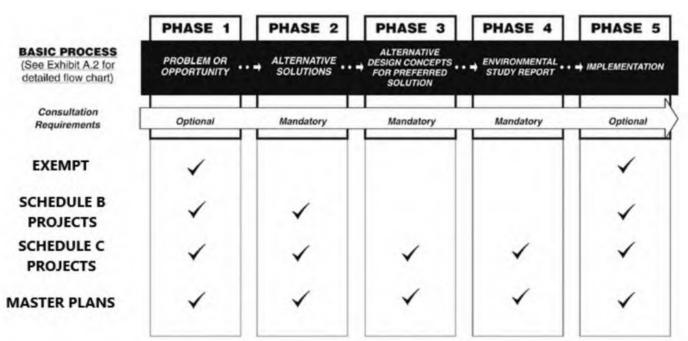


2.2 MCEA PROCESS

In brief, the phases of the MCEA process is paraphrased from the MCEA Manual as follows:

- **Phase 1** Identify the problem, deficiency or opportunity.
- Phase 2 Identify alternative solutions to address the problem or opportunity by taking into consideration the existing environment. Establish the preferred solution taking into account public and review agency input. At this point, determine the appropriate schedule for the undertaking (ie: A, A+, B, or C), and proceed though the phases as required.
- Phase 3 Examine alternative methods of implementing the preferred solution, based upon the existing environment, public and review agency input, anticipated environmental effects and methods of minimizing negative effects and maximizing positive effects.
- Phase 4 Document a summary of the rationale, the planning, design and consultation process of the project as established through the above phases in an Environmental Study Report, and make such documentation available for scrutiny by review agencies and the public.
- Phase 5 Complete contract drawings and documents, and proceed to construction and operation; monitor construction for adherence to environmental provisions and commitments. Where special conditions dictate, also monitor the operation of the completed facility.

The phases of the process that would be required depend on which schedule the preferred option falls into:



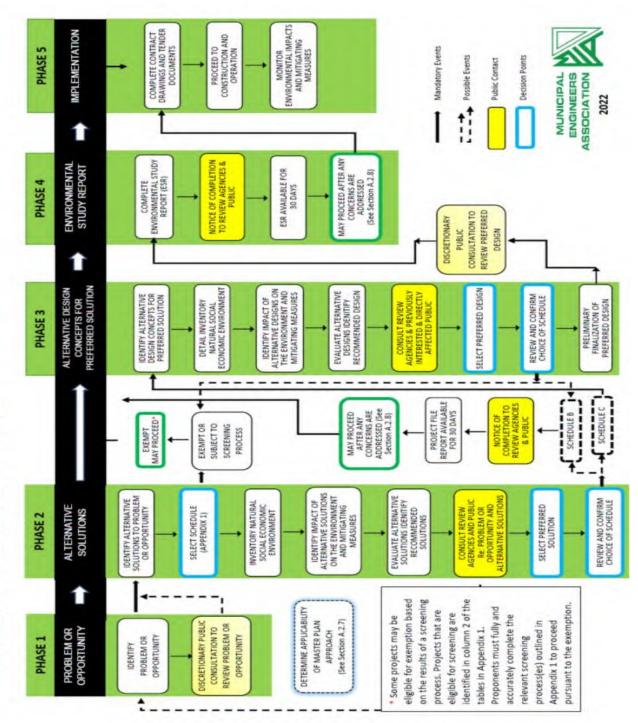
The chart above illustrates the phase requirements for the various schedule projects; the following page is an algorithm chart of the full five phases. These figures are taken directly from the MCEA Manual.





EXHIBIT A.2. MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the MCEA







3. ALTERNATIVE SOLUTIONS

3.1 PROBLEM STATEMENT

Despite the 'low' Dam Hazard Potential Classification, it would be irresponsible to neglect the condition of the facility. It is also noted that the dam does not meet MNRF guideline requirements for freeboard of the earth embankment in the event of the Inflow Design Flood (IDF), unless the stop logs are removed. The structural condition of the dam and IDF inadequacy are deficiencies that pose a potential risk to public safety. The following Problem Statement summarises the need for the site:

The deficient dam is over a century in age; a decision and subsequent action is required to protect public safety.

In Phase 2 of the MCEA process, alternative solutions are considered to address the problem statement. Any work proposed on the subject site would be completed with consideration for all the findings of the *Municipal Class Environmental Assessment*.

All the considered options, with the exception of 'do nothing', will require a permit under the Lake & Rivers Improvement Act

3.2 ALTERNATIVE 1 - DO NOTHING

This alternative is typically considered to characterise maintaining the existing conditions. To do nothing would still require seasonal inspection as it continues to deteriorate and carries significant risk. Eventually, the structure will deteriorate to a condition where it will be necessary to lower the retained upstream water levels to relieve hydrostatic pressure on the structure.

The work anticipated for this option would include:

Seasonal inspection and condition reporting.

The cost of this option is **estimated to be approximately \$3000 (+/- 30%)** per annum, with annual increases to account for inflation inline with the Consumer Price Index (CPI).

This alternative solution does not provide the required work needed to keep the dam in a safe condition. This option has a **lifespan of 1-2 years** as it only delays the decision to choose one of the other options. The length of time required in decision making will reduce the availability of other options and increase costs as time progresses.

To do nothing does not satisfy the problem statement.

3.3 ALTERNATIVE 2 – REPAIR

This alternative would provide only the most critical urgent repairs that are needed in the short term. This option would be a 'band-aid' to be considered in the absence of adequate funds with associated risk. The repair would simply delay the eventual required decision to choose one of the other considered alternatives.





Page 8

The work anticipated for this option would include:

- Seasonal inspection and condition reporting until the work is completed, and continuing afterward for areas that were not repaired.
- Spillway and pier rehabilitation.

This option does **not** address required work to:

- Embankment improvements to satisfy the MNRF guideline IDF freeboard deficiency.
- Repairs to the concrete deck, abutments, wingwalls, or retaining walls.

This option was tendered in 2022 and was subsequently cancelled due to an insufficient competitive process for a procurement of this nature. The updated Class C (-30% to +50%) cost estimate of this option is **estimated to be approximately \$300k** (-30% to +50%) in today's dollars with annual increases to account for inflation inline with the Consumer Price Index (CPI).

This alternative solution does not provide the required work needed to keep the dam in a safe condition. This option has a **lifespan of 2-5 years** as it only delays the decision to choose one of the other options. The length of time required in decision making will reduce the availability of other options and increase costs as time progresses.

This option would be considered an 'exempt' project under the MCEA schedule.

This option does not adequately address the problem statement.

3.4 ALTERNATIVE 3 – MINOR REHABILITATION

This alternative would provide the most critical urgent repairs that are needed in the short term. This option would be a compromise solution with some risk to be considered in the absence of adequate funds with reduced risk. The minor rehabilitation would further delay the eventual required decision to choose full rehabilitation, replacement, or removal.

The work anticipated for this option would include:

- Seasonal inspection and condition reporting until the work is completed, and continuing afterward for areas that were not repaired.
- Spillway and pier rehabilitation.
- Repairs to the concrete deck, abutments, wingwalls, or retaining walls.

This option does **not** address required work to:

- Embankment improvements to satisfy the MNRF guideline IDF freeboard deficiency.
- Replacement of retaining walls

This option was tendered in 2022 and was subsequently cancelled due to an insufficient competitive process for a procurement of this nature. The updated Class C (-30% to +50%) cost estimate of this option is **estimated to be approximately \$900k** (-30% to +50%) in today's dollars with annual increases to account for inflation inline with the Consumer Price Index (CPI).





This alternative solution does not provide the required work needed to keep all of the appurtenant dam components in a safe condition. This option has a **lifespan of 10 (+/-) years** as it only delays the decision to choose one of the other options. The length of time required in decision making will reduce the availability of other options and increase costs as time progresses.

This option would be considered an 'exempt' project under the MCEA schedule.

This option partially addresses the problem statement.

3.5 ALTERNATIVE 4 – MAJOR REHABILITATION

This alternative would provide the necessary work to fully rehabilitate the site for the long term. All of the concrete and earth embankment deficiencies would be addressed. This option should be considered in the presence of adequate funds.

The work anticipated for this option would include:

- Seasonal inspection and condition reporting until the work is completed.
- Spillway and pier rehabilitation.
- Rehabilitation to the concrete deck, abutments, wingwalls.
- Replacement of poor retaining walls.
- Embankment improvements to satisfy the MNRF guideline IDF freeboard deficiency.

The updated Class C (-30% to +50%) cost estimate of this option is **estimated to be approximately \$1.4M** (**-30% to +50%**) in today's dollars with annual increases to account for inflation inline with the Consumer Price Index (CPI).

This alternative solution provides the required work needed to rehabilitate the dam to a safe condition. This option has a **lifespan of 25 (+/-) years**. This process would need to be repeated in 25 years time.

This option may be considered an 'exempt' project under the MCEA schedule if the embankment improvement to satisfy the MNRF guideline for IDF freeboard doesn't trigger a 'Schedule B' requirement due to a change in capacity.

This option addresses the problem statement.

3.6 ALTERNATIVE 5 – REPLACE THE STRUCTURE (REDUCED CAPACITY)

This alternative would include the complete removal of the current concrete dam facility and replacement with an earth embankment with an armoured weir overflow at a lower elevation than the current reservoir. This option should be considered in the presence of adequate funds.

The work anticipated for this option would include:

- Seasonal inspection and condition reporting until the work is completed.
- Temporary flow channel during construction.





- Removal of all concrete dam elements such as deck, abutments, piers, spillway, and retaining walls.
- Construction of a reinforced earth embankment with a lower weir spillway.
- Stabilisation regrading of embankments where retaining walls are removed.

Embankment improvements to satisfy the MNRF guideline IDF freeboard deficiency would not be required since the new spillway can be designed to accommodate current standards for IDF flows.

The updated Class C (-30% to +50%) cost estimate of this option is **estimated to be approximately \$1.9M** (**-30% to +50%**) in today's dollars with annual increases to account for inflation inline with the Consumer Price Index (CPI).

This alternative solution provides the required work needed to reinstate the dam site to a safe condition. This option has a **lifespan of 75 (+/-) years**.

This option would be considered a 'Schedule B' project under the MCEA schedule due to a change in dam capacity.

This option addresses the problem statement.

3.7 ALTERNATIVE 6 - REPLACE THE STRUCTURE (SAME LOCATION, USE & CAPACITY)

This alternative would include the complete removal of the current concrete dam facility and replacement with a 'like-for-like' concrete dam facility at the same location with the same use and capacity. This option should be considered in the presence of adequate funds.

The work anticipated for this option would include:

- Seasonal inspection and condition reporting until the work is completed.
- Temporary flow channel during construction.
- Removal of all concrete dam elements such as deck, abutments, piers, spillway, and retaining walls.
- Construction of a 'like-for-like' concrete dam facility.

Embankment improvements to satisfy the MNRF guideline IDF freeboard deficiency would not be required since the new spillway can be designed to accommodate current standards for IDF flows.

The updated Class C (-30% to +50%) cost estimate of this option is **estimated to be approximately \$4.2M** (**-30% to +50%**) in today's dollars with annual increases to account for inflation inline with the Consumer Price Index (CPI).

This alternative solution provides the required work needed to reinstate the dam site to a safe condition. This option has a **lifespan of 75 (+/-) years**.

This option may be considered an 'exempt' project under the MCEA schedule if the new design to satisfy the MNRF guideline for IDF freeboard doesn't trigger a 'Schedule B' requirement due to a potential change in capacity.

This option addresses the problem statement.





3.8 ALTERNATIVE 7 – REMOVE THE DAM

This alternative would include the complete removal of the current concrete dam facility and inline stream habitat restoration and silt traps. This option should be considered in the presence of adequate funds.

The work anticipated for this option would include:

- Seasonal inspection and condition reporting until the work is completed.
- Temporary flow channel during construction.
- Removal of all concrete and earth embankment dam elements.
- Construction of erosion control facilities such as silt traps where accessible to facilitate cleanout.
- Restoration of reservoir habitat to pre-dam stream conditions where feasible.

The updated Class C (-30% to +50%) cost estimate of this option is **estimated to be approximately \$1.3M** (-30% to +50%) in today's dollars with annual increases to account for inflation inline with the Consumer Price Index (CPI).

This alternative solution provides the required work needed to reinstate the site to pre-dam conditions. This option would have an **indefinite/permanent lifespan**.

This option would be considered a 'Schedule B' project under the MCEA schedule due to a change in dam capacity.

This option addresses the problem statement.

3.9 ALTERNATIVE SOLUTIONS DISCUSSION

What is the long-term vision for the Dalewood Dam?

The forgoing discussion of these options will attempt to delete options that are not feasible or recommended and simplify the decision path to leave KCCA with viable alternatives from which to choose.

Alternative 1 Do Nothing is not considered responsible and does not address the problem statement; it will not be considered further as a potential recommended path forward.

The remaining considered alternative solutions have significant range in cost and impact. The critical question posed to be considered and answered by KCCA is:

What is the long-term vision of the dam facility and what is the availability of funding?

The first decision in the process needs to be whether the dam is **to remain OR be removed**; this decision simplifies the remaining options.

If removal is deleted from further consideration, the remaining alternatives are to rehabilitate OR replace.

The decision point between rehabilitate or replace is dependent upon available funding and the desired outcome for lifespan.

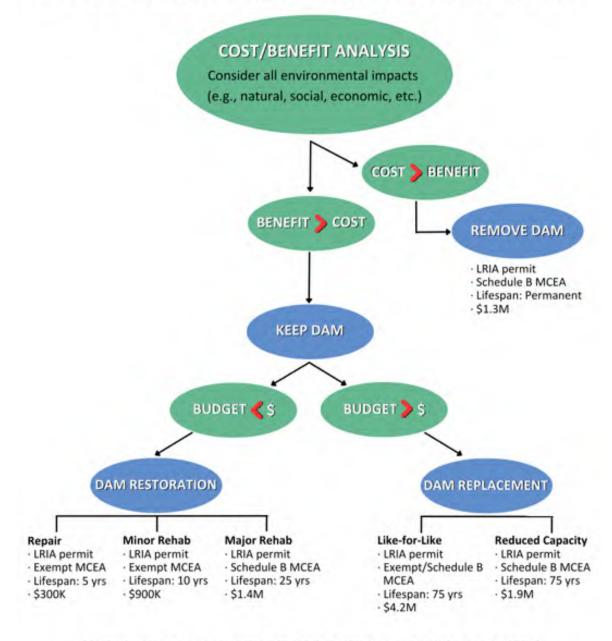
The decision process has been simplified visually as laid out in a flow chart on the following page:





DECISION PROCESS FLOW CHART

WHAT IS THE LONG-TERM VISION FOR DALEWOOD DAM?



^{*}Cost estimates are considered "Class C" (-30% to +50%) rounded up to the nearest \$100K





Reduction of Considered Options

The Municipal Class Environmental Assessment (MCEA) process would take intangible or other benefits that are difficult to quantify (i.e.: natural, social, economic environments, etc.) into consideration. In the absence of these considerations, the following discussion can reduce the outlying options from consideration from a simplified point of view of tangible benefit compared to relative costs. For example, it is understood that the reservoir is no longer required for drinking water. Additionally, due to accumulated impounded sediment, the reservoir capacity is significantly reduced. The GHD studies indicate that this characteristic means the facility has no practical flood storage. As a result of these deficiencies and a cost of over \$4M, the 'like-for-like' replacement may not be the preferred alternative.

Therefore, the 'like-for-like' dam replacement could be removed from consideration.

If we consider the dam restoration option, the scope of work varies from the bare minimum repair to full rehabilitation. Based on the relative high cost of the lowest value repair option and considering the short lifespan it purchases, the repair option is ineffective from a cost vs benefit point of view.

Therefore, the repair option could be removed from consideration.

The remaining dam restoration options are the minor and major rehabilitation scopes of work. Review of the minor rehabilitation option reveals that remaining deficiencies would still pose a liability to the KCCA that would need to be addressed in the years following the rehabilitation. The major rehabilitation provides the necessary program of work to bring the full facility to current standards with a longer anticipated lifespan. Considering the cost/benefit ratio of dollars per year that the minor vs major rehabilitation produces for purchased lifespan, the major rehabilitation provides a significantly better return on investment.

Therefore, the minor rehabilitation could be removed from consideration.

The preceding argument leaves three viable alternatives remaining for consideration:

- Major Rehabilitation;
- Dam Replacement (eg.: reduced capacity earth embankment weir); and
- Dam Removal.

These remaining options bring us back to the fundamental question of what is the long term vision and available funding for the Dalewood Dam?

The answer to that fundamental question will also decide the selection of one of the three remaining viable options.





4. CONCLUSION

This Municipal Class Environmental Assessment Schedule B process will assist the KCCA in making the ultimate decision of the fate of the Dalewood Dam. Based on our review and assessment however, there are three viable options for KCCA to consider:

- Major Rehabilitation;
 - o \$1.4M cost with a 25 year lifespan. (-30% to +50% range of \$1M to \$2M)
- Dam Replacement (eg.: reduced capacity earth embankment weir);
 - o \$1.9M cost with a 75 year lifespan. (-30% to +50% range of \$1.3M to \$2.8M)
- Dam Removal.
 - o \$1.3M cost with a permanent lifespan. (-30% to +50% range of \$900k to \$2M)

The availability of funding and the desired outcome for lifespan, while also considering the implications of the selection on the natural, social, and economic environments will be integral to the selection of the preferred alternative.

The condition of the dam facility continues to deteriorate; therefore it is critical that KCCA continue with seasonal inspections until the selection of the preferred alternative is decided.

Notwithstanding the selection of any of the options listed above, an accurate IDF Forecast Model with a redundant process for removing the stop logs (i.e. staff method and training) in the event of a predicted incoming IDF should be implemented as soon as possible.

We trust that this report is clear and to your satisfaction. Thank you for the opportunity to be of service to Kettle Creek Conservation Authority.

This report is respectfully submitted by,

A. Ryan Elliott, P.Eng., BDS, Consulting Engineer Managing Director of Structural Engineering

G. DOUGLAS VALLEE LIMITED

Consulting Engineers, Architects & Planners

H:\Projects\2023\23-114 Dalewood Dam - Options Report\Working Files\Dalewood Dam Options Report FINAL Aug 30 23.docx

A.R.J. ELLIOTT IN 1200ct 261





TO: Board of Directors

FROM: Elizabeth VanHooren

Date: September 20, 2023

Subject: CA Act Progress Report and Cost Apportioning

Agreement Update

Recommendation: That the October 1, 2023 Progress Report be

received; and further that Staff be directed to request an extension to the January 1, 2024 deadline to execute Cost Apportioning Agreements with

all member municipalities.



PURPOSE

To present the Progress Report highlighting work undertaken to date to meet the requirements of amendments to the *Conservation Authorities Act* for submission to the Ministry of Natural Resources and Forestry and to provide an update to KCCA's Board of Directors on the progress of executing Cost Apportioning Agreements with member municipalities.

SUMMARY

- As part of Ontario Regulation 687/21, Progress Reports are required to be submitted to the Ministry of Natural Resources and Forestry throughout the transition period.
- Based on the Regulation, Progress Reports are to contain:
 - Any comments/feedback the CA receives from member municipalities on the Inventory of Programs and Services;
 - An update on the progress of negotiations of cost apportioning agreements with the participating municipalities; and
 - Outline of any difficulties that the authority is experiencing that my affect the ability to enter into cost apportioning agreements by the transition date.
- KCCA's October 1 Progress Report highlights:
 - To date, KCCA has Council resolutions from 4 member municipalities affirming the execution of the Cost Apportioning Agreement: Middlesex Centre, Thames Centre, Malahide and Southwold.
 - While KCCA anticipates signed agreements with its remaining member municipalities (London, St. Thomas and Central Elgin) prior to the January 1, 2024 deadline, reports are still working their way through council agendas. As resolutions remain outstanding from some municipalities KCCA is advising the

Ministry that an extension to the January 1, 2024 deadline may be required to facilitate council schedules and further negotiations if necessary. However, KCCA is making every effort to ensure compliance with the regulatory deadline. Staff estimate that an extension until March 31, 2024 would be sufficient.

 Staff have been compiling the required information about KCCA properties for the mandatory deliverable Land Inventory.

Recommendation:

That the October 1, 2023 Progress Report be received; and further that Staff be directed to request an extension to the January 1, 2024 deadline to execute Cost Apportioning Agreements with all member municipalities.





PROGRESS REPORT

OCTOBER 1, 2023

TRANSITION PLAN

- The Transition Plan was approved by KCCA's Board of Directors at the November 24, 2021 Full Authority meeting.
- The Transition plan was circulated to member municipalities on November 26, 2021.
- The Transition plan was circulated to the Minister on December 2, 2021.
- The Transition plan is posted to KCCA's website: https://www.kettlecreekconservation.on.ca/governance/

INVENTORY OF PROGRAMS AND SERVICES

- The draft Inventory of Programs and Services was approved for circulation to member municipalities for comment by KCCA's Board of Directors at the January 19, 2022 Full Authority meeting.
- The Inventory of Programs and Services was approved by KCCA's Board of Directors at the February 9, 2022 Full Authority meeting.
- The Inventory was circulated to member municipalities on February 16, 2022.
- The Inventory was circulated to the Minister on February 16, 2022.
- The Inventory is posted to KCCA's website: https://www.kettlecreekconservation.on.ca/governance/
- Based on feedback from MECP, minor edits were made to the Inventory of Programs and Services for the July 1, 2022 Progress Report.
- No further changes have been made to the Inventory since that date.

CONSULTATION WITH MEMBER MUNICIPALITIES

- Staff provided a presentation to municipal staff from St. Thomas, Thames Centre, Malahide, Southwold and Central Elgin on January 11, 2022 to review the *Conservation Authorities Act* amendments and initial categorization of KCCA's programs and services.
- Feedback received to date on KCCA's Inventory of Programs and Services:
 - Middlesex Centre (January 26, 2022)
 No concerns. Observed a shift in funding allocation from provincial to municipal levy in category 1 programming relative to flood forecasting. Clarification was provided that this shift was a result of the provincial transfer payment being cut from \$119,652 to \$61,770 in 2019.
 - Central Elgin (January 31, 2022)
 No concerns with the categorization of KCCA programs and services.
 - Southwold (January 31, 2022)
 No concerns with the categorization of KCCA programs and services. Seeking consistency where possible amongst its CAs for MOU terms and fee structure.
 Interested in discussions on additional services KCCA could provide.
 - Thames Centre (February 3, 2022)
 No concerns with the categorization of KCCA programs and services.

- Malahide (February 3, 2022)
 No concerns with the categorization of KCCA programs and services. Suggested expanded detail to note where specific monitoring stations are located. Requested information was provided to the municipality.
- St. Thomas (February 3, 2022)
 No concerns with the categorization of KCCA programs and services. Staff indicated support for the two Category 3 programs requiring an agreement (tree planting and watershed monitoring).
- City of London (April 29, 2022)
 Clarification sought on costs for new mandatory programs/services, whether the costs provided reflect total gross costs or London's apportioned share, and if costs include depreciation.
- Staff distributed the July 1, 2022 Progress Report and the updated Inventory of Programs and Services to all member municipalities on June 23, 2022. No concerns or questions were submitted by member municipalities.
- Staff distributed the October 1, 2022 Progress Report to all member municipalities on September 22, 2022. No concerns or questions were submitted by member municipalities.
- Staff distributed the January 1, 2023 Progress Report to all member municipalities on December 19, 2022. No concerns or questions were submitted by member municipalities.
- Staff distributed the April 1, 2023 Progress Report to all member municipalities on March 28, 2023. No concerns or questions were submitted by member municipalities.

AGREEMENTS

- Existing Category 2 agreements are posted to KCCA's website under the Governance section.
- KCCA communicated with senior staff from member municipalities in April 2023 to discuss the
 development of Cost Apportioning Agreements and solicit their feedback. No concerns were
 raised at that time.
- KCCA developed a draft Cost Apportioning Agreement while engaging with neighbouring CAs with shared member municipalities.
- On April 24, 2023, a draft Cost Apportioning Agreement was circulated for review and comment from senior staff at member municipalities. Feedback received to date on KCCA's draft Cost Apportioning Agreement:
 - Malahide (April 17, 2023)
 Staff had no concerns or comments at this time with KCCA attempting to have a draft agreement executed by Fall 2023.
 - Middlesex Centre (May 3, 2023)
 Staff provided feedback on dispute resolution, termination clauses.
 - St. Thomas (May 3, 2023)
 Staff had no concerns and noted that both Category 3 programs seeking municipal funding are programs staff would recommend Council support as they have real benefit to watershed management and ecosystem health.
 - London (May 4, 2023)
 Accepted KCCA's proposed scope of Category 3 programs and proposed cost apportionment but could not provide feedback as staff will be undertaking a review with their Legal staff in parallel with submissions by the UTRCA and LTRCA. Asked for

- clarification on what happens if one of the member municipalities does not agree to this agreement.
- Central Elgin (May 9, 2023)
 Staff provided feedback on the agreement length and renewal clauses. Staff expressed support for Category 3 programs seeking municipal support and indicated these services are beneficial to the watershed and assist Central Elgin with enhanced environmental conditions as well as information that can be used for capital projects and Environmental Assessments etc.
- Thames Centre (May 10, 2023)
 Staff had no concerns with the draft Agreement.
- Southwold (May 11, 2023)
 Staff had no concerns with the draft Agreement.
- The Draft Cost Apportioning Agreement was circulated to KCCA's solicitor for review. Minor edits were received and incorporated into the agreement.
- Staff developed a Guide to Cost Apportionment Agreements document for distribution to Municipal Councils to accompany the draft agreement that was distributed to Member Municipalities on June 22, 2023.
- Staff have attended various member municipality Council meetings to provide presentations on the changes to the *Conservation Authorities Act* and the need for Cost Apportioning Agreements.
- To date, KCCA has Council resolutions from 4 member municipalities affirming the execution of the Cost Apportioning Agreements: Middlesex Centre, Thames Centre, Malahide and Southwold.
- While KCCA anticipates signed agreements with its remaining member municipalities (London, St. Thomas and Central Elgin) prior to the January 1, 2024 deadline, reports are still working their way through council agendas. As resolutions remain outstanding from some municipalities KCCA is advising the Ministry that an extension to the January 1, 2024 deadline may be required to facilitate council schedules and further negotiations if necessary. However, KCCA is making every effort to ensure compliance with the regulatory deadline.

OTHER DELIVERABLES

• The Land Inventory is nearing completion.

OTHER ACTIVITIES

- Attended Conservation Ontario sessions related to changes to the *Conservation Authorities Act* and Phase 1 and 2 regulations.
- Attended MECP sessions on the Conservation Authorities Act and the Inventory of Programs and Services.
- Meeting held with MECP staff on May 12, 2022 to solicit feedback on KCCA's Inventory of Programs and Services.
- Fee Policy and Fee Schedules approved at the May 18, 2022 KCCA Full Authority meeting as per requirements of the *Conservation Authorities Act*.
- KCCA's website updated to include Governance Section as per Phase 2 Regulations.

- Attended a Conservation Ontario session related to Conservation Areas Strategy and Lands Inventory on June 15, 2022.
- Land Acquisition and Disposition Policy approved at the August 18, 2022 KCCA Full Authority meeting as per requirements of *Conservation Authorities Act*.
- Attended Phase 1 and Phase 2 Refresher sessions held by MNRF in October 2022
- Attended a Conservation Ontario session related to Ice Management Plans on October 13, 2022
- Review of and dissemination of information regarding the *More Homes Built Faster Act* to KCCA's Board and member municipalities.
- Development of orientation materials for new members of municipal Councils and KCCA's Board of Directors following the municipal election.
- Attended a Conservation Ontario session related to Cost Apportioning Agreements on March 6, 2023.
- Attended a Conservation Ontario/AMO session related to the *Conservation Authorities Act* on April 19, 2023.
- Attended a Conservation Ontario session related to Conservation Authorities Act deliverables on August 24, 2023

TO: Board of Directors

FROM: Elizabeth VanHooren

Date: September 20, 2023

Subject: City of London Budget – Business Plan

Recommendation: That the Draft City of London Business Plan be submitted

as presented.



PURPOSE

To review and approve KCCA's 2024-2027 draft City of London Business Plan for submission.

SUMMARY

- In addition to the budget submission forwarded to the City of London in August; City of London's Boards and Commissions are also asked to submit a Business Plan that identifies the strategies and priorities that are driving strategic direction.
- Business Plans were due to the City of London on September 15, 2023; staff submitted a draft to be finalized following consideration at KCCA's September Full Authority meeting.
- As per the City of London's Multi-Year Budget Policy, Business Plans may be modified through 2024 2027 as necessary based on Annual Budget Updates and amendments.
- The attached submission builds upon KCCA's August submission and outlines how KCCA is
 helping to address The City of London to address its strategic plan including giving consideration
 for Environmental, Socio-Economic, Equity and Governance Considerations.
- In addition, the plan identifies the risks and challenges KCCA anticipates over the next four-year period.

Recommendation:

That the Draft City of London Business Plan be submitted as presented.



2024 to 2027 Business Plan



Who we are:

- Conservation Authorities are local watershed management agencies that deliver programs and services to protect and manage impacts on water and other natural resources, in partnership with all levels of government, landowners and many other organizations.
- The Kettle Creek Conservation Authority (KCCA), incorporated in 1965, works in partnership with 7 member municipalities (London, St. Thomas, Central Elgin, Southwold, Malahide, Thames Centre and Middlesex Centre) which appoint 10 members to the Board of Directors. The Board of Directors makes program decisions and allocates funds.
- The *Conservation Authorities Act* and its related Regulations prescribe the role and responsibilities of conservation authorities.

What we do:

- Maintain and/or enhance programs and services that safeguard people and property from natural hazards such as flooding and erosion and a changing climate.
- Maintain and/or enhance programs and services that monitor or contribute to the environmental health of the watershed through collaborative, integrated, science.
- Maintain and/or enhance Authority owned lands to support outdoor recreational opportunities, protect natural features and mitigate the effects of invasive species.
- Promote a positive community profile of KCCA's programs and services and foster respect for the Kettle Creek watershed through outreach, engagement and education.
- Ensure effective and efficient delivery of KCCA's programs and services in an equitable and respectful manner.

Why we do it:

- <Mandatory or Traditional (select one)>
- KCCA is mandated by the Conservation Authorities Act, and its related regulations to provide programs and services
 designed to further the conservation, restoration, development and management of natural resources in watershed in
 Ontario.
- KCCA undertakes watershed-based programs to protect people and property from flooding and other natural hazards
 and to conserve natural resources for economic, social and environmental benefits. Positive actions in one part of the
 watershed will have positive impacts downstream. All municipalities benefit when these programs are undertaken on a
 watershed basis.

The following table provides an overview of the budget for this service:

Budget Summary (\$000's)	2024	2025	2026	2027	2024 to 2027 TOTAL
Gross Operating Expenditures	\$0	\$0	\$0	\$0	\$0
Other Revenues	-\$0	-\$0	-\$0	-\$0	-\$0
Net Tax Levy Supported Operating Budget	\$0	\$0	\$0	\$0	\$0
Total Capital Expenditures	\$0	\$0	\$0	\$0	\$0
Full-Time Equivalents (FTE's)	0	0	0	0	N/A

Reflects Draft 2024 to 2027 Multi-Year Budget – December 12, 2023

Linkage to the 2023 to 2027 Strategic Plan

This service supports the following Strategic Areas of Focus in the 2023 to 2027 Strategic Plan:

(delete check marks for the strategic areas of focus that are not relevant or materially contributed to)

•	Reconciliation, Education, Accessibility, and Inclusion		Economic Growth, Culture, and Prosperity
•	Housing and Homelessness	•	Mobility and Transportation
•	Wellbeing and Sa	fety	Climate Action and Sustainable Growth



Safe London for Women, Girls, and Gender-Diverse and Trans People

•



Well-Run City

Environmental, Socio-economic Equity and Governance (ESG) Considerations

Environmental, Socio-economic Equity and Governance Profile for this service:

(please right-click on graphic below to re-arrange priority ordering)

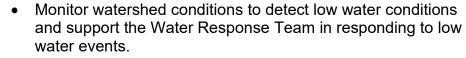
		Socio-economic
Environmental	Governance	Equity

Environmental:

- KCCA's business is closely aligned with a number of action in London's Climate Emergency Action Plan and assists the City of London in increasing resiliency to extreme weather events through the implementation of a science-based integrated watershed approach. Each one of KCCA's programs and services works in collaboration to inform watershed residents about the natural environment in which they live, work and play. Programs and services protect life and property from natural hazards such as flooding and erosion and mitigates the effects of natural hazards including a rapidly changing climate by planting trees, undertaking stewardship works such as wetland and tall grass prairie creation and managing and protecting significant landholdings from invasive species while ensuring these areas are available for both passive and active recreation.
- KCCA ensures that its programs and services are relevant to the user groups it serves by complying with the Conservation Authorities Act and its related regulations, consulting regularly with the community and user groups and working closely with member municipalities.
- KCCA's business case addresses a variety of climate emergency aspects as summarized below:

•

Climate Emergency Aspect/Issue/Impact	KCCA Response
Energy Use and Conservation	 Phasing out gas powered hand-tools and switching to battery powered alternatives Investigating EV use for fleet and researching investment to provide charging units on CA properties Metre readers installed in campgrounds to help campers monitor and reduce energy consumption Continuing pandemic business protocols such as on-line meetings to reduce travel, Continuing and enhancing electronic business practices (paperless accounting) to reduce paper usage and carbon emissions
Carbon Sequestration Potential Natural Heritage loss/disconnection Biodiversity Loss	 KCCA preserves and protects 548 acres of land including (woodlots, in-land lakes, wetlands and significant areas) Manages invasive species on KCCA's own landholdings and provides technical advise and funding for landowners to undertake management plans on their own property. Planting an average of 50,000 trees per year – making KCCA the top planter of all time in the City of London's One Million Tree Challenge. Manages the Elgin Clean Water Program and the Kettle Creek Clean Water Initiative that provide incentives to landowners to undertake stewardship projects on their own lands including wetland creation, tall grass prairie establishment and erosion control. Acquired 63 new acres of land through land donation program from 2022-2023.
Extreme Weather Events Risks/Rising Insurance costs and shifting access to capital requirements.	 Operate a flood forecasting and warning system to ensure that residents and municipalities are aware of potential flood related events in a timely manner. Issues Flood Warning messages and conducts outreach and education on flood forecasting program and safety measures



- Acquire and maintain floodplain mapping and conduct necessary communication initiatives to inform stakeholders and update mapping, Board approved policies, official plans and KCCA's on-line mapping tool.
- Deliver the Authority's permitting responsibilities, ensuring compliance with Ontario Regulation 181/06 and related policies, site inspections, communications with agents and consultants) and appropriate enforcement action.
- Meet the Authority's delegated responsibility to represent the provincial interest in natural hazards (Section 3.1 of the Provincial Policy Statement) providing technical information and advice on land-use planning documents (Official Plans and Zoning By-Law Amendments, Subdivisions, Consents and Minor Variances.

Governance:

- The Conservation Authorities Act and its related regulations guide the programs and services offered by KCCA and holds it accountable to the province and its member municipalities.
- KCCA is bound by the CA Act and Ontario Regulation 686/21 to offer the following programs and services:
 - Risk of Natural Hazards (Planning and Regulation, Flood Forecasting/Warning/Low Water, Dam Operations, Technical Studies)
 - Conservation and Management of CA Lands
 - Provincial Water Quality Monitoring
 - o Drinking Water Source Protection Program
 - General Operating Expenses (Administration, Communications, Information Technology and GIS)
- As a result of Ontario Regulations 686/21 additional programs and services have been added which need to be in place by December 31, 2024, including:

- 1. Conservation Areas Management Plan strategy to guide the management of Conservation Authority owned lands
- 2. Conservation Area Lands Inventory
- 3. Watershed Based Resource Management Strategy
- 4. Ice Management Plan

KCCA has no option but to meet the requirements outlined in the CA Act and Ontario Regulation 686/21. KCCA's programs and services are monitored by KCCA's Board of Directors, which is comprised of representatives from KCCA's seven member municipalities. The Board makes program decisions and allocates funds.

KCCA's Board of Directors meets monthly on the third Wednesday of every month. Board Meetings are fully transparent and documented with agendas, meeting minutes and recordings available on KCCA's web site. Meetings are also streamed live to Facebook. Audited financial statements, budgets, annual reports are also posted to KCCA's web site.

Board of Director's contact information is also publicly available on the Authority's web site.

Socio-economic Equity:

KCCA works toward creating an inclusive work environment respecting ethnic backgrounds, religious beliefs, gender expression, sexual orientation and physical or mental ability.

KCCA is taking actions to address barriers to inclusion in its programs and services including the following:

- AODA compliant web site
- Accessible Administration office, accessible pools at both Dalewood and Lake Whittaker Conservation Area, accessible dock at Lake Whittaker Conservation Area
- Training provided to employees and board members on Equity, Inclusion and Diversity and Truth and Reconciliation
- KCCA maintains 28 km of natural surfaced hiking trails with 19 km, or 67%, open for free access to the public
- ReWild the Family program offers a free weekend of camping and all the associated gear to families that have never camped before due to socio-economic hardship. In 2023, four families participated in the program.
- The Environmental Youth Corps provides a no cost opportunity for any interested youth to participate in local environmental projects by identifying local stewardship projects and participating in implementation.

The following section provides an overview of the key activities the service plans to undertake from 2024 to 2027 to implement the Corporation's 2023 to 2027 Strategic Plan, as well as an overview of the risks and challenges the service is anticipated to experience during this period:

Service Highlights 2024 to 2027

- Continue transition to paperless work environment by digitizing historical records and making more services and resources available on-line.
- Continue to mitigate climate change and the loss of forest cover by pursuing funding opportunities and planting on average 50,000 trees per year throughout the watershed, maintaining status as Reforest London's top tree planter and bolstering wetland cover by undertaking wetland creation projects through the Elgin Clean Water Program and the Kettle Creek Clean Water Initiative with at least 3 hectares of wetland per year.
- As a tributary to Lake Erie, a source of drinking water, KCCA is committed to working collaboratively with a variety of
 agencies to reduce phosphorous loadings by undertaking erosion control projects, tree planting, wetland creation and
 other projects as identified in the Lake Erie Action Plan. Specifically supporting phosphorous mitigation measures within
 rural areas of the City of London in the Kettle Creek watershed through the creation, enhancement and/or restoration of
 wetlands, planting of stream/field buffers, tallgrass prairie plantings, and erosion control projects.
- Continue and enhance environmental education opportunities in the watershed including the Environmental Youth Corps, Carolinian Forest Festival and the St. Thomas Elgin Children's Water Festival.
- Improving access, public safety and improvements to 7 conservation areas and associated 28 km of recreational trails including revamping the Kirk Cousins Management Area, a conservation area in the City of London, by updating the parking lot, trail entrance and undertaking invasive species management.
- KCCA's campgrounds and other fee for service program areas help to support almost 50% of staffing expenses and generate revenue to implement capital asset management plans.
- Continuously improving KCCA's floodplain mapping to ensure that development is directed away from natural hazards and accounts for a changing climate.
- Fulfilling requirements of Ontario Regulation 686/21 by ensuring the following items are completed by December 31, 2024, including: Conservation Areas Management Plan – strategy to guide the management of Conservation Authority owned lands; Conservation Area Lands Inventory; Watershed Based Resource Management Strategy and Ice Management Plan.

Risks and Challenges Anticipated in 2024 to 2027

- KCCA is obligated to deliver all the mandatory programs and services outlined in Ontario Regulation 686/21 by December 31, 2024. This will strain available staffing resources and an additional .5 FTE is required to facilitate backfilling to allow permanent staff to undertake policy updates and meet deliverables.
- Back-filling will be required beyond 2024 to facilitate the ongoing maintenance of Ontario Regulation 686/21
 requirements and other legislative pressures including ongoing floodplain mapping updates and the necessary public
 consultation.
- Use of KCCA's passive recreation facilities continues to increase, taxing staffing levels as well as uncontrollable costs such as proper maintenance and safety measures. While the use of KCCA's passive recreation trails has increased, staffing levels have remained constant.
- Inflationary pressures are being mitigated by staging the implementation of a 2022 Salary and Pay Equity review over five years however, staffing retention, cost of living and succession planning will remain pressures from 2024 2027.
- KCCA's water control infrastructure is aging and must be appropriately accounted for in capital asset management planning.

Other reference information and links:

www.kettlecreekconservation.on.ca

Contact:

Elizabeth VanHooren
General Manager – Secretary Treasurer
519-631-1270 ext. 224

TO: Board of Directors

FROM: Joe Gordon, Elizabeth VanHooren & Jeff Lawrence

Date: September 20, 2023

Subject: Kirk Cousins Management Area Improvements

Recommendation: That the Board approve the Kirk Cousins

Management Area Improvements as presented.



PURPOSE:

To seek approval of the Board of Directors to undertake improvements to the Kirk Cousins Management Area.

SUMMARY:

- Staff have prepared a plan to re-design the entrance and parking of Kirk Cousins Management Area to make the property more inviting and to promote it as a local community destination.
- Funding has been secured to assist with the parking area improvements and invasive species management.
- To accommodate completion of the project staff is recommending closing the property to the public in October and reopening in the spring of 2024.
- A communication plan will be developed for posting to KCCA's web site, social media channels and key user groups.

BACKGROUND:

Staff have developed a proposed improvement plan to re-design the entrance and parking lot of the Kirk Cousins Management Area to make the trail entrance more inviting and improve the trail signage to clearly mark the trail for new users. Kirk Cousins is an underutilized area that with some minor improvements can be promoted as a local community destination.

The proposed plan is designed to improve on the following:

- Maintenance and operation efficiencies to improve esthetics of the property and maintain an entrance that is more inviting to the public;
- Repair existing parking area surfaces and replace barriers;
- Invasive species management; and
- Promote an increase in permissive uses such as hiking, bird watching and picnic areas.

Kirk Cousins Management Area is managed and maintained by KCCA through a collaborative management agreement with Corus Entertainment and the London District Catholic School Board.

Representatives of Corus Entertainment reviewed the proposed plan and are supportive of the improvements which will occur on lands within their ownership.

The attached improvement plan includes reducing the size of the existing parking area to accommodate a picnic or public rest area at the entrance of the property and focus on a single trail entrance. The reduced size of the parking area will maintain approximately 22 parking spaces consistent with parking areas at other KCCA day-use areas.

The proposal includes hiring a contractor to regrade the parking area and cut down an existing perimeter grassed berm which blocks views of the property and is difficult to maintain. The soil material from the berm will be used to create a grassed area over a portion of the existing parking lot for a public rest area.

Existing barriers will be replaced, and new gates added for maintenance equipment access and closing the property to the public during the winter off-season. A new entrance sign and trailhead sign is proposed consistent with other KCCA properties and armourstone seating will be placed below existing and new shade trees.

The 2023 budget allocates \$5,000 for a new trailhead sign and an additional \$5,000 in grant funding was provided by the Trillium Roots Community Fund 2023. The parking area barrier and gates can be completed by staff relying upon existing stock of materials and supplies.

An additional \$7,000 is required to complete the project as proposed to include a new entrance sign and armour stone seating in the rest area. Staff will continue to apply for additional grant funding to complete these items or will defer these purchases for consideration in the 2024-2027 budget or future funding proposals.

Staff were also successful in receiving funding from the Invasive Species Action Fund to control invasive plant and shrub species at Kirk Cousins and develop an invasive species management plan for the area moving forward. Target Area 1 is immediately north and west of the parking area and was traditionally a grass habitat that has slowly been taken over by invasive Knapweed and Autumn Olive. Work began this summer with the removal of knapweed primarily through wholesale mowing.

This fall/winter staff will continue invasive work by taking measures to control invasive Autumn Olive. This species requires physical removal by individual stem followed by herbicide application. Staff plan to work with student volunteers from Regina Mundi Catholic College to undertake this work. Mowing and herbicide application will occur over the next several years as required until the seed bank for these species is depleted.

The long-term goal for Target Area 1 is to return the areas immediately north and west of the parking lot to tall grass prairie and remove the identified invasive species from the area adjacent the CN tracks along the east side of the property while preserving established native tree specimens.

Target Area 2, immediately south of the existing mature woodland, is heavily infested with European Buckthorn, Autumn Olive and Spotted Knapweed. Staff will be including targeted plans to tackle these species in the long-term management plan. Management in this area may include planting additional native trees and shrubs as appropriate.

As the parking lot will be an active work zone and invasive species management will be ongoing throughout the fall season, staff are proposing to close the Kirk Cousins Management Area to the public beginning October 1 for the remainder of the season, re-opening the area in Spring 2024.

Staff will prepare a appropriate communication about the closure and works for posting to KCCA's web site, social media channels and shared with various user groups.

RECOMMENDATION:

That the Board of Directors approve the Kirk Cousins Management Area Improvements as presented.





KIRK COUSINS MANAGEMENT AREA



Page 70 of 72

TO: Board of Directors

FROM: Joe Gordon

Date: September 20, 2023

Subject: September 2023 Planning and Regulations Activity Report



RECOMMENDATION:

That the September 2023 Planning and Regulations Activity Report be received.

REPORT SUMMARY

The following is a summary of KCCA's Plan Input and Review responses and Section 28 permits issued by staff during the period of August 11 to September 14, 2023.

Plan Input and Review:

KCCA#	File No.	Municipality	Application Type	Support	Conditions
2350	E60-23	Southwold	Consent	Yes	None
2351	B05/23 Plan 43 Pt Lots 6 & 7	St.Thomas	Consent	Yes	None
2352	A09/23 9520 Sunset Dr	St.Thomas	Minor Variance	Yes	None
2353	B04/23 10 Ontario Rd	St.Thomas	Consent	Yes	None
2354	B06/23 9520 Sunset Dr	St.Thomas	Consent	Yes	None
2355	COA 16-23 300 Colborne St	Central Elgin	Minor Variance	Yes	Permit Req.
2356	COA 19-23 294 Hill St	Central Elgin	Minor Variance	Yes	Permit Req.
2357	COA 20-23 16 Compas Trail	Central Elgin	Minor Variance	Yes	None
2358	E67-23 39564 Fingal Line	Southwold	Consent	Yes	None
2359	42264 Ron McNeil	Central Elgin	Zoning By-Law Amendment	Yes	None
2360	42496 Water Line	Central Elgin	Zoning By-Law Amendment	Yes	None

Section 28 Permit(s):

<u>5000000120110110(3).</u>				
Permit No.	Address	Municipality	Description	
P23-039	41819 Fulton Bridge Line	Southwold	Construction of a new residential dwelling to replace an existing dwelling. The location of the new dwelling is adjacent to a ravine slope and is setback a distance consistent with the provincial technical guide in absence of engineering.	