APPENDIX 10

MINUTES OF NVCA BOARD ON MAY 28, 2021

(CONTAINING ENGINEER'S POWERPOINT PRESENTATION TO NVCA BOARD, NVCA STAFF REPORT TO BOARD, AND BOARD'S RESOLUTION

Engineer's reading notes with PowerPoint are also included.

SWALEY DRAIN

(Ponded water in lower end of Swaley Drain)

PRESENTATION
For

MAY 28, 2021

NVCA Board Meeting

File No. 16-387

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS & PLANNERS
85 McIntyre Drive
Kitchener, ON N2R 1H6
Tel: 519-748-1199
Fax: 519-748-6100

INTRODUCTION

- Thank you for the opportunity to make this presentation on the Swaley Drain.
- My name is Kenn Smart and I am the Engineer retained by the Township of Springwater to prepare a Report pursuant to the Drainage Act to bring the lower portions of the Swaley Drain back to an acceptable state of repair.
- I appeared before this Board back in February 2018 when we were just starting on our engineering work. I presented then the work I believed necessary, and the Board subsequently directed NVCA Staff to work with us on this project.
- We do appreciate, and thank, both the Board and Staff for work since 2018.
- Substantial work and discussions have occurred since 2018 and the project recommendations have evolved to the betterment of all in our opinion.
- We are here today to ask for the Board's continued direction to Staff to work with us as we near completion of the first phase of our engineering (the "Preliminary Report").
- Ultimately after all engineering work and reporting is done, a formal Permit Application will be made to NVCA.
- My presentation as forwarded is lengthy but I will condense such so I can limit my presentation to 10 minutes±. I will be asking that certain slides only be displayed and I will then try to describe orally what are on the other pages of this presentation as we look at a specific slide.
- Much of this submitted Power Point contains background material and tables that are technical in nature. These plus the appendices will be referred to only if I am requested to do so.

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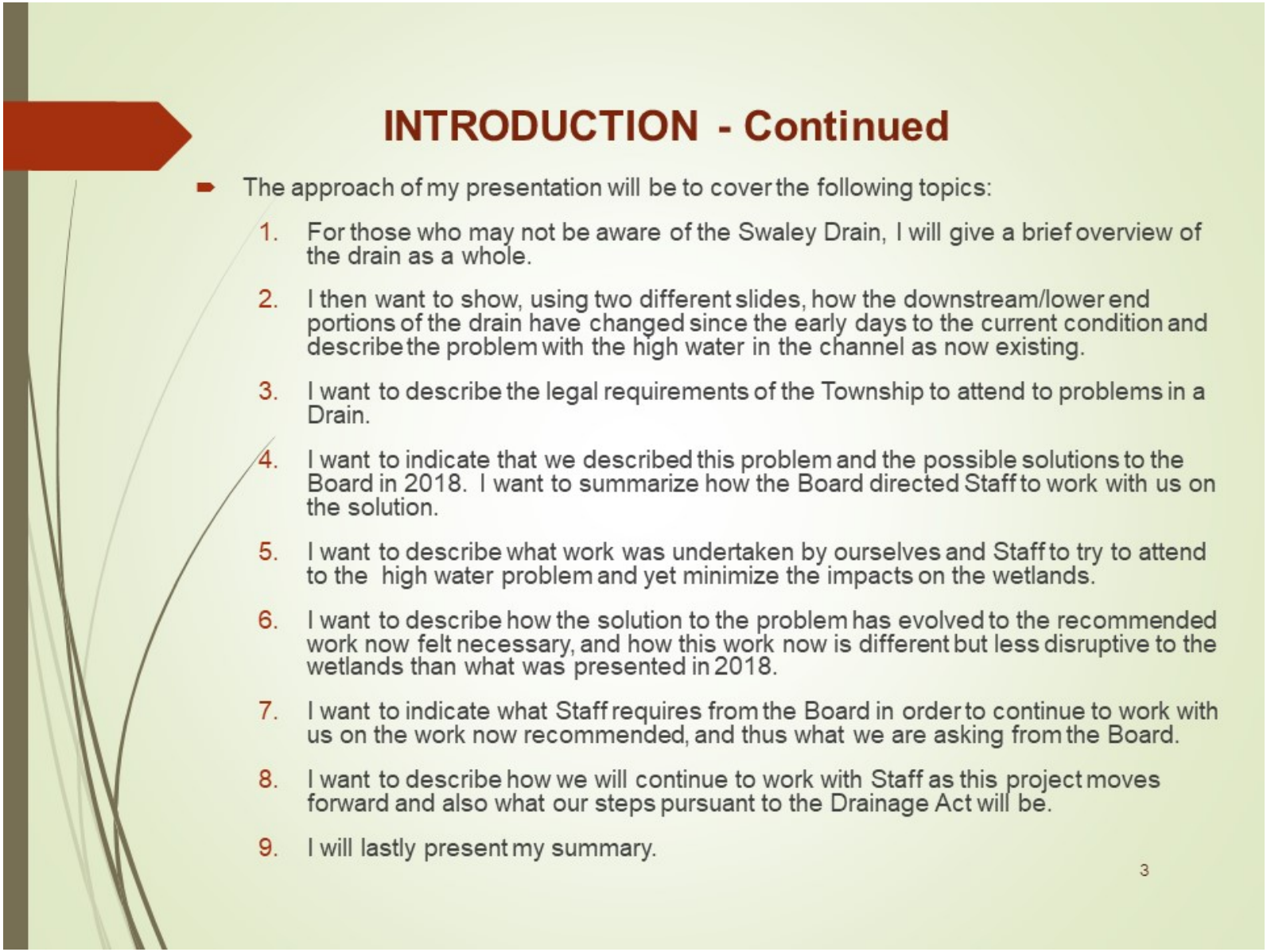
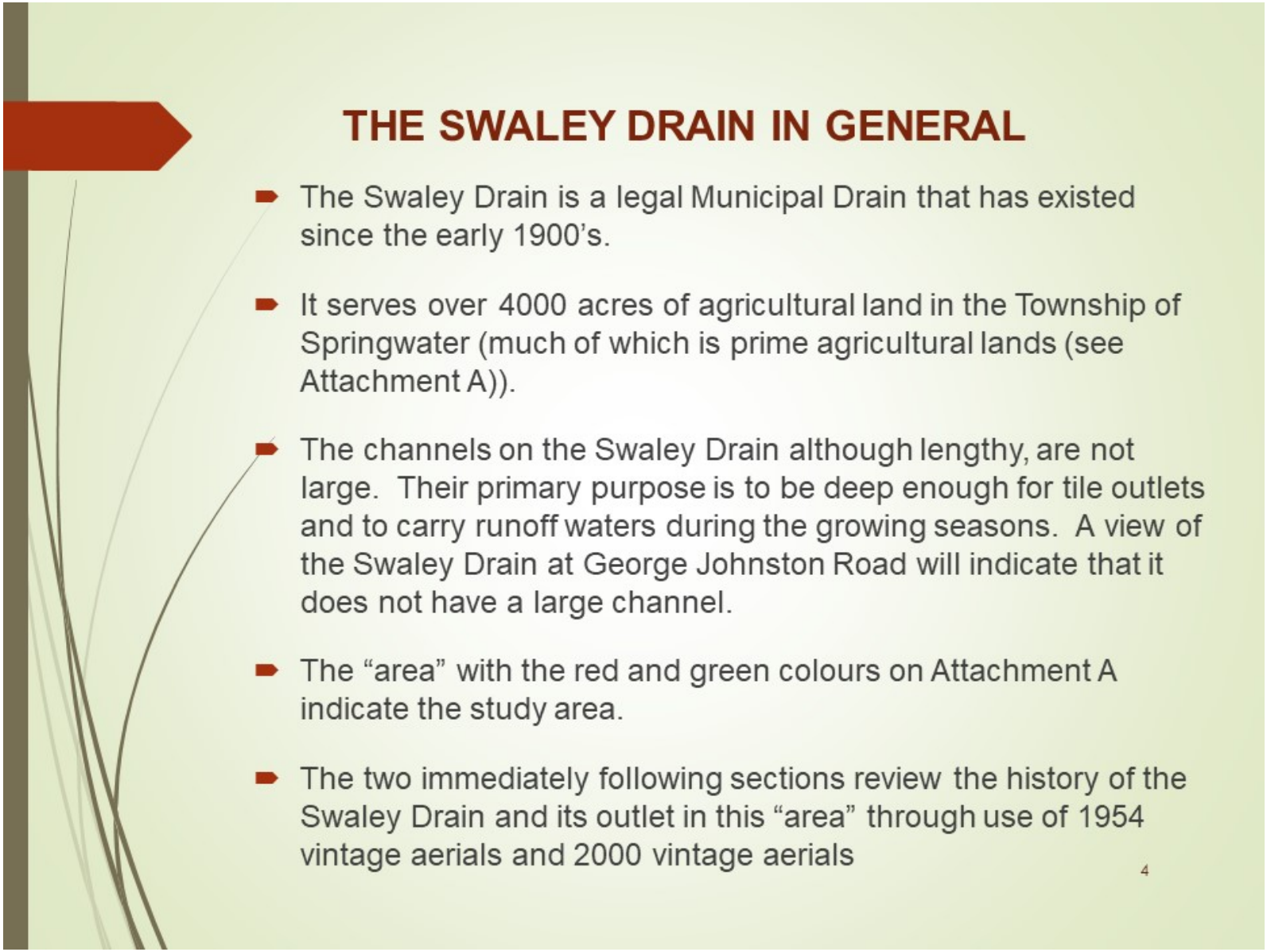
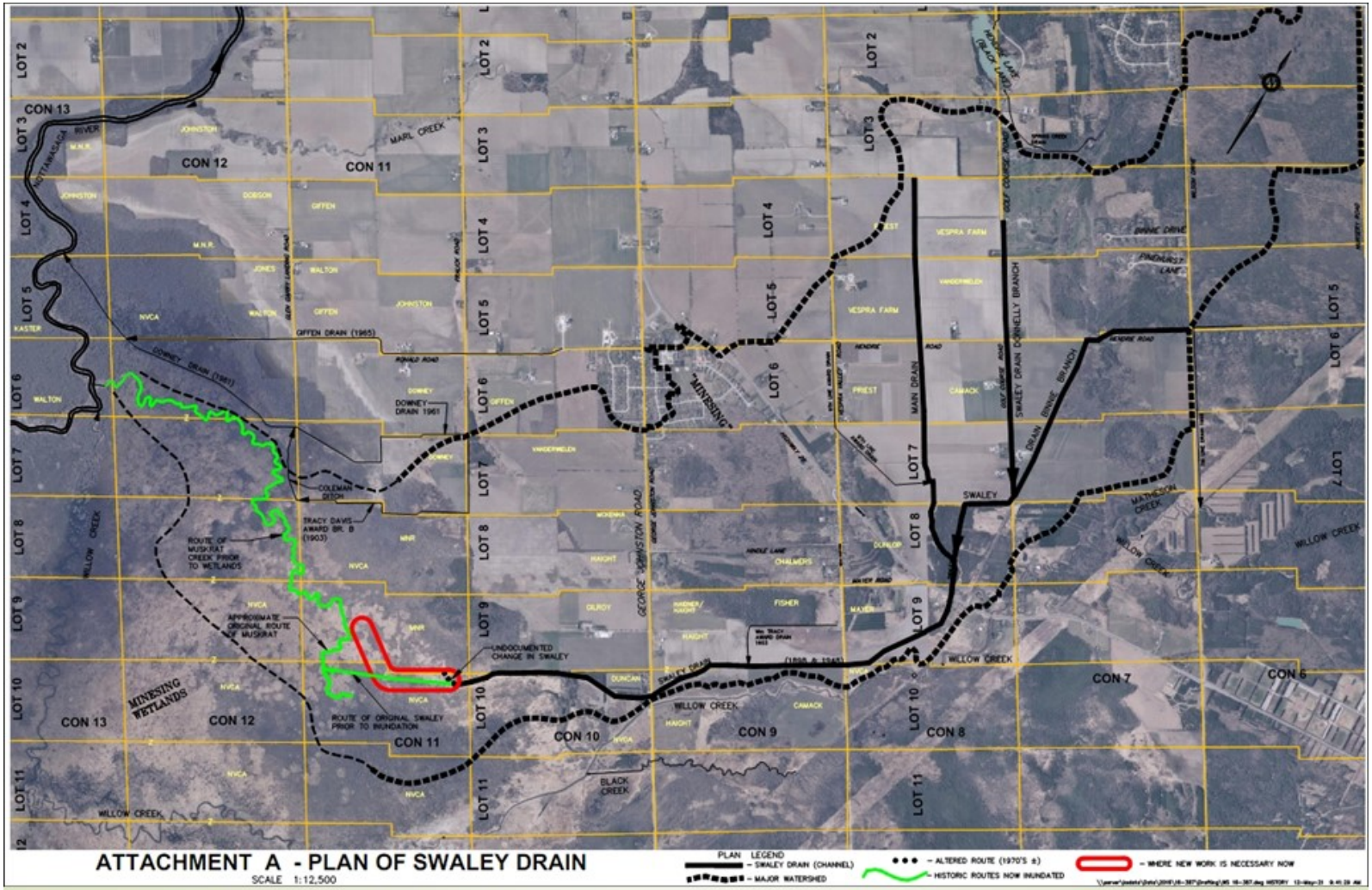

INTRODUCTION - Continued
The approach of my presentation will be to cover the following topics:
1. For those who may not be aware of the Swaley Drain, I will give a brief overview of the drain as a whole.
2. I then want to show, using two different slides, how the downstream/lower end portions of the drain have changed since the early days to the current condition and describe the problem with the high water in the channel as now existing.
3. I want to describe the legal requirements of the Township to attend to problems in a Drain.
4. I want to indicate that we described this problem and the possible solutions to the Board in 2018. I want to summarize how the Board directed Staff to work with us on the solution.
5. I want to describe what work was undertaken by ourselves and Staff to try to attend to the high water problem and yet minimize the impacts on the wetlands.
6. I want to describe how the solution to the problem has evolved to the recommended work now felt necessary, and how this work now is different but less disruptive to the wetlands than what was presented in 2018.
7. I want to indicate what Staff requires from the Board in order to continue to work with us on the work now recommended, and thus what we are asking from the Board.
8. I want to describe how we will continue to work with Staff as this project moves forward and also what our steps pursuant to the Drainage Act will be.
9. I will lastly present my summary.
3


THE SWALEY DRAIN IN GENERAL
The Swaley Drain is a legal Municipal Drain that has existed since the early 1900's.
It serves over 4000 acres of agricultural land in the Township of Springwater (much of which is prime agricultural lands (see Attachment A)).
The channels on the Swaley Drain although lengthy, are not large. Their primary purpose is to be deep enough for tile outlets and to carry runoff waters during the growing seasons. A view of the Swaley Drain at George Johnston Road will indicate that it does not have a large channel.
The "area" with the red and green colours on Attachment A indicate the study area.
The two immediately following sections review the history of the Swaley Drain and its outlet in this "area" through use of 1954 vintage aerials and 2000 vintage aerials
4



ATTACHMENT A
WATERSHED PLAN OF THE SWALEY DRAIN

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REVIEW OF SWALEY DRAIN (LOWER END) HISTORY THROUGH: a) USE OF A 1954 AERIAL (ATTACHMENT B)

- The 1954 aerial is the oldest aerial KSAL have been able to secure to date.
- It does show the subject area from the Nottawasaga River to George Johnston Road. (The hard copy of this photo presents all data more distinctly.)
- Note should be made that the aerial shows that in 1954:
  a) The Muskrat Creek was still very evident;
  b) The 500' (30 rod) long cut made to the River in 1901 for the Muskrat is still visible (it has been manually highlighted here);
  c) The Government Ditch excavated in 1930 (and which became the basis of the Downey Drain in 1961) is evident (but in poor repair);
  d) The Muskrat flood plain is still well wooded;
  e) The Swaley Drain is still existent in its original route for 60% of the way across Lot 10, Concession 11. In 1901 it was 80% of the way across the lot. (Its original outlet would have been 900 to 1000m west of where it turns into Lot 9 now.)

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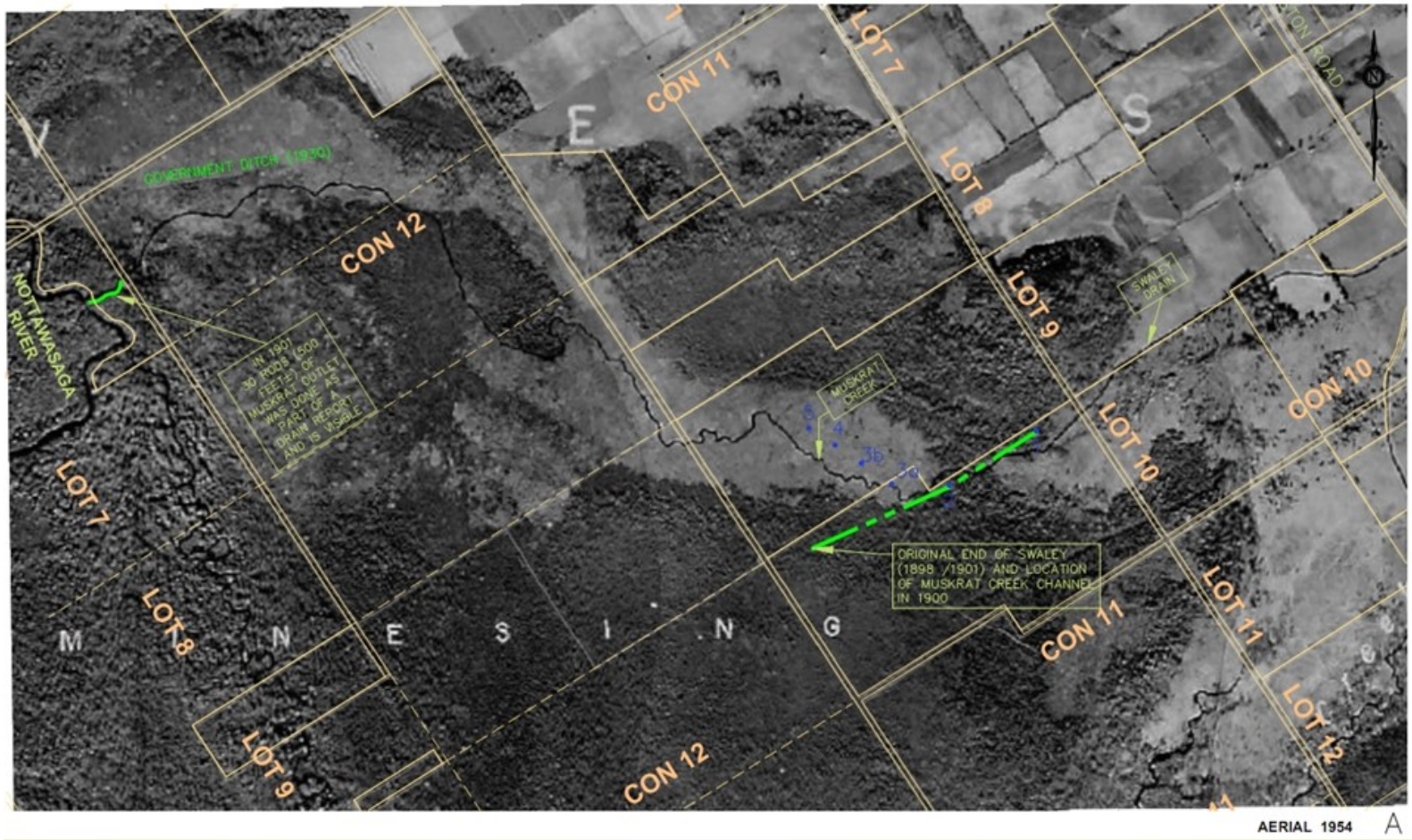

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ATTACHMENT B
1954 VINTAGE AERIAL TO SHOW LOWER PORTION OF SWALEY DRAIN

REVIEW OF SWALEY DRAIN (LOWER END) HISTORY THROUGH: a) USE OF A 1954 AERIAL Continued

- All properties in this aerial were believed to be privately owned. The Swaley Drain and its outlet as shown allowed the Drain to function as a Drain should.
- Note should be made of Points 1 to 5 on this and the following aerials. It is between these points where the 950m long repair/improvement project is now required.

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REVIEW OF SWALEY DRAIN (LOWER END) HISTORY THROUGH: b) USE OF A 2020 AERIAL (ATTACHMENT C)

- It is evident that since 1954:
  - a) The route of the Muskrat Creek and the lower end of the Swaley Drain are no longer visible due to the developed flooding/wetlands along their route. Indeed there is now 600 to 1200mm of wetlands water in the area where the lower end of the Drain and the Muskrat Creek once existed.
  - b) Much of the woodland cover in the Muskrat floodplain has been lost (as has elsewhere been documented).
  - c) The Swaley route has been shortened substantially and has been diverted into Lot 9 (without the basis of an authorizing Engineer's Report). The Swaley Drain channel where it now terminates sits with 900mm of water. All the tile drain systems discharging into the channel upstream to Highway 26 are submerged now year round.
  - d) The Government Ditch has been substantially improved as the Downey Drain.
- Points 1 to 5 extend over the route of the 950m Repair/Improvement Project now proposed.
- Point 5 which is the downstream (westerly) termination of the 950m long Project is the same location Burnside Engineering in a 2001 Drainage Superintendent report said the Swaley Drain repair work should continue to/commence from.

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ATTACHMENT C
2020 VINTAGE AERIAL TO SHOW CURRENT CONDITIONS IN THE LOWER PART OF THE SWALEY DRAIN

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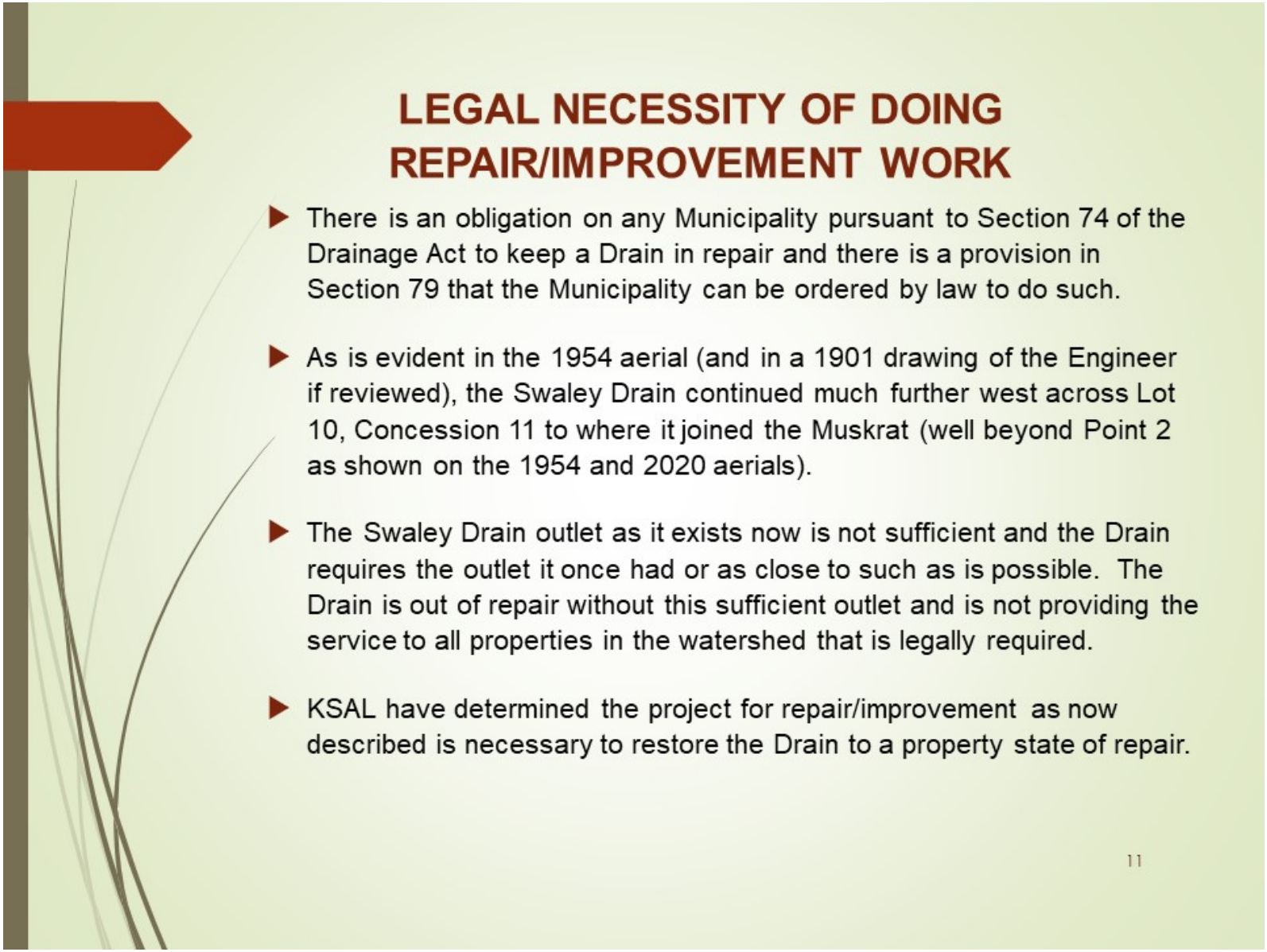
LEGAL NECESSITY OF DOING REPAIR/IMPROVEMENT WORK
There is an obligation on any Municipality pursuant to Section 74 of the Drainage Act to keep a Drain in repair and there is a provision in Section 79 that the Municipality can be ordered by law to do such.
As is evident in the 1954 aerial (and in a 1901 drawing of the Engineer if reviewed), the Swaley Drain continued much further west across Lot 10, Concession 11 to where it joined the Muskrat (well beyond Point 2 as shown on the 1954 and 2020 aerials).
The Swaley Drain outlet as it exists now is not sufficient and the Drain requires the outlet it once had or as close to such as is possible. The Drain is out of repair without this sufficient outlet and is not providing the service to all properties in the watershed that is legally required.
KSAL have determined the project for repair/improvement as now described is necessary to restore the Drain to a property state of repair.
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LEGAL NECESSITY OF DOING WORK - Continued

- KSAL's opinion is that if a legal review was necessary:
  - of the Section 78 initiation of this project;
  - of the history of the Swaley Drain;
  - of the history of the development of the wetlands;
  - of the current disrepair of the Swaley Drain; and
  - of the efforts to attend to works of repair with consideration of the impact on the wetlands that have developed,

the project would be legally ordered to proceed as proposed.

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COMPARISON OF ANTICIPATED WORK DESCRIBED IN 2018 TO WORK PROPOSED NOW in 2021

- By further use of a 2020 vintage aerial, KSAL have highlighted in "blue" the work discussed in 2018 and in "red" the work proposed now (see Attachment D).
- As is evident, the 2018 work* envisaged would have involved:

  a) Either 500m± of work to the River, or 500m± of work to the Downey Drain (at the Muskrat end).

  b) 300m± of work downstream of the current Swaley Drain channel either by following its historic route or by extending northwesterly on the diagonal route created sometime after 1954.

  c) In 2018 KSAL anticipated the work could be done by an excavator sitting on "mats", excavating a channel in the shallow wetlands on one side of the mats and by disposing of the materials in the wetlands on the other side of the mats.

* *a) The work presented to the Board in Feb. 2018 was based on elevations secured primarily for water levels and obtained by either drone or GPS work. Firm ground/wetlands bottom elevations were not sufficiently obtained until 2019, at which time greater depths of wetland waters were found.*

b) At various meetings with the public and NVCA staff in 2017 and earlier, and as pointed out in the March 2018 Scoping Report, a longer option that was once investigated and considered is also shown on Attachment F.

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Blue is 2018 Proposals
(2 options at each end)
Red is 2021 Proposed Work
(either the 950m or 750m lengths)

ATTACHMENT D
2018 AND 2021 PROPOSALS

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COMPARISON OF ANTICIPATED WORK DESCRIBED IN 2018 TO WORK PROPOSED NOW– Cont'd

d) The width of disturbance in the wetlands was in 2018 suggested at 2 to 3m for the channel and a further 4 to 5m would have been necessary for the mats on which the excavator would sit. Another 3 to 4m width would be necessary to dispose of the materials.

e) The depth necessary for the excavation was then anticipated to be 750mm±.

f) If the work joined to the River along a new "cut" north of the 1901 "cut", a much greater width through the high wooded grounds adjacent to the River would have been necessary. (Ground elevations were able to be secured in the woodlands in 2018.)

- The work shown in 2018 was desired to lower the wetlands levels by 300mm throughout by doing the work at the River/Muskrat end and then by a further 300mm at the Swaley end by doing the Swaley end work.
- The area of the wetlands where the 300mm lowering could occur could be 800 ha± and in the upper 100 ha± of these 800 hectares, a further lowering of up to a further 300mm would/could occur as per the work described in 2018.

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COMPARISON OF ANTICIPATED WORK DESCRIBED IN 2018 TO WORK PROPOSED NOW– Cont'd

- When this proposed work was presented to the Board in 2018, the Board directed Staff to work with us.
- Staff followed up with their April 27, 2018 Report (See Appendix A hereto) that outlined the data to be submitted prior to NVCA's final approval through issuance of a Permit.
- Since 2018, one of the main requests of Staff has been addressed by the completion of the Natural Environment Report.
- The NER concludes that if its recommendations are implemented, there will be a low likelihood of negative impacts on significant heritage features and that any negative impacts on the natural environment can be acceptably minimized
- Through incorporation of the NER recommendations and updated survey work in 2019, the project has evolved to the betterment of all.

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COMPARISON OF ANTICIPATED WORK DESCRIBED IN 2018 TO WORK PROPOSED NOW– Cont'd

- The work as now proposed, and as shown in red on Attachment D will involve:

a) A 6m width of grass removal in the wetlands over a length of 950m at the Swaley end only. (The wetlands water depth varies from 600mm to 1100mm in this length.)

b) A 6m± wide channel to a depth of 500mm maximum would be excavated at the base of the wetland waters over the 950m length except that over the upper 175m of length it would be necessary to provide greater depth to launch the barge and to ensure there was 800mm± of water for the barge when it returns to its start point. This overdigging has been described as a pool area, an area that could provide habitat diversity, and an area for any transported sediments to collect in. (Overdigging of the pool area by an additional 300mm could provide even a deeper pool area.)

c) The excavated materials would be cast on either side of the barge path in a width of 3 to 5m.

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COMPARISON OF ANTICIPATED WORK DESCRIBED IN 2018 TO WORK PROPOSED NOW– Cont'd

d) Work at the River/Muskrat end has now been deleted.

e) This work would result in lowering of wetlands waters in a much reduced area (100 ha±) and such would actually be a tapered lowering in these 100 ha from 0mm at the start of work to 450mm± at the existing Swaley end.

f) This aerial also shows the 950m of work could be reduced to 750m if the diagonal route were followed. However, this diagonal route would not be along the historic route and would pass through an area in part once wooded.

- Next included is a "table" to show the "numbers" comparison of the primary KSAL projects presented over the past 3 years and the impacts on the wetlands. This will show the continued attempt to reduce wetlands impacts. Column 2 in this table is the work presented to the Board in 2018 and Column 5 is the work proposed and presented now. Columns 3 and 4 describe other iterations considered between 2018 and 2021.

- How/why the evolution of KSAL's recommendations occurred from 2018 to the present are described in Appendix C to this presentation.

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TABLE TO SHOW A "NUMBERS" COMPARISON OF THE PRIMARY PROJECTS PRESENTED BY KSAL AND THE IMPACTS

Column 1	Column 2 2018	Column 3 During the period of the NER Preparation	Column 4 During the latter part of the NER Review Period	Column 5 Now (after further input from a barge contractor)
Total length of channel/wetlands work	800m± (500m at River/Muskrat end and 300m± at Swaley end) (and even then KSAL said further work would be necessary to confirm this length)	950m± at Swaley end plus 300 to 400m± at River/Downey/ Muskrat end)	950m± (750m± if on diagonal) at Swaley end. No River end work.	950m± (750m± if on the diagonal) at Swaley end. No River end work.
Width of wetlands grass disturbance by channel and by excavation methods*	6 to 8m (More in wooded area by River)	10m Swaley end, 6m River end	10m Swaley end only	6m Swaley end only

** Disposal of the excavated material, which will be a "soupy" mixture of water, topsoils and wetland grasses, and perhaps some sediments would be in amongst adjacent wetland grasses. This mixture would settle through the wetland waters quickly and disturbance of these adjacent wetland grasses would be temporary. The widths for disposal are therefore not included in the channel excavation widths for any project.*

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TABLE TO SHOW A "NUMBERS" COMPARISON OF THE PRIMARY PROJECTS PRESENTED BY KSAL AND THE IMPACTS - Continued

Column 1	Column 2 2018	Column 3 During the period of the NER Preparation	Column 4 During the latter part of the NER Review Period	Column 5 Now (after further input from a barge contractor)
Channel dimensions at base of wetlands	2 to 3m with a 750mm± depth of anticipated excavation	Swaley End – 6m wide, 500mm deep except at barge launching area where bottom would be 10m wide and channel depth would be 500 to 900mm with no deeper pool (and 300mm more with a deeper pool River End – 3 to 4m parabolic width, 500mm depth	Swaley End Only – 6m wide, 500mm deep except at barge launching area where bottom would be 10m wide and channel depth would be 500 to 900mm with no deeper pool (and 300mm more with a deeper pool).	6m with a 500mm depth throughout except that over 175m the depth would gradually increase from 500 to 800mm with no deeper pool (and 300mm more with a deeper pool).
Total visible area of wetlands grass removal to accommodate the channel and the excavator	800m long x 6 to 8m wide = 4800 to 6400m²	950 x 10 = 9500m² (7500m² if along diagonal) at Swaley end, and 300 to 400mm x 6m = 1800m² to 2400m² at River end.	950 x 10 = 9500m² (7500m² if along diagonal) at Swaley end	950 x 6 = 5700mm² (4500m² if on the diagonal)

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TABLE TO SHOW A "NUMBERS" COMPARISON OF THE PRIMARY PROJECTS PRESENTED BY KSAL AND THE IMPACTS - Continued

Column 1	Column 2 2018	Column 3 During the period of the NER Preparation	Column 4 During the latter part of the NER Review Period	Column 5 Now (after further input from a barge contractor)
Area of wetlands subject to lowering	800± ha by 300mm with 100 ha of this having up to another 300mm (total of 600mm lowering at Swaley end)	800± ha by 300mm with 100 ha of this having up to another 300mm (total of 600mm lowering at Swaley end)	100 ha with a lowering to taper from 0 to 450mm	100 ha with a lowering to taper from 0 to 450mm
Impact on Wetland Features (as per the NER)	Higher potential of negative impact at River end and by inference lower potential at Swaley end	Higher potential of negative impact at River end and by inference lower potential at Swaley end	Lower potential of negative impacts at Swaley end	Lower potential of negative impacts at Swaley end
Expected Maintenance Frequency	15 years (as stated at the time based on a narrower channel)	15 years (as stated at the time based on a narrower channel)	40 years (based on a wider channel and more work to remove the plant growing medium)	Perhaps a bit less than 40 years due to a slightly narrower channel and closer spoil deposition (35 years?)

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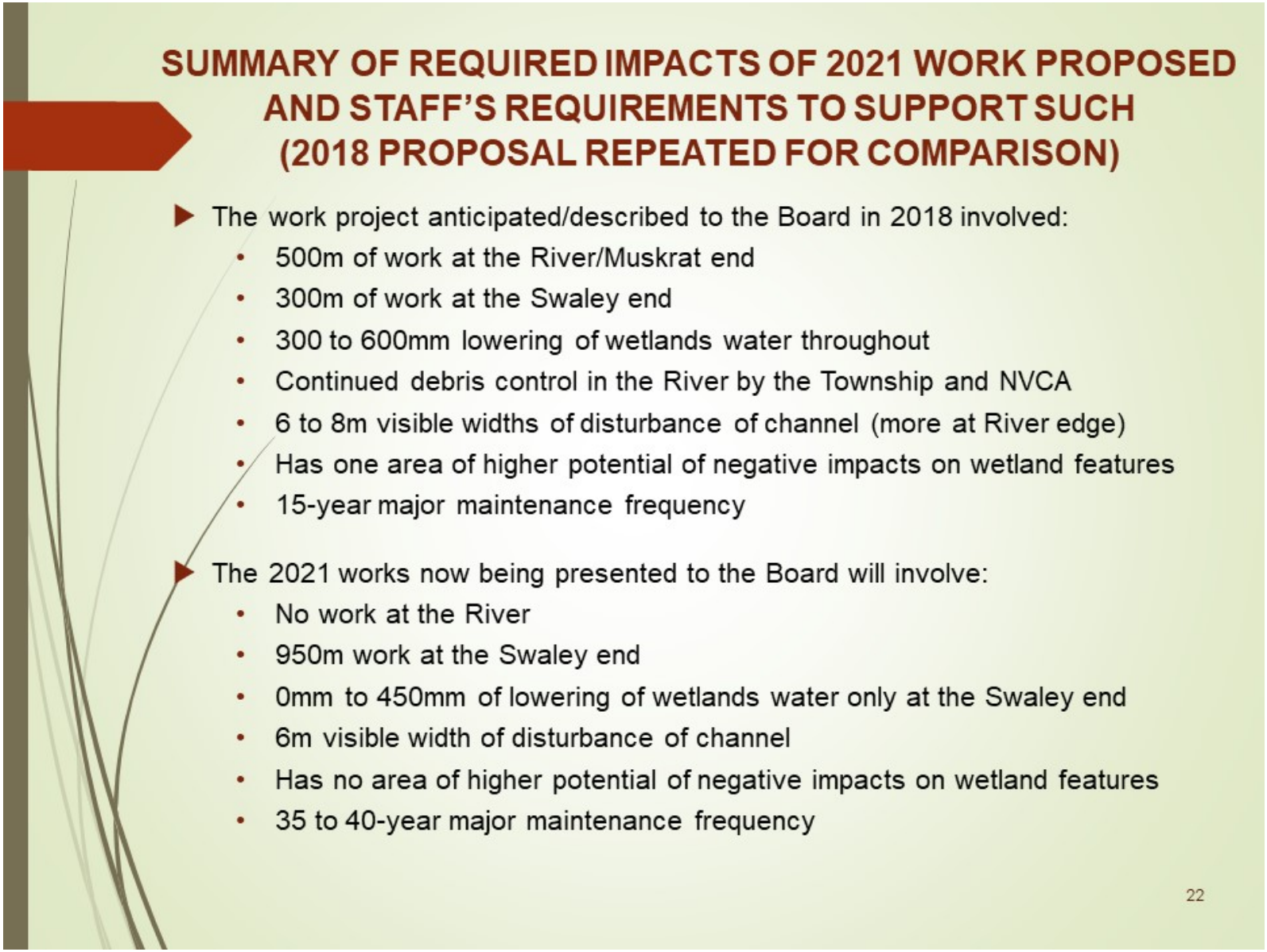
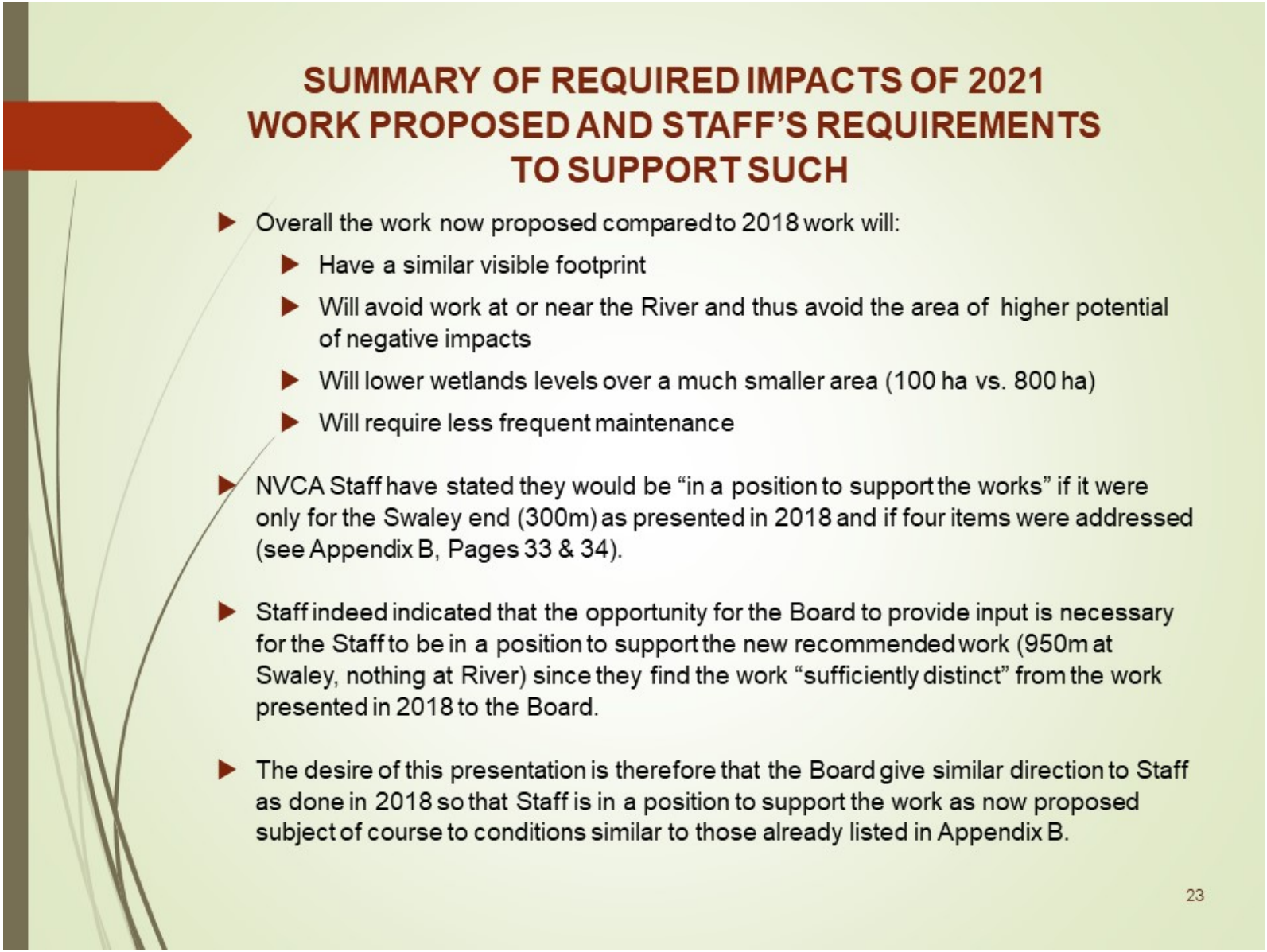

SUMMARY OF REQUIRED IMPACTS OF 2021 WORK PROPOSED AND STAFF'S REQUIREMENTS TO SUPPORT SUCH (2018 PROPOSAL REPEATED FOR COMPARISON)
The work project anticipated/described to the Board in 2018 involved:
500m of work at the River/Muskrat end
300m of work at the Swaley end
300 to 600mm lowering of wetlands water throughout
Continued debris control in the River by the Township and NVCA
6 to 8m visible widths of disturbance of channel (more at River edge)
Has one area of higher potential of negative impacts on wetland features
15-year major maintenance frequency
The 2021 works now being presented to the Board will involve:
No work at the River
950m work at the Swaley end
0mm to 450mm of lowering of wetlands water only at the Swaley end
6m visible width of disturbance of channel
Has no area of higher potential of negative impacts on wetland features
35 to 40-year major maintenance frequency
22


SUMMARY OF REQUIRED IMPACTS OF 2021 WORK PROPOSED AND STAFF'S REQUIREMENTS TO SUPPORT SUCH
Overall the work now proposed compared to 2018 work will:
Have a similar visible footprint
Will avoid work at or near the River and thus avoid the area of higher potential of negative impacts
Will lower wetlands levels over a much smaller area (100 ha vs. 800 ha)
Will require less frequent maintenance
NVCA Staff have stated they would be "in a position to support the works" if it were only for the Swaley end (300m) as presented in 2018 and if four items were addressed (see Appendix B, Pages 33 & 34).
Staff indeed indicated that the opportunity for the Board to provide input is necessary for the Staff to be in a position to support the new recommended work (950m at Swaley, nothing at River) since they find the work "sufficiently distinct" from the work presented in 2018 to the Board.
The desire of this presentation is therefore that the Board give similar direction to Staff as done in 2018 so that Staff is in a position to support the work as now proposed subject of course to conditions similar to those already listed in Appendix B.
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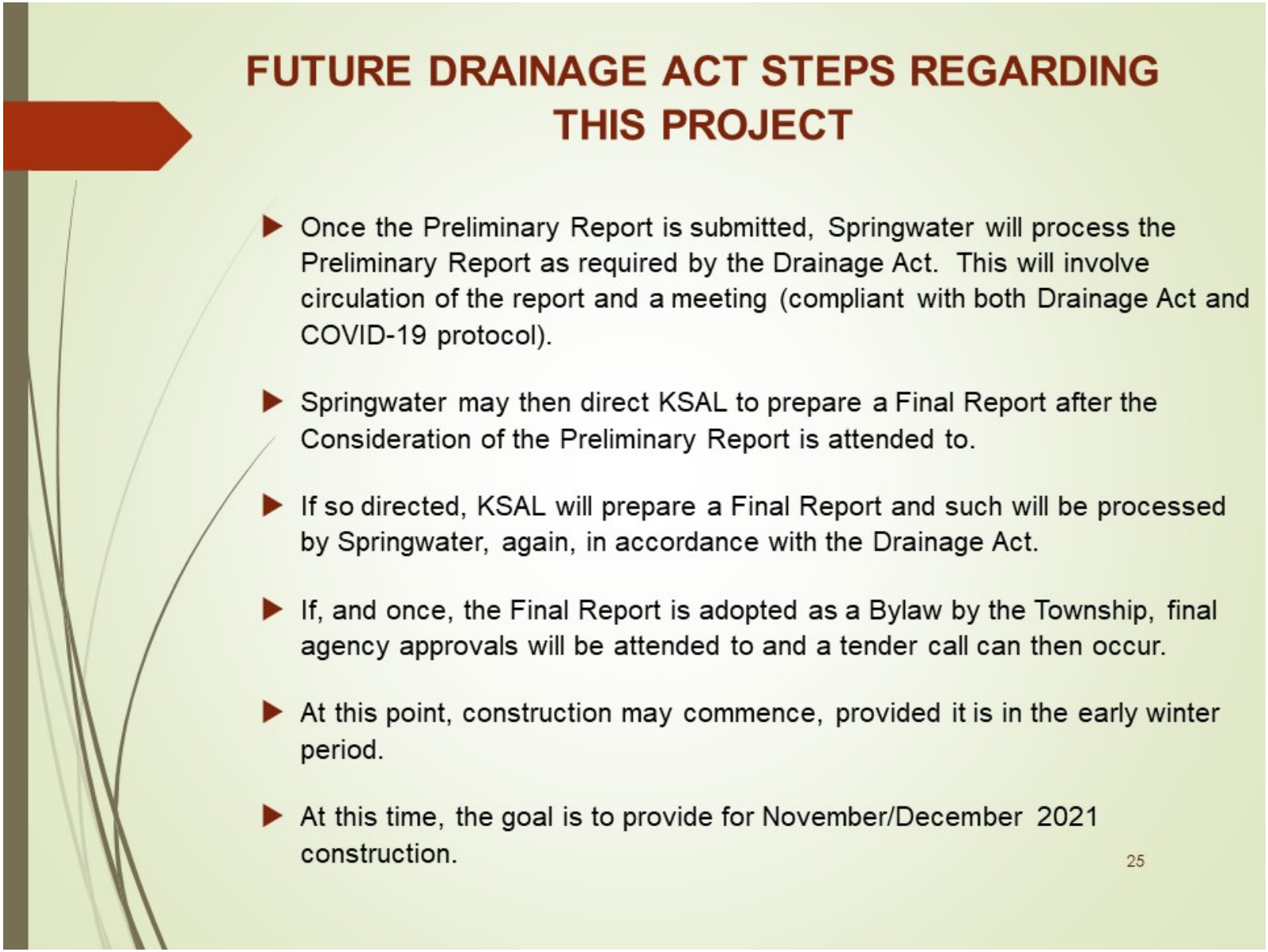
FUTURE STEPS WITH NVCA GOING FORWARD
KSAL will continue to dialogue with Staff after this Presentation.
RiverStone will dialogue with NVCA staff and review and address any new data and prepare an addendum to the NER if required.*
RiverStone will pursue dialogue with MECP and DFO for the new defined project.*
Re-contacts will be made with affected landowners including MNRF*
KSAL will continue to finalize the Preliminary Report which is now in draft condition (all past, existing and new input from agencies and landowners will be considered) and shared with NVCA.
* Conditions as set out in Staff reports (see Appendix B)
24


FUTURE DRAINAGE ACT STEPS REGARDING THIS PROJECT
Once the Preliminary Report is submitted, Springwater will process the Preliminary Report as required by the Drainage Act. This will involve circulation of the report and a meeting (compliant with both Drainage Act and COVID-19 protocol).
Springwater may then direct KSAL to prepare a Final Report after the Consideration of the Preliminary Report is attended to.
If so directed, KSAL will prepare a Final Report and such will be processed by Springwater, again, in accordance with the Drainage Act.
If, and once, the Final Report is adopted as a Bylaw by the Township, final agency approvals will be attended to and a tender call can then occur.
At this point, construction may commence, provided it is in the early winter period.
At this time, the goal is to provide for November/December 2021 construction.
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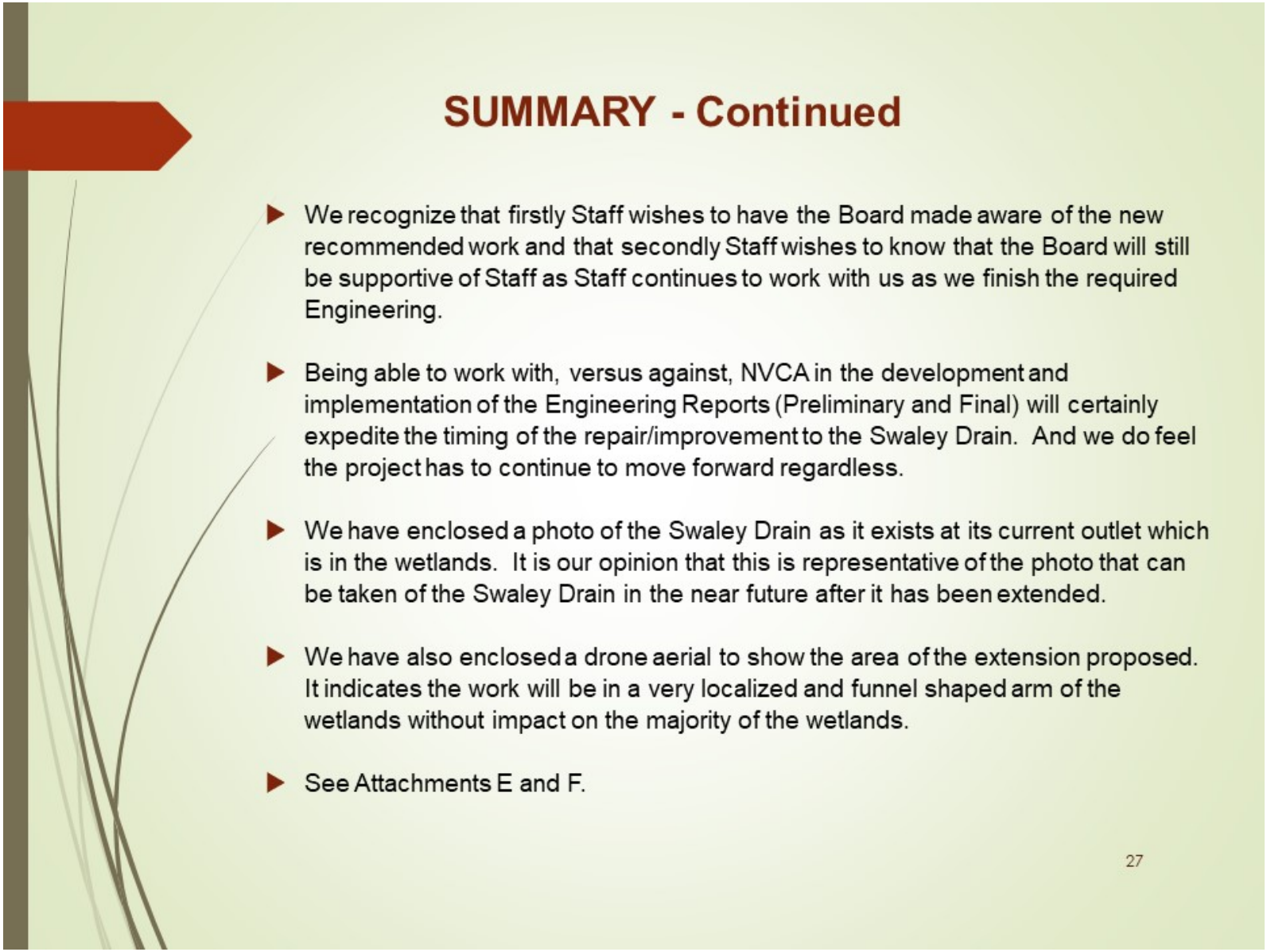
SUMMARY

- We appreciate the direction the Board gave Staff in 2018 to work with us on this project and we appreciate Staff's efforts to work with us since 2018.
- We feel we have addressed the 2018 requirements of Staff as much as we can to date and we will continue to address remaining requirements. This presentation and appendices certainly demonstrate the efforts we have made to work with NVCA.
- KSAL and the Township (together – "we") have arrived at the conclusion that the repair/improvement of the Swaley Drain is legally and physically required, and that the necessary Engineering Reports should be prepared for construction of such work.
- We know our recommended work differs from the work in 2018 but we believe the new work (2021) will have less impacts on the wetlands than what would be associated with the work presented in 2018 if it were implemented.

26


SUMMARY - Continued
We recognize that firstly Staff wishes to have the Board made aware of the new recommended work and that secondly Staff wishes to know that the Board will still be supportive of Staff as Staff continues to work with us as we finish the required Engineering.
Being able to work with, versus against, NVCA in the development and implementation of the Engineering Reports (Preliminary and Final) will certainly expedite the timing of the repair/improvement to the Swaley Drain. And we do feel the project has to continue to move forward regardless.
We have enclosed a photo of the Swaley Drain as it exists at its current outlet which is in the wetlands. It is our opinion that this is representative of the photo that can be taken of the Swaley Drain in the near future after it has been extended.
We have also enclosed a drone aerial to show the area of the extension proposed. It indicates the work will be in a very localized and funnel shaped arm of the wetlands without impact on the majority of the wetlands.
See Attachments E and F.
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ATTACHMENT E
SWALEY DRAIN – EXISTING END OF DRAIN

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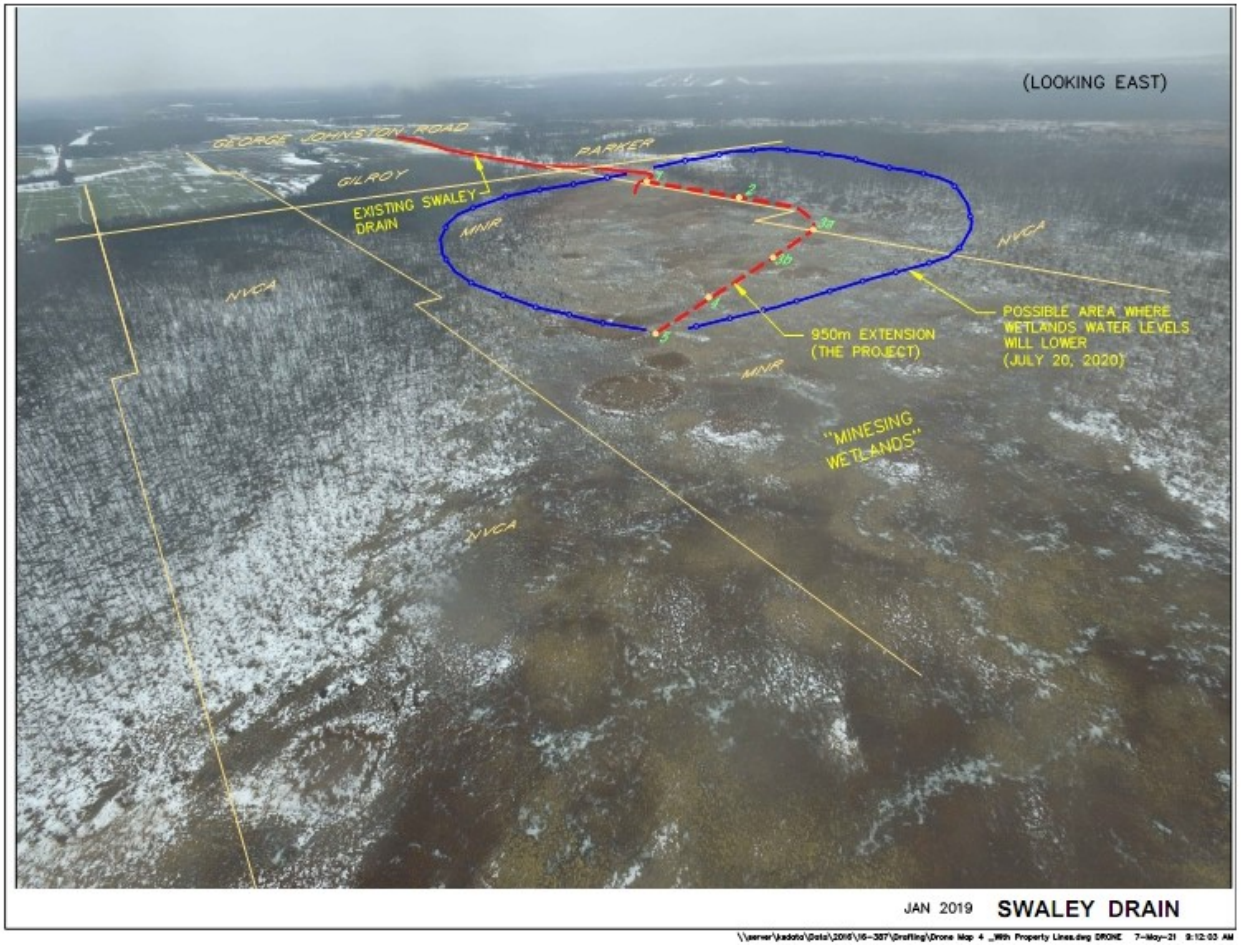

ATTACHMENT F
SWALEY DRAIN – DRONE PHOTO WITH PROPERTY LINES TO SHOW EXISTING DRAIN AND PROPOSED EXTENSION

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SUMMARY - Continued

- We wish to thank everyone for the opportunity to communicate today and to describe the work done and being done.
- We do request the continued support of NVCA in pursuit of this project.
- Specifically we ask that the Board direct Staff to work with us and support this 950m long project.

K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS & PLANNERS
85 McIntyre Drive
Kitchener, ON N2R 1H6
Tel: 519-748-1199
Fax: 519-748-6100

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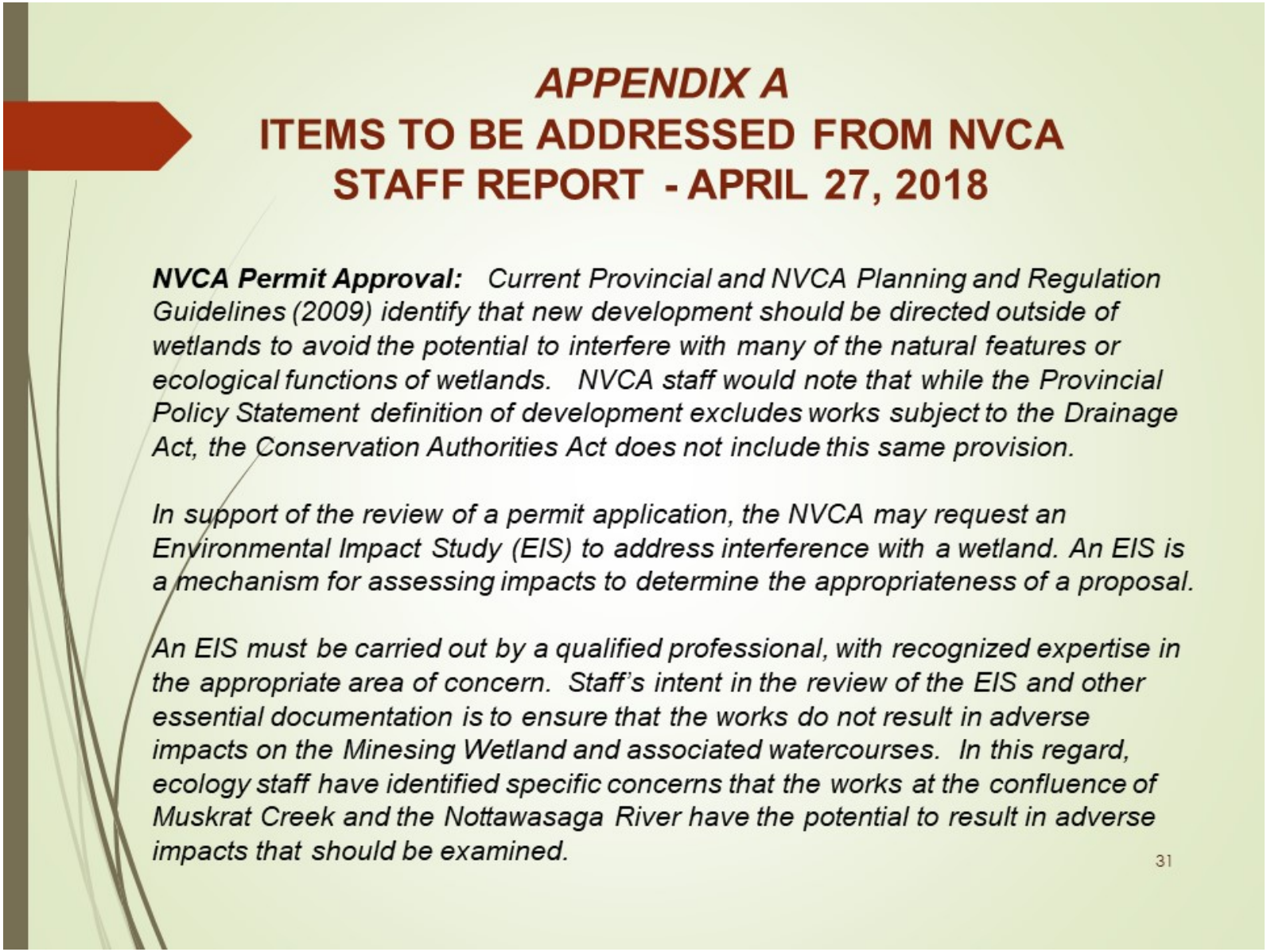
APPENDIX A
ITEMS TO BE ADDRESSED FROM NVCA STAFF REPORT - APRIL 27, 2018
NVCA Permit Approval: Current Provincial and NVCA Planning and Regulation Guidelines (2009) identify that new development should be directed outside of wetlands to avoid the potential to interfere with many of the natural features or ecological functions of wetlands. NVCA staff would note that while the Provincial Policy Statement definition of development excludes works subject to the Drainage Act, the Conservation Authorities Act does not include this same provision.
In support of the review of a permit application, the NVCA may request an Environmental Impact Study (EIS) to address interference with a wetland. An EIS is a mechanism for assessing impacts to determine the appropriateness of a proposal.
An EIS must be carried out by a qualified professional, with recognized expertise in the appropriate area of concern. Staff's intent in the review of the EIS and other essential documentation is to ensure that the works do not result in adverse impacts on the Minesing Wetland and associated watercourses. In this regard, ecology staff have identified specific concerns that the works at the confluence of Muskrat Creek and the Nottawasaga River have the potential to result in adverse impacts that should be examined.
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APPENDIX A
FOUR ITEMS TO BE ADDRESSED – Continued

Subject to the Board's concurrence and prior to issuance of a permit, the proposed works should be supported by the following satisfactory details submitted by the municipality:

- *An Environmental Impact Study that examines the environmental impacts and provides recommendations that ensure that the final proposed works are designed (and phased if necessary) in such a manner to avoid, mitigate and where necessary offset environmental impacts to achieve no net loss to the natural heritage system;*
- *Details prepared by a professional engineer confirming that the proposed works will not result in adverse flooding impact to adjacent properties. In addition, the proposed drainage works should be reviewed and approved by fluvial geomorphologist;*
- *Detailed construction drawings/plans outlining the extent of the works, erosion and sediment control measures, restoration of disturbed areas, and enhancement plantings and habitat creation; and,*
- *Appropriate landowner permissions and other required approvals (e.g. MNRF and DFO).*

NVCA staff will continue to assist through ongoing discussions with Township staff, Drainage Engineer and other involved qualified professionals.

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APPENDIX B
ITEMS TO BE ADDRESSED
NVCA EMAIL MARCH 10, 2021

The current proposal consists, generally, of an approximately 950m extension to the existing Swaley Drain outlet. Works from Station 0+000 to approximately 0+600 are on NVCA-owned lands, while 0+600 to termination at 0+950 are on MNRF-owned lands. Work generally includes excavation of a 10m width of grass & wetland base removal to west of Station 0+200 and a 10m with of grass removal and 6m width wetland base removal to termination at Station 0+950. Excavated and deeper pool materials will either be levelled beside existing maintenance access, or applied to a 10m section adjacent the excavated drain.

It is the opinion of the NVCA that, due to changes to the proposal (as we understand has been necessitated through further study, investigation and review), the current proposal is sufficiently distinct from that previously presented to the BOD (February 23, 2018 – 450m+ extension to Swaley Drain, removal of Muskrat outlet improvement), that the opportunity for the Board to provide input is necessary. Alternatively, if the proposed Swaley Drain extension can be revised to that in line with the proposal previously presented to the Board (300m ± Swaley Drain extension), NVCA staff would be in a position to support the works under the following conditions:

1. *Revisions to the NER to assess the revised proposal. The NER must demonstrate, to the satisfaction of the NVCA, sufficient mitigation and enhancements to offset impacts and demonstrate no net loss to the natural heritage system. This must include incorporation of any and all available NVCA monitoring data. The NER must also include a comprehensive monitoring program to the satisfaction of the NVCA and Township (specifics to be discussed further between NVCA, Township and RiverStone) with the goal of both monitoring the efficacy of the drainage works, and monitoring for any impacts to natural heritage features;*

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APPENDIX B
ITEMS TO BE ADDRESSED
NVCA EMAIL MARCH 10, 2021 – Continued

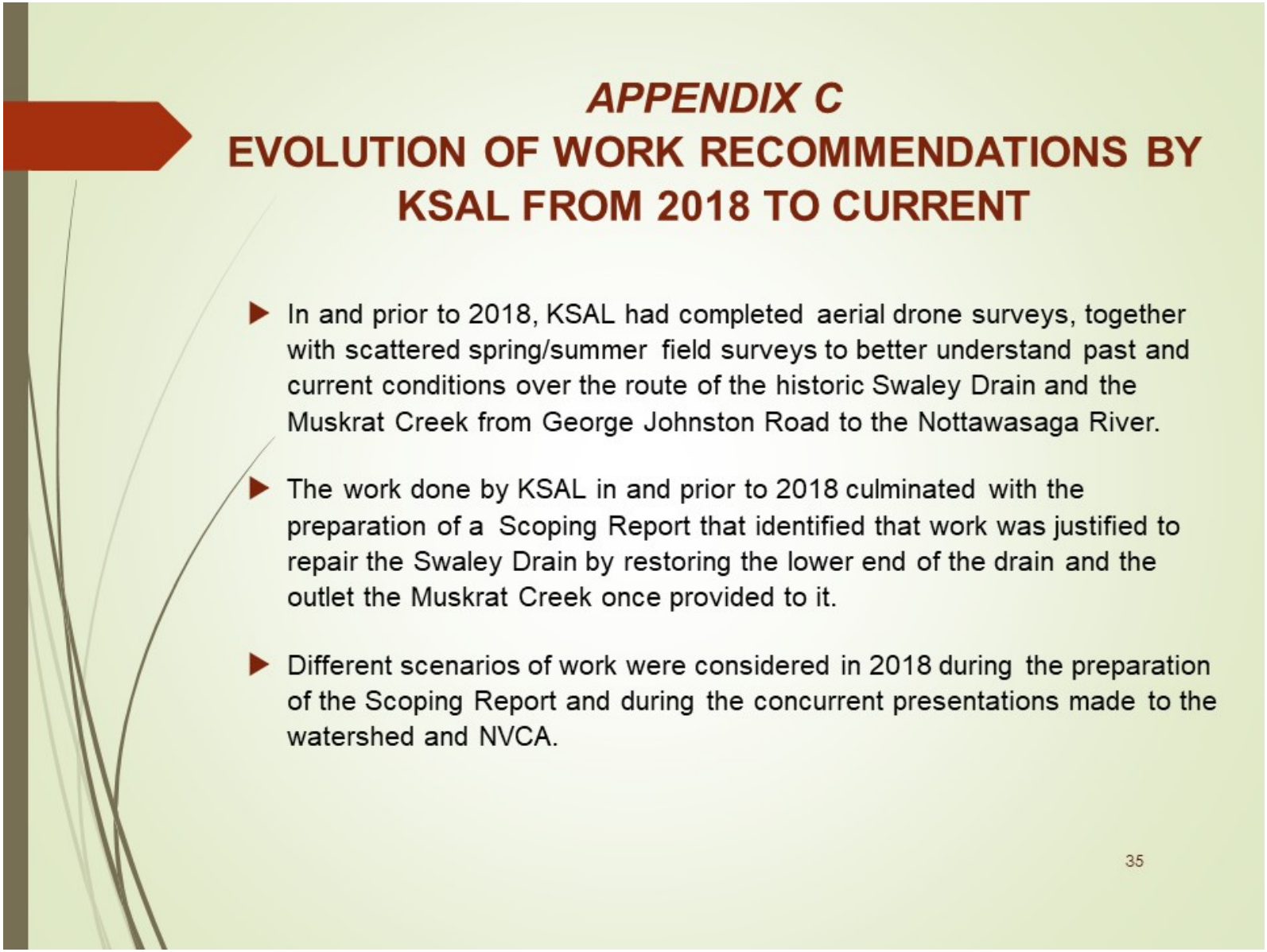
2. *Details prepared by a qualified professional engineer confirming that the proposed works will not result in adverse flooding impact to adjacent properties. These details should include any drawings/reports/calculations used to support the conclusions regarding estimated impact to Swaley Drain and wetland water levels, impact zones, etc., resulting from the proposed construction;*

3. *Detailed construction drawings/plans outlining the extent of the works, erosion and sediment control measures, restoration of disturbed areas, and enhancement planting and habitat creation; and,*

4. *Appropriate landowner permissions and other required Regulatory approvals (e.g. MECP, MNRF, and DFO).*

Again, we appreciate the opportunity to provide comments on the proposed modifications to the Swaley Drain at this stage. If there are any questions pertaining to the above comments, please let us know.

34


APPENDIX C
EVOLUTION OF WORK RECOMMENDATIONS BY KSAL FROM 2018 TO CURRENT
In and prior to 2018, KSAL had completed aerial drone surveys, together with scattered spring/summer field surveys to better understand past and current conditions over the route of the historic Swaley Drain and the Muskrat Creek from George Johnston Road to the Nottawasaga River.
The work done by KSAL in and prior to 2018 culminated with the preparation of a Scoping Report that identified that work was justified to repair the Swaley Drain by restoring the lower end of the drain and the outlet the Muskrat Creek once provided to it.
Different scenarios of work were considered in 2018 during the preparation of the Scoping Report and during the concurrent presentations made to the watershed and NVCA.
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APPENDIX C
EVOLUTION OF WORK RECOMMENDATIONS BY KSAL FROM 2018 TO CURRENT - Continued

- The minimum work identified by the Scoping Report and the work described at a presentation to the NVCA staff and Board in February 2018 would have involved:

  a) 500m± of work in the wetlands from either the Nottawasaga River or Downey Drain outlet upstream.

  b) 300m± of work in the wetlands from the Swaley Drain's current outlet downstream either along its historic route or along its current diagonal outlet into Lot 9.

  c) Suggested continued removal of debris in the River by the cooperative effort of the Township and NVCA.

- After the submission of the Scoping Report and the presentation to the Board in 2018, it became evident that the undertaking of an environmental review of the work area would be necessary and the review would have to identify that the "works do not result in adverse impacts on the Minesing wetland and associated watercourse"* for NVCA to give support to the project.

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* *Wording from 2018 staff report.*

APPENDIX C
EVOLUTION OF WORK RECOMMENDATIONS BY KSAL FROM 2018 TO CURRENT - Continued

- As a result over the period of 2018 to 2020, RiverStone Environmental Solutions (RSES) completed their Natural Environment Report (NER). The "work" areas considered during the preparation of this NER were both the area identified by the Scoping Report at the River end and the area at the Swaley end similar in concept to that presented in the Scoping Report but greater in length (to encompass the 750m to 950m lengths now proposed).
- The reason for the greater length at the Swaley end being, that in 2019, the Engineer's field work had identified that a greater length should be studied at the Swaley end and this was conveyed to the authors of the NER and was addressed in the NER.
- The NER concluded that if identified mitigation measures were undertaken, work could occur in the studied area at the Swaley end with no adverse impacts on the wetland but work should be pursued at the River end only if, and after, it was determined that work at the Swaley end was insufficient.
- During the period of review by NVCA staff of the NER and the back and forth discussions between NVCA, RiverStone, KSAL and the Township, it was agreed that the 500m of work at the River end should not be undertaken pursuant to KSAL's reports.

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APPENDIX C
EVOLUTION OF WORK RECOMMENDATIONS BY KSAL FROM 2018 TO CURRENT - Continued

- KSAL indeed advised if a 950m project were undertaken at the Swaley end and if the Township did undertake a brush removal project in the lower part of the Downey Drain pursuant to Section 74 of the Act, with approval of NVCA, KSAL would be of the opinion that the outlet of the Swaley Drain would be sufficiently restored now and that the Downey Drain repair would sufficiently provide for control of the wetlands levels at the River end. KSAL would therefore no longer recommend work near the original outlet of the Muskrat into the River.

- In the initial periods of reviews of the NER by NVCA and over the period of discussions re such between NVCA and KSAL (2020 and early 2021), the 950m long project at the Swaley end was anticipated to require a 10m width of removal of wetlands grasses, the excavation of a 6 to 10m wide channel at the base of the wetland waters in this 10m width of wetland grass removal with overdigging, at the start of the work. The widths and depths discussed in this period were based on the finding that the work could only be undertaken by an excavator working from a 9 to 10m wide barge requiring a depth of 0.9 to 1.0m of wetland waters prior to and after the excavation of the base channel.

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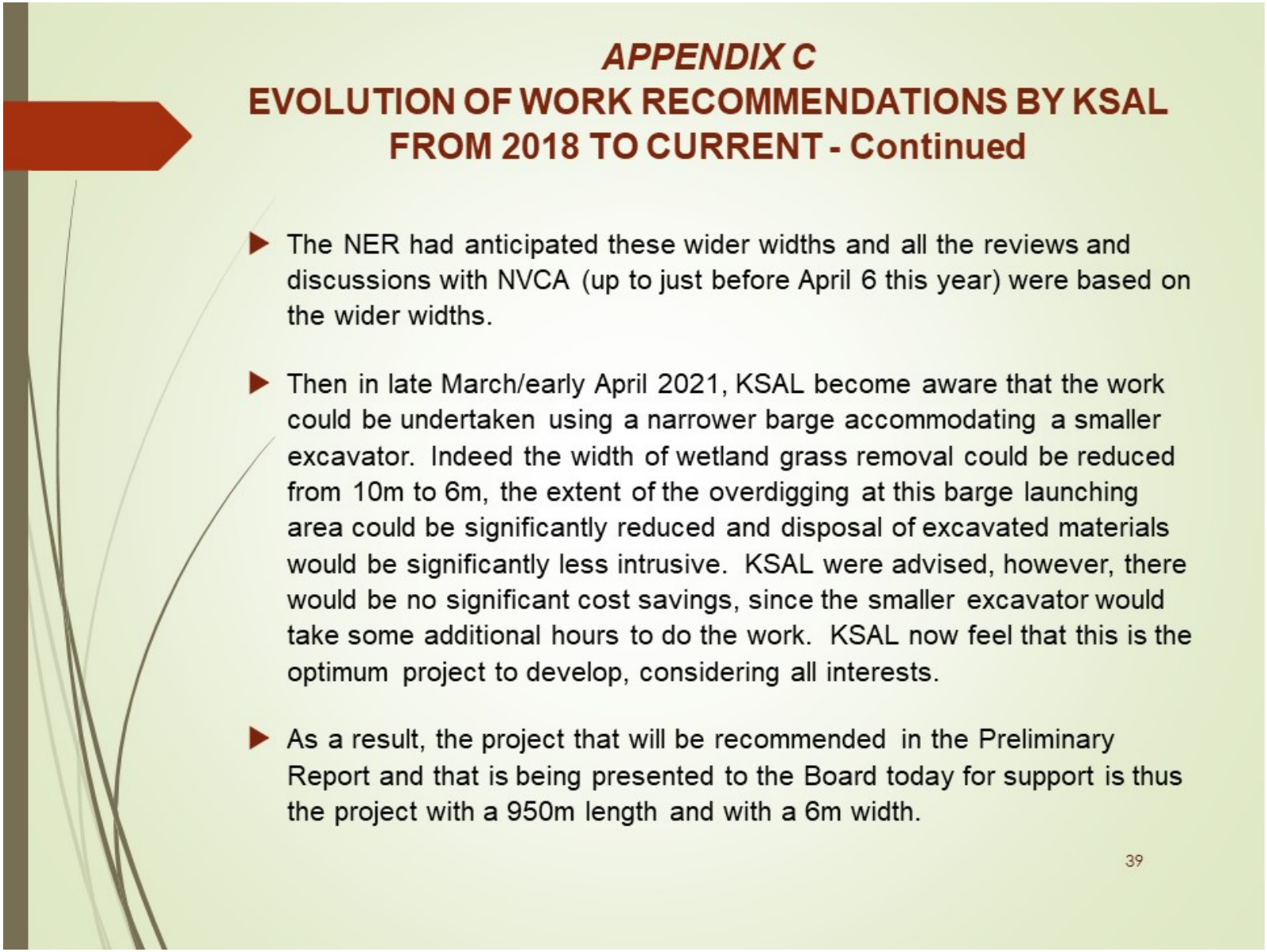
APPENDIX C
EVOLUTION OF WORK RECOMMENDATIONS BY KSAL FROM 2018 TO CURRENT - Continued
The NER had anticipated these wider widths and all the reviews and discussions with NVCA (up to just before April 6 this year) were based on the wider widths.
Then in late March/early April 2021, KSAL become aware that the work could be undertaken using a narrower barge accommodating a smaller excavator. Indeed the width of wetland grass removal could be reduced from 10m to 6m, the extent of the overdigging at this barge launching area could be significantly reduced and disposal of excavated materials would be significantly less intrusive. KSAL were advised, however, there would be no significant cost savings, since the smaller excavator would take some additional hours to do the work. KSAL now feel that this is the optimum project to develop, considering all interests.
As a result, the project that will be recommended in the Preliminary Report and that is being presented to the Board today for support is thus the project with a 950m length and with a 6m width.
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APPENDIX D

HOW EXPRESSED CONCERNS OF NVCA HAVE BEEN/WILL BE ADDRESSED AS PROJECT MOVES FORWARD

Acronyms:

KSAL - K. Smart Assoc. Ltd. (Kenn Smart)
Twp - Township of Springwater
PR - Preliminary Report
FR - Final Report
RSES - RiverStone Environmental Solutions (Al Shaw)
NER - Natural Environment Report
PDV - Present Day Value

NVCA CONCERN		KSAL RESPONSES			KSAL COMMENTS
Concern #	Specifics	Given Already	To Also be in PR	To Also be in FR	
NVCA Staff Report, April 2018					
1	Use matting to move equipment	Yes	Acknowledge	Specifics Then	KSAL final report specifications will address use of matting
2	NVCA staff to consider/advise/ review options to use for spoil disposal	Acknowledge	Yes	Yes	KSAL prefer to cast on each side. NVCA has not stated a preference.
3	NVCA staff to consider/advise re enhancements to use	Acknowledge	Yes	Yes	KSAL, NVCA, RSES to finalize. NVCA has not stated preferences.
4	EIS to be done to avoid, mitigate, and possibly offset	Done	Acknowledge	Implement	RSES prepared NER to address NVCA concerns as conveyed
5	P.Eng. to confirm no adverse flooding	Yes	Yes	Yes	KSAL can confirm no adverse flooding but will provide more detail
6	Have A Fluvial Geomorphologist (FG) review	Yes	No	No	KSAL disagree re applicability of use of a FG
7	Need detailed plans re footprints, erosion, restoration, etc.	Yes	No	Yes	KSAL will include in FR. Some preliminary data has already been given.
8	Need landowners permission and agency approvals	Yes	Acknowledge	Will address	Work cannot occur until landowner and agency concerns are addressed. RSES are pursuing agency concerns now. Input from MECP and DFO will be given/sent to NVCA
9	Staff's understanding of costs to NVCA - $10,000 net for a $200,000 project and $1,500/ $2,000 every 10 to 15 years	Yes	Prelim data will be given	Final data	Current estimate is $300,000, current PDV of maintenance is $75,000 for 100 years (wetland areas share 10% prior to damages). Final assessments can only be set out in FR.

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APPENDIX D

HOW EXPRESSED CONCERNS OF NVCA HAVE BEEN/WILL BE ADDRESSED AS PROJECT MOVES FORWARD – Cont'd

NVCA CONCERN		KSAL RESPONSES			KSAL COMMENTS
Concern #	Specifics	Given Already	To Also be in PR	To Also be in FR	
NVCA Staff Report, July 2020 after review of NER					
10	Consider compensation, land purchase options	Yes	Acknowledge	Acknowledge	Already addressed in Scoping Report. Other options are not cost beneficial.
11	Consider changes in flood depth	Yes	Acknowledge	Acknowledge	River flood depths will not change
12	Construction footprints required	Yes	Acknowledge	Will be Included	Prelim drawings can be given now, but final drawings only come with FR
13	Discuss uncertaintly in forecast water level lowering	Yes	Yes	Yes	No uncertainty. GPS survey has been done
14	Consider phased approach	Yes	No Need	No Need	Will be only the one phase - at the Swaley
15	Consider law aspect/legality of doing work	Yes	Yes	Yes	Drainage Act requires existing drains to be maintained. "Law" has been considered
16	Concerns 4 to 8 are repeated	See	Responses	Given	Already In this Table
17	Multiple concerns re doing work at River end	Yes	Yes	Yes	No work to be done at River end
18	Sedimentation from upstream watershed	Yes	Yes	Yes	Minimal sedimentation is occurring now and is expected in future. Sediment facility/deeper pool can be included
19	Section 28 permit application and enclosures will be necessary	Yes	Acknowledge	Acknowledge	Permit & enclosures are addressed after final report is adopted as a bylaw. Discussions occurring now are intended to facilitate the permit
20	Provide for monitoring program	Yes	Yes	Yes	NVCA, RSES & KSAL to continue to work towards finalizing this prior to FR
21	What is DFO classification?	Yes	Yes	Yes	Not classified but DFO will be asked to confirm

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APPENDIX D

HOW EXPRESSED CONCERNS OF NVCA HAVE BEEN/WILL BE ADDRESSED AS PROJECT MOVES FORWARD – Cont'd

NVCA CONCERN		KSAL RESPONSES			KSAL COMMENTS
Concern #	Specifics	Given Already	To Also be in PR	To Also be in FR	
NVCA Staff Report, November 2020 (Following KSAL response to July 2020 Report					
22	Acquire lands instead for phosphorous sink purpose	Yes	No Need	No Need	KSAL reviewed data from Twp and NVCA and spoke to a developer's consultant. This "idea" should apply to Willow Creek lands, not Swaley lands.
23	Why did Scope of Work change?	Yes	No Need	No Need	See section on Evolution. Scope has changed in order to povide lowering with less impacts. Scope is consistent with what NER addresses.
24	Concern work may still be done at River end	Yes	Yes	Yes	KSAL agreed to drop idea of work at River end completely since Downey to have a repair
25	Could there be a future phase where Swaley is joined to Downey directly as discussed back in 2017/2018?	Yes	Acknowledge	Acknowledge	KSAL have advised such may now not be possible due to costs/benefits and environment. If ever to be considered, it will have to be a full new study.
26	Could just doing 400m of Swaley work accomplish what is required?	Yes	No Need	No Need	KSAL answered "no"
27	Concerns in Items 6, 7, 8, 12, 17, 20 & 21 are repeated	See	Responses	Given	Already In this Table
28	Why has maintenance frequency changed?	Yes	Acknowledge	Final forecast to be given	KSAL have reviewed experience with existing Swaley and Downey and have revised initial forecasts given the work widths proposed
29	Other NVCA data such as for Walleye and Brook Lamprey have not been addressed	Yes	Acknowledge	Acknowledge	RSES did discuss Walleye with MNRF. RSES did a Terms of Reference and start up meeting with NVCA. Nonetheless, RSES will review any new data from NVCA and will address
30	Preparation of an NER is no guarantee of project being ultimately approved	Yes	Acknowledge	Acknowledge	KSAL & Twp understood that if NER found no adverse impacts, NVCA would work with us. If all is considered, i.e. history, NER report, work by KSAL to reduce project, the justification to approve project is there or can be found to be there

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APPENDIX D

HOW EXPRESSED CONCERNS OF NVCA HAVE BEEN/WILL BE ADDRESSED AS PROJECT MOVES FORWARD – Cont'd

NVCA CONCERN		KSAL RESPONSES			KSAL COMMENTS
Concern #	Specifics	Given Already	To Also be in PR	To Also be in FR	
31	Deeper channel work may identify concerns not in the NER	Yes	No Need	No Need	NER did already consider that barge methods may have to be used.
32	Concern re the "channel colonizing" comments by RSES	Yes	No Need	No Need	KSAL's suggested construction and maintenance work will minimize/avoid colonizing
33	Concern re changes in forest cover	Yes	Acknowledge	Acknowledge	KSAL & RSES agree possible changes in rate of loss of forest cover will be nil to minimal with deletion of work at River end
NVCA Letter of March 10, 2021 to KSAL					
34	Changes in proposal to now do no work at River end and to do 950m of work at Swaley end are sufficiently different from data presented to Board in Feb. 2018 that a new presentation to the Board is necessary in order to obtain support from the Board	Yes	Will Acknowledge	Will Acknowledge	At an April 6, 2021 virtual meeting, KSAL and Twp confirmed the intention to appear before the Board
35	NER to be revised as necessary to show sufficient mitigation, enhancement, offsetting, etc. are proposed to demonstrate no net less to the natural heritage system	Yes	Yes	Yes	RSES and NVCA to discuss further data to include in NER and the PR by KSAL
36	Past and future monitoring are to be addressed	Yes	Yes	Yes	Comments to concern #20 can be repeated
37	Concerns 5, 7 and 8 are repeated	See	Responses	Given	Already In this Table

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SWALEY DRAIN

KENN SMART'S PRESENTATION TO BOARD MAY 28, 2021

(Let's start off with Slide 2 – The Introduction)

- Thank you for the opportunity to appear here today.

- My name is Kenn Smart and I am the Engineer retained by Springwater pursuant to the Drainage Act to bring the lower end of the Swaley Drain back into a good state of repair.

- I am joined virtually on this presentation by:
    - Township CAO Jeff Schmidt
    - Twp Drge Superintendent Steve Buchanan, and
    - Our Environmental Consultant Al Shaw of RiverStone Environmental Solutions

- I believe Mayor Don Allan is present and some members of Council may be viewing this also.

- My approach today, in order to be brief, is to present only selected slides of my presentation with an oral summary of the data on some of the other slides.

- As background, I appeared before this Board in February 2018 in order to describe the Swaley Drain, its problem, and the solution or solutions then anticipated.

- I asked then for NVCA's support as we moved forward.

- I believe you appreciated there was a problem and you directed your Staff to work with us on the solution.

- Staff then in turn identified conditions to be met as we proceeded.

- Since 2018, we have been addressing the conditions and refining the solution, all the time working with your Staff.

- We now have the solution we wish to implement and, as requested, we are here today to describe it to you and to ask that you request your Staff to continue to work with us as we in turn work to finalize this solution and eventually ask for the NVCA permit.

(Move to Slide 3 re the Order of My Presentation)

- Today, therefore, I propose briefly (in 15 minutes±) to describe, or re-describe to some:
    - The Swaley Drain
    - The changes in its lower end over the years.
    - The problem that has resulted
    - The legal need to fix the problem
    - The solution proposed in 2018
    - What study work has been done since 2018
    - The minimum solution now in 2021 felt necessary
    - How this 2021 solution differs from that of 2018
    - Why we feel the new solution is a betterment to all
    - Why Staff feels this new solution should be presented to the Board
    - My summary.

(Move to Slide 5 – Attachmt A, Aerial of the Swaley Dr)

- Firstly, I should advise I will speak in metric with some imperial cross-references.
- Slide 5 is here to show:
    a) The setting *(Refer to the River at the left, to George Johnston Road in the middle, to Minesing at the top)*
    b) The actual Swaley Drain and Branches *(the heavy solid lines)*
    c) Its watershed *(1600 ha (4000 ac), the heavier dashed lines). Each yellow grid box is 80 ha (200 ac)*

d) All components of the drain are small open ditches, deep enough for tile outlets and large enough only for growing season runoff (it can be viewed at George Johnston Road)

e) The drain was built in accordance with Bylaws that implemented Engineering Reports in 1898, 1901 and 1948.

- When first constructed, the Drain outletted into the Muskrat Creek, ¾ of the way across Concession 11.

- Also as part of the 1901 Bylaw work, a 150m (500') long channel was cut through the high east River bank to give the Muskrat Creek a better outlet.

- All of the original lower end – the Swaley Drain and the Muskrat Creek, are shown in green on this aerial.

- The red area is where the problem exists and the solution is now proposed (as to be described).

(Move to Slide 7 – Attachment B, 1954 Aerial)

- I want to use Slide 7 to show how the lower end conditions of the Swaley Drain existed until at least 1954 (the date of this aerial).

- Note should be made that:

1. The Swaley Drain was still 2/3 the way across Concession 1 (green is its original length)

2. Its outlet, the Muskrat Creek, was very evident

3. The floodplain of the Muskrat was well wooded

4. The cut at the River is still evident (we did highlight it in green also)

5. Back then, all the properties were believed to be privately owned.

- I think it's important to note the Swaley Drain existed as intended from 1901 to at least 1954.

(Move to Slide 10 – Attachment C, 2020 Aerial)

- I want to use Slide 10, which is a 2020 vintage aerial to show the changed conditions of the lower end of the Swaley Drain 66 years after the 1954 aerial.

- The drain is now much shorter and was diverted at some time by someone to try to find a different outlet

- Most of the trees in the Muskrat floodplain are gone

- The original lower end of the Swaley Drain and the Muskrat Creek have disappeared.

- They are now under 600 to 1200mm (24” to 48”) of wetland water as the Muskrat flood plain became flooded.

- Also the 150m long cut in the River is now blocked off at the River.

- This wetlands water has caused waters in the Swaley Drain channel to pond year round to 700 to 900mm (30 to 36”) depths

- All tiles in the Swaley channel up to George Johnston Road are continuously submerged and will eventually fail.

- Adjacent fields now have much higher ground water levels which impedes cultivation.

- The problem to be addressed is thus the high water level in the Swaley Drain lower end.

- Such is because of its inundation, because of the inundation of the Muskrat, and because of the loss of the cut to the River.

- You will note the area of Points 1 to 5. This is one of the study areas as I will describe.

- I should add that Burnside Engineering in a 2001 Drainage Superintendent report to the Township identified the area of Point 5 as being where Swaley Drain repair should start.

- A survey by an OLS (Betts from Barrie) produced a profile between the Swaley and Downey Drains that indicated the same. His survey route shows on Attachment D which will soon be shown.

(Now Go to Slides 11 & 12 re Legal Items)

- The first purpose of these slides is to described that Section 74 of the Drainage Act requires a Municipality to keep a drain in repair and that Section 79 of the Act can legally force a Municipality to do so.

- The Swaley Drain requires repair and the improvement/solution being proposed through use of Section 78 of the Act will legally address such.

- We believe if a legal review were necessary of:

    - The Section 78 initiation of this project
    - The drain history
    - The impact of the wetlands as such developed
    - The problem
    - The solution developed to repair/improve the Swaley Drain and to minimize impacts on the wetlands,

  the repair/improvement project, as today to be presented, would be ordered to proceed.

- We however want to avoid any legal involvement, if we can, by working with everyone since a legal involvement will have high costs to some, and would delay the needed fix for the farms and since we believe the solution ordered would be as proposed in any case.

- We do believe we have a legal obligation and justification to carry on as described today.

(Now go to Slide 14 – Attachment D for further use of a 2020 aerial)

- I want to use this slide to show the recommended solutions presented to the Board in 2018 and as now being presented in 2021.

- Blue colour represents two proposed work areas presented in 2018 – one at the Swaley end and one at the River end.

- It was felt in 2018 that if the cut to the River were opened back up, or if alternatively, a new route to the Downey Drain were followed, and of similar length (500m), a lowering of

wetlands water levels by 300mm (12”) would eventually occur all the way from the River to the Swaley (across 800± ha of wetlands).

- It was also felt then that if the Swaley were extended downstream over one of the two blue 300m long routes, a further 300mm lowering of wetlands levels (over part of the 800 ha area) could be achieved in the Swaley.
- Combined, and if both lowerings produced the desired result, a lowering of up to 600mm (24”) of the ponded waters in the Swaley channel would result.
- After our 2018 presentation, we were advised that NVCA would work with us but we would have to address conditions.

- **Please now go to Slides 31 & 32** for Appendix A for one concern of NVCA and for the conditions set out.

- The last lines on Slide 31 describe NVCA’s concern that works near the River have greater potential of adverse impacts.

- The conditions of Staff as set out in 2018 are on Slide 32 and stated that prior to any permit issuance the following would be necessary:
    - An environmental study to address environmental impacts and the natural heritage system.
    - A report re flooding
    - Detailed construction plans
    - Landowner permissions and other approvals.

(Keep Slide 14 – Attachment D to describe work done since 2018)

- The work done was:

- Firstly, Al Shaw of RiverStone Environmental Solutions, our sub-consultant, over a 2-year period, produced an environmental study of the areas, coloured in red and blue.

    - He concluded “There will be a low likelihood of negative impacts on significant heritage features and that any negative impacts on the natural environment can be acceptably mitigated.”

    - He did also say there was a higher potential of negative impacts if work were done near the River.

- Secondly, during frozen conditions in 2019, we surveyed our own accurate GPS elevations in the wetlands study areas.

- Thirdly, we spoke to contractors able to do work in wetland areas and determined that due to depth of waters, barge methods versus matting would be necessary (more costly, but less disruptive).

- Fourthly, we determined that the Township and NVCA agreed to do fallen tree and debris removal from the adjacent Downey Drain channel.

(Now still using Slide 14)

- I want to show and describe what the solution has evolved to, as a result of the described work done between 2018 and 2021.

- The solution I will describe is what we are asking the Board to review and to discuss with Staff.

- This new solution as shown in red involves:

    - Either 750m or 950m of work at the Swaley end only

    - No work at the River end.

- Work would be done in winter months as recommended by RiverStone to reduce significantly the environmental impacts.

- Overall visible footprints of work would be similar to those associated with the 2018 recommendation.

- A lowering for sure of 450mm (18”) of wetlands waters in the lower end of the Swaley would result.

- I should add this solution is also based on the cleanup of the Downey channel occurring.

Next please briefly put up Slides 19, 20 and 21, which are tables of comparison.

- Slides 19, 20 and 21 in columns 2 and 5 provide a comparison between the solution proposed in 2018 to that now proposed. I will not read these slides now but will give the summary on the next slide.

- Columns 3 and 4 show comparisons to other solutions that were once considered between 2018 and 2021.

- I might add that Appendices C and D attached describe the evolution of our recommendations while addressing Staff conditions as much as possible to date.

- If I had more time, I could describe the contents of Slides 19, 20 and 21 and the appendices.

Next I want to go to Slide 22 which is a summary of the data in the tables

- Here both the work suggested in 2018 and the work now proposed in 2021 (the solution) is listed and compared in summary format to show there would be:

    - Similar footprints of the work overall in both the 2018 and 2021 work

    - Less wetland lowering with the 2021 work.

    - Less frequent maintenance with the 2021 work.

    - No 2021 work at the River where the higher potential of negative impacts could be.

- No 2021 stated suggestion that NVCA and the Township renew their annual river cleanup in this area.

- Although not stated here, the construction cost estimate has increased by $50,000 from 2018 to 2021.

(Now go to Slide 23 briefly – re NVCA response to date re this new work)

- Slide 23 talks in general of Staff's position re the new 2021 recommended work and refers to Appendix B.

- **Now go to Slides 33 then 34 for the specifics of Staff's position.**

- On Slide 33, Staff's position is stated as being, and I want to read this.

- *It is the opinion of the NVCA that, due to changes to the proposal (as we understand has been necessitated through further study, investigation and review), the current proposal is sufficiently distinct from that previously presented to the BOD (February 23, 2018 – 450m+ extension to Swaley Drain, removal of Muskrat outlet improvement), that the opportunity for the Board to provide input is necessary. Alternatively, if the proposed Swaley Drain extension can be revised to that in line with the proposal previously presented to the Board (300m± Swaley Drain extension), NVCA staff would be in a position to support the works under the following conditions:*

- Staff also listed the conditions to be met for their continued support of 300m long component described in 2018. (Such start on Slide 33 and then finish on Slide 34.)

- A summary of the conditions are:

    1. An addendum to RiverStone's environmental study is necessary re possible additional mitigation and to address future monitoring

    2. Still the need for the flood report.

    3. Still the need for construction drawings.

    4. Still the need for permissions and approval.

- Since we, as the Engineers can not achieve the required repair/improvement to the Swaley Drain by just doing the 300m of repair that was part of the total package presented in 2018, we feel the input of the Board is necessary.

- I should add all these conditions will be addressed as part of, or prior to, our Final Report and the application for the permit. Our position and status on these and other NVCA conditions to date is in Appendix A.

Now going back to Slide 33, I therefore want to specifically list what we are asking here today and that is:

- We ask that the Board direct Staff to amend or augment their position as stated in the second paragraph of what is shown on Slide 33 to say, in effect, that with the Board's new input, NVCA Staff are now in a position to support the 950m total extension of the Swaley Drain under conditions as listed on March 10, 2021.

(Next Briefly put up Slide 24 and then Slide 25)

- These two slides show how we propose to work with NVCA Staff and the conditions already listed and how we propose to follow the required Drainage Act procedures regardless of the outcome today to hopefully be in a position to construct this winter.

(Now go to Slides 26 and 27 for a summary, and then to Slides 28 & 29 for concluding photos)

- As we say on Slides 26 & 27:

- We thank the Board and Staff for their efforts to work with us since 2018.

- We do ask that the Board recognize that the new recommended work is proposed to address the same problem, and to give a similar but acceptable solution, as that described in 2018, but with significantly reduced impact on the wetlands.

- We ask that the Board direct Staff to continue to work with us on the work as now recommended and as we complete our engineering and eventually seek the NVCA permit.

- We recognize that being able to work with, versus against, NVCA will expedite the timing of the work and will minimize the costs.

- We do feel the solution has to be implemented and our work has to go on as described.

- Our concluding slides **are first Slide 28**. This shows how we feel our new extension will appear shortly after construction and shows the limited visual impact on the wetlands by doing the work with barge methods.

Next go to Slide 29 as this summarizes visually that the proposed solution and wetlands impacts is in a very limited area of the wetlands (100 ha or less of a 6000 ha Minesing wetlands).

So thank you for the opportunity to make this presentation with our request that NVCA continue to work with us.

Staff Report No.:	17-05-21-BOD
Date:	28/05/2021
To:	Chair and Members of the Board of Directors
From:	Daniel Dyce Senior Regulations Technician
SUBJECT:	**Swaley Drain, Township of Springwater**

Recommendation

RESOLVED THAT: the Board of Directors approve Staff Report No. 17-05-21-BOD regarding the Township of Springwater's Swaley Drain project; and
FUTHER THAT: the Board approves the presentation on the Swaley Drain as presented.

Purpose of the Staff Report

The purpose of this report is to provide background on the proposed Swaley Drain project and outline NVCA's permit and land ownership interests. The purpose is also to provide staff recommendation to the Board for moving forward with the project under a scope acceptable to the NVCA both as a Regulatory agency and landowner.

Background

The Swaley Drain is a municipal drain that was originally built in 1898 and incorporates a watershed area within Springwater Township that reaches from the southern edge of Anten Mills south and west to its outlet west of George Johnston Road within the Minesing Wetlands.

The Township received notice for drain improvement from an agricultural producer(s) whose fields have reportedly been negatively affected by the present condition of the Swaley Drain. The Township appointed the consulting engineering firm K. Smart Associates Ltd. (KSAL) under Section 78 of the *Drainage Act* to investigate and determine opportunities to alleviate the reported drainage issues impacting on field tile outlets. The *Drainage Act* allows for improving, extending to an outlet or altering the drainage works under a report of an engineer appointed by the municipality.

The NVCA is committed to working with the Township to ensure S.74 maintenance of the existing Swaley Drain can be performed as needed following standard compliance requirements implemented under the *Drainage Act and Conservation Authorities Act Protocol (DART)*. Based on discussions with Township representatives and KSAL, staff understand that proposed works are intended to ensure proper function of the municipal drain and the areas agricultural tile drains. The Township has also provided historical reference outlining construction of similar past drainage works including improved drainage at the confluence of the Muskrat Creek and the Nottawasaga River.

Issues/Analysis

KSAL presented the project to the NVCA Board of Directors in April 2018. At that time, the proposal, as based on a preliminary assessment and scoping report, proposed a 300m± extension to the existing Swaley Drain, and improving the Muskrat outlet either by excavating through the sediment levee into the Nottawasaga River with some debris removal in the river, or by extending into the Downey, ensuring the Downey is cleaned of any debris and 500m± channel work upstream of either the river or Downey. This presentation was accompanied by NVCA Staff Report No.: 06-03-18-BOD (Schedule A).

Based on further investigation and analysis by KSAL, and a Natural Environment Report prepared by RiverStone Environmental Solutions Inc., the Township is currently proposing to extend the existing Swaley Drain outlet 750m or 950m (Schedule B & C). Work on the Nottawasaga/Muskrat outlet has been removed from consideration on the condition of maintenance works on the Downey Drain. Downey Drain maintenance works under Section 74 of the *Drainage* Act have/would be reviewed under a separate project heading per the *DART Protocol*.

The proposed construction is within the Minesing Provincially Significant Wetland and within the regulatory floodplain. Due to the noted hazards and environmental features the works are within an area regulated by the NVCA pursuant to *Ontario Regulation 172/06* and will require permit approval. In addition, a portion of the works appear to be on lands owned by the NVCA, the extent of which depends upon the chosen project scope. All of the proposed work would take place on both NVCA and MNRF-owned lands. Under the 950m extension proposal, approximately 600m would be on NVCA lands. Under the 750m extension proposal, the majority of works would be on MNRF lands (Schedule B & C)

NVCA Permit Approval: Current Provincial and NVCA *Planning and Regulation Guidelines* (2009) identify that new development should be directed outside of wetlands to avoid the potential to interfere with many of the natural features or ecological functions of wetlands. NVCA staff would note that while the Provincial Policy Statement definition of development excludes works subject to the *Drainage Act*, the *Conservation Authorities Act* does not include this same provision.

NVCA staff are in receipt and have reviewed and provided comment on a Natural Environment Report, prepared by RiverStone Environmental Solutions Inc. The purpose of this study '*was to review the existing natural heritage features present in the areas of proposed drainage improvements to be completed under the Drainage Act*'. The NVCA is continuing to work with KSAL, RiverStone and the Township to ensure the NER represents an acceptable and comprehensive investigation of the project study area and evaluation of potential impact from the proposed construction on the Minesing Wetlands and associated watercourses.

Subject to the Board's concurrence and prior to issuance of a permit, the proposed works should be supported by the following satisfactory details submitted by the municipality:

- A revised Natural Environment Report, including incorporation of NVCA monitoring data, to further examine potential impacts and provide recommendations that ensure that the final proposed works are designed (and phased if necessary) in such a manner to avoid and mitigate adverse natural heritage impacts. Where impacts or loss to natural heritage systems are deemed unavoidable, this plan should specifically address offset and/or compensation to achieve no net loss to the natural heritage system function;

- Development and implementation of a comprehensive monitoring program to monitor for potential short term (from construction) and longer-term adverse impacts to natural heritage systems. Such a program will also allow for a quantitative investigation of the efficacy of the drainage works, and act as an indicator for future drain maintenance works. NVCA would propose to be involved with development and implementation of this monitoring program;

- Details prepared by a Professional Engineer confirming that the proposed works will not result in adverse flooding impact to adjacent properties;

- Detailed construction drawings/plans outlining the extent of the works, erosion and sediment control measures, restoration of disturbed areas, and enhancement plantings and habitat creation; and,

- Appropriate landowner permissions and other required Regulatory review and/or approvals (e.g. MECP, MNRF and DFO).

Based on consideration of the project, the NVCA understands KSAL/Township has concluded that benefiting landowners along the existing Swaley Drain do not have sufficient outlet, and that maintenance of the existing Swaley Drain under S.74 of the *Drainage Act* will not provide sufficient outlet. Therefore, and subject to the Board's concurrence, staff would propose the following:

- KSAL proceeds with development of a Preliminary Engineering Report for the project as proposed. The NVCA would request the Engineering Report stage the project. For example, the NVCA would propose two (2) phases. Phase '1' would be an extension to the Swaley Drain outlet from approximately Station 0+000 to 0+400. Phase '2' would be a provisional item for the remaining 350 or 550m extension (from Station 0+400 to Station 0+750 or Station 0+950).

- The 'trigger' for Phase '2' would be as determined through development and implementation of a comprehensive water level monitoring program developed with and acceptable to the NVCA, which will allow for evaluation of the efficacy of Phase '1' works prior to undertaking any Phase '2' works;
- The NVCA will review the entire project under a permit application per *Ontario Regulation 172/06* with the information/details as previously listed. Phase '1' and '2' would subsequently be considered under separate permit applications, though with no further required revisions to the Engineering Report or accompanying Bylaw.

The NVCA would also propose to enter into discussion with the Township to discuss the potential for the NVCA to be appointed as a drain commissioner, for the section of drain on NVCA lands, under S.95 of the *Drainage Act* and to further refine the NVCA role in the aforementioned monitoring program.

Relevance to Authority Policy/Mandate

The project is subject to the requirements of the Conservation Authorities Act and Ontario Regulation 172/06. The Drainage Act makes reference to Conservation Authorities involvement in the drainage projects including: notification of a project and the ability to appeal. In addition, under the Drainage Act the NVCA as a landowner is subject to assessment of a portion of the project's cost including construction and maintenance costs.

Impact on Authority Finances

The current total project cost is estimated at $345,000 – 360,000±. The portion of costs to the NVCA are to-be-determined as assessed by the Drainage Engineer and will include such considerations as engineering design and reporting, construction, allowances, and recurring maintenance. Costs to the NVCA associated with the *Drainage Act* works will be addressed through the NVCA Reserve. The staff costs associated with the review and issuance of related permit(s) is addressed within the existing 2021 budget.

The NVCA retained R.J. Burnside & Associates Limited to better understand our role as a landowner along the drain and potential cost assessment under the *Drainage Act* (see Schedule D for report).

Submitted by:		Approved for submission by:
Original Signed by		*Original Signed by*
Byron Wesson Director, Conservation Services	Chris Hibberd, Director, Watershed Management Services	Doug Hevenor Chief Administrative Officer

Swaley Drain
Staff Report No. 17-05-21-BOD

Attachment: Schedule 'A' – Staff Report No. 06-03-18-BOD
Schedule 'B' – Proposed Extension Plan/Vegetation Communities
Schedule 'C' - Swaley Drain Preliminary Report Drawings, prepared by KSAL, dated Dec. 2020, page 8 dated Feb. 2020.
Schedule 'D' – Report from R.J. Burnside & Associates Limited, dated May 13, 2021

SCHEDULE A

REVISED

Staff Report No.:	06-03-18-BOD
Date:	April 27, 2018
MEETING NO:	BOD-03-18
TO:	Chair and Members of the Board of Directors
FROM:	Byron Wesson, Director, Lands, Education and Stewardship Services Chris Hibberd, Director, Watershed Management Services

SUBJECT: **Swaley Drain, Township of Springwater**

Recommendation

RESOLVED THAT: Staff Report No. 06-03-18-BOD regarding the Township of Springwater's Swaley Drain project be received and approved.

Purpose of the Staff Report

The purpose of this report is to provide background on the proposed Swaley Drain and outline NVCA's permit and land ownership interests.

Background

The Swaley Drain is a municipal drain that was originally built in 1898 and incorporates a watershed area within Springwater Township that reaches from the southern edge of Anten Mills, parts of Minesing and several rural properties in between. The outlet for the Swaley Drain is within Minesing Wetlands. The Township received notice for drain improvement from an agricultural producer whose fields have been negatively affected by the present condition of the Swaley Drain. The Township's drainage engineer has been investigating opportunities to alleviate the reported drainage issues impacting on field tile outlets. The *Drainage Act* allows for improving, extending to an outlet or altering the drainage works under a report of an engineer appointed by the municipality.

Based on discussions with Township representatives, staff understand that proposed works are intended to ensure proper function of the municipal drain and the areas agricultural tile drains. The Township has also provided historical reference outlining construction of similar past drainage works including improved drainage at the confluence of the Muskrat Creek and the Nottawasaga River.

Issues/Analysis:

The Township is proposing to extend the Swaley Drain and to improve the outlet for Muskrat Creek. The construction is within the Minesing Wetland and within the regulatory floodplain. Due to the noted hazards and environmental features the works are within an area regulated by the NVCA pursuant to Ontario Regulation 172/06 and will require permit approval. In addition, a portion of the works appear to be on lands owned by the NVCA.

NVCA Lands: There have been two options presented for works to improve drainage on the Swaley drain. Option 1 included extensive channeling (approximately 4 km) to join the existing outlet of Swaley drain to what is known as the Cavana ditch. This option was largely discouraged by landowners, NVCA and township staff due to high costs and environmental impacts. Option 2 (as presented at the February 23 NVCA board meeting) would see a 300m extension of the existing Swaley drain outlet into a historic creek bed (Muskrat Creek) and an improvement to the end of the Muskrat Creek by enhancing its outlet into the Nottawasaga River. It is anticipated that water levels in the Swaley drain would be lowered by 300 mm. All of this work would take place on both NVCA and MNRF lands with the majority being NVCA.

This project will realize impacts to the immediate drain area from construction activity. Staff will be recommending and ensuring that matting will be used for transporting heavy equipment in and out of the work site. It is believed that any proposed disturbances will be minimized through this process. Staff are reviewing all options for dealing with the spoils (spread thinly around the channeled area/pile on one side of channel and/or remove completely) and will make recommendations accordingly. There are also some environmental enhancement options that staff and the contractor will consider for this project including tree planting, fish and turtle nesting habitat.

NVCA Permit Approval: Current Provincial and NVCA Planning and Regulation Guidelines (2009) identify that new development should be directed outside of wetlands to avoid the potential to interfere with many of the natural features or ecological functions of wetlands. NVCA staff would note that while the Provincial Policy Statement definition of development excludes works subject to the *Drainage Act,* the *Conservation Authorities Act* does not include this same provision.

In support of the review of a permit application, the NVCA may request an Environmental Impact Study (EIS) to address interference with a wetland. An EIS is a mechanism for assessing impacts to determine the appropriateness of a proposal.

An EIS must be carried out by a qualified professional, with recognized expertise in the appropriate area of concern. Staff's intent in the review of the EIS and other essential documentation is to ensure that the works do not result in adverse impacts on the Minesing Wetland and associated watercourses. In this regard, ecology staff have identified specific concerns that the works at the confluence of Muskrat Creek and the Nottawasaga River have the potential to result in adverse impacts that should be examined.

Subject to the Board's concurrence and prior to issuance of a permit, the proposed works should be supported by the following satisfactory details submitted by the municipality:

- An Environmental Impact Study that examines the environmental impacts and provides recommendations that ensure that the final proposed works are designed (and phased if necessary) in such a manner to avoid, mitigate and where necessary offset environmental impacts to achieve no net loss to the natural heritage system;
- Details prepared by a professional engineer confirming that the proposed works will not result in adverse flooding impact to adjacent properties. In addition, the proposed drainage works should be reviewed and approved by fluvial geomorphologist;
- Detailed construction drawings/plans outlining the extent of the works, erosion and sediment control measures, restoration of disturbed areas, and enhancement plantings and habitat creation; and,
- Appropriate landowner permissions and other required approvals (e.g. MNRF and DFO).

NVCA staff will continue to assist through ongoing discussions with Township staff, Drainage Engineer and other involved qualified professionals.

Relevance to Authority Policy/Mandate:

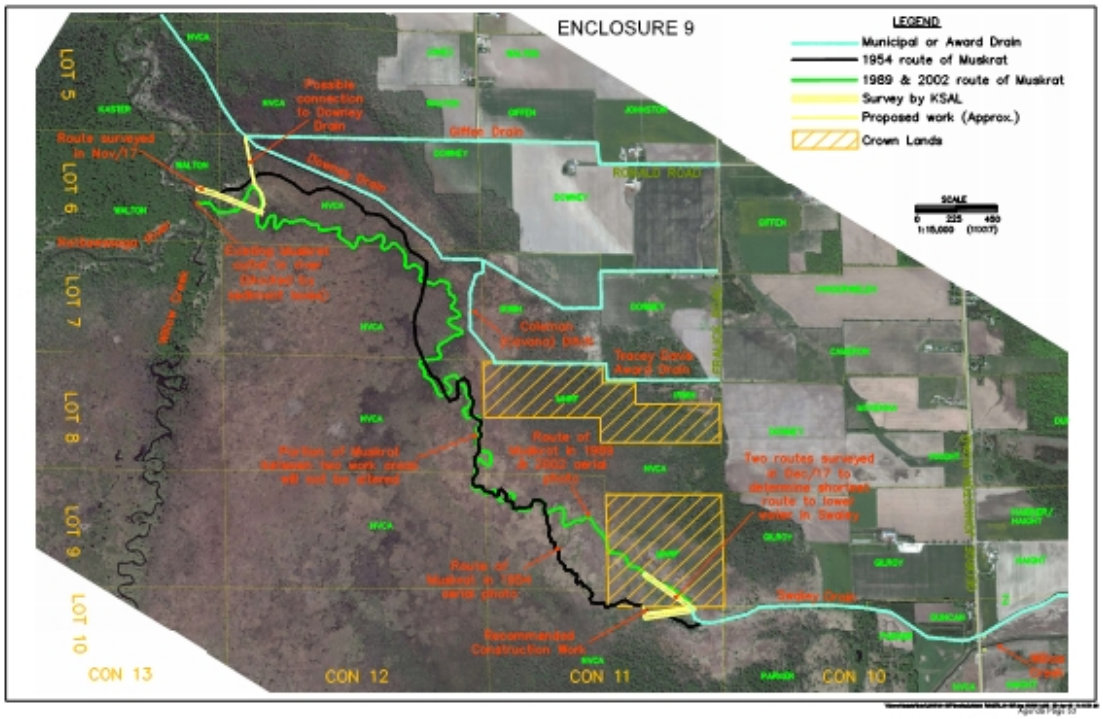
The project is subject to the requirements of the *Conservation Authorities Act* and Ontario Regulation 172/06. The *Drainage Act* makes reference to Conservation Authorities involvement in the drainage projects including: notification of a project and the ability to appeal. In addition, under the *Drainage Act* the NVCA as a benefitting landowner is subject to assessment of a portion of the project's cost including construction and maintenance costs.

Impact on Authority Finances:

Costs associated the *Drainage Act* works will be addressed through NVCA's Land Acquisition Reserve. It is anticipated that NVCA's share of this $200,000 project will realize approximately $10,000. Future maintenance costs (every 10 to 15 years) are expected to realize $1500 to $2000 as part of our accessed share of the drain. The staff costs associated with the review and issuance of related permit(s) is addressed within the existing 2018 budget.

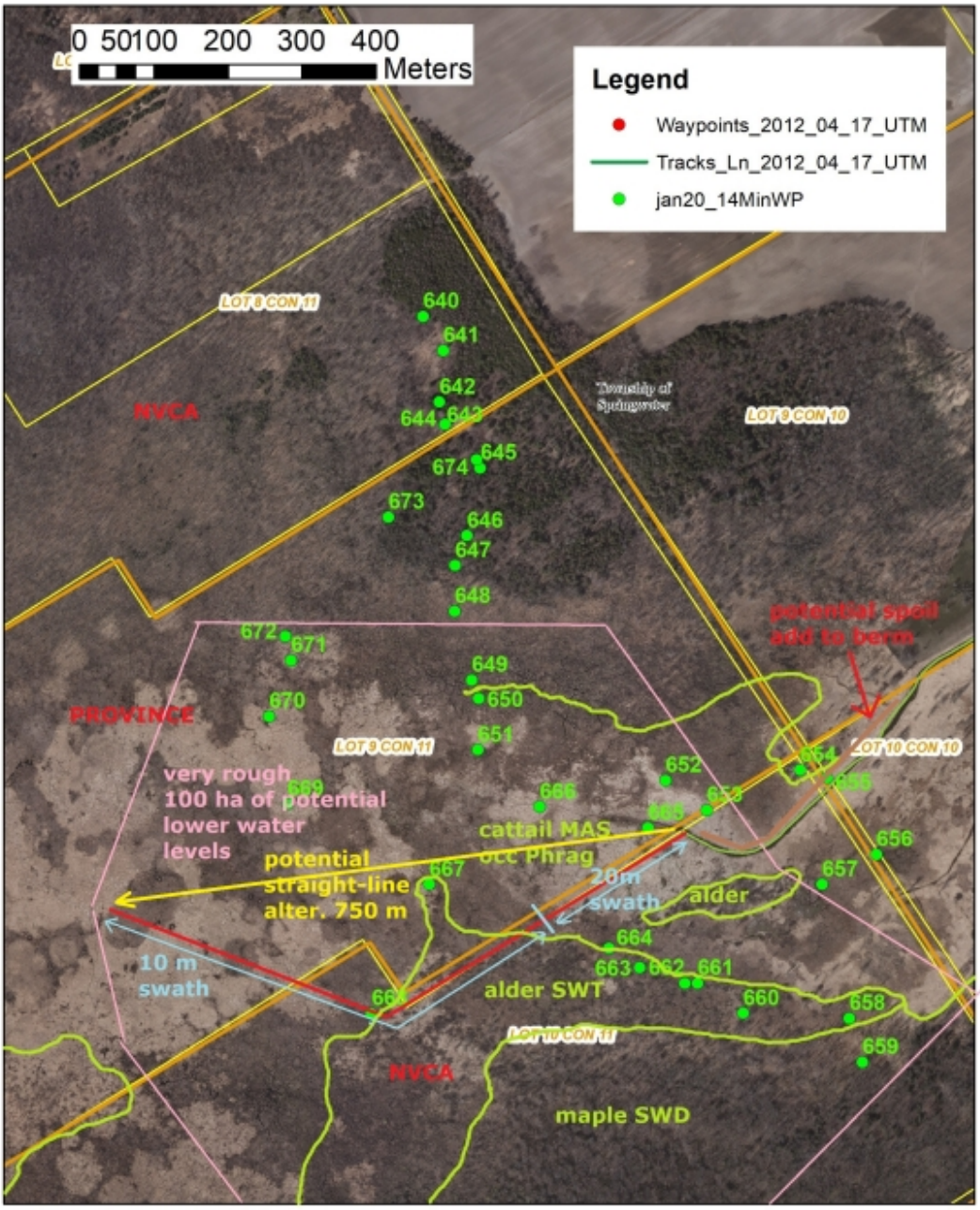
Submitted by:		Approved for submission by:
Original Signed by	*Original Signed by*	*Original Signed by*
Byron Wesson Director, Lands, Education and Stewardship	Chris Hibberd, Director, Watershed Management Services	Doug Hevenor Chief Administrative Officer

Attachment: Location Map


ENCLOSURE 9
LEGEND
Municipal or Award Drain
1954 route of Muskrat
1989 & 2002 route of Muskrat
Survey by KSAL
Proposed work (Approx.)
Crown Lands
SCALE
0 225 450
Possible connection to Downey Drain
Route surveyed in Nov/17
Existing Muskrat outlet to be ditched to sediment basin
Coleman (Downey) Drain
Tracey Creek Award Drain
Route of Muskrat in 1989 & 2002 aerial photos
Portion of Muskrat between two work areas will not be altered
Two routes surveyed in Dec/17 to determine shortest route to lower portion in Swaley
Swaley Drain
Recommended Construction Work
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
CON 13
CON 12
CON 11
CON 10

SCHEDULE B

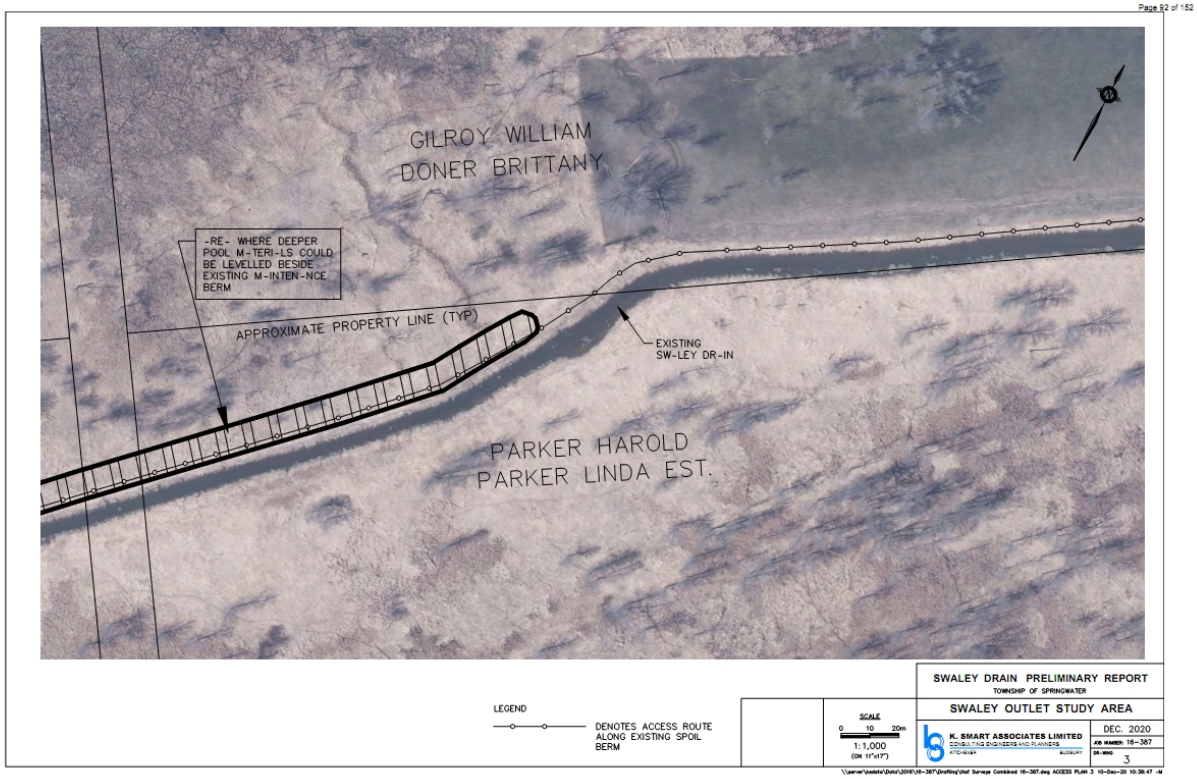
Swaley Drain
Proposed Extension/Vegetation Communities
UNC 30738

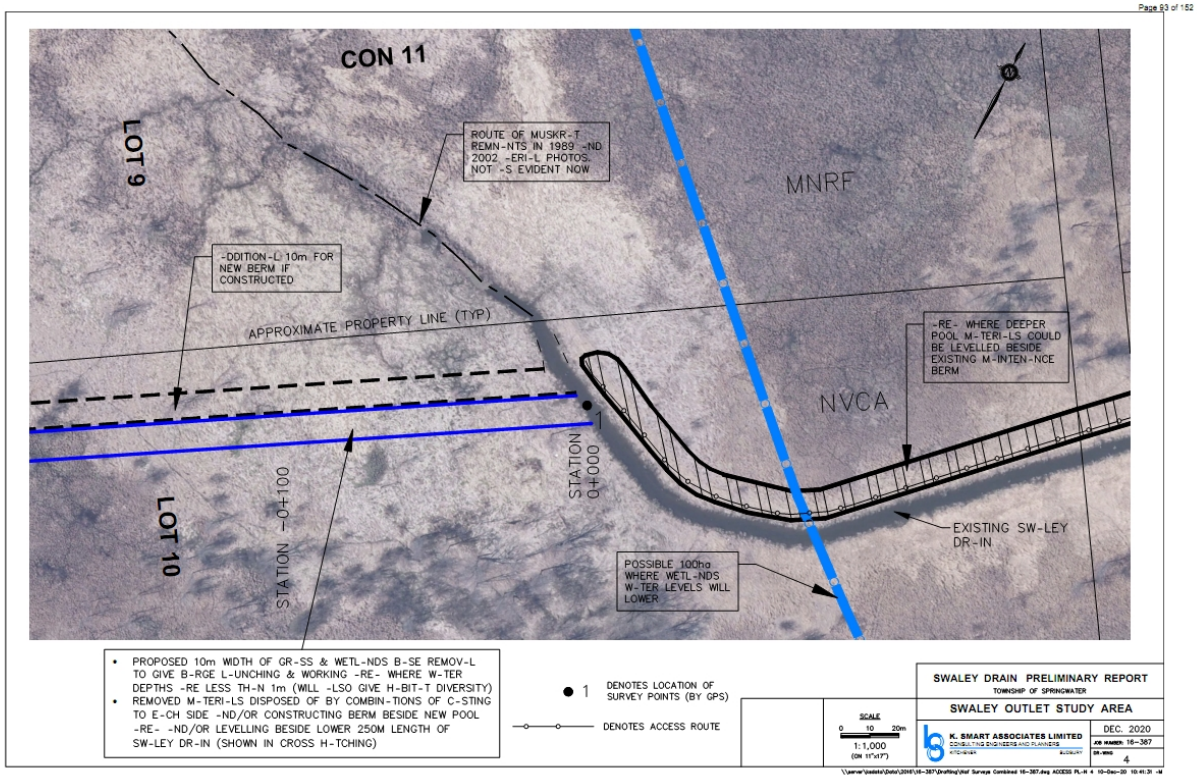


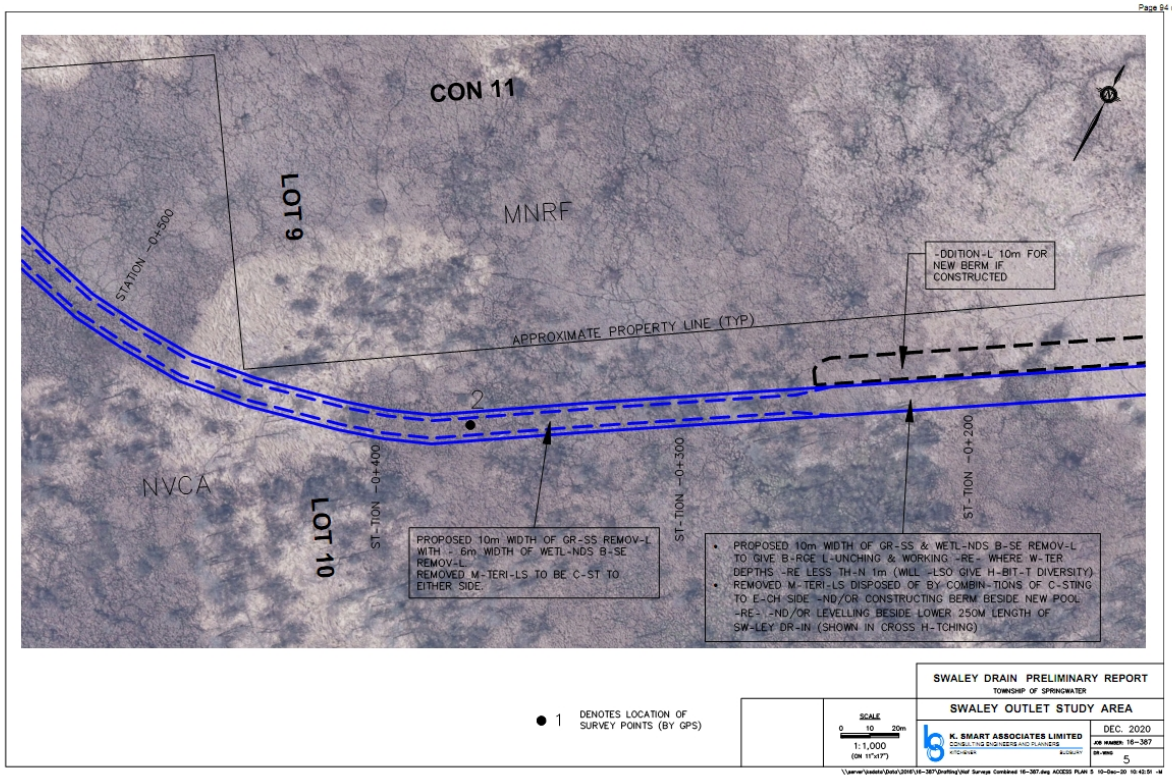

GILROY WILLIAM
DONER BRITTANY
GILROY OUTLET
GEORGE JOHNSTON ROAD
PARKER HAROLD
PARKER LINDA EST.
EXISTING
SW-LEY DR-IN
PARKER HAROLD
NOTE:
1. AERIAL PHOTO – SIMCOE COUNTY 2016
LEGEND
DENOTES ACCESS ROUTE THROUGH YARD AND FIELD
SCALE
1:3,000
SWALEY DRAIN PRELIMINARY REPORT
TOWNSHIP OF SPRINGWATER
ACCESS ROUTE
K. SMART ASSOCIATES LIMITED
DEC. 2020
1

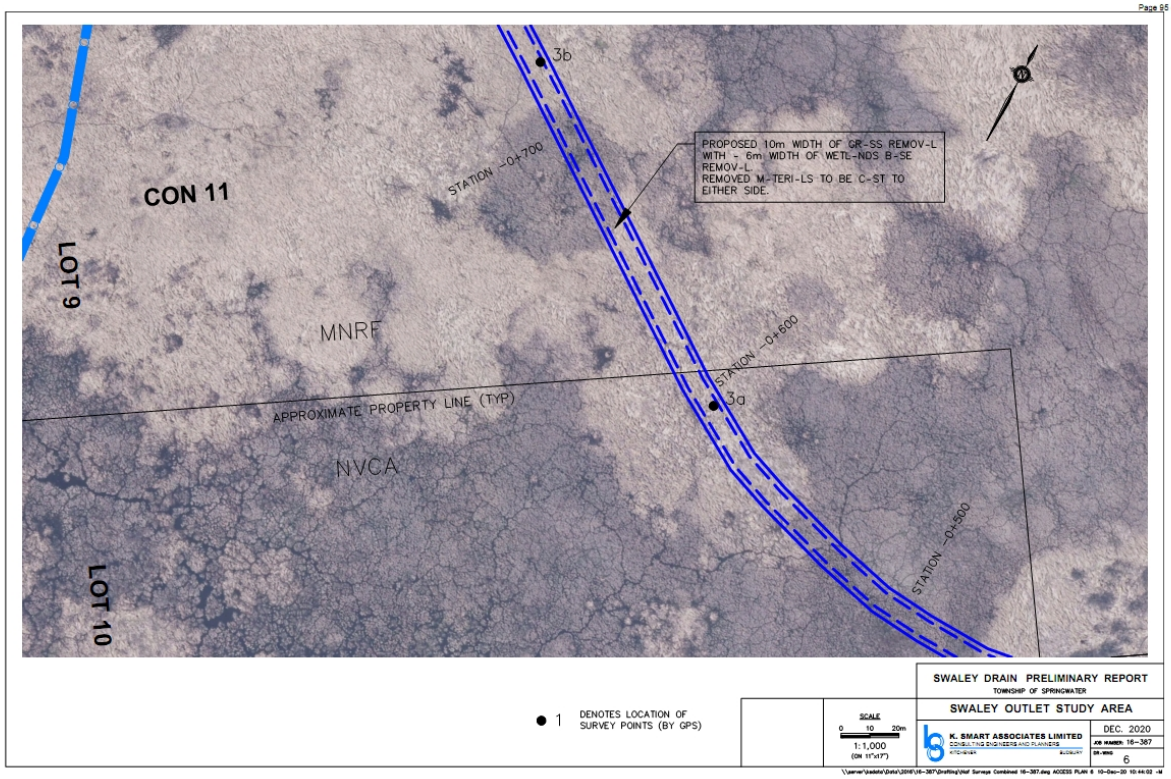
SCHEDULE C


GILROY WILLIAM
DONER BRITTANY
GILROY OUTLET
EXISTING
SW-LEY DR-IN
PARKER HAROLD
PARKER LINDA EST.
LEGEND
DENOTES ACCESS ROUTE ALONG EXISTING SPOIL BERM
SCALE
1:1,000
SWALEY DRAIN PRELIMINARY REPORT
TOWNSHIP OF SPRINGWATER
SWALEY OUTLET STUDY AREA
K. SMART ASSOCIATES LIMITED
DEC. 2020
2


GILROY WILLIAM
DONER BRITTANY
-RE- WHERE DEEPER POOL M-TERI-LS COULD BE LEVELLED BESIDE EXISTING M-INTEN-NCE BERM
APPROXIMATE PROPERTY LINE (TYP)
EXISTING SW-LEY DR-IN
PARKER HAROLD
PARKER LINDA EST.
LEGEND
DENOTES ACCESS ROUTE ALONG EXISTING SPOIL BERM
SCALE
1:1,000
SWALEY DRAIN PRELIMINARY REPORT
TOWNSHIP OF SPRINGWATER
SWALEY OUTLET STUDY AREA
K. SMART ASSOCIATES LIMITED
DEC. 2020
3


CON 11
LOT 9
LOT 10
ROUTE OF MUSKR-T REMN-NTS IN 1989 -ND 2002 -ERI-L PHOTOS. NOT -S EVIDENT NOW
-DDITION-L 10m FOR NEW BERM IF CONSTRUCTED
APPROXIMATE PROPERTY LINE (TYP)
MNRF
N.VCA
-RE- WHERE DEEPER POOL M-TERI-LS COULD BE LEVELLED BESIDE EXISTING M-INTEN-NCE BERM
STATION 0+000
STATION 0+100
EXISTING SW-LEY DR-IN
POSSIBLE 100ha WHERE WETL-NDS W-TER LEVELS WILL LOWER
• PROPOSED 10m WIDTH OF GR-SS & WETL-NDS B-SE REMOV-L TO GIVE B-RGE L-UNCHING & WORKING -RE- WHERE W-TER DEPTHS -RE LESS TH-N 1m (WILL -LSO GIVE H-BIT-T DIVERSITY)
• REMOVED M-TERI-LS DISPOSED OF BY COMBIN-TIONS OF C-STING TO E-CH SIDE -ND/OR CONSTRUCTING BERM BESIDE NEW POOL -RE- -ND/OR LEVELLING BESIDE LOWER 250M LENGTH OF SW-LEY DR-IN (SHOWN IN CROSS H-TCHING)
1 DENOTES LOCATION OF SURVEY POINTS (BY GPS)
DENOTES ACCESS ROUTE
SCALE
1:1,000
SWALEY DRAIN PRELIMINARY REPORT
TOWNSHIP OF SPRINGWATER
SWALEY OUTLET STUDY AREA
K. SMART ASSOCIATES LIMITED
DEC. 2020
4


CON 11
LOT 9
MNRF
STATION -0+500
APPROXIMATE PROPERTY LINE (TYP)
-DDITION-L 10m FOR NEW BERM IF CONSTRUCTED
2
NVCA
LOT 10
STATION -0+400
STATION -0+300
STATION -0+200
PROPOSED 10m WIDTH OF GR-SS REMOV-L WITH - 6m WIDTH OF WETL-NDS B-SE REMOV-L
REMOVED M-TERI-LS TO BE C-ST TO EITHER SIDE.
PROPOSED 10m WIDTH OF GR-SS & WETL-NDS B-SE REMOV-L TO GIVE B-RGE L-UNCHING & WORKING -RE- WHERE W-TER DEPTHS -RE LESS TH-N 1m (WILL -LSO GIVE H-BIT-T DIVERSITY)
REMOVED M-TERI-LS DISPOSED OF BY COMBIN-TIONS OF C-STING TO E-CH SIDE -ND/OR CONSTRUCTING BERM BESIDE NEW POOL -RE- -ND/OR LEVELLING BESIDE LOWER 250M LENGTH OF SW-LEY DR-IN (SHOWN IN CROSS H-TCHING)
1 DENOTES LOCATION OF SURVEY POINTS (BY GPS)
SCALE
0 10 20m
1:1,000
(ON 11"x17")
SWALEY DRAIN PRELIMINARY REPORT
TOWNSHIP OF SPRINGWATER
SWALEY OUTLET STUDY AREA
K. SMART ASSOCIATES LIMITED
DEC. 2020
JOB NUMBER: 16-387
DR-WING 5


3b
STATION -0+700
PROPOSED 10m WIDTH OF GR-SS REMOV-L WITH - 6m WIDTH OF WETL-NDS B-SE REMOV-L
REMOVED M-TERI-LS TO BE C-ST TO EITHER SIDE.
CON 11
LOT 9
MNRF
STATION -0+600
APPROXIMATE PROPERTY LINE (TYP)
3a
NVCA
STATION -0+500
LOT 10
1 DENOTES LOCATION OF SURVEY POINTS (BY GPS)
SCALE
0 10 20m
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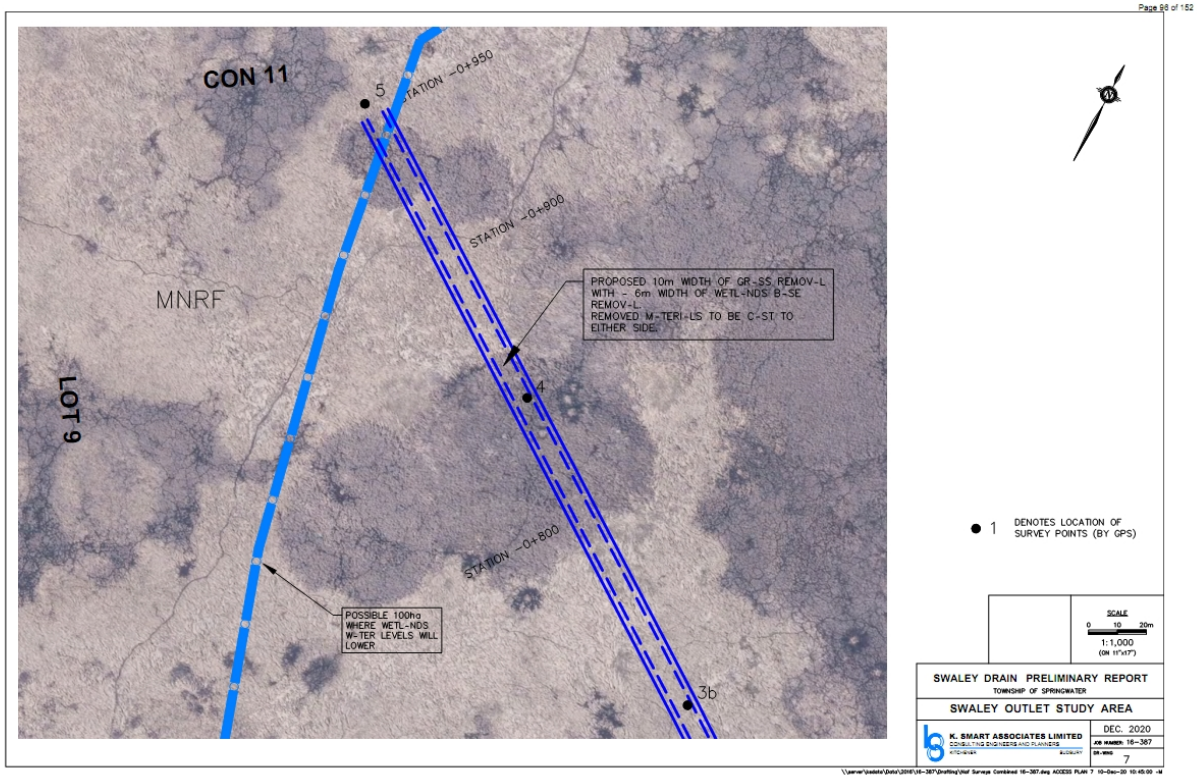
(ON 11"x17")
SWALEY DRAIN PRELIMINARY REPORT
TOWNSHIP OF SPRINGWATER
SWALEY OUTLET STUDY AREA
K. SMART ASSOCIATES LIMITED
DEC. 2020
JOB NUMBER: 16-387
DR-WING 6


CON 11
LOT 9
MNRF
STATION -0+950
STATION -0+900
STATION -0+800
PROPOSED 10m WIDTH OF GR-SS REMOV-L WITH - 6m WIDTH OF WETL-NDS B-SE REMOV-L.
REMOVED M-TERI-LS TO BE C-ST TO EITHER SIDE.
POSSIBLE 100lng WHERE WETL-NDS W-TER LEVELS WILL LOWER
1 DENOTES LOCATION OF SURVEY POINTS (BY GPS)
SCALE
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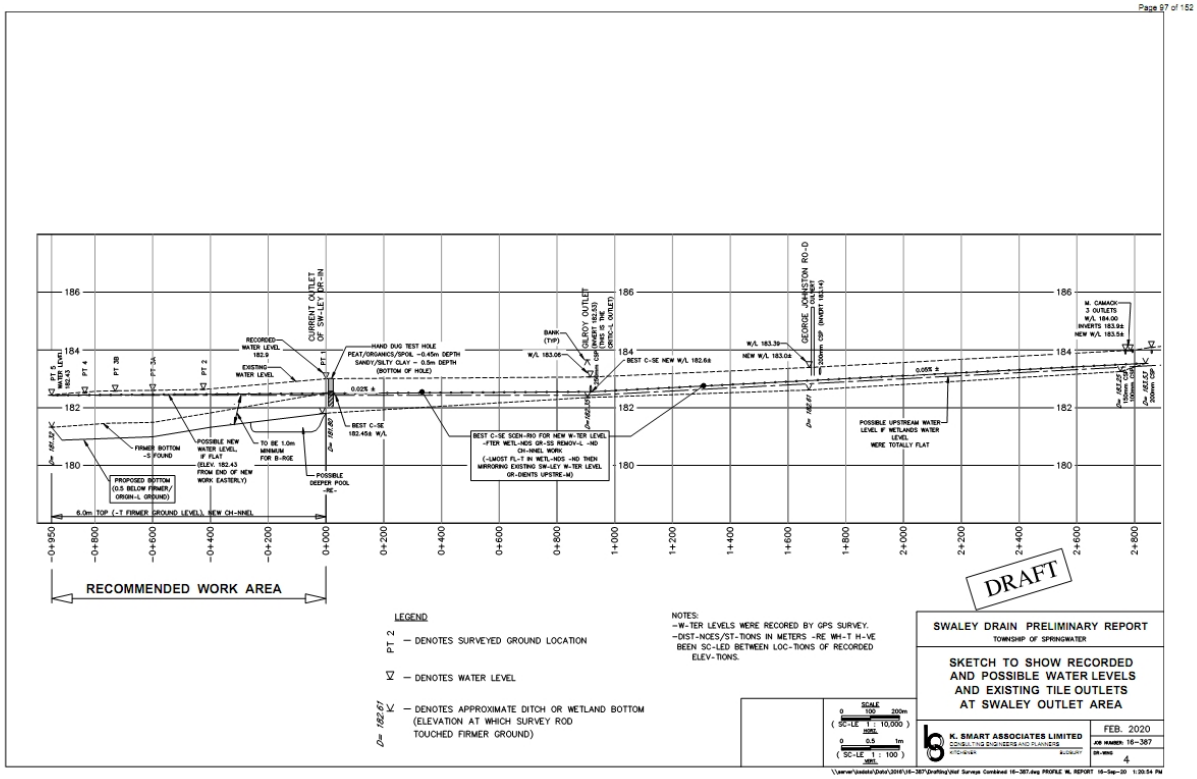
SWALEY DRAIN PRELIMINARY REPORT
TOWNSHIP OF SPRINGWATER
SWALEY OUTLET STUDY AREA
K. SMART ASSOCIATES LIMITED
DEC. 2020


RECOMMENDED WORK AREA
DRAFT
LEGEND
PT 2 — DENOTES SURVEYED GROUND LOCATION
— DENOTES WATER LEVEL
— DENOTES APPROXIMATE DITCH OR WETLAND BOTTOM (ELEVATION AT WHICH SURVEY ROD TOUCHED FIRMER GROUND)
NOTES:
-W-TER LEVELS WERE RECORED BY GPS SURVEY.
-DIST-NCES/ST-TIONS IN METERS -RE WH-T H-VE BEEN SC-LED BETWEEN LOC-TIONS OF RECORDED ELEV-TIONS.
SWALEY DRAIN PRELIMINARY REPORT
TOWNSHIP OF SPRINGWATER
SKETCH TO SHOW RECORDED AND POSSIBLE WATER LEVELS AND EXISTING TILE OUTLETS AT SWALEY OUTLET AREA
K. SMART ASSOCIATES LIMITED
FEB. 2020

SCHEDULE D

R.J. Burnside & Associates Limited 15 Townline Orangeville ON L9W 3R4 CANADA
telephone (519) 941-5331 **fax** (519) 941-8120 **web** www.rjburnside.com

BURNSIDE
[THE DIFFERENCE IS OUR PEOPLE]

May 13, 2021

Via: Email <ddyce@nvca.on.ca>

Mr. Daniel Dyce
Senior Regulations Technician
Nottawasaga Valley Conservation Authority
8195 8th Line
Utopia, ON L0M 1T0

Dear Daniel:

Re: Swaley Drain Improvement Project – Township of Springwater
Project No.: 300053074.0000

In response to requests from upstream property owners, the Township of Springwater (Township) appointed the consulting engineering firm K. Smart Associates Ltd. (KSAL) under Section 78 of the Drainage Act to investigate and propose improvements to the Swaley Drain.

By email dated March 19, 2021, you, on behalf of the Nottawasaga Valley Conservation Authority (NVCA), requested the following:

> *Opinion letter/report to outline the various options and outcomes resulting from our role as a landowner, including how our decision as a Regulatory authority may impact the process.*

You also identified the following specific questions for discussion/opinion:

1. *Does the outcome of our Regulatory review under O.Reg.172/06 impact on the outcome of our role as a landowner? For example, there have been insinuations that refusing permission would require allocation of costs for insufficient outlet, with significant portion to be allocated to the CA.*

2. *As a landowner, we currently receive no benefit from the drain, as we do not, nor do we plan to, farm the lands. In fact, since our 'use' of the land is connected to its natural heritage function, you could argue that any impairment of natural heritage function would limit our benefit from the land. Should the project be approved, we understand costs would be assessed – we would request an opinion on what we can expect in terms of a relative assessed value for construction, maintenance, etc. under the Drainage Act process based on current land use.*

The responses to these requests are provided as specific attachments to this letter. Specifically:

Attachment 1: Responses to Question 1
Attachment 2: Responses to Question 2
Attachment 3: Recommendations in response to the initial request.
Attachment 4: Drainage Act Background
Attachment 5: Abbreviated Drain Construction or Improvement Process Flowchart

Please note that any references to section numbers in these attachments are references to sections of the Drainage Act.

If you have any questions about this information, please contact me.

Yours truly,

R.J. Burnside & Associates Limited

Sid Vander Veen, P. Eng.,
Drainage Specialist
SVV:kl

Enclosures: As Noted Above

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2021-05-12 2:43 PM

Attachment 1: Response to Question 1

1. ***Does the outcome of our Regulatory review under O.Reg.172/06 impact on the outcome of our role as a landowner? For example, there have been insinuations that refusing permission would require allocation of costs for insufficient outlet, with significant portion to be allocated to the CA.***

Response:

The response to this question is divided into two components:

a) Allowances for insufficient outlet:

b) S. 40 Report: Drain cannot be constructed under this Act.

a) Allowances for Insufficient Outlet

When a drainage project is proposed to be constructed, some property owners may be temporarily or permanently impacted. The Drainage Act assigns the engineer the responsibility to compensate property owners for these impacts, when appropriate, through the provision of "allowances". Allowances can be compensation for the use of land (S. 29) or for damages caused in the construction of the drain (S. 30). The compensation provided in the engineer's report becomes part of the cost of the project.

S. 15 of the Drainage Act instructs the engineer to take all drainage systems to a sufficient outlet, meaning a point where the water can be safely discharged without damaging lands or roads. However, S. 32 gives the engineer the authority to provide compensation for "insufficient outlet" with the following:

> ***32.*** *Where, in the opinion of the engineer, the cost of continuing a drainage works to a sufficient outlet or the cost of constructing or improving a drainage works with sufficient capacity to carry off the water will exceed the amount of injury likely to be caused to low-lying lands along the course of or below the termination of the drainage works, instead of continuing the works to such an outlet, or making it of such capacity, the engineer may include in the estimate of cost a sufficient sum to compensate the owners of such low-lying lands for any injuries they may sustain from the drainage works, and in the report the engineer shall determine the amount to be paid to the owners of such low-lying lands in respect of such injuries."*

In this situation, the engineer has the authority to provide a one-time allowance to the owners of the impacted lands located upstream of the Minesing Wetlands to compensate them for not taking the drain to a sufficient outlet. The cost of this allowance becomes part of the cost of the project and is assessed to the lands in the watershed of the drain.

The engineer has full autonomy to assign the cost of this allowance; it is possible for the engineer assign all or part of the cost of this compensation to the lands owned by the NVCA. Although the engineer has autonomy to assess, it does not appear to be an appropriate interpretation of the legislation to assess a property owner (NVCA) because of conditions imposed by a regulatory agency (NVCA). If the property was owned by a different owner (e.g. Nature Conservancy of Canada, or MNRF), it would be very questionable to assess these lands because of restrictions imposed by the NVCA, the regulating agency.

Further, the general practice is that the costs of projects under the Drainage Act are assessed upstream. If the engineer concludes that it is not cost effective or practical to obtain a sufficient outlet and decides to provide an allowance under S. 32 to compensate those lands affected by the insufficient outlet, those costs in almost all circumstances would be assessed to the upstream lands.

Given the autonomy of the engineer, it is still possible for these costs to be assessed to the NVCA lands. If this occurs, grounds exist for an NVCA appeal to the court of revision or the Tribunal. The right to appeal allowances is covered in Attachment 2.

b) S. 40 Report: Drain cannot be constructed under this Act

When an engineer appointed under S. 4 (new drain) or S. 78 (drain improvement) of the Drainage Act concludes that a project cannot proceed, the engineer must apply S. 40 of the Act, which states:

> ***40.*** *Where the engineer finds that a drainage works is not required or is impractical, or cannot be constructed under this Act, the engineer shall forthwith file with the clerk of the initiating municipality a report to that effect, stating the reasons therefor, the amount of the engineer's fees and other charges and by whom they shall be paid, and the clerk shall forthwith send a notice of the filing of such report to all persons who signed the petition and the matter shall not be further proceeded with unless the decision of the engineer is reversed on appeal.*

A common application of this section of the Act occurs when one or more of the property owners that initiated a drainage project decide that they no longer want to continue with the project. For example, if a petitioning property owner solves the drainage problem through an agreement reached with their neighbour, then the municipal drain project is no longer required. Once the engineer becomes aware of this, it would be appropriate for the engineer to write a S. 40 report.

But this section of the Act has been used in other ways. The proposed Rosene Spillway / Deer Lake Project in the Municipality of West Nipissing was an untraditional use of the Drainage Act. A group of cottage owners on Deer Lake petitioned the Municipality under the Drainage Act to have a spillway created to moderate the water levels in the lake. In order for this project to proceed, the Ministry of Natural Resources (MNR) determined that approval under the Lakes and Rivers Improvement Act (LRIA) was required. The MNR also owned property located in the watershed of the drain.

After spending a significant amount of time performing studies and consulting with property owners, the engineer concluded that MNR was not willing to grant LRIA approval. The engineer wrote a S. 40 report, indicating that the project could not be constructed under the Act. At that point, about $90,000 in engineering costs had been accumulated, and the S. 40 report indicated that these costs should be divided equally between the municipality (1/3), the cottage owners (1/3) and MNR (1/3).

The MNR appealed this report to the Agriculture, Food and Rural Affairs Appeal Tribunal (Tribunal) and a decision was issued in April 2014 (https://canlii.ca/t/g6hg6). In their decision, the Tribunal made the following statements:

> *"We conclude that the Ministry tied its location approval of the proposed dam (spillway) to the Engineer's proposed assessments under the Act.*

The Tribunal finds as a fact that the Ministry's communications about the LRIA approval with the Engineer were confusing and inconsistent.

The Tribunal finds as a fact that the Ministry's communications about the LRIA approval mislead the Engineer.

The Tribunal finds as a fact that the Ministry tied its approval location under the LRIA to the Engineer's proposed assessments under the Act.

The Tribunal finds as a fact that the confusing and inconsistent and misleading communications from the Ministry resulted in additional time and expense by the Engineer.

The Tribunal finds as a fact that the Ministry tying its approval location under the LRIA to the Engineer's proposed assessments under the Act to have resulted in wasted time and expense by the Engineer.

In all these circumstances, the Tribunal finds that the Engineer did have a good faith basis for his view that he had received conflicting statements from the Ministry about location approval, riparian owners' rights, the requirement for plans and specifications, and the Ministry's tying location approval to the proposed assessments.

There was no evidence that satisfied the Tribunal that the Engineer's determination that the Ministry should pay 1/3 of the "fees and other charges" was rash or motivated by vindictiveness or improper considerations. The Engineer was eminently qualified and the Tribunal was satisfied that he exercised a cautious and reasoned approach to his determination under section 40 of the Act."

Based on the above, if the NVCA regulatory requirements posed significant barriers to completing the drainage work such that the engineer felt compelled to write a Section 40 report, it is possible for the NVCA to be assessed a share of the cost of a failed project. But it is important to note that in the above example, the regulatory agency (MNR) was assessed, not MNR as a property owner. It is important to continue to make that distinction between NVCA lands and regulatory authority.

Attachment 2: Response to Question 2

2. ***As a landowner, we currently receive no benefit from the drain, as we do not, nor do we plan to, farm the lands. In fact, since our 'use' of the land is connected to its natural heritage function, you could argue that any impairment of natural heritage function would limit our benefit from the land. Should the project be approved, we understand costs would be assessed – we would request an opinion on what we can expect in terms of a relative assessed value for construction, maintenance, etc. under the Drainage Act process based on current land use.***

Response:

There are five types of assessments under the Drainage Act:

S. 22: Benefit Assessment is levied to lands that derives a benefit from the drainage system. In order to be assessed benefit, the land must be able to derive some benefit from the drainage system, even if the current owner has no intention of making use of that benefit. The Drainage Act defines "benefit" as follows:

"…means the advantages to any lands, roads, buildings or other structures from the construction, improvement, repair or maintenance of a drainage works such as will result in a higher market value or increased crop production or improved appearance or better control of surface or subsurface water, or any other advantages relating to the betterment of lands, roads, buildings or other structures."

S. 23(1): Outlet Liability Assessment is assessed to the lands that contribute water into a drainage system; with rare exception, all lands in the watershed of a drain are assessed some amount for outlet liability. According to S. 23(3) of the Act, the assessment is based on the volume and rate of flow of water artificially caused to flow into the drain.

S. 23(2): Injuring Liability Assessment is assessed to lands that collect and concentrate the flow of water and direct it onto a lower property owner. Similar to outlet liability, it is based on S. 23(3) of the Act. Because of the similarity to outlet liability assessments, injuring liability is rarely used today.

S. 24: Special Benefit is assessed to property owners that request and receive a feature that is not required for the functioning of the drainage system. Examples might be an additional crossing, or the hauling away of the spoil excavated from the drain. The Act defines "special benefit" as follows:

"…means any additional work or feature included in the construction, repair or improvement of a drainage works that has no effect on the functioning of the drainage works"

S. 26: Special Assessment: This assessment is specifically directed to roads and/or public utilities to offset the additional cost to a drainage system caused by the existence of the road or public utility. For example, if a proposed channel drainage system needed to cross a municipal road, the community of landowners in the watershed of the drain would pay the equivalent of constructing a channel across the road right-of-way. The road authority would pay all the other costs associated with installing the crossing.

The potential to apply each of the above assessment types to Lot 10, Concession 11 of the former Township of Vespra, which is the property owned by the NVCA is as follows:

Benefit Assessment:

Nothing in the definition of "benefit" would apply to these NVCA lands. A wetland does not, in any way, benefit from improved drainage. As indicated in the question, the project may impair the wetland. Publication 852 of the Ontario Ministry of Agriculture, Food and Rural Affairs is entitled "A Guide for Engineers working under the Drainage Act in Ontario". On page 63, the Guide provides the following direction to engineers:

> *"Protected wetlands that discharge into a drain should not be assessed for benefit."*

This principle is also supported by the 1969 decision of Judge W. Reville, QC, Judge of the County Court of Brant in the decision on the appeals from the local Court of Revision on the Bennett and Martin Municipal Drains in the Township of Burford. In this decision, Judge Reville states:

> *"Whether or not the proposed drainage schemes will be detrimental to the lands of the Conservation Authority in that they will frustrate the objects which the Authority had in mind in acquiring the properties or will limit the effectiveness of those objects, I think it is obvious on all the evidence that the said scheme will be of no benefit to the lands of the Authority. It follows, therefore, that the assessments for benefit levied against the lands of the Authority, in both the reports covering both the Martin and Bennett Drains, must be struck out…"*

In summary, the above NVCA lands should not be assessed for benefit for this project.

Outlet Liability Assessment:

The Swaley Drain appears to be governed by By-law Number 990 of the former Township of Vespra which adopts a 1948 report authored by E. O. Rawson, P. Eng. In this 990, the E½ Lot 10, Concession 11, currently owned by the NVCA was assessed $0.00 for benefit, $0.00 for outlet liability and $1.00 for injuring liability. The total assessment on this property was $1.00 out a project estimated to cost $10,208.

The assessment schedule for the Swaley Drain was updated in 1970 through a report produced by Ainley & Associates and adopted by By-law No. 1444 of the former Township of Vespra. The plan included in this report clearly shows the drain extending into Lot 10, Concession 11, but the updated assessment schedule does not assess any costs for future maintenance and repair to this property.

Today, when creating a new assessment schedule for this drain, the engineer is instructed by S. 34 of the Drainage Act which states:

> ***34.*** *In fixing the sum to be assessed upon any land or road, the engineer may take into consideration any prior assessment or allowance on the same land or road for the construction, improvement, maintenance or repair of a drainage works and make such adjustment therefor as appears just, and in the report the engineer shall state the adjustment so made.*

Injuring Liability Assessment:

The NVCA lands will not be assessed for injuring liability for two reasons:

1) The Drainage Act defines "injuring liability" as
   "…the part of the cost of the construction, improvement, maintenance or repair of a drainage works required to relieve the owners of any land or road from liability for injury caused by water artificially made to flow from such land or road upon any other land or road."

   It is highly unlikely that the NVCA lands, as provincially significant wetlands, are artificially collecting water and discharging it on downstream lands.

2) The basis for calculating injuring liability assessments is identical to that for outlet liability. The accepted industry practice is to combine both of these assessment types into a single "outlet liability" column. Outlet liability was addressed earlier.

Special Benefit Assessment:

There is no legal basis to assess, as a special benefit, a property owner for conditions imposed by a regulatory agency, even if the property owner and the regulatory agency are the same agency. As a regulator, it is NVCA's responsibility to regulate activities on all of the Minesing Wetland properties, not just the wetlands on the property owned by NVCA.

S. 26 Special Assessment:

Both "public utility" and "road authority" are terms defined in the Drainage Act. The NVCA lands do not fit into either definition. Therefore, this form of assessment cannot legally be used to impose any costs on the NVCA lands.

Summary:

Excluding road, utility and special benefit items on any project, the remaining costs are divided between benefit and outlet liability. The split between the two assessment types is a judgement call by the engineer. The outlet liability component of the assessment is expected to be larger than the benefit component.

I would expect the NVCA lands to be assessed some amount for outlet liability, but the per acre assessment rate should be considerably less than that imposed on the upstream agricultural lands because:

- Per hectare, the NVCA lands contribute less water to the Swaley Drain.
- The NVCA lands only use a very short length of the Swaley Drain.

Appeal Rights:

As a property owner, the NVCA has the following appeal rights:

Court of Revision: The court of revision is a municipally appointed appeal body that hears appeals on assessments only. It is usually a 3-person panel. S. 52 lists the following grounds for appeal to the court of revision:

52 (1) *An owner of land assessed for the drainage works may appeal to the court of revision on any of the following grounds:*

1. Any land or road has been assessed an amount that is too high or too low.
2. Any land or road that should have been assessed has not been assessed.
3. Due consideration has not been given to the use being made of the land.

No representation is required to appear before the court of revision. Occasionally a property owner will retain another engineer to make assessment arguments. The decision of the court of revision can be appealed to the Agriculture, Food and Rural Affairs Appeal Tribunal (Tribunal).

Tribunal: The Agriculture, Food and Rural Affairs Appeal Tribunal is a provincially appointed appeal body. They usually sit as a 3-member panel, using the council chambers for their hearing. They hear the following types of property owner appeals

a) S.54: Appeals from the decision of the court of revision. Any decision of the court of revision can be appealed to the Tribunal who's decision is then final.
b) S. 48: On technical matters. Specifically, a proposed drainage project can be appealed to the Tribunal on the following broad grounds:
   - That the project is not cost-beneficial
   - That the drain should be modified
   - That the compensation or allowances are inadequate or excessive

Although some appellants retain lawyers to assist them with their appeals before the Tribunal, in appeals of a technical nature, an engineer experienced in drainage matters may be more useful.

Referee: The Referee is also a provincially appointed appeal body. The Referee hears all matters of law or procedure under the Drainage Act and sits as an individual, not a panel. The hearings are held in the courtroom of the local Superior Court of Justice. While assessment appeals cannot be heard by the Referee, matters of law involving assessments could be heard by the Referee. For example, if the additional costs of complying with NVCA regulations are assessed to NVCA the landowner, the NVCA could appeal to the Referee under Section 47 of the Drainage Act, which states:

47. *Any owner of land or public utility affected by a drainage works, if dissatisfied with the report of the engineer on the grounds that it does not comply with the requirements of this Act, or that the engineer has reported that the drainage works cannot be constructed under section 4, may appeal to the referee and in every case a notice of appeal shall be served upon the council of the initiating municipality within 40 days after the sending of the notices under section 40 or subsection 46 (2), as the case may be.*

Regulator Appeal Rights Under the Drainage Act: As a regulator, the Drainage Act also provides some specific appeal rights to CA's**.** Section 49 of the Drainage Act states:

49. *Where the proposed drainage works is to be undertaken within a watershed in which a conservation authority has jurisdiction, the authority may appeal from the report of the engineer to the Tribunal on the ground that the drainage works will injuriously affect a scheme undertaken by the authority under the Conservation Authorities Act, and in every case a notice of appeal shall be served within 40 days after the sending of the notices under subsection 46 (2).*

This appeal right has been used infrequently.

Attachment 3: Recommendations to the NVCA

1. *Separate the NVCA roles as property owner and regulatory agency*

   When dealing with the Township and their engineer on this project, make every effort to separate and distinguish the NVCA's dual roles as property owner and regulator. In any discussions or meetings on this drainage project, consider assigning two different NVCA employees to represent these different roles.

2. *Distinguish between the existing drain limits and the new drain*

   Because a section of the Swaley drain already has legal authority through an earlier municipal by-law, the Drainage Act places a statutory duty on the Township to perform work on the Drain. In fact, the Township can be held liable for damages if they do not fulfill their duties. For this reason, it is recommended that the NVCA be more accommodating for proposed activities on the existing section of the Swaley Drain located within the wetlands. That is not to suggest that conditions on the proposed work cannot be imposed.

   If the conflict between the responsibilities placed on a municipality by the Drainage Act and the responsibilities placed on a CA by the CA Act and regulations were challenged in an appeal, the legal outcome is uncertain. But operationally, both sides of the issue would lose.

   In any new drain or extension to an existing drain, the same concerns do not exist.

3. *Drain Assessment*

   Excellent grounds exist to challenge any benefit or special benefit assessment that is proposed to be levied against the NVCA lands. As indicated earlier, the wetlands do not derive a benefit from this project.

   Conversely, be willing to accept some outlet liability assessment levied against your property. Compare the per hectare share of the outlet liability cost levied against your property to that on the upstream agricultural lands. The per hectare amount levied against the NVCA lands should be considerably less.

4. *Compromise:*

   It seems that in order to relieve the concerns of the upstream agricultural property owners, some physical work is required in the wetland. This may be an opportunity, as a regulator, to offset the impacts of the work in the wetland by negotiating the addition of upstream drain improvement features that could be a benefit to the wetland. One example is establishing legally defined and enforceable buffers between the agricultural land and the drain. Another example is the establishment of an on-line sediment trap upstream of the wetland that could be used to trap and remove sediment on a more frequent and less intrusive manner. Since KSAL has been assigned to make improvements to the drain, the addition of these features could be within the scope of this project.

   The NVCA may also want to consider allowing the downstream extension of drain proposed by KSAL and the Township on condition that the work on the downstream extension would only be performed by the NVCA as drain commissioner (see below).

If these features are included as part of the drain, they become part of the municipal drain and exist through the by-law adopting the report. They become features in the municipal drain infrastructure. The Township will be responsible to ensure that these features are not removed by property owners and that they are managed in accordance with the requirements of the Drainage Act.

5. *Drain Commissioner*

Under S. 95 of the Drainage Act, the Township has the authority to appoint a drain commissioner. S. 95 states:

> *95 (1) For the better maintenance and repair of drainage works by embanking, pumping or other mechanical operations, the council of the municipality initiating the drainage works may by by-law,*
>
> *(a) appoint one or more commissioners with power to,*
>
> *(i) enter into all necessary and proper contracts for the purchase of fuel, erection or repairs of buildings and purchase and repairs of machinery, and*
>
> *(ii) do all other things necessary for successfully operating the drainage works and for keeping the embankment thereof in repair as may be set forth in the by-law appointing the commissioner or commissioners; and*
>
> *(b) provide for defraying the annual cost of maintaining and operating the drainage works by assessment upon the lands and roads in any way liable to assessment therefor.*
>
> ***Fees, etc.***
> *(2) The fees or other remuneration of a commissioner shall form part of the cost of the maintenance and repair of the drainage works.*
>
> ***Powers***
> *(3) A drainage superintendent and a commissioner have the same powers as to entry on land as are given to the engineer and the engineer's assistants under subsection 12 (1)."*

The most common application of this section of the Drainage Act is the appointment of an individual, usually residing in the vicinity of a pump station, to manage the day-to-day operations of that pump. However, it has also been used by municipalities to appoint individuals to perform regular inspection of dykes that are part of a drain and to manage water control structures. It may also have been used to appoint an individual to manage a component of a drain that requires frequent attention (e.g. a catchbasin or a sediment trap).

The NVCA may want to consider developing a proposal to the Township for the NVCA to be appointed as a works commissioner for the section of drain located in the regulated wetland. If agreeable to the Township, it is expected that a form of contract would need to be reached between the two parties.

This approach offers the following benefits to the NVCA:

- Complaints about the condition of the drain would still be directed to the Township as the owner of the drainage system. Ultimately, they remain responsible for the management of the drainage system.

- NVCA has much greater control of the activities taking place in the wetland
- Interest groups that have a stake in the Minesing Wetlands would likely have more confidence in work in the wetland performed by the NVCA rather than by the Township.
- The cost of the commissioner is assessed to the drain. Therefore, the expense incurred by NVCA in performing this work could be recovered from the Township.

This approach also offers benefits to the Township:

- Improved response time to complaints about blockages in the drain.
- Less time and effort required to obtain regulatory approval for the work.

However, the drain commissioner role also adds responsibilities and potential concerns:

- The NVCA would assume responsibility for this section of the drain. If this approach is agreeable to the Township, it is recommended that the NVCA enter into a contractual agreement with the Township about expectations for frequency of inspection and of maintenance and repair. For example, for good drainage of the upstream agricultural land, obstructions blocking the flow of the drain would have to be removed in the spring, but is it necessary to remove obstructions in the summer after planting has been completed?
- If work is not performed to the satisfaction of the upstream property owners, under certain circumstances, they may be able to launch a claim for damages against the Township under S. 79 and S. 106 of the Drainage Act. It is possible that the NVCA, as the drain commissioner, could be included in this claim.

Attachment 4: Drainage Act Background

There are three major activities authorized by the Drainage Act:

1. Drain Construction (Section 4):

The Drainage Act allows property owners and/or road authorities to petition their municipality for a solution to drainage problems. Very generally, the process is as follows:

- The petition is considered by council, and in most occurrences, it is accepted.
- Upon acceptance of the petition, the municipal council appoints an engineer.
- The engineer holds an on-site meeting with the property owners and must confirm that the petition is valid. A valid petition must meet one of the criteria in Section 4(1).
- The engineer conducts a field survey of the area. At this stage, the engineer may also begin consulting with any regulatory agencies.
- The engineer designs a solution and writes a report containing plans, profiles and specifications of the proposed drain. The report must also provide allowances (or compensation) to affected owners and must identify the total cost estimate. The report, through assessment schedules must identify how the total cost of the project would be distributed among property owners. The engineer also has a duty to bring the drain to a sufficient outlet (Section 19), which is defined as a point where the water can be safely discharged so that it will do no damage to lands or roads.
- The report is presented to municipal council. Council hosts a "meeting to consider the report" with the property owners. The petitioners have an opportunity to stop the project by removing names from the petition.
- After the meeting, the municipal council gives two readings to a by-law, provisionally adopting the report.
- Property owners have the right to appeal to three different appeal bodies:
  - The court of revision on assessment matters
  - The Agriculture, Food and Rural Affairs Appeal Tribunal on technical matters
  - The Referee on legal matters.
- After all appeals have been heard and dealt with, council gives third and final reading to the by-law.
- The project is constructed in accordance with the plans, profiles and specifications in the report.
- After construction, the municipality (usually with the assistance of the engineer), calculates the actual assessments on individual properties and applies for grants, if any, from the Ministry of Agriculture, Food and Rural Affairs.
- The drainage system now exists under the authority of a municipal by-law and becomes part of the municipality's infrastructure.

A flowchart showing an abbreviated Drainage Act process for the construction or improvement of drains is shown in Attachment 5. A copy of the detailed process flowchart for the development of new drains is available upon request.

2. Drain Repair (Section 74):

Drain maintenance and repair work is mandated by Section 74 of the Act and is normally coordinated by the municipality's drainage superintendent. It does not require the services of an engineer, although some municipalities appoint an engineering firm to serve as their drainage superintendent.

The Drainage Act defines "repair" as the restoration of a drainage works to its original condition. This means that the drainage superintendent, in performing the drain repair work, is bound by the plans, profiles and specifications in the engineer's report that has been adopted by by-law. The superintendent cannot deepen the drain from the original design or take a different route or extend the drain future downstream as a work of repair.

The Drainage Act defines "maintenance" as the preservation of a drainage works. This means that the municipality has the authority to take actions to preserve a drainage works, such as planting vegetation to protect exposed soils, removing beaver to prevent the building of beaver dams, etc.

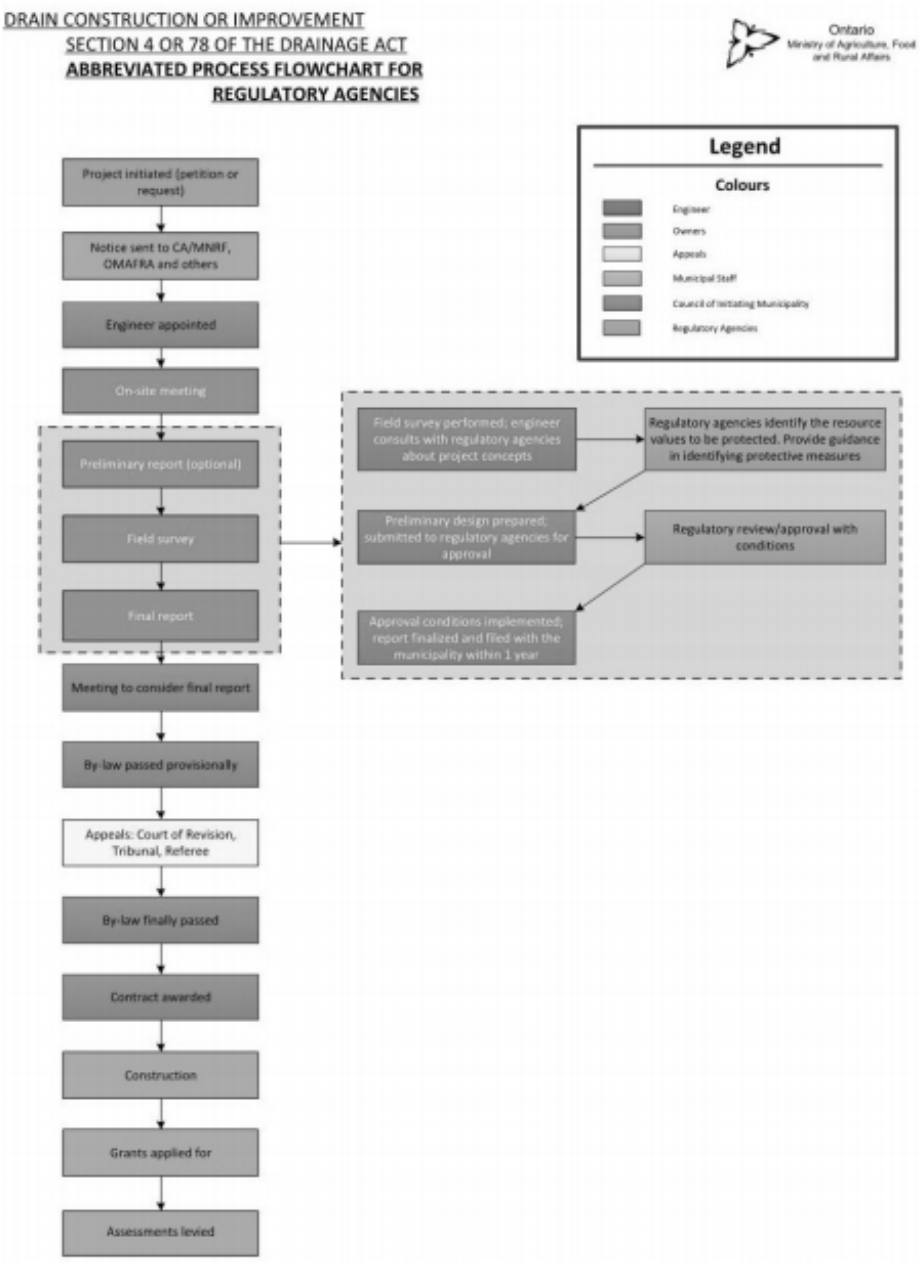
3. Drain Improvement (Section 78):

When the current drain design no longer serves the needs of the property owners, a drain improvement project can be undertaken. These projects are normally triggered by a request of one or more property owners but can only be initiated by a municipal council resolution. When the resolution is passed, essentially the same process is used as for the development of a new drainage system, with the exception that there is no petition from property owners. Section 78(1.1) of the Drainage Act identifies the following as improvement projects (paraphrased):

- Changing the course of a drain
- Making a new outlet for a drain
- Adding a tile drain
- Adding bridges, culverts, dams, dykes, reservoirs, pumping stations, etc.
- Extending to an outlet
- Covering all or part of a drain
- Consolidating two or more drains

The Act also identifies that the process used to establish a new drain is also used to make improvements to an existing drain with the exception that a petition is not required. A copy of the detailed process flowchart for the improvement of existing drains is available upon request.

Attachment 5: Abbreviated Drain Construction or Improvement Process Flowchart



Nottawasaga Valley Conservation Authority
05-21-BOD
MINUTES
May 28, 2021
9:00 a.m. - 12:00 p.m.
Virtual Meeting Via WebEx

Present:

Deputy Mayor Michael Smith	Essa (Township)
Councillor Gail Little, Vice-Chair	Amaranth (Township)
Councillor Mariane Mcleod, Chair	Collingwood (Town)
Councillor Margaret Mercer	Melancthon (Township)
Deputy Mayor Bob Meadows	Adjala-Tosorontio (Township)
Councillor George Watson	Wasaga Beach (Town)
Councillor Thom Paterson	Clearview (Township)
Councillor Andrea Matrosovs	Blue Mountains (Town)
Councillor Ralph Manketlow	Mono (Town)
Councillor Dane Nielsen	Grey Highlands (Municipality) *Departed at 10:50am*
Councillor Donna Jebb	New Tecumseth (Town)
Councillor Shirley Boxem	Mulmur (Township)
Councillor Rob Nicol	Innisfil (Town) *Departed at 10:00am* *Returned at 12:00pm*
Councillor Cathy Keane	Oro-Medonte (Township) *Departed at 11:00am*
Councillor Walter Benotto	Shelburne (Town)
Mayor Don Allen	Springwater (Township)
Councillor Gary Harvey	Barrie (City)
Councillor Raj Sandhu	Bradford West Gwillimbury (Town)

Staff:
Doug Hevenor, Chief Administrative Officer; Chris Hibberd, Director Watershed Management Services; Byron Wesson, Director Conservation Services; Sheryl Flannagan, Director Corporate Services; Meagan Kieferle, Regulations Technician; Daniel Dyce, Senior Regulations Technician; Kerry Jenkins; Administrative Assistant; Haleigh Ferguson, Executive Administrator/Recorder

1. CALL TO ORDER

Chair McLeod called the meeting to order at 9:02am

2. LAND ACKNOWLEDGEMENT

The Nottawasaga Valley Conservation Authority Board acknowledges that we are situated on the traditional land of the Anishinaabeg. The Anishinaabeg include the Odawa, Salteaux, Anishinaabeg, Mississauga and Algonquin who spoke several languages including Anishinaabemowin and Potawatomi. We are dedicated to honouring Indigenous history and culture and committed to moving forward in the spirit of reconciliation and respect with all First Nation, Métis and Inuit people.

3. DECLARATION OF PECUNIARY AND CONFLICT OF INTEREST

None declared.

4. MOTION TO ADOPT AGENDA

RES: 33-21
Moved by: Cllr. Margaret Mercer Seconded by: Deputy Mayor Bob Meadows
RESOLVED THAT: the agenda for the Board of Directors Meeting # 05-21-BOD dated May 28, 2021 be approved.

Carried;

5. ANNOUNCEMENTS

Chair McLeod introduced our visiting Board member Deputy Mayor Smith, Township of Essa who is expected to be appointed to the NVCA Board in June at an upcoming Council meeting. He is replacing newly retired, Keith White.

6. DEPUTATIONS

a. Kenn Smart P.Eng, from K. Smart Associates Limited conducted a presentation on the Swaley Drain, Township of Springwater. The resolution for this presentation is found at 11c)ii.

b. Colin A. Brown, Partner, HHL Law Firm LLP, conducted a presentation on the Board Hearing Training.

RES: 34-21
Moved by: Cllr. George Watson Seconded by: Cllr. Thom Paterson
RESOLVED THAT: the Board of Directors receive the presentation on Board Hearing Training for information.

Carried;

7. PRESENTATIONS

a. Meagan Kieferle, Regulations Technician conducted a presentation on the NVCA Permit Process.

RES: 35-21
Moved by: Cllr. Andrea Matrosovs Seconded by: Cllr. Ralph Manketlow
RESOLVED THAT: the Board of Directors receive the presentation on the NVCA Permit Process for information.

Carried;

8. HEARINGS

There were no hearings for this meeting.

9. DETERMINATION OF ITEMS REQUIRING SEPARATE DISCUSSION

Board Members were requested to identify items from the Consent List that they wish to have considered for separate discussion.

10. ADOPTION OF CONSENT LIST AND IDENTIFICATION OF ITEMS REQUIRING SEPARATE DISCUSSION

RES: 36-21
Moved by: Cllr. Gail Little Seconded by: Donna Jebb
RESOLVED THAT: agenda item number C-ii was identified as requiring separate discussion, be referred for discussion under Agenda Item #9; and
FURTHER THAT: all Consent List Agenda Items not referred for separate discussion be adopted as submitted to the board and staff be authorized to take all necessary action required to give effect to same; and
FURTHER THAT: any items in the consent list not referred for separate discussion, and for which conflict has been declared, are deemed not to have been voted on or discussed by the individual making the declaration.

Carried;

11. CONSENT LIST

a. Adoption of Minutes

i. *Approved by Consent.*
RESOLVED THAT: the minutes of the Board of Directors Meeting # 04-21-BOD dated April 23, 2021 be approved.

Carried;

b. Correspondence

There was no correspondence for this meeting.

c. Staff Reports

i. Staff Report No. 16-05-21-BOD from Doug Hevenor, CAO regarding Financial Support to Assist TRCA.

Approved by Consent.
RESOLVED THAT: the Board of Directors approve Staff Report No. 16-05-21-BOD; and
FURTHER THAT: CAO Hevenor has the authority to approve staff's ability to provide funds, from Nottawasaga Valley Conservation Authority (NVCA) reserves, when required to support this court action by TRCA.

Carried;

ii. Staff Report No. 17-05-21-BOD from Senior Regulations Technician, Dyce regarding the Swaley Drain, Township of Springwater.

RES: 37-21
Moved by: Mayor Don Allen Seconded by: Cllr. Gary Harvey
RESOLVED THAT: the Board of Directors receive the delegation presentation from K. Smart P. Eng. from K. Smart Associates Limited (KSLA) on the Swaley Drain, Township of Springwater and;

FURTHER THAT: the Board of Directors receive Staff Report No. 17-05-21-BOD including the attached schedules regarding the Township of Springwater's Swaley Drain project and;

FURTHER THAT: the Board of Directors approve NVCA staff moving toward the issuance of a permit, subject to satisfactory approval by staff of the following details for the up to 950m +/- extension proposal outlined in the KSLA presentation:

- An amended Natural Environmental Report, as deemed necessary, that examines the environmental impacts and provides recommendations that ensure that the final proposed works are designed in such a manner to avoid, mitigate and where necessary offset environmental impacts to achieve no net loss to the natural heritage system;

- A report prepared by a professional engineer confirming that the proposed works will not result in adverse flooding impact to adjacent properties;

- Detailed construction drawings/plans outlining the extent of the works, erosion and
sediment control measures, restoration of disturbed areas, and enhancement plantings and habitat creation; and,

- Appropriate landowner permissions and other required Regulatory review and/or approvals (e.g. MECP, MNRF and DFO).

- NVCA staff will continue to assist through ongoing discussions with Township staff, Drainage Engineer and other involved qualified professionals and;

FURTHER THAT: these items be delivered and finalized such that construction can commence by December 2021.

Recorded Vote:
Yay:
Cllr. Gary Harvey, Cllr. Raj Sandhu, Cllr. Dane Nielsen, Cllr. Ralph Manktelow, Cllr. Donna Jebb, Cllr. Cathy Keane, Mayor Don Allen, Cllr. George Watson
Nay:
Deputy Mayor Bob Meadows, Cllr. Gail Little, Cllr. Andrea Matrosovs, Cllr. Thom Paterson, Cllr. Mariane McLeod, Cllr. Margaret Mercer, Cllr. Shirley Boxem

Carried;

iii. Staff Report No. 18-05-21-BOD from Communications Coordinator regarding Communications Report – April 10, 2021 – May 15, 2021.

Approved by Consent.
RESOLVED THAT: Staff Report No. 18-05-21-BOD regarding NVCA Communications – April 10, 2021 – May 15, 2021, be received.

Carried;

12. OTHER BUSINESS

None declared.

13. ADJOURN

RES: 38-21
Moved by: Cllr. Donna Jebb Seconded by: Cllr. Thom Paterson
RESOLVED THAT: this meeting adjourn at 12:03pm to meet again on June 25, 2021 or at the call of the Chair.

Carried;