

Working together with our community

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Council-In-Committee Meeting – December 14, 2021

Subject: 2021 Municipal Drainage Services Update

Report Number: EIS 21-46

Division: Environmental and Infrastructure Services

Department: Engineering

Purpose: For Information

Executive Summary:

Council requested that staff bring back a fulsome report on the status of all active Municipal Drainage projects. The summary was to include information such as year initiated, costs to date, status and projected timelines. Staff from Drainage Services and Finance have met several times over the past year and now present this report to Council for information.

Discussion:

Introduction

Norfolk County Municipal Drainage Services program currently is managed by the Director Engineering, the Two Drainage Superintendents manage the various program services (Construction, Maintenance, and Wetland Restoration) for their respective areas and share available resources including staff and equipment to schedule and coordinate the work necessary to serve all of Norfolk County.

The Drainage Superintendents have been delegated overall responsibility from Council to administer and oversee all activities within the municipality as they relate to the *Drainage Act (the Act)*. This includes the overall administration and operational needs for new construction projects and maintenance work carried out on existing systems.

The Drainage Program Coordinator position is responsible for obtaining the permits and approvals necessary to complete work on municipal drains. This also includes monitoring and reporting required by the approval agencies during and after the work has been completed. In 2020, we obtained permits and approvals for 118 drainage projects. Another key component of this position is to review the work being completed and modify work plans to avoid the need to apply for permits, if possible. This streamlines work plans to get work done in the timeliest manner possible. The cost of these services are a growing necessity for the completion of the work. In 2022, we are looking to start recovering costs associated with the Drainage Program Coordinator

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position while working on municipal drains. If the municipality did not apply for the necessary permits, it places a significant risk for non-compliance fines up to \$1,000,000 under each of the Fisheries Act, Species at Risk Act, and Endangered Species Act for first offences. These fines may be applied to the Corporation and personally against the Superintendents overseeing the work, with second offence fines being significantly more. Also, any work completed without necessary permits and approvals is not eligible for grant through OMAFRA. In addition to the above, this position assists the Drainage Superintendents with the management of invasive species within Norfolk County, restoration/establishing municipal drain buffers, classifying municipal drains through sampling, and applies for any applicable funding.

The Drainage Clerk position is responsible for performing a variety of statutory, financial and administrative duties related to Municipal Drainage Services and pursuant to the *Act*. This work includes but is not limited to being the frontline staff for all drainage related inquiries and service requests, creating work orders and purchase orders relating to drainage works while maintaining inventory records. This position performs the duties prescribed to the clerk under the Act and also prepares, analyses and processes all documentation pertaining to all drain projects, provincial/federal grants, billing, quotes, tenders, agreements, tile loans, apportionments, by-laws, coordinates appeal bodies and provides overall administrative support to the Drainage Superintendents for work carried out under the *Act*. If any of these tasks are completed by a Superintendent, their time is not eligible for grant through OMAFRA in accordance with the ADIP Policies and Procedures.

The Drainage Operator and Drainage Truck Driver positions are our field staff and are responsible for completing physical and coordinating work on our existing drainage systems. These positions are responsible for maintaining over 120kms of open ditch drains each year as part of our Annual Drain Maintenance Program, in addition to dealing with service requests that arise throughout the year. In 2020, we received 172 service maintenance requests specific to municipal drainage services, and processed 325 work orders in total. Time spent on our municipal drains completing physical work is chargeable to the drains and eligible for grant through OMAFRA.

In recent years staff and Council have realized a backlog with respect to older construction projects that need to be finalized. Staff have been working to resolve this backlog; however, it has proven to be a difficult challenge with the staffing resources available. Drainage staff have also have seen an increase in landowner requests and inquiries due to more frequent heavy rainfall events in 2021 as well as being consulted or involved in numerous development applications, capital projects and owner complaints related to storm water.

In 2021, a Drainage Superintendent was tasked with coordinating the review of the majority of our Stormwater Management Facilities within Norfolk County. The review identified and recommended two (2) facilities for cleanout in 2022 and another in 2023. These cleanouts require dedicated staff to prepare the contracts, facilitate contracts and provide communication and outreach to the public during these projects. In 2020, approximately 30% of one superintendent's duties and 15% of the other was reported as non-grantable non-superintendent activities, which was realized in the grant funding

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received from OMAFRA. Any time spent completing non-grantable time has a negative impact on the levy as there is less external funding available to cover the costs of employing the Drainage Superintendents.

A requirement of the *Drainage Act* is for the Drainage Superintendent to report to Council on the superintendent's activities relating to maintenance, repair, inspections and Construction of Municipal drains throughout the municipality. In 2015, OMAFRA changed policies removing the annual reporting requirements. Once the reporting was deemed not necessary the drainage superintendents annual reporting has been set aside. In 2020, staff and council identified the backlog of drain construction projects and Council requested more frequent status updates.

Drain Maintenance Program

The Drainage Superintendents are responsible for managing 974 kms of existing Municipal Drains throughout Norfolk County. The cost of all maintenance and repair activities when completed under direction of the Drainage Superintendents and in compliance with applicable laws are assessed against lands and roads according to the current drain by-laws.

In 2020, drainage services staff completed a total of \$816,886.51 in maintenance activities that were assessable on Municipal Drains. \$530,256.54 on the Scheduled Maintenance program and \$286,629.97 on unscheduled service requests. The following table shows the total applicable grant and distribution of assessments. It should be noted if a project is not completed within the year it is started, project costs can be carried forward into the following year.

Applicable Grant*	Owner Assessment	County Road Assessments		Carry Over to 2021	Total
\$145,008.73	\$448,253.87	\$180,439.75	\$5,616.11	\$37,568.05	\$816,886.51

 Per 2021 Grant Applications. Grant is not guaranteed, has not been received and is subject to OMAFRA reviews.

Scheduled Maintenance Program

The 2021 Scheduled Maintenance Program includes maintenance of 94.3 kms of drains. (Refer to Attachment No. 1 - Maintenance Plans and Attachment No. 2 – 2021 Maintenance List). Current delays in permits and approvals combined with timing windows for working instream will affect the ability to complete all the proposed work. Where work is delayed, drains or sections of drains may be deferred to the following year which can affect the amount of work staff are able to complete and affect the overall schedule of the maintenance program.

The scheduled maintenance program ensures each open ditch system in Norfolk County is maintained on a scheduled rotational basis. The program is proactive and primarily includes removing overgrown vegetation and sedimentation in open ditch

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drains to maintain the optimum original design capacity. The program has proven to reduce long term costs, liability and damages relating from non-repair, reduce owner complaints, maintains access to drains, and results in an overall reduction in engineering costs for large repair and improvement projects. When completing maintenance more frequently, it minimizes the footprint and extent of work required which assists with various legislation and approvals. In comparison to other municipalities, some municipalities are seeing maintenance rates at \$20-\$30 per meter or more due to long term neglect. In 2020, 96.3 kms of drains were maintained under the Norfolk County scheduled maintenance program at an average cost of \$3.69 per meter.

One area that has been recognized as a potential maintenance issue and direct financial impact to the County for the future is in relation to culvert crossings within the road allowance. Many of Norfolk County drainage systems were built between the 60's and 70's. Many of the culverts installed within this time period were specified as corrugated steel pipe, which are now reaching their ultimate life expectancy. This has been recognized in the last 2 years by through the number of emergency repairs required for our road crossings, and seen in the increased cost for Norfolk County assessments. All road crossings under the Act are 100% assessment to the municipality, are not assessable to upstream lands, and not eligible for grant. In order to get a better understanding of our current position, in 2020, we started collecting an extensive inventory including condition assessments of our existing municipal drain culvert crossings. This information is incomplete, and will require additional resources/time to complete. Once complete, we will bring a future capital plan forward so that we can budget appropriately for this infrastructure replacement in years ahead.

Construction Program

The 2021 Capital Budget includes an allocation of \$9,680,000 for the Drainage Engineering and Construction Program, which is recovered through assessment to affected owners, roads (Tax Levy), Utilities and Ministry Grants. As each project is brought before Council, the adoption of the drainage report identifies an estimate project cost at which time funds a project specific budget can be allocated or a Capital Projects created.

In 2022, we are anticipating approximately fourteen (14) drainage projects valued at approximately \$7.5 million dollars that could be required to be constructed in 2022. All of these projects are required to be overseen and managed by a Drainage Superintendent. Within the 2022 Capital Construction budget for drains, Financial Services staff have noted that if we continue on the same path forward, we will need an additional four (4) years to get through the current backlog. With Staff and Council pushing the Engineering firms to finalize older projects, more staff time will be required to coordinate this work and get these projects through the regulatory process. It should also be noted that the earlier these projects are completed, the earlier they will need to be funded so that they can be constructed.

At this time Norfolk County has 85 active construction projects under the *Drainage Act*. All expenses related to the construction of municipal drains are financed through Norfolk County while the project is being completed. Currently we are financing approximately

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\$5,850,988.54 to date until those costs can be levied out to the affected stakeholders. We have 30 active construction projects where we have received an Engineers Report or an engineer's estimate for budgetary purposes. The total estimated construction value of these 30 projects is anticipated to be \$12,555,271.01, with Norfolk County's share of the assessments being \$6,264,070.07. Within those 30 projects, 14 of these projects have been constructed and Staff are currently working with the Engineer to review costs to date, complete the provincial grant applications and calculate the final assessments. These 14 projects are anticipated to be levied in 2022. The total cost to be levied is anticipated to be \$1,849,971.75, with Norfolk County's share of the assessments estimated to be \$912,635.76.

Attachment No. 3 includes a schedule of current active projects under the Municipal Drain Construction Program, their current status and costs to date. Attachment No. 4 includes a high level summary of where each project is at with respect to the *Drainage Act* process. Should anyone require further information relating to a specific project, we encourage them to contact the applicable Drainage Superintendent for more nformation.

Where an engineer's estimate has been provided, these values are not guaranteed and the overall cost for each project are unknown until such time the report has received its 3rd and final reading under by-law and the project has underwent a public procurement process. Up until the report is passed under by-law, there are opportunities for landowners to add or remove their names from the projects which can have a major impact on the final project design. With *Drainage Act* projects being as dynamic and complex as they can be, it is difficult to estimate the values of projects and identify who will be involved until the project is much further along in the process i.e. draft design, cost estimates etc. When a project is passed under by-law, Council is obligated under the *Drainage Act* to proceed with construction in a timely manner. Where Council does not proceed with reasonable dispatch with construction of the work, a petitioner may appeal to the Tribunal, and the Tribunal may direct the Council to take action.

Another item to note is the number of construction projects where Norfolk County has been appointed as the Engineer. There are a total of 15 projects that were initiated prior to 2015, when Norfolk County had a Professional Engineer on staff who was willing and able to author drainage reports. These projects mostly consisted of simple culvert reports for new crossings, formalizing riparian buffer strips on municipal drains, and some wetland projects. For these reports staff would survey the project and assist with preparing the reports, plans and specifications in order to help reduce the overall costs for the stakeholders involved. Due to current workload and lack of resources available, even if there was an Engineer on Staff, it is unlikely we could continue with these projects in house. While there has been no costs incurred on the majority of these projects, in some instances the County has collected fees from owners to provide a completed report. Staff are reviewing the best strategy moving forward to bring these projects to a close. Some of these projects are mandatory and will need to be assigned to a new engineer in order for them to be brought to a close.

Summary

This report is intended to provide a high level overview of Drainage Services as a whole. We will be working with our Financial Services team to complete a more

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comprehensive financial review of all existing projects as we finalize projects, this was not completed as part of this report. Staff will continue to identify any costs that pose a risk to Norfolk County and any costs that may be unrecoverable through the *Drainage Act*. Staff will also continue with annual reporting to Council. All drainage projects that are incomplete at this time will remain as "Active" drain construction projects and will be brought to Council once the individual projects are certified complete, financially reviewed and prepared for final billing.

Financial Services Comments:

Maintenance

Staff work diligently each year to apply for maintenance grants through the Province in order to ensure that grant opportunities are maximized. Remaining drain maintenance costs are assessed annually to land owners and included on property tax bills as applicable. Norfolk County's portion of drain maintenance costs is budgeted annually in the operating budget in the year following the completion of the maintenance activities. The 2021 Levy Supported Operating Budget included a budget of \$160,000 for the County's portion of maintenance costs.

Construction

As noted above, Norfolk County's portion of drain construction projects to be levied in 2022 is \$912,635.76 which will in large part be funded from the drain contingency which will encompass the majority of the balance in that fund as noted in report CS 21-74. It is essential that the process of forecasting drain construction costs and inclusion of these costs in the operating budget be further investigated. If the balance in the reserve is not sufficient to cover the drain assessment to Norfolk County, the likely financing source will be debt. The current value of drain construction projects which is expected to be assessed to Norfolk County in the coming years is now over \$6 million.

Interdepartmental Implications:

All expenses related to maintenance and construction of municipal drains are financed through Norfolk County. These costs are assessed to lands, roads and utilities following work according to the Engineers report and recovered in accordance with the *Drainage Act* and current drain by-laws.

Final assessments are calculated based on actual costs and the assessment schedules adopted under the drain by-law. Assessments are applicable to the owner of the lands according to the tax roll at the time of the bill preparation.

Consultation(s):

The General Manager-Environmental and Infrastructure Services, Director-Engineering, Financial Services Staff were all consulted throughout the preparation of this report.

Strategic Plan Linkage:

This report aligns with the 2019-2022 Council Strategic Priority "Build and Maintain Reliable, Quality Infrastructure".

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Explanation:

Conclusion:

This report provides an update to Council in the status of the Drainage Superintendents Activities and Municipal Drainage Services as a whole. Staff are working towards clearing the backlog of construction projects, while maintaining the daily operational needs of Drainage Services within Norfolk County. This report, provides a better understanding of where we are with current and future projects.

Recommendation(s):

THAT staff report EIS 21-46, 2021 Municipal Drainage Services Update, be received as information;

Attachment(s):

Attachment No. 1 – 2021 Maintenance Plan

Attachment No. 2 – 2021 Maintenance List

Attachment No. 3 – Construction Project Table

Attachment No. 4 – Construction Project Summaries

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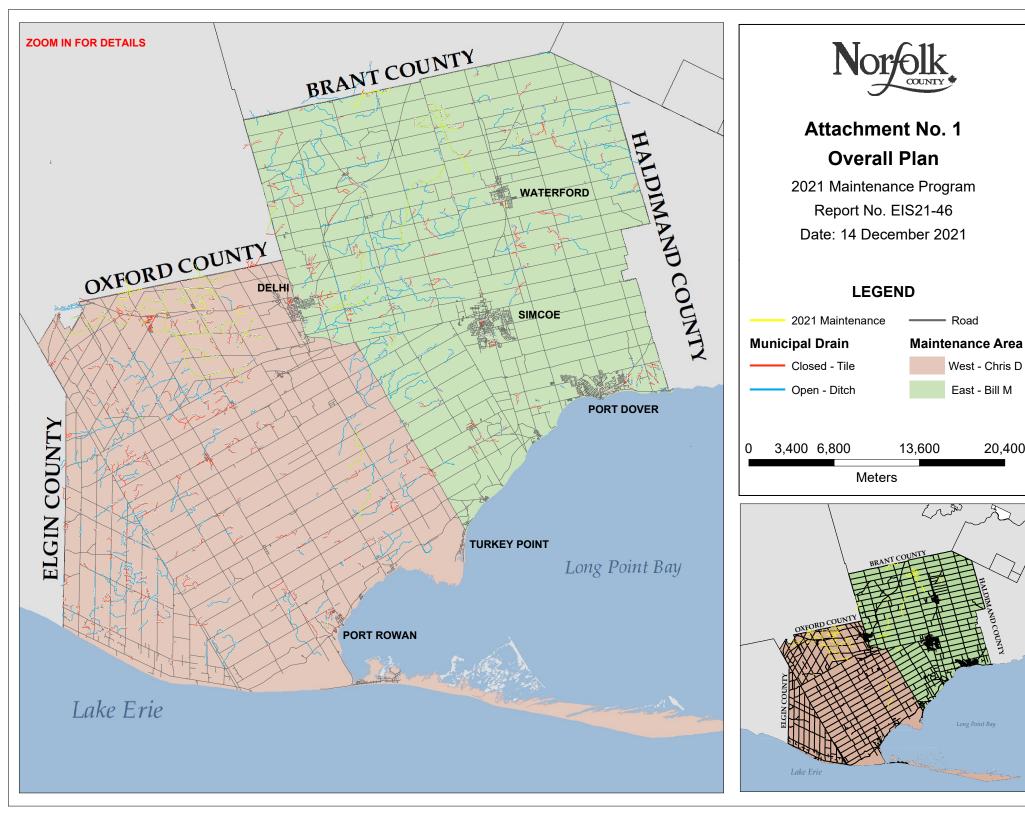
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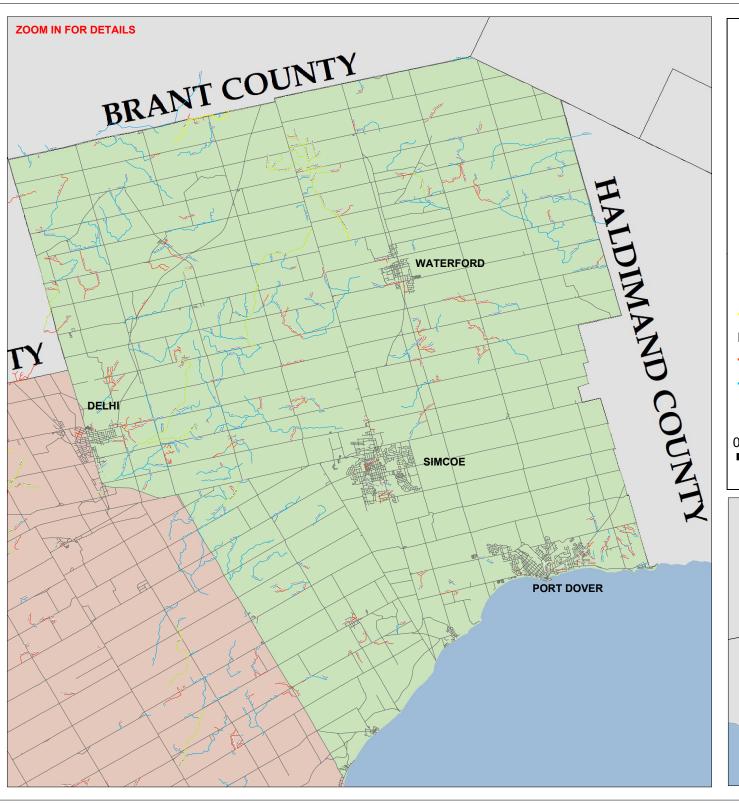
Bill Mayes Chris Dunn, CET

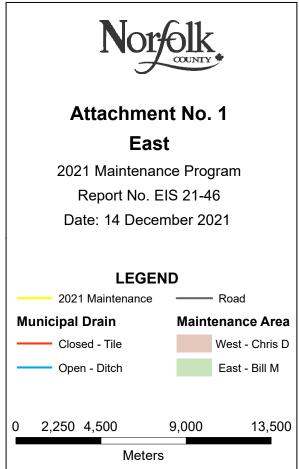
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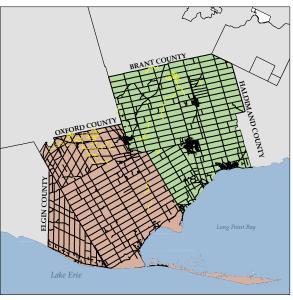
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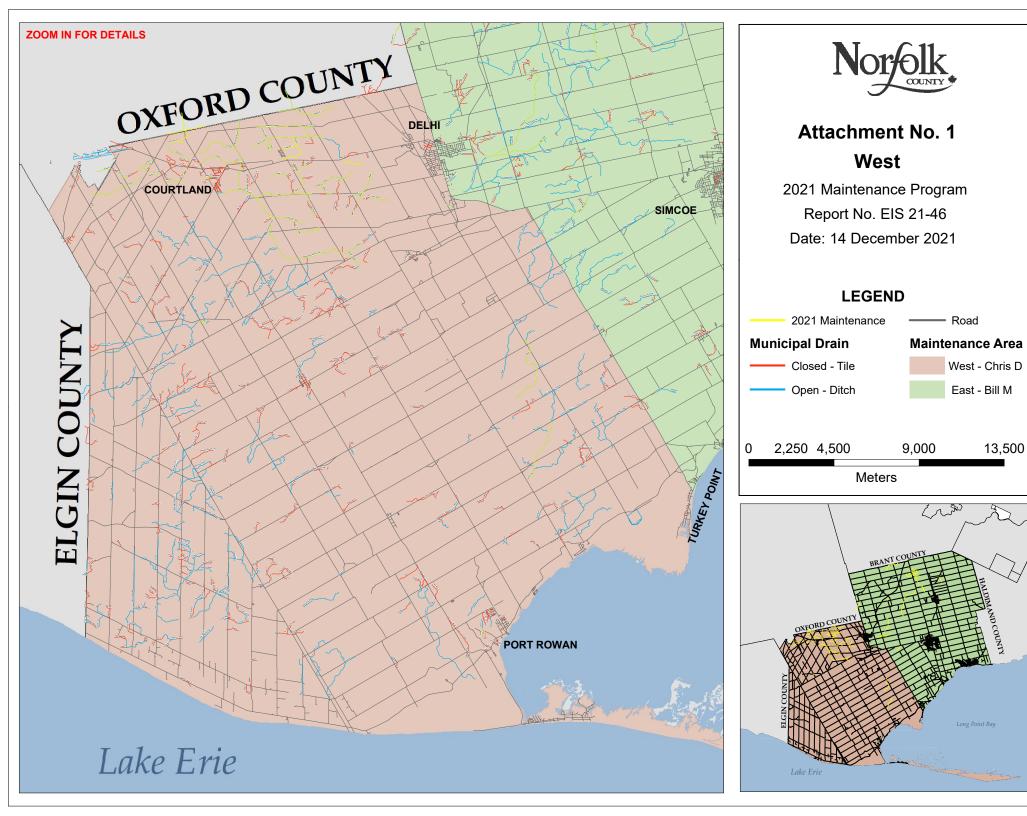


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Drain Name	Superintendent	Service Area	By-law	Length (m)	Last Maintained	E	Estimated Cost
Draggett D	Bill Mayes		2012-158	590.5	2016	\$	2,361.87
Prescott B	Bill Mayes	East	2012-158	1165.5	2016	\$	4,662.01
Prescott C	Bill Mayes	East	2008-221	60.0	N/A	\$	240.09
Prescott C Ext	Bill Mayes	East	2012-158	947.9	2015	\$	3,791.61
Prescott D	•	East	2012-158	734.1	2015	\$	2,936.24
Prescott Diggins	Bill Mayes	East	2012-158	301.9		\$	•
Prescott E	Bill Mayes	East	2012-158	511.7	2016		1,207.54
Prescott East Int 1	Bill Mayes	East	2012-158	528.9	2016	\$	2,046.64
Prescott East Int 3	Bill Mayes	East	2012-158	369.8	2016	\$	2,115.55
Prescott East Int 2	Bill Mayes	East	2012-158	2173.1	2016	\$	1,479.09
Prescott Downstream Ext	Bill Mayes	East	2012-158	524.0	2016	\$	8,692.50
Prescott F	Bill Mayes	East			2016	\$	2,096.09
Prescott H Int 1	Bill Mayes	East	2012-158	1294.5	2016	\$	5,177.97
Prescott Main Int 1	Bill Mayes	East	2012-158	1657.6	2016	\$	6,630.39
Prescott Main Int 2	Bill Mayes	East	2012-158	1489.5	2016	\$	5,958.16
Prescott Main Int 3	Bill Mayes	East	2012-158	2118.4	2016	\$	8,473.59
Prescott Main Int 3	Bill Mayes	East	2012-158	270.4	2010	\$	1,081.62
Prescott K	Bill Mayes	East	2012-158	495.0	2016	\$	1,980.06
Prescott M Int 1	Bill Mayes	East	2012-158	146.7	2015	\$	587.00
Prescott M Int 2	Bill Mayes	East	2012-158	110.6	2015	\$	442.53
Prescott N Int 1	Bill Mayes	East	2012-158	119.3	2015	\$	477.13
Prescott P	Bill Mayes	East	2012-158	1144.5	2016	\$	4,577.99
Prescott West Int 1	Bill Mayes	East	2012-158	433.4	2016	\$	1,733.78
Prescott West Int 2	Bill Mayes	East	2012-158	586.4	2016	\$	2,345.80
Prescott West Int 3	Bill Mayes	East	2012-158	1296.2	2016	\$	5,184.71
Prescott West Int 4	Bill Mayes	East	2012-158	1059.4	2016	\$	4,237.67
Butler (M)	Chris Dunn	West	1618-97	2231.1	2016	\$	8,924.39
Byerlay Road 1967 (M)	Chris Dunn	West	31D	659.5	2016	\$	2,637.93
Condie (M)	Chris Dunn	West	1D	2969.6	2016	\$	11,878.59
Cowan (M)	Chris Dunn	West	18D	2641.1	2016	\$	10,564.31
Cowan Br A (M)	Chris Dunn	West	1746-99	99.1	2016	\$	396.57
Godo 2005 (M)	Chris Dunn	West	2007-174	219.3	2016	\$	877.38
Helsdon (M)	Chris Dunn	West	50-74	1031.0	2016	\$	4,123.97
Helsdon Br A (M)	Chris Dunn	West	50-74	536.7	2016	\$	2,146.78
Hillis (M)	Chris Dunn	West	586	3215.0	2016	\$	12,859.96
JA Smith (M)	Chris Dunn	West	87-75	964.7	2016	\$	3,858.99
JA Smith (M)	Chris Dunn	West	87-75	871.3	2016	\$	3,485.19
JA Smith (M)	Chris Dunn	West	87-75	687.0	2016	\$	2,748.11
JA Smith Br A (M)	Chris Dunn	West	1D	414.5	2016	\$	1,657.90
JA Smith Br A (M)	Chris Dunn	West	1D	206.2	2016	\$	824.70
Kociuk (SW)	Chris Dunn	West	1514-95	389.6	2016	\$	1,558.40
Kociuk (SW)	Chris Dunn	West	2016-85	299.7	2016	\$	1,198.79
Little Otter Creek (M)	Chris Dunn	West	27D	3680.1	2016	\$	14,720.24

Drain Name	Superintendent	Service	By-law	Length (m)	Last		Estimated
Diam itamo	Сироппиони	Area			Maintained		Cost
Little Otter Creek Br 1 (M)	Chris Dunn	West	1515-95	2036.5	2016	\$	8,146.03
Little Otter Creek Ext (M)	Chris Dunn	West	531-81	2406.3	2016	\$	9,625.16
Mills-South Norwich (M)	Chris Dunn	West	349-79	3217.5	2016	\$	12,870.08
Priester (M)	Chris Dunn	West	613-82	566.1	2016	\$	2,264.59
Priester (M)	Chris Dunn	West	613-82	432.1	2016	\$	1,728.46
Priester (M)	Chris Dunn	West	613-82	500.2	2016	\$	2,000.78
Purdy Highway Branch (M)	Chris Dunn	West	1650-97	27.7	2016	\$	110.82
Purdy Highway Branch(M)	Chris Dunn	West	1650-97	172.3	2016	\$	689.38
Ronson Section A (M)	Chris Dunn	West	1432-94	208.9	2016	\$	835.63
Ronson Section B (M)	Chris Dunn	West	1432-94	140.7	2016	\$	562.77
Ronson Section C (M)	Chris Dunn	West	1432-94	1616.9	2016	\$	6,467.69
Ruppert (M)	Chris Dunn	West	70D	2102.7	2016	\$	8,410.79
Ruppert Br 1 (M)	Chris Dunn	West	70D	972.3	2016	\$	3,889.07
Scott-Stover (M)	Chris Dunn	West	1286-91	2520.5	2016	\$	10,081.87
Scott-Stover Br A (M)	Chris Dunn	West	1286-91	1050.1	2016	\$	4,200.37
Scott-Stover Br B (M)	Chris Dunn	West	35-D	896.2	2016	\$	3,585.00
Snow (M)	Chris Dunn	West	2005-106	447.7	2016	\$	1,790.75
South Creek (M)	Chris Dunn	West	69D	5891.3	2016	\$	23,565.05
South Creek Br A (M)	Chris Dunn	West	69D	656.1	2016	\$	2,624.34
South Creek S of Hwy 3 (M)	Chris Dunn	West	23D	1226.3	2012	\$	4,905.13
Stoner (M)	Chris Dunn	West	1065-88	2209.8	2016	\$	8,839.17
Stoner Br A (M)	Chris Dunn	West	1065-88	1162.3	2015	\$	4,649.36
Tisdale (M)	Chris Dunn	West	437-80	2484.5	2016	\$	9,938.02
Veit (M)	Chris Dunn	West	1426-94	739.4	2016	\$	2,957.56
Veit Br A (M)	Chris Dunn	West	750	396.9	1996	\$	1,587.64
Walthers (M)	Chris Dunn	West	4D	1575.6	2016	\$	6,302.49
Walthers Overflow (M)	Chris Dunn	West	34-74	3290.5	2016	\$	13,162.09
Walthers Overflow Br A (M)	Chris Dunn	West	34-74	587.3	2016	\$	2,349.08
Wilkinson (M)	Chris Dunn	West	47-74	270.6	2016	\$	1,082.59
Ullman (M)	Chris Dunn	West	1063-88	2538.7	2016	\$	10,154.95
Ullman Br A (M)	Chris Dunn	West	108-75	309.6	2016	\$	1,238.24
Ullman Br B (M)	Chris Dunn	West	753	376.4	2016	\$	1,505.40
Ullman Br C (M)	Chris Dunn	West	1063-88	307.4	2016	\$	1,229.58
Regional Road 21 (CW)	Chris Dunn	West	491-81	56.8	2015	\$	227.20
Bilger (M)	Chris Dunn	West	497-80	1263.2	2016	\$	5,052.88
Bilger Br 1 (M)	Chris Dunn	West	497-80	725.3	2016	\$	2,901.08
Bilger Br 2 (M)	Chris Dunn	West	497-80	622.9	2016	\$	2,491.52
Mills-South Norwich (M)	Chris Dunn	West	349-79	3217.5	2016	\$	12,870.08
Bilger Br 1 (M)	Chris Dunn	West	497-80	433.2	2016	\$	1,732.97
Drees (M)	Chris Dunn	West	669-82	989.6	2017	\$	3,958.50
Drees (M)	Chris Dunn	West	669-82	159.9	2017	\$	639.43
Van Laecke (M)	Chris Dunn	West	59D-72	1061.0	2015	\$	4,243.90

Drain Name	Superintendent	Service Area	By-law	Length (m)	Last Maintained	E	Estimated Cost
James Street Drain	Chris Dunn	West	23D.	244.7	2016	\$	978.84
Sonnyside Drain (M)	Chris Dunn	West	2010-209	422.5	2013	\$	1,689.83
Bucholtz (M)	Chris Dunn	West	621-83	276.8	2009	\$	1,107.30
Bucholtz Br C (M)	Chris Dunn	West	621-83	94.7	2005	\$	378.72
Bucholtz Br A (M)	Chris Dunn	West	621-83	47.0	2009	\$	188.19
Bucholtz Br B (M)	Chris Dunn	West	621-83	122.4	2009	\$	489.60

Drain Name	NC Lead	Engineering Firm	Report to Hire (PW YY-XXX)	Act Section	Initiated by	Active Years	С	ost to Date	Maintenance Costs Applicable	Engineers Repo Estimate	rτ Re	lk County eport ortion	Overall Status
AMMERMAN DRAIN	Bill Mayes	Spriet Associates	PW 02-41	4-Petition	Owner Petition	19	\$	12,329.74		\$ -	\$	- F	Report Pending
ANDREW PETITION	Bill Mayes	K. Smart Associates Limited	PW 21-12	4-Pettion	Owner Petition	0	\$	-		\$ -	\$	- (On-Site
ANGLING ROAD PETITION	Bill Mayes	Dietrich Engineering Limited	PW 07-18	4-Petition	Owner Petition	14	\$	67,448.86		\$ 200,000.0	\$	66,500.00 F	Report Pending
ARGYLE AVENUE DRAIN	Bill Mayes	Spriet Associates	PW 11-60	76-Assessment	Development Request	10	\$	-		\$ -	\$	- F	Report Pending
BALL BRANCH A	Chris Dunn	G. Douglas Vallee Limited	PW 04-110, PW 07-74	76-Re-Assessment	Superintendent	17	\$	4,541.75		\$ -	\$	- F	Report Pending
BARTH DRAIN CULVERT	Chris Dunn	Norfolk County	PW 09-04	78-Improvement	Owner Request	12	\$	-		\$ -	\$	- F	Report to Hire
BIG MARSH BRIDGE	Chris Dunn	Norfolk County	PW 07-97	78-Improvement	Owner Request	14	\$	-		\$ -	\$	- F	Report to Hire
BIG MARSH DRAIN BRANCH F	Chris Dunn	Norfolk County	PW 14-17	78-Improvement	Owner Petition	7	\$	-		\$ -	\$	- F	Report to Hire
BILGER DRAIN ENCLOSURE	Chris Dunn	Norfolk County	PW 11-30	78-Improvement	Owner Petition	10	\$	-		\$ -	\$	- F	Report to Hire
BUCHOLTZ MUNICIPAL DRAIN	Chris Dunn	Dietrich Engineering Limited	PW 09-76	4-Petition	Owner and Roads Petition	12	\$	12,456.39		\$ -	\$	- F	Report Pending
CAMPBELL CREEK AUX DRAIN 2	Bill Mayes	Norfolk County	PW 07-63	78-Improvement	Wetland/Riparian Project	14	\$	-		\$ -	\$	- F	Report to Hire
CAMPBELL CREEK CULVERT	Bill Mayes	Norfolk County	PW 07-64	78-Improvement	Building Permit Issue	14	\$	-		\$ -	\$	- F	Report to Hire
CAUSYN SUBDIVISION DRAIN	Chris Dunn	Spriet Associates	PW 10-39	4-Petition	Roads Petition	11	\$	8,540.94		\$ 9,050.0) \$	9,050.00 (Council Consideration
CHROMCZAK PETITION	Chris Dunn	Spriet Associates	PW 20-04	4-Petition	Owner Petition	1	\$	(280.44)		\$ -	\$	- L	Levy By-Law
COURTLAND DRAIN 5	Chris Dunn	G. Douglas Vallee Limited	PW 05-91	4-Petition	Owner and Roads Petition	16	\$	1,549.64		\$ -	\$	- li	Information Meeting
DEDRICK RIPARIAN BUFFER	Chris Dunn	Norfolk County	PW 07-XX	78-Improvement	Wetland/Riparian Project	14	\$	-		\$ -	\$	- F	Report to Hire
DEKINDT-CLOSED SECTION	Chris Dunn	Norfolk County	PW 10-110	78-Improvement	Landwner Request	11	\$	(1,000.00)		\$ -	\$	- F	Report to Hire
DEMEYERE PETITION (M)	Chris Dunn	G. Douglas Vallee Limited	TWP 00-00	4-Petition	Owner Petition	21	\$	40,170.76		\$ 56,027.0	7 \$	4,145.31 F	Report Pending
DEPARTMENT OF HIGHWAYS NO. 1	Chris Dunn	Spriet Associates	PW 13-84	76-Reassessment	Owner Request	8	\$	-		\$ -	\$		Information Meeting
DEROO-VANHOVE	Bill Mayes	K. Smart Associates Limited	PW 03-110, PW 11-94	4-Petition and 78-Improvement	Superintendent	18	\$	178,674.96	\$ 30,656.38	\$ 169,315.0) \$	80,686.00 L	
DERTINGER IMPROVEMENTS	Bill Mayes	R.J. Burnside & Associates Ltd.	<u> </u>	78-Improvement	Superintendent	1	\$	-	· /	\$ -	\$		On-Site
DEWITTE DRAIN	Chris Dunn	Dietrich Engineering Limited	PW 11-95	4-Petition and 78-Improvement	Owner Petition	10	\$	16,257.09		\$ -	\$		Information Meeting
DINGLE CREEK	Bill Mayes	Dietrich Engineering Limited	PW 05-122	4-Petition and 78-Improvement	Owner and Roads Petition	16	\$	1,392,786.07		\$ 4,430,000.0) \$ 2.0	61,000.00 C	
DINGLE CREEK - WAL-MART	Bill Mayes	Dietrich Engineering Limited	PW 07-73	4-Petition	Development Petition	14	\$	2,695.44		\$ -			Construction
DINGLE CREEK - WOOLLEY WCS	Bill Mayes	Dietrich Engineering Limited	PW 07-75	78-Improvement	Wetland/Riparian Project	14	\$	11,620.55		\$ -			Construction
DINGLE CREEK-HWY 3 & IRELAND	Bill Mayes	Dietrich Engineering Limited	PW 07-132	4-Petition and 78-Improvement	Owner Petition	14	\$	13,701.82		\$ -	\$		Construction
DREES DRAIN (M)	Chris Dunn	Spriet Associates	PW 12-24	4-Petition	Owner Petition	9	\$	17,470.97		\$ 20,900.0) \$		Levy By-Law
DRY CREEK-JANULIS	Bill Mayes	Spriet Associates	PW 05-15, PW 06-07	78-Improvement	Wetland/Riparian Project	16	\$	4,531.55		\$ -			Levy By-Law
DUCKS LANDING	Bill Mayes	Cyril J. Demeyere Limited	PW 02-97	4-Petition and 78-Improvement	Wetland/Riparian Project	19	\$	-		\$ -	\$		Report Pending
ELLIOTT	Bill Mayes	K. Smart Associates Limited	PW 03-97	4-Petition and 78-Improvement	Superintendent	18	\$	349,501.87		\$ 283,000.0) \$	94,860.00	
ELLIOTT KITCHEN DRAIN	Bill Mayes	Spriet Associates	PW 20-03	78-Improvement	Superintendent	1	\$	-		\$ -			On-Site
ELLWANGER DRAIN NO.1 & NO.7	Chris Dunn	Spriet Associates	PW 15-41	78-Improvement	Development Request	6	\$	16,322.81		\$ -	\$		Report Pending
F. R. GREGORY	Bill Mayes	Dietrich Engineering Limited	PW 07-08	4-Petition and 78-Improvement	Wetland/Riparian Project	14	\$	242,178.76		\$ 250,000.0			Report Pending
GARNHAM NORTH BRANCH	Chris Dunn	Dietrich Engineering Limited	PW 20-03	78-Improvement	Landwner Request	1	\$	-		\$ -			On-Site
GUTHRIE PETITION	Chris Dunn	G. Douglas Vallee Limited	PW 05-22	4-Petition	Owner and Roads Petition	16	\$	29,068.25		\$ -	•		Report Pending
HAYMARSH RE-ASMT	Bill Mayes	Spriet Associates	PW 10-001	4-Petition and 78-Improvement	Superintendent	11	\$	7,268.87		\$ -			Report Pending
HENRY JULL DRAIN	Bill Mayes	R.J. Burnside & Associates Ltd.		78-Improvement	Owner Request	6	\$	227,224.06		\$ 223,610.0		72,592.00 L	
HWY 6 DRAIN	Bill Mayes	K. Smart Associates Limited	PW 12-52	4-Petition and 78-Improvement	MTO and Roads Petition	9	\$	340,213.14		\$ 2,282,000.0			
J A SMITH ROADS	Chris Dunn	Spriet Associates	PW 09-78	4-Petition and 78-Improvement	Roads Petition	12	\$	21,414.22		\$ 72,000.0) \$	37,818.00 (Council Consideration
JAMES BERRY EXTENSION	Chris Dunn	Dietrich Engineering Limited	PW 09-79	4-Petition	Owner Petition	12	\$	17,641.28			\$		Information Meeting
JAMES BERRY WETLAND	Chris Dunn	Norfolk County	PW 07-130	4-Petition and 78-Improvement	Wetland/Riparian Project	14	\$	37,756.17		·	\$		Report to Hire
KILIAN DRAIN (WYECOMBE)	Chris Dunn	Spriet Associates	PW 10-137	4-Petition and 78-Improvement	Development Petition	11	\$	(14,938.84)		\$ 46,900.0			Levy By-Law
KOZACK DRAIN	Chris Dunn	Dietrich Engineering Limited	PW 11-96	4-Petition	Owner Request	10	\$	15,538.51			\$		Report Pending
LAMBERT (W CADMAN)	Chris Dunn	Spriet Associates	PW 13-01	4-Petition and 78-Improvement	Owner Request	8	\$	20,242.18		\$ 24,000.0		14,580.00 C	·
LANGTON DRAIN NO.1	Chris Dunn	Spriet Associates	PW 13-55	78-Improvement	Superintendent	8	\$	2,887.19		\$2,887.1			Report Pending
LANGTRY	Chris Dunn	K. Smart Associates Limited	PW 03-110 PW 13-53	4-Petition and 78-Improvement	Owner and Roads Petition	18	\$	193,545.37	\$ 22,543.57			• •	Council Consideration
LEHI ASSESSMENT	Bill Mayes	R.J. Burnside & Associates Ltd.		76-Assessment	Owner Request	0	\$	-			\$,	Information Meeting
		24 & / 1000014103 Etd.					Ψ			-	<u> </u>		

Drain Name	NC Lead	Engineering Firm	Report to Hire (PW YY-XXX)	Act Section	Initiated by	Active Years	С	ost to Date	Maintenance Costs Applicable		jineers Report Estimate	Norfolk County Report Portion	Overall Status
LYNEDOCH	Bill Mayes	G. Douglas Vallee Limited	PW 03-104	4-Petition	Owner and Roads Petition	18	\$	340,908.81		\$	325,326.75 \$	201,554.76	Levy By-Law
MARY MACKENZIE	Bill Mayes	K. Smart Associates Limited	PW 03-110, PW 10-76	4-Petition and 78-Improvement	Superintendent	18	\$	343,584.78		\$	271,770.00 \$	174,879.00	Levy By-Law
MC GUIRE PETITION	Bill Mayes	K. Smart Associates Limited	PW 03-50	4-Petition	Owner Petition	18	\$	10,135.00		\$	43,000.00 \$	19,421.00	Report Pending
MCCALL MUNICIPAL DRAIN	Chris Dunn	Dietrich Engineering Limited	PW 07-144	76-Reassessment	Assessment Issue	14	\$	3,490.72		\$	- \$	-	Report Pending
MCCLUNG MUNICIPAL DRAIN	Bill Mayes	Dietrich Engineering Limited	PW 08-136	76- Reassessment and 78-Improvement	Assessment Issue	13	\$	2,009.81		\$	- \$	-	Information Meeting
MCKOY MUNICIPAL DRAIN	Chris Dunn	Dietrich Engineering Limited	PW 08-35	84 - Abandonment	Owner Request	13	\$	4,707.19		\$	- \$	-	Report Pending
MCQUEEN DRAIN	Chris Dunn	Norfolk County	PW 07-115	78-Improvement	Owner Request	14	\$	-		\$	- \$	-	Report to Hire
MILES	Bill Mayes	K. Smart Associates Limited	PW 12-83	78-Improvement	Owner Request	9	\$	168,276.52		\$	303,500.00 \$	77,897.00	Levy By-Law
MUNICIPAL NO. 1 DRAIN D (WETLAND)	Chris Dunn	Spriet Associates	PW 09-30	4-Petition and 78-Improvement	Wetland/Riparian Project	12	\$	26,315.44		\$	20,900.00 \$	-	Levy By-Law
MUNICIPAL SYSTEM No.2	Chris Dunn	Dietrich Engineering Limited	PW 10-40	78-Improvement	Owner Request	11	\$	23,851.26		\$	- \$	-	Report Pending
MURRAY DRAIN CULVERTS	Bill Mayes	K. Smart Associates Limited	PW 16-64	4-Petition and 78-Improvement	Superintendent	5	\$	85,851.12		\$	- \$	-	Report Pending
NANTICOKE DRAIN	Bill Mayes	Dietrich Engineering Limited	PW 06-19	4-Petition	Owner Petition	15	\$	141,108.51		\$	- \$	-	Information Meeting
NINTH CONCESSION	Bill Mayes	Spriet Associates	PW 10-142	78-Improvement	Superintendent	11	\$	46,756.11		\$	750,000.00 \$	500,000.00	Report Pending
NORMANDALE DRAIN	Bill Mayes	Spriet Associates	PW 03-132, PW 08-135	4-Petition and 78-Improvement	Owner and Roads Petition	18	\$	51,037.14		\$	- \$	-	Report Pending
OLD MILL ROAD DRAIN (H)	Chris Dunn	Spriet Associates	PW 11-91	4-Petition	Owner Petition	10	\$	103,790.32		\$	95,300.00 \$	76,677.00	Levy By-Law
PAAUW DRAIN	Bill Mayes	K. Smart Associates Limited	PW 04-25	4-Petition	Owner Petition	17	\$	192,259.31		\$	295,100.00 \$	91,924.00	Appeals
PETTINGER DRAIN	Bill Mayes	R.J. Burnside & Associates Ltd.	PW 20-10	4-Petition	Owner Petition	1	\$	32,912.77		\$	54,730.00 \$	1,462.00	Appeals
PETTIT DRAIN CULVERT	Bill Mayes	Norfolk County	PW 11-97	78-Improvement	Owner Request	10	\$	(1,000.00)		\$	- \$	-	Report to Hire
PETTIT RE-ASMT	Bill Mayes	G. Douglas Vallee Limited	PW 04-58	4-Petition and 78-Improvement	Assessment Issue	17	\$	6,167.75	\$ 120,947.58	\$	- \$	-	Report Pending
PORT DOVER RAVINE	Bill Mayes	Dietrich Engineering Limited	PW 11-79	4-Petition and 78-Improvement	Owner and Roads Petition	10	\$	321,728.59		\$	- \$	-	Report Pending
PORT RYERSE PETITION (WD)	Bill Mayes	Spriet Associates	PW 03-102	4-Petition	Owner and Roads Petition	18	\$	47,698.54		\$	- \$	-	Report Pending
PRESCOTT BRANCH A (T)	Bill Mayes	K. Smart Associates Limited	PW 07-98	78-Improvement	Owner Request	14	\$	19,667.13		\$	45,445.00 \$	-	Construction
PROVOOST RESTRUCTURE	Chris Dunn	Norfolk County	PW 06-159	4-Petition and 78-Improvement	Owner Request	15	\$	-		\$	- \$	-	Report to Hire
REGIONAL RD 21 MUNICIPAL DRAIN	Chris Dunn	Headway Engineering	PW 09-40, PW 10-52	4-Petition and 78-Improvement	Development Petition	12	\$	40,364.87		\$	- \$	-	Information Meeting
SIXTH CONCESSION (DE BOER)	Bill Mayes	Dietrich Engineering Limited	PW 07-139	4-Petition and 78-Improvement	Owner Request	14	\$	34,698.76		\$	83,700.00 \$	-	Levy By-Law
SOUTH CREEK BUFFERS	Bill Mayes	Norfolk County	PW 08-84	78-Improvement	Wetland/Riparian Project	13	\$	-		\$	- \$	-	Report to Hire
SOUTH MIDDLETON DRAIN	Chris Dunn	Spriet Associates	PW 10-136	4-Petition	Development Petition	11	\$	332,053.65		\$	288,750.00 \$	228,350.00	Levy By-Law
SOUTHERN TURKEY POINT DRAINAGE SYSTE	EN Chris Dunn	K. Smart Associates Limited	PW 19-05, EIS 21-08	4-Petition	Roads Petition	2	\$	476.01		\$	512,500.00 \$	316,250.00	Information Meeting
UNION PARSONS TRACT	Chris Dunn	Spriet Associates	PW 04-21	78-Improvement	Wetland/Riparian Project	17	\$	7,964.32		\$	- \$	-	Levy By-Law
VAN LAEKE	Chris Dunn	Norfolk County	PW 11-29	78-Improvement	Owner Request	10	\$	23,021.58		\$	- \$	-	Report to Hire
VAN LOON DRAIN MUNICIPAL DRAIN	Bill Mayes	Dietrich Engineering Limited	PVV U0-U2, PVV U0-13/	4-Petition and 78-Improvement	Wetland/Riparian Project	15	\$	6,160.39		\$	125,000.00 \$	99,750.00	Report Pending
VAN TYNE DRAIN BRANCH A	Chris Dunn	Dietrich Engineering Limited	PW 10-37	4-Petition and 78-Improvement	Owner Request	11	\$	20,509.66		\$	- \$		Report Pending
VEIT (RELOCATION)	Chris Dunn	Spriet Associates	PW 01-62	78-Improvement	Owner Request	20	\$	-		\$	- \$	-	Report Pending
VERSCHEURE (H)	Chris Dunn	Norfolk County	PW 13-54	4-Petition	Owner Petition	8	\$	-		\$	- \$	-	Report to Hire
VILLAGES OF LONG POINT BAY	Chris Dunn	GHD	TWP 00-00, PW 04-101	1, 4-Petition	Development Petition	21	\$	922.04		\$	- \$	-	Council Consideration
WALDICK PETITION	Chris Dunn	Spriet Associates	PW 11-57	4-Petition	Owner Petition	10	\$	3,190.58		\$	- \$	-	On-Site
WALLACE MARSH	Chris Dunn	Dietrich Engineering Limited	PW 08-48	78-Improvement	Owner Request	13	\$	50,608.76		\$	- \$	-	Report Pending
ZDRILUK DRAIN	Bill Mayes	K. Smart Associates Limited	PW 20-03	78-Improvement	Superintendent	1	\$	70,401.17		\$	491,970.00 \$	63,810.00	
				·		SUBTOTALS	\$	5,850,988.54	\$ 174,147.53	\$ 1	12,555,271.01 \$	6,264,070.07	

AMMERMAN DRAIN					
Engineer Spriet Associates					
Drainage Superintendent	Bill Mayes				
Initiated By	Landowners & Norfolk County				
Location	Commercial Road, Port Ryerse				
Cost to Date	\$12,329.74				
Engineers Estimate	Not Available				
Estimated NC Assessment	Not Available				

- Project initiated to address runoff from road allowances through private property
- Various Staff met with the Engineer in 2021 to determine project needs and to try to simplify the project scope
- Original plan was to provide a storm sewer network throughout Port Ryerse. In order
 to save on costs, it was decided reduce the project scope and to only establish the
 necessary legal outlets to accommodate the most impacted areas. These legal outlets
 will serve as a connection point for Norfolk County in the future.

ANDREW PETITION					
Engineer K. Smart Associates Limited					
Drainage Superintendent	Bill Mayes				
Initiated By	Landowner Petition				
Location	Thirteenth Street West, Simcoe				
Cost to Date	\$0				
Engineers Estimate	Not Available				
Estimated NC Assessment	Not Available				

Project Update:

- Project initiated by a landowner to address drainage issues are relating to surface runoff from agricultural lands as well as Norfolk County road ditches and storm sewers discharging onto the property.
- Project just initiated and first on-site meeting was held in October 2021

ANGLING ROAD PETITION						
Engineer Dietrich Engineering Limited						
Drainage Superintendent	Bill Mayes					
Initiated By	Landowner Petition					
Location	Angling Road, Boston					
Cost to Date	\$ 67,448.86					
Engineers Estimate	\$200,000.00					
Estimated NC Assessment	\$135,604.00 (from last landowner meeting in 2017)					

- Project initiated by landowners to obtain a legal outlet for storm water from a small residential area.
- Staff met with the Engineer in 2021 to discuss this project and the landowner responses received. Staff with the Engineer determined the design can be simplified greatly with the cooperation from adjacent landowners
- Staff need to meet with current landowners to see if they are willing to accept a simplified design
- This project will take some effort and coordination to bring it to a conclusion, mostly due to age, current engineering costs to date and change in ownership

ARGYLE AVENUE DRAIN					
Engineer	Spriet Associates				
Drainage Superintendent	Chris Dunn				
Initiated By	Development Request				
Location	Argyle Avenue, Delhi				
Cost to Date	\$0				
Engineers Estimate	Not Available				
Estimated NC Assessment	Not Available				

- Project initiated by developer for the Bluegrass Estates Subdivision in Delhi which required a legal outlet and adequate for the development.
- This project is ongoing with further development proposed in the area in May 2021
- Along with the drain being required to be updated, the Stormwater Management Facility on Huggins Ave is also being evaluated throughout this process

BALL BRANCH A					
Engineer G. Douglas Vallee Limited					
Drainage Superintendent	Bill Mayes				
Initiated By	Superintendent				
Location	Lot 19, Concession WNR Houghton				
Cost to Date	\$ 4,541.75				
Engineers Estimate	Not Available				
Estimated NC Assessment	Not Available				

Project Update:

- Project initiated due to landowner complaint that additional lands were in the watershed which were not being assessed for drain maintenance. The only way to address this issue was to hire an Engineer to complete a re-assessment report
- Project is close to completion and needs to be finalized
- Staff will need to review project with the engineer and work on finalizing the report

BARTH DRAIN CULVERT					
Engineer	Norfolk County				
Drainage Superintendent	Chris Dunn				
Initiated By	Landowner				
Location	Barth Side Road, Houghton				
Cost to Date	\$0				
Engineers Estimate	Not Available				
Estimated NC Assessment	Not Available				

- Project initiated by a Landowner who required a culvert crossing on the Barth Drain
- Norfolk County was appointed as the Engineer, but no report was ever completed
- Staff will need to review project and determine best method forward. It is possible that this project is no longer required

BIG MARSH BRIDGE	
Engineer	Norfolk County
Drainage Superintendent	Chris Dunn
Initiated By	Landowner
Location	Lot 21, Concession 2 STR in Middleton
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by a Landowner who was required to legalize a bridge crossing on the Big Marsh Drain.
- Norfolk County was appointed as the Engineer, but no report was ever completed
- Staff will need to review project and determine best method forward. It is possible that this project is no longer required

BIG MARSH – BRANCH F	
Engineer	Norfolk County
Drainage Superintendent	Chris Dunn
Initiated By	Norfolk County
Location	Lot 26, Concession 3 & 4 in Middleton
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project seems to have been initiated by Norfolk County to address a roads safety issue along the 3rd Concession Road STR
- Norfolk County was appointed as the Engineer, but no report was ever completed
- Staff will need to review project and determine best method forward

BILGER DRAIN – DRAIN ENCLOSURE	
Engineer	Norfolk County
Drainage Superintendent	Chris Dunn
Initiated By	Landowner
Location	Lot 37, Concession 32 STR in Middleton
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by Landowner to enclose a section of the Bilger Drain.
- Norfolk County was appointed as the Engineer, but no report was ever completed
- If landowner wants to proceed, another Engineer will need to be appointed.
- Staff will need to review project and determine best method forward. It is possible that this project is no longer required

BUCHOLTZ MUNICIPAL DRAIN	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner & Roads Petition
Location	Gilbertville
Cost to Date	\$12,456.39
Engineers Estimate	\$57,200 (2011 Draft)
Estimated NC Assessment	\$34,272 (2011 Draft)

- Project initiated due to storm water from Pinegrove Road being discharged through private property which was causing ponding on private property and septic issues
- Project stalled after first landowner information meeting in 2011. Landowners were not satisfied with the proposed assessments and overall cost of the project.
- Additional meetings are required to determine current needs for drainage in the area.
 Staff will need to work with the Engineer and Landowners to bring the project to a close.
- The only way to deal with the costs to date is to bring the project to completion

CAMPBELL CREEK AUX DRAIN 2	
Engineer	Norfolk County
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Nixon
Cost to Date	\$ 0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project was initiated after an airport hangar was installed over an existing municipal drain. The building location obstructs the municipalities' ability to perform future maintenance.
- A new engineers report is required to relocate the drain.
- Since Norfolk County was originally appointed as the Engineer, a new engineer will need to be appointed to address the relocation

CAMPBELL CREEK - CULVERT	
Engineer	Norfolk County
Drainage Superintendent	Bill Mayes
Initiated By	Landowner
Location	Lot 11, Concession 13 in Windham
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by a Landowner who requires a Culvert crossing on the Cambell Creek Drain
- Norfolk County was appointed as the Engineer, but no report was ever completed
- Staff will need to review project and determine best method forward. It is possible that this project is no longer required

CAUSYN SUBDIVISION DRAIN	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Roads Petition
Location	Langton
Cost to Date	\$8,540.94
Engineers Estimate	\$9,050.00
Estimated NC Assessment	\$9,050.00

- The project was initiated to formalize a storm sewer as a municipal drain and provide a legal outlet for various Norfolk County road allowances. The current storm sewer has been installed across private property with no legal right to maintain it in the future
- Final report submitted in 2021
- Staff anticipate bringing the report forward to Council by the end of 2021
- No other landowners assessed for this report

CHROMCZAK PETITION	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner Petition
Location	Part of Lot 15, Concession 3 NTR in Middleton
Cost to Date	\$ (280.44)
Engineers Estimate	\$ 2,495.00
Estimated NC Assessment	\$0

Project Update:

- Project initiated due to the Town of Tillsonburg outletting watermain discharge across
 private property. After the first on-site meeting, the Town of Tillsonburg re-routed their
 water into an adjacent sanitary sewer and the project was no longer required.
- Final report submitted in 2020
- All costs for the project assessed to the Town of Tillsonburg

COURTLAND DRAIN 5	
Engineer	G. Douglas Vallee
Drainage Superintendent	Chris Dunn
Initiated By	Landowner & Norfolk County
Location	St. Elizabeth's Crescent, Courtland
Cost to Date	\$1,549.64
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated in order to convert an existing drainage system into a municipal drain.
 Drain provides an outlet for a couple residential lots and St. Elizabeth's Crescent in Courtland.
- This project will take some effort to bring the project to a conclusion due to age and lack of progress
- Staff will need to review project with the engineer and determine best method forward

DEDRICK CREEK – RIPARIAN BUFFERS	
Norfolk County	
Chris Dunn	
Landowner	
Dedrick Creek Watershed, Charlotteville	
\$0	
Not Available	
Not Available	

- Project initiated by Norfolk County in conjunction with the Ministry of Natural Resources to provide buffer strips along drainage systems within the Dedrick Creek watershed
- Norfolk County was appointed as the Engineer, but no reports were adopted under by-law. Some of the restoration work has been completed with funding received; however, the buffers are not permanent until they are adopted under by-law
- Staff will need to review project and determine best method forward

DEKINDT DRAIN – BRANCH A ENCLOSURE	
Engineer	Norfolk County
Drainage Superintendent	Chris Dunn
Initiated By	Landowner
Location	Lot 16, Concession 2 STR in Middleton
Cost to Date	\$(1000.00)
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project initiated by landowner to enclose Branch A of the Dekindt Drain
- Norfolk County was appointed as the Engineer, but no reports have been completed or adopted under by-law
- Work appears to have been completed without an updated engineers report
- Staff will need to review project and determine best method forward. If the section of drain can be formally abandoned under the Act, this project may no longer be required.

DEMEYERE PETITION	
Engineer	G. Douglas Vallee
Drainage Superintendent	Chris Dunn
Initiated By	Landowners
Location	Lots 3 & 4 Concession 3 in Middleton
Cost to Date	\$40,170.76
Engineers Estimate	\$58,506 (2006)
Estimated NC Assessment	\$13,719.45 (2006)

- This project was initiated to address a landowner dispute regarding drainage
- It appears that this project stalled after the second landowner information meeting due to anticipated costs. The landowners requested the Engineer to review another route to see if it would result in reduced construction costs
- The engineer reviewed the additional route and found no costs saving so he issued a
 final report to Council in 2006 and the report was deferred back to the engineer again
 due to landowner opposition, the project appears to have stalled at this point
- With the current engineering cost to date, anticipated construction costs, and age of project, it is likely that this project will take some effort to bring to a conclusion

EngineerSpriet Associates LimitedDrainage SuperintendentChris DunnInitiated ByMTO PetitionLocationHighway #3 & Highway #59 in CourtlandCost to Date\$0Engineers Estimate\$168,988.91 (MTO Estimate for Construction)	DEPARTMENT OF HIGHWAYS NO. 1 DRAIN	
Initiated ByMTO PetitionLocationHighway #3 & Highway #59 in CourtlandCost to Date\$0	Engineer	Spriet Associates Limited
LocationHighway #3 & Highway #59 in CourtlandCost to Date\$0	Drainage Superintendent	Chris Dunn
Cost to Date \$0	Initiated By	MTO Petition
	Location	Highway #3 & Highway #59 in Courtland
Engineers Estimate \$168,988.91 (MTO Estimate for Construction)	Cost to Date	\$0
	Engineers Estimate	\$168,988.91 (MTO Estimate for Construction)
Estimated NC Assessment \$0	Estimated NC Assessment	\$0

- Project initiated by the MTO to obtain an improved legal outlet for Highway #3
- Project tendered in 2021
- Estimated costs do not include engineering, MTO has agreed to pay 100% of project costs.

DEROO-VANHOVE DRAIN	
Engineer	K. Smart Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lot 12, Concession 9 in Charlotteville
Cost to Date	\$178,674.96
Engineers Estimate	\$169,315.00
Estimated NC Assessment	\$ 79,219.00

Project Update:

- Project initiated by Superintendent for overall improvements to the drain and to update the assessment schedule
- Project was constructed in 2020, Grant application completed in 2020
- Once final inspection has been completed, and the Engineer has prepared the final assessments, the project can be billed out based on assumed grant funding
- Estimated levying by-law anticipated early 2022

DERTINGER DRAIN	
Engineer	R.J. Burnside and Associates Ltd
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lots 20-23, Cons 9-11 in Windham
Cost to Date	\$1,001.32
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by Superintendent due to necessary repairs and improvements required on this drain which can no longer be completed under maintenance of the existing drain By-Laws and a new report is required.
- The Dertinger Drain is experiencing significant annual maintenance requirements relating to pipes collapsing and joint displacements
- Project initiated in 2020

DEWITTE DRAIN	
Engineer	Dietrich Engineering Limited

Drainage Superintendent	Chris Dunn
Initiated By	Landowner Petition
Location	Lot 7, Con 3 Charlotteville
Cost to Date	\$16,257.09
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by landowner for improved outlet for their farming operations
- Survey is complete and design work is in process as per Engineers update in September of 2021
- Next steps will be meeting with landowners to discuss design and cost estimates

DINGLE CREEK DRAIN	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowners & Norfolk County
Location	Simcoe
Cost to Date	\$ 1,420,803.88
Engineers Estimate	\$4,430,000.00
Estimated NC Assessment	\$2,061,000.00

Project Update:

- Project initiated by numerous landowners and Norfolk County for improvements required within a major ravine system in Simcoe
- A final engineering report has been adopted by Council and all appeals have been addressed through the necessary appeal bodies.
- A budget amendment report with anticipated construction costs will be coming forward to Council by the end of 2021.
- It is anticipated that a portion of this project will be constructed in 2022, and the
 remainder of the works will likely occur in 2023. The work must be split over multi
 years in order to meet the regulatory timing windows from the DFO and the
 MNRF/MECP.

DREES DRAIN	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner Petition
Location	Lot 28 & 29, Con 1 STR Middleton
Cost to Date	\$17,470.97
Engineers Estimate	\$20,900.00
Estimated NC Assessment	\$0

- Project initiated by landowner to obtain improved outlet for their farming operations.
- Staff recently completed minor works on the drain so that it can be certified complete by the Engineer
- Staff are currently working with the Engineer to review costs to date, complete the provincial grant applications and calculate the final assessments
- Levying By-law to assess the costs is expected to be brought forward to Council in early 2022

Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Wetland/Riparian Project
Locatoin	Lot 15, Con 7 in Windham
Cost to Date	\$4,531.55
Engineers Estimate	\$17,700.00
Estimated NC Assessment	\$0

- Report Completed in 2005 and passed under By-Law in 2006
- Project was coordinated through the ALUS Program to permanently install riparian buffers along the Dry Creek drainage corridor. This project was active for 9 years post the initial construction
- Funding was received to cover the costs of this projects and it should be funded from the Wetland and Riparian Buffer Accounts
- Account to be closed in 2022

DUCKS LANDING	
Cyril J. Demeyere Limited	
Chris Dunn	
Development Request	
Port Rowan	
\$0	
Not Available	
\$0	

Project Update:

- Project initiated to make modifications and abandonment of existing Ducks Landing Drain as development proceeds.
- All costs will be borne by Developer
- Project is ongoing as the development is not fully built out

ELLIOTT DRAIN	
Engineer	K. Smart Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowners and Roads Petitions
Location	Lot 14&15, Con 5 in Townsend
Cost to Date	\$349,501.87
Engineers Estimate	\$283,000.00
Estimated NC Assessment	\$94,860.00

- Project initiated by both landowners and the Roads Department to deal with numerous areas requiring improved drainage within the Elliott Drain watershed
- Some minor work was completed in 2020 under direction of the engineer
- Once final costs have been posted to the construction accounts staff will be working
 with the Engineer to certify the project complete, review costs to date, complete the
 provincial grant applications and calculate the final assessments
- Levying By-law to assess the costs is expected to be brought forward to Council in early 2022

ELLIOTT KITCHEN DRAIN	
Engineer	Spriet Associates
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lot 20-21, Con 11-12 in Windham
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by Superintendent due to the necessary repairs and improvements required on this drain which can no longer be completed under maintenance and identified that a new report is required.
- The Elliott Kitchen Drain is experiencing significant annual maintenance requirements relating to pipes collapsing and joint displacements
- Project initiated in 2020

ELLWANGER DRAIN NO.1 & NO.7	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Development Request
Location	Port Dover
Cost to Date	\$ 16,322.81
Engineers Estimate	Not Available
Estimated NC Assessment	\$ 0

Project Update:

- Project initiated by developer for the Dover Coast Development in Port Dover
- Staff met with all necessary stakeholders to review. Minor comments were submitted back to the engineer for revisions
- Project expected to be finalized in 2022
- All costs are borne by Developer

EngineerDietrich Engineering LimitedDrainage SuperintendentBill MayesInitiated ByLandowners & Norfolk CountyLocationSimcoe	F.R. GREGORY DRAIN	
Initiated By Landowners & Norfolk County		
·		
Location Simcoe		
Cost to Date \$242,178.76		
Engineers Estimate \$250,000.00		
Estimated NC Assessment \$200,000.00		

Project Update:

- Project initiated due to improvements required on the drain which have been identified by Norfolk County and Landowners within the watershed
- Part of drain was reconstructed in 2020 under an emergency authorization through the Minister of Agriculture, Food and Rural Affairs due to major drain failure
- Final Report anticipated to be completed in 2022 and remainder of drain to be reconstructed
- Current estimates provided by Staff as a rough costs for budgeting purposes

GARNHAM NORTH BRANCH

Engineer	Dietrich Engineering Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner Request
Location	Lot 137-Lot 138, Con 1 NTR in Houghton
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project was initiated by a landowner to rebuild the existing North Branches of the Garnham Drain to inadequate drainage and poor tile conditions
- Engineer has suggested this project be moved to another Engineering Firm due to lack of progress and limited availability since appointment in 2020
- A new report will be presented to Council for the appointment of a new engineer

GRZECH DRAIN RE-ASSESSMENT	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Chris Dunn
Initiated By	Superintendent Request
Location	St. Williams
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project was initiated by the Drainage Superintendent due to assessment schedule being out of date and no longer fair and equitable to landowners
- Recent apportionments completed and new report may no longer be required

GUTHRIE PETITION	
Engineer	G. Douglas Vallee Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowners & Norfolk County
Location	Dancy Side Road, St. Williams
Cost to Date	\$ 29,068.25
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Staff need to discuss this project with the Engineer, Norfolk County Road and new landowners in the area to determine current needs
- Project can be simplified to reduce costs
- This project will take some effort and coordination to bring it to a conclusion, mostly due to age, costs to date and change in ownership
- There is approximately \$46,635.32 in maintenance costs associated with this project which need to be reviewed to see what is eligible to be assessed with construction

HAYMARSH RE-ASSESSMENT REPORT	
Engineer	Spriet Associates
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lot 14-23, Con 9-13 in Windham
Cost to Date	\$ 7,268.87
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- The Haymarsh Drain has multiple drain reports which are contradictory to one another which introduced challenges for the municipality when conducting maintenance or assessing maintenance costs.
- There has also been numerous areas identified along the drain which are in need of improvements
- Project initiated to complete an overhaul on the drain and to update the assessment schedules

HENRY JULL DRAIN	
Engineer	R.J. Burnside and Associates Ltd
Drainage Superintendent	Bill Mayes
Initiated By	Landowner Request
Location	Lot 22, Con 5 in Windham
Cost to Date	\$227,224.06
Engineers Estimate	\$223,610.00
Estimated NC Assessment	\$72,592.00

Project Update:

- The Henry Jull Drain was initiated due to multiple landowner request for improvement on the existing drain to improve the outlet for agricultural purposes.
- Staff are currently working with the Engineer to review costs to date, complete the provincial grant applications and calculate the final assessments
- Levying By-law to assess the costs is expected to be brought forward to Council in early 2022

HIGHWAY NO. 6 DRAIN	
Engineer	K. Smart Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	MTO and Roads Petition
Location	Port Dover
Cost to Date	\$ 340,213.14
Engineers Estimate	\$2,282,000.00
Estimated NC Assessment	\$682,009.00 + \$689,995.00 to Rate Budget for WWTP

- Project initiated by the MTO to obtain a legal outlet for Highway #6, and subsequently Norfolk County for an outfall for the Port Dover WWTP
- Final report submitted in August 2021
- Currently going through the Drainage Act appeal process with construction anticipated to occur in 2022

J A SMITH ROADS	
Engineer	Spriet Associates Limited

Drainage Superintendent	Chris Dunn
Initiated By	Landowner and Roads Petition
Location	Lot 13, Con 3 in Middelton
Cost to Date	\$ 21,414.22
Engineers Estimate	\$72,000.00
Estimated NC Assessment	\$37,818.00

- Project initiated by the Roads Department to obtain an outlet for storm water along roads and subsequently an adjacent landowner also signed a petition for improved drainage
- Staff have been reviewing final plans and report with affected landowners prior to submitting to Council
- Staff will be bringing the final report before Council by the end of 2021 anticipating construction will occur in 2022

JAMES BERRY EXTENSION	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner & Roads Petition
Location	Lot 13, Con 3 in South Walsingham
Cost to Date	\$17,641.28
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project initiated by landowner and roads to obtain an improved outlet at the top end of the James Berry Drain
- Due to the age of the project, staff need to meet with the original petitioner(s) and Norfolk County Roads to determine the current requirements for drainage
- The only way to deal with the costs to date is to bring the project to completion

JAMES BERRY WETLAND	
Engineer	Norfolk County
Drainage Superintendent	Chris Dunn
Initiated By	Wetland/Riparian Project
Location	Lot 11, Con B in South Walsingham
Cost to Date	\$37,756.17
Engineers Estimate	\$6,500.00
Estimated NC Assessment	Not Available

- Norfolk County was appointed as the Engineer, but no reports have been completed or adopted under by-law
- Files will need to be reviewed to see how much funding was received
- Work appears to have been completed without an updated engineers report
- Costs seem to have significantly over run the estimated costs
- Staff will need to review project and determine best method forward, Norfolk County cannot assess out costs or perform necessary maintenance without an updated engineers report

KILIAN DRAIN, BRANCH F,G,H	
Spriet Associates Limited	
Chris Dunn	
Development Request	
Lot 18, Con 14 in Township of Norfolk	
\$(14,938.84)	
\$46,900.00	
\$0	

- As per the original development agreement, the developers provided a letter of undertaking stating that they would be responsible for all costs related to the construction of a new municipal drain for a six (6) lot subdivision.
- The developers paid for the costs to construct the drain; however, the engineering invoices were paid by the municipality and represent the costs to date.
- Recently staff sent invoices to the original developers requesting payment of outstanding costs, those invoices went unpaid.
- Since the developers have refused to pay the outstanding costs, in order to recoup costs, Norfolk County must assess the costs to the landowner identified within the original engineers report and by-law passed by Council

KOZACK DRAIN (LEEDHAM DRAIN)	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner Petition
Location	Lot 7, Con 2 in Charlotteville
Cost to Date	\$ 15,538.51
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project initiated by a landowner who required additional outlet for their agricultural lands
- Surveying complete, engineer to finalize design and present a draft report to Norfolk County to review with landowners and anticipate a draft report to be received in 2022

LAMBERT DRAIN – CULVERT EXTENSION	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Owner Request
Location	Lot 16, Concession 1 N.T.R. in Middleton
Cost to Date	\$ 20,242.18
Engineers Estimate	\$24,000.00
Estimated NC Assessment	\$14,580.00

- Project was initiated by an owner who wanted to extend a culvert and created a wetland area on their farmland
- Final report has been completed and adopted under By-Law in 2017
- Only one landowner aside from Norfolk County is affected by this project
- Superintendent has been working with the landowner to coordinate construction with an adjacent wetland they are constructing. Landowner was to complete all work, however, this has not occurred to date
- Staff will tender this project in 2022 if no movement has occurred by the landowner

LANGTON NO. 1 DRAIN	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Superintendent
Location	George Street Langton
Cost to Date	\$2,887.19
Engineers Estimate	Not Available
Estimated NC Assessment	\$3,500.00

- Project initiated by staff due to numerous complaints along the drain regarding pipe failures
- Through the investigations, the drain was videoed and it was determined that a large
 part of the issue was isolated to one area where the pipe was settling. The other
 issues are related to poor installations of catchbasins along the stretch of the drain
 which have been installed by Norfolk County.
- It was further determined that the majority of the work could be completed under maintenance and that a full reconstruction and new engineers report was not required
- A substantial maintenance project was undertaken in 2021 to try to remedy the settling pipe.
- Construction project expected to be wrapped up early in 2022.

LANGTRY DRAIN	
Engineer	K. Smart Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner & Roads Petition
Location	Lot 10-14, Con 7-11 in Charlotteville
Cost to Date	\$193,545.37
Engineers Estimate	\$778,590.00
Estimated NC Assessment	\$395,110.00

- Project initiated by Superintendent for overall improvements to the drain and to update
 the assessment schedule, subsequently multiple addition request for improved
 drainage have been received by landowners and the Roads Department
- Minor revisions to draft report in an updated report being received in August 2021
- Staff will be bringing the final report before Council by the end of 2021
- Anticipated that construction will occur in 2022

LEHI DRAIN - RE-ASSESSMENT	
Engineer	R.J. Burnside and Associates Ltd

Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lots 20-23, Cons 9-11 in Windham
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Landowner request received from seven (7) owners to address changes within the Lehi Drain watershed after a culvert was replaced on Brantford Road in 2019
- A new engineers report must be provided in order to make assessments fair an equitable for all landowners within watershed
- Project initiated in 2021

LYNEDOCH DRAIN	
Engineer	G. Douglas Vallee
Drainage Superintendent	Bill Mayes
Initiated By	Landowners & Norfolk County
Cost to Date	\$340,908.81
Location	Lynedoch
Engineers Estimate	\$325,326.75
Estimated NC Assessment	\$201,554.76

Project Update:

- Project initiated by landowners and Norfolk County to address drainage concerns
- Staff need to discuss this project with the Engineer to address changes made during construction, certify completion, review costs to date, complete the provincial grant applications and calculate the final assessments
- This project will take some effort to bring the project to a conclusion
- Levying By-law is required to assess the costs is expected to be brought forward to Council in 2022

MARY MACKENZIE DRAIN	
Engineer	K. Smart Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lot 10-14, Con 7-10 in Charlotteville
Cost to Date	\$343,584.78
Engineers Estimate	\$271,770.00
Estimated NC Assessment	\$174,879.00

- Project initiated by Superintendent for overall improvements to the drain and to update the assessment schedule
- Staff are currently working with the Engineer to review costs to date, complete the provincial grant applications and calculate the final assessments
- Levying By-law to assess the costs is expected to be brought forward to Council in early 2022

MC GUIRE PETITION	
Engineer	K. Smart Associates Limited

Drainage Superintendent	Bill Mayes
Initiated By	Landowner Petition
Location	Boston
Cost to Date	\$10,135.00
Engineers Estimate	\$43,000.00
Estimated NC Assessment	\$19,421.00

- Project initiated by a landowner who was dealing with drainage issues from adjacent properties and had restricted outlet
- Meeting was held in April 2017 to discuss overall design and costs, the project was met with opposition due to costs
- Additional meetings are required to determine current needs for drainage in the area.
 Staff will need to work with the Engineer and Landowners to bring the project to a close. If original petitioner does not want to proceed with the project, they will be responsible for the costs to date

MCCALL DRAIN - REASSESSMENT	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lot 24, Con 6-7 in North Walsingham, Lot 1, Con 4 in Charlottville
Cost to Date	\$3,490.72
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- This projected was initiated by the Superintendent regarding a dispute over maintenance assessments relating to a road crossing.
- It appears that the dispute was resolved; however, the Superintendent felt that ti was necessary to have an engineer update the assessment schedule for future maintenance purposes.
- Staff will need to work with the Engineer and Landowners to bring the project to a close.

MCCLUNG MUNICIPAL DRAIN	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lot 7, Con 1 in Windham
Cost to Date	\$ 2,009.81
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Originally the project was initiated by staff recognizing that the current report, design and assessment schedule were out of date and no longer valid.
- Recently this project was brought back to light when Norfolk County installed an automatic flusher which utilized this drain as an outlet.
- The landowner has expressed concerns regarding costs for the reconstruction and engineering involved to create a new report under the Act which has stalled progress

Engineer	Dietrich Engineering Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner Request
Location	Lots 10-12, Con 1-2 STR in Middleton
Cost to Date	\$4,707.19
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated as a result of the municipality receiving a written request to hire an Engineer to prepare a report for the abandonment of a section of the McKoy Drain
- Preliminary drafting complete, draft report completed Engineer needs to update landowner information and finalize report
- Anticipated that this project could be completed in 2022

MCQUEEN MUNICIPAL DRAIN	
Engineer	Norfolk County
Drainage Superintendent	Chris Dunn
Initiated By	Landowner Request
Location	Lot 14, Con 1 STR in Middleton
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- The project was initiated by a landowner who wished to realign the McQueen Drain –
 Branch "B" and an enclose a section of the existing open ditch portion of the drain
- Norfolk County was appointed as the Engineer, but no reports have been completed or adopted under by-law
- Staff will need to review project and determine best method forward. If the section of drain can be formally abandoned under the Act, this project may no longer be required.

MILES DRAIN	
Engineer	K. Smart Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowner Petition
	Lots 7-10, Con 4 in Townsend
Cost to Date	\$168,276.52
Engineers Estimate	\$303,500.00
Estimated NC Assessment	\$77,897.00

- Project intited by landowners requesting the culvert under Highway #19 be lowered to improve the drainage for upstream lands
- Engineers Report finalized and adopted under By-Law in 2019
- Drain was constructed in 2020
- Staff applied for OMAFRA Grant in 2020, it has not been received to date.
- Drain construction came well under budget; therefore, it is anticipated that the costs savings will be realized by all stakeholders including Norfolk County
- Levy by-law anticipated early in 2022

MUNICIPAL NO. 1 DRAIN D (WETLAND)	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Wetland/Riparian Project
Location	Lot 14-15, Concession 3 in Houghton Lot 1, Con 10 in South Walsingham
Cost to Date	\$26,315.44
Engineers Estimate	\$20,900.00
Estimated NC Assessment	\$0

- Project initiated by landowners to create a wetland with riparian buffers on the drainage system
- Final report has been completed and adopted under By-Law in 2019
- Project is complete
- Project will be funded through wetland funding received, account to be closed in 2022

MUNICIPAL SYSTEM No.2	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner Request
Location	Lot 5, Conc 3 in Houghton
Cost to Date	\$ 23,851.26
Engineers Estimate	Not Available
Estimated NC Assessment	No costs to Norfolk County are anticipated

Project Update:

- Project initiated by landowner to enclose a portion of the existing municipal drain and incorporate changes made over time so that the municipality can properly maintain the drainage system
- CCTV investigation is complete, Engineer is currently evaluating design options, revising cost estimates, preparing final report
- Staff will have to meet with landowners to discuss final report before bringing forward to Council
- Project could be completed as early as 2022

MURRAY DRAIN CULVERTS	
Engineer	K. Smart Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowner Petition
Location	Lots 1-5, Conc 7-10 in Windham and Lots 1-3, Conc 8-9 in
	Townsend
Cost to Date	\$85,851.12
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by Superintendent due to landowner request to replace culvert that had collapsed. Through investigations it was determined that the culverts were not part of the drain and a new drain report would be required for staff to perform any maintenance
- The culvert was replaced in 2016 under an emergency authorization through the Minister of Agriculture, Food and Rural Affairs due to the culvert failure and immediate need of replacement

- It was also identified that many of the culverts on this system also held the same status and had a need to form part of the drainage works. Subsequent to the culvert investigation, it has also been identified that there is a need to formalize the outlet for the Murray Drain and improve the overall outlet for the watershed. A major limiting factor for the drain is related to the elevation of water levels within the Waterford Ponds
- A memo regarding the management of water levels in the Waterford Ponds was received from K. Smart Associates Limited in 2021
- It is hoped that a final report on the Murray Drain will be received 2022

NANTICOKE CREEK DRAIN	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowner Request
Location	Lot 14-19, Conc 7-9 in Townsend
Cost to Date	\$141,108.51
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by landowners in the area requesting improved drainage in tributaries to Nanticoke Creek
- Due to the size of the watershed, there has been a substantial amount of engineering design, survey work and consultations with the local conservation authority and the Department of Fisheries and Oceans
- In 2019 this project was met with substantial resistance form the Conservation Authority to improve what they felt was a natural watercourse
- Staff will need to review project with the Engineer, Conservation Authority and Landowners to determine best method forward
- The most difficult part of this project is if it unable to go forward due to environmental reasons, how will Norfolk County and the Engineer address costs to date

NINTH CONCESSION DRAIN	
Engineer	Spriet Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lots 19-21, Con 8-9 in Charlotteville
Cost to Date	\$ 46,756.11
Engineers Estimate	\$750,000.00 (Draft)
Estimated NC Assessment	\$500,000.00 (Draft)

Project Update:

- Project initiated due to being unable to maintain the existing drain in its current state largely due to buried utility conflicts with the drainage system
- Landowner information meeting was held in 2016 and was met with extreme opposition from landowners due to costs
- Project required significant coordination between several utilities that will be affected by construction, utilities will be assessed for a portion of the project

NORMANDALE DRAIN

Engineer	Spriet Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowner & Roads Petition
Location	Normandale
Cost to Date	\$ 51,037.14
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by several landowners and the Roads Department to deal with drainage issues within Normandale
- Staff met to discuss this project in September 2021. The outcome of the meeting was to reduce the scope of the project from a full storm system throughout the Normandale, to a smaller system that would only provide a single legal outlet. This will provide a legal for Norfolk County should they wish to improve the drainage in the area in the future
- Cost to date include emergency work completed in 2011. This forms the majority of the work that is required for this project to be completed.
- A final engineers report could be expected in 2022

OLD MILL ROAD DRAIN	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner & Roads Petition
Location	Clear Creek
Cost to Date	\$103,790.32
Engineers Estimate	\$95,300.00
Estimated NC Assessment	\$76,677.00

Project Update:

- Project initiated by several landowners and Norfolk County to address road water runoff and erosion at the end of Old Mill Road
- Staff are currently working with the Engineer to review costs to date, complete the provincial grant applications and calculate the final assessments
- Levying By-law to assess the costs is expected to be brought forward to Council in early

PAAUW DRAIN	
Engineer	K. Smart Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowner and Roads Petition
Location	Lots 22-24, Conc 9-10 inTownsend Lot 1, Con 12 in Walpole (Haldimand County)
Cost to Date	\$192,259.31
Engineers Estimate	\$295,100.00
Estimated NC Assessment	\$91,924.00

- Project initiated by landowners seeking a resolution to surface flooding and tile outlet issues
- Due to changes in engineers (3), project complexity and varying landowner interests, the efforts to date has been stalled on several occasions. There have been several unsuccessful attempts to complete a design that is acceptable to all parties.
- Final report submitted in 2021 and currently working its way through the appeals process under the Act.
- Anticipated construction to start in 2022

PETTINGER PETITION	
Engineer	R.J. Burnside and Associates Ltd
Drainage Superintendent	Bill Mayes
Initiated By	Landowner Petition
Location	Lot 4, Broken Front Concession in Woodhouse
Cost to Date	\$32,912.77
Engineers Estimate	\$54,730.00
Estimated NC Assessment	\$1,462.00

- Project initiated by landowners due to a neighbourly drainage dispute
- Final report submitted in 2021 and currently working its way through the appeals process under the Act

PETTIT DRAIN CULVERT	
Engineer	Norfolk County
Drainage Superintendent	Bill Mayes
Initiated By	Landowner
Location	Lot 10, Con 12 in Windham
Cost to Date	-\$1,000
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project initiated by a Landowner who required a culvert crossing on the Pettit Drain
- Culvert has been installed at the cost of the landowner, remaining costs on account are related to engineering costs required to incorporate the culvert as part of the drainage works
- Norfolk County was appointed as the Engineer, but no report was ever completed
- Staff will need to review project and determine best method forward

PETTIT DRAIN RE-ASSESSMENT	
Engineer	G. Douglas Vallee Limited
Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lot 3-13, Con 9-13 in Windham
Cost to Date	\$6,167.75
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by the Drainage Superintendent to correct errors within the existing report related to the watershed and inequitable assessments. There had been many severances and boundary adjustments within the watershed since the original report.
- Since the existing drain report for the Pettit Drain is unfair and inequitable, the municipality cannot use related assessment schedule for applying for grant or for assessing the landowners for maintenance activities on the drainage system.
- Although the assessment schedule cannot be used for grant applications and billing, it
 does not alleviate the municipalities responsibilities under the Act and the requirement
 of performing maintenance on the drainage system

- Routine maintenance which cannot be billed out has still occurred since 2007 which has resulted in \$120,947.58 in maintenance cost accumulating to date
- Report delayed due to work on adjacent drain which needed to be identified within this report.
- Staff are going to work with the engineer to get this project finalized now that other work has been completed

PORT DOVER RAVINE	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowner & Roads
Location	Port Dover
Cost to Date	\$321,728.59
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project was initiated by numerous landowners and the manager of roads to deal with severe erosion issues within the ravine system that runs through Port Dover and outlets near Inkerman Street
- Most of the issues realized have been caused from uncontrolled stormwater from development in the watershed which has occurred over the last 25 to 50 years and, as a result of the continued development, increased runoff volume and peak flows have resulted in channel and streambank erosion which requires remediation
- Due to project complexity, size of watershed, project constraints, number of landowners involved, varying landowner interests and stability and sensitivity of the system a large amount of engineering has gone into this project including specialist being hired for soils, stream restoration
- Staff are in receipt of a final geotechnical reports, bank stabilization and restoration plan, floodplain mapping, storm pond analysis
- Staff will continue to work with the engineer to evaluate design options and bring this project forward for completion

PORT RYERSE PETITION (WD)	
Engineer	Spriet Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowners & Norfolk County
Cost to Date	\$ 47,698.54
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by several landowner and the Roads Department to address drainage issue related to road water runoff
- Staff met to discuss this project in September 2021. Outcome of the meeting was to reduce the scope of the project from a full storm system throughout the Port Ryerse to only provide legal outlets at two separate locations to deal with the worst areas. This will provide a legal and adequate outlet for Norfolk County if they decide to improve the drainage in the area in the future
- A final engineers report could be expected in 2022

Engineer	K. Smart Associates Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowner Request
Location	Lot 1, Con 2 in Townsend
Cost to Date	\$19,667.13
Engineers Estimate	\$45,445.00
Estimated NC Assessment	\$ 0

- Project initiated by landowner to enclose a portion of Branch A on the Prescott Drain
- Final report has been completed and adopted under By-Law in 2018
- Project was tendered in 2019 and the project came in at almost five (5) times the engineers estimate noting that only one bid was received
- Staff met with the landowner and the Engineer to determine the best course of action moving forward
- It is anticipated that the project will be re-tendered in 2022

PROVOST DRAIN - RESTRUCTURE	
Engineer	Norfolk County
Drainage Superintendent	Chris Dunn
Initiated By	LPRCA
Location	Lot 18, Con 5 in South Walsingham
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project initiated the conservation authority to remove an existing tile drain and revert a drain back to an open ditch on the Provost Drain
- Norfolk County was appointed as the Engineer, work was completed without a final report, and no report was ever completed
- Staff will need to review project and determine best method forward. Norfolk County will need to appoint a new engineer to incorporate the modifications to the drain so that future maintenance can be performed.

REGIONAL ROAD 21 DRAIN	
Engineer	Headway Engineering
Drainage Superintendent	Chris Dunn
Initiated By	Landowner and Roads Petition
Location	Lynedoch
Cost to Date	\$40,364.87
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project originally initiated by Roads in order to address runoff from Regional Road 21 through private property. Recently a new Petition was signed by an owner who requires an outlet for their subdivision development.
- Draft design, estimate and schedules are almost complete for a Landowner Information Meeting.
- Project is going to combine a 2023 Capital Reconstruction project with the drain to eliminate two storm sewers running in parallel.
- Project moving along as anticipated, possible construction in 2022

SIXTH CONCESSION DRAIN (DE BOER)	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowner Request
Location	Lot 24, Con 7 in Townsend
Cost to Date	\$34,698.76
Engineers Estimate	\$83,700.00
Estimated NC Assessment	\$0

- Staff recommended levying the costs as per the Engineers Report in 2020. Council
 requested a staff report to discuss the assessment to the landowner. The landowner
 had submitted a written submission to Council which was not provided to staff for
 comment.
- Staff have recently obtained the written submission from the landowner, we will work to provide a staff report outlining the Landowners position and the County's position on the assessment
- Staff will bring forward a staff report and new levying by-law in 2022

SOUTH CREEK - RIPARIAN	
Engineer	Norfolk County
Drainage Superintendent	Chris Dunn
Initiated By	Landowner Request
Location	Lot 38, Con 1 STR in Middleton
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project initiated by Norfolk County in conjunction with the Ministry of Natural Resources to provide buffer strips along drainage systems within the South Creek watershed
- Some work completed with funding received
- Norfolk County was appointed as the Engineer, but no reports were adopted under by-law. Staff will need to review project and determine best method forward

SOUTH MIDDLETON DRAIN	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowners & Norfolk County Petition
Cost to Date	\$332,053.65
Engineers Estimate	\$288,750.00
Estimated NC Assessment	\$228,350.00

- Project initiated by a developer and the Roads Department to establish a legal outlet for the adjacent lands and roads
- Project constructed in 2019
- Staff are currently working with the Engineer to review costs to date, complete the provincial grant applications and calculate the final assessments
- Levying By-law is anticipated to be brought forward to Council early in 2022

SOUTHERN TURKEY POINT DRAINAGE SYSTEM	
Engineer	K. Smart Associates Limited

Chris Dunn
Roads Petition
Turkey Point
\$476.01
\$512,520.00 (Draft)
\$316,250.00 (Staff Estimate)

- The project is to formalize and provide a legal outlet for a Norfolk County road allowances within Turkey Point
- Draft design is complete and currently undergoing environmental reviews with the DFO, LPRCA, and MECP. Species at Risk in the area has been flagged as a potential challenge and costs could vary depending on the request from the environmental agencies
- Project stalled until we understand if the environmental agencies are on-board with the design
- Norfolk County portion estimated by Staff based on 50% of anticipated costs and special assessments for road crossings.
- Staff anticipate a final engineers report will be brought before Council in 2022

UNION PARSONS TRACT	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Wetland/Riparian Project
Location	Lot 24-25, Con 4 STR in Middleton
Cost to Date	\$7,964.32
Engineers Estimate	\$6,600.00
Estimated NC Assessment	\$0

Project Update:

- Proejct initiated by landowner to establish a wetland restoration site
- Report is complete and has been adopted by Council under By-law in 2008.
- Staff need to review what funding was received and assess the remaining costs to Roll# 541-060-180 as per the Engineers Report
- Account to be closed in 2022

VAN LAEKE DRAIN ENCLOSURE	
Norfolk County	
Chris Dunn	
Landowner Request	
Lot 37, Concession 2 STR in Middleton	
\$23,021.58	
Not Available	
Not Available	

- Project initiated by landowner to enclose a portion of the Van Laeke Drain
- Norfolk County was appointed as the Engineer, work appears to have been completed; however, no reports have been completed or adopted under by-law
- Staff will need to review project and determine best method forward, we cannot
 assess out costs without an updated Engineers report or perform maintenance on the
 enclosed section. Possibly abandon section of drain if landowner will pay costs to date

Engineer	Dietrich Engineering Limited
Drainage Superintendent	Bill Mayes
Initiated By	Landowner Petition
Location	Lot 11-13, Con 2-3 in Charlotteville
Cost to Date	\$6,160.39
Engineers Estimate	\$125,000.00
Estimated NC Assessment	\$99,750.00

- Project initiated update the current engineers report and identify the location of this drain as well as to establish new assessment schedules required for maintenance
- Dietrich Engineering has requested that this file be transfer to Headway Engineering as the lead engineer on this project joined the competing firm in 2021
- A new landowner wants to see the drain relocated to support the construction of a new residential dwelling scheduled to be built in 2022
- Staff are currently working with the Engineer to find a solution moving forward
- Estimate provided by staff for budgeting purposes only and are subject to change

VAN TYNE DRAIN BRANCH A	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Chris Dunn
Initiated By	Roads Petition
Location	Lot 7, Con 5 in Charlotteville
Cost to Date	\$ 20,509.66
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

Project Update:

- Project initiated by the Roads Department to convert a Mutual Agreement Drain into a Municipal Drain that primarily services Charlotteville Road 5
- Staff will be bringing the final report before Council by the end of 2022
- Staff are working with the Engineer to finalize the report

VEIT DRAIN - RELOCATION	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landonwer Request
Location	Lot 29-30, Con 1 STR in Middleton
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by the landowner to make changes to the Veit Drain in order to accommodate development of their agricultural business
- It is unclear at this time if there is still a need for this project or if changes have been made that need to be addressed by a new Engineers report
- Staff will need to review project and determine best method forward. A meeting will need to held with the current owners to see if there is a future or current need
- If project is no longer required, account to be closed in 2022

VERSCHEURE DRAIN - INCORPORATION	
Engineer	Norfolk County
Drainage Superintendent	Chris Dunn
Initiated By	Roads Petition
Location	Lot 5, Con 5 in Houghton
Cost to Date	\$0
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by the Roads Department to incorporate an extension of pipe along the 5th Concession ENR to the Verscheure Drain so that the infrastructure has legal status and as an outlet for the road allowance.
- It appears that this pipe is already in existence, a new report is only require to convert the pipe into a municipal drain
- Norfolk County was appointed as the Engineer; however, no reports have been completed or adopted under by-law. Staff have very little information on this project.
- If this project is still required, a new engineer will need to be appointed under the Drainage Act

VILLAGES OF LONG POINT BAY	
Engineer	GHD
Drainage Superintendent	Chris Dunn
Initiated By	Development Petition
Location	Port Rowan
Cost to Date	\$922.00
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by the original developer of the Villages of Long Point Bay development. The entire development is serviced by municipal drains for stormwater. As each phase of the development was completed, the Engineers report was updated, all cost were paid directly by the developer; therefore, there are no outstanding costs to be paid.
- Originally staff were under the impression that the final Engineers report was adopted under by-law; however, this does not appear to be the case. Only half of the development has been adopted under by-law which needs to be corrected

- In order to be able to maintain the municipal drains in the area as one system, the final report needs to be adopted by Council. This is purely a desktop paper exercise and will bear no additional costs to the landowners in the development.
- Staff provided an education session regarding the drainage report in November of 2019, with the intentions on bringing the report forward to Council later in 2020.
 Unfortunately due to COVID and the sheer number of landowners affected by this report, this did not happen.
- It is staffs intension to bring this report forward some time in 2022 to get it formally adopted under the Drainage Act.
- Cost to date are related to the purchase of USB devices for mailing that will be required when circulating the report

WALDICK PETITION	
Engineer	Spriet Associates Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landonwer Request
Location	Lot 1 Con A in Charlotteville
Cost to Date	\$3,190.58
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available

- Project initiated by the landowner because they were experiencing drainage issues related to a downstream road culvert and obstructed watercourse
- An on-site meeting was held in 2014 with little to no movement on the project since that time
- The petitioning owner has recently completed private works on their lands. Further
 discussion with the landowner is required to determine their desire to proceed under
 the Act.
- The upstream owner has indicated a desire to request an improved outlet but has not signed a petition.
- Staff will need to review project with the affected landowners to determine best method forward.
- If project is no longer required, account to be closed in 2022

WALLACE MARSH	
Engineer	Dietrich Engineering Limited
Drainage Superintendent	Chris Dunn
Initiated By	Landowner Request
Location	Lot 13 Con 1-2 STR in Middleton
Cost to Date	\$50,608.76
Engineers Estimate	Not Available
Estimated NC Assessment	Not Available
B 1 411 1 4	

- Project initiated by landowner to enclose a portion of the Wallace Marsh Drain
- Almost all engineering work completed including survey, draft report, draft assessment schedules
- Staff anticipate bringing the final report before Council by the end of 2022
- Staff are working with the Engineer to finalize the report

ZDRILUK DRAIN	
Engineer	K. Smart Associates Limited

Drainage Superintendent	Bill Mayes
Initiated By	Superintendent
Location	Lot 13 Con 1-2 STR in Middleton
Cost to Date	\$70,401.17
Engineers Estimate	\$491,970.00
Estimated NC Assessment	\$63,810.00

- Project initiated by the Superintendent due to number of maintenance request and flooding complaints, and determined that the drain tile is in poor condition as well as undersized according to current standards. Staff considered replacing the drain under maintenance; however, due to the extent of work necessary, the change in site conditions, and the need for improved drainage, the Superintendent recommended Council appoint an Engineer to address the changes required
- A draft report was submitted in 2021 and is currently going through the appeals process
- Staff anticipate construction occurring in 2022