HOLLAND MARSH
DRAINAGE SYSTEM
Joint Municipal Service Board

Report of Drainage Superintendent

REPORT #:	HMDSJMSB-2021-01
DATE:	February 4, 2021
SUBJECT:	Drainage Act S.65 and S.76 Assessment Revisions
PREPARED BY:	Frank Jonkman, Drainage Superintendent

RECOMMENDATION:

That Staff Report HMDSJMSB-2021-01 – Drainage Act S.65 and S.76 Assessment Revisions dated February 4, 2021 be received; and

That the Board support that the drainage engineer be instructed to review existing municipal drains where a change of use or alteration of land has been identified as per S65(3) to inspect the land and assess it for a just proportion of the drainage works pursuant to the *Ontario Drainage Act*; and

That the Board appoint the drainage engineer to develop an updated assessment schedule for the Main Drain and Pumping Operations as per Section 76, which could allow for variable levy rates based on land use.

PREAMBLE

The Holland Marsh Drainage System Joint Municipal Service Board has been delegated the duty of assuming the municipalities' responsibilities as they relate to the Holland Marsh and all other municipal drains in Bradford West Gwillimbury and Township of King, under the *Ontario Drainage Act R.S.O. 1990*.

There are four commonly used sections in the *Drainage Act* that require the appointment of a Drainage Engineer:

1. Section 4 which authorizes the petitioning of the local municipality to establish a new municipal drain;
2. Section 65 which addresses subsequent connections to a municipal drain or a change of use or alteration of land.

3. Section 76 which varies the assessment for maintenance and repair of the drain; and
4. Section 78 which authorizes improvements or modifications to existing municipal drains.

It had been previously reported that the Board would require the services of a Drainage Engineer in order to address Section 65 of the *Ontario Drainage Act*, based on the significant increase in greenhouse development and other hardening of land in the Holland Marsh. Section 65(3) requires that a drainage engineer be instructed to inspect the land and assess it for a just proportion of the drainage works if the land has been subsequently altered in the nature or extent of use of the drainage works.

The maintenance of the Main Drain and Pumping Operations has historically been funded through a levy program, currently $64.27/ha is collected annually from every property within the polder regardless of land use and/or benefit. The rate used for the levy was last reviewed over 10 years ago and has not been adjusted to reflect current costs for maintenance and operation since then.

The assessment to lands for maintenance of the Main Drain and Pumping Operations is based on an assessment schedule produced as part of the engineering report titled *'Holland Marsh Drainage Scheme Bradford Pumping Station No.2'* authored by Young-Smart in 1990.

BASIC DATA PERTAINING TO THE MATTER

Section 65(3) will be used where Municipal drains, particularly those with pipes or culverts, have a limited capacity and were designed to provide sufficient outlet based on a particular land use. Conversion of land currently in agricultural crop production to greenhouses or other hardening increases the amount of storm run-off and satisfies the requirement of subsequent alteration in the nature or extent of use of the drainage works. The increase in flow to the drain may exceed the design capacity of the drain. As a result, there may be landowners along the drain that could have drainage problems because of the additional run-off generated through storm events.

A Section 65(3) report may also find that existing drain capacities are no longer adequate and may require additional capacity to be provided, including culverts and road crossings. If this is the conclusion after a review of an existing municipal drain under Section 65, a new Section 78 report may be required.

While S.65(3) states that it is a duty of the clerk, where the clerk shall instruct the engineer to assess lands and assess it for a just proportion of the drainage works, it is recommended that this approach be approved by the Board.

Section 76 will be used to adjust the annual levy that is applied to the lands within the polder where additional hardening of the agricultural lands is causing concern with the

conveyance and the ability to maintain water levels through pumping, as the increased covering or hardening of the land is creating stormwater run-off which immediately requires an outlet. The result of this is a drainage system which is inadequate to sufficiently react to storm events, and localized flooding will increase proportionately. Other concerns will be additional maintenance resulting from increased volumes of water and sediment loading to the systems.

S.76(1) states that *The council of any local municipality liable for contribution to a drainage works in connection with which conditions have changed or circumstances have arisen such as to justify a variation of the assessment for maintenance and repair of the drainage works may make an application to the Tribunal, of which notice has been given to the head of every other municipality affected by the drainage works, for permission to procure a report of an engineer to vary the assessment, and, in the event of such permission being given, such council may appoint an engineer for such purpose and may adopt the report but, if all the lands and roads assessed or intended to be assessed lie within the limits of one local municipality, the council of that municipality may procure and adopt such report without such permission. R.S.O. 1990, c. D.17, s. 76 (1); 2006, c. 19, Sched. A, s. 6 (1).*

It would also be the recommendation that the Board support a new levy structure that either creates variable rates or a multiplication factor applied to a base rate for determining assessments against existing agricultural properties and properties that have been modified through development (i.e. hardening). This new levy would apply the principles of Section 23(3) of the Drainage Act where *"The assessment for outlet liability…shall be based upon the volume and rate of flow of the water artificially caused to flow … into the drainage works from the lands and roads…"*

Attachment 1 provides an example of how a variable rate would apply to different land uses within the polder.

Attachment 2 provides a Flow Chart for the process required to proceed with updating an existing assessment schedule.

Under the *Drainage Act*, municipalities are responsible for the integrity of the drainage systems within the municipalities' jurisdictions. An engineer's report is required for any improvements or modification to any drainage systems constructed under the *Drainage Act.*

FINANCIAL CONSIDERATION

There are no financial commitments at this time. Engineering costs associated with drainage works are generally assessed to benefitting property owners. Assessments to the municipalities may also be adjusted once new schedules for assessment resulting from the Section 76 review of levies has been approved.

ATTACHMENTS:

1. Sample Holland Marsh Levy Spreadsheet
2. **OMAFRA Flow Chart**
   UPDATING ASSESSMENT SCHEDULES: DEVELOPING NEW SCHEDULES SECTION 76 OF THE DRAINAGE ACT

SAMPLE HOLLAND MARSH LEVY SPREADSHEET

Base Agricultural Rate ($/ha)	$	64.27

EXAMPLE PROPERTIES	TOTAL PROPERTY AREA (ha)	[1]AGRICULTURAL AREA (ha)	IMPERVIOUS AREA (ha)	[2]GRAVEL ROAD (ha)	[3]PAVED ROAD (ha)	FOREST COVER (ha)	RESIDENTIAL LOT (ha)	ANNUAL LEVY ($)	HISTORIC LEVY ($)
A	3.94	3.94	0.00	0.00	0.00	0.00	0.00	$ 253.48	$ 253.48
B	3.94	2.92	1.02	0.00	0.00	0.00	0.00	$ 384.33	$ 253.22
C	0.50	0.17	0.33	0.00	0.00	0.00	0.00	$ 74.55	$ 31.88
D	0.50	0.00	0.00	0.00	0.00	0.00	0.50	$ 64.27	$ 32.14
ROAD A	1.00	0.00	0.00	1.00	0.00	0.00	0.00	$ 160.68	$ 64.27
ROAD B	1.00	0.00	0.00	0.00	1.00	0.00	0.00	$ 192.81	$ 64.27
							TOTAL	$ 1,130.12	$ 699.26

Property A 3.944 ha agricultural use with no buildings
Property B 3.940 ha with approximately 1.02 ha of covering
Property C .50 ha property with .33 ha of covering/hardening

LAND USE	EQUIVALENCY FACTOR
Agriculture	1.0
Impervious	3.0
Gravel Road	2.5
Paved Road	3.0
Forest Cover	0.6
Residential Lot	2.0

NOTES
1 Includes up to 2% impervious area
2 Combined factor applied to gravel road surface and ditches
3 Combined factor applied to paved road surface and ditches

UPDATING ASSESSMENT SCHEDULES:
DEVELOPING NEW SCHEDULES
SECTION 76 OF THE DRAINAGE ACT

Ontario
Ministry of Agriculture, Food and Rural Affairs