

**REPORT TO:** Halton-Hamilton Source Protection Committee  
**REPORT NO.:** SPC-22-06-02  
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**DATE:** June 7, 2022  
**SUBJECT:** Technical Rules 2021

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## Recommendation

THAT the Halton-Hamilton Source Protection Committee **receives for information the Staff report SPC-22-06-02 Technical Rules 2021.**

## Executive Summary

Staff are analysing the implications of the updated technical framework, under the *Clean Water Act, 2006*, on the Halton-Hamilton Source Protection Region (HHSPR). Analysis carried out thus far on the 2021 Technical Rules are provided in this report.

## Report

### Background

In December 2021, the Ministry of the Environment, Conservation and Parks (MECP) posted a policy decision on the Environmental Registry of Ontario updating the Technical Rules for assessing source protection vulnerability and risks under the *Clean Water Act, 2006*. These Technical Rules (“rules”) provide the overarching technical framework of the source water protection science, which in turn inform policies to protect drinking water sources. The rules are available at: <https://www.ontario.ca/page/2021-technical-rules-under-clean-water-act>

Note that the recently submitted comprehensive HHSPR updates per Section 36 of the *Clean Water Act, 2006* were undertaken per the 2017/2018 Technical Rules, which were in place at the time of carrying out the scientific work. The 2021 Technical Rules will apply to subsequent Assessment Report and Source Protection Plan updates at HHSPR.

### Implication Analysis

Staff carried out an implication analysis in November 2020 on the then proposed changes to the 2017 Technical Rules. The final updated rules were released by MECP in December 2021. Staff are in the process of updating the implication analysis accordingly to determine potential policy impacts to property owners.

**Attachment 1** shows the implications analysis completed to date. Note the road salt related analysis of impervious surfaces, where implications for properties are likely.

**Attachment 2** shows the draft updated impervious surfaces mapping applied to the Carlisle wellhead protection areas (WHPA) – A, B, C, D, and E, using the method allowed and the new

lowered thresholds of the 2021 rules. Staff will continue to apply the new method to other WHPAs, where impervious surfaces are estimated by individual WHPA sub-area (A, B, C, D and E) rather than by the 1 by 1 kilometer grid. The new method provides for greater certainty and scientific basis for the impervious surfaces estimations.

### **Livestock Density Estimations**

Other research by staff includes a collection of a small number of alternate methods to estimate livestock density from other program managers, as provided below. These will be considered through 2022-23 to follow up on a discussion of the HHSPC to determine a more robust method to determine livestock density of farms that abut high growth and development areas; as these farms would most likely have lower number of livestock than those specified in the 2009 MECP guidance bulletin for estimating livestock density.

### **Saugeen Grey Sauble Northern Bruce Peninsula SPR**

The calculations were done as an average over the whole WHPA instead of on a parcel by parcel basis. Excerpts from the Grey Sauble Assessment Report: "A proposed methodology for calculating the percentage of managed lands and livestock density for the application of ASM, NASM and commercial fertilizers was outlined in an MOECC Technical Bulletin (2009b). Agricultural Managed Lands: For each agricultural parcel within a wellhead protection area (WHPA), the percentage of managed land was estimated, based on review of aerial photography, as the total area that is cropped plus the area devoted to animal land use. The portion of the property within the WHPA was estimated using the MPAC parcel layer and the DWSP delineation of the WHPA. The total area of agricultural lands within a vulnerable area is calculated by adding all agricultural parcels within the vulnerable area, weighted with the percentage of each property that is managed. The calculation of livestock density within vulnerable areas (WHPAs, IPZs, SGRAs, and HVAs) uses the index nutrient units per acre (NU/acre), using only the area of agricultural managed lands as a denominator. Separate scores were computed for WHPA-A, WHPA-B, WHPA-C, WHPA-D, IPZ-1 and IPZ-2. The same areas with elevated vulnerability were used as previously described for managed lands".

### **Trent Conservation Coalition**

Staff recommend the purchase of census of agriculture data produced at a "Dissemination Area" level, in order to estimate the livestock numbers within this relatively small area. This would require minimal assumptions/averaging. Dissemination Area: The dissemination area (DA) is a small, relatively stable geographic unit composed of one or more blocks. It is the smallest standard geographic area for which all census data are disseminated. DAs cover all the territory of Canada. Enumeration Area: An enumeration area (EA) is the geographic area canvassed by one census representative. An EA is composed of one or more adjacent blocks. EAs cover all the territory of Canada. Enumeration areas are only used for census data collection. The dissemination area (DA) replaces the EA as a basic unit for dissemination. Livestock density in the northern part of the Trent source protection areas was calculated for each vulnerable area using information from the 2006 agricultural census that reported livestock density by census consolidated subdivision (CCS). CCS is a very coarse area, and a number of assumptions and averaging were used in the assessment. However, CCS data is

available for free. Census Consolidated Subdivision: A census consolidated subdivision (CCS) is a grouping of adjacent census subdivisions. Generally, the smaller, more urban census subdivisions (towns, villages, etc.) are combined with the surrounding larger, more rural census subdivision, in order to create a geographic level between the census subdivision and the census division. Census Division Census division (CD) is the general term for provincially legislated areas (such as county, and regional district) or their equivalents. Census divisions are intermediate geographic areas between the province level and the municipality (census subdivision). Census Subdivision Census subdivision (CSD) is the general term for municipalities (as determined by provincial legislation) or areas deemed to be their equivalents (for example, Indian reserves, Indian settlements and unorganized territories) used for statistical reporting purposes.

### **Next Steps**

Staff continue to analyse implications of the 2021 Technical Rules for HHSPR and apply alternate methods for livestock density calculations. Staff will bring their findings to future HHSPC meetings. Draft updates being made under Section 34 of the *Clean Water Act, 2006* (i.e. source protection authority initiated updates) will follow the 2021 rules as required by the legislation.

Signed & respectfully submitted:



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