

**CORPORATION OF THE COUNTY OF HURON**

**Planning and Development Department**

**To:** Warden and Members of County Council – Day 1  
**From:** Denise Van Amersfoort, Manager of Planning, and Sandra Weber, Director  
**Date:** July 6, 2022  
**Subject:** **Development Standards in Privately Serviced Areas**

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**RECOMMENDATION**

RECOMMENDED MOTION:

THAT:

The Council of the County of Huron approves the report by Denise Van Amersfoort, Manager of Planning and Sandra Weber, Director, titled "Development Standards in Privately Serviced Areas" dated July 6, 2022;

AND FURTHER THAT:

The Council of the County of Huron approves the attached County of Huron Terms of Reference for Hydrogeological Nitrate Studies;

AND FURTHER THAT:

The Council of the County of Huron directs staff to continue with the approach of reviewing new lot creation based on the recommendations of Nitrate Studies and an adequate area for a conventional septic system but no longer require a contingency tile bed area for replacement;

AND FURTHER THAT:

The Council of the County of Huron directs planning staff to update related local Official Plan policies as necessary.

**BACKGROUND**

The County is the consent granting authority for the creation of new lots. Prior to January 1, 2020, Huron County Health Unit staff reviewed and provided comments on the appropriate minimum lot size of new lots in privately serviced areas. The purpose of this process was to ensure the long term protection of groundwater from cumulative impacts of nitrate sources. The Health Unit had an internal policy that stated, "The Inspector shall determine if there is enough useable land for the installation/replacement of a standard subsurface Class 4 sewage system plus 100% spare area". This means that the creation of new lots requires an adequate area for a conventional septic system, plus a contingency tile bed area to replace the system in a new location on the lot if needed.

In addition, the Health Unit reviewed and provided comments on Nitrate Studies required under Provincial Guideline D-5-4 "Individual On-Site Sewage Systems: Water Quality Risk Assessment" for the creation of new lots proposed to be serviced by private septic systems. The purpose of the Nitrate Study is to ensure that the discharge from the septic system will protect groundwater and be within Provincial criteria for nitrates (ie. nitrates levels must be 10mg/L or less at the lot lines). The Province of Ontario deems nitrate as the "critical contaminant" for sewage systems in the context of protecting the environment and public health, to ensure that development utilizing individual onsite sewage systems proceeds at a density and scale that will not result in, or cause degradation of, groundwater resources in exceedance of acceptable limits.

Due to the merger of the Huron and Perth County Health Units, Health Unit staff no longer provide these review services and the responsibility shifted to the Planning & Development Department. In response to this shift, the Department, in consultation with local consultants that prepare Nitrate Studies (BM Ross & Associates, R.J. Burnside & Associates, Wilson & Associates Ltd.) and local municipal staff, reviewed the

process and requirements to determine opportunities for changes or improvements. One outcome was the development of a Terms of Reference for Nitrate Studies to ensure the requirements are clear in advance of a development proposal.

Typically, Terms of References are not approved by County Council but rather developed by internal staff and consulting technical experts (eg. Biologist, Hydrogeologist, Economist in the case of the market study, etc). Because the development of this Terms of Reference led to a recommendation for amendments to lot creation standards and related local Official Plan policies, of which County Council is the approval authority, formal Council direction is sought.

## **COMMENTS**

### **Provincial Policy Statement (PPS) 2020**

The Provincial Policy Statement states that individual on-site sewage and water services may be used provided site conditions are suitable for the long-term provision of such services with no negative impacts (Section 1.6.6.4.). In this regard, no negative impacts means potential risks to human health and safety and degradation to the quality and quantity of water, sensitive surface water features and sensitive ground water features, and their related hydrologic functions, due to single, multiple or successive development. The PPS further states that negative impacts “should be assessed through environmental studies including hydrogeological or water quality impact assessments, in accordance with provincial standards”.

### **County Official Plan, 2021**

The County of Huron Official Plan is the County’s guiding document for land use planning. Policy 7.3.4.7. states that where individual on-site sewage and water services are recommended, it shall be demonstrated that site conditions are suitable for the long-term provision of such services with no negative impacts.

### **Nitrate Study Terms of Reference**

The Nitrate Study Terms of Reference (TOR) has been prepared in accordance with the Provincial Guideline D-5-4, Provincial Policy Statement and County Official Plan. The Terms of Reference provides direction and outlines approaches that will satisfy the relevant policies of the Plans. Planning staff are responsible for the review of Nitrate Studies and may, as required, engage the services of a consulting peer reviewer. In those instances, the cost of the peer review is borne by the developer. The goal of the Terms of Reference is to create a clear, streamlined process, avoiding the need for peer reviews.

In preparing the Terms of Reference, a number of related factors were discussed with the consulting professional hydrogeologist and are outlined below.

#### *Reliance on Conventional Septic Systems for Lot Sizing*

In arriving at the proposed recommendation, Planning staff sought the input of several professional hydrogeologists in regards to whether conventional septic systems should continue to be required for calculations to determine lot size or whether new technology, referred to as tertiary treatment systems, should be permitted to be utilized. The following outlines the technical considerations why conventional septic systems continue to be the recommendation:

- The paramount concern when considering nitrate calculations is the protection of the aquifer. Adverse impacts to groundwater quality are locally irreversible in the short term and require substantial efforts to overcome.
- In areas of the County where hydrogeological isolation considerations are not available, and there is actual or potential potable use of shallow groundwater, it is a best management practice to utilize passive solutions – lot area and dilution – rather than relying only technological solutions that require careful operation and more costly maintenance.

The use of tertiary treatment systems has been encouraged by the consulting hydrogeologists for a few recent planning applications, as it would enable lot density to be increased (either through the reduction of lot size or permitting more units on an existing lot). Staff are not in favour of a shift to tertiary systems for the purpose of nitrate calculations for the following reasons:

- long term risk of cumulative impacts on the groundwater;
- responsibility to ensure maintenance agreements are maintained;
- responsibility to ensure that annual maintenance reports are submitted;
- the Ontario Building Code does not prevent a conventional system being installed on a property which was designed with a requirement for tertiary nor can this requirement be enforced through zoning;
- education of homeowners regarding operation of tertiary treatment systems and avoidance of certain products (eg. chemicals, cancer treatment, etc).
- responsibility for monitoring and addressing underperforming systems.

Planning staff recognize that the responsibility for addressing underperforming septic systems, conventional or otherwise, lies with the Ontario Building Code. The County has, as recently as 2015, considered a County-wide Mandatory Septic Re-inspection Program but to date, it has not been supported by Council. The absence of any formal quality assurance program contributes to the staff opinion that reliance on passive solutions (ie. lot size and dilution) as safety factors continues to be appropriate, represent good planning over the long term and in the public interest.

#### *Removal of Contingency Tile Bed Requirement*

Based on consultation with local municipal staff and local hydrogeologists, it is recommended that the consent policies in the local Official Plans be revised such that new lot creation on private septic systems no longer require a contingency tile bed area. The required lot size would be based on the greater of the minimum lot area required in the Zoning By-law or the lot area required by a Nitrate Study.

The approach continues to rely on conventional septic systems for the purpose of calculations but does not require a contingency bed area be provided.

#### *Minimum Lot Sizes in Local Official Plans and Zoning By-laws*

The minimum lot size is stated within local Zoning Bylaws and in some cases, local Official Plans. Many considerations contribute to minimum lot sizes including:

- Proposed use;
- Average size of main building;
- Average size of accessory building(s);
- Servicing type;
  - o Including setback requirements between wells and septic systems where privately serviced.
- Drainage and open space requirements;
- Required setbacks to property lines;
- Additional space to accommodate driveways, parking areas, and other desired uses such as decks, gardens, swimming pools, landscaping, etc.

Lot sizes must be large enough to accommodate the functional aspects of the lot in all settings. In settings where lots are privately serviced, lots must be large enough to physically contain the desired septic system (conventional or otherwise approved by the Ontario Building Code) and large enough to allow sufficient infiltration to dilute nitrates (and thus, comply with provincial requirements for nitrates).

Due to the high variability in hydrogeological conditions across the County, across local municipalities and even across specific settlement areas, it is impossible to establish minimum lot sizes for new development that reflect nitrate considerations. All new lot creation applications will continue to be based on the recommended density of the nitrate study. In addition, for existing lots where increased density is

proposed (such as additional residential units or industrial/commercial development), nitrate studies are required to ensure no negative impacts on the groundwater.

In a residential, privately serviced context, the current and proposed approach is to permit a more permissive minimum lot size of 0.5 acres (2000 square metres) in areas where nitrate limitation does not apply (ie aquifer isolation). In areas with heavy clay soils, such as sections of the lakeshore, raised beds may be necessary or alternative systems, such as tertiary treatment, may be utilized. The removal of the contingency bed requirement will in part, address criticisms that the lots are unnecessarily large. In areas without aquifer isolation, and where sensitive hydrogeological conditions exist, minimum lot sizes will be increased to reflect the average development standard.

#### *Multiple Unit Residential Buildings*

Multi-unit residential buildings will generally be directed to settings where municipal water and sewer connections are available. Where a multi-unit building is proposed in privately serviced areas, a site specific re-zoning subject to a supportive nitrate study will be required and the lot must be sized to accommodate a conventional septic system per each dwelling unit.

#### **NEXT STEPS**

If approved, the removal of the contingency bed requirement from local Official Plans and updating of related policies will occur through a municipally initiated update or at the time of the Five Year Review.

The Department will continue to engage with technical experts and industry partners to ensure the Terms of Reference continues to achieve the objective of long-term protection of groundwater. The Terms of Reference may be updated from time to time as required through a report to County Council.

#### **OTHERS CONSULTED**

Geoff Rether, Senior Hydrogeologist – Ian D. Wilson Associates Limited; local municipal staff including Building Officials and Septic Inspectors; Caroline Baker, Principle Planner with Baker Planning Group, County Planning and Development Staff.

#### **BUDGET IMPACTS**

Peer review of Nitrate Studies would be at the cost of the applicant.

Denise Van Amersfoort,  
Manager of Planning