



7.0 Servicing

The following is a review and summary of available documentation pertaining to water and wastewater servicing capacity in Kleinburg-Nashville. The purpose of this summary is to highlight key primary servicing issues and associated strategies based on existing documents and analysis available.

The City is undertaking a number of servicing related Master Plan studies as part of the Official Plan Update. The servicing related Master Plans will identify the infrastructure requirements necessary to accommodate the population and employment growth expected from the implementation of the Growth Management Strategy of the Official Plan.

7.1 Background Documents

The following documents serve as the basis for this summary:

- Class Environmental Assessment - Water Supply and Storage Capacity for Kleinburg-Nashville (May 2007), prepared by KMK Consultants Limited for York Region
- Class Environmental Assessment - Wastewater Servicing Capacity for Kleinburg-Nashville (May 2007), prepared by KMK Consultants Limited for York Region (carried out concurrently with the above)
- York Region Water and Wastewater Master Plan (November 2009)

7.2 Summary of Findings

7.2.1 Water Supply and Storage Capacity

Concurrent Class EA processes addressing water supply/storage capacity and wastewater servicing capacity, were initiated to identify preferred approaches to ensuring capacity existed to meet the projected growth of the Kleinburg-Nashville community to 2021, as per OPA 601, the Kleinburg-Nashville Community Plan, of the Vaughan Official Plan.

Kleinburg's existing water system consists of two wells (Kleinburg Well No. 2 and No. 3) and an elevated storage tank near Highway 27 and Nashville Road.

Well No. 2 was constructed in 1960 and is in good condition, maintaining compliance with MOE requirements. Well No. 2 has a rated capacity of 660L/min (950 m³/d).

Well No. 3 was constructed in 1990 and serves as the main

production well with a rated capacity of 2,280 L/min (3,283 m³/d). A Stage 2 mandatory outdoor water use ban was implemented in 2006 following problems with plugged screens. This issue highlighted the limitations of Kleinburg's water system, given that Well No. 2 is inadequate to provide contingency capacity in the event of problems with the main production well.

The storage tank has a storage capacity of 1,819 m³. The tank was deemed to be in good condition at the time of the Class EA, and was expected to remain in service for the planning period.

The current water system services a population of approximately 3,500, in addition to local businesses. However, issues with contingency capacity and aesthetic water quality are known.

Four alternative solutions at the regional level were evaluated as part of the Class EA process, based on a serviced population of 7,745 persons, including an allowance for servicing 500 persons currently serviced by private wells. Based on the projections at the time, a total supply capacity of 7,045 m³/d together with a total storage capacity of 3,701 m³ was required to service the projected population to 2021. A preferred design concept, including provisions for two new watermains, a new elevated storage tank, upgrades to Well No. 3 and the division of Kleinburg-Nashville into two pressure districts together with the construction of a new pumping station to service one of the new districts, was developed on this basis.

7.2.2 Wastewater Servicing Capacity

As previously indicated above, a Class EA to address wastewater servicing capacity within the Kleinburg-

Nashville Community was carried out concurrently with the Class EA to address water supply/storage capacity. Both processes were initiated to identify preferred approaches to ensuring capacity exists to meet the projected growth of the Kleinburg-Nashville community to 2021, as per OPA 601, the Kleinburg-Nashville Community Plan, of the Vaughan Official Plan.

At present, municipal wastewater generated within the Kleinburg-Nashville community is collected and gravity-conveyed to the Kleinburg Water Pollution Control Plant (WPCP1) where it is treated. The Kleinburg WPCP has an approved capacity of 1,205 m³/d.

As part of the Class EA process, it was determined that while existing aeration tanks have performed well, they do not have adequate capacity with respect to existing approved plant capacity with typical municipal loadings and nitrification requirements, firm oxygenation capacity for peak flows and sludge digestion/retention.

Three alternative solutions were evaluated as part of the Class EA process, based on a serviced population of 7,505 persons requiring a total capacity of 2,874 m³/d. The alternatives explored both upgrades and expansions to the existing WPCP as well as new potential connections.

The evaluation resulted in a preferred design concept to meet the projected population and associated capacity requirements. The preferred concept included the construction of new secondary treatment facilities and specific upgrades



to the existing Kleinburg WPCP.

As per the UMA | AECOM memorandum (June 13, 2008) on wastewater servicing strategies, work to expand the existing facility was underway as of June, 2008, following the recommendations of the Class EA.

The purpose of the UMA | AECOM memorandum was to outline the consideration of five growth scenarios – developed in consultation with the City of Vaughan – to provide capacity to the ultimate service area.

7.3 Conclusion

This overview has identified that current work carried out through the EA process is considering the full built-out of the Kleinburg-Nashville Area, but that population and employment generation forecasts will need to be established and input into the process.

The provision of urban servicing is considered a key element of implementation, and will be further explored once a preferred plan has been developed. The City of Vaughan will carry out sufficient evaluation of servicing options for the focus areas to ensure that appropriate solutions can be provided both at the Regional and local level. Additionally proper siting of pumping stations and other servicing is imperative to avoid natural heritage and hazard features to the greatest extent possible.