

MEMO

TO: Wellington County
FROM: WSP
SUBJECT: Municipal Comprehensive Review Municipal Servicing Analysis
DATE: January 31, 2022

1 Executive Summary

Wellington County has undertaken an analysis of servicing capacity for each local municipality in support of the County's ongoing Municipal Comprehensive Review Process.

The findings of the Analysis demonstrate:

- The municipalities of the Township of Centre Wellington, Town of Minto, Township of Mapleton and Town of Wellington North each have existing water and wastewater servicing capacity to accommodate near-term growth;
- The Town of Erin is constrained to accommodate near-term growth due to wastewater servicing deficiencies;
- The Township of Guelph-Eramosa requires further evaluation due to data constraints and therefore the servicing capacity for this municipality was not evaluated; and
- The Township of Puslinch does not have municipal servicing infrastructure and therefore an analysis was not undertaken for this area municipality.

As required by provincial policies and plans, the near-term phasing of growth should be directed to area municipalities with sufficient existing capacity. Area municipalities that have existing servicing deficiencies may consider future infrastructure enhancements to appropriately accommodate forecasted growth over the new planning horizon.

2 Introduction

The purpose of this memorandum is to inform the County's MCR process regarding the servicing capacities of local municipalities. The County is undertaking an MCR and a 5-year review of its Official Plan, in accordance with the *Planning Act* and A Place to Grow: Growth Plan for Greater Golden Horseshoe ("A Place to Grow").

The Municipal Servicing Analysis (the "Analysis") evaluates the existing water and wastewater capacities of the area municipalities. As required under the provincial land use planning framework, growth should be directed to existing

“settlement areas” that have available or planned servicing capacity to accommodate future development. The findings of this memorandum are intended to inform the County’s ongoing growth management work regarding where and when future growth should be allocated to the settlement areas.

2.1 Official Plan Review

The County is undertaking a review of its official plan in accordance with Section 26 of the *Planning Act*. An official plan is a long-range planning document that provides direction to local decision makers on land use planning matters. Importantly, an official plan provides direction on how and where change and growth will occur over the planning horizon. Municipal official plans inform local land use planning decisions on applications made under the *Planning Act* and when planning for infrastructure and servicing.

The *Planning Act* requires municipalities to regularly undertake a review and update of their official plan every five years. This is to ensure that land use planning decisions have regard for matters of Provincial interest and that they are consistent with provincial policy, as established through the Provincial Policy Statement under Sections 2 and 3 of the *Planning Act*. The County’s official plan must also conform to A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2020 Office Consolidation (“A Place to Grow”), and the Greenbelt Plan, 2017.

2.2 Context

In accordance with a Place to Grow, the County is required to undertake a Municipal Comprehensive Review (MCR) including a range of technical studies related to growth forecasting, growth management, natural heritage, servicing and infrastructure, as well as other matters of provincial interest. Requirements established by the Province for undertaking an MCR are detailed in the following section.

3 Municipal Comprehensive Review Requirements

3.1 Planning Act

The *Planning Act* establishes the legislative framework for land use planning in Ontario and describes the requirements for planning processes. Land use planning decisions in Ontario must have regard to matters of Provincial interest, as described in the *Planning Act*.

Section 16 of the *Planning Act* specifically establishes direction to municipal planning authorities regarding the contents of an official plan. The *Planning Act* requires municipalities to update official plans to ensure that the Plan:

- Has regard for matters of Provincial interest, as described in Section 2 of the *Planning Act*;

- Is consistent with the PPS 2020; and
- Conforms to applicable provincial plans, including A Place to Grow: Growth Plan for the Greater Golden Horseshoe.

In accordance with the *Planning Act*, the County is currently undertaking the 5-year review of its Official Plan.

3.2 Provincial Policy Statement, 2020

The PPS 2020 applies Province-wide and provides policy direction regarding matters of provincial interest related to land use planning and development. The policies include direction on key land use planning issues, such as:

- Efficient use and management of land and infrastructure;
- Provision of sufficient housing and employment opportunities;
- Protection of the environment and natural resources;
- Appropriate transportation, water and sewer infrastructure required to accommodate future growth; and
- Promotion of healthy, integrated and viable rural areas.

More specifically, the County Official Plan must be consistent with the following policies of the PPS 2020:

- 1** Settlement areas may only be established or expanded if there is sufficient infrastructure and public service facilities planned or available to accommodate development over the long term (Policy 1.1.3.8). In this regard, municipal servicing is preferred for settlement areas (Policy 1.6.6.2).
- 2** When planning for municipal infrastructure, including water, sewage and stormwater, infrastructure must be provided in an efficient manner that accommodates future growth while preparing for the impact of climate change (Policy 1.6.1).
- 3** The use of existing infrastructure and public service facilities should be optimized to accommodate future growth (Policy 1.6.3(a)).
- 4** New lot creation is only permitted if there is sufficient sewage system capacity and reserve water system capacity. This requirement applies to areas with both municipal services and private services.

In the context of the PPS 2020, the County is required to give consideration to municipal servicing capacity, including water and sewage, when planning for growth and development over the planning horizon.

3.3 A Place to Grow (Office Consolidation, 2020)

A Place to Grow is a provincial plan that applies to all municipalities within the Greater Golden Horseshoe area, including Wellington County. The County

Official Plan must conform with the A Place to Grow and implement its policies, including the following:

- Municipalities are required to allocate growth to settlement areas that have existing or planned municipal water and wastewater systems (Policy 2.2.1.2).
- Upper-tier and lower-tier municipalities will undertake integrated planning to manage growth over the planning horizon. This includes providing direction for an urban form that will optimize servicing infrastructure (Policy 2.2.1.3).
- Municipal water and wastewater systems will be planned, designed, constructed or expanded in a manner that supports achieving minimum intensification and density targets of A Place to Grow (Policy 3.2.6.2(b)).

The County is required to implement the direction of A Place to Grow through an update to its Official Plan by July 1, 2022.

4 Municipal Servicing Assessment

The provincial land use policy framework largely prioritizes future growth in existing developed areas. Under the PPS 2020, existing developed areas must have sufficient water and sewage capacity to accommodate future growth over the long-term. As a key input to the MCR, the assessment builds on the County’s growth modelling and helps inform where future growth should be directed on the basis of available or planned local municipal servicing capacity. Based on a draft October 26, 2021 update to the County’s Growth Allocations, area municipalities are projected to accommodate the following percentage of total growth within the County over the planning horizon¹:

- Centre Wellington: 44%;
- Erin: 22%;
- Wellington North: 12%;
- Minto: 9%;
- Mapleton: 7%;
- Puslinch: 4%; and
- Guelph-Eramosa: 2%.

The assessment is also an important planning tool for local municipalities to identify necessary upgrades or expansions of existing infrastructure that may be required to accommodate future projected growth.

¹ Source: “Phase 1 MCR Report: Urban Structure and Growth Allocations –Addendum Report – Figure 2. Population Growth Allocation, 2016-2051 By Area Municipality (October 26, 2021)

4.1 Methodology

The following calculations, inputs and assumptions were made when determining local municipal servicing capacity within the County for both water and wastewater:

4.1.1 Water

Available reserve capacity is calculated by subtracting the current maximum day demand from the permitted firm capacity of the water system. Firm capacity is the sum of the capacities of all water supply wells in the municipality's Permit to Take Water (PTTW) minus the largest well. Treatment process efficiency, storage capacities, and booster pumping station capacities are not considered.

4.1.2 Wastewater

The reserve capacity for each community is calculated based only on the design capacity of the wastewater treatment plant (WWTP), as identified in the Environmental Compliance Approval or Certificate of Approval, servicing each community. Wastewater collection capacities, and the performance characteristics of the treatment processes, are not considered.

4.1.3 Additional Considerations

Several additional considerations and assumptions are noted for the purpose of this Assessment:

- The analysis only considered water production capacity or sewage treatment capacity;
- Water distribution system capacity, including linear, storage, and pumping station capacities, are not evaluated;
- Sewage collection capacity, including linear and pumping station capacities, as well as performance characteristics of sewage treatment works are not evaluated;
- Further evaluation for Guelph-Eramosa is required;
- Puslinch does not have municipal servicing and therefore was not evaluated through this Assessment;
- Municipal servicing information was obtained from documentation released in 2020, with the exception of Township of Wellington North and the Town of Minto. As significant changes in uncommitted reserve capacity were observed between 2020 and 2021 in these two locations, updated numbers were provided; and
- The analysis includes projected residential demand, and Institutional, Commercial, and Industrial (ICI) demands.

4.2 Wellington County

Wellington County includes the local municipalities of Centre Wellington, Wellington North, Erin, Minto, Mapleton, Guelph-Eramosa, and Puslinch. An assessment of water and wastewater servicing capacity for each municipality has been prepared to inform the County's ongoing MCR process. Both Guelph-Eramosa and Puslinch are not evaluated for the reasons stated previously.

Population and housing forecasts for the County and each local municipality have been prepared by Watson and Associates as part of the MCR. Overall, the County is forecasted to grow to a population of 160,000 people and 57,930 households by 2051. Each of the local municipalities has been allocated a portion of this growth.

4.3 Township of Centre Wellington

The Township of Centre Wellington has two urban settlement areas, Elora and Fergus. The balance of the Township largely consists of rural areas that are generally serviced by private systems. Portions of the urban areas are supplied by the municipal system, and some urban residents remain on private systems. Rural residents are not supplied by the municipal system (AECOM, 2019).

From 2016 to 2051, the Township of Centre Wellington is forecast to grow by 29,200 people and 11,260 households by 2051.

4.3.1 Water

The Township of Centre Wellington conducted a Water Supply Master Plan (WSMP) study in 2019. Based on the WSMP, Elora and Fergus share a water system which consists of nine groundwater wells for a total firm capacity of 13,067 m³/d. As of December 2020, uncommitted reserve capacity of the Elora-Fergus water system is 1,524 m³/d, equivalent to 1,627 residential units.

4.3.2 Wastewater

Elora and Fergus have separate wastewater systems and each community has its own wastewater treatment plant (WWTP). The Elora WWTP has a rated capacity of 5,000 m³/d, with a 3-year average day flow of 1,825 m³/d. The uncommitted reserve capacity of the Elora WWTP is 1,878 m³/d, equivalent to 2,586 residential units.

The Fergus WWTP is rated at 8,000 m³/d with a 3-year average day flow of 4,319 m³/d. The uncommitted reserve capacity of Fergus WWTP is 1,523 m³/d, equivalent to 1,937 residential units.

4.4 Town of Erin

The Town of Erin includes the Village of Erin, the Village of Hillsburgh, and rural areas. Municipal water servicing is currently provided to portions of the two Villages. All rural residents use private systems.

From 2016 to 2051, the Town of Erin is forecast to grow by 14,500 people and 5,090 households.

4.4.1 Water

The two Villages have separate drinking water systems which supply treated groundwater to portions of their respective communities. The Village of Erin is supplied by two groundwater wells for a firm capacity of 1,968 m³/d and has an uncommitted reserve capacity equivalent to 342 residential units (Triton, 2021).

The Village of Hillsburgh is supplied by two groundwater wells for a firm capacity of 655 m³/d. The uncommitted reserve capacity of the Hillsburgh water system is equivalent to 9 residential units (Triton, 2021).

The Town of Erin has proposed to connect the two water systems together to form one joint system. This option was previously explored in the Town's Urban Centre Water Servicing Class Environmental Assessment (Triton, 2020). The firm capacity of the joint system would be 3,605 m³/d and is anticipated to be complete by 2023. The joint system would have an uncommitted reserve capacity of 920 residential units based on 2020 demands.(Triton, 2021).

4.4.2 Wastewater

There is currently no municipal wastewater servicing in the Town of Erin. However, the Town is undertaking design work for a new 7,171 m³/d WWTP, and associated wastewater collection system, which would service both Erin and Hillsburgh. Construction of the new WWTP and wastewater collection system is anticipated to be complete in 2023. The WWTP capacity is equivalent to 6,740 residential units and is the maximum assimilative capacity of the West Credit River, the receiving body of the WWTP's effluent. After removing existing and projected infill demands, there is a maximum capacity of 4,120 equivalent residential units available for new development.

Based on information received, it is understood that all new development has been allocated due to Front Ending Agreements between developers and the Town. The timeline for construction of new units was not specified. A summary of Erin's wastewater capacity projections, based on the future WWTP, is shown in

Table 1.

Table 1 Town of Erin Wastewater Capacity

Item	Erin	Hillsburgh
Total WWTP Capacity (ERU ¹)	6,740	
Existing Demand (ERU)	1733	540
Projected Infill (ERU)	320	27
Committed New Development (ERU)	2495	1625
Uncommitted Reserve Capacity (ERU)	0	
¹ ERU refers to equivalent residential units		

4.5 Guelph-Eramosa Township

Guelph/Eramosa Township consists of two fully serviced areas (Rockwood urban centre & Gazer Mooney area), one partially serviced hamlet (municipal water in Hamilton Drive area) numerous privately serviced hamlets and other rural areas. Complete water and wastewater data was not available for the Township of Guelph/Eramosa at the time of preparing this assessment.

Rockwood is serviced by a Township water system and by a Township sanitary collection system which sends wastewater under a current agreement to the City of Guelph for treatment and disposal. The Township has confirmed that this agreement can support build out of the current village limits. Negotiations are expected shortly with the City to ensure that the full build out of Rockwood can be accommodated including allowances for accessory units.

The majority of rural residents are serviced by private systems, except that water in the Hamilton Drive area is provided by Township wells and water in the Gazer Mooney area is provided directly from the City of Guelph.

Water and wastewater data was not available for Guelph-Eramosa Township at the time of preparing this Assessment. However, from 2016 to 2051, Guelph-Eramosa Township is forecast to grow by 1,500 people and 620 households.

4.6 Township of Puslinch

The Township of Puslinch currently does not provide municipal water nor wastewater servicing (CIMA, 2018). All water and wastewater services are provided by private wells and private wastewater or septic systems.

From 2016 to 2051, the Township of Puslinch is forecast to grow by 2,400 people and 850 households.

4.7 Township of Wellington North

The Township of Wellington North consists of two urban areas and rural areas. The two urban areas, Arthur and Mount Forest, have separate water and wastewater systems. All rural residents, in addition to some urban residents, use private systems.

From 2016 to 2051, the Township of Wellington North is forecast to grow by 8,200 people and 3,000 households.

4.7.1 Water

The Arthur water system consists of three groundwater wells and has a firm capacity of 2,255 m³/d. The Arthur water system has an uncommitted reserve capacity of 1,521 m³/d, equivalent to 444 residential units (Triton, 2021). The Eastridge Landing, Forest View Estates, Seawaves Homes, Golden Valley, and infill lot allocations were included as committed developments in this calculation.

The Mount Forest water system is supplied by four groundwater wells and has a firm capacity of 5,976 m³/d. The Mount Forest water system has an uncommitted reserve capacity equivalent to 4,363 residential units (Triton, 2021). Note that this uncommitted reserve capacity is based on a maximum day per capita demand of 0.340 m³/cap/d, calculated using historical data from 2018 – 2020. This is lower than the Township's 2018 Growth Plan reports which assumes 0.55 m³/cap/d. However, as the 0.340 m³/cap/d is based on trended data, it is reasonable to use the lower value in this analysis.

While this report does not include analysis of water distribution system capacity, the Township indicated that there is a current water storage deficiency in Mount Forest.

4.7.2 Wastewater

The Arthur WWTP completed Phase 1 upgrades in December 2020 to expand the plant's capacity from 1,465 m³/d to 1,860 m³/d. The Township intends to undertake Phase 2 upgrades to increase the Arthur WWTP capacity to 2,300 m³/d within the next two to four years.

The current 3-year average day flow observed at the Arthur WWTP is 1,333 m³/d. A summary of the unreserved capacity of the Arthur WWTP under current and final build out conditions is provided in

Table 2.

Table 2 Summary of Arthur WWTP Uncommitted Reserve Capacity

Uncommitted Reserve capacity (ERU) ¹	Arthur WWTP Capacity (ERU) ¹	
	Current Existing (1,860 m ³ /d)	Final Buildout (2,300 m ³ /d)
Uncommitted Reserve capacity (ERU)	342	809
¹ ERU refers to Equivalent Residential Units		

The Mount Forest WWTP has a design capacity of 2,818 m³/d. The WWTP’s environmental compliance approval has a provision to be re-rated to 3,500 m³/d without the need for physical expansion. The plant currently has an uncommitted reserve capacity equivalent to 1,164 residential units (Triton, 2021). The Township is also currently working with Wellington County on a proposal that would accept and treat leachate at the Mount Forest WWTP. This activity is currently estimated to consume an additional 92 – 154 equivalent residential units of capacity; this would reduce the Mount Forest WWTP’s uncommitted capacity to approximately 1,072 to 1,010 units. However, as the leachate proposal has not yet been finalized, it has not been included in this analysis.

4.8 Town of Minto

The Town of Minto has three major urban areas and rural areas. The urban areas of Clifford, Harriston, and Palmerston all have municipal servicing in portions of each community.

From 2016 to 2051, the Town of Minto is forecast to grow by 6,300 people and 2,210 households.

4.8.1 Water

The Harriston water system is supplied by three groundwater wells. Wells 1,2, and 3 have rated capacities of 979 m³/d, 2,065 m³/d, and 1,634 m³/d based on the Permit To Take Water (PTTW). As Well 2 is the largest well, firm capacity is calculated as the sum of the capacities of Wells 1 and 3. A pumping test completed in June 2021 indicated that the feasible combined pumping capacity of Wells 1 and 3 is only 1,728 m³/d, significantly lower than the permitted rated capacity of 2,613 m³/d. The permitted rated capacity could be achieved through well upgrades or construction of a new well at the existing site, however, based on current operating procedures, the firm capacity of the Harriston system is considered to be 1,728 m³/d (Triton, 2021). Harriston’s water system is currently overcommitted by 18 equivalent residential units.

Palmerston is supplied by four groundwater wells with a firm capacity of 1,964 m³/d. Palmerston currently has an uncommitted capacity of 461 equivalent residential units (Triton, 2021).

Clifford is supplied by three groundwater wells: Wells 1,3,4. Wells 3 and 4 cannot be operated together, and the firm capacity of the system is 1,309 m³/d (Triton, 2021). Clifford has an uncommitted reserve capacity equivalent to 781 equivalent residential units.

4.8.2 Wastewater

There are three WWTPs within the Town of Minto:

- The Harriston WWTP has a rated capacity of 2,378 m³/d and has an uncommitted reserve capacity of 499 equivalent residential units (Triton, 2021).
- The Palmerston WWTP has a rated capacity of 2,010 m³/d and has an uncommitted reserve capacity of 615 equivalent residential units (Triton, 2021).
- The Clifford WWTP has a rated capacity of 500 m³/d and has an uncommitted reserve capacity of 356 equivalent residential units (Triton, 2021).

4.9 Township of Mapleton

The Township of Mapleton consists of two urban centres and rural areas. The two urban centres, Drayton and Moorefield, have a separate water system and a shared wastewater system. Rural residents and some urban residents continue to use a private system.

From 2016 to 2051, the Township of Mapleton is forecast to grow by 4,400 people and 1,680 households.

4.9.1 Water

Drayton is supplied by two groundwater wells for a total firm capacity of 1,964 m³/d. There is an unreserved capacity of 1,306 residential units.

Moorefield is supplied by two groundwater wells for a total firm capacity of 605 m³/d. Moorefield has an unreserved capacity of 351 residential units.

4.9.2 Wastewater

The Mapleton WWTP services both Drayton and Moorefield. The WWTP has a rated design capacity of 900 m³/d and had an average sewage flow of 646 m³/d between 2018 – 2020 (OCWA, 2021). However, the Ontario Clean Water Agency (OCWA), which operates the Mapleton WWTP, noted these volumes may not be accurate as a private service is brought in to haul sewage from the manholes directly to the lagoons during high flows, and no volume is available for these occurrences. Based on an average flow of 646 m³/d, the Mapleton WWTP has an unreserved capacity equivalent to 332 residential units.

5 Summary of Analysis and Discussion

5.1 Summary of Uncommitted Reserve Capacity of Water

Each local municipality within the County has been assessed as having a surplus of uncommitted reserve capacity for water. The exceptions to this are Guelph-Eramosa, which requires further assessment, Puslinch, which does not have municipal servicing, and the urban area of Harriston in the Town of Minto, which currently has overcommitted its water reserve capacity. A summary of these findings is shown in Table 2:

Table 3 - Summary of Uncommitted Reserve Capacity of Water

Municipality	Settlement Area	Uncommitted Reserve Capacity (ERU ¹)	Forecast Growth 2016-2051 (ERU ¹) ²	Reserve Capacity to 2051 (ERU ¹)
Centre Wellington	Fergus – Elora	1,627	10,990	(9,363) ³
Town of Erin	Erin	342	2,730	(2,338) ³
	Hillsburgh	9	1,650	(1,641) ³
Wellington North	Arthur	444	820	(376) ³
	Mount Forest	4,363	1,890	2,473
Minto	Harriston	(18)	500	(518) ³
	Palmerston	461	1,360	(899) ³
	Clifford	781	220	612
Mapleton	Drayton	1,306	770	536
	Moorefield	351	710	(359) ³

¹ ERU refers to Equivalent Residential Units

² Source: Phase 1 MCR Report: Urban Structure and Growth Allocations – Addendum Report – Appendix A-3 Population and Housing Forecast by Urban Settlement Area (October 26, 2021)

³ Bracketed values denote a servicing deficiency.

A detailed methodology of the uncommitted reserve capacity for water is located in Appendix A.

5.2 Summary of Uncommitted Reserve Capacity of Wastewater

The local municipalities of Centre Wellington, Wellington North, Minto and Mapleton have been assessed as having uncommitted reserve capacity for wastewater. Although the Town of Erin is currently undertaking enhancements to increase wastewater servicing capacity, it is understood that new development has been allocated through Front Ending Agreements, and therefore the Town is not projected to have reserve capacity to 2051. A summary of these findings is shown in Table 3:

Table 4 - Summary of Uncommitted Reserve Capacity of Wastewater

Municipality	Settlement Area	Existing Uncommitted Reserve Capacity (ERU ¹)	Forecast Growth 2016-2051 (ERU ¹) ²	Reserve Capacity to 2051 (ERU ¹)
Centre Wellington	Fergus	1,937	8,370	(6,433) ³
	Elora	2,586	2,680	(94) ³
Wellington North	Arthur	342	820	(478) ³
	Mount Forest	1,164	1,890	(726) ³
Town of Erin	Erin	0	2,730	0
	Hillsburgh	0	1,650	0
Minto	Harriston	499	500	199
	Palmerston	615	1,360	(745) ³
	Clifford	358	220	175
Mapleton	Drayton-Moorefield	332	1,480	(1,148) ³

¹ ERU refers to Equivalent Residential Units

² Source: Phase 1 MCR Report: Urban Structure and Growth Allocations – Addendum Report – Appendix A-3 Population and Housing Forecast by Urban Settlement Area (October 26, 2021)

³ Bracketed values denote a servicing deficiency.

A detailed methodology of the uncommitted reserve capacity calculus for wastewater is located in Appendix B.

5.3 Discussion

The Analysis demonstrates that most municipalities will need to undertake enhancements to servicing infrastructure within settlement areas to accommodate projected growth over the planning horizon. The following specific exceptions to this are noted as follows:

- 1 Clifford is projected to have sufficient water and wastewater capacity over the planning horizon.
- 2 Mount Forest is projected to have sufficient water capacity over the planning horizon, but not wastewater capacity.
- 3 Drayton is projected to have sufficient water capacity over the planning horizon, but not wastewater capacity.
- 4 Harriston is projected to have sufficient wastewater capacity over the planning period horizon, but not water capacity.

Based on the above findings, only Clifford is positioned to accommodate the projected growth (based on ERU²) over the planning horizon with existing servicing infrastructure.

On this basis, all of the area municipalities include at least one settlement area that did not demonstrate sufficient water and wastewater capacity over the planning horizon. On this basis, each of the area municipalities will need to undertake local growth management planning exercises and asset management planning to enhance servicing infrastructure over the planning horizon in order to accommodate projected growth.

The Township of Puslinch does not have municipal servicing infrastructure but is projected to accommodate some growth within the County over the planning horizon³. Without municipal servicing infrastructure, Puslinch will need to accommodate growth through private communal systems, or where this is not feasible, through partial or on-site individual servicing.

An analysis of Guelph-Eramosa was not undertaken due to data constraints.

6 Conclusion

This Analysis has been prepared within the context of the PPS, 2020, A Place to Grow and the County's Official Plan review. The County's new Official Plan must be consistent with the PPS, 2020 and conform with A Place to Grow. This principally includes that growth be allocated to settlement areas with existing or planned municipal water and wastewater systems and that both upper-tier and lower-tier municipalities will undertake an integrated approach to managing growth of the planning horizon.

² ERU refers to Equivalent Residential Units

³ Source: "Updated: Summary of Draft Population, Housing and Employment Growth Forecast Allocations by Area Municipality" Appendix C Watson & Associates (March 2021)

In accordance with Provincial policies and plans, area municipalities must ensure there is land with servicing capacity sufficient to accommodate at least a three-year supply of residential units, and that servicing infrastructure is viable over the full life cycle. Further, any proposed expansion to a settlement area boundary to accommodate projected growth must be informed by water and wastewater master plans.

On this basis, the findings of this Memo are intended to be advanced through both the County's Official Plan review process, as well as local planning processes as described above.

The findings of this Analysis also demonstrate that each of the area municipalities may experience servicing constraints within settlement areas over the planning horizon. The only exception is the community of Clifford, which has sufficient uncommitted reserve water and wastewater capacity. The communities of Drayton and Mount Forest each have sufficient uncommitted reserve water capacity, but not wastewater capacity. The community of Harriston has sufficient wastewater capacity, but not water capacity.

In Puslinch, future limited growth will likely continue to be serviced through private communal systems, or partial or individual on-site water and wastewater systems in the absence of a municipal servicing system.

In conclusion, area municipalities will need to undertake local planning exercises with regards to growth management and servicing capacity in order to accommodate forecasted growth. The findings of this Memo offer a preliminary assessment and may be used as a basis to prepare water and wastewater master plans, or equivalent. In the near term, municipalities with greater existing unreserved capacity may be able to accommodate a larger share of growth within the County.

Appendix A

Summary of Water Reserve Capacity Calculations

Item	Town / Township		Puslinch	Centre Wellington	Town of Erin		Wellington North		Minto			Mapleton		Guelph-Eramosa ¹	
	Community	Units	Puslinch ¹	Fergus-Elora	Erin	Hillsburgh	Arthur	Mt. Forest	Harriston	Palmerston	Clifford	Drayton	Moorefield	Rockwood	Hamilton Drive
1	Water Production Capacity (Firm)	m ³ /d		13,067	1968	655	2,255	5976	1,728	1,964	1,309	1964	605		
2	Maximum Day Demand (2018 - 2020)	m ³ /d		7,297	1473	634	1,521	2312	1,461	1,322	431	581	227		
3	Existing Serviced Residential Units	ERU ²		-	1,019	275	918	2,110	914	1,266	406	731	143		
4	Persons per unit ²	PPU		3.09	2.6	2.6	2.4	2.50	2.63	2.47	2.45	3.50	3.08		
5	Max Day Demand per unit (2) / (3)	m ³ /d		0.94	1.45	2.31	1.66	1.10	1.60	1.04	1.06	0.79	1.58		
6	Adjusted Max Day Demand per unit for New Developments ³	m ³ /d		-	-	-	1.11	0.81	1.18 ³	-	-	1.05 ²	1.08 ²		
7	Reserve Capacity based on existing demands/units (1) - (2)	m ³ /d		5,770	495	21	734	3,664	267	642	878	1,383	378		
8	Reserve Capacity (7) / (6) where available or (7) / (5)	ERU		6,160	342	9	662	4,497	226	614	827	1,317	351		
9	Committed/Approved Water Connections Unbuilt ⁴	ERU		4,216	-	0	218	134	244	153	46	11	0		
10	Tentative Water Connections Under Review	ERU		316	0	0	0	0	0	0	0	0	0		
11	Water Uncommitted Reserve Capacity (8) - (9) - (10)	ERU		1,627	342⁵	9⁵	444	4,363	(18)⁶	461	781	1,306	351		

- 1) Municipal servicing is not provided in Puslinch and additional information is required for Guelph-Eramosa.
- 2) Persons per unit (PPU) calculated from existing serviced population provided by Township. ERU refers to equivalent residential units.
- 3) Some communities used adjusted (projected) max day demands for new developments rather than existing values. Values were calculated as Arthur (0.412 m³/cap/d x 2.7 PPU), Mt. Forest (0.34 m³/cap/d x 2.4 PPU), Drayton (0.3 m³/cap/d x 3.5 PPU), Moorefield (0.350 m³/cap/d x 3.08 PPU), Harriston (0.45 m³/cap/d x 2.63 PPU). Projected m³/cap/d values Arthur and Mt. Forest were retrieved from their respective reserve capacity letters, values for Drayton and Moorefield were retrieved from the Mapleton Water/Wastewater Servicing Presentation to Council, and values for Harriston was retrieved from the Town of Minto's reserve capacity letter.
- 4) Tentative unit means dwelling units that have been draft approved through an application under the *Planning Act*.
- 5) The Town of Erin has proposed connecting the water systems of the Villages of Erin and Hillsburgh to form a joint system. The firm capacity of the joint system would be 3,605 m³/d and is anticipated to be complete by 2023. The joint system would have an uncommitted reserve capacity of 920 residential units based on 2020 demands.
- 6) Bracketed values denote a supply deficiency. Based on the Town of Minto's reserve capacity letter, the Harriston water system is currently overcommitted by 18 ERU.

Appendix B Summary of Wastewater Reserve Capacity Calculations

Item	Township		Puslinch	Centre Wellington		Town of Erin		Wellington North		Minto			Mapleton	Guelph Eramosa ¹	
	Community	Units	Puslinch ¹	Fergus	Elora	Erin ⁸	Hillsburgh ⁸	Arthur	Mt. Forest	Harriston	Palmerston	Clifford	Drayton-Moorefield	Rockwood	Hamilton Drive
1	Wastewater Treatment Plant Rated Capacity	m ³ /d		8000	5,000	7,171		1,860 ⁴	2,818	2,378	2,010	500	900		
2	Average Day Flow	m ³ /d		4319	1,825	1,844	575	1,333 ⁴	1,977	1,500	1,243	244	646		
3	Existing Serviced Residential Units	ERU ²		-	-	1,733	540	-	-	904	1244	385	874 ⁶		
4	Persons per unit	PPU		3.09	3.09	2.80	2.80	2.70	2.15	2.63	2.47	2.53	2.93		
5	Average Day Flow per unit	m ³ /d		0.79	0.73	1.06	1.06	0.94	0.648	1.66	1.00	0.63	0.74		
6	Adjusted Average Day Flow per unit for New Developments ³	m ³ /d		-	-	-	-	-	-	1.18	-	-	-		
7	Reserve Capacity (1) - (2)	m ³ /d		3681	3,175	4,753		527	841	878	767	256	254		
8	Reserve Capacity (7)/(6) where available or (7)/(5)	ERU		4682	4,373	4,467		560	1,298	743	768	404	343		
9	Committed/Approved Wastewater Connections Unbuilt	ERU		2507	1,709	2,815	1,652	218	134	244	153	46	11		
10	Tentative Wastewater Connections Under Consideration ⁷	ERU		238	78	-	-	-	-	0	0	0	0		
11	Wastewater Uncommitted Reserve Capacity (8) - (9) - (10)	ERU		1,937	2,586	-		342⁵	1,164	499	615	358	332		

- 1) Neither Puslinch nor Erin currently provide wastewater servicing. Additional information is required from Guelph-Eramosa to complete this analysis.
- 2) Persons per unit (PPU) calculated from existing serviced population provided by Township. ERU refers to equivalent residential units.
- 3) Some communities used adjusted (projected) average day flows for new developments rather than existing values. The value for Harriston was calculated as (0.45 m³/cap/d x 2.63 PPU). Projected m³/cap/d values for Harriston was retrieved from the Town of Minto's reserve capacity letter.
- 4) The current wastewater treatment plant capacity is 1,860 m³/d in accordance with the reserve capacity letter from Township of Wellington North dated April 8, 2021. The Township is expecting to expand the Arthur wastewater treatment plant capacity to 2,300 m³/d within the next two to four years.
- 5) Based on the current capacity of 1,860 m³/d and the 3-year average day flow of 1,333 m³/d, the Arthur WWTP uncommitted reserve capacity is 342 ERU. If using the final build out capacity of 2,300 m³/d, the uncommitted reserve capacity would be 809 ERU based on an average day flow of 1,333 m³/d.
- 6) OCWA noted that the average day flow value may not be accurate because private services are retained to remove sewage during high flows. No volumes are available for these times.
- 7) Tentative unit means dwelling units that have been draft approved through an application under the *Planning Act*.
- 8) A new Erin WWTP is being designed to service both Erin and Hillsburgh. The available capacity appears to have already been allocated between existing, infill and new developments (both counted as Committed Connections Unbuilt).