

Region of Waterloo

Planning, Development and Legislative Services

Community Planning

To: Chair Galloway and Members of the Planning and Works Committee

Meeting Date: June 29, 2022

Report Title: Regional Official Plan Review – Recommended Growth Approach from the Land Needs Assessment Process

1. Recommendation:

That the Regional Municipality of Waterloo take the following actions with respect to the recommended approach to growth as described in Report PDL-CPL-22-20, dated June 29, 2022:

- a) Endorse, in principle, the recommended growth approach as outlined in Report PDL-CPL-22-20 and appendices; and
- b) Direct Regional staff to apply the recommended growth approach as key inputs in finalizing the draft Regional Official Plan amendment (Report PDL-CPL-22-21).

2. Purpose / Issue:

The purpose of this report is to recommend a growth approach that best positions Waterloo Region to achieve its vision for an equitable, thriving, and sustainable Waterloo Region, through strategic and targeted growth that supports critical community building and climate change objectives, while also meeting Provincial obligations to plan to accommodate forecasted population and jobs to a 2051 planning horizon.

3. Strategic Plan:

The recommended growth to approach will shape how and where the community will grow to the year 2051. It therefore addresses all Strategic Focus Areas, particularly: Thriving Economy; Sustainable Transportation; Environment and Climate Action; and Health, Safe and Inclusive Communities. It also relates to Action 3.5.1, “Promote efficient urban land use through greenfield and intensification policies while conserving natural heritage and agricultural areas.”

4. Key Considerations:

a) Waterloo Region is a consistent leader of innovation in land use planning, environmental protection, and community building. The Regional Official Plan (ROP) establishes the

framework for guiding Waterloo Region's long-term growth and development in keeping with Council's vision for an inclusive, thriving and sustainable community. Through the Regional Official Plan Review, the Region has an opportunity to build on this leadership by accommodating its future growth to 2051 in a manner that achieves Council's vision.

b) Waterloo Region is required to plan for a forecasted population and employment growth of 306,000 people (50%) and 168,000 jobs (56%) by the year 2051. Based on Provincial requirements through the Growth Plan, a review of the ROP is required. One component of this review is to complete a LNA using a standardized Provincial methodology.

c) In November 2021, Regional Council directed staff to complete a LNA and engage with area municipalities and the public prior to making a recommendation on an approach to growth. The draft LNA and associated growth options were presented to Regional Council on April 12, 2022 (PDL-CPL-22-11) and an engagement and evaluation period has followed, using the growth options as a way to illustrate a range of possibilities for how to accommodate growth. A summary of the feedback is provided in high-level in this briefing note, and a more detailed summary is provided in Appendix B.

d) A recommended approach to growth was identified based on a series of technical refinements to the land inventory, technical evaluations that focused on growth management, infrastructure, climate change, and other key considerations, in addition to critical and substantive feedback from all area municipalities, First Nations, and the public.

e) The ultimate result is a recommended approach to growth that puts into numerical terms a way to best meet the community vision, addresses corporate strategic priorities, responds to public and area municipal feedback and support of key principles of growth, while also adhering to the prescribed steps of the LNA methodology and the Province's directive to look to a 2051 planning horizon.

f) The recommended approach to growth for the community area, when compared to Option 2, has a slightly higher intensification rate, lower designated greenfield area density targets, and a significantly reduced amount of land recommended for community area expansions in addition to an intentional focus on creating 15-minute neighbourhoods as a transformational outcome. Expansions for employment area have also been limited by using a higher intensification target. The recommended approach to growth addresses feedback from the public and area municipalities, as further described in Table 2 below.

The recommended growth approach includes four key features that best align with community vision, corporate strategic priorities, technical considerations, and all feedback.

The four key features are:

- 1. It best advances the Region's and the community's strategic priorities while meeting provincial requirements.** The recommended approach provides for efficient and affordable infrastructure, maintains the Countryside Line, protects

farmland and natural areas, and supports transformational climate action by enabling the clean energy transition and preparing the community to thrive in a global low-carbon future. It provides an appropriate and achievable range and mix of housing that considers market demand resulting in an incremental shift to a higher proportion of medium and higher densities, while also maintaining a 45% inventory of housing in a form dominated by low-density, ground-related housing to 2051.

- 2. It reflects an intensification-first approach to optimize intensification opportunities to support a more compact built form** within the existing Built-Up Area (BUA). Focusing growth within the BUA (City and Township) supports the Region's strategic transit and infrastructure investments, provides access to services and achieves a broader diversity of housing options including higher density and maximizing missing middle housing.

This will be critical for retrofitting existing neighbourhoods into 15-minute neighbourhoods that are complete, energy efficient communities. Regarding intensification within the Townships, the recommended approach to growth aims to implement appropriate types, forms and scale of intensification for smaller urban areas consistent with the creation of 15-minute neighbourhoods and the long-term needs of the residents of the community, including an aging population.

- 3. It targets a select number of strategically located Community Area expansions that are needed to enable the retrofit of existing urban areas in the Townships into affordable and energy-efficient 15-minute neighbourhoods with a full range of housing types.** This is in order to address the unique challenges they will face in transitioning their existing urban areas into energy-efficient 15-minute neighbourhoods, where people can meet their daily needs through a short trip by walking, cycling, and rolling. These recommended expansions have been tailored to each neighbourhood, where the addition of adjacent new neighbourhoods that are more energy efficient will be a critical addressing climate change and equity by completing existing communities.

The completion of these communities will enable access to a greater range and mix of housing forms and more convenient local access to amenities, and ultimately greater choice and affordability for both housing and mobility. This will provide the foundation to ensure township residents can thrive in a low-carbon future within their unique communities and are not left behind in the clean energy transition.

- 4. It limits employment area land expansion by using an ambitious and achievable intensification rate** of 25% for employment areas, and designates 456 hectares of new Employment Area lands to support the Region's strong employment base and protect them for employment uses in the long-term. The recommended Employment

Area expansions are provided to the area municipalities that made a request (Appendix C).

g) The numerical details of the recommended approach to growth are as follows:

Table 1: The Region of Waterloo’s Recommended Approach to Growth

Population Growth, 2021-2051	306,000 people
Employment Growth, 2021 - 2051	168,000 jobs
Housing Need, 2021 - 2051	121,000 housing units
Community Area Intensification Rate	A minimum of 61% of all new housing units to be built within the Delineated Built-Up Area, Region-wide (2,453 housing units per year). City Average – 2,346/year Township Average – 106/year
Community Area Designated Greenfield Area Density	A minimum of 59 residents and jobs per hectare, Region-wide average
Additional urban land required through expansion to accommodate residents	150 hectares
Employment Area Intensification Rate	A minimum of 25%
Employment Area Density Target	A minimum of 35 jobs per developable hectare, Region-wide average
Additional urban land required through expansion to accommodate employment	456 hectares
Total Recommended Urban Area Expansion	606 hectares

h) While the province requires all forecasted growth to be allocated now, there will be many opportunities to revisit assumptions, market trends and legislation in the next thirty years and future changes will be reviewed through these processes and appropriate amendments to the ROP can be considered at that time.

i) Mapping of recommended expansions is included in Appendix C. Not included in the mapping is an urban expansion of 17 hectares in the Township of Wellesley, for which specific locations will be determined through a future process and implemented through a future ROP amendment. The LNA identifies a small Community Area expansion of 8 hectares

for Cambridge, for which specific locations will be determined through future processes.

j) The proposed policies presented in the Draft Regional Official Plan amendment, as outlined in Report PDL-CPL-22-20, will implement the recommended growth approach. The policies in the draft amendment reflect the Region's strong commitment to inclusivity, thriving communities, and sustainability. The draft amendment shows Waterloo Region's leadership on climate action and equity through policies aligned with implementation of the TransformWR community climate action strategy, which goes far beyond a traditional greenhouse gas (GHG) reduction plan to enable the community's transformation into an equitable, prosperous, resilient low-carbon community over the next 30 years. The broader amendment will have a significant influence over how our community will grow into an equitable, thriving, and sustainable Waterloo Region, both within existing and future neighbourhoods.

5. Background

Building an Equitable, Thriving, and Sustainable Community

Waterloo Region has been a leader in land use planning over the last two decades. The introduction of the Countryside Line (CSL), the Protected Countryside, Environmentally Sensitive Landscapes (ESLs), the Regional Recharge Area (RRA), strong water protection policies, and a focus on intensification that has surpassed expectation, are some examples of this innovation. There is a strong community desire to continue building on this leadership by ensuring that the community vision for Waterloo Region is fulfilled and results in equitable, thriving, and sustainable communities.

The community vision for the Region of Waterloo, identified in the Region's Corporate Strategic Plan is, "Waterloo Region will be an inclusive, thriving, and sustainable region of connected urban and rural communities with global reach, fostering opportunities for current and future generations." This vision was generated through an extensive, multi-year, community visioning exercise.

Waterloo Region, like many other municipalities, is at a critical juncture with respect to land use planning. There is a rapidly changing planning environment, influenced by changing growth patterns due to a variety of factors including: the COVID-19 pandemic; adjacency to the Greater Toronto and Hamilton Area; boomers/millennials, immigration; migration; economic development; climate change; transportation, and; the clean energy transition. It is imperative that the way in which the region continues to grow is rooted in decisions that align with community-building objectives and that build on the region's policy strengths.

Community-Building Objectives

The community-building objectives that align with the corporate strategic focus areas are:

- **Creating 15-minute neighbourhoods across Waterloo Region** that are compact, well-connected places with a clustering of a diverse and appropriate mix of land uses, including a range of housing types, shops, services, local access to food, schools and day care

facilities, employment, greenspaces, parks and pathways. 15-minute neighbourhoods are complete communities that enable people of all ages and abilities, at all times of year, to conveniently access the necessities for daily living with a 15-minute trip by walking, cycling, and rolling, and to meet other needs by taking direct, frequent, and convenient transit, wherever this service is possible.

The Cities are in a strong position to create energy efficient 15-minute neighbourhoods by building on their existing population, employment, amenities, and larger land bases that are already able to accommodate a significant amount of forecasted growth.

The Townships will face a different set of challenges in retrofitting their urban areas into energy-efficient 15-minute neighbourhoods with a full range of housing types and amenities so residents can meet their daily needs within a short trip by walking, cycling, and rolling. Due to smaller existing built areas, most of these have more limited opportunities to increase density that could work toward transit-supportive densities and enable 15-minute neighbourhoods through intensification.

For the township areas, the addition of adjacent new neighbourhoods, built to be energy efficient and complete existing communities, will play a critical role in ensuring township residents can experience the benefits of 15-minute neighbourhoods and thrive in a low-carbon future within their unique communities, and are not left behind in the clean energy transition.

- **Maximizing opportunities to align transit with growth** by directing growth to Major Transit Station Area and other strategic growth areas, including Urban Growth Centres and Regional Intensification Corridors, and promoting transit investments in these areas.
- **Adapting to the effects of a changing climate** by preparing the community for warmer, wetter, and wilder weather as a result of climate change. This means designing communities to reduce the urban heat island effect, and to protect lands to ensure a balanced natural water system that can manage future flooding. Complete communities can be more resilient to the impacts of climate change, as they are more self-sufficient and less reliant on global production chains, and improve the health of residents by reducing heat island effect and improving air quality.
- **Reducing future energy needs and greenhouse gas emissions** by creating energy efficient communities that enable people in diverse communities across the region to use less energy, use clean energy and produce local clean energy. Land use planning is key to reducing energy needs, including: making new and existing communities into 15-minute neighbourhoods where people can meet their daily needs using low-energy mobility options like walking, cycling, and rolling, and can travel to other destinations using transit where it is available; adding people and jobs to existing neighbourhoods to support the additional services and amenities that people will be able to access with little to no energy use close to home; building higher density housing forms, like townhomes and various types of apartments, to reduce the energy use and greenhouse gas emissions per person

from building heating and cooling; and maintaining natural lands and agricultural lands that sequester carbon from the atmosphere wherever possible.

- **Providing fiscally responsible infrastructure** and this is accomplished by integrating land use and infrastructure planning. Infrastructure is the physical structures that form the foundation for development. The coordination of land use planning and infrastructure planning allows municipalities to identify the most cost-effective options for sustainably accommodating forecasted growth to support the achievement of complete communities.
- **Providing a range and mix of housing options at different price points** to best address housing affordability, and to reflect an existing as well as forward-looking approach to market-based housing. The recommended approach to growth provides for a dominant supply of low-density, ground-related housing forms to the year 2051 (almost 50% of the total housing inventory), while addressing the need for ‘missing middle’ housing, by continuing to introduce more medium and higher-density housing options that can have lower rental and purchase prices than detached homes.
- **Continuing to protect water, natural and agricultural systems** by minimizing urban expansion and integrating systems-level conservation approaches, as well as through the ongoing proactive identification of key resources coupled with strong policies for their conservation, enhancement, and adaptation to a changing climate.

These community-building objectives highlight outcomes through which the ROP will support building an equitable, thriving, and sustainable community. To do this, it is necessary to move beyond trying to “balance” these different objectives in land use planning. These three aspects of community – inclusivity, thriving, and sustainability – are fundamentally connected, and must be achieved together.

The remainder of the Background section of this report is structured around the following headings:

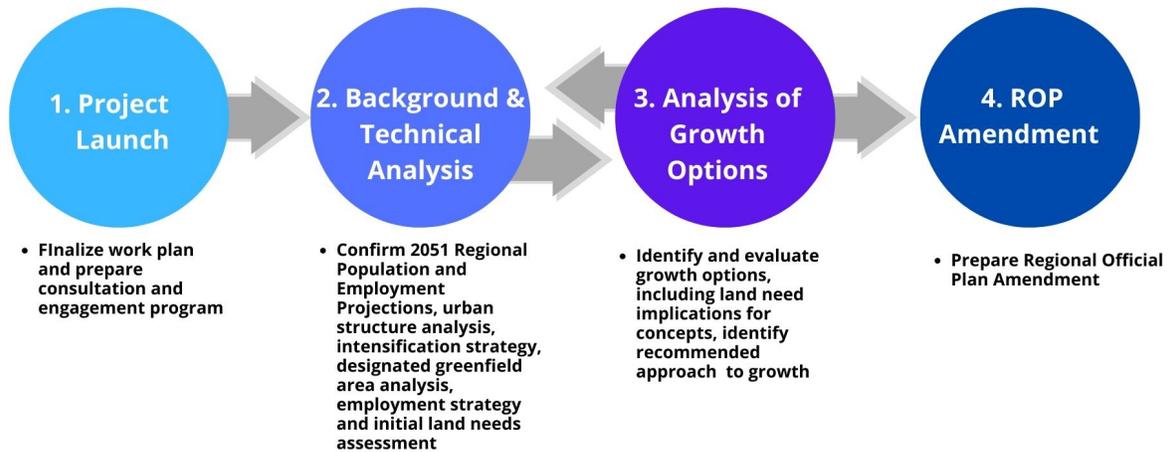
- I. The Regional Official Plan Process
- II. The Purpose of a Land Needs Assessment
- III. An Overview of the Growth Options
- IV. Evaluation and Consultation Process
- V. Summary of the Results of the Evaluation and Consultation Process
- VI. Key Points of Area Municipal, First Nations, and Public Feedback
- VII. The Recommended Approach to Growth

I. The Regional Official Plan Review Process

The overall purpose of the ROP Review is to comprehensively update the Region’s current ROP to ensure it is consistent with the policies of the PPS, 2020, reflect matters of Provincial interest under the Planning Act, and conforms to the Growth Plan, 2019. The ROP review has four main, highly

integrated and iterative phases, as shown in Figure 1.

Figure 1: ROP Review in Four Phases



A major component of the review includes a comprehensive growth analysis, referred to as a Municipal Comprehensive Review (MCR), to examine the Region’s land needs to 2051, analyze various growth options, and identify strategic growth areas (SGAs) to achieve the Region’s minimum intensification and density targets.

The following sections of this report speak to the purpose of the LNA and the supporting documents used to complete a LNA, a brief overview of the growth options that were presented for public consultation, and a summary of the evaluation of the growth options.

II. Purpose of A Land Needs Assessment

The Region completed a Land Needs Assessment (LNA) using a prescribed provincial methodology to ensure that sufficient land is available within municipalities to accommodate all types of households at all stages of life to the horizon of the plan, while avoiding shortages that would increase the costs of housing and employment. The focus of the LNA is on how the Region can accommodate forecasted growth. The recommended approach to growth identifies specific Community Area and Employment Area expansions for consideration, based on alignment with the community-building objectives, and they are shown on Appendix C.

When the Province released a standardized methodology on how to complete a LNA, the intent was to acknowledge that the way in which growth has been occurring can be improved and therefore highlights a focus on intensification, and providing a technically-consistent approach across the Greater Golden Horseshoe. The results of a LNA, implemented through a strong set of land use policies, allows the Region to re-orient growth away from expensive, inequitable development and better prepare to grow and thrive in the future. While the technical purpose of a LNA is to assess land need, the intent is to facilitate the potential to move away from the past

patterns of growth towards a future that addresses significant challenges such as the effects of climate change, the needs of our aging population, efficiently using our existing infrastructure, and working to create more 15-minute communities.

The draft LNA, prepared by Watson and Associates Economists Ltd., presented on April 12, 2022 (PDL-CPL-22-11), identified several growth options for Community Area and Employment Area. Community Areas include lands for residential, retail/commercial, institutional and major office uses – it is land that is not meant to exclusively accommodate homes. Employment Areas are lands that primarily accommodate warehousing, manufacturing, and logistic uses.

The associated technical work that supports the analysis in the LNA is documented in the following Technical Briefs and Reports, available on the EngageWR page:

- Regional Recharge Area Delineation Study (October 2019);
- Upper Cedar Creek Scoped Subwatershed Study (October 2019);
- Hydrogeological Assessment Strasburg Well Field (November 2019);
- Technical Approach to the Delineation of the Regional Recharge Area in the Regional Official Plan (November 2019);
- Long-Term Population and Housing Growth Analysis, 2051 (December 2020);
- Policy Direction Paper on Climate Change (January 2021);
- Employment Strategy Technical Brief (July 2021);
- Intensification Strategy Technical Brief (August 2021);
- Draft Land Needs Assessment Report (April 2022) and Land Needs Assessment - Addendum (June 2022)
- Greenhouse Gas Impact of Land-Use Scenarios on GHG Emissions (June 2022) (Appendix D);
- Growth Option Infrastructure Review and Class D Cost Estimates (June 2022) (Appendix E);
- Growth Evaluation Technical Brief (June 2022) (Appendix F);
- Region of Waterloo Growth Options Fiscal Considerations and Addendum to Region of Waterloo Growth Options Fiscal Considerations (June 2022) (Appendix G).

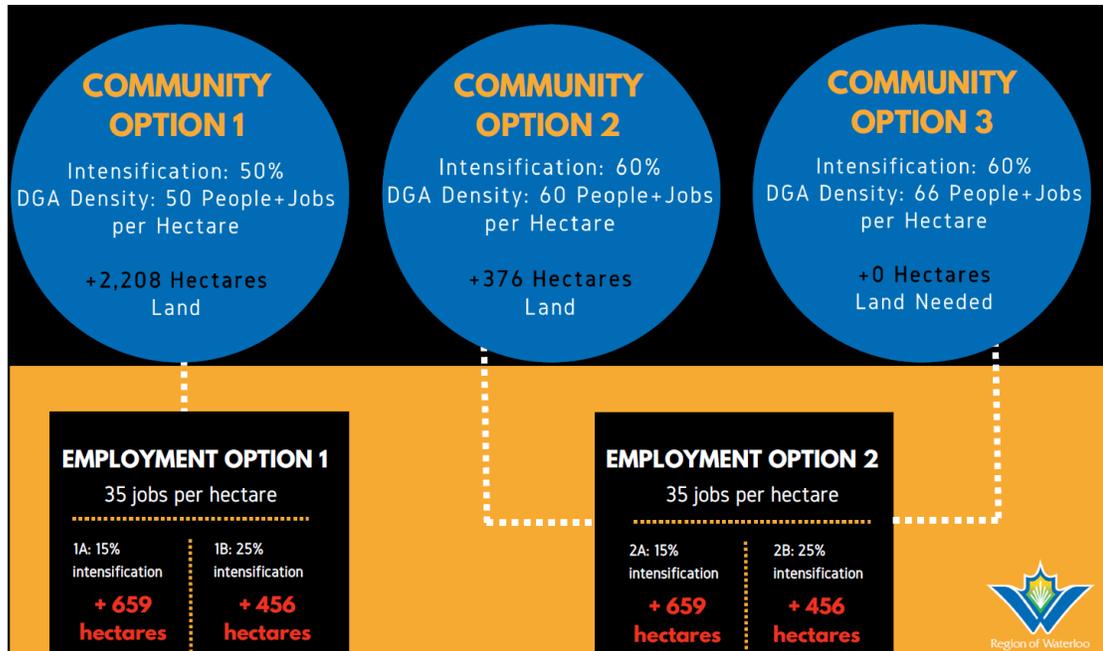
III. Overview of the Growth Options

The illustrative growth options that were presented on April 12, 2022 (PDL-CPL-22-11) related to both Community Area and Employment Area; a six-week public engagement period followed the release of this report where feedback was requested on the growth options. Staff approached the public engagement period as an opportunity to have conversations around how best to achieve the community vision and, based on the results of these conversations, to make refinements to the growth options, resulting a recommended approach to growth.

The three growth options served to illustrate different approaches to accommodating growth and the different kinds of choices that are necessary to realize the community vision. The growth options considered factors such as transportation planning, development financing, employment planning, infrastructure and servicing, protection and enhancement of agricultural lands, and a range of intensification and density targets.

The three Community Area and two Employment Area growth options presented the April 12, 2022 information report (PDL-CPL-22-11) were as follows:

Figure 2: Illustrative Growth Options



Staff developed the three options in response to, and consistent with, Council’s motion on November 9, 2021 regarding the preliminary results of the draft LNA released at that time. In particular, Council directed staff to prepare the LNA in accordance the Provincial methodology, review the draft LNA with the community, and then report back to Council on the results of the consultation process prior to finalizing the LNA.

Option 1 reflected the minimum targets set out in the Provincial Growth Plan. These target are well below what the Region is currently achieving, but provide a reference point for evaluating the other two growth options.

Option 2, represented an ambitious but achievable set of targets that would require a modest urban expansion of 376 hectares of land for Community Area growth. This was presented by staff to Regional Council in November 2021 (without full area municipal allocations),

Option 3 set out a DGA density target higher than Option 2, but would not trigger any urban expansions for Community Area Growth. This option addressed the spirit and intent of Council’s direction-on November 9, 2021 for staff to explore an option for growth that resulted in no urban area expansion, without creating excess lands in the region.

With respect to the Employment Area growth options, both options used the same density target of 35 jobs per hectare. The employment options are associated with the community area options. These two options generate the same Employment Area land need for the Region as a whole and result in varying employment lands employment allocations by Area Municipality. The density target of 35 jobs per hectare is the same for the options, which allows the Region the ability to accommodate a wide range of employment uses on employment lands. Within the two options there are two choices presented in the amount of employment growth estimated to be accommodated through intensification of the Region's existing employment areas.

A more detailed breakdown of the growth options is contained the draft LNA, available on the ROP EngageWR platform (www.engagewr.ca/regional-official-plan). In addition, an evaluation of each growth option is available (Appendix F).

IV. Evaluation and Consultation Process

How Were the Growth Options Evaluated?

Recommending an approach to growth that best positions Waterloo Region to achieve the identified community-building objectives involves two main components:

- 1) Identifying how the Region wants to grow through alignment with the community vision and community-building objectives; and,
- 2) Meeting provincial requirements by including an intensification target of at least 50% and a designated greenfield area density target of at least 50 people and jobs per hectare, and by completing a LNA, specifically addressing forecasted land need by housing type, mix, supply and demand (see Appendix A).

To help identify the recommended approach to growth, each growth option was evaluated through the following analyses:

- **A Growth Option Evaluation Framework** was developed reflecting priorities for development and growth in both Provincial and local policies, as well as in using public and stakeholder feedback (Report PDL-CPL-21-29).
- **Impact of Land-use Options on GHG Emissions (Appendix D)**, which was completed by Sustainability Solutions Group to illustrate the relative energy use and GHG effects of the three options compared to each other;
- **Growth Option Infrastructure Review and Class D Cost Estimates (Appendix E)**, which was completed by Dillon Consulting Limited, analysed the infrastructure requirements for each of the three growth options and identified initial capital costs associated with infrastructure;
- **Financial Impact Assessment by Growth Option (Appendix G)**, which was completed by Watson and Associates, used the capital costs identified in Appendix E and

calculated growth-related and net costs per capita, and provided an indication of potential future operating costs for each of the scenarios and the recommended approach to growth.

- **Synthesis and Analysis of Area Municipal and Public Feedback** - The purpose of engagement on the growth options was to generate discussion, solicit feedback and opinions on priorities for the community and then refine the approach to growth to identify a recommended approach to growth. In addition, collaboration with area municipalities, and having frequent discussions around area municipal visions and priorities for growth was critical in shaping the recommended growth approach. The recommended approach to growth that staff identifies must be holistic, strategic, and focused on advancing the region's community vision.

Appendix B provides a detailed summary of the consultation process, a high-level summary of feedback received organized by theme, and high-level staff responses. In addition, there is a list of all consultation dates, meeting dates with ROP committees, area municipal staff, stakeholders, and the public, as well as a summary of engagement through the ROP EngageWR page.

V. Summary of the Results of the Evaluation and Consultation Process

The following is a high-level summary of the results of the evaluation and consultation processes.

- **Growth Option Evaluation Results (Appendix F)**
 - Based on the results of this evaluation assessment, the options that minimized the outward expansion of the Region's urban areas best supported the criteria identified in this evaluation framework, particularly with respect to climate change mitigation and adaptation, the energy transition, agricultural land preservation and natural environment protection.
 - From a technical perspective, Option 3 appeared to achieve a number of the Region's community-building objectives, however, there were also some major challenges associated with implementing the target housing mix, as it relied on the Cities and Townships planning for very high levels of density on vacant greenfield lands.
 - Comparatively, Option 2 provided the best general fit with the criteria by avoiding the challenges associated with very high densities on greenfield land. However, there is an opportunity to further refine aspects of Option 2 and 3 to better optimize the distribution of growth, maximize a number of the positive aspects and minimize the challenge.
 - Option 1 provided little alignment with the criteria and should not be considered as a recommended approach to growth. This has been a unanimous opinion of all stakeholders.

- **Impact of Land-use Options on GHG Emissions (Appendix D)**

- In general, growth options that supported a more compact built form would accommodate the needed people and jobs with fewer greenhouse gas emissions resulting from the new population's activities.
- This is due to the lower energy needs per person as density of the housing form increases, and due to lower vehicle kilometres travelled for households in more central areas and in denser forms of housing. A smaller role is played in quantifiable emissions by the amount of farmland converted to urban uses and which will no longer sequester carbon.
- It should be noted that the quantitative GHG analysis only compared relative emissions under the three illustrative growth options with each other, and only covers new residents added through new units within the planning horizon. It is not able to quantify the effects on existing emissions in existing neighbourhoods that might result from an option's ability to support the creation of 15-minute neighbourhoods to improve the energy efficiency of existing lower-density neighbourhoods.

- **Area Municipal Feedback**

- Overall, there was consensus among the area municipalities on the importance of the community building objectives, specifically maintaining the Countryside Line, climate change considerations, complete communities, and achieving a range and mix of housing, with an emphasis on 'missing middle.'
- There was also consensus on focussing growth through intensification.
- There was some support for the principles of Option 4, as submitted by Smart Growth Waterloo Region (see Table 3 for a summary) by the Township of Woolwich
- There was some support for the direction of Option 2, with some modifications from the Township of North Dumfries.

- **Public/Stakeholder Feedback**

- There was strong consensus across the community on the importance of the community building objectives highlighted above, with particular focus completing communities, climate action, protecting natural heritage, agricultural and heritage features, as well as affordable housing.
- There was also a general consensus that Option 1, based on Growth Plan minimum intensification and density requirements, should not be considered further, since it does not meet community objectives, and underperforms compared to what is being achieved already.
- Some members in the development community indicated support for an option with higher intensification and density targets than Option 1, but lower than Option 2. This

approach would necessitate a significant Community Area expansion.

- There was strong support for Option 3 as it resulted in no Community Area land need, with those supporting it highlighting climate action, affordable housing, protection of agricultural lands, and support for 'missing middle' housing.
- There was also strong community support for a no Community Area expansion option that would increase intensification targets in the Built-Up Area, relative to what was presented in Option 3, rather than increasing density targets in the unbuilt portions of new Designated Greenfield Areas.

VI. Key Points of Area Municipal Council and Public Feedback

With respect to communication and engagement with Area Municipalities, since the release of the draft LNA in April 2022, Regional Staff have had active and continuous conversations with the municipal planning staff of all seven local Area Municipalities, as well as their CAOs, and attended meetings of most Area Municipal Councils. In addition, each Area Municipal Council has provided feedback or comments, and this feedback from municipal councils and/or staff are found in Appendix B.

With respect to communication and engagement with First Nations, Métis and other local Indigenous peoples, the Region recognizes its responsibility to engage on planning matters that may affect their rights and interests, and the unique role that Indigenous peoples have had and will continue to have in the growth and development of this region.

The ROP Review provided an opportunity to build stronger relationships with First Nations and Métis based on shared values of respect, trust, meaningful dialogue and cooperation. The Region is committed to improving processes for notification and on-going engagement, and will include language in the ROP to recognize the importance of reconciliation and building relationships with Indigenous peoples who have lived and are currently living in the region. Throughout the ROP Review, and more specifically engagement on the growth options, staff have been continuously engaging with Six Nations of the Grand River and the Mississaugas of the Credit First Nation. Staff have also reached out to the Métis Nation of Ontario through the Grand River Métis Council, and look forward to a forthcoming meeting. Please see Appendix B for a summary of meetings.

With respect to public feedback, Table 2, below, summarizes key points from public consultation submissions, along with staff's high-level response to each point.

These comments were received between April 12 and June 10, 2022 from the development community, environmental and agricultural stakeholders, the Regional Ecological and Environmental Advisory Committee, and the general public. These comments were received through virtual public engagement sessions, EngageWR, and individual or group meetings. The Response Report (Appendix B) provides a more comprehensive summary of the engagement period.

Table 2: Summary of Public/Stakeholder Feedback and High-Level Staff Responses

Development Community Feedback and Staff's High-Level Response	
Feedback	High-Level Response
Concerns that the draft LNA was not completed using the prescribed Provincial methodology.	The Regional LNA follows the prescribed steps in the Provincial methodology.
Concerns that a housing supply and housing demand analysis are missing from the Draft LNA.	See Appendix A for the detailed inventory of greenfield housing supply and need by type.
Concerns that LNA has errors in the identification of Community Areas.	<p>The definition of Community Area includes not only residential lands, but those that can accommodate schools, including post-secondary institutions such as Conestoga College, some office uses, and retail/commercial areas. We have refined the delineation of the vacant Community Areas based on feedback through the public engagement process.</p> <p>Community Areas are not meant to accommodate only houses.</p> <p>The LNA correctly identifies Community Area lands.</p>
Concern that a 60% intensification rate, or higher, is unachievable over a 30 year period.	<p>Historical intensification rates in very recent years have been well above the Region's recommended 61% intensification rate. For example, development activity throughout Kitchener, and particularly along the ION corridor, is very strong, signalling an increasing market demand. Further intensification opportunities will be realized as construction commences on ION Stage 2 through Cambridge.</p> <p>Townships have also indicated a desire for policies to support further intensification, allowing for senior-oriented housing, as well an ability to look towards transit opportunities.</p>
Expression that none of the growth options provide for housing choice based on market-demand.	The recommended approach to growth builds into the inventory a greater range and mix of housing forms.
Recognition that Option 1, the provincial minimum targets, would not be responsive to a variety of policy objectives including responding to climate change, and managing growth in a manner that is walkable, transit oriented, fiscally responsible, and healthy.	Option 1 is not being pursued as a recommended approach to growth.
Some requests for an option with higher density and intensification than Option 1, but lower density and intensification, and therefore more urban expansion, than Option 2.	The requested approach to growth is not supported by the recommended approach to growth as it does not align well with the community vision, community-building objectives, climate change objectives, or re-orienting growth to make better use of existing infrastructure.
A request for an option with the same intensification as Option 1 and density target as Option 2, in order to better address 'missing middle' housing.	While a focus on missing middle housing aligns with the recommended approach to growth, the current delineated Built-Up Areas can accommodate a higher intensification rate (than requested) that better aligns with supporting

	climate action objectives.
Concerns that the Region overestimated the amount of vacant land that can be developed, and that we should exclude lands that will be used for roads, parks, etc.	The Regions assessment of vacant DGA lands is consistent with the provincial methodology.
Concerns that DGA densities proposed are unreasonably high in a few area.	Adjustments to the DGA densities in some municipalities has been based on feedback from the area municipalities and the public. There are existing development throughout the Region that have similar densities to what is proposed in the LNA
Concern that the Region’s LNA underestimates the total amount of housing required.	The Region’s LNA forecasts total housing need to 2051 consistent with the provincial methodology, using housing propensity data to inform the total housing need over the forecast period.
Concerns that the proposed housing mix cannot be achieved.	The proposed housing mix has been informed by historical housing unit construction and housing units by type within the development approvals process. Roughly half of the units in the development pipeline are high density units.

Environmental and Agricultural Community Feedback and High-Level Staff Response

Feedback	High-Level Response
Advocacy towards continuing tradition of being leaders in land-use planning/be bold, ambitious and visionary.	<p>The identified minimum intensification and density targets and among the highest of all the municipalities in the Greater Golden Horseshoe.</p> <p>In addition, a focus on implementing the transformative concept of 15-minute neighbourhoods within the ROP, in combination with addressing a changing climate by moving towards a clean energy transition and preparing to thrive in a global low-carbon future, is considered ambitious and bold, particularly when compared to other area municipalities.</p>
Strong public support for an option that does not require urban area expansion for community lands.	The Region is required fulfill the direction of the Province by realistically analysing land need to 2051. The final land needs assessment does not support an approach to growth that results in zero community area expansion.
There was a perception that zero community area expansion was the most “future proof” option, since lands can be added in a future review of the ROP, but designated lands are very difficult to de-designate.	The Region is required to meet Provincial obligations and complete an LNA that looks towards a 2051 planning horizon. The results of the LNA indicate that land is required to meeting forecasted population and employment growth.
<p>Significant support for Option 3 or Option 4, as submitted by Smart Growth Waterloo Region.</p> <p>Option 4 requests the following:</p> <ul style="list-style-type: none"> - use higher intensification rates to encourage better use of existing infrastructure and provide a wider range of affordable housing options and minimize the 	<p>The recommended approach to growth aligns very closely with the principles identified in Option 4, as submitted. In addition, the draft policies presented in the Draft ROP Amendment (PDL-CPL-22-20) advance these principles.</p> <p>With respect to Option 3, the most comparable growth option, the intensification rate is slightly higher; DGA target is lower; land need has been reduced significantly, to a</p>

- need for urban expansions;
- no Community Area expansions and no farmland loss occur until better information regarding the trends and issues is available;
- the principles of the Countryside Line and Protected Countryside be upheld;
- a focus on more sustainable growth, including initiatives related to adopting inclusionary zoning, and increasing seniors housing, accessory units, and the missing middle for all municipalities;
- investigate and implement appropriate types, forms and scale of intensification for smaller urban areas consistent with the creation of complete communities and the long term needs of the residents of the community;
- a focus on development of complete, walkable communities with active transportation and public transportation options; and,
- Employment Lands Option #2 with 25% or higher intensification is supported to minimize farmland loss.

threshold that can be technically supported by the LNA and meets direction by the Province.

In addition, the recommended approach to growth prioritizes implementing the transformative concept of 15-minute neighbourhoods within the ROP, which addresses a changing climate by moving towards a clean energy transition and preparing to thrive in a global low-carbon future.

Regional Ecological and Environmental Advisory Committee Feedback and Staff High-Level Response

Feedback	High-Level Response
<p>Indicated a preference for Option 3 (Community Area) since it offers the most compact form and most protection of natural heritage, water, and agricultural resources.</p>	<p>The recommended approach to growth optimizes an intensification rate that supports compact growth and minimizes, to the extent possible while still adhere to the Provincial direction regarding planning to a 2051 horizon, disruption to natural heritage, water, and agricultural resources.</p> <p>Beginning this September, staff will focus on the second phase of the ROP review. That phase will update the balance of the ROP policies (e.g., agriculture, natural heritage, cultural heritage resources, infrastructure and other policy areas) to align with Provincial policy. That process will culminate in a second proposed ROP amendment targeted for the spring of 2023.</p>
<p>Improvements requested relating to creating more opportunities for complete communities spread throughout the region and not as focussed in the Cities of Kitchener and Waterloo.</p>	<p>This feedback is captured in the recommended approach to growth.</p>
<p>Only identify additional lands for development only once there is a defined need and also contributes to creating a complete community.</p>	<p>This feedback is captured in the recommended approach to growth.</p>

<p>Further assessment and consideration of the Protected Countryside is necessary before there is any consideration of expanding beyond the Countryside Line.</p>	<p>Beginning this September, staff will focus on the second phase of the ROP review. That phase will update the balance of the ROP policies (e.g., agriculture, natural heritage, cultural heritage resources, infrastructure and other policy areas) to align with Provincial policy. That process will culminate in a second proposed ROP amendment targeted for the spring of 2023.</p>
<p>There may be an opportunity through this process to better capture this feedback.</p>	
<p>Support Employment Area option 2 (25%/35 j/ha) while giving consideration for more innovative approaches to increasing densities.</p>	<p>This feedback is supported in the recommended approach to growth.</p>
<p>Need to include more diverse housing forms within existing neighbourhoods (city and township) to allow for all ages and income levels to remain within the community.</p>	<p>This feedback is supported in the recommended approach to growth.</p>

General Public Feedback and High-Level Staff Responses

Feedback	Response
<p>Concerns that 66 people and jobs per hectare, as a minimum and an average across both the existing and new DGA, would be difficult to achieve.</p>	<p>The recommended approach to growth presents a lower density target to address this feedback.</p>
<p>Better protect the region’s natural heritage and agricultural systems.</p>	<p>The policies in the current ROP are some of the most protective in the province.</p> <p>Beginning this September, staff will focus on the second phase of the ROP review. That phase will update the balance of the ROP policies (e.g., agriculture, natural heritage, cultural heritage resources, infrastructure and other policy areas) to align with Provincial policy. That process will culminate in a second proposed ROP amendment targeted for the spring of 2023.</p>
<p>Think bolder and seek more ambitious intensification and density targets for new greenfield communities.</p>	<p>The identified minimum intensification and density targets in the recommended approach to growth are among the highest of all the municipalities in the Greater Golden Horseshoe.</p>
<p>Take stronger actions to mitigate and adapt to climate change.</p>	<p>The recommended approach to growth prioritizes mitigating and adapting to climate change. To implement this feature of the recommended approach to growth, the Draft ROP Amendment (PDL-CPL-22-20) highlights proposed key policy innovations that relate specifically to climate action.</p>
<p>Increase the supply of affordable and “missing middle” housing.</p>	<p>The recommended approach to growth prioritizes providing a greater range and mix of housing to 2051, at various price</p>

	<p>points and specifically through “missing middle” housing.</p> <p>To implement this feature of the recommended approach to growth, the Draft ROP Amendment (PDL-CPL-22-20) highlights proposed key policy innovations that relate specifically to affordable and missing middle housing.</p>
Select a growth option that limits the financial impact on municipalities.	The recommended approach to growth is a fiscally responsible approach for municipalities, as outlined in Appendix G.
Ensure the LNA is completed correctly to provide a sufficient supply of land to accommodate future growth.	The Regional LNA follows the prescribed steps in the Provincial methodology.
Growth cannot only be in the form of high rise towers.	The recommended approach to growth provides for a mix of housing forms to accommodate growth to the year 2051.
Need more time to review the draft LNA with key stakeholders to provide for a more equitable distribution of growth between the cities and the townships.	There will be further opportunities throughout July 2022 to provide input into draft policies that seek to implement the principles of the recommended approach to growth, if endorsed.
A few supporters of Option 1 (50%/50 pj/ha) indicated a preference that best preserves the character of existing neighbourhoods from intensification, supports the market demand for low density housing types, and provides for a more equitable distribution of residential housing between the Region’s urban and rural municipalities.	The recommended approach to growth does not support Option 1. However, the draft policies contained in the Draft ROP Amendment (PDL-CPL-22-20) provides further context for how intensification, housing mix, and distribution of population and employment growth between the region’s cities and townships will occur. Heritage resources and community character will be protected and enhanced through policy.
A few community members preferred Community Area Option 2 because it would strike the balance of having a limited urban expansion while also providing for a range and mix of housing options.	The recommended approach to growth supports this feedback.

VII. The Recommended Growth Approach

Highlights

Several significant considerations have led to this recommended approach to growth. First, based on further review and feedback on the draft LNA, and more specifically, a review of the total amount of Community Area DGA land supply, overall Community Area land need to 2051 has been significantly reduced, compared to Option 2. Second, in consideration of staff’s responsiveness to public feedback, as well as the desires of area municipalities, in addition to the results of the technical background work and evaluation, and strategic priorities of Regional Council, the technical elements of the LNA have been refined.

The ultimate result is a recommended approach to growth that puts into numerical terms a way to best meet the community vision, addresses corporate strategic priorities, responds to public and area municipal criticisms, concerns, and support of key principles of growth, while also adhering to the prescribed steps of the LNA methodology and the Province’s directive to look to a 2051 planning horizon. The recommended approach to growth is not a compromise between other possible options for accommodating growth, and it does not make trade-offs between being an equitable, thriving, and sustainable community. Instead, the recommended approach to growth is a holistic approach that best sets Waterloo Region up for success over the next 30 years and beyond. Table 3, below, summarizes the recommended approach to growth.

Table 3: The Region of Waterloo’s Recommended Approach to Growth

Population Growth, 2021-2051	306,000 people
Employment Growth, 2021 – 2051	168,000 jobs
Housing Need, 2021 – 2051	121,000 housing units
Community Area Intensification Rate	A minimum of 61% of all new housing units to be built within the Delineated Built-Up Area, Region-wide (2,453 housing units per year). City average – 2,346 Township average - 106
Community Area Designated Greenfield Area Density	A minimum of 59 residents and jobs per hectare, Region-wide
Additional urban land required through expansion to accommodate residents	150 hectares
Employment Area Intensification Rate	A minimum of 25%
Employment Area Density Target	A minimum of 35 jobs per developable hectare, Region-wide
Additional urban land required through expansion to accommodate employment	456 hectares
Total Recommended Urban Area Expansion	606 hectares

This recommended approach includes the following key features, all of which address either the concerns, criticisms, support, or calls for advocacy and leadership provided throughout the engagement period.

The recommended approach to growth best advances the Region's and the community's strategic priorities while meeting provincial requirements, by:

- providing an appropriate range and mix of housing that considers market demand resulting in an incremental shift to a higher proportion of medium and higher densities, while also resulting in a 45% inventory of housing form dominated by low-density, ground-related housing in 2051;
- supporting housing and community affordability by continuing to add to the inventory of medium and high-density housing forms throughout the region;
- supports the provision of efficient and affordable infrastructure by focusing growth and development in the cities to support future growth while allocating land, only where necessary, in all townships to encourage and support the creation of 15-minute neighbourhoods where residents can continue to live, work and play in close proximity;
- maintaining the Countryside Line and only expanding in a very limited, targeted and strategic manner in order to support other community-building objectives related to living and working in close proximity;
- minimizing expansion into farmland and natural areas, to the greatest extent possible given the results of the final LNA, while providing a strategic range and mix of population and employment growth; and
- addressing climate change and achieving the community's clean energy transition while preparing Waterloo Region to thrive in a global low-carbon future by directing forecasted growth to existing areas and only providing for additional growth in areas where 15-minute neighbourhoods can be created.

The recommended approach to growth optimizes the intensification target, by:

- focusing growth within all BUAs across the region (city and township), at a rate of 61%. This means 61% of all new development, averaged Region-wide, will occur within the delineated BUAs. This approach supports the Region's strategic transit and infrastructure investments, provides access to services and achieves a broader diversity of housing options including higher density and maximizing missing middle housing. This will be critical for retrofitting existing neighbourhoods into 15-minute neighbourhoods that are complete, energy efficient communities.
- maximizing opportunities associated with medium-density housing, or the "missing middle", in locations throughout the Region that are amenity-rich, and support existing and future investments in transit infrastructure. This recommended approach provides for a greater choice of housing options in the BUAs across the region, which can be

accommodated by families and an aging population.

- avoiding negative consequences of increasing the intensification rate beyond 61%, specifically:
 - avoiding the potential to limit grade-related housing options (particularly medium-density housing) within the region due to the limited land supply in the BUA for such housing forms; and,
 - avoiding an excess land scenario in Cambridge and Kitchener.

The recommended approach to growth targets expansion to complete or create 15-Minute neighbourhoods, by:

- focusing the recommended 150 hectares of Community Area and 456 hectares of Employment Area to accommodate forecasted population and employment growth to the planning horizon of 2051 to areas that advance the community-building objectives noted above. Table 5, below, provides the recommended allocation of Community Area and Employment Area.
- enabling the development of 15-minute neighbourhoods in specific existing urban areas in the townships. While the cities are in a strong position to create energy efficient 15-minute neighbourhoods within their existing community areas given the significant amount of existing vacant DGA lands, the townships will face a different set of challenges in retrofitting their unique urban areas into energy-efficient 15-minute neighbourhoods with a full range of housing types and amenities so residents can meet their daily needs within a short trip by walking, cycling, and rolling.

Due to smaller existing built areas, most of these have more limited opportunities to increase density and enable 15-minute neighbourhoods through intensification. The strategically targeted urban expansions in the townships will provide for the addition of adjacent new neighbourhoods, built to be energy efficient and complete these existing communities. The completion of these communities will enable access to a greater range and mix of housing forms and more convenient local access to amenities, and ultimately greater choice and affordability for both housing and mobility.

By providing access to lower-energy mobility and housing options, these expansions will play a critical role in ensuring township residents can thrive in a low-carbon future within their unique communities, and are not left behind in the clean energy transition.

- locating the recommended Community Area and Employment Area expansions between the current Urban Area Boundary and the Countryside Line (CSL). These areas were identified in the current ROP as areas for potential areas of expansion, when they align with community building objectives. The recommended expansion areas do not extend beyond the CSL that was identified in the 2015 ROP and maintains the Countryside Line as presented in the 2015 ROP.

The recommended approach limits employment area land expansion, by:

- using an ambitious and achievable intensification rate of 25% for employment areas; and;
- designating 456 hectares of new employment area lands to support the Region's strong employment base.

Table 4: Recommended Approach to Growth - City and Township Population and Employment Growth, Community Area and Employment Area Land Need, Intensification and Density Targets to 2051

Area Municipality	Population Growth (%) to 2051	Employment Growth (%) to 2051	Additional Community Area (ha)	Additional Employment Area (ha)	Intensification Target (%) (minimums)	Density Target at 2051 (people and job per hectare)
City of Cambridge	47%	53%	8	187	65	59
City of Kitchener	52%	54%	0	0	60	65
City of Waterloo	45%	54%	0	0	83	54
Township of North Dumfries	73%	74%	38	78	18	51
Township of Wellesley	14%	20%	17	0	14	48
Township of Wilmot	30%	40%	35	15	35	43
Township of Woolwich	78%	103%	52	176	20	53
REGIONAL	50%	55%	150ha	456ha	61%	59pj/ha

5. Area Municipality Communication and Public/Stakeholder Engagement:

Consultation and engagement with the various Project Committees, including the Steering Committee, Stakeholder Committee, Technical Team and Area Municipal Working Group, as well as Indigenous engagement and public consultation is continuous throughout the ROP review project, and more specifically, with engagement on the land needs assessment component of this process. Collaboration and discussion is iterative and ongoing.

Feedback that was received from April to June, 2022 from area municipalities and the public has been incorporated into the recommended approach to growth and is reflected in the key features of the recommendation as well as the accompanying draft ROP policies, presented in Report PDL-CPL-22-20. A full summary of the engagement related specifically to the LNA and growth options is provided for in the Response Report (Appendix B); high-level responses to submissions are also contained in this document.

6. Financial Implications:

A fiscal analysis of the three growth options and recommended growth approach has been prepared by Watson & Associates and is attached as Appendix G. The analysis uses data and findings from the Growth Option Infrastructure Review and Class D Cost Estimates completed by Dillon (Appendix E), and provides Council with the estimated financial impacts of recommended urban area expansions required by the various growth options as well as the recommended approach to growth. The fiscal analysis uses the Class D estimates prepared by Dillon relating to water supply, wastewater treatment and public transit. The fiscal analysis includes a summary of capital costs, an estimate of potential capital cost recovery from future development charges, property taxes and user rates, and a high level future operating cost estimate.

Table 5 summarizes the fiscal analysis as follows:

	Growth Option 1	Growth Option 2	Growth Option 3	Recommended Approach
Incremental Capital Costs (\$2021, in millions)	\$711.4m	\$684.7m	\$684.9m	\$684.9m
Growth-related % *	64%	62%	62%	62%
Non-Growth-related % **	36%	38%	38%	38%
Cost per capita	\$2,342	\$2,255	\$2,254	\$2,225
Cost per capita range				
- Cities	\$1,921-\$2,275	\$1,966-\$2,302	\$2,008-\$2,302	\$1,911-\$2,163
- Townships	\$1,488-\$9,000	\$1,472-\$9,000	\$1,351-\$9,000	\$1,333-\$8,684

Notes:

* Growth related costs are potentially recoverable from future regional development charges

** Non-growth related costs would be funded by either from property taxes or user rates

The total incremental capital costs are relatively similar across the three growth options and the recommended approach to growth. Growth Option 1, which reflects a higher level of greenfield development, has a slightly higher development charge recovery. Growth Options 2 and 3 reflect increased levels of intensification and therefore have a slightly lower development charge recovery as a result of higher benefits to existing development. Townships that are part of integrated urban water system and that do not have a mature transit system will have the lowest per capita cost of growth. Significant investments in the transit system will be required to support growth in the urban areas, resulting in a higher cost per capita. Townships that are on standalone water and wastewater systems that are nearing capacity will have a much higher cost per capita.

This analysis is not intended to be a complete representation of the costs of growth. At this stage of the ROP Review process, the focus has been on incremental costs associated with water supply, wastewater treatment and public transit. As noted in Appendix E, it is assumed that all projects in the most recent Transportation Master Plan will be required under each scenario. Stage 2 ION has been treated in a similar manner. As such, the above figures do not include costs associated with roads expansion or Stage 2 LRT, or for other Regional services including ambulance service, the Regional Airport and policing. Also not included in the analysis are local water distribution and wastewater collection costs, which to a great extent will be incurred by the lower tier municipalities (but also by the Region in the Townships of Wellesley and North Dumfries).

The costs in the above table would be incurred at different times over the 30-year time horizon based on the location of growth and the need for the expansion. A more detailed financial analysis will be prepared based on the recommended approach to growth approved by Regional Council.

7. Conclusion / Next Steps:

The ROP review is a collaborative and iterative process; one component of this process is the requirement to complete a Land Needs Assessment to determine if any Community Area or Employment Area is needed to accommodate future population and employment growth to 2051. According the results of the LNA, some land is necessary.

The recommended approach to growth presented in this briefing note is ambitious and builds on Waterloo Region's reputation for being a leader in land use planning. If endorsed by Council, it would provide strong strategic direction on where and how the region will grow and change over the next 30 years, while achieving Council's vision for an inclusive, thriving and sustainable community. The identified minimum intensification and density targets are among the highest of all the municipalities in the Greater Golden Horseshoe. Staff are confident these targets are realistic and achievable, and will provide for a range and mix housing to accommodate the region's growing and increasingly diverse community.

The recommended approach to growth would be implemented through a proposed amendment to the ROP outlined in Report PDL-CPL-22-20. The proposed amendment would establish several new supporting policies relating to: Indigenous Relationships and Reconciliation; Equity and Inclusion; Growth Management; Climate Action; Affordable and "Missing Middle" Housing; and

Economic Prosperity.

Subject to Council's consideration of the recommendations in this report, staff will update the draft ROP amendment as provided in Report PDL-CPL-22-20 and seek public input on it through a second round of engagement. This process will include two virtual public information meetings, and statutory Public Open House and Public Meeting. Following these sessions, staff will assess the feedback received from the community and compile the final recommended draft of the ROP amendment, targeted for Council's consideration on August 11, 2022 and adoption on August 18, 2022. The key dates in the process are shown below.

July 6, 2022	Virtual Public Information Meeting
July 13, 2022	In-Person Public Information Meeting
July 14, 2022	Virtual Public Information Meeting
July 19, 2022:	In-Person Statutory Public Open House
July 27, 2022:	Virtual Statutory Public Meeting
August 11, 2022:	Recommendation report to Council on adoption of the final proposed ROP amendment
August 18, 2022:	Council consideration of final proposed ROP amendment

Attachments / Links:

- Appendix A – [Land Needs Assessment and Addendum \(Watson & Associates, Inc.\)](#)
- Appendix B – [Response Report: Summary of Public Consultation Results](#)
- Appendix C – [Maps of Recommended Community Area and Employment Area Expansions](#)
- Appendix D – [Impact of Land-Use Scenarios on GHG Emissions \(June 2022\)](#)
- Appendix E – [Growth Options Infrastructure Review and Class D Cost Estimates and Addendum \(June 2022\)](#)
- Appendix F – [Growth Option Evaluation Technical Brief \(June 2022\)](#)
- Appendix G – [Fiscal analysis of the three growth options and recommended growth approach \(June 2022\)](#)
- Appendix H – [Settlement Area Boundary Expansion Requests](#)

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