Report to Council

Date: March 16th, 2020

To: Council

From: City Manager

Subject: 20-Year Servicing Plan and Financing Strategy Update

Department: Infrastructure Engineering

Recommendation:

THAT Council receives, for information, the report from the Infrastructure Engineering Manager dated March 16, 2020, with respect to the 20-Year Servicing Plan and Financing Strategy update, in conjunction with the 2040 Official Community Plan;

AND THAT Council direct staff to prepare infrastructure servicing options outlining service levels and associated costs for consideration in future reports to Council.

Purpose:
To introduce infrastructure cost models for parks, transportation and utilities to service the 2040 Growth Scenario and to provide an overview for the discussion for future reports that will facilitate Councils input for the appropriate infrastructure servicing strategy.

Background:
Imagine Kelowna outlines the community's vision for the future. Imagine Kelowna informed the 2040 Growth Scenario and provides direction to develop the Official Community Plan. Servicing the OCP is about more than just providing pipes, roads and parks to accommodate a growing population. Having a network of well-maintained infrastructure and amenities is essential to our quality of life and helps to create equity, support economic development, increase prosperity, and create jobs. As Kelowna continues to grow, we need to make strategic, long-term infrastructure investments to enhance the sustainability and resilience of our city. Ultimately, a financing strategy will have to be developed with a cost that City Council and the community will support and adopt as a blueprint for future development.

This report was preceded by the 2040 Infrastructure Impact Analysis report to Council (August 12th, 2019) that provided a high-level qualitative review of the infrastructure impacts associated with the 2040 Official Community Plan (2040 OCP) Growth Scenario. This report builds on the previous report and provides quantitative costing and service level information for the 2040 Growth Scenario for five major servicing areas – water, wastewater, drainage, transportation and parks. A service level approach is used to communicate costs as infrastructure costs are a function of the service level

provided. This report will introduce infrastructure servicing costs, service levels and provide a basis for future reports that will facilitate Councils input for the appropriate infrastructure servicing strategy.

Discussion:

The 2040 OCP will establish future direction for land use and development for the next 20-Years and align with the vision of Imagine Kelowna. The Council endorsed 2040 Growth Scenario (Figure 1) accommodates the expected 25,000 new residential units to support a population increase of 50,000 by focusing growth in urban areas, a departure from the 2030 OCP. To achieve this, servicing the 2040 OCP will require investments in transportation, parks and utilities (water, wastewater and stormwater).

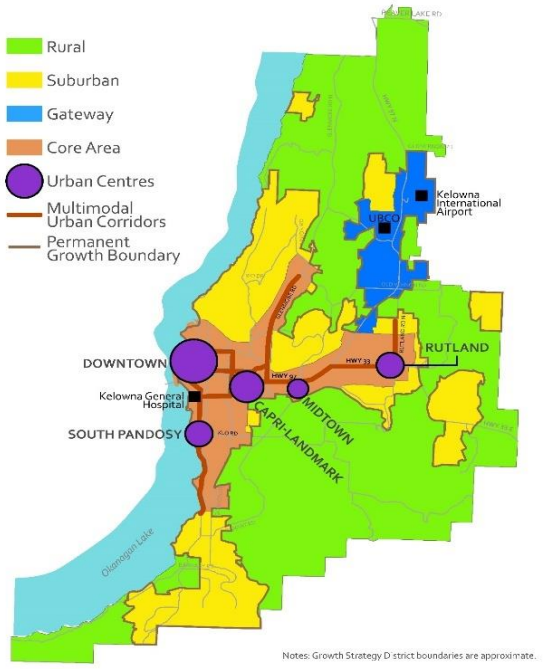

Figure 1 - 2040 Growth Scenario.

Updating the 20-Year Servicing Plan early in the OCP development process highlights the infrastructure servicing challenges so the City can make the necessary decisions to optimize investment where and when it is most needed, and balance wants versus needs. Fortunately, the Council endorsed Growth Scenario directs most of the future population growth to our Core Area and Urban Centres, which equates to a more compact, denser development pattern where infrastructure can be more efficiently utilized by a greater percent of our community population. By optimizing growth, the City can make efficient and effective use of infrastructure, ensuring a better return on investment for taxpayers and move our community toward the Imagine Kelowna vision.

20-Year Servicing Plan and Financing Strategy (DCC Program):

The City's 20-Year Serving Plan and Financial Strategy forms the basis of the DCC program and outlines the major servicing needs required to service growth projected in the OCP. The DCC program is governed by the Local Government Act and permits only certain eligible growth-related infrastructure to be funded:

- Transportation,
- Wastewater,
- Water,
- Drainage and,
- Parkland Acquisition and Improvement.

The City's DCC program includes all the above infrastructure categories except Drainage infrastructure.

The DCC program is only one stream for financing an OCP as it cannot be used to fund certain non-eligible growth-related infrastructure like fire halls, police buildings, recreation and cultural centers, public works yards or administrative buildings, transit, etc. This report will focus on DCC eligible infrastructure only. Future reports will build on this report and examine all infrastructure needs up to 2040.

The DCC program forms a large component of the capital program making up approximately 40% of the City's infrastructure needs for the next 20-years and supports infrastructure investment totaling $993 million. This investment is funded by development through DCCs and developer constructed works and by City sources including taxation, utility fees and grants. In general, the DCC program is funded 2/3 by development and 1/3 through City sources. Therefore, a change to the DCC program has a direct impact on the level of matching taxation and utility funding.

Funding Models:
The 2040 Growth Scenario predicts the addition of 25,000 new units to support a population increase of 50,000. The implications of the adopted 2040 Growth Scenario on the updated DCC program was analyzed through four funding models applied to five (DCC eligible) infrastructure service areas – water, wastewater, stormwater, transportation and parks as illustrated in Figure 2.

- **Model A** – the current DCC program to 2040 or the business as usual (BAU) condition with the total DCC program matching the anticipated growth rate, with no increase to DCC unit rates and proportional funding from taxation and utility funding. Estimates to achieve this model by 2040 are at $1.2 billion.
- **Model B** – Model A (BAU) plus 10% increase to DCC program. *Results not presented in this report but will be included as part of more detailed review in future Council reports.*
- **Model C** - Model A (BAU) plus 20% increase in DCC Program. Estimates to achieve this model by 2040 are at $1.46 billion.
- **Model D** (Accelerated) - considers the cost implications of implementing the full vision of Imagine Kelowna within the 2040-time horizon. Estimates to achieve this model are $1.9 billion.

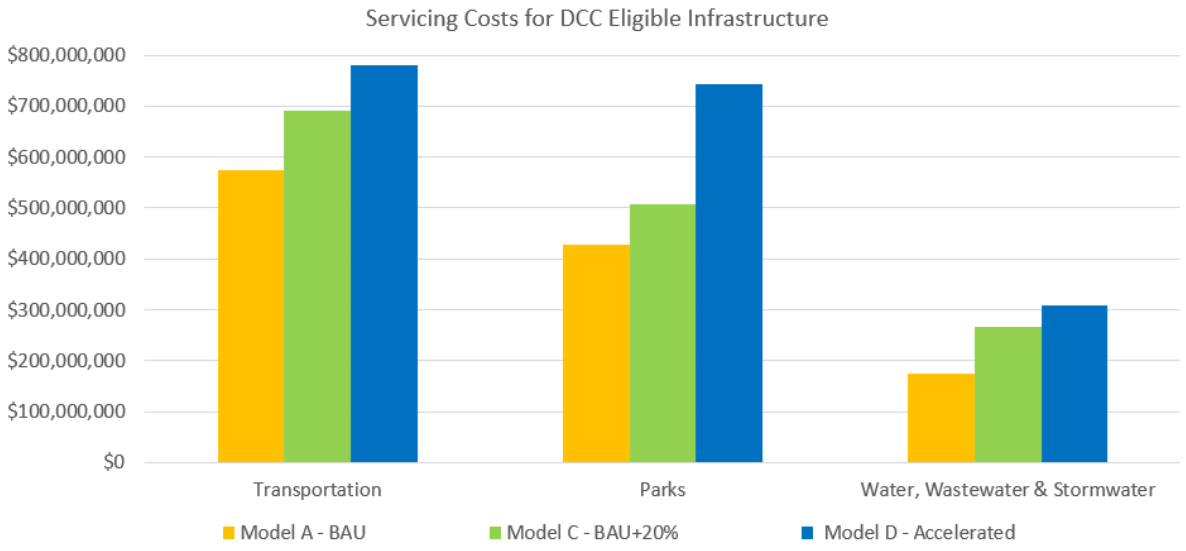

***Figure 2** - Three funding models for infrastructure servicing for DCC eligible infrastructure. BAU represents business as usual.*

All four models support infrastructure needed to service the 2040 Growth Scenario and align with the vision of Imagine Kelowna, however, the difference between the 4 options is the pace of infrastructure investment. Model A supports a slower pace of infrastructure investment compared to Model D but both models align and make progress towards the full vision of Imagine Kelowna.

The following sections introduce the anticipated service levels associated with three of the funding models. Staff representing each service area will return to Council later to discuss in detail service level impacts and costs and receive direction from Council as to the appropriate servicing strategy. Future reports will include the results from all 4 funding models including **Model B,** which was not presented in this report to reduce content and simplify the report. Timing of subsequent Council reports is discussed later in this report.

Transportation: While option evaluation is still on-going for the Transportation Master Plan (TMP), it is not too early to provide some estimates of transportation service levels for the potential DCC Program funding models. Transportation is unique in that, as the City focuses growth in the urban centres and Core Area, the historic approach of building out our roadway network in the suburbs will need to shift to investments that help move more people through the core area in same amount of road space. While this is generally a cost-effective approach to servicing growth, it will mean shifts in how the City prioritizes and allocates budget for transportation. For example, more funding will be needed for transportation options that connect our urban centres, such as transit service, which is not currently funded through the DCC Program.

While about half of transportation funding is outside of the DCC program, the focus of this report is primarily on the DCC eligible transportation categories, which includes active transportation and roads. The transportation team will be coming with a report in the coming weeks that looks at funding across all the transportation categories comprehensively.

Transportation			Current Program to 2040 Model A		Funding Increase 20% Model C		Accelerated Model D	
		Category	Funding Increase	Service Level	Funding Increase	Service Level	Funding Increase	Service Level
DCC Program		Active Transportation	BAU	↔	Moderate	↑	Moderate	↑
		Roads	BAU	↓	Moderate	↔	High	↔
		Cost	$574 million		$690 million		$780 million	

- **<u>Model A - Current DCC Program to 2040:</u>** Funding for the DCC eligible transportation categories would remain about the same as today – aligning with the business as usual transportation budget forecast for 2040. Investments in active transportation corridors would continue but would not be enough to complete the Pedestrian and Bicycle Master Plan. Investment in many of the road projects in the current 10-year Capital Plan would continue, but overall traffic congestion levels would continue to rise. The reason for this is that even though the endorsed growth scenario will help reduce the amount of driving per person in the future, the total amount of driving is still anticipated to increase because of population growth and a booming economy. While overall traffic congestion in the peak periods is expected to increase in 2040 in all funding scenarios, investments to help encourage mode shift and better manage our roadways can help reduce the rate at which traffic congestion intensifies.

- **Model C - Funding Increase 20 %:** Funding increases to active transportation and roads would allow some additional projects to be built. Examples include new capital programs to fund roadway intersection capacity and safety improvements, additional projects in the Pedestrian and Bicycle Master Plan, investments in urban centre streetscaping in the Rutland, South Pandosy and Downtown urban centres, and the highest priority projects to be identified in the Okanagan Gateway Transportation Study. In 2040, service levels for active transportation would improve; for driving, service levels would improve in 2040 compared to the current funding program.

- **Model D - Accelerated:** This model supports additional active transportation and road projects. Some examples include the Sutherland Complete Street extension (Spall to Dilworth) as identified in Capri-Landmark Plan, a new ATC corridor and intersection improvements along Springfield Road, and more fully funding the suite of projects to be identified in the upcoming Okanagan Gateway Transportation Study. In 2040, service levels for active transportation would improve; for driving, service levels would improve in 2040 compared to both the Current and 20% Increase funding models. It is important to note that this funding model reflects current best estimates, but as option evaluation for the TMP is still underway, the estimate for fully funding Imagine Kelowna will likely be updated moving forward.

As mentioned, many transportation categories, including those needed to support the 2040 OCP Growth Scenario, are not DCC eligible, including transit service. Funding these categories will need to rely more on taxation and other funding sources. Since DCC-eligible transportation projects also include taxation support from the City, it will be important to look at funding both the DCC-eligible and non-eligible transportation categories comprehensively.

It should also be noted that the current funding model is largely based on existing plans. Part of developing the TMP will include identifying opportunities to reprioritize and increase efficiencies, which will enable staff to bring forward the most cost-effective suite of transportation projects needed to support the 2040 OCP Growth Scenario. Moving forward, staff will continue the TMP option evaluation, and will come back to Council in the coming weeks with a report that discusses transportation funding challenges and opportunities in more depth, followed by a transportation scenario workshop anticipated later this spring.

Parks: The previous 2040 OCP Park and Open Space report (March 9th, 2020), detailed the importance of parks in creating vibrant and livable cities and the key role they play in the supporting the visionary goals of Imagine Kelowna, the 2040 OCP's Growth Strategy, and the 2019-2022 Council Priorities. Acquiring parkland in pace with growth, especially for local (neighbourhood and community) parks, will ensure that Kelowna will continue to benefit from the social, environmental and economic opportunities they provide to residents both in the immediate vicinity and the overall community. However, the challenge, based on the endorsed 2040 Growth Scenario, is the shift in future park locations away from suburban sites to the more densely urbanized and constrained sites in the urban centres and the City core where land costs are much greater. Maintaining public access to the lake also remains a high priority but is a challenge due to the cost of lakefront property.

Parks			Current Program to 2040 Model A		Increase Funding 20% Model C		Accelerated Model D	
		Category	Funding Increase	Service Level	Funding Increase	Service Level	Funding Increase	Service Level
DCC Program		Neighbourhood Park (Ha)	BAU	↓	High	↓	High	↔
		Community Park (Ha)	BAU	↓	High	↓	High	↔
		City-wide Park (Ha)	BAU	↓	Moderate	↓	High	↔
		Recreational Park (Ha)	Low	↑	Low	↑	BAU	↔
		Linear Park (Km)	BAU	↔	BAU	↔	BAU	↔
		Cost	$427 million		$507 million		$744 Million	

Model D - Accelerated: Model D establishes a scenario in which the overall visionary goals are achieved by meeting the current City's parkland acquisition standards through the 20-Year Servicing Plan. Model D provides local parks within the City's core area and five urban centres in line with the projected growth. Model D also maintains a strong balance between lakefront and other city-wide parks and expands each of the existing recreational parks. Model D is the most costly, due to the higher land costs in these areas compared to other sectors. The high costs associated with acquisition and development are offset by the benefits of livability and walkability for the new growth, and active living options for a greater number of residents living in urban areas.

The other funding models **(Model A & Model C)** are based on more conservative funding levels than Model D. The level of service in response to growth is reduced significantly, with the greatest impact on the reduction of local neighborhood and community parks in the urban centres and Core Area. Local parkland acquisition ranges from 27% - 43% of the current neighbourhood and community park standards, depending on the funding model.

In order to maintain an overall parkland acquisition rate of 2.2 Ha / 1,000 population growth, any reduction of parkland in urban areas can be offset through acquisition of more sites for recreational, city-wide, or linear park use elsewhere in the City. However, the model also relies on alternate policies

and different park solutions outside the 20-Year Servicing Plan in order to achieve the vision of Imagine Kelowna and the 2040 OCP Big Moves.

Water: Water Infrastructure requires that supply and water quality are managed well in advance of immediate need. Knowing where growth is occurring are key to assuring that water treatment, transmission and supply programs meet future population need. Water utilities are governed by Provincial regulation, and so by definition, the Level of Service should not reduce.

Future development impacts to the Year 2040 require water utility improvements and capacity to the core areas downtown, south of Highway 97 and up into the Kettle Valley Area. The following DCC project targets were modelled to meet growth and level of service requirements as follows:

- **Model A - Current DCC Program to 2040:** This funding model assumes that mainlines, reservoir sizing and supply needs are met with DCC funding.
- **Model C - Funding Increase 20%:** This funding model provides for additional projects that enhance water supply and fire flow capacity to the City's North Industrial area (Jim Bailey) and treatment upgrades anticipated at Poplar Point.
- **Model D - Accelerated:** This funding model provides additional resiliency and addresses water quality differences in and around community. This model would include initiating the Kelowna Water Integration Program and address growth and water quality collaboratively with other purveyors. City projects include an intake extension at Cedar Creek, completing a pump station on KLO Road and purchasing land for a future water Filtration Plant near the downtown core.

Water, Wastewater & Stormwater			Current Program to 2040 Model A		Increase Funding by 20% Model C		Accelerated Model D	
		Category	Funding	Service Level	Funding Increase	Service Level	Funding Increase	Service Level
DCC Program		Pipes (Mains)	BAU	↔	Moderate	↑	High	↑
		Lift & Pump Stations	BAU	↔	Moderate	↑	High	↑
		Treatment Facilities	BAU	↔	Moderate	↑	High	↑
		Reservoir & Filling Stations	BAU	↔	High	↑	High	↑
		Flood Mitigation Projects	BAU	↓	Moderate	↔	High	↑
		Cost	$175 million		$268 million		$309 Million	

Wastewater: The Wastewater infrastructure includes future needs for collection, transmission, treatment and solids management. Similar to water, the wastewater utility is regulated by the Province, so any reduction in Level of Service is scrutinized heavily, and generally assumed not permitted. For example, reductions should only occur based on poor resiliency considerations, and whether major elements might fail without backup.

Development cost funding over the next 20-Years will focus on more on collection, transmission and higher capacity lift stations in growth area. New wastewater treatment plant components will be limited to biosolids management. The major issue in the next 20-Years will be the handling of biosolids; a product of our wastewater treatment processes on Raymer. The following DCC project targets were modelled to meet growth and level of service requirements as follows:

- **Model A - Current DCC Program to 2040:** This funding model includes the initiation of a digestion process to reduce solids and extend the life of the current process using the Regional Compost Facility. By adding a mesophilic digester, biosolid volumes are reduced by 45% to a Class B biosolid to be composted later. Staff is investigating this.
- **Model C - Funding Increase 20%:** This funding model assumes a more costly Thermophilic biosolids digestion and biogas generation facility be installed, thereby reducing solids, but producing Class A biosolids which can be composted as before or land applied if compost facility capacity is reached. The collection and transmission in the Sexsmith, North Industrial, Capri and downtown Tolko area would also be enhanced.
- **Model D - Accelerated:** This funding model would see the additional infrastructure investment with the expansion of the compost facility within a fully enclosed structure.

Stormwater: Stormwater or Drainage, is currently not a self-funded utility, nor are any elements funded through the DCC program. Historically, this sector involved funding projects in a reactionary manner; generally addressing creek outlet erosion, flood repairs and renewal upgrades to a small number of the City's many minor and major systems in place. The City is reviewing the feasibility of implementing a Stormwater DCC to address growth related drainage challenges.

From a development perspective, DCC's could be applied to address creek and stormwater quality due to higher water discharge and poor quality effluent that impact our creeks and lake as urbanization expands. Linking this work to flood mitigation and First Nations values is one strategy available to address riparian needs and limits. Growth in core areas will include flood prone areas where mitigation will be required.

- **Model A - Current DCC Program to 2040:** Growth areas are impacted by creek flooding. The base scenario funding (i.e. grants and taxation and not DCCs) would continue to see broad decreases in levels of service for its standard drainage needs but would see a definite improvement in flood management and future mitigation. Four Mill Creek flood mitigation strategies are in place to mitigate and adapt to anticipated flooding in the downtown core.
- **Model C - Funding Increase 20%:** This funding model would introduce a DCC which would address growth areas at risk, including the Sexsmith-Appaloosa growth area, where stormwater catchment, treatment and release to Mill Creek need to be addressed.
- **Model D - Accelerated:** A stormwater DCC would allow for stormwater quality improvements in major creeks, and additional storage and attenuation projects that slow down water and adapt processes to minimize impacts to natural assets from urbanized development. This includes upgrades to major storm systems which increase capacity on ditches, storm ponds, creek outlets and outfall structures.

Next Steps:
A series of topic-specific reports has been sequenced for Council's information and/or direction in order to build the roadmap forward for each service area. Of note, the Imagine Kelowna Vision serves as the framework for all servicing areas to take vision from and be rooted within. Putting Imagine Kelowna into action is an exercise of moving from a visionary concept into implementable actions and tactics. The 2040 OCP, TMP and 20-Year Servicing Plan are the first suite of planning updates to mobilize this vision into reality.

The next few months have a series of Council reports and workshops that will build on each other to paint a collective picture of the intricate relationships of decisions in land use, transportation, infrastructure, and parks planning and how this will translate into a comprehensive financial strategy for the City to implement out to 2040. The items will be sequenced as follows:

In summary, this framework has been laid out in this sequence to help inform upcoming decisions on the financing aspects of the 2040 OCP. The City strives to balance the need for maintaining our existing assets, while expanding our network of infrastructure and amenities to support new growth.

Identifying the financial capacity upfront ensures that City's infrastructure plans are developed in a financially prudent manner, which considers the City's long-term financial health and future impacts on our ratepayers.

Financial/Budgetary Considerations:
The DCC program has been updated several times over the last ten years to ensure infrastructure costs and required DCC revenue reflect current market conditions. As recently as February 10, 2020, Council endorsed a major update to include a Parks Improvement DCC that increased the overall DCC program by $113 million to $993 million.

The capacity to increase DCCs further in the near term is limited and there is a risk that further increases may put financial pressure on almost all forms of new development, making it difficult for developers to acquire or assemble property for redevelopment. This would in-turn affect housing supply and affordability.

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Parks & Buildings Planning Manager
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Utility Planning Manager

Considerations applicable to this report:
Legal/Statutory Authority:
Legal/Statutory Procedural Requirements:
Existing Policy:
External Agency/Public Comments:
Communications Comments:

Submitted by:

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Attachment 1 - 20-Year Servicing Plan Update Presentation

cc: Divisional Director, Corporate Strategic Services
Divisional Director, Financial Services
Divisional Director, Human Resources & Community Safety
Divisional Director, Infrastructure
Divisional Director, Partnership & Investments
Divisional Director, Planning & Development Services