| TO: | CHAIR AND MEMBERS STRATEGIC PRIORITIES & POLICY COMMITTEE JUNE 9, 2016 |
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| FROM: | MARTIN HAYWARD MANAGING DIRECTOR, CORPORATE SERVICES & CITY TREASURER, CHIEF FINANCIAL OFFICER |
| SUBJECT: | GROWTH MANAGEMENT IMPLEMENTATION STRATEGY (GMIS): 2017 ANNUAL REVIEW & UPDATE |

RECOMMENDATION

That on the recommendation of the Managing Director, Corporate Services and City Treasurer, Chief Financial Officer with regard to the implementation of the Official Plan growth management policies applicable to the financing of growth-related infrastructure works, the following actions be taken:

- a. the Growth Management Implementation Strategy Infrastructure Project Evaluation Framework outlined in Appendix 'A' **BE ENDORSED** to inform the timing of future growth infrastructure projects for the 2017 Growth Management Implementation Strategy Update and subsequent Updates, it being noted the Framework aims to provide a future 3 year supply of single family residential lots in each greenfield area of the city through investments in major infrastructure;
- b. the 2017 Growth Management Implementation Strategy Update **BE APPROVED** as attached in Appendix 'B', it being noted that:
 - i. trunk sanitary sewer SS15A Phase 2 will be rescheduled from 2016 to 2018;
 - ii. Parker SWM will be rescheduled from 2017 to 2018;
 - iii. Sunningdale SWM E1 will be rescheduled from 2018 to 2020;
 - iv. Stoney Creek SWM 10 will be rescheduled from 2018 to 2022;
 - v. Fox Hollow SWM 1 Phase 2 will be rescheduled from 2019 to 2022;
 - vi. Hyde Park SWM 6 will be scheduled in the GMIS for 2022;
 - vii. Stoney Creek SWM 7.1 will be rescheduled from 2018 to 2023;
 - viii. White Oaks SWM 3 will be rescheduled from 2017 to 2023:
 - ix. Pincombe Drain SWM 4 will be rescheduled from 2018 to 2020;
 - x. North Lambeth P6 will be rescheduled from 2020 to 2026:
 - xi. Old Oak SWM 1 (formerly Contingency Facility A) will be scheduled in the GMIS for 2027;
 - xii. White Oaks SWM 4 will be rescheduled from 2017 to 2027;
 - xiii. Stoney Creek SWM 8 will be rescheduled from 2024 to 2027;
 - xiv. Pincombe Drain SWM 5 will be rescheduled from 2022 to 2028; and,
 - xv. an Environmental Assessment for Southdale Road West (Farnham to Pine Valley) will be commenced in 2017.
- c. the 2017 Growth Management Implementation Strategy will be used to adjust the 10 year capital program for growth infrastructure, to be reflected in the 2017 Multi-year Capital Budget Update.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

| November 9, 2015 | Report to Strategic Priorities and Policy Committee – Development Charges Rate Monitoring – 2015 Review |
|-------------------|---|
| May 11, 2015 | Report to Strategic Priorities and Policy Committee – Growth Management Implementation Strategy (GMIS): 2016 Annual Review & Update |
| April 13, 2015 | Presentation to Strategic Priorities and Policy Committee – "Introduction to Development Charges (DCs)" |
| June 23, 2014 | Report to Strategic Priorities and Policy Committee – "Approval of 2014 Development Charges By-law and DC Background Study" |
| June 23, 2014 | Report to Strategic Priorities and Policy Committee – "Growth Management Implementation Strategy (GMIS): 2015 Annual Review & Update" |
| February 20, 2014 | Report to Strategic Priorities and Policy Committee – "Growth Management Implementation Strategy (GMIS): 2014 Annual Review & Update" |
| July 29, 2013 | Report to Strategic Priorities and Policy Committee – "Development Charges Policy Review: Major Policies Covering Report" |
| December 4, 2012 | Report to Strategic Priorities and Policy Committee – "Growth Management Implementation Strategy (GMIS): 2013 Annual Review & Update |
| October 17, 2011 | Report to Built and Natural Environment Committee – "Growth Management Implementation Strategy (GMIS): 2012 Annual Review & Update" |
| June 21, 2010 | Report to Planning Committee – "Growth Management Implementation Strategy (GMIS): 2011 Annual Review |
| November 16, 2009 | Report to Planning Committee – "Growth Management Implementation Strategy (GMIS): 2010 Annual Review |
| June 16, 2008 | Report to Planning Committee – "Growth Management Implementation Strategy" |
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EXECUTIVE SUMMARY

The Growth Management Implementation Strategy (GMIS) is an important tool for Council to coordinate growth infrastructure with development approvals and guide the pace of growth across the city, while maintaining an acceptable financial position. This GMIS report builds upon the financial analysis provided in the previous GMIS reports and seeks to ensure the affordability of growth servicing in the City of London. The scope of the 2017 GMIS's analysis focuses on all projects that will directly impact specific subdivision or site plan applications (i.e., projects that would be ultimately included in Draft Plan conditions). The attached tables and figures outline the timing of key growth related infrastructure projects required to facilitate development throughout the city.

Although there have been recent indications that London's economy is improving, single family residential construction has been consistently below the City's adopted growth projections for several years. Given that single family unit construction accounts for almost 50% of DC revenues, Staff is of the opinion that unmet revenue projections result in an inability of the City to maintain its present plan for investment in growth infrastructure projects.

This report discusses some of the financial considerations (DC reserve fund and debt) which arise from lower than anticipated DC revenues. Following from these observations, several project deferrals are being recommended by staff. These deferrals provide the necessary relief for DC reserve funds to respond to a scenario of less than anticipated DC revenues. A Project Evaluation Framework has been developed to inform the timing of future infrastructure projects with the aim of providing a future 3 year supply of single family residential lots in each greenfield area of the city through investments in major infrastructure. Extensive developer and community stakeholder consultation is a vital part of the annual GMIS process.

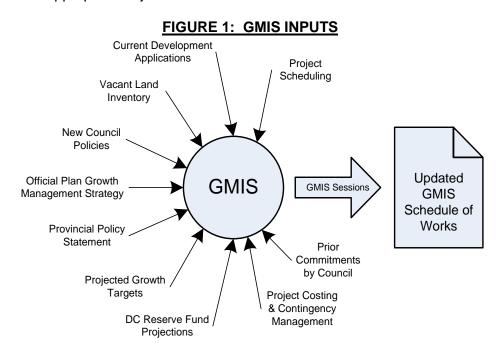
BACKGROUND

The initial Growth Management Implementation Strategy (GMIS) document, dated June 4, 2008, provided a schedule for growth infrastructure with estimated costs over the 20-year growth period. This schedule was incorporated into the finalized Development Charges (DC) Background Study which came into effect with the passing of the DC By-law in August, 2009. Since then, the GMIS has been updated annually, reflecting adjustments to timing for DC-funded projects.

The purpose of the GMIS is to provide Council with a tool to coordinate growth infrastructure with development approvals and to guide the pace of growth across the city in a financially practical manner. The GMIS is reviewed and updated annually to allow for adjustment of the schedule of works between DC background studies so that it continues to align with growth needs and DC revenues. The GMIS considers the pace of development, the status of DC reserve funds, the Provincial Policy Statement housing supply requirements, and the desires of developers to progress development applications in areas approved for growth. It provides flexibility to respond to changes in market conditions or to make adjustments that reflect the financial status of the DC reserve funds.

GMIS Inputs and Principles

The GMIS update involves the integration and assessment of multiple inputs (Figure 1). Typically, each GMIS update assesses the collected information against the eight Council approved principles of GMIS to make appropriate adjustments to the schedule of works.



As part of drafting the first GMIS in 2008, staff and development industry representatives participating in the DC Implementation Team helped develop core principles for the implementation of the City's growth management policies. These core principles guided the considerations and analysis for the original GMIS as well as future annual updates. The eight core principles set out by Council in 2008 include:

- 1. Provide direction for timely and cost efficient extension of municipal services both from an efficiency and municipal affordability perspective.
- 2. Support growth costs that are affordable within our financial capacity, having regard for both the capital and operating costs of services to support growth.
- 3. Allocate growth in a manner that optimizes the utilization of existing services and facilities.
- 4. Support the development of sufficient land to meet the City's growth needs and economic development objectives.
- 5. Support the implementation of Official Plan growth management policies.
- 6. Support the completion of existing development approvals.
- 7. Maintain lot and land supply that is consistent with provincial policies and conducive to a healthy housing market.
- 8. Co-ordinate the phasing of development approvals and the scheduling/funding of works through the capital budget.

DISCUSSION

2017 GMIS Update - Introduction

The 2017 GMIS report builds upon information provided in the previous GMIS reports and seeks to sustain the affordability and adequate servicing of growth in the City of London. The scope of the 2017 GMIS analysis includes all projects that directly impact specific subdivision or site plan applications (i.e. projects that would be ultimately included in Draft Plan conditions or development agreements) with the goal of creating the most efficient process possible.

The 2014 Development Charges Background Study contained a large number of stormwater and sanitary growth projects in the first five years of the recovery period. Given the largely "front-loaded" capital program for these service areas, it is important for the City to monitor the DC reserve funds and manage the timing of investments in relation to the pace of growth.

2017 GMIS Context – Growth and Development Observations and Trends

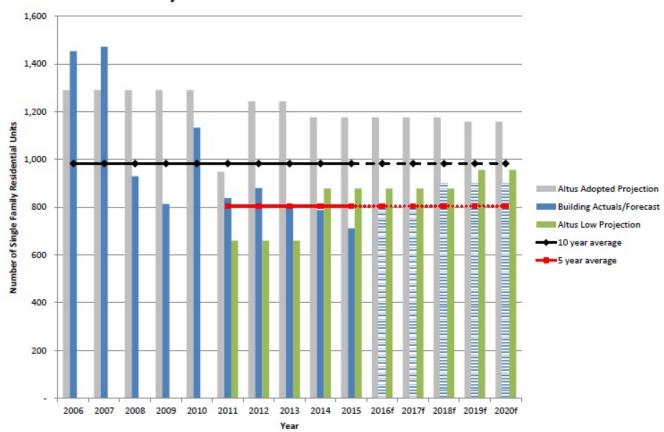
An important relationship exists between the projected amount of residential and non-residential growth and the City's future investments in infrastructure projects. Development Charges rate calculations are based on growth projections that determine servicing needs, which in turn establish DC rates. If actual growth in the form of development and building construction does not consistently meet the growth projections contained in the DC Background Study, then sufficient revenues are not being generated to maintain the original schedule of investments in infrastructure. The two key elements – growth activity and investment in infrastructure – should move in tandem.

For the 2017 GMIS Update, staff reviewed historic growth levels for all forms of residential and non-residential development. Figure 2 provides a graph of historic and forecasted growth for low density residential development, which is particularly important for DC purposes since single family homes represent almost 50% of calculated DC revenues and are the primary driver for the construction of new infrastructure to support greenfield subdivisions. It should be noted, however, that the growth forecasts for all forms of residential and non-residential development are used for determining future DC revenues and for assessing the health of the DC reserve funds.

FIGURE 2: LOW DENSITY RESIDENTIAL GROWTH: 2006-2020

Comparison of Low Density Residential

Projected Growth and Actual Growth: 2006 - 2020



Staff notes the following growth observations and trends that impact DC revenues and the 2017 GMIS recommendations:

- Although the 5 year (2011-2015) average for single family homes city-wide is approximately 880 units per year (well below the 1100+ units per year projected in the 2014 DC study), Staff is anticipating a recovery of the market for this form of housing in the coming years. The City's forecast has been revised to reflect this change, with 800 single family units anticipated for 2016 and 2017 and 900 units for 2018 and beyond. This forecast was discussed with Canada Mortgage and Housing Corporation and is consistent with their nearterm forecast for London.
- Medium density residential growth has been below projections for several years. However, it is anticipated that rowhousing construction will be at or slightly above growth projections for the coming years due to increasing demand for this housing form from young adults and retirees. Several GMIS stakeholders have indicated that they are experiencing strong demand for townhouses and believe that the market will sustain higher levels of demand in the future. The City's forecast for townhouses for 2016 and beyond is consistent with the Altus projection and higher than the growth experienced for the 2011-2015 period.
- Apartment construction continues to be strong in London, but has a "peaks and troughs" building cycle. There is strong development interest at present for new apartment buildings due to low vacancy rates; however, construction levels are likely to be at or below the growth projection by the end of the decade.
- Several large commercial developments are anticipated to be built in the coming years at a
 number of locations city-wide. Additionally, the Altus projection of commercial space has
 been exceeded for the past five years. These factors have prompted adjustments to the
 City's forecast of commercial space to assume a higher amount of DC revenues from
 commercial buildings than originally anticipated.
- A large amount of institutional space was constructed between 2009 and 2011, exceeding the institutional growth projection. Future institutional construction is difficult to predict in light of spending restraints by upper levels of government. As a result, future institutional growth is anticipated to be at, or slightly below, projected levels beyond 2016.
- The industrial sector in the London area has been challenged with the impact of the 2008 recession and the continued restructuring of manufacturing globally. The City is attracting new businesses to London, however, we have been achieving less than half of our projected amount of new industrial floor space for the last three years. Future industrial construction is likely to be challenged by a reduced amount of industrial construction province-wide. Longer-term external forecasts for the industrial sector anticipated continued recovery, which will coincide with the City's development of new industrial lands attractive to larger industrial users. By the end of the decade, London's industrial growth is forecasted to be at the Altus projection.

In recent months, several publications by Statistics Canada, the Conference Board of Canada and the Canada Mortgage and Housing Corporation have indicated that London's economy is recovering. Staff is cautiously optimistic of increased employment opportunities, stronger population growth and corresponding market demand for higher levels of construction of residential units and non-residential floor space. This scenario should improve DC revenues in comparison the performance of the last two years. However, this revenue projection poses some risk in the event that the informed optimistic forecast does not materialize.

<u>2017 GMIS Context – Development Charges Reserve Fund Analysis</u>

As part of the 2014 Development Charges Background Study, Staff reviewed the cash flow projections for each service component funded by DCs. This analysis revealed a need to closely monitor reserve fund revenues and drawdown activity, especially for the following high cost service components:

- Stormwater Management Facilities (SWMFs);
- Sanitary Sewerage;
- · Roads Services; and
- Water Distribution.

These services rely heavily on debt to facilitate the timing of infrastructure construction, given that:

- major expenditures (especially sanitary sewers and stormwater management) precede and facilitate growth in that new investments are required prior to development being possible in a new area; and,
- significant amounts of project costs have been identified for future recovery (i.e. post period benefits) in the 2014 DC rate calculations. Therefore, the DC reserve funds that finance these services rely on debt to finance the portion of the project costs identified for recovery beyond the 20 year time horizon of the DC study.

As noted in the growth information discussed above, levels of single family residential construction and industrial building construction have been well below amounts indicated in the DC Study growth projections. It appears unlikely that these trends will sharply reverse in the coming years, producing continued construction "actuals" that are below projected levels. This situation continues to challenge DC funding for new infrastructure.

Staff has conducted a detailed cash flow analysis of all DC reserve funds to assess the financial risks and overall affordability of the present GMIS. Additionally, Environmental and Engineering Services division managers were interviewed to determine emergent changes to project cost estimates. Two reserve funds were flagged as experiencing an inability to fund the current DC capital program in the future: the Stormwater DC Reserve Fund and the Sanitary DC Reserve Fund.

Figures 3 and 4 provide a graphical representation of the reserve fund analysis undertaken by Development Finance staff:

- Debt payments (bars): For each year, the bars reflect annual debt payments required by the reserve fund to pay for infrastructure investments. Viewing the graph from left to right, the first bar reflects debt payments based on approved capital budgets and forecasts. The second bar represents adjustments made due to revised project cost estimates provided by Environmental and Engineering Services project managers. Finally, the third bar reflects debt payment changes arising from the recommended project timing adjustments discussed below and, for Figure 4, additional information received regarding increased project cost estimates.
- Revenues to debt payment ratio (lines): To provide context for the debt obligations of the Stormwater and Sanitary Reserve Funds, a line depicting a revenues to debt ratio is provided. As the line declines, a greater share of DC revenues is being used to pay down debt, limiting the amount of cash draws available to fund projects. In Figure 3, the ratio dips below 1:1 pre-2017 GMIS infrastructure project adjustments, meaning that annual debt payments are exceeding forecasted annual revenues.

FIGURE 3: STORMWATER DC RESERVE FUND ANALYSIS

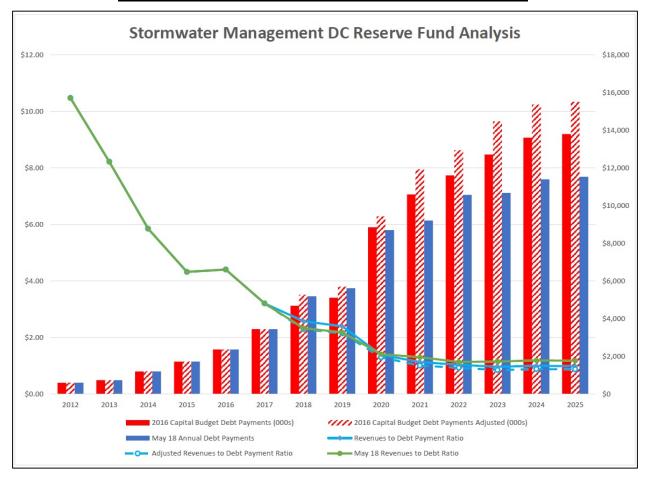
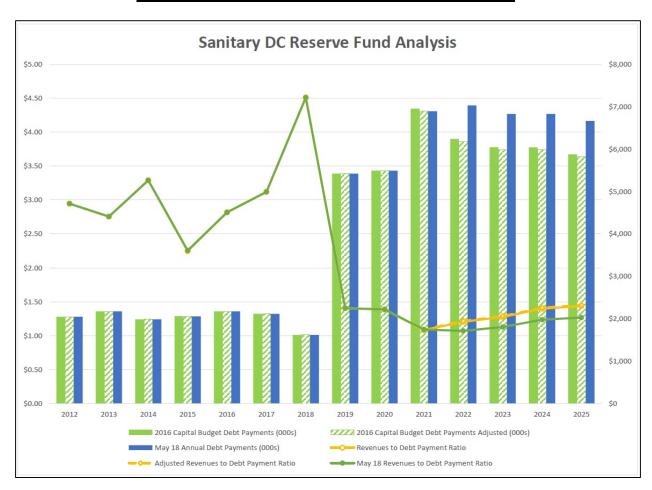


FIGURE 4: SANITARY DC RESERVE FUND ANALYSIS



The following provides a summary of the DC reserve fund analysis, however, a more complete discussion of the financial observations and projections can be found in Appendix 'C':

• DC Revenues:

- A "soft market" for single family houses as well as institutional and industrial development has existed for the past five years. As a result, DC revenues have not met expected levels. Projected revenues are necessary to maintain timing of projected investments (expenditures) in new infrastructure.
- Despite recent activity, DC revenues for the next few years are expected to improve.

DC Expenditures:

 Several project cost estimates are now expected to significantly exceed the estimates upon which DC rates were set. In the absence of sufficient cost estimates for DC rate setting, adverse variances further challenge the City's ability to maintain project schedules.

• DC Reserve Funds:

- The combination of adverse variances in DC revenues combined with adverse project cost variances makes it impossible to maintain project timing as originally set out in the 2014 DC Study.
- Adjustments to project schedules are an inescapable result of the observations above.

The recommended project schedule discussed below is the best compromise between the fiscal reality and the desire of most developers to advance timing on projects that will accelerate development of their land holdings.

2017 GMIS Goal and Objectives

Based on the above context for the 2017 GMIS, Staff has recognized the need for significant changes to this GMIS update, relative to previous years. Rather than making 1 or 2 year project deferrals, the 2017 GMIS seeks to make adjustments that will provide the following benefits:

- Sustainable debt: Although debt is an acceptable financing tool for providing infrastructure in advance of DC revenues being received for a benefitting area, the City is mindful that debt obligations can constrain future investments in infrastructure and impact future DC rates. Rescheduling projects to later dates will reduce the amount of debt being incurred to install growth infrastructure. Although some debt will be required to service new growth areas, the City is facing mounting debt loads for its sanitary and stormwater DC reserve funds that must be addressed. Timing changes are required in an effort to address increasing debt levels, while providing sufficient land to service growth needs.
- Completion of existing communities: It is important that the city fosters growth that builds out existing communities. Major investments have been made with past DC funding that provide opportunities to finalize the development of the City's area plans. Many of London's communities require a "critical mass" of population for services such as parkland development and transit, and some need subdivisions to proceed to construct vital collector roads. A balance is needed between opening up new locations for development with ensuring that build-out timelines for existing communities are not challenged.
- Greater certainty for project timing: Although GMIS deferrals have historically assisted with addressing cash flow and debt concerns with the City's DC reserve funds, concerns have been expressed by the development community that the uncertainty of GMIS project timing from year-to-year is presenting significant challenges for business planning. By making more substantial changes to project timing -- essentially, "rephasing" the development timelines of growth areas the City will be in a better financial position to maintain projected infrastructure construction dates on a year-over-year basis.
- Maximize development associated with infrastructure: Development Charges exist
 to recover costs for infrastructure investments. Although the City uses an "average
 approach" to DC recovery (whereby DCs paid city-wide contribute to infrastructure costs
 for all areas of the city), it is important to encourage development within the benefitting
 area of the infrastructure to link investments with the receipt of revenues.

- **Provide substantial market choice and competition:** One of the main goals of the GMIS is to provide the major servicing needed to enable the development of new communities. It is important that the GMIS provides opportunity for land development to support the Official Plan growth policies, as well as to foster the collection of DC revenues.
- Avoid premature/underutilized investments: GMIS investments need to match with the timing of development. Once funding is committed for a project, it is important that subdivisions proceed to registration and that major infrastructure is constructed. Frank and open dialogue between stakeholders and City staff is vital to ensuring that servicing and development timelines are aligned.
- Stability of DC rates: Concerns are frequently raised by stakeholders that DC rates are
 too high and impact home affordability. Mindful of this concern, efforts to reduce future debt
 obligations can help stabilize DC rates. Additionally, adjustments to GMIS project timing
 can improve cash flows and provide opportunities to recover DC contributions over a longer
 period.

Most importantly, it is the opinion of Staff that the changes made with the 2017 GMIS should aim to clarify expectations for the timing of development progression and to better position the DC reserve funds to afford the future growth infrastructure plan. <u>Barring major irregularities (e.g., changes to DC revenue levels or project cost estimates)</u>, it is anticipated that the subsequent 2018 GMIS <u>Update will be able to avoid shifts in infrastructure timing.</u>

2017 GMIS Framework and Growth Modelling

Last year's GMIS Update report identified the need for a conversation amongst GMIS stakeholders and Staff regarding infrastructure planning and the future build-out of the city. Although the project deferral criteria introduced last year made some minor adjustments to GMIS project timing, it did not comprehensively review whether there was a demonstrated need for the infrastructure for the given timing, nor did it provide sufficient stability to the City's capital growth program.

For the 2017 GMIS, Staff has used a series of questions to help inform GMIS project timing. Each serves as a "lens" for evaluating whether changes are merited to the timing of infrastructure projects and are applied equally to all projects. Referred to as the GMIS "tests," the questions are as follows:

- Is the project needed to provide additional buildable lots to meet demand in the growth area?
- Has a developer sufficiently progressed a development proposal to warrant the construction project next year or the following year?
- Can we afford the project?

The first question speaks to the need for infrastructure, in relation to market demand and supply of lots in a geographic area. This criterion is new for the 2017 GMIS in an attempt to match the pace of infrastructure construction with the pace of growth.

Appendix 'A' provides a summary of the GMIS growth framework and the results of the analysis conducted by Staff, based on feedback received from stakeholder interviews.

2017 GMIS Stakeholder Consultation

Stakeholder engagement is a vital component of the annual GMIS update. Normally, two general stakeholder meetings are held to provide an overview of growth information and reserve fund health, to discuss GMIS timing considerations and to outline draft project changes. For the 2017 GMIS, an additional general stakeholder session was introduced to encourage more dialogue on the draft GMIS before its presentation to the Strategic Priorities and Policy Committee. Staff felt this feedback opportunity was especially important for the 2017 GMIS, given the substantial timing changes recommended for some projects.

In addition to the general stakeholder meetings, individual one-on-one interviews were held with developers, builders and other community stakeholders that requested an opportunity to discuss development plans or issues with Staff related to GMIS projects. The 2017 GMIS Update also provided two rounds of stakeholder interviews, representing an enhanced degree of stakeholder consultation from previous GMIS Updates.

The 2017 GMIS process experienced record stakeholder involvement. A total of 26 meetings (13 initial and 13 follow-up) were held with stakeholders, resulting in a wide array of perspectives and infrastructure needs for consideration with the GMIS. The interviews provided important information regarding the GMIS Infrastructure Project Evaluation Framework, growth modelling assumptions, development timelines, community benefits, and suggestions for process improvements. The collective knowledge of the stakeholders was vital to producing the recommended 2017 GMIS Update.

On April 7th, the draft GMIS was presented to the stakeholders based on feedback received from the first round of interviews, growth and reserve fund analysis and internal constructability discussions with City project managers. As noted below, additional conversations with stakeholders produced revised recommended timing for two stormwater management facilities and a trunk sanitary sewer. Although Staff have not been able to accommodate all stakeholder requests, the continued dialogue through the GMIS process has produced an infrastructure strategy that maximizes development opportunities while addressing concerns about the financial sustainability of the DC reserve funds.

A list of GMIS stakeholders is provided in Appendix 'D'.

2017 GMIS - Additional Development Opportunities for 2017 and 2018

A large portion of GMIS projects originally intended for construction in 2017 and 2018 will be proceeding as planned. The following subdivisions will be advancing to provide new opportunities for residential and non-residential development, in addition to subdivisions that are proceeding to registration with the construction of major infrastructure that has previously been funded:

- 800 Sunningdale Rd. W.: The Sunningdale Golf and Country Club is presently undertaking the relocation of golf holes from the south to the north of Sunningdale Rd. W. Approximately 120 single family lots will be developed in the North by Corlon Properties. These lands will be serviced by the Sunningdale SWM 6A stormwater management facility.
- **39T-06407 (Parker Jackson):** Although the timing of the Parker SWM facility is being deferred (discussed below), the owners of the Parker Jackson lands in the Southeast are proceeding towards a 2018 subdivision registration. The first phase is anticipated to consist of 150 single family lots.
- 39T-14506 (Talbot Village): Southside Construction is finalizing approvals for an extension of Talbot Village in the Southwest. With the construction of the Colonel Talbot Pumping Station, forcemain and trunk sanitary sewer SS15C in 2017, these lands will be available for building construction. Although phasing of the subdivision is still being finalized, a total of 244 single family lots have been proposed.
- 39T-15501 (Richardson): When the draft GMIS was presented to the stakeholders in early April, stormwater and sanitary infrastructure servicing the Richardson lands was proposed for a one year deferral due to Staff concerns regarding the financial health of the Stormwater and Sanitary DC Reserve Funds. After extensive discussions with the owners of the Richardson lands, and growth and reserve fund analysis, Staff has finalized a recommended timing of 2017 for trunk sewer SS12B and the Pincombe SWM 3 facility. This timing was also informed by concerns raised by the London Home Builders' Association about the need to advance additional lots in the near-term to satisfy market demand. Although maintaining the timing of the stormwater and sanitary project places strain on the DC reserve funds, Staff are of the opinion that the approximately 150 single family lots that are proceeding towards registration merits maintaining the current timing.
- **3700 Colonel Talbot Rd:** York Developments has proposed a large subdivision located in the Southwest area of the City. With the construction of the Colonel Talbot Pumping Station, forcemain and trunk sewer SS15C in 2017, the first phase of the subdivision will be able to be developed.
- 3614 Colonel Talbot Rd: Sifton Properties has proposed developing approximately 150 single family lots on lands serviced by the Colonel Talbot Pumping Station, forcemain and trunk sewer SS15C, along with the North Lambeth SWM P7 facility. The construction of these projects in 2017 and 2018 will provide additional near-term residential opportunities in the Southwest.

<u>2017 GMIS – Recommended Project Timing Adjustments</u>

In general, the timing for the proposed projects aligns with the needs of the development community stakeholders and will provide significant new growth opportunities throughout all areas of the City.

Table 1 below identifies various projects timing adjustments resulting from an analysis of low density residential unit demand and supply, project "test" questions and DC reserve fund analysis. It should be noted that no changes are being recommended to the existing timing for Roads and Water GMIS projects. Additionally, no project adjustments for any service areas are recommended for the following areas of the City: Northeast, West and Built Area.

The attached tables and figures (Appendix 'B': 2017 GMIS Project Tables and Figures) outline the timing of key growth related infrastructure projects required to facilitate development throughout the City.

The final project timing outlined for the 2017 GMIS is subject to the approval of the 2017 Capital Budget Update.

TABLE 1: 2017 GMIS PROJECT TIMING ADJUSTMENTS

| Service | Project Description | 2016 GMIS Year | Rationale for Timing Change | 2017 GMIS Year | Total Gross Cost |
|------------|---|----------------------|--|----------------------|------------------------|
| Stormwater | Hyde Park SWM 6 (Northwest) | N/A | Re-assessment of need for infrastructure | 2022 | \$1.9M |
| Stormwater | Old Oak SWM 1 (Former Contingency Facility A) (Southwest) | 2014- 2019 | Concerns re: reserve fund health | 2027 | \$2.5M |
| Sanitary | Sanitary Sewer SS15A – Phase 2 (Southwest) | 2016 | Concerns re: reserve fund health | 2018 | \$1.6M |
| Stormwater | Parker SWM (Southeast) | 2017 | Concerns re: reserve fund health | 2018 | \$4.4M |
| Stormwater | White Oaks SWM 3 (Southwest) | 2017 | Concerns re: reserve fund health | 2023 | \$2.8M |
| Stormwater | White Oaks SWM 4 (Southwest) | 2017 | Concerns re: reserve fund health | 2027 | \$4.7M |
| Stormwater | Sunningdale SWM E1 (North) | 2018 | Deferral criteria | 2020 | \$2.0M |
| Stormwater | Stoney Creek SWM 10 (North) | 2018 | Developer intentions | 2022 | \$2.0M |
| Stormwater | Stoney Creek SWM 7.1 (North) | 2018 | Phasing of lands | 2023 | \$1.7M |
| Stormwater | Pincombe Drain SWM 4 (Southwest) | 2018 | Concerns re: reserve fund health | 2020 | \$5.1M |
| Stormwater | Fox Hollow SWM 1 Ph 2 (Northwest) | 2019 | Concerns re: reserve fund health | 2022 | \$3.0M |
| Stormwater | North Lambeth SWM P6 (Southwest) | 2020 | Concerns re: reserve fund health | 2026 | \$2.8M |
| Stormwater | Pincombe Drain SWM 5 (Southwest) | 2022 | Concerns re: reserve fund health | 2028 | \$1.7M |
| Stormwater | Stoney Creek SWM 8 (North) | 2024 | Phasing of lands | 2027 | \$1.1M |
| | 1 | otal | | | \$37.3M |

A more complete discussion of the projects being recommended for deferral in Table 1 is provided in Appendix 'E'.

2017 GMIS - Developer Requests Not Recommended

Through the GMIS stakeholder interviews, Staff received proposals for project accelerations from existing GMIS timing. The requests made by GMIS stakeholders are outlined in Table 2.

TABLE 2: PROJECT TIMING REQUESTS NOT RECOMMENDED BY STAFF

| Service | Project Description | Stakeholder Request | 2016 GMIS Year | Requested 2017 GMIS Timing | Total Cost |
|------------|---|----------------------------------|----------------------|----------------------------------|------------|
| Roads | Oxford St. W. Road Widening (Commissioners to Westdel Bourne) | Sifton | 2032 | < 2025 | \$4.7M |
| Stormwater | Kilally SWM S/E Basin | Sifton, Auburn, Everton Homes | 2024 | 2019/2020/ 2021 | \$3.7M |
| Stormwater | North Lambeth SWM P7 | Sifton | 2018 | 2017 | \$3.6M |
| Stormwater | Pincombe Drain SWM 4 | Sifton | 2018 | 2017 | \$5.1M |
| Stormwater | North Lambeth SWM P6 | Sifton | 2020 | 2018 | \$2.8M |
| Water | Wonderland Rd. S. Watermain (Lambeth A21 Growth Area) | Sifton | 2024 | 2018 | \$1.7M |
| Roads | Southdale Rd. W. Road Widening (Farnham to Pine Valley) | York | N/A* | 2020/2021 | \$3.2M |
| Sanitary | Sanitary Sewer SS14B | York | 2030 | 2025 | \$12.9M |
| Sanitary | Sanitary Sewer SS15A Phase 2 | York | 2016 | 2017 | \$1.6M |
| Roads | Sunningdale Rd. E. Road Widening (Adelaide to Bluebell) | Sergautis | 2025 | <2025 | \$11.0M |
| | Tota | al | | | \$50.3M |

^{*} Southdale Rd. W. Road Widening is a DC-funded roadwork, but it is not a GMIS project as it represents a network need improvement. Although Staff is not recommending the acceleration of the road widening, the Environmental Assessment will commence in 2017.

In general, Staff are not recommending the above infrastructure timing requests due to technical concerns and/or affordability constraints. A more complete discussion of the requests and Staff rationale is provided in Appendix 'F'.

"GMIS Booklet" Enhancements

Each year, Development Finance produces the "GMIS Booklet" – a comprehensive reference document that contains mapping for new development areas, Vacant Land Inventory information (i.e., residential construction opportunities), infrastructure servicing areas, and up-to-date GMIS project timing. Additionally, the digital version of the GMIS Booklet provides interactive capabilities to turn on and off various layers, making it customizable for the needs of the user. This resource has proven to be a positive "value add" to GMIS stakeholders and City staff.

For the 2017 GMIS Update, Staff have added an additional layer to the area mapping to visually communicate the current timing that external services will be constructed (per the timing identified in the associated GMIS tables), reflecting the earliest opportunity that the subject lands could be developed. The new layer provides a helpful visual reference for the progression of development for the City's greenfield lands, based on a snapshot in time. It is anticipated that this will be a beneficial information source for GMIS stakeholders and City staff.

A draft version of the 2017 GMIS Booklet has been prepared to reflect the recommendations contained in this report and hard copies will be provided to the Committee at the June 9th meeting. Subject to Council adoption of the GMIS (with revisions where applicable), a final version of the 2017 GMIS Booklet will be prepared. The document will be broadly circulated to GMIS stakeholders and City staff as well as being made available on the City's website.

Looking Ahead: 2018 GMIS Update

In the coming months, Staff will begin preparations for the 2018 GMIS Update. As a result of the recommendations contained this report, it is anticipated that next year's GMIS will not involve substantial changes to the City's growth infrastructure plan. The changes proposed with the 2017 GMIS Update will significantly improve the financial health of the DC reserve funds, barring a continued decline in DC revenues or major adverse changes to project cost estimates. Staff will continue to review these factors and will provide additional analysis and commentary in the DC Rate Monitoring report this fall.

The preliminary schedule for the 2018 GMIS Update is attached as Appendix 'G'.

Next Steps

Following the adoption of the 2017 Growth Management Implementation Strategy, Staff will reflect the GMIS changes in the Multi-year Capital Budget Update this fall and collectively work towards addressing any implementation challenges so that infrastructure projects are delivered in a timely manner, consistent with the completion of subdivision approvals.

CONCLUSION

The GMIS is an important tool for Council to coordinate growth infrastructure with development approvals and manage the financial resources available. As the GMIS process strives for continuous improvement, the 2017 GMIS provides changes to the timing outlined in last year's GMIS update.

With adverse variations in DC revenues and increased costs that have occurred, the heavy concentration of growth related investment in sanitary and storm water that was slated to occur in the first 5 years of the capital program (as reflected in the 2014 DC study) must be managed prudently. As a result, Staff are recommending a number of changes to infrastructure construction timing with the intent of providing greater sustainability for the Sanitary and Stormwater DC Reserve Funds and sufficient servicing to meet growth expectations. Barring major irregularities (e.g., changes to DC revenue levels or project cost estimates), it is anticipated that the subsequent 2018 GMIS Update will be able to avoid shifts in infrastructure timing.

The recommended GMIS has been developed with record stakeholder involvement and Staff would like to express their gratitude for the frank and productive dialogue that has produced a workable 2017 GMIS Update.

Staff will continue to work with and consult with development and community stakeholders over the coming year to ensure efficient and timely servicing that will provide for a logical and sustainable progression of growth well into the future.

Acknowledgements

Administration wishes to extend appreciation to the London Home Builders' Association, the Urban League of London and the London Development Institute for their contributions to this year's GMIS process. The insights and feedback regarding the growth modelling in particular significantly improved Staff's understanding of present housing market conditions.

The annual GMIS Update is a major corporation-wide activity that involves numerous staff from the following service areas: Environmental and Engineering Services, Development and Compliance Services, Planning Services and Finance and Corporate Services. In particular, the author would like to acknowledge and thank the core GMIS team of Jennie Ramsay, Matt Feldberg and Adam Langmuir. The participation of these staff members is greatly appreciated and their input was essential to the recommendations contained in this report.

| PREPARED BY: | REVIEWED AND SUBMITTED BY: |
|--|---|
| | |
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May 27, 2016

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Doug MacRae, Division Manager, Transportation Planning and Design
Alan Dunbar, Manager Financial Planning and Policy Matt Feldberg, Manager, Development Finance Gregg Barrett, Manager, Long Range Policy and Research

Appendix 'A': GMIS Infrastructure Project Evaluation Framework Appendix 'B': 2017 GMIS Project Tables and Figures:

- Table A1 GMIS Annual Update 2017: Detailed List of Works and Costs by Service 5 Year **Projects**
- Figure A1 GMIS Annual Update 2017: Works 0-5 Years (2017 2021) Year of Construction
- Table A2 GMIS Annual Update 2017: Detailed List of Works and Costs by Service 5+ Year Projects
- Figure A2 GMIS Annual Update 2017: Works 5+ Years (2022 2033) Year of Construction

Appendix 'C': Detailed Commentary Regarding DC Reserve Fund Analysis

Appendix 'D': List of GMIS Stakeholders

Appendix 'E': Rationale for 2016 GMIS Project Timing Adjustments
Appendix 'F': Detailed Commentary Regarding Developer Infrastructure Requests

Appendix 'G': Preliminary 2018 GMIS Schedule

APPENDIX 'A' GMIS Infrastructure Project Evaluation Framework

Appendix 'A': GMIS Infrastructure Project Evaluation Framework

GMIS "Tests"

The following questions are applied to each project listed in the GMIS in relation to the development contained within the benefitting area. The three questions serve as separate, but related lenses for considering infrastructure timing and all three tests must be met in order to maintain existing project timing.

- a) Is the project needed to provide additional buildable lots to meet demand in the growth area? (If no, reschedule project).
- b) Has a developer sufficiently progressed a development proposal to warrant the construction project next year or the following year? (If no, defer project).
- c) Can we afford the project? (If no, other projects must be deferred to accommodate the selected project).

GMIS Targets/Growth Modelling

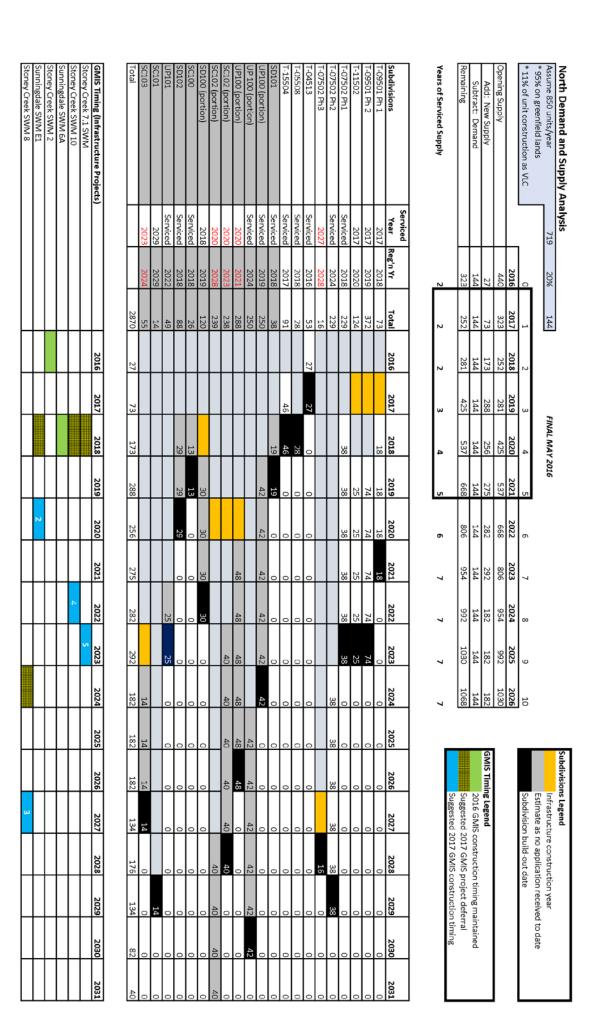
In order to address GMIS Test a) outlined above, growth modelling is required to examine demand for and supply of single family residential lots for each of the City's greenfield growth areas (North, Northwest, Northeast, Southwest, West). The model is informed by the following targets and assumptions:

- Provide three (3) years of permit ready supply of single family lots in each greenfield area (where possible);
- Using a straight-line demand forecast of 850 single family units per year, deduct 5% to account for construction within the Built Area and a further 11% to address houses that are constructed on medium density designated lands (i.e., Vacant Land Condominiums). This will provide for an "apples-to-apples" comparison of demand for single family residential lots with available supply;
- Base the model on when building permits can be issued for developable lands, rather than on the timing of the installation of major infrastructure (i.e., "permit-ready" supply of lands versus "serviced" supply of lands);
- Assume the following market capture shares for single family lots, based on a review of historic trends and stakeholder feedback:

North: 20%
 Northwest: 22%
 Northeast: 8%
 Southeast: 15%
 Southwest: 20%
 West: 15%

- In establishing the baseline, employ subdivision timing and phasing from information supplied by development proponents in the GMIS interviews and adjust where warranted based on model iterations and professional judgement;
- Select year of registration at the year following the construction of infrastructure to provide a buffer for any process-related issues that may arise; and,
- Provide opportunities in multiple locations and for multiple developers (where possible).

The results of the 2017 GMIS growth modelling are provided in the following tables.

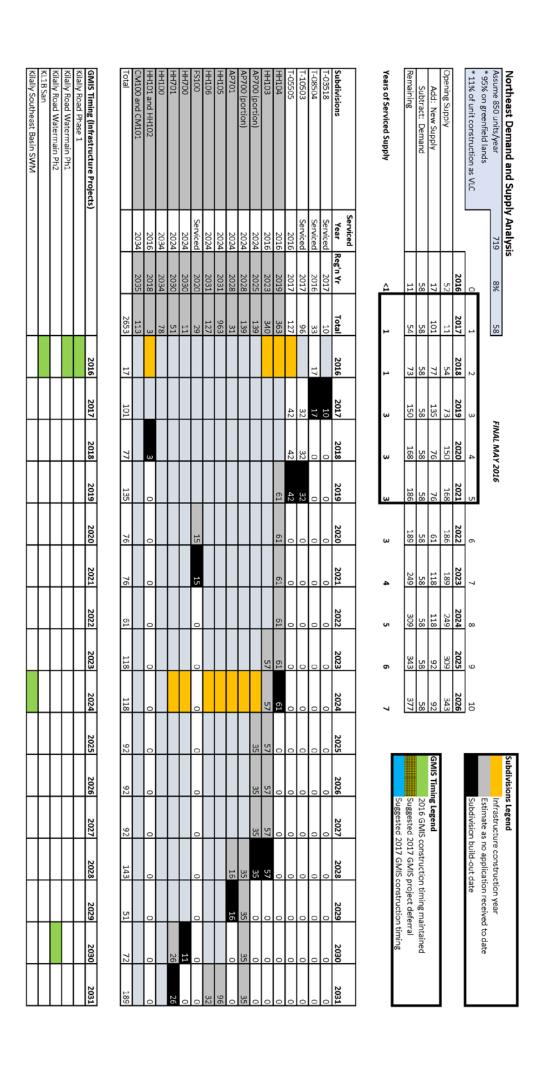


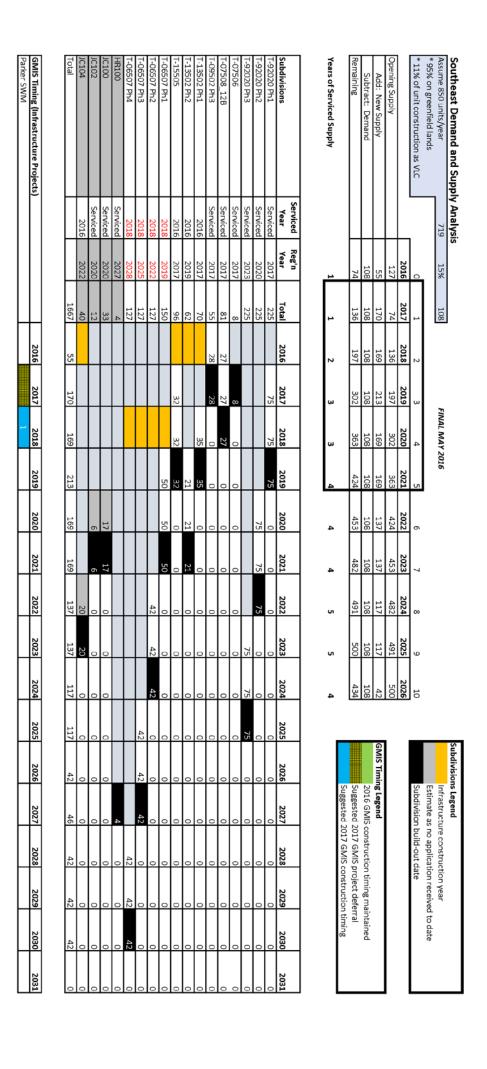
| T-11503 Ph2 Serviced 2019 94 T-11503 Ph3 2022 2023 162 T-11503 Ph4 2022 2027 162 FH100 2030 2030 100 FH101 Serviced 2018 11 | 3 Ph2 Serviced 2019 3 Ph3 2022 2023 3 Ph4 2022 2027 3 Ph4 2020 2030 | Serviced 2019 2022 2023 2022 2027 | Serviced 2019 2022 2023 | Serviced 2019 | 2020 | CONTRACT FORM | Serviced 2017 60 | 2017 108 36 | 61 31 | | T-08502 Ph2 Serviced 2018 94 | 2016 58 29 | | T-05512 2016 2017 131 44 | T-05511 Ph2 2016 2021 125 | T-05511 Ph1 2016 2019 125 | 2016 2020 | T-04510 Ph3 2016 2019 94 94 | 2016 2018 | 2016 2017 | Subdivisions Serviced Year Reg'n Yr Total 2016 2017 | | Years of Serviced Supply 3 3 4 5 | 000 | 447 538 658 | d 158 158 158 | Supply 96 249 | Opening Supply 509 447 538 658 | 2 | * 11% of unit construction as VLC 0 1 2 3 | nds | 22% 158 | Northwest Demand and Supply Analysis | |
|---|---|-----------------------------------|----------------------------|---------------|------|---------------|------------------|-------------|-------|-----|------------------------------|------------|-------|--------------------------|---------------------------|---------------------------|-----------|-----------------------------|-----------|-----------|---|-----|----------------------------------|---|--------------|--|--------------------|--------------------------------|-----------|---|---|----------------------------------|--------------------------------------|--|
| 11 | | | | | | | 30 | 36 | 0 | | 31 | 0 | 32 | 44 | | | | | 47 | 47 | 2018 20 | | 5 | ſ | | | 230 1 | 774 8 | 2020 20 | 4 | | FINAL MAY 2016 | | |
| 0 | | | | | 51 | Ī | 0 | 0 0 | 0 0 | | 31 | 0 | 32 32 | 44 0 | | 42 42 | 47 | 47 | 47 0 | 0 0 | 2019 2020 | . I | 5 | | | | 193 73 | 846 881 | 2021 2022 | 5 6 | I | | | |
| c |) | | | | 31 | 2 0 | О | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 42 | 42 | 47 | 0 | 0 | 0 | 2021 | | 5 | 730 | 738 | 158 | 100 | 796 | 2023 | 7 | | | | |
| 0 | | | | | c | | Э | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 2022 2 | | 4 | | | | 27 | 738 | 2024 2 | ∞ | | | | |
| 0 | | | | 27 | c | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 42 | 0 | 0 | 0 | 0 | 0 | 2023 20 | | ω | | | 158 1 | 27 | | | 9 | | | | |
| 0 | | | | 27 | c | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2024 20 | - | 2 | £ | 245 | 158 | 27 | 476 | 2026 | 10 | | | | |
| 0 | | | | 27 2 | c | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2025 2026 | | | | | | GMIS Tin | | | | | | Subdivisi | |
| 0 | | | 27 | 27 27 | Ī | | 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 0 0 | 0 0 | 26 2027 | | | Suggested | Suggested | 2016 GMIS | GMIS Timing Legend | | | Subdivision | Estimate as | Infrastructi | Subdivisions Legend | |
| _ |) | | 27 | | | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2028 | | | Suggested 2017 GMIS construction timing | 2017 GM/s - | 2016 GMIS construction timing maintained | | | | Subdivision build-out date | Estimate as no application received to date | Infrastructure construction year | | |
| , | 0 | | 27 | 0 | c | 0 | Э | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2029 | | | onstruction t | roject defer | າ timing mair | | | | ate | ion received | tion year | | |
| , | 0 | 25 | 27 | 0 | c | 0 | э | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 | | | timing | <u>ນໍ</u> | ntained | | | | | to date | | | |
| | 0 | 25 | 27 | 0 | c | 0 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2031 | | | | _ | | | | | | | | | |

GMIS Timing (Infrastructure Projects)
Fox Hollow SWM 3
Fox Hollow SWM 1 PH 2
Sunningdale Road
Sarria Road
Hyde Park SWM 6

2017 2018 2019

2030 2031





| LW105 | LW104 (portion) | LW104 (portion) | LW103 | LW102 | LW100 | BT101 | BT100 | LB106 (portion) | LB106 (portion) | LB106 (portion) | LW107 | TB102 (portion) | TB103/TB105 (portion) | TB105 (portion) | T-15501 Ph4 | T-15501 Ph3 | T-15501 Ph2 | T-15501 Ph1 | T-14506 Ph2 | T-14506 Ph1 | T-14504 Ph2 | T-14504 Ph1 | T-12503 Ph4 | T-12503 Ph3 | T-12503 Ph2 | T-12503 Ph1 | T-14502 | T-06511 | T-06502 | Subdivisions |
|-------|-----------------|-----------------|-------|-------|----------|-------|-------|-----------------|-----------------|-----------------|-------|-----------------|-----------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|----------|----------|--------------|
| | | | | | | | | | | | | | rtion) | | | | | | | | | | | | | | | | | |
| 2027 | 2028 | 2026 | 2020 | 2018 | Serviced | 2033 | 2033 | 2034 | 2026 | 2020 | 2023 | 2033 | 2018 | 2018 | 2027 | 2023 | 2017 | 2017 | 2017 | 2017 | 2016 | 2016 | 2018 | 2018 | 2016 | 2016 | Serviced | Serviced | Serviced | Year |
| 2028 | 2029 | 2027 | 2021 | 2019 | 2019 | 2034 | 2034 | 2035 | 2027 | 2021 | 2024 | 2034 | 2019 | 2019 | 2028 | 2024 | 2021 | 2018 | 2022 | 2018 | 2020 | 2017 | 2023 | 2021 | 2019 | 2017 | 2016 | 2018 | 2018 | Year |
| 508 | 423 | 568 | 77 | 10 | 94 | 81 | 80 | 30 | 205 | 171 | 220 | 132 | 622 | 150 | 81 | 278 | 137 | 150 | 122 | 122 | 93 | 102 | 105 | 105 | 105 | 105 | 157 | 61 | 17 | Total |
| _ | | | | | | | | | | | | | | | | | | | | | | | | | | | 52 | | | 2016 |
| _ | | | | | | | | | | | | | | | | | | | | | | 34 | | | | 53 | 52 | | | 2017 |
| | | | | | | | | | | | | | | | | | | 50 | | 31 | | 34 | | | | 53 | 52 | 31 | 17 | |
| _ | | | | 10 | 31 | | | | | | | | 78 | 38 | | | | 50 | | 31 | | 34 | | | 53 | 0 | 0 | 31 | 0 | 2019 20 |
| | | | | 0 | | | | | | | | | 78 | | | | , | 50 | | | 23 | | | | 53 | 0 | 0 | 0 | 0 | 2020 2021 |
| | | | 26 26 | 0 0 | 31 0 | | | | | 43 43 | | | 78 78 | | | | 46 46 | 0 0 | 31 | | 23 23 | | | 53 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 21 2022 |
| | | | 26 | 0 | | | | | | 3 43 | | | 3 78 | | | | 46 | 0 | 31 | | 2 | 0 | 53 | 3 0 |) 0 | 0 | 0 | 0 | 0 | 2023 |
| | | | 0 | 0 | 0 | | | | | 43 | 37 | | 78 | 0 | | 70 | 0 | 0 | 31 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 2024 |
| | | | 0 | 0 | 0 | | | | | 0 | 37 | | 78 | 0 | | 70 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2025 |
| | | | 0 | 0 | 0 | | | | | 0 | 37 | | 78 | 0 | | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2026 |
| | | 57 | 0 | 0 | 0 | | | | 41 | 0 | 37 | | 0 | 0 | | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2027 |
| 51 | | 57 | 0 | 0 | 0 | | | | 41 | 0 | 37 | | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2028 |
| 51 | 42 | 57 | 0 | 0 | 0 | | | | 41 | 0 | 37 | | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2029 |
| 51 | 42 | 57 | 0 | 0 | 0 | | | | 41 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2030 |
| 51 | 42 | 57 | 0 | 0 | 0 | | | | 41 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2031 |

Subdivisions Legend
Infrastructure construction year
Estimate as no application received to date
Subdivision build-out date

GMIS Timing Legend
2016 GMIS construction timing maintained
Suggested 2017 GMIS project deferral
Suggested 2017 GMIS construction timing

Opening Supply

Add: New Supply

Subtract: Demand

Years of Serviced Supply

Southwest Demand and Supply Analysis
Assume 850 units/year 719
*95% on greenfield lands

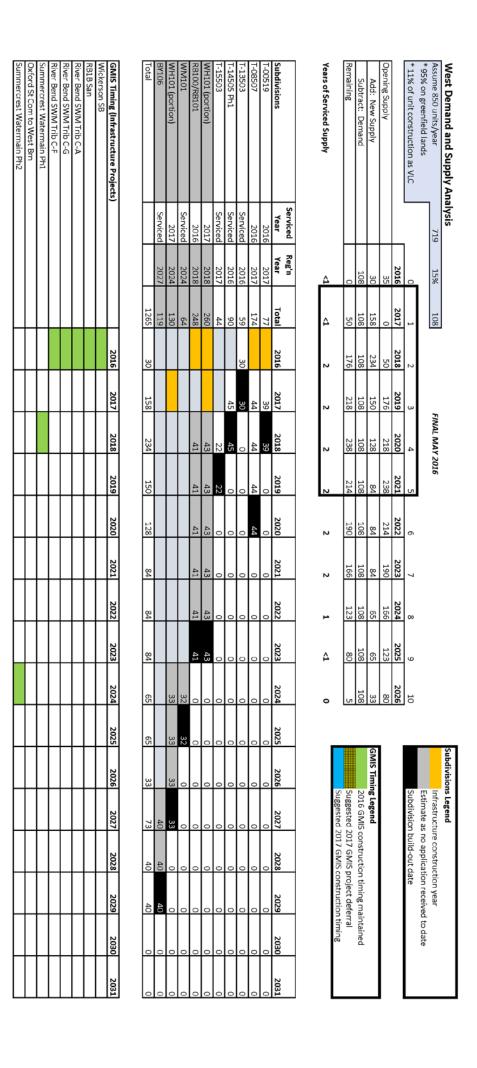
20%

FINAL MAY 2016

2026

* 11% of unit construction as VLC

| 2024 19 19 29 0 0 0 0 | 024 2025 2026 19 19 0 31 31 31 29 29 0 0 0 0 0 0 0 0 0 0 0 0 0 360 295 216 2024 2025 2026 | 2025 2 19 31 31 29 0 0 0 2025 2 | 2025 2026 2027 2 19 0 0 0 31 31 31 31 29 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 295 216 278 |
|--|---|---|--|
| | | 2026 2027 2 0 0 0 31 31 31 0 0 0 0 0 0 0 0 0 16 26 0 0 0 26 278 2026 2027 2 | 2026 2027 2028 2029 20 0 0 0 0 0 31 31 31 31 31 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 205 278 300 326 326 2026 2027 2028 2029 20 |



APPENDIX 'B' 2017 GMIS Project Tables and Figures

Table A1: GMIS ANNUAL UPDATE 2017 DETAILED LIST OF WORKS AND COSTS BY AREA 5 YEAR PROJECTS (2017 to 2021)

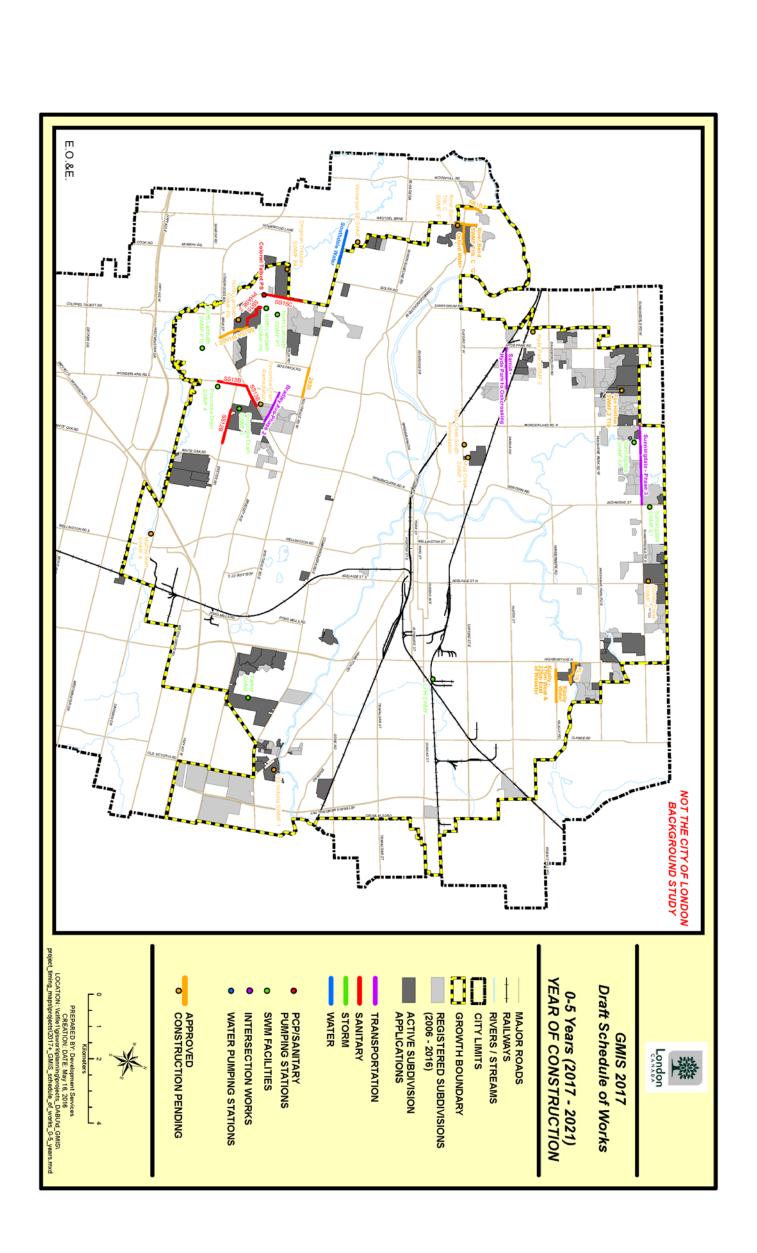
May 18 2016

| PREVIOUS GMIS 1) | GMIS 2017 | | PROJECT DESCRIPTION | | TOTAL COST ³⁾ | | GROWTH | N | ON-GROWTH |
|---------------------|---------------------------|----------------|--|------------|------------------------------|-------|-------------------------------------|------|-------------|
| TIMING | TIMING 1) | DCID | GENERAL DESCRIPTION | Service | | | | | |
| | | BUILT OUT | | | | | | | |
| 2019 | 2019 | DC14-MS00011 | London Psychiatric Hospital (LPH) SWMF | SWM | \$3,577,358 | 100% | \$3,577,358 | 0% | \$ |
| 2014-2033 | 2014-2033 | DC14-MS01002 | Infill and Intensification Nodes Storm Sewer Servicing | SWM | \$13,782,913 | 93% | \$12,861,194 | 7% | \$921,71 |
| 2014-2033 | 2014-2033 | DC14-WW02002 | Infill and Intensification Nodes Sanitary Sewer Servicing | Wastewater | \$4,862,299 | 85% | \$4,136,236 | 15% | \$726,06 |
| 2014-2033 | 2014-2033 | DC14-WD01002 | Infill and Intensification Nodes Water Servicing | Water | \$10,990,381 | 95% | \$10,385,938 | 5% | \$604,44 |
| | | | TOTAL BUILT OUT CITY PROJECTS | | \$33,212,951 | | \$30,960,726 | | \$2,252,220 |
| | | NORTH | | | | | | | |
| | | Sunningdale | • | | | | | | |
| 2018 | 2018 | DC14-MS00037 | Sunningdale SWMF 6A | SWM | \$1,696,409 | 100% | \$1,696,409 | 0% | \$ |
| 2020 | 2020 | DC14-RS00017 | 12 (2c): Sunningdale Road-Stage 2 - Phase 3 - Richmond to Wonderland (2 to 4 through lanes) | Roads | \$18,757,609 | 94% | \$17,608,459 | 6% | \$1,149,15 |
| | | Uplands | TOTAL SUNNINGDALE PROJECTS | | \$20,454,018 | | \$19,304,868 | | \$1,149,150 |
| 2018 | 2020 | DC14-MS00038 | Sunningdale SWMF E1 | SWM | \$1,961,950 | 100% | \$1,961,950 | 0% | \$(|
| 2010 | 2020 | DC 14-10300036 | TOTAL UPLANDS PROJECTS | SVVIVI | \$1,961,950 | 100% | \$1,961,950 | 0.76 | SO |
| | | | | | | | | | |
| | | | TOTAL NORTH PROJECTS | | \$22,415,967 | | \$21,266,817 | | \$1,149,150 |
| | | NORTHWES | <u>T</u> | | | | | | |
| | | Hyde Park | | | | | | | |
| 2017 | 2017 | DC14-RS00202 | Sarnia Road - Stage 2 Phase 2 - Hyde Park to Oakcrossing Gate (2LUA) | Roads | \$5,060,000 | 89% | \$4,497,650 | 11% | \$562,350 |
| | | | TOTAL HYDE PARK PROJECTS | | \$5,060,000 | | \$4,497,650 | | \$562,350 |
| | | | TOTAL NORTHWEST PROJECTS | | \$5,060,000 | | \$4,497,650 | | \$562,350 |
| | | WEST | | | | | | | |
| | | River Bend | | | | | | | |
| 2018 | 2018 | DC14-WD00021 | Summercrest Growth Area - Southdale (Bramblewood to Wickerson) | Water | \$1,257,181 | 100% | \$1,257,181 | 0% | \$0 |
| | | | TOTAL WEST PROJECTS | • | \$1,257,181 | | \$1,257,181 | | \$0 |
| | | SOUTHEAST | [| | | | | | |
| | | Jackson | | | | | | | |
| 2017 | <u>2018</u> | DC14-MS00027 | Parker SWMF - Phase 1 | SWM | \$4,367,000 | 100% | \$4,367,000 | 0% | \$0 |
| | | | TOTAL SOUTHEAST PROJECTS | | \$4,367,000 | | \$4,367,000 | | \$0 |
| | | SOUTHWES | <u>T</u> | | | | | | |
| | | Entire Area | | | | | | | |
| 2014-2019 | 2014-2019 | DC14-GS00005 | Southwest Area Environmental Assessments | SWM | \$1,000,000 | 100% | \$1,000,000 | 0% | \$0 |
| | | Bostwick | TOTAL ENTIRE AREA PROJECTS | | \$1,000,000 | | \$1,000,000 | | \$0 |
| 2017 | 2017 | | 22b: Bradley Avenue Extension-Phase 2 - | D d. | 640 004 075 | 4000/ | 640 004 075 | 00/ | - |
| 2017 | 2017 | DC14-RS00012 | Wharncliffe to Wonderland (4 through lanes) TOTAL BOSTWICK PROJECTS | Roads | \$12,264,375 \$12,264,375 | 100% | \$12,264,375 \$12,264,375 | 0% | \$0 |
| | | Lambeth | | | , | | | | , |
| 2016 | <u>2018</u> ²⁾ | DC14-WW00005-E | SS15A - Lambeth Growth Area Greenway PCP sewershed - Phase 2 | Wastewater | \$1,637,455 | 100% | \$1,637,455 | 0% | \$0 |
| 2018 | 2018 | DC14-MS00018 | North Lambeth P10 (Dingman Tributary D2) Phase 1 | SWM | \$4,079,581 | 9% | \$367,162 | 91% | \$3,712,419 |
| | | | TOTAL LAMBETH PROJECTS | | \$5,717,036 | | \$2,004,617 | | \$3,712,419 |
| | | Longwoods | | | | | | | |
| 2017 | 2017 | DC14-WW00007 | SS12B - Longwoods Growth Area Greenway PCP sewershed | Wastewater | \$3,865,000 | 100% | \$3,865,000 | 0% | \$0 |
| 2017 | 2017 | DC14-MS00029 | Pincombe Drain SWMF 3 | SWM | \$2,448,034 | 100% | \$2,448,034 | 0% | \$0 |
| 2018 | 2018 | DC14-WW00009 | SS13B - Wonderland/ Bostwisk E Growth Area Greenway PCP sewershed | Wastewater | \$7,431,059 | 100% | \$7,431,059 | 0% | \$0 |
| 2018 | 2020 | DC14-MS00030 | Pincombe Drain SWMF 4 - Phase 1 | SWM | \$5,128,000 | 100% | \$5,128,000 | 0% | \$0 |
| | | | TOTAL LONGWOODS PROJECTS | | \$18,872,093 | | \$18,872,093 | | \$0 |
| | | Talbot | | | | | | | |
| 2018 | 2018 | DC14-MS00023 | North Lambeth P7 | SWM | \$3,605,565 | | \$3,605,565 | 0% | \$0 |
| 2017 | 2017 | DC14-WW00006 | SS15C - North Talbot Growth Area Greenway PCP sewershed | Wastewater | \$4,025,754 | 100% | \$4,025,754 | 0% | \$0 |
| 2017 | 2017 | | Colonel Talbot Pumping Station | Wastewater | \$6,100,000 | 100% | \$6,100,000 | 0% | \$0 |
| 2020 | 2020 | DC14-MS00024 | | SWM | \$3,691,206 | 100% | \$3,691,206 | 0% | \$0 |
| | | | TOTAL TALBOT PROJECTS | | \$17,422,525 | | \$17,422,525 | | \$0 |
| | | | TOTAL SOUTHWEST PROJECTS | | \$55,276,029 | | \$51,563,610 | | \$3,712,419 |
| | | | TOTAL SOUTHWEST PROJECTS | | \$55,276,029 | | \$51,563,610 | | \$3,712,419 |

Notes:
1) Timing refers to the year of construction.

²⁾ In the 2016 GMIS, SS15A was intended to be completely constructed in 2016. The project has since been split into two phases, due to affordability concerns.

³⁾ The following updates to project cost estimates have been incorporated into the GMIS:
i) SS15A: from \$2.8 million to \$3.1 million (for phase 1 and 2 combined).
ii) SS12B: from \$5.4 million to \$3.9 million.
iii) SS13B: from \$3.2 million to \$7.4 million.



DETAILED LIST OF WORKS AND COSTS BY AREA 5+ YEAR PROJECTS (2022 and Beyond)

May 18 2016

| NORTH State Stat | PREVIOUS | GMIS 2017 | | PROJECT DESCRIPTION | | TOTAL COST 3) | | C D C V (T) | | |
|---|-------------------|----------------------|---------------|---|------------|---------------|----------|---|------|------------|
| Display Creek Display Creek Display | GMIS 1) TIMING | TIMING ¹⁾ | DC ID | GENERAL DESCRIPTION | SERVICE | TOTAL COST | | GROWTH | N | ON-GROWTH |
| 2022 2022 DC1+M000003 Source Creek SWMF 8 SWM \$1.001.001 | | | NORTH | | | | | | | |
| 2018 2022 DC1-4-M00003 Somey Creek 9/MF 10 SWM \$1.861.05 100% \$1.661.00 0% | | | Stoney Cree | k | | | | | | |
| 2018 2022 DC1-M-M00003 Sorrey Creek 71 SyMM \$1.866.105 100% \$3.68.105 00% \$1.866.105 100% \$3.68.105 00% \$1.866.105 100% \$3.68.105 00% \$1.866.105 100% \$3.68.105 00% \$1.866.105 100% \$3.68.105 00% \$1.866.105 100% \$3.68.105 00% \$1.866.105 100% \$3.68.105 00% \$1.866.105 100% \$3.69.105 1 | 2024 | 2027 | DC14-MS00036 | Stoney Creek SWMF 8 | SWM | \$1,051,000 | 100% | \$1,051,000 | 0% | \$(|
| 2018 2022 DC 14-MS00004 Source NOME TO SyMM \$1,501,000 10014 \$3,601,000 10014 \$1,0014 10014 \$1,0014 \$1,0014 | 2018 | | DC14-MS00033 | Stoney Creek 7.1 | SWM | \$1,668,185 | 100% | \$1,668,185 | 0% | \$(|
| NORTHWEST | 2018 | 2022 | DC14-MS00034 | Stoney Creek SWMF 10 | SWM | \$1,961,000 | 100% | \$1,961,000 | 0% | \$(|
| 2019 2022 CO14-M500006 Fox Hollow 1 - Phase 2 SWM \$2,276,860 100% \$2,276,860 00% \$2,276, | | | | TOTAL NORTH PROJECTS | | \$4,680,185 | | \$4,680,185 | | \$0 |
| 2019 2022 CO14-M500006 Fox Hollow 1 - Phase 2 SWM \$2,276,860 100% \$2,276,860 00% \$2,276, | | | NORTHWES | Т | | | | | | |
| Color Colo | | | Fox Hollow | Ī | | | | | | |
| Hyde Park | 2019 | 2022 | | Fox Hollow 1 - Phase 2 | SWM | \$2,976,893 | 100% | \$2.976.893 | 0% | \$(|
| N/A 2022 4 | | | | | | | | . , , , , , , , , , , , , , , , , , , , | | \$0 |
| N/A 2022 Str. S | | | Hvde Park | | | | | | | |
| NORTH EAST | | 4) | | | I | | | | | |
| NORTH EAST | N/A | 2022 | | Hyde Park SWMF 6 | SWM | \$1,892,000 | 100% | \$1,892,000 | 0% | \$(|
| NORTH EAST Huron Heights | | | | TOTAL HYDE PARK PROJECTS | | \$1,892,000 | | \$1,892,000 | | \$0 |
| NORTH EAST Huron Heights | | | | TOTAL MORTHWEST PROJECTS | | ¢4 060 003 | | ¢4 969 993 | | \$ |
| Huron Heights 2024 | | | NODTH EAS | | | \$4,000,033 | | \$4,000,033 | | 31 |
| 2024 2024 DC14-W500009 Silaly South, East Basin SWM \$3,747,000 100% \$3,747,000 00% \$1,300,969 0% 0% 0% 0% 0% 0% 0% 0 | | | | | | | | | | |
| 2030 2030 DC14-WD00006 DC14-WD00006 DR30 Prince Prin | 2004 | 0004 | | | | ** *** | | *** | | - |
| | 2024 | 2024 | DC14-MS00009 | - | SWM | \$3,747,000 | 100% | \$3,747,000 | 0% | \$0 |
| WEST River Bend | 2030 | 2030 | DC14-WD00040 | | Water | \$1,330,969 | 100% | \$1,330,969 | 0% | \$0 |
| WEST River Bend | | | | | | \$5,077,060 | | \$5,077,969 | | \$0 |
| River Bend 133. Oxford Street West-Phase 2 - | | | WEST | TOTAL NORTHLAND TROUBUTE | | 90,011,000 | | 90,011,000 | | 90 |
| 13b: Oxford Street West-Phase 2 - Roads \$4,675,000 90% \$4,186,000 10% \$489,000 10% \$489,000 10% \$489,000 10% \$489,000 10% | | | | | | | | | | |
| 2032 2032 DC14-RS00052 Commissioners to Westdel Bourne (2 to 4 Roads \$4,675,000 90% \$4,186,000 10% \$489,000 \$4,186,000 \$4,18 | | | River Bellu | 13h: Oxford Street West-Phase 2 - | | | | | | |
| Byron | 2032 | 2032 | DC14-RS00052 | Commissioners to Westdel Bourne (2 to 4 | Roads | \$4,675,000 | 90% | \$4,186,000 | 10% | \$489,000 |
| 2024 2024 2024 DC14-WD00022 Summercrest Growth Area - Wickerson Gate) Water \$1,361,030 100% \$1,361,030 0% | | | | | | \$4,675,000 | | \$4,186,000 | | \$489,000 |
| DC14-WD00012 Summercrest Growth Area - Wickerson Wester S1.361.030 100% S1.361.030 0% | | | Byron | | | | | | | |
| Southale to Wickerson Gate) Water S1,361,030 S1,3 | | | | Summercrest Growth Area - Wickerson | T | | | | | |
| SOUTHWEST South | 2024 | 2024 | DC14-WD00022 | | Water | \$1,361,030 | 100% | \$1,361,030 | 0% | \$0 |
| SOUTHWEST Bostwick 2032 DC14-R800047 202: Bradley Avenue Extension-Phase 3 - Wonderland to Bostwick (2 through lanes) Roads \$6,090,000 100% \$6,090,000 0% 2032 2032 DC14-M800017 North Lamberth P3 (Dingman Tributary D4) SWM \$3,529,753 100% \$3,529,753 0% 2033 2033 DC14-M800017 North Lamberth P3 (Dingman Tributary D4) SWM \$2,871,613 100% \$2,871,613 0% 2024 DC14-WW00010 SSI5B - North Taibot Growth Area Greenway PcP sewershed PcP | | | | TOTAL BYRON PROJECTS | | \$1,361,030 | | \$1,361,030 | | \$0 |
| SOUTHWEST Bostwick 2032 DC14-R800047 202: Bradley Avenue Extension-Phase 3 - Wonderland to Bostwick (2 through lanes) Roads \$6,090,000 100% \$6,090,000 0% 2032 2032 DC14-M800017 North Lamberth P3 (Dingman Tributary D4) SWM \$3,529,753 100% \$3,529,753 0% 2033 2033 DC14-M800017 North Lamberth P3 (Dingman Tributary D4) SWM \$2,871,613 100% \$2,871,613 0% 2024 DC14-WW00010 SSI5B - North Taibot Growth Area Greenway PcP sewershed PcP | | | | TOTAL W/50T DD0 /50T0 | | 65 025 020 | _ | ee 547 020 | | 6490 000 |
| Bostwick 2032 2032 DC14-RS00047 202: Bradley Avenue Extension-Phase 3 - Wonderland to Bostwick (2 through lanes) Roads \$8,080,000 100% \$8,090,000 0% 2032 2032 DC14-MS00019 North Lambeth P3 (Dingman Tributary D4) SWM \$3,529,753 100% \$3,529,753 0% 2033 DC14-MS00017 North Lambeth P3 (Dingman Tributary D4) SWM \$3,529,753 100% \$3,529,753 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,613 0% 22,871,614 0% 22,871,710 0 | | | COLUTION | | | \$0,030,030 | | \$5,547,030 | | \$489,000 |
| 2032 2032 DC14-RS00047 22c: Bradley Avenue Extension-Phase 3 Roads \$6,090.000 100% \$6,090.000 0% | | | | <u> </u> | | | _ | | | |
| 2032 2032 2014-MS00019 North Lambeth P3 (Dingman Tributary D4) SWM \$3,529,753 100% \$3,529,753 00% \$3,229,753 00% \$3,229,75 | | | Bostwick | | | | | | | |
| 2032 2032 DC14-MS00019 North Lambeth P3 (Dingman Tributary D4) SWM \$3,529,755 100% \$2,871,613 0% | 2032 | 2032 | DC14-RS00047 | | Roads | \$6,090,000 | 100% | \$6,090,000 | 0% | \$0 |
| 2033 DC14-MS00017 North Lambeth P1 SWM \$2,871,613 100% \$2,871,613 00% | 2032 | 2032 | DC14-MS00019 | | SWM | \$3,529,753 | 100% | \$3.529.753 | 0% | \$0 |
| Company Comp | | | DC14-MS00017 | | SWM | \$2,871,613 | 100% | \$2,871,613 | 0% | \$0 |
| 2025 2025 DC14-WW00010 PCP sewershed | | | | TOTAL BOSTWICK PROJECTS | | | | | | \$0 |
| 2020 2026 DC14-MS00021 North Lambeth P5 SWM \$1,983,694 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,743,674 100% \$2,835,755 | | | Lambeth | | | | | | | |
| 2030 2030 DC14-MS00021 North Lambeth P5 SWM S1,933,694 100% S1,933,694 0% | 2025 | 2025 | DC14-WW000010 | | Wastewater | \$2 745 674 | 100% | \$2 745 674 | 0% | \$0 |
| DC14-MS00022 | | | | | | | | | | |
| TOTAL LAMBETH PROJECTS \$7,565,123 \$7,565,123 \$ \$2022 \$2028 | | | | | | | | | | \$0 |
| Longwoods DC14-MS00031 Pincombe Drain SWMF 5 SWM S1,731,000 100% S1,731,000 0% 2022 2022 DC14-RS00022 22a: Bradley Avenue Extension-Phase 1 - Jalna to Wharncliffe (4 through lanes) 22a: Bradley Avenue Extension-Phase 1 - Jalna to Wharncliffe (4 through lanes) Roads S10,755,000 100% S10,755,000 0% 100% S10,755,000 0% 100% S10,755,000 100% | 2020 | 2026 | DC14-MS00022 | | SWM | | 100% | | 0% | \$0 \$0 |
| 2022 2028 DC14-MS00031 Pincombe Drain SWMF 5 SWM \$1,731,000 100% \$1,731,000 0% | | | Longwoods | IOTAL LAMBETH PROJECTS | | \$1,000,123 | \vdash | \$1,000,123 | | \$0 |
| 2022 2022 DC14-RS00022 22a: Bradley Avenue Extension-Phase 1 - Jalna to Wharncliffe (4 through lanes) Roads to Wharncliffe (4 through lanes) S10,755,000 100% \$10,755,000 0% | 2022 | 2020 | | Dincomba Drain SW/ME 5 | CIA/NA | 64 724 000 | 1000/ | 64 724 000 | 00/ | \$0 |
| 2022 2024 2024 2024 DC14-WD00010 Lambeth (A21) Growth Area - Wonderland (Dingman to Exeter) Water \$1,681,128 95% \$1,597,072 5% \$84,0 | | | | | | | | | | |
| 2024 2024 2024 2024 2024 2024 2024 2028 2028 2028 2029 2029 2029 2029 2029 2029 2024 2024 2025 | 2022 | 2022 | DC14-RS00022 | to Wharncliffe (4 through lanes) | Roads | \$10,755,000 | 100% | \$10,755,000 | 0% | \$0 |
| 2028 2029 2029 DC14-W000009 (Wonderland to White Oak) Water \$2,614,776 100% \$2,274,776 00% | 2024 | 2024 | DC14-WD00010 | (Dingman to Exeter) | Water | \$1,681,128 | 95% | \$1,597,072 | 5% | \$84,056 |
| 2029 2029 DC14-MS00020 North Lambeth P4 (Dingman Tributary D3) SWM \$2,613,256 100% \$2,613,256 0% | 2028 | 2028 | DC14-WD00009 | | Water | \$2,874,778 | 100% | \$2,874,778 | 0% | \$0 |
| 2014-2019 2027 DC14-MS00061 Old Oak SWM 1 (former Contingency Facility A) SWM \$2,517,000 100% \$2,517,000 0% | | 2029 | DC14-MS00020 | | SWM | \$2,613,256 | 100% | \$2,613,256 | 0% | \$0 |
| 2017 2027 DC14-MS00040 White Oaks SWMF 4 - Phase 1 SWM \$4,698,000 100% \$4,698,000 0% | | | DC14-MS00061 | | SWM | \$2 517 000 | 100% | | 0% | \$0 |
| 2017 2023 DC14-MS00039 White Oaks SWMF 3 SWM \$2,837,000 100% \$2,837,000 0% | | | | | | | | | | \$(|
| TOTAL LONGWOODS PROJECTS \$29,707,161 \$29,623,105 \$84,000 \$20,300 | | | | | | | | | | \$(|
| Talbot | 2017 | 2020 | 55 | | | | , | | - 70 | \$84,056 |
| 2030 2030 DC14-WW00011 SS14B - Bostwick W Growth Area Greenway Wastewater \$12,807,565 100% \$12,807,565 0% | | | Talbot | | | | | , , , | | |
| 2030 2030 DC14-WW00011 PCP sewershed Wastewater \$12,807,565 100% \$12,807,565 0% TOTAL TALBOT PROJECTS \$12,807,565 \$12,807,565 TOTAL SOUTHWEST PROJECTS \$62,571,216 \$62,487,159 \$84,0 | 2020 | 2020 | | SS14B - Bostwick W Growth Area Greenway | Mesterret | 640.007.505 | 1000/ | 640.007.505 | 00/ | - |
| TOTAL SOUTHWEST PROJECTS \$62,571,216 \$62,487,159 \$84,0 | 2030 | 2030 | DC14-WW000011 | | wasiewater | | 100% | | 0% | \$0 |
| | | | | TOTAL TALBOT PROJECTS | | \$12,807,565 | | \$12,807,565 | | \$0 |
| TOTAL 5+ YEAR PROJECTS (2022 and Beyond) \$83,234,293 \$82,661,236 \$573,05 | | | | TOTAL SOUTHWEST PROJECTS | | \$62,571,216 | | \$62,487,159 | | \$84,056 |
| TOTAL 5+ YEAR PROJECTS (2022 and Beyond) \$83,234,293 \$82,661,236 \$573,05 | | | | | | | | | | |
| | | TOTAL | 5+ YEAR PR | OJECTS (2022 and Beyond) | | \$83,234,293 | 1 | \$82,661,236 | | \$573,056 |

Notes:

²⁾ In the 2016 GMIS, SS15A was intended to be completely constructed in 2016. The project has since been split into two phases, due to affordability concerns.

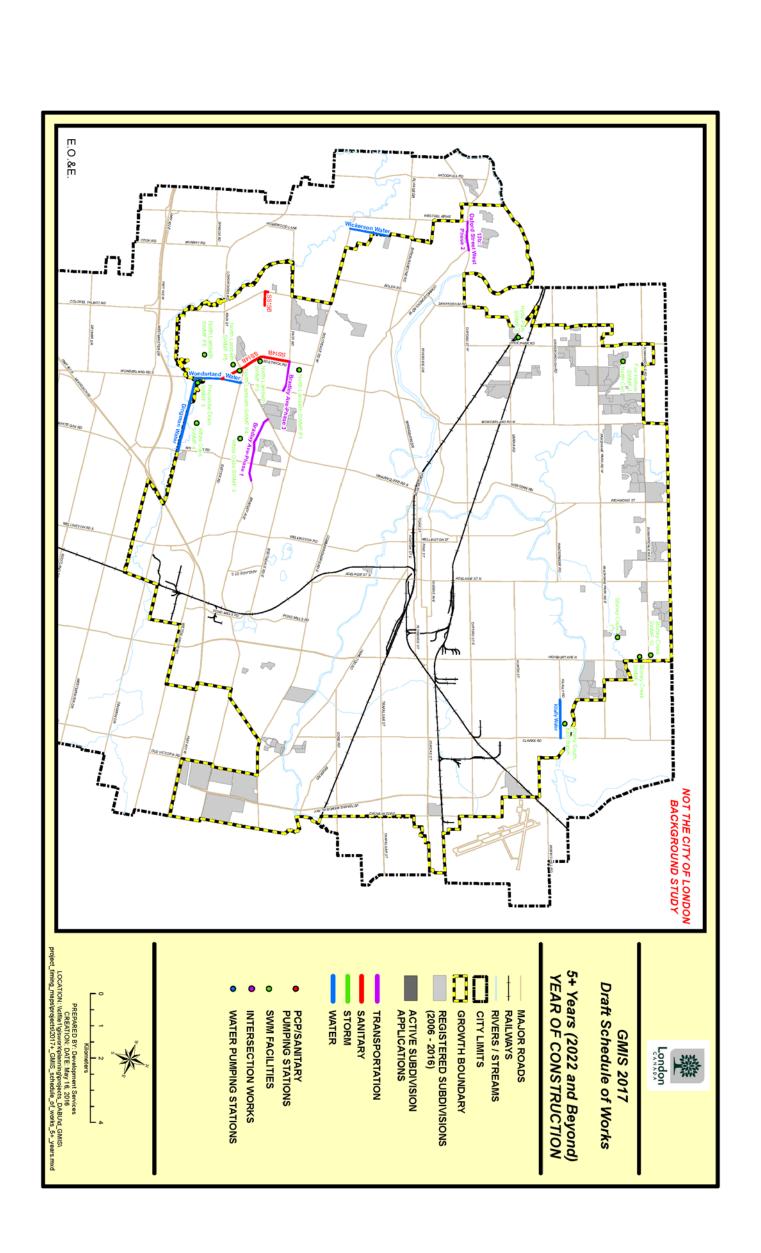
³⁾ The following updates to the above project cost estimates have been incorporated into the GMIS:

i) SS15A: from \$2.8 million to \$3.1 million (for phase 1 and 2 combined).

ii) SS12B: from \$5.4 million to \$3.9 million.

iii) SS13B: from \$3.2 million to \$7.4 million.

4) Hyde Park SWM 6 was provided with budget approval prior to the 2014 DC Study; however, funding for this project will be released and it is being re-scheduled in the GMIS.



APPENDIX 'C' Detailed Commentary Regarding DC Reserve Fund Analysis

Appendix 'C': Detailed Commentary Regarding DC Reserve Fund Analysis

The findings below are noted by Staff from the reserve fund analyses, assuming no change to the project timing outlined in the 2016 GMIS Update:

Stormwater DC Reserve Fund

- A project cost estimate for a previously funded SWM facility has increased significantly, placing additional strain on reserve fund cash flows.
- Based on updated cost estimates and the maintenance of the 2016 GMIS timing for stormwater projects, all facilities constructed beyond 2017 would require debt financing.
- O By 2022, annual debt payments would exceed revenues, requiring built-up reserve fund balances to make up the difference. This situation is not sustainable by 2026, whereby a loan would be required to fund reserve fund debt obligations. This circumstance greatly concerns Staff as it would be analogous to "paying your mortgage with your credit card."
- The large amount of debt being incurred by the SWM reserve fund would likely result in significant increases in DC rates in 2019.

Sanitary DC Reserve Fund

- Although one trunk sanitary sewer cost estimate decreased, the construction costs for two others (SS15A and SS13B) are anticipated to be significantly above present budget estimates.
- Without changes to the trunk sanitary sewer program, a \$1.1 million funding gap is anticipated in 2017 due to infrastructure needs and revised estimates. Staff are concerned about the possibility of needing to rely on an interfund loan to maintain the current timing for trunk sanitary sewer projects.
- Beginning in 2019, a large increase in annual debt payments is anticipated as a result of past investments and near-term budget commitments.
- o The DC-funded sanitary treatment and sewers program has limited flexibility to respond to project cost increases and is especially vulnerable to unmet revenue expectations. There are few, but costly sanitary projects, meaning that limited opportunities exist through project deferrals to address reserve fund concerns.

The 2016 GMIS Update report included the following statement: "Even with the identified deferrals, there is still potential for funding challenges for both the Stormwater and Sanitary DC Reserve Funds in the coming years" (emphasis in the original). Continued review of DC reserve fund health as part of the 2017 GMIS indicates that stormwater and sanitary timing adjustments are needed to address the health of the DC reserve funds.

APPENDIX 'D'List of GMIS Stakeholders

Appendix 'D': List of GMIS Stakeholders

| Name | Organization |
|-----------------------------|----------------------------------|
| Adam Carapella | Organization Tricar Group |
| Ali Soufan | York Development Group |
| Allan Churchill | Fusion Homes |
| Allan Drewlo | Drewlo Holdings Inc |
| Blair Doman | Doman Developments, Inc. |
| Bob Stratford | R. W. Stratford Consulting Inc |
| C. McIntyre | Devlon Corporation |
| Chris Bourdeau | Futurestreets Inc. |
| Chris Leigh | Tricar Group |
| Craig Linton | DevelPro Land Services |
| Dan Walsh | Sydenham investments |
| Dara Honeywood | Z Group |
| Dave Schmidt | Corlon Properties Inc. |
| David Ailles | Consultant |
| David Tennant Jr. | Dave Tennant Urban Concepts |
| David Tennant Sr. | Hampton Group Inc |
| Don de Jong | Tridon Group |
| Doug Stanlake | Consultant |
| George Bikas | Drewlo Holdings Inc |
| Gord Thompson | Corlon Properties Inc. |
| Jamie Crich | Auburn Developments Inc. |
| Jeff Paul | Stantec |
| Jeff Willick | Decade Group Inc. |
| Jim Gardner | Monarch Group |
| Jim Kennedy | London Development Institute |
| Lois Langdon | London Home Builders Association |
| Lynda Townsend | WeirFoulds LLP |
| Mardi Turgeon | BlueStone Properties |
| Maureen Zunti | Sifton Properties Limited |
| Mike Howe | Norquay Developments Limited |
| Ornella Richichi | SmartCentres |
| Paul Hinde | Tridon Group |
| Peter Sergautis | Extra Realty Limited |
| Phil Masschelein | Sifton Properties Limited |
| Phillip Abrantes | Kape Developments |
| Ric Knutson | Kenmore Homes (London) Inc |
| Richard Sifton | Sifton Properties Limited |
| S. Graham | SegwayGroup |
| Sandy Levin | Urban League |
| Shmuel Farhi | Farhi Holdings Corporation |
| Stephen Stapleton | Auburn Developments Inc. |
| Tony Fediw | AECOM |
| Tony Marsman Vito Frijia | Rembrandt Homes Southside Group |
| Tim Stubgen | Stantec |
| Bernie Bierbaum | BlueStone Properties |
| Ben Farhi | Farhi Holdings Corporation |
| Todd Pierce | SmartCentres |
| Jeff Thomas | Development Engineering |
| John-Paul Sousa | City of London Planning Services |
| Mike Johnson | Urban Metrics Inc. |
| Jim Sheffield | Nicholson Sheffield Architects |
| Lindsey Gerrish | Infrastructure Ontario |
| Eric Saulesleja | GSP Group |
| David Drake | SmartCentres |
| Anthony Passarelli | CMHC |
| Wes Kinghorn | Urban League |
| Amanda Stratton | Urban League |
| Michelle Doornbosch | Consultant |
| Michael Mayo | Landowner |
| Louie Maisano | Homebuilder |
| Jonathan Aarts | Landowner |
| - | |

APPENDIX 'E' Rationale for 2017 GMIS Update Project Timing Adjustments

Appendix E: Rationale for 2017 GMIS Update Project Timing Adjustments

The following sections provide commentary and rationale for project timing adjustments identified in Table 1 of the 2017 GMIS Annual Review & Update report.

Adjustments to Previously Timed 2017 Projects:

- Parker SWM: The growth analysis for the Southeast area indicated that a significant
 amount of single family residential lots are being brought online in the near term, based on
 subdivisions that are progressing towards registration. Staff are concerned about the
 potential for an over-supply of lots in the Southeast with the progression of lands tributary
 to the Parker SWM progressing in 2017. Given this situation and the need to improve the
 financial health of the SWM DC reserve fund, Staff have recommended that the Parker SWM
 facility be deferred one year to 2018.
- White Oaks SWM 3: The growth analysis for the Southwest area indicated that a significant amount of single family residential lots are being brought online in the near term, based on subdivisions that are progressing towards registration. In discussions with the primary landowner for the lands tributary to White Oaks SWM 3, the facility will not be required until later phases of the subdivision. Based on the growth analysis conducted by Staff, a timing of 2027 has been recommended. This adjustment will also improve the financial health of the SWM DC reserve fund.
- White Oaks SWM 4: The growth analysis for the Southwest area indicated that a significant amount of single family residential lots are being brought online in the near term, based on subdivisions that are progressing towards registration. No development has been proposed for lands south of Exeter Road that would be serviced via White Oaks SWM 4. Additionally, phases of the subdivision to the north tributary to White Oaks SWM 4 are planned to be available in the late 2020s. Thus, Staff are recommending rescheduling this project to 2027 in order to improve the financial health of the SWM DC reserve fund and avoid a premature investment in infrastructure.

Adjustments to Previously Timed 2018 Projects:

- Sunningdale SWM E1: As a result of conversations with the developer of lands tributary to Sunningdale SWM E1, Staff are recommending the deferral of the stormwater management facility to 2020. Over 30 hectares of low density residential lands are presently serviced and available for development immediately adjacent to Sunningdale SWM E1 and multi-family residential lands within the facility's catchment area can proceed using permanent private stormwater systems, per City policy. This deferral is not anticipated to hinder opportunities for single family residential development in the Richmond Rd./Sunningdale Rd. E. area.
- Stoney Creek SWM 10: The present 2018 timing for Stoney Creek SWM 10 does not align with the business plans of the benefitting developer. A draft plan of subdivision located immediately to the south of lands tributary to Stoney Creek SWM 10 is progressing towards registration and it is anticipated that full build-out will take approximately 10 years for all phases. Based on conversations with the developer, Staff are recommending a timing of 2022 for Stoney Creek SWM 10 to match the business plans of the developer and to improve the financial health of the SWM DC reserve fund.
- Stoney Creek 7.1: Staff are recommending that Stoney Creek 7.1 be rescheduled from 2018 to 2023. It is not anticipated that the stormwater management facility will be required until this time due to the timing of build-out of subdivision phases to the immediate north. This adjustment will improve the financial health of the SWM DC reserve fund.

Adjustments to Previously Timed 2019 Projects:

• Fox Hollow SWM 1 Ph 2: The growth analysis for the Northwest area indicated that a significant amount of single family residential lots are being brought online in the near term, based on subdivisions that are progressing towards registration. Staff are concerned about the potential for an over-supply of lots in the Northwest with the progression of lands tributary to the Fox Hollow SWM 1 Ph 2 facility progressing in 2019. Fox Hollow SWM 1 Ph 2 is intended to service lands at the furthest northeast extent of the City, which should be a longer-term development area, based on a logical progression of growth. As a result, Staff are recommending that the facility be rescheduled to 2022 in order to improve the financial health of the SWM DC reserve fund.

Adjustments to Previously Timed 2020+ Projects:

- North Lambeth SWM P6: The growth analysis for the Southwest area indicated that a
 significant amount of single family residential lots are being brought online in the near and
 mid term, based on subdivisions that are progressing towards registration. Staff is
 concerned about the potential for a future over-supply of lots in the Southwest beyond 2020.
 As a result, it is recommended that North Lambeth SWM P6 be rescheduled to 2026 to avoid
 premature investment in growth infrastructure.
- Pincombe Drain SWM 5: The growth analysis for the Southwest area indicated that a
 significant amount of single family residential lots are being brought online in the near and
 mid term, based on subdivisions that are progressing towards registration. Staff is
 concerned about the potential for a future over-supply of lots in the Southwest beyond 2020.
 As a result, it is recommended that Pincombe Drain SWM 5 be rescheduled to 2028 to avoid
 premature investment in growth infrastructure.
- Stoney Creek SWM 8: The growth analysis for the North area indicated that a significant amount of single family residential lots are being brought online in the near and mid term, based on subdivisions that are progressing towards registration. Staff is concerned about the potential for a future over-supply of lots in the North beyond 2020. As a result, it is recommended that Stoney Creek SWM 8 be rescheduled to 2028 to avoid premature investment in growth infrastructure. It is anticipated that this timing change will not present a barrier to the build-out of subdivision 39T-07502.

Other Project Adjustments:

- Hyde Park SWM 6: Due to a lack of immediate need for Hyde Park SWM 6, the Stormwater Management Unit will be releasing funding for this project for reconsideration in the GMIS. Staff is recommending that the facility be scheduled for 2022 in order to improve the financial health of the SWM DC reserve fund.
- Old Oak SWM 1: In 2015, Council passed a resolution assigning funding for an identified stormwater management contingency project contained in the DC Background Study to provide for the future Old Oak SWM 1 facility, servicing lands in the White Oak Rd./Dingman Rd. area in the Southwest. Although the contingency project had a timing range of 2014-2019, a secondary plan for the White Oak Rd./Dingman Rd. lands was intended to determine the timing for build-out and construction of Old Oak SWM 1. For the 2017 GMIS Update, the growth analysis for the Southwest area indicated that a significant amount of single family residential lots are being brought online in the near and mid term, based on subdivisions that are progressing towards registration. Staff are concerned about the potential for a future over-supply of lots in the Southwest beyond 2020. As a result, the Old Oak SWM 1 facility is recommended to be constructed in 2027 as a placeholder until the completion of the secondary plan and its recommendations for future construction.
- SS15A Ph 2: Trunk sanitary sewer SS15A was originally intended to be completed as a single project in 2016. Since the completion of the 2016 GMIS, discussions with stakeholders have resulted in changes to the routing of the trunk sewer and revised cost estimates. Given cash flow concerns for the Sanitary DC Reserve Fund and a lack of immediate need for the construction of the entire length of the sewer, Staff are recommending that the project be split into two phases, with phase 1 progressing in 2016 and phase 2 re-introduced into the GMIS and deferred until 2018. The deferral aligns with the subdivision phasing timelines of the principal developer and improves the financial health of the Sanitary DC Reserve Fund.

APPENDIX 'F' Detailed Commentary Regarding Developer Infrastructure Requests

Appendix 'F': Detailed Commentary Regarding Developer Infrastructure Requests

Staff are unable to support the project acceleration requests identified in Table 2 of the GMIS report for the following reasons:

- Oxford St. W. Road Widening (Commissioners to Westdel Bourne): Sifton Properties has made the requested acceleration of Oxford St. W. It should be noted that the current staging of city-wide road widenings has been set out as part of the City's 2030 Transportation Master Plan. This plan had regard for road needs city-wide including consideration of the relative safety of roadways and traffic congestion capacity problems as determined through a comprehensive road network modeling analysis. The current timing for the Oxford Street West widening improvements has been established with regard to needs city-wide and therefore Staff do not recommend a change in timing. Over the coming year, Staff will continue to have discussions with Sifton regarding potential enhancements to this road project and its cost implications. Further, Staff will continue to monitor growth in the area serviced by the road project and potential impacts on project timing as a result. It should be noted that the widening of Oxford Street does not impact the ability to develop the Sifton Properties lands.
- **Kilally SWM S/E Basin:** Sifton Properties, Auburn Developments and Everton Homes have requested the acceleration of the Kilally S/E Basin stormwater management facility, presently timed for construction in 2024. Staff do not recommend the requested rescheduling of this facility to 2020/2021 due to the present concerns regarding the Stormwater Management DC Reserve Fund, pending availability of additional development lands in the area, and given that the existing construction timing is more than 5 years away. According to the GMIS timing, these lands are anticipated to develop in the longer-term, rather to provide near-term opportunities for single family residential unit construction and it would be premature to consider an acceleration under the current conditions.
- North Lambeth SWM P7: Sifton Properties has requested an accelerated construction for North Lambeth SWM P7 one year to 2017. This stormwater facility is presently being reviewed as part of the Dingman Creek Environmental Assessment (EA), which is scheduled to be completed by the end of 2017. Given that the EA will not be complete within the suggested construction date, staff are recommending that no changes are made to the present GMIS timing for North Lambeth P7 (2018).
- Pincombe Drain SWM 4: Sifton Properties has requested the acceleration of Pincombe Drain SWM 4 to 2017. Staff do not recommend the requested acceleration of this facility (and are recommending a deferral to 2020) due to the present concerns regarding the Stormwater Management DC Reserve Fund and the pending availability of additional development lands in the area. According to the GMIS timing, lands within the catchment area are anticipated to develop in the mid-term and it would be premature to consider an acceleration under current conditions.
- North Lambeth SWM P6: Sifton Properties has requested an acceleration of the North Lambeth SWM P6 stormwater management facility to a construction year of 2018. Staff do not recommend the requested acceleration of this facility (and are recommending a deferral to 2026) due to the present concerns regarding the Stormwater Management DC Reserve Fund and the pending availability of additional development lands in the area. According to the GMIS timing, lands within the catchment area are anticipated to develop in the longerterm and it would be premature to consider an acceleration under current conditions.
- Wonderland Rd. S. Watermain: Sifton Properties has requested an acceleration of the Wonderland Rd. S. Watermain project (from 2024 to 2018). Environmental and Engineering Services has expressed concern regarding the amount of proposed development in relation to the requested timing for the watermain. The project is part of a system-wide improvement in the Wonderland/Dingman area and needs to be closely aligned with the development of the broader area. An acceleration of the watermain will result in poor water quality and the added environmental and financial costs to the City of regularly discharging treated water to meet minimum quality standards. As a result, the acceleration of the Wonderland Rd. S. watermain is not recommended for the 2017 GMIS Update.
- Southdale Rd. W. Road Widening: York Developments expressed concern about pending traffic volumes and intersection signalizations for Southdale Road West, and requested an acceleration of the project to 2020/2021. It was also suggested that the Environmental Assessment (EA) be commenced in 2017 to prepare for this construction timing.

Transportation staff have reviewed the request and concur with the commencement of the EA in 2017. Traffic conditions for the area are being closely monitored and there may be an advancement of the road widening in the future; however, at this time, Staff is not recommending accelerating the construction timing for Southdale Road. This project will be reviewed in the future, based on further analysis and the progress of the EA.

- Sanitary Sewer SS14B: York Developments is progressing a large subdivision in the North Lambeth Community. Although the bulk of the lands are serviced by sanitary trunk sewers to be constructed on Colonel Talbot Road (2017), portions of the site are planned to be serviced via trunk sewer SS14B on Bostwick Road. Although York intends to phase their subdivision, they believe that the build-out of the final phases will be commencing prior to the current timing of the sewer (2030), and have requested an acceleration. Given the time horizon of the subject project, Staff is not recommending an acceleration of the trunk sewer. Analysis of overall build-out of single family homes in the Southwest Area has also indicated that there will be a significant supply of available lots in the mid-2020s, supporting the existing timing for SS14B.
- Sanitary Sewer SS15A: Following the presentation of the draft GMIS is early April, York Developments met with Staff to express concerns about the provision of sanitary servicing for the North Lambeth neighbourhood. Although this area intended to be primarily serviced via the Colonel Talbot Pumping Station, forcemain and trunk sanitary sewer SS15C in 2017, York requested that the timing of phase 2 of SS15A be revised to 2017 to provide an additional sanitary servicing option in the event that a Part II Order request was made for the Colonel Talbot Pumping Station Environmental Assessment (i.e., and appeal of the EA), delaying the intended timing of the construction. Staff are recommending that the 2018 timing for phase 2 of SS15A be maintained; however, if the Colonel Talbot Pumping Station EA was subject to a Part II Order request, Staff may be receptive to York constructing phase 2 of SS15A in 2017 and making a claim to the City Services Reserve Fund for the work (subject to the provisions of Schedule 8 of the DC By-law).
- Sunningdale Road (Adelaide to Bluebell): Peter Sergautis, owner of the Applewood Estates subdivision, has requested an accelerated timing for Sunningdale Rd. E. from the present 2025 timing. Mr. Sergautis believes that the immediate area to the road widening will be built out by the early 2020s, resulting in increased vehicular use of the road. Further, he has expressed safety concerns associated with the Sunningdale/Adelaide intersection. Staff have reviewed the request and are not recommending an adjustment to the present timing of this project. Upgrades to Sunningdale Rd. E. are based on network needs and traffic warrants, which are not anticipated to be met until 2025.

APPENDIX 'G'Preliminary 2018 GMIS Update Schedule

Appendix 'G': Preliminary 2018 GMIS Update Schedule

| Timing | Milestone |
|--------------------|---|
| February 9, | Milestone 1: GMIS Update Kickoff Meeting |
| 2017 | Presentation will be provided by LDI on the "State of the Market". The presentation will summarize the overall housing trends for the previous year and provide a projection of the trends for the following year. Commentary would be provided on a City-wide basis. Presentation will be provided by the City on the following subjects: Draft Detailed List of Works and Costs by Area; Vacant Land Inventory Update; and, Summary of Development Charge Cash Flow and |
| | Debt position. |
| February 20, | Milestone 2: Development Community Rep Interviews |
| 2017 (All week) | One on one interviews each developer in the City. The purpose of the interview is to discuss each developer's plans for bringing forward lands for development in upcoming years. |
| March 6, 2017 | Milestone 3: Internal Divisions Project Managers Meeting |
| | An internal session to discuss the information provided in the Developer Interviews and with senior managers of the various development related groups. These groups include Engineering, Development Services, and Finance. |
| March 10, 2017 | Milestone 4: Internal City Development Management Team Meeting (Internal Steering Committee) |
| | Discussion with the various engineering division head to provide direction on the timing and need of growth related infrastructure. |
| April 6, 2017 | Milestone 5: Development Community Stakeholder Session Meeting |
| | City Staff presents a draft version of the GMIS Update to the industry stakeholders. The City receives comments from the development community, makes changes as seen appropriate, and brings forward a GMIS update report to Council. |
| May, 2017 | Milestone 6: City Staff GMIS Update Presentation to the Strategic Priorities and Policy Committee Public Meeting |
| | |
| | Presentation of the proposed GMIS update (including all written development stakeholder comments) and a related Public meeting to allow comments from individual development community members. |