

BYLAW 1531/21
STURGEON VALLEY AREA OFF-SITE LEVY BYLAW
STURGEON COUNTY, ALBERTA

A BYLAW OF STURGEON COUNTY, IN THE PROVINCE OF ALBERTA, FOR THE PURPOSE OF ESTABLISHING OFF-SITE LEVIES FOR LAND THAT IS TO BE SUBDIVIDED OR DEVELOPED WITHIN THE STURGEON VALLEY AREA STRUCTURE PLAN

WHEREAS, section 648 of the *Municipal Government Act*, RSA 2000, c M-26, as amended (the MGA), provides that a Council of a municipality may enact a bylaw to provide for the imposition and payment of Off-Site Levies in respect to lands that are to be developed or subdivided and to authorize agreements to be entered into in respect of the payment of those levies;

AND WHEREAS, Council deems it necessary to establish Off-Site Levies to pay for the capital costs of new and expanded roads, for new or expanded water and wastewater facilities, and for new or expanded stormwater facilities, and the land required in connection with those facilities, all of which will be required as a result of anticipated subdivision and development within the Sturgeon Valley Area;

AND WHEREAS, Sturgeon County has and continues to consult in good faith with affected landowners and representatives of the development industry in order to address and define existing and future infrastructure and facility requirements within the Sturgeon Valley Area and the benefit to new development from such infrastructure and facilities;

AND WHEREAS, Council has received advice and reports respecting existing and future infrastructure and facility requirements within the Sturgeon Valley Area and the benefit to new development from such infrastructure and facilities, which advice and reports set out a fair and equitable calculation of Off-Site Levies in relation to benefit, in accordance with the purpose of the MGA and the principles of the *Off-Site Levies Regulation*, Alta Reg 187/2017;

AND WHEREAS, notice of intention to pass this bylaw has been given in accordance with the MGA;

NOW THEREFORE, the Council of Sturgeon County, in the Province of Alberta, duly assembled, hereby enacts as follows:

PART I: BYLAW TITLE

1. This bylaw may be cited as the “Sturgeon Valley Area Off-Site Levy Bylaw”.

PART II: DEFINITIONS

2. For the purposes of this bylaw the following words will have the following meanings:
 - a. “Act” or “MGA” means the *Municipal Government Act*, RSA 2000, c M-26, as amended.

- b. “Benefitting Area” means each of the 32 areas within the Off-Site Levy Area that will benefit from Off-Site Infrastructure, as more specifically identified in Schedule “A” to this bylaw.
- c. “Bylaw” means this Off-Site Levy Bylaw.
- d. “County Commissioner” means the Chief Administrative Officer of Sturgeon County.
- e. “County” means Sturgeon County.
- f. “Council” means the Council of Sturgeon County.
- g. “Construction Cost” means the capital cost, incurred or as estimated and adjusted annually by the Engineer, to complete the construction of the Off-Site Infrastructure and all necessary improvements forming part of the Off-Site Infrastructure. Construction costs shall include design, engineering, land costs, surveying costs, contingency costs and carrying costs. Estimated Construction Costs and Actual Construction Costs must be verified to the satisfaction of the Engineer.
- h. “Developable Land” means the area of land, in hectares, within the Off-Site Levy Area being developed or subdivided, excluding land designated as municipal reserve, environmental reserve, school reserve, road right-of-way for arterial roadways, and any land owned by a school board that is to be developed for a special building project within the meaning of the *Education Act*, SA 2012, c E-0.3.
- i. “Development Agreement” means an agreement entered into as a condition of subdivision approval or a development permit between the County and the applicant for subdivision approval or a development permit that provides for the construction of municipal improvements required to service the lands and to allow development to proceed.
- j. “Development Permit” means a permit issued in accordance with the Sturgeon County Land Use Bylaw by a Development Authority for the County or the Subdivision and Development Appeal Board.
- k. “Engineer” means the County Commissioner or their delegate.
- l. “Off-Site Infrastructure” means:
 - i. New or expanded facilities for the storage, transmission, treatment, or supplying of water;
 - ii. New or expanded facilities for the treatment, movement, or disposal of wastewater;
 - iii. New or expanded stormwater drainage facilities;

- iv. New or expanded roads required for or impacted by a subdivision or development; and
- v. Land required for or in connection with any of the above described facilities.
- m. "Off-Site Levy" means the levy imposed on lands within the Off-Site Levy Area payable to the County upon entering into a Development Agreement as a contribution towards the Construction Cost of the Off-Site Infrastructure;
- n. "Off-Site Levy Area" means those lands within the Sturgeon Valley Area as shown in Schedule "A" to this bylaw.
- o. "Off-Site Levy Regulation" means the *Off-Site Levies Regulation*, Alta Reg 187/2017, as amended or repealed and replaced from time to time;
- p. "Sturgeon Valley" means the area of the County located within the Sturgeon Valley Area Structure Plan Bylaw 882/99, as amended or repealed and replaced from time to time.

PART III: APPLICATION

- 3. An Off-Site Levy is hereby imposed and shall be collected in respect of all Developable Land within the Off-Site Levy Area as shown in Schedule "A" to this bylaw, which lands respectively benefit from one or more of the Off-Site Infrastructure facilities installed or to be installed by the County.
- 4. The Off-Site Levy payable shall be the sum of all the Off-Site Levies imposed upon the Developable Land within the relevant Benefitting Area for each of the following Off-Site Infrastructure facilities:
 - a. Transportation Infrastructure;
 - b. Water Infrastructure;
 - c. Sanitary (Wastewater) Infrastructure; and
 - d. Stormwater Infrastructuremultiplied by the area of Developable Land, in hectares, using the Off-Site Levy rates set out in Schedule "B" to this bylaw.
- 5. Off-Site Levies are deemed imposed whether or not the imposition of Off-Site Levies is made a specific condition of subdivision approval or the development permit.
- 6. Applicants for subdivision approval or the issuance of a development permit in relation to lands within the Off-Site Levy Area shall be required to enter into a Development Agreement with the County as a condition of subdivision approval or the development permit requiring, among other things, payment of the Off-Site Levy.

7. The Developable Land in respect of which the Off-Site Levy is being imposed and collected shall be identified in the subdivision approval or development permit.
8. The supporting technical information which identifies the impact of proposed subdivision and development within the Off-Site Levy Area and each Benefitting Area, estimates the Construction Costs of the Off-Site Infrastructure and identifies how the Off-Site Levy is calculated is contained in the Sturgeon Valley 2021 Off-Site Levy Update, dated March 1, 2021 prepared by Corvus Business Advisors, attached hereto as Schedule "C" to this bylaw.
9. On or before May 31 in each calendar year, the County shall prepare a written report, which report shall be made publicly available in its entirety, on the Off-Site Levies and shall include in the report the details of all Off-Site Levies received and utilized for each of the Off-Site Infrastructure facilities within the Off-Site Levy Area and each Benefitting Area, including:
 - a. Off-Site Infrastructure constructed during the previous calendar year;
 - b. Construction Costs of the Off-Site Infrastructure;
 - c. Amounts paid from the Off-Site Levies towards Construction Costs for the Off-Site Infrastructure and details as to whom the payments have been made;
 - d. Estimated Construction Costs for the Off-Site Infrastructure yet to be constructed and an explanation as to any adjustments to the estimates since the previous annual report;
 - e. Details as to the amounts collected in Off-Site Levies;
 - f. The total value of Off-Site Levies held by the County which are yet to be expended, including the amount of interest earned and information regarding any commitments made for the expenditure of Off-Site Levies that have not yet been paid out; and
 - g. Information regarding any changes to the assumptions related to the staging or timing of development and the projected construction date for the Off-Site Infrastructure.
10. Any Off-Site Levies collected under this bylaw, and any interest earned from the investment of such Off-Site Levies, shall be accounted for separately for each of the Off-Site Infrastructure facilities and must be used only for the specific type of Off-Site Infrastructure facility for which it was collected or for land required for or in connection with that purpose.
11. The County shall review the Off-Site Infrastructure and the Off-Site Levy rates every three years after the year this bylaw is adopted or as otherwise determined by the Engineer. After the review has been completed, Council may amend the bylaw to update the Off-Site Infrastructure and the Off-Site Levy rates.
12. Except as otherwise provided herein, each Development Agreement entered into by the County with respect to any subdivision approval or development permit shall make

provision for payment of all Off-Site Levies imposed by this bylaw within the times specified by County policy or guideline, as amended from time to time.

13. In the event that any of the Off-Site Levies imposed by this bylaw are not paid at the time specified in a Development Agreement, the County Commissioner is hereby authorized to take whatever action deemed necessary to collect the unpaid Off-Site Levies.
14. No Off-Site Levies shall be required to be paid where Off-Site Levies have been previously collected in respect of the Developable Lands for the same type of Off-Site Infrastructure facility.
15. Except as otherwise provided herein, a Development Agreement entered into by the County with respect to any subdivision approval or development permit may require the applicant to fund the entire Construction Cost of an Off-Site Infrastructure facility to be funded by the Off-Site Levy, subject to terms and conditions agreed to by both parties, including but not limited to, provisions for the reimbursement of the cost incurred or payment made in excess of the applicant's proportional benefit of the Off-Site Infrastructure, together with interest calculated at a rate fixed by the County for the amount of the cost of the Off-Site Infrastructure, until all land in the Benefitting Area for the specific Off-Site Infrastructure is developed or subdivided.
16. Council may from time to time adopt policies or guidelines for the assistance and direction of County Administration in determining when an applicant for subdivision approval or a development permit may be required to fund the entire Construction Cost of an Off-Site Infrastructure facility to be funded by the Off-Site Levy.
17. Nothing contained in this bylaw precludes the County from imposing such further or other charges, costs, fees or levies as may be lawfully authorized.

PART IV: SEVERABILITY

18. If at any time any provision of this bylaw is declared or held to be illegal, invalid or ultra vires, in whole or in part, then that provision shall not apply and the remainder of this bylaw shall continue in full force and effect and shall be construed as if it had been enacted without the illegal, invalid or ultra vires provision.
19. If any clause in this bylaw is found to be invalid, it shall be severed from the remainder of the bylaw and shall not invalidate the whole bylaw.

PART V: ENACTMENT

20. This Bylaw shall repeal Bylaw 1446/19.

21. This Bylaw shall come into force and take effect upon being passed.

Read a first time this 13th day of April, 2021.

Read a second time this 27th day of April, 2021.

Read a third time this 27th day of April, 2021.

"Original Signed"

Alanna Hnatiw

MAYOR

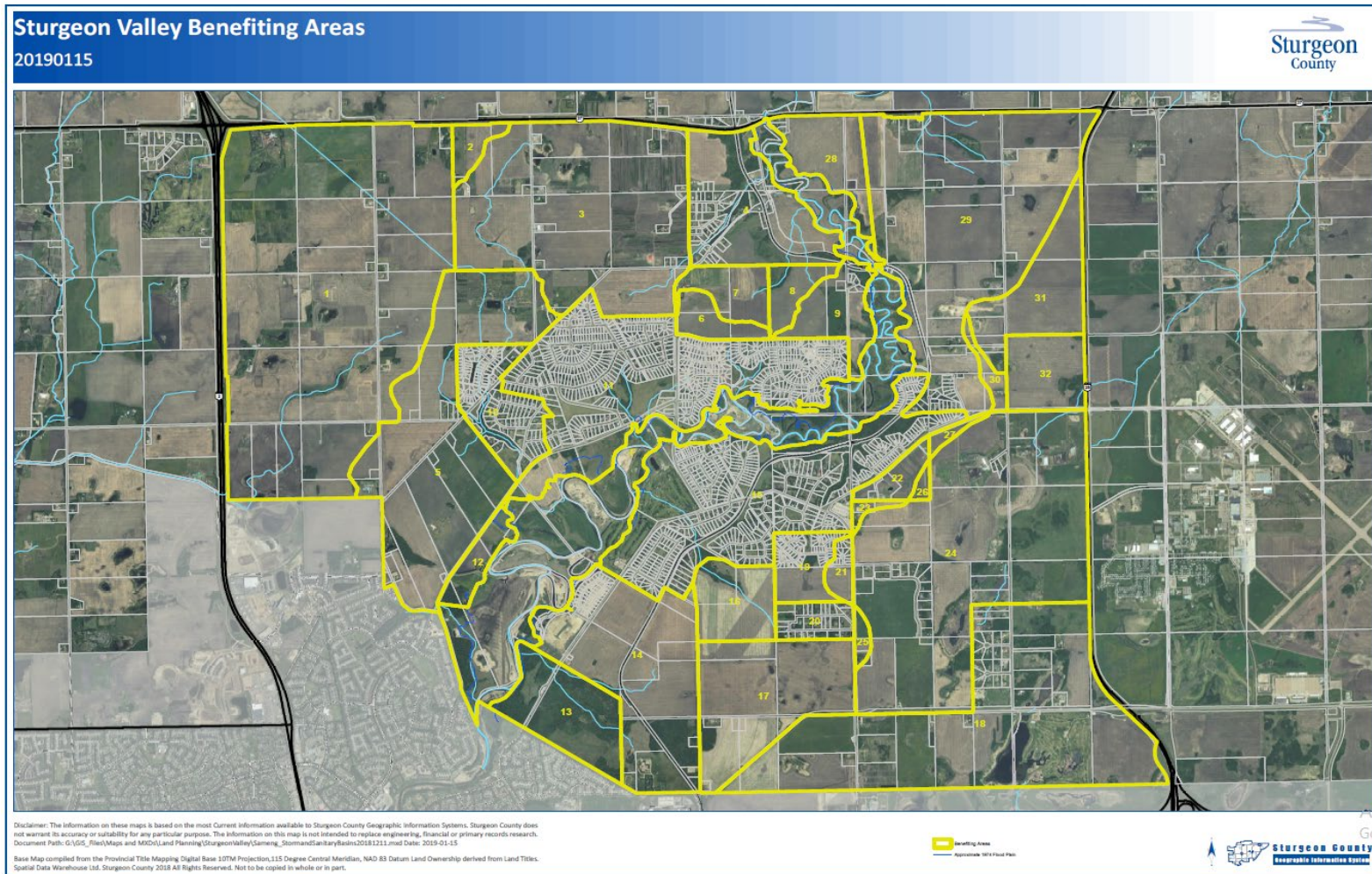
"Original Signed"

Reegan McCullough

COUNTY COMMISSIONER (CAO)

April 27, 2021

DATE SIGNED

Schedule "A"

Schedule "B"*Summary of Offsite Levy Rates by Area (Per Net Hectare)*

Area #	Transportation Levies	Water Levies	Sanitary Levies	Stormwater Levies	Total
1.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ 0	\$ 92,410
2.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ 0	\$ 92,410
3.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
4.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
5.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ 0	\$ 92,410
6.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
7.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
8.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
9.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
10.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ 0	\$ 92,410
11.0	\$ 25,084	\$ 38,237	\$ 32,952	\$ -	\$ 96,273
12.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
13.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
14.0	\$ 25,084	\$ 38,237	\$ 24,272	\$ -	\$ 87,593
15.0	\$ 25,084	\$ 38,237	\$ 24,272	\$ -	\$ 87,593
16.0	\$ 25,084	\$ 38,237	\$ 24,272	\$ -	\$ 87,593
17.0	\$ 25,084	\$ 38,237	\$ 16,099	\$ -	\$ 79,420
18.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
19.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
20.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
21.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
22.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
23.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
24.0	\$ 25,084	\$ 38,237	\$ -	\$ 0	\$ 63,321
25.0	\$ 25,084	\$ 38,237	\$ -	\$ 0	\$ 63,321
26.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
27.0	\$ 25,084	\$ 38,237	\$ -	\$ 0	\$ 63,321
28.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
29.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
30.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
31.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
32.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321



Sturgeon Valley: 2021 Offsite Levy Update

March 1st, 2021

Prepared by:

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March 1st, 2021

Sturgeon County
9613 – 100 Street
Morinville, Alberta
T8R 1L9

RE: Sturgeon Valley 2021 Offsite Levy Update

Enclosed is our report in support of the Sturgeon Valley 2021 offsite levy rate update. If you have any questions do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Greg Weiss', followed by a long horizontal line extending to the right.

Greg Weiss
President

1 DOCUMENT INFORMATION

Version		
Number	Revision Date	Summary of Changes and Author
1.0	March 1 st , 2021	FINAL. Created by CORVUS Business Advisors.

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3 INTRODUCTION

3.1 Overview

Bylaw 1446-19, established by Sturgeon County ("the County") in 2019 defines offsite levy charges for transportation, water, sanitary, and stormwater offsite infrastructure in the Sturgeon Valley. The County wishes to update this bylaw, amending offsite infrastructure included in the bylaw in alignment with the County's recent actual expenditures, receipts, latest capital/master plans, and ensuring updated costs and development forecasts are reflected fairly and equitably in new rates, thereby ensuring a financially sustainable community.

This report outlines the methodology and information used in establishing updated transportation, water, sanitary, and stormwater offsite levy rates for the Sturgeon Valley.

3.2 Methodology

The County has various infrastructure capital/master plans, and these plans have been used by County staff as a start point for developing key information for this offsite levy review. County staff reviewed existing plans and verified offsite projects for roads, water, sanitary, and drainage infrastructure¹. The County's review also included verification of benefits to existing development, future development, and benefiting areas.

Support provided by CORVUS Business Advisors ("CORVUS") included:

- Update of the offsite levy model—configuration, priming, and data loading.
- Incorporation of area measurements and land development forecasts (provided by County staff).
- Incorporation of infrastructure costs and allocation percentages for existing development, new development, and other parties (provided by County staff).
- Reconciliation of reserve opening balances (historical reconciliation details provided by County staff).
- Determination of roads, water, sanitary, and drainage levy rates.
- Presentation of results to Administration.

Offsite levy rates within the CORVUS model are forecast using a rolling 25-year review period. During this review, a cut-off date of December 31st, 2020 was established, and so the review period stems from **2021 to 2045**. The cut-off date coincides with the County's most recent year-end when the project started. Project expenditures, receipts etc. were gathered as "actuals" from the County's financial records up to the cut-off date. Beyond the cut-off date, all financial details are estimates. When the County completes its next rate update, information from January 1st, 2021 up to the new cut-off date will be converted from

¹ It was not within CORVUS' scope of work to review the County's capital/master plans. Plans were reviewed and refined by County staff.

estimates to actuals, and the rolling 25-year review period will move further out.

Costs that benefit development prior to and within the 25-year review period are included in rates. Costs that benefit development beyond the review period (called “financial oversizing”) are excluded from rates. In future years, when rates are updated and the rolling 25-year period moves further out, offsite infrastructure costs beyond 2045 will gradually be included in rates.

4 KEY FINDINGS

The following provides a summary of key findings pertaining to the updating of Sturgeon Valley offsite levy rates:

Offsite Infrastructure Costs. Offsite infrastructure costs to be included in the offsite levy bylaw total approximately **\$263.15 million**. An overview of offsite infrastructure costs and maps is provided in Appendices B1 (Transportation), C1 (Water), D1 (Sanitary), and E1 (Stormwater); and a definition of each offsite infrastructure type is provided in Appendix F.

Before determining how the infrastructure costs will be allocated to parties that benefit (e.g., existing/residual development, future development, other municipalities etc.), financing provided by way of special ear-marked grants and other contributions are deducted from offsite infrastructure costs. For this review, the County has identified approximately **\$1.64 million** in ear-marked grants and contributions. An overview of ear-marked grants and contributions and resulting net costs is provided in Appendices B2, C2, D2, and E2.

The share of costs which benefits existing/residual development (the County’s share) is **\$60.61 million**; and, the share of costs which benefits other stakeholders (e.g., neighbouring municipalities) is **\$0.08**.

The share of costs which benefits future development totals approximately **\$200.81 million (\$158.03 million + \$42.78 million)** and is based on the allocations shown in Appendices B4, C4, D4, and E4. However, **\$158.03 million** of the cost which benefits future development is beyond the 25-year review period (called “financial oversizing”). Financial oversizing is determined based on the anticipated year of construction (construction staging) which is provided in Appendices B3, C3, D3, and E3.

Of the **\$263.15 million** in total offsite infrastructure costs which benefits future development, the portion that is within the 25-year review period and included in rates today (the offsite levy share) is approximately **\$42.78 million**, as shown in the table below. This is an increase of approximately **33%** since the last update. An increase in costs puts upward pressure on rates, all other things being equal. A complete summary of offsite infrastructure net cost “flow-thru” is provided in Appendices B6, C6, D6, and E6.

Summary of Infrastructure Costs & Allocations

Infrastructure	Special Grants & Contributions	Muni Share of Costs	Other Stakeholders' Share of Costs	Developer Cost Beyond 25 Yrs (Financial Oversizing)	Developer Costs (In Rates)	Total Costs
Transportation	\$ -	\$ 52,866,316	\$ -	\$ 102,048,057	\$ 14,545,986	\$ 169,460,359
Water	\$ 15,000	\$ 5,038,059	\$ -	\$ 8,733,784	\$ 18,823,303	\$ 32,610,146
Sanitary	\$ 1,627,200	\$ 2,709,428	\$ 76,453	\$ 10,499,549	\$ 9,414,422	\$ 24,327,052
Stormwater	\$ -	\$ -	\$ -	\$ 36,748,387	\$ -	\$ 36,748,387
Total	\$ 1,642,200	\$ 60,613,803	\$ 76,453	\$ 158,029,777	\$ 42,783,711	\$ 263,145,944

Offsite Levy Collections. Before allocating infrastructure costs to benefitting lands, offsite levy costs must be reduced by the total levies collected to date. Up to **December 31st, 2020**, the County collected approximately **\$15.05 million** in offsite levies as summarized in the table below. Details associated with levy collections are shown in Appendices B5, C5, D5, and E5.

Summary of Levies Collected to Date

Levies Collected To Date	
Transportation	\$ 7,199,323
Water	\$ 5,303,034
Sanitary	\$ 2,550,025
Stormwater	\$ -
Total	\$ 15,052,382

Offsite Levy Areas and Forecast Development. To facilitate the allocation of infrastructure costs to those lands that benefit from the infrastructure, the Sturgeon Valley is parsed into **32** offsite levy areas. The area boundaries, numbering schema, and area measurements are described in Appendix A along with an offsite levy map. An overview of offsite infrastructure allocations to each benefitting area is provided in Appendices B7, C7, D7, and E7.

To calculate offsite levy rates, it is necessary to forecast the amount of land that will develop during the 25-year review period. Land development forms the denominator of the rate calculation. A larger denominator reduces rates but could potentially result in under-collection thereby placing an increased burden on tax payers. A smaller denominator increases rates but could potentially result in over-collection thereby placing an increased burden on future development. Accordingly, land development forecasts need to be: (a) reasonable and reflect current planning assumptions including the current pace of development in the community, and (b) updated regularly.

For this review, the County is forecasting development of approximately **297 ha.** during the 25-year review period (the land development forecast is shown in Appendix A). This is an increase of approximately **12%** since the last update. An increase in land development puts downward pressure on rates, all other things being equal.

Offsite Levy Reserves. The County is currently managing offsite levy receipts and withdrawals in the Sturgeon Valley via four accounts (i.e., one account for each infrastructure type), and this in alignment with MGA requirements. The reason the MGA stipulates the requirement for separate accounts is because offsite levies can only be used for the type of infrastructure for which they were collected (e.g., water levies can only be used to construct water offsite infrastructure, not sanitary infrastructure etc.). In addition to account updates, during this review County staff identified several amendments to historic account information. Accordingly, the County's offsite levy account balances require amendment as discussed further below and shown in Appendices B8, C8, D8, and E8.

Interest. Offsite levy account balances (both actual and forecast) are impacted by interest. Actual reserve inflows and forecast reserve balances that are in a positive/surplus position earn interest (as required by the MGA). Actual reserve outflows and forecast reserve balances that are in a negative/deficit position are charged interest (forecast balances that are negative indicate the requirement for front-ending). During this review, several amendments to interest calculations were identified. An overview of account adjustments is discussed further below, and interest rates and forecast balances over the 25-year review period are shown in Appendices B9, C9, D9, and E9.

Front-ending Approach. Front-ending is an extremely important concept that underpins rigorous management of offsite levies. Front-ending represents monies owed by future development to the front-ending party (municipality or developer) for past construction undertaken on behalf of future development—i.e., a front-ending party will often pay for its share of an offsite infrastructure project in addition to that portion of the project which benefits future development when offsite levy reserve balances are insufficient.

There are 2 alternatives for repaying front-ending debts to claimants: (1) the First-In First-Out (FIFO) approach, and (2) the Average Outstanding Claim (AOC) approach. The FIFO approach can create: (a) stagnation of development, and (b) increased pressure on the municipality (i.e., taxpayers) to front-end. Accordingly, in 2017 the County adopted the AOC approach as part of its broader offsite levy policy framework.

Under the AOC approach, claimants share distributions based on their proportionate share of outstanding claims. For example, Developer A fronts a \$1 million piece of infrastructure in 2016. Developer B front-ends a \$0.5 million piece of infrastructure in 2017. And Developer C is contemplating front-ending a \$0.5 million piece of infrastructure in the future. Using the AOC approach, offsite levy collections are shared between Developer A (66.6% of distributions) and Developer B (33.3% of distributions) until fully repaid². If Developer C chooses to front-end in the future, then future claim reimbursements would be shared amongst Developer A (50% of distributions) and Developer B (25% of distributions) and Developer C (25% of distributions) until repaid³. This approach is preferred, as it ensures

² $\$1,000,000 / (\$1,000,000 + \$500,000) = 66.6\%$. $\$500,000 / (\$1,000,000 + \$500,000) = 33.3\%$.

³ $\$1,000,000 / (\$1,000,000 + \$500,000 + \$500,000) = 50\%$. $\$500,000 / (\$1,000,000 + \$500,000 + \$500,000) = 25\%$.

regular positive cash flow to all claimants, and therefore no disincentive to future front-ending.

In the Sturgeon Valley, it is our understanding that the County is the only front-ending party currently. As such, all excess cash in reserve accounts should always be used to pay-down the County's front-ending debt (described below).

Offsite Levy Account Adjustments. At end 2020, County records for the transportation account reflected a surplus balance of **\$2,335,289**. However, after adjustments and front-ending claim repayments, the balance in the transportation account should be amended to reflect a surplus of approximately **\$1,884,671** at end 2020. A complete reconciliation of the transportation account balance is provided in Appendix B8.

At end 2020, County records for the water account reflected a surplus balance of **\$1,447,430**. However, after adjustments and front-ending claim repayments, the balance in the water account should be amended to a deficit of approximately **\$(3,449,056)** at end 2020. A complete reconciliation of the water account balance is provided in Appendix C8.

At end 2020, County records for the sanitary account reflected a surplus balance of **\$773,734**. However, after adjustments and front-ending claim repayments, the balance in the sanitary account should be amended to a deficit of approximately **\$(2,013,342)** at end 2020. A complete reconciliation of the sanitary account balance is provided in Appendix D8.

At end 2020, County records for the stormwater account reflected a surplus balance of **\$119,061**. However, after adjustments and front-ending claim repayments, the balance in the stormwater account should be amended to a surplus of approximately **\$118,956** at end 2020. A complete reconciliation of the stormwater account balance is provided in Appendix E8.

5 RATE UPDATES

For future development to pay for its share of the **\$263.15 million** offsite infrastructure costs contained in the County's capital plans for the Sturgeon Valley, rates are approximately **\$82,794** per net hectare on a weighted average basis, as shown in the tables below. A comparison of rates to other municipalities is shown in Appendix G.

Rates are increasing from an average of approximately \$67,814 per net hectare (contained in the current bylaw) to an average of \$82,794 per net hectare. The primary reason for the increase in rates is the 33% increase in costs outlined in the capital plan.

Offsite Levy Rates (Per Net Hectare): High, Low, & Averages⁴

	Transportation Levies	Water Levies	Sanitary Levies	Storm Levies	Total
High	\$ 25,084	\$ 38,237	\$ 32,952	\$ 0	\$ 96,273
Low	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
Weighted Average	\$ 25,084	\$ 38,237	\$ 19,472	\$ -	\$ 82,794

Summary of Offsite Levy Rates by Area (Per Net Hectare)

Area #	Transportation Levies	Water Levies	Sanitary Levies	Stormwater Levies	Total
1.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ 0	\$ 92,410
2.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ 0	\$ 92,410
3.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
4.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
5.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ 0	\$ 92,410
6.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
7.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
8.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
9.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ -	\$ 92,410
10.0	\$ 25,084	\$ 38,237	\$ 29,089	\$ 0	\$ 92,410
11.0	\$ 25,084	\$ 38,237	\$ 32,952	\$ -	\$ 96,273
12.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
13.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
14.0	\$ 25,084	\$ 38,237	\$ 24,272	\$ -	\$ 87,593
15.0	\$ 25,084	\$ 38,237	\$ 24,272	\$ -	\$ 87,593
16.0	\$ 25,084	\$ 38,237	\$ 24,272	\$ -	\$ 87,593
17.0	\$ 25,084	\$ 38,237	\$ 16,099	\$ -	\$ 79,420
18.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
19.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
20.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
21.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
22.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
23.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
24.0	\$ 25,084	\$ 38,237	\$ -	\$ 0	\$ 63,321
25.0	\$ 25,084	\$ 38,237	\$ -	\$ 0	\$ 63,321
26.0	\$ 25,084	\$ 38,237	\$ 8,758	\$ -	\$ 72,079
27.0	\$ 25,084	\$ 38,237	\$ -	\$ 0	\$ 63,321
28.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
29.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
30.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
31.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321
32.0	\$ 25,084	\$ 38,237	\$ -	\$ -	\$ 63,321

⁴ Highs, Lows, and Averages are shown for information purposes only. Developers pay the actual rate applicable to their specific development area.

6 RECOMMENDATIONS

In addition to implementing the offsite levy rates outlined in *Section 5*, CORVUS recommends the following:

1. Undertake a detailed a review and reconciliation of a historic projects in the Sturgeon Valley including expenditures, grants, contributions, and account withdrawals, similar to the review recently undertaken for the Sturgeon Industrial Park.
2. Assuming there are no significant amendments stemming from the review of historic projects (see item 1 above), amend the County account records and balances to align with the account balances in the offsite levy model and described in Appendices B8, C8, D8, and E8; and in so doing, withdraw excess funds to pay down front-ending claims, or top-up account shortfalls as required. If significant amendments are forthcoming from the review of historic projects (see item 1 above), complete next year's model and rate update before aligning County records to the account balances in the model.
3. Establish a formal and regular communication and documentation process between the Finance, Planning, and Engineering departments to enable the accurate documentation of offsite levy expenditure and front-ending details.
4. Limit future withdrawals from offsite levy accounts to only that portion of project cost for which future development is responsible (i.e., Project Cost X Developer Share %).
5. During the reconciliation account balances in the future, ensure the interest earning and charge rates that underpin the offsite levy bylaw for that time period are used to determine reserve interest impacts.
6. Changes to the MGA in 2017 enable municipalities to charge offsite levies for recreation, fire, police, library, and interchange facilities. County Administration and Council should consider whether it wishes to adopt such levies in the future and, if so, begin developing the necessary supporting documentation that will be needed to support such levies. Support documentation requirements for these new levies are more stringent (see *MGA Section 648* and *Regulation AR 187/2017*).

7 ACKNOWLEDGEMENTS

CORVUS Business Advisors would like to thank all Sturgeon County staff from Engineering, Planning, and Finance who supported the work of this review.

8 DISCLAIMER

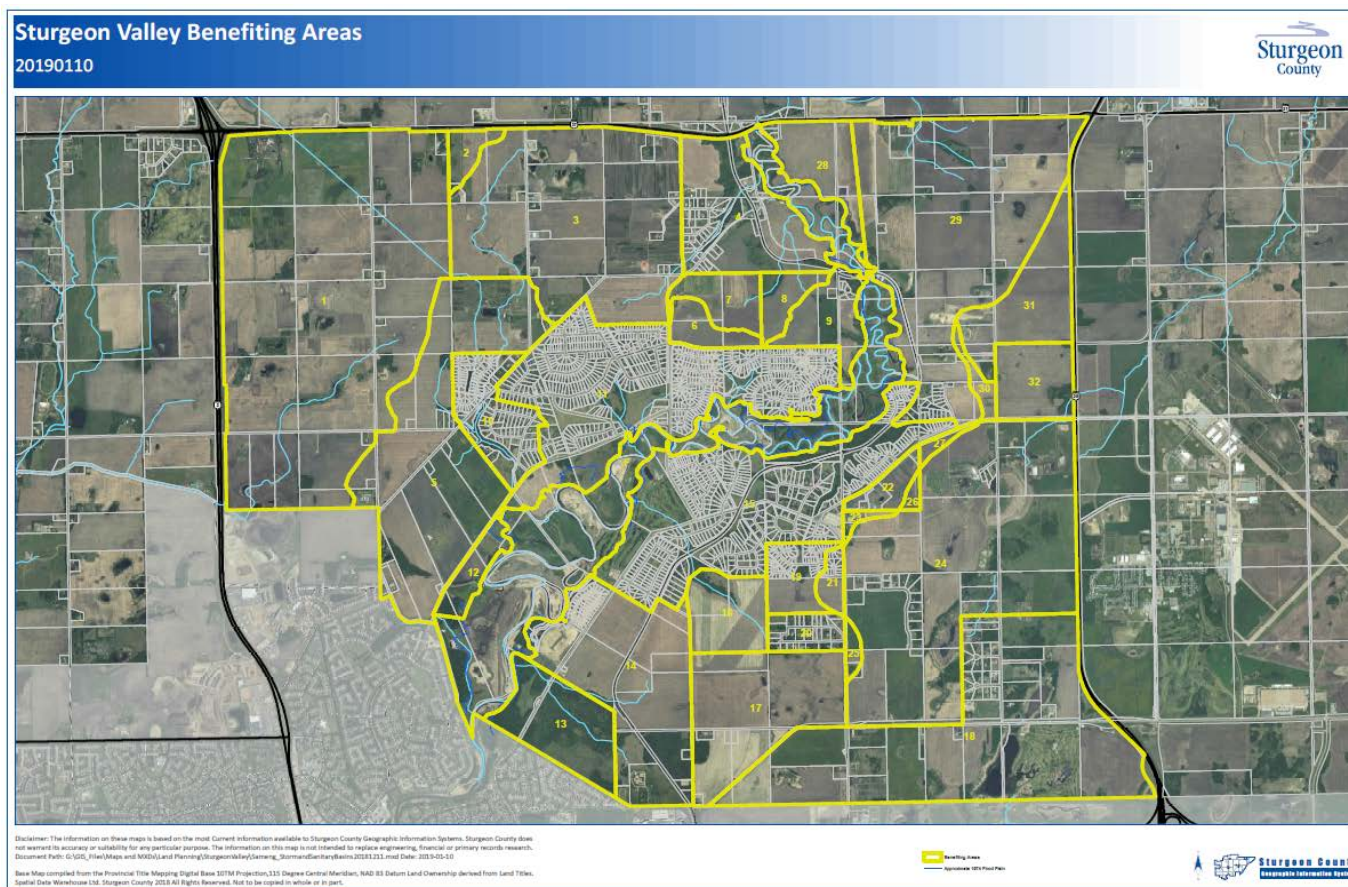
CORVUS Business Advisor has relied upon Sturgeon County and its advisors to provide all of the data and information used to construct the offsite levy model and create the rates, such as planning data and assumptions, development forecasts and assumptions, infrastructure costs and costs estimates, allocations to benefitting parties, allocation to benefitting areas, and other assumptions etc. As such, CORVUS Business Advisors makes no guarantee as to the accuracy of the input data and information provided by these groups or the results that stem from this data and information.

Offsite levy rates are not intended to stay static; they are based upon assumptions and the best available information of the day. Planning assumptions, cost estimates etc. can change each year. Accordingly, the Municipal Government Act requires that offsite levy rates be updated with the most available information on a regular basis (usually annually). When information changes, it will be reflected in a future update, and rates adjusted accordingly.

APPENDIX A: OFFSITE LEVY AREAS AND LAND STAGING

The Sturgeon Valley is parsed into **32** offsite levy areas, as shown in the map below. Areas take into consideration the intersection points of existing/planned infrastructure basins (e.g., water and sanitary basins), and also various natural and man-made barriers (e.g., rivers, highways, etc.). All offsite levy infrastructure costs are allocated to one or more areas.

Offsite Levy Areas



Total net development area, the amount of land available for development in all offsite levy areas, is approximately **4113 ha**. In calculating net development area, allowances have been made for environmental reserves, municipal reserves, and arterial road right of way.

Offsite Levy Net Development Area⁵

Area Ref. #	Development Area Location	Land Use	Gross Area (ha.)	Environmental Reserves (ha.)	Sub-total	Municipal Reserves	Arterial Right of Way	Net Development Area (ha.)
1.3	See Map	Residential	816.09	-	816.09	81.61	37.14	697.34
2.3	See Map	Residential	20.69	-	20.69	2.07	0.93	17.69
3.3	See Map	Residential	426.42	-	426.42	42.64	30.32	353.46
4.3	See Map	Residential	162.48	5.06	157.42	15.74	16.18	125.50
5.3	See Map	Residential	353.33	-	353.33	35.33	32.31	285.69
6.3	See Map	Residential	29.94	-	29.94	2.99	5.97	20.97
7.3	See Map	Residential	44.49	-	44.49	4.45	3.03	37.01
8.3	See Map	Residential	30.08	-	30.08	3.01	1.80	25.27
9.3	See Map	Residential	61.36	13.02	48.34	4.83	9.81	33.70
10.3	See Map	Residential	86.94	7.68	79.26	8.30	14.39	56.58
11.3	See Map	Residential	362.75	58.59	304.16	5.42	67.33	231.41
12.3	See Map	Residential	31.86	-	31.86	3.19	3.46	25.22
13.3	See Map	Residential	104.04	101.88	2.15	-	2.15	-
14.2	See Map	Industrial	40.21	-	40.21	4.02	-	36.19
14.3	See Map	Residential	256.92	5.67	251.25	25.13	26.13	200.00
15.3	See Map	Residential	358.23	47.68	310.55	31.06	63.83	215.66
16.3	See Map	Residential	68.42	4.96	63.46	6.35	3.28	53.83
17.3	See Map	Residential	183.64	-	183.64	18.36	20.60	144.67
18.3	See Map	Residential	479.24	11.68	467.56	46.76	37.89	382.92
19.3	See Map	Residential	45.20	-	45.20	4.52	7.06	33.62
20.3	See Map	Residential	32.54	4.06	28.48	-	3.73	24.75
21.3	See Map	Residential	16.04	-	16.04	1.60	2.47	11.97
22.3	See Map	Residential	25.04	-	25.04	2.50	4.45	18.08
23.3	See Map	Residential	7.08	-	7.08	0.71	3.14	3.23
24.3	See Map	Residential	541.93	-	541.93	54.19	28.81	458.92
25.3	See Map	Residential	8.52	-	8.52	0.85	1.88	5.79
26.3	See Map	Residential	5.22	-	5.22	0.52	1.43	4.70
27.3	See Map	Residential	7.32	-	7.32	0.73	1.43	5.16
28.3	See Map	Residential	70.87	0.19	70.68	7.07	4.93	58.68
29.3	See Map	Residential	467.28	1.55	465.73	46.57	33.38	385.78
30.3	See Map	Residential	13.55	-	13.55	1.36	1.32	10.88
31.3	See Map	Residential	107.21	-	107.21	10.72	3.81	92.67
32.3	See Map	Residential	66.34	-	66.34	6.63	4.02	55.68
Total			5,331.27	262.03	5,069.24	479.23	476.99	4,113.01

Summary of Offsite Levy Net Development Area

Description	ha.
Gross Development Area	5,331.27
Less Environment Reserve	262.03
Less Municipal Reserve	479.23
Less ROW Allowance	476.99
Net Development Area	4,113.01

*Note: 1 Hectare (ha.) = ~2.47 Acres

Net development area definitions will be applied in determining offsite levy obligations of developers on application for subdivision or development within Sturgeon County. Net development area is defined as follows:

- Gross Area – The area of lands to be developed in hectares that have not previously paid an offsite levy.
 - Less: Any environmental reserves contained within the development area Including environmental reserves and environmental easements.
 - Less: A 10% allowance for Municipal Reserves.
 - Less: The measurement of arterial road right of way that bisects the

⁵ Area measurements were provided by County staff.

development lands.

- Equals: Net Developable Area, which is the area subject to offsite levies.

A rate planning period of 25 years underpins the offsite levy model and rate calculations. Many municipalities use this planning period as it provides a reasonable timeframe to recoup the costs associated with offsite levy infrastructure construction, and it aligns with the timeframes of many municipal capital planning and construction cycles.

Of the **4113 ha.** of net land available across all offsite levy areas, approximately **563 ha. (14%)** have been developed to date, and planners estimate that approximately **297 ha. (7%)** will develop during the next 25-years (the rate planning period) as shown in the tables below.

Summary of Anticipated Development during the 25 Year Rate Planning Period

Developed to Date	562.86	13.7%
Developed In Next 25 Years	297.10	7.2%
Developed Beyond 25 Years	3,253.05	79.1%
Net Development Area	4,113.01	

Area Ref. #	Area Developed in Next 25 years (Net ha.)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
17.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.3	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.00	-	-	-	-	-
17.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.3	53.000	-	-	-	-	-	-	-	-	-	-	-	-	-	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	-	-
18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19.3	17.650	-	-	-	-	-	-	-	-	4.63	3.00	3.00	3.00	3.00	1.02	-	-	-	-	-	-	-	-	-	-	-
19.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.3	7.310	-	-	-	-	3.65	-	3.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.3	18.080	-	-	-	11.75	-	-	6.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.3	4.690	-	-	-	-	-	-	4.69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30.3	-	-	-	-	-	-	-	-	-	-	-	-														

APPENDIX B: TRANSPORTATION

B1. Transportation Offsite Infrastructure

To support future growth, transportation offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) future debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$155.76 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by County staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support development during the 25-year review period. The remainder of this section outlines how the “net” costs for development are determined.

Summary of Transportation Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Future Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Cost
1	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Sub Grade	\$ 1,836,738	\$ -	\$ -	\$ 1,836,738
2	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Pave	\$ 1,681,017	\$ -	\$ -	\$ 1,681,017
3	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Road Widening & Sub Grade	\$ 365,189	\$ -	\$ -	\$ 365,189
4	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Pave	\$ 597,189	\$ -	\$ -	\$ 597,189
5	Starkey Road (Station 2+400 to Highway 37)	\$ -	\$ -	\$ 20,057,837	\$ 20,057,837
6	Twp. 542 (Range Road 250 to Range Road 251)	\$ -	\$ -	\$ 1,748,073	\$ 1,748,073
7	Sturgeon Road @ RR 250 (Roundabout - Access Management)	\$ -	\$ -	\$ 1,897,021	\$ 1,897,021
8	Range Road 251 (Railway Trestle to Twp. 542)	\$ -	\$ -	\$ 2,097,626	\$ 2,097,626
9	127 Street Stage 1	\$ -	\$ -	\$ 36,859,967	\$ 36,859,967
10	127 Street Stage 2A	\$ -	\$ -	\$ 24,554,674	\$ 24,554,674
11	127 Street Stage 2B	\$ -	\$ -	\$ 29,488,458	\$ 29,488,458
12	127 Street Stage 3	\$ -	\$ -	\$ 15,243,042	\$ 15,243,042
13	127 Street Stage 4	\$ -	\$ -	\$ 10,352,450	\$ 10,352,450
14	Sturgeon Road and Starkey Road Traffic Calming (Roundabout)	\$ 257,965	\$ -	\$ -	\$ 257,965
15	Bellerose Drive	\$ 5,476,363	\$ 33,004	\$ -	\$ 5,509,367
16	Trestle Ridge Road	\$ 1,179,543	\$ -	\$ -	\$ 1,179,543
17	Sturgeon Road and Starkey Road	\$ 1,719,517	\$ -	\$ -	\$ 1,719,517
18	Range Road 250 (Trestle Ridge to Twp. 544A)	\$ -	\$ -	\$ 583,402	\$ 583,402
19	Township Road 544 (Coal mine Road to Hwy 2)	\$ -	\$ -	\$ 2,731,283	\$ 2,731,283
20	Coal Mine Road (Neil Ross Connection)	\$ -	\$ -	\$ 6,300,000	\$ 6,300,000
21	Starkey Road & Highway 37 Roundabout	\$ -	\$ -	\$ 2,000,000	\$ 2,000,000
22	Range Road 252 – Highway 37 to Coal Mine Road	\$ -	\$ -	\$ 2,400,000	\$ 2,400,000
100	Unallocated Offsite Levies Collected to Dec 31, 2018	\$ -	\$ -	\$ -	\$ -
		\$ 13,113,521	\$ 33,004	\$ 156,313,834	\$ 169,460,359

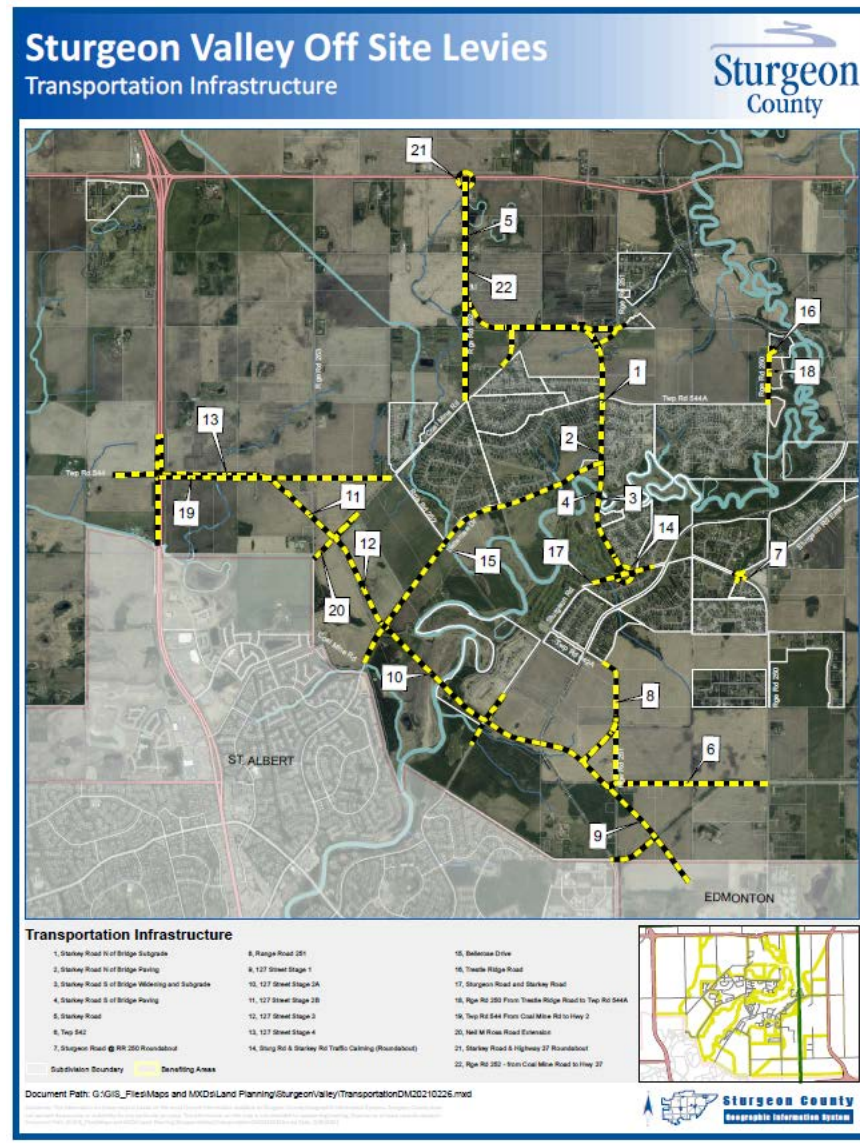
*Past expenditures include past financing expenditures (interest) if any.

**Costs estimates provided by County staff.

***Estimates include engineering and contingencies.

****Unallocated levies to end-2018 (if any) were set-up as an individual project (#100) and credited 100% to future development and to all offsite levy areas (see *Section B5*).

*****Offsite infrastructure definitions are contained in Appendix F.



B2. Transportation Offsite Infrastructure Grants & Contributions to Date

The MGA enables the County to allocate the costs of offsite infrastructure to development, other than those costs that have been provided by way of special ear-marked grant or contribution (i.e., contributed infrastructure). Sturgeon County has/will receive **\$0.00** in special ear-marked grants or contributions for transportation offsite levy infrastructure as shown in the table below (note, if the County receives other ear-marked grants or contributions in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). The result is that the total reduced project estimated cost is **\$169.46 million**.

Special Grants and Contributions for Transportation Offsite Infrastructure

Item	Project Description	Total Project Cost	Special Provincial Grants	Developer Agreement Contributions	Other Contributions	Reduced Project Cost
1	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Sub Grade	\$ 1,836,738	\$ -	\$ -	\$ -	\$ 1,836,738
2	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Pave	\$ 1,681,017	\$ -	\$ -	\$ -	\$ 1,681,017
3	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Road Widening & Sub Grade	\$ 365,189	\$ -	\$ -	\$ -	\$ 365,189
4	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Pave	\$ 597,189	\$ -	\$ -	\$ -	\$ 597,189
5	Starkey Road (Station 2+400 to Highway 37)	\$ 20,057,837	\$ -	\$ -	\$ -	\$ 20,057,837
6	Twp. 542 (Range Road 250 to Range Road 251)	\$ 1,748,073	\$ -	\$ -	\$ -	\$ 1,748,073
7	Sturgeon Road @ RR 250 (Roundabout - Access Management)	\$ 1,897,021	\$ -	\$ -	\$ -	\$ 1,897,021
8	Range Road 251 (Railway Trestle to Twp. 542)	\$ 2,097,626	\$ -	\$ -	\$ -	\$ 2,097,626
9	127 Street Stage 1	\$ 36,859,967	\$ -	\$ -	\$ -	\$ 36,859,967
10	127 Street Stage 2A	\$ 24,554,674	\$ -	\$ -	\$ -	\$ 24,554,674
11	127 Street Stage 2B	\$ 29,488,458	\$ -	\$ -	\$ -	\$ 29,488,458
12	127 Street Stage 3	\$ 15,243,042	\$ -	\$ -	\$ -	\$ 15,243,042
13	127 Street Stage 4	\$ 10,352,450	\$ -	\$ -	\$ -	\$ 10,352,450
14	Sturgeon Road and Starkey Road Traffic Calming (Roundabout)	\$ 257,965	\$ -	\$ -	\$ -	\$ 257,965
15	Bellerose Drive	\$ 5,509,367	\$ -	\$ -	\$ -	\$ 5,509,367
16	Trestle Ridge Road	\$ 1,179,543	\$ -	\$ -	\$ -	\$ 1,179,543
17	Sturgeon Road and Starkey Road	\$ 1,719,517	\$ -	\$ -	\$ -	\$ 1,719,517
18	Range Road 250 (Trestle Ridge to Twp. 544A)	\$ 583,402	\$ -	\$ -	\$ -	\$ 583,402
19	Township Road 544 (Coal mine Road to Hwy 2)	\$ 2,731,283	\$ -	\$ -	\$ -	\$ 2,731,283
20	Coal Mine Road (Neil Ross Connection)	\$ 6,300,000	\$ -	\$ -	\$ -	\$ 6,300,000
21	Starkey Road & Highway 37 Roundabout	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,000,000
22	Range Road 252 – Highway 37 to Coal Mine Road	\$ 2,400,000	\$ -	\$ -	\$ -	\$ 2,400,000
100	Unallocated Offsite Levies Collected to Dec 31, 2018	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 169,460,359	\$ -	\$ -	\$ -	\$ 169,460,359

B3. Year of Construction

The timing of construction is used to determine the impact of inflation on cost, the impact of forecast reserve balances, and the estimate of financial oversizing (described in the Section that follows). The County anticipates construction of offsite infrastructure as outlined in the table below. Note, if this schedule is adjusted in the future, it will be reflected in one of the County's annual rate/bylaw updates.

Forecast Year of Construction

Item	Project Description	Construction Start Year
1	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Sub Grade	2013
2	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Pave	2014
3	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Road Widening & Sub Grade	2014
4	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Pave	2014
5	Starkey Road (Station 2+400 to Highway 37)	2050
6	Twp. 542 (Range Road 250 to Range Road 251)	2027
7	Sturgeon Road @ RR 250 (Roundabout - Access Management)	2023
8	Range Road 251 (Railway Trestle to Twp. 542)	2027
9	127 Street Stage 1	2050
10	127 Street Stage 2A	2050
11	127 Street Stage 2B	2050
12	127 Street Stage 3	2050
13	127 Street Stage 4	2050
14	Sturgeon Road and Starkey Road Traffic Calming (Roundabout)	2020
15	Bellerose Drive	2008
16	Trestle Ridge Road	2007
17	Sturgeon Road and Starkey Road	2009
18	Range Road 250 (Trestle Ridge to Twp. 544A)	2025
19	Township Road 544 (Coal mine Road to Hwy 2)	2050
20	Coal Mine Road (Neil Ross Connection)	2022
21	Starkey Road & Highway 37 Roundabout	2050
22	Range Road 252 – Highway 37 to Coal Mine Road	2021

*The share of projects constructed beyond the 25-year review period are not included in rates today (see financial oversizing in next section).

**Project costs are inflated by 2% per annum to 2022 and 3% per annum thereafter to the year of construction.

B4. Transportation Offsite Infrastructure Benefiting Parties

The transportation offsite infrastructure previously outlined will benefit various parties to varying degrees. Three potential benefiting parties were identified including:

1. Sturgeon County – a portion of the transportation infrastructure which is required to service existing residents. This residual benefit is determined at the point in time when the project is added to the bylaw (i.e., it does not fluctuate from year-to-year).
2. Other Stakeholders – other municipalities that benefit from the infrastructure.
3. Future Development:
 - Financial Oversizing – that portion of cost (i.e., levyable transportation infrastructure costs) which benefits future development beyond the 25-year review period.
 - **In Rates – that portion of cost (i.e., levyable transportation infrastructure costs) which benefits future development within the 25-year review period.**

The table below outlines the allocation of transportation offsite levy infrastructure costs to benefiting parties.

Allocation of Transportation Infrastructure to Benefiting Parties

Item	Project Description	Reduced Project Cost	Muni Share %	Other Stakeholder Share	Developer Share Beyond 25 Yrs (Financial Oversizing %)	OSL / Developer Share %
1	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Sub Grade	\$ 1,836,738	80.0%		0.0%	20.0%
2	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Pave	\$ 1,681,017	80.0%		0.0%	20.0%
3	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Road Widening & Sub Grade	\$ 365,189	80.0%		0.0%	20.0%
4	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Pave	\$ 597,189	80.0%		0.0%	20.0%
5	Starkey Road (Station 2+400 to Highway 37)	\$ 20,057,837	80.0%		20.0%	0.0%
6	Twp. 542 (Range Road 250 to Range Road 251)	\$ 1,748,073	20.0%		19.2%	60.8%
7	Sturgeon Road @ RR 250 (Roundabout - Access Management)	\$ 1,897,021	75.0%		2.0%	23.0%
8	Range Road 251 (Railway Trestle to Twp. 542)	\$ 2,097,626	20.0%		19.2%	60.8%
9	127 Street Stage 1	\$ 36,859,967	20.0%		80.0%	0.0%
10	127 Street Stage 2A	\$ 24,554,674	20.0%		80.0%	0.0%
11	127 Street Stage 2B	\$ 29,488,458	20.0%		80.0%	0.0%
12	127 Street Stage 3	\$ 15,243,042	20.0%		80.0%	0.0%
13	127 Street Stage 4	\$ 10,352,450	20.0%		80.0%	0.0%
14	Sturgeon Road and Starkey Road Traffic Calming (Roundabout)	\$ 257,965	25.0%		0.0%	75.0%
15	Bellerose Drive	\$ 5,509,367	58.0%		0.0%	42.0%
16	Trestle Ridge Road	\$ 1,179,543	58.0%		0.0%	42.0%
17	Sturgeon Road and Starkey Road	\$ 1,719,517	58.0%		0.0%	42.0%
18	Range Road 250 (Trestle Ridge to Twp. 544A)	\$ 583,402	20.0%		12.8%	67.2%
19	Township Road 544 (Coal mine Road to Hwy 2)	\$ 2,731,283	20.0%		80.0%	0.0%
20	Coal Mine Road (Neil Ross Connection)	\$ 6,300,000	20.0%		3.2%	76.8%
21	Starkey Road & Highway 37 Roundabout	\$ 2,000,000	20.0%		80.0%	0.0%
22	Range Road 252 – Highway 37 to Coal Mine Road	\$ 2,400,000	20.0%		0.0%	80.0%
100	Unallocated Offsite Levies Collected to Dec 31, 2018	\$ -			0.0%	100.0%
		\$ 169,460,359				

*Allocations were determined by County staff.

**Financial oversizing is determined by separating out the pro rata portion of developer cost beyond the 25-year review period, in comparison with the anticipated year of construction. As the years move forward and rates are updated, these additional developer costs will be included in rate calculations. For example, a project which is slated to be constructed in year 20 of the 25-year review period will have 20% (5/25) of its costs in rates today, and 80% (20/25) of its costs will sit beyond the 25-year review period.

B5. Existing Receipts & Adjusted Levy Cost

Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of approximately **\$14.55 million**.

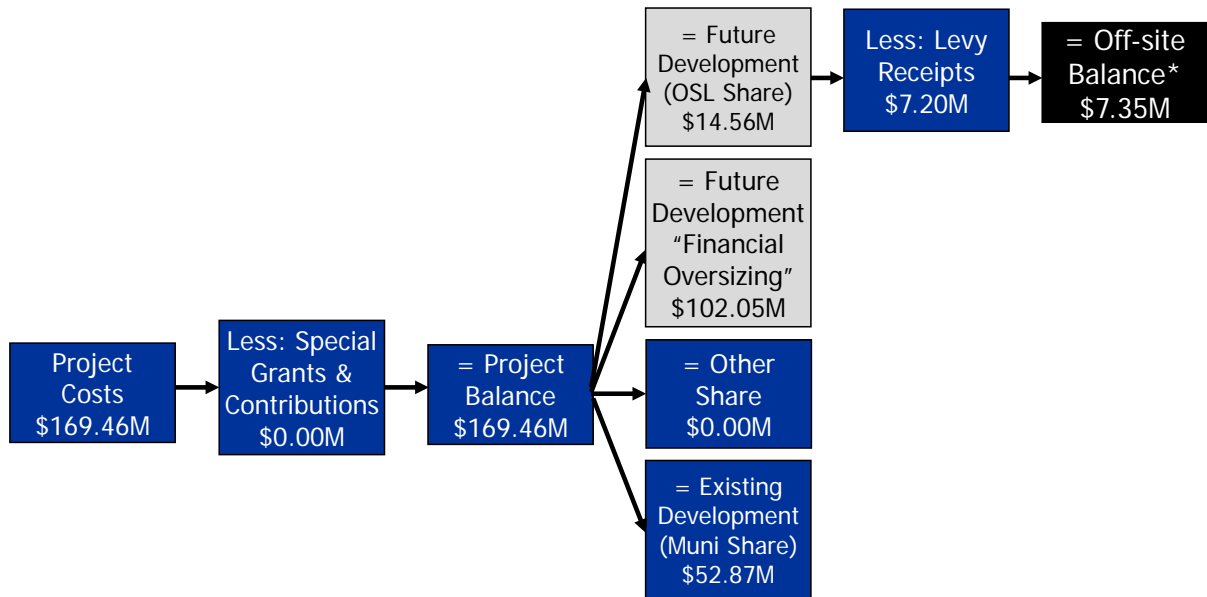
However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers (if any) need to be considered in determining the residual/net costs to developers. County staff have advised that **\$7.20 million** in transportation levies have been applied/collected as shown in the table below. This results in an adjusted offsite levy cost of approximately **\$7.35 million**.

Offsite Levy Funds Applied to Date

Item	Project Description	OSL / Developer Cost	Offsite Levy Funds Collected to Dec 31, 2018	Offsite Levy Funds Collected Starting Jan 1, 2019	Adjusted Developer (Levy) Cost
1	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Sub Grade	\$ 367,348	\$ 367,348	\$ (0)	\$ (0)
2	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Pave	\$ 336,203	\$ 336,203	\$ 0	\$ 0
3	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Road Widening & Sub Grade	\$ 73,038	\$ 73,038	\$ (0)	\$ (0)
4	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Pave	\$ 119,438	\$ 119,438	\$ 0	\$ 0
5	Starkey Road (Station 2+400 to Highway 37)	\$ -	\$ -	\$ -	\$ -
6	Twp. 542 (Range Road 250 to Range Road 251)	\$ 1,062,829	\$ -	\$ 27,121	\$ 1,035,707
7	Sturgeon Road @ RR 250 (Roundabout - Access Management)	\$ 436,315	\$ -	\$ 10,577	\$ 425,738
8	Range Road 251 (Railway Trestle to Twp. 542)	\$ 1,275,357	\$ -	\$ 26,036	\$ 1,249,321
9	127 Street Stage 1	\$ -	\$ -	\$ -	\$ -
10	127 Street Stage 2A	\$ -	\$ -	\$ -	\$ -
11	127 Street Stage 2B	\$ -	\$ -	\$ -	\$ -
12	127 Street Stage 3	\$ -	\$ -	\$ -	\$ -
13	127 Street Stage 4	\$ -	\$ -	\$ -	\$ -
14	Sturgeon Road and Starkey Road Traffic Calming (Roundabout)	\$ 193,474	\$ -	\$ 3,883	\$ 189,591
15	Bellerose Drive	\$ 2,313,934	\$ 2,054,568	\$ (0)	\$ 259,366
16	Trestle Ridge Road	\$ 495,408	\$ 495,408	\$ 0	\$ 0
17	Sturgeon Road and Starkey Road	\$ 722,197	\$ 722,197	\$ 0	\$ 0
18	Range Road 250 (Trestle Ridge to Twp. 544A)	\$ 392,046	\$ -	\$ 6,789	\$ 385,258
19	Township Road 544 (Coal mine Road to Hwy 2)	\$ -	\$ -	\$ 48,732	\$ (48,732)
20	Coal Mine Road (Neil Ross Connection)	\$ 4,838,400	\$ -	\$ -	\$ 4,838,400
21	Starkey Road & Highway 37 Roundabout	\$ -	\$ -	\$ -	\$ -
22	Range Road 252 – Highway 37 to Coal Mine Road	\$ 1,920,000	\$ -	\$ -	\$ 1,920,000
100	Unallocated Offsite Levies Collected to Dec 31, 2018	\$ -	\$ 2,907,985	\$ -	\$ (2,907,985)
		\$ 14,545,986	\$ 7,076,185	\$ 123,138	\$ 7,346,663

B6. Summary of Transportation Offsite Levy Cost Flow-through

As shown in the figure below, the total cost for transportation infrastructure that forms the basis of the rate is approximately **\$7.35 million**. The cost allocations to each benefiting party are based on the benefiting percentages shown in previous section. The offsite levy balance (due from developers) is allocated to various benefiting areas (as described in the next section).

Total Transportation Offsite Levy Costs

B7. Transportation Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a “1” below applicable area numbers. Benefiting areas were determined by County staff. The lands anticipated to develop over the 25-years in each offsite levy benefiting area are used to determine rates.

Transportation Allocations to Benefitting Areas

[illegible]

Item	Project Description	17.1	17.2	17.3	17.4	18.1	18.2	18.3	18.4	19.1	19.2	19.3	19.4	20.1	20.2	20.3	20.4	21.1	21.2	21.3	21.4	22.1	22.2	22.3	22.4	23.1	23.2	23.3	23.4	24.1	24.2	24.3	24.4
1	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Sub Grade	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	Starkey Road N of Bridge (Sturgeon River to Estates Way)- Pave	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Road Widening & Sub Grade	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	Starkey Road S of Bridge (Sturgeon Road to Sturgeon River)- Pave	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	Starkey Road (Station 2+400 to Highway 37)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Twp. 542 (Range Road 250 to Range Road 251)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	Sturgeon Road @ RR 250 (Roundabout - Access Management)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	Range Road 251 (Railway Trestle to Twp. 542)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	127 Street Stage 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	127 Street Stage 2A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	127 Street Stage 2B	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	127 Street Stage 3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	127 Street Stage 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	Sturgeon Road and Starkey Road Traffic Calming (Roundabout)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	Bellerose Drive	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	Trestle Ridge Road	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
17	Sturgeon Road and Starkey Road	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	Range Road 250 (Trestle Ridge to Twp. 544A)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	Township Road 544 (Coal mine Road to Hwy 2)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
20	Coal Mine Road (Neil Ross Connection)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	Starkey Road & Highway 37 Roundabout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	Range Road 252 – Highway 37 to Coal Mine Road	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
100	Unallocated Offsite Levis Collected to Dec 31, 2018	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

[illegible]

B8. Reserve Balance

At December 31st, 2020 the transportation reserve balance was in a surplus of **\$1,884,670.84**. This amount takes into consideration expenditures and front-ending repayments up to end-2020. This balance assumes that all remaining cash (if any) in the reserve is withdrawn and used to pay down front-ending obligations owed to the County.

Transportation Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures (incl loan interest if any) to December 31, 2018		\$ 4,392,304.34	\$ (4,392,304.34)
Allocated Receipts to December 31, 2018	\$ 4,168,199.90		\$ (224,104.44)
Unallocated Receipts to December 31, 2018	\$ 2,161,596.17		\$ 1,937,491.73
Closing Balance 2018			\$ 1,937,491.73
2019			\$ 1,937,491.73
Interest on Opening Balance	\$ 19,374.92		\$ 1,956,866.65
Withdrawals/Applied to OSL Projects		\$ -	\$ 1,956,866.65
Net Project Expenditures (OSL Share) In Addition to Withdrawals Applied to Projects		\$ 11,843.74	\$ 1,945,022.91
OSL Receipts	\$ 121,448.00		\$ 2,066,470.91
Other Receipts	\$ -		\$ 2,066,470.91
Debenture Interest Expenditures		\$ -	\$ 2,066,470.91
Interest on Project Expenditures		\$ 96.23	\$ 2,066,374.68
Interest on Offsite Levy Receipts	\$ 607.24		\$ 2,066,981.92
Interest on Other Receipts	\$ -		\$ 2,066,981.92
Interest on Debenture Expenditure		\$ -	\$ 2,066,981.92
2020			\$ 2,066,981.92
Interest on Opening Balance	\$ 20,669.82		\$ 2,087,651.74
Withdrawals/Applied to OSL Projects		\$ -	\$ 2,087,651.74
Net Project Expenditures (OSL Share) In Addition to Withdrawals Applied to Projects		\$ 203,029.91	\$ 1,884,621.83
OSL Receipts	\$ 1,690.18		\$ 1,886,312.01
Other Receipts	\$ -		\$ 1,886,312.01
Debenture Interest Expenditures		\$ -	\$ 1,886,312.01
Interest on Project Expenditures		\$ 1,649.62	\$ 1,884,662.39
Interest on Offsite Levy Receipts	\$ 8.45		\$ 1,884,670.84
Interest on Other Receipts	\$ -		\$ 1,884,670.84
Interest on Debenture Expenditure		\$ -	\$ 1,884,670.84

B9. Development and Transportation Infrastructure Staging Impacts

Transportation offsite infrastructure will be constructed in staged fashion over the 25-year review period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of transportation infrastructure from time to time—front ending of infrastructure will be required. A front-enders is the party that constructs and pays up front for infrastructure that benefits other parties.

To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **2.09%**⁶ interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **1.00%**⁷ interest credit has been provided to the reserve when it is forecast to be in a positive balance. The graph and table below outline

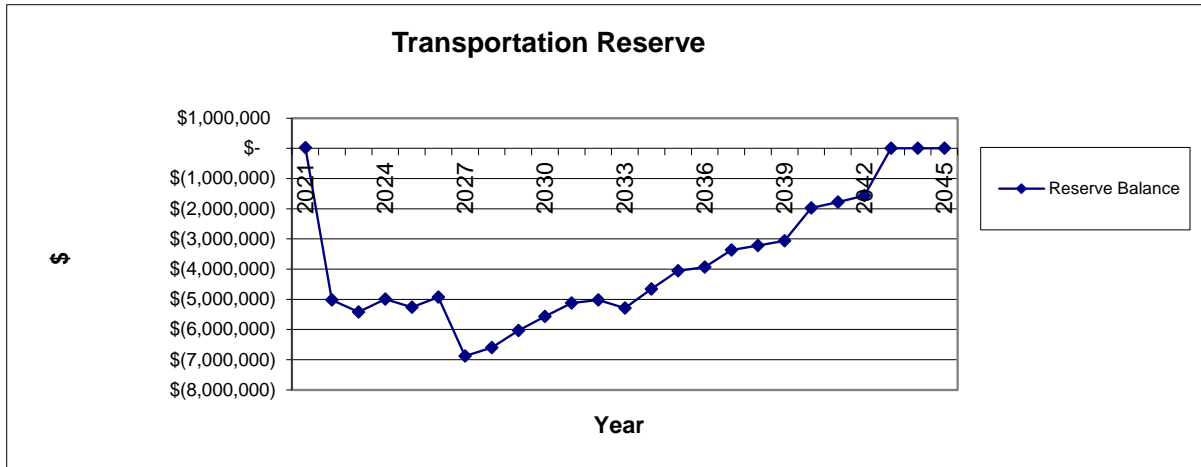
⁶ The 20-year debenture rate at the Alberta Capital Finance Authority at the time of writing was ~2.09%. Historic charge rates used in the model are 3.25% (2019-2020).

⁷ Historic earning rates used in the model are 1.00% (2019-2020).

the forecast transportation levy reserve balances over the 25-year development period.

If necessary, an interest staging adjustment has been applied to rates (slightly positive or slightly negative) to ensure that the forecast reserve balance at the end of the 25-year review period always returns to break-even (i.e., developers are not charged too much thereby providing a windfall to the County, nor are they charged too little thereby placing an unequitable burden on taxpayers).

Anticipated Transportation Offsite Levy Reserve Balances



Anticipated Transportation Offsite Levy Reserve Balances

			Reserve Balance	\$ 1,884,671
Year	Receipts	Expenditure	Interest	Balance
2021	\$ 52,677	\$ 1,920,000	\$ 173	\$ 17,521
2022	\$ -	\$ 4,935,168	\$ (102,779)	\$ (5,020,425)
2023	\$ 163,633	\$ 453,942	\$ (110,994)	\$ (5,421,729)
2024	\$ 530,893	\$ -	\$ (102,218)	\$ (4,993,055)
2025	\$ 274,656	\$ 432,725	\$ (107,658)	\$ (5,258,783)
2026	\$ 429,476	\$ -	\$ (100,933)	\$ (4,930,239)
2027	\$ 615,369	\$ 2,426,829	\$ (140,902)	\$ (6,882,601)
2028	\$ 416,785	\$ -	\$ (135,136)	\$ (6,600,952)
2029	\$ 687,902	\$ -	\$ (123,583)	\$ (6,036,633)
2030	\$ 579,670	\$ -	\$ (114,051)	\$ (5,571,014)
2031	\$ 554,611	\$ -	\$ (104,843)	\$ (5,121,245)
2032	\$ 204,650	\$ -	\$ (102,757)	\$ (5,019,352)
2033	\$ 210,790	\$ 371,515	\$ (108,264)	\$ (5,288,340)
2034	\$ 725,975	\$ -	\$ (95,353)	\$ (4,657,719)
2035	\$ 682,043	\$ -	\$ (83,092)	\$ (4,058,768)
2036	\$ 203,124	\$ -	\$ (80,583)	\$ (3,936,226)
2037	\$ 634,207	\$ -	\$ (69,012)	\$ (3,371,031)
2038	\$ 215,495	\$ -	\$ (65,951)	\$ (3,221,487)
2039	\$ 221,960	\$ -	\$ (62,690)	\$ (3,062,218)
2040	\$ 1,123,681	\$ -	\$ (40,515)	\$ (1,979,052)
2041	\$ 235,477	\$ -	\$ (36,441)	\$ (1,780,016)
2042	\$ 242,541	\$ -	\$ (32,133)	\$ (1,569,608)
2043	\$ 1,569,608	\$ -	\$ 0	\$ 0
2044	\$ -	\$ -	\$ 0	\$ 0
2045	\$ -	\$ -	\$ 0	\$ 0

APPENDIX C: WATER

C1. Water Offsite Infrastructure

In order to support future growth, water offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) future debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$32.61 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by County staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support development during the 25-year review period. The remainder of this section outlines how the “net” costs for development are determined.

Summary of Water Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Future Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	Allin Ridge New Pump (Expansion Project)	\$ 2,948,502	\$ 136,044	\$ -	\$ 3,084,546
2	Allin Ridge Reservoir (Expansion Project)	\$ 3,042,677	\$ 130,344	\$ -	\$ 3,173,021
3	Upper Manor Pointe (East) - Starkey Road Water Looping Connection	\$ 276,950	\$ -	\$ -	\$ 276,950
4	Summerbrook Reservoir Pump Station Improvements (Interior)	\$ -	\$ -	\$ 1,525,546	\$ 1,525,546
5	Allin Ridge Reservoir to Tuscany Hills and Regency Estates (Watermain Looping for Fire Protection)	\$ -	\$ -	\$ 1,019,222	\$ 1,019,222
6	Upper Vicount Estates to Lower Vicount Estates and Sturgeon Heights	\$ -	\$ -	\$ 1,932,188	\$ 1,932,188
7	Coal Mine Road from Summerbrook Reservoir to Flynn Way	\$ -	\$ -	\$ 825,410	\$ 825,410
8	Summerbrook Reservoir to Southwest Summerbrook Estates	\$ -	\$ -	\$ 783,888	\$ 783,888
9	Watermain to Noroncal via Crozier Avenue	\$ -	\$ -	\$ 1,049,442	\$ 1,049,442
10	Noroncal Water and Fire Servicing	\$ -	\$ -	\$ 1,783,910	\$ 1,783,910
11	Sturgeon Heights Fire Servicing	\$ -	\$ -	\$ 476,171	\$ 476,171
12	PRV Improvements	\$ -	\$ -	\$ 512,746	\$ 512,746
13	127th Street Reservoir and Pumphouse (Allin Ridge initial construction of Reservoir)	\$ 818,684	\$ -	\$ -	\$ 818,684
14	127th Street Water Supply Line (Allin Ridge supply line from EPCOR)	\$ 2,342,618	\$ -	\$ -	\$ 2,342,618
15	Sturgeon Road Pressure Reducing Valve	\$ 65,263	\$ -	\$ -	\$ 65,263
16	East River Crossing	\$ 625,213	\$ -	\$ -	\$ 625,213
17	Summerbrook Reservoir Exterior Improvements	\$ -	\$ -	\$ 915,327	\$ 915,327
18	Allin Ridge Reservoir Expansion #1	\$ -	\$ -	\$ 2,000,000	\$ 2,000,000
19	Allin Ridge Reservoir Expansion #2	\$ -	\$ -	\$ 6,200,001	\$ 6,200,001
20	Twinning Allin Ridge Supply Line	\$ -	\$ -	\$ 3,200,001	\$ 3,200,001
100	Unallocated Offsite Levies Collected	\$ -	\$ -	\$ -	\$ -
		\$ 10,119,907	\$ 266,388	\$ 22,223,851	\$ 32,610,146

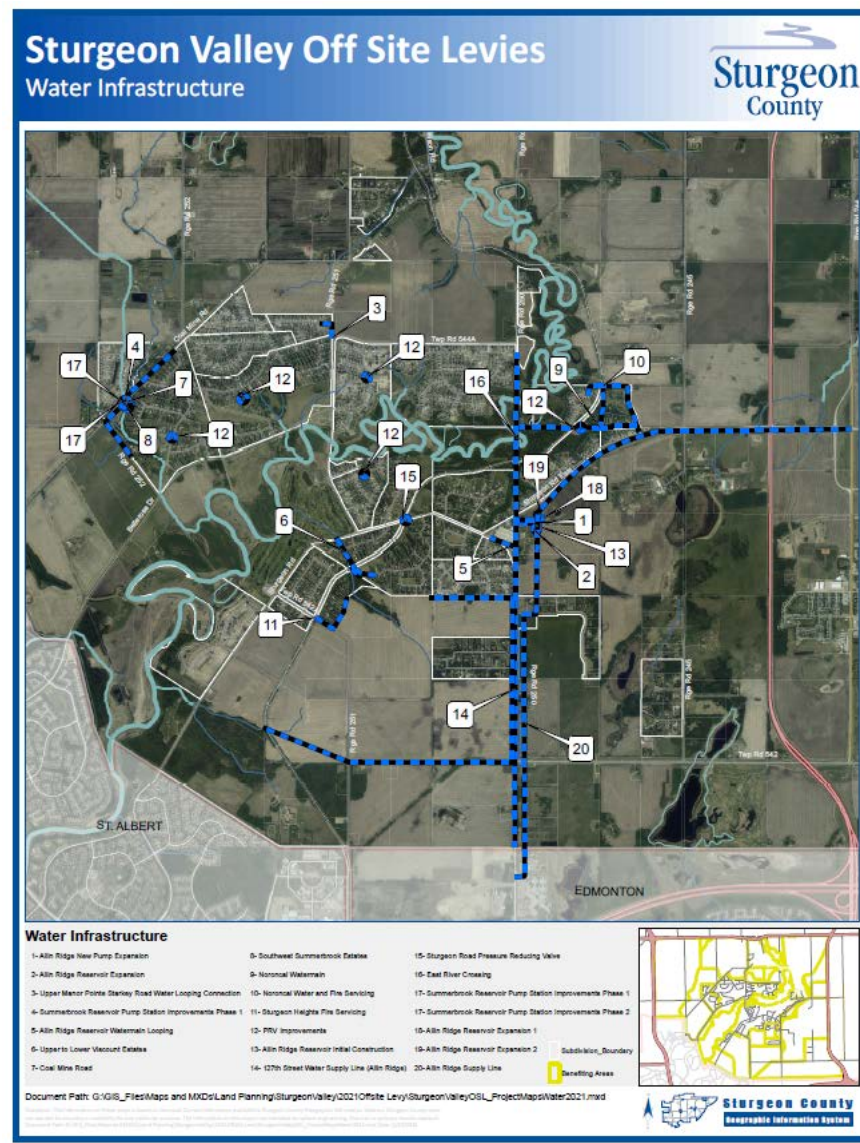
*Past expenditures include past financing expenditures (interest) if any.

**Costs estimates provided by County staff.

***Estimates include engineering and contingencies.

****Unallocated levies to end-2018 (if any) were set-up as an individual project (#100) and credited 100% to future development and to all offsite levy areas (see *Section C5*).

*****Offsite infrastructure definitions are contained in Appendix F.



C2. Water Offsite Infrastructure Grants & Contributions to Date

The MGA enables the County to allocate the costs of offsite infrastructure to development, other than those costs that have been provided by way of special ear-marked grant or contribution (i.e., contributed infrastructure). The County has/will receive approximately **\$0.02 million** in special ear-marked grants and contributions for water offsite levy infrastructure as shown in the table below (note, if the County receives other ear-marked grants or contributions in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). The result is that the total reduced project estimated cost is **\$32.60 million**.

Special Grants and Contributions for Water Offsite Infrastructure

Item	Project Description	Total Project Estimated Cost	Special Provincial Grants	Developer Agreement Contributions	Other Contributions	Reduced Project Estimated Cost
1	Allin Ridge New Pump (Expansion Project)	\$ 3,084,546	\$ -	\$ -	\$ -	\$ 3,084,546
2	Allin Ridge Reservoir (Expansion Project)	\$ 3,173,021	\$ -	\$ -	\$ -	\$ 3,173,021
3	Upper Manor Pointe (East) - Starkey Road Water Looping Connection	\$ 276,950	\$ -	\$ -	\$ -	\$ 276,950
4	Summerbrook Reservoir Pump Station Improvements (Interior)	\$ 1,525,546	\$ -	\$ -	\$ -	\$ 1,525,546
5	Allin Ridge Reservoir to Tuscany Hills and Regency Estates (Watermain Looping for Fire Protection)	\$ 1,019,222	\$ -	\$ -	\$ -	\$ 1,019,222
6	Upper Vicount Estates to Lower Vicount Estates and Sturgeon Heights	\$ 1,932,188	\$ -	\$ -	\$ -	\$ 1,932,188
7	Coal Mine Road from Summerbrook Reservoir to Flynn Way	\$ 825,410	\$ -	\$ -	\$ -	\$ 825,410
8	Summerbrook Reservoir to Southwest Summerbrook Estates	\$ 783,888	\$ -	\$ -	\$ -	\$ 783,888
9	Watermain to Noroncal via Crozier Avenue	\$ 1,049,442	\$ -	\$ -	\$ -	\$ 1,049,442
10	Noroncal Water and Fire Servicing	\$ 1,783,910	\$ -	\$ -	\$ -	\$ 1,783,910
11	Sturgeon Heights Fire Servicing	\$ 476,171	\$ -	\$ -	\$ -	\$ 476,171
12	PRV Improvements	\$ 512,746	\$ -	\$ -	\$ -	\$ 512,746
13	127th Street Reservoir and Pumphouse (Allin Ridge initial construction of Reservoir)	\$ 818,684	\$ 3,750	\$ -	\$ -	\$ 814,934
14	127th Street Water Supply Line (Allin Ridge supply line from EPCOR)	\$ 2,342,618	\$ 3,750	\$ -	\$ -	\$ 2,338,868
15	Sturgeon Road Pressure Reducing Valve	\$ 65,263	\$ 3,750	\$ -	\$ -	\$ 61,513
16	East River Crossing	\$ 625,213	\$ 3,750	\$ -	\$ -	\$ 621,463
17	Summerbrook Reservoir Exterior Improvements	\$ 915,327	\$ -	\$ -	\$ -	\$ 915,327
18	Allin Ridge Reservoir Expansion #1	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,000,000
19	Allin Ridge Reservoir Expansion #2	\$ 6,200,001	\$ -	\$ -	\$ -	\$ 6,200,001
20	Twinning Allin Ridge Supply Line	\$ 3,200,001	\$ -	\$ -	\$ -	\$ 3,200,001
100	Unallocated Offsite Levies Collected	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 32,610,146	\$ 15,000	\$ -	\$ -	\$ 32,595,146

C3. Year of Construction

The timing of construction is used to determine the impact of inflation on cost, the impact of forecast reserve balances, and the estimate of financial oversizing (described in the Section that follows). The County anticipates construction of offsite infrastructure as outlined in the table below. Note, if this schedule is adjusted in the future, it will be reflected in one of the County's annual rate/bylaw updates.

Forecast Year of Construction

Item	Project Description	Construction Start Year
1	Allin Ridge New Pump (Expansion Project)	2013
2	Allin Ridge Reservoir (Expansion Project)	2013
3	Upper Manor Pointe (East) - Starkey Road Water Looping Connection	2013
4	Summerbrook Reservoir Pump Station Improvements (Interior)	2022
5	Allin Ridge Reservoir to Tuscany Hills and Regency Estates (Watermain Looping for Fire Protection)	2028
6	Upper Vicount Estates to Lower Vicount Estates and Sturgeon Heights	2027
7	Coal Mine Road from Summerbrook Reservoir to Flynn Way	2023
8	Summerbrook Reservoir to Southwest Summerbrook Estates	2024
9	Watermain to Noroncal via Crozier Avenue	2023
10	Noroncal Water and Fire Servicing	2023
11	Sturgeon Heights Fire Servicing	2027
12	PRV Improvements	2021
13	127th Street Reservoir and Pumphouse (Allin Ridge initial construction of Reservoir)	2002
14	127th Street Water Supply Line (Allin Ridge supply line from EPCOR)	2003
15	Sturgeon Road Pressure Reducing Valve	2004
16	East River Crossing	2006
17	Summerbrook Reservoir Exterior Improvements	2021
18	Allin Ridge Reservoir Expansion #1	2034
19	Allin Ridge Reservoir Expansion #2	2044
20	Twinning Allin Ridge Supply Line	2044

*The share of projects constructed beyond the 25-year review period are not included in rates today (see financial oversizing in next section).

**Project costs are inflated by 2% per annum to 2022 and 3% per annum thereafter to the year of construction.

C4. Water Offsite Infrastructure Benefiting Parties

The water offsite infrastructure previously outlined will benefit various parties to varying degrees. Three potential benefiting parties were identified including:

1. Sturgeon County – a portion of the water infrastructure which is required to service

existing residents. This residual benefit is determined at the point in time when the project is added to the bylaw (i.e., it does not fluctuate from year-to-year).

2. Other Stakeholders – other municipalities that benefit from the infrastructure.
3. Future Development:
 - Financial Oversizing – that portion of cost (i.e., levyable water infrastructure costs) which benefits future development beyond the 25-year review period.
 - **In Rates – that portion of cost (i.e., levyable water infrastructure costs) which benefits future development within the 25-year review period.**

The table below outlines the allocation of water offsite levy infrastructure costs to benefiting parties.

Allocation of Water Infrastructure to Benefiting Parties

Item	Project Description	Reduced Project Estimated Cost	Muni Share %	Other Stakeholder Share	Developer Share Beyond 25 Yrs (Financial Oversizing %)	OSL / Developer Share %
1	Allin Ridge New Pump (Expansion Project)	\$ 3,084,546			0.0%	100.0%
2	Allin Ridge Reservoir (Expansion Project)	\$ 3,173,021			0.0%	100.0%
3	Upper Manor Pointe (East) - Starkey Road Water Looping Connection	\$ 276,950	70.3%		0.0%	29.7%
4	Summerbrook Reservoir Pump Station Improvements (Interior)	\$ 1,525,546	25.0%		3.0%	72.0%
5	Allin Ridge Reservoir to Tuscany Hills and Regency Estates (Watermain Looping for Fire Protection)	\$ 1,019,222	25.0%		21.0%	54.0%
6	Upper Vicount Estates to Lower Vicount Estates and Sturgeon Heights	\$ 1,932,188	25.0%		18.0%	57.0%
7	Coal Mine Road from Summerbrook Reservoir to Flynn Way	\$ 825,410	25.0%		6.0%	69.0%
8	Summerbrook Reservoir to Southwest Summerbrook Estates	\$ 783,888	25.0%		9.0%	66.0%
9	Watermain to Noroncal via Crozier Avenue	\$ 1,049,442	25.0%		6.0%	69.0%
10	Noroncal Water and Fire Servicing	\$ 1,783,910	25.0%		6.0%	69.0%
11	Sturgeon Heights Fire Servicing	\$ 476,171	25.0%		18.0%	57.0%
12	PRV Improvements	\$ 512,746			0.0%	100.0%
13	127th Street Reservoir and Pumphouse (Allin Ridge initial construction of Reservoir)	\$ 814,934	3.8%		0.0%	96.2%
14	127th Street Water Supply Line (Allin Ridge supply line from EPCOR)	\$ 2,338,868			0.0%	100.0%
15	Sturgeon Road Pressure Reducing Valve	\$ 61,513			0.0%	100.0%
16	East River Crossing	\$ 621,463			0.0%	100.0%
17	Summerbrook Reservoir Exterior Improvements	\$ 915,327	20.0%		0.0%	80.0%
18	Allin Ridge Reservoir Expansion #1	\$ 2,000,000	20.0%		41.6%	38.4%
19	Allin Ridge Reservoir Expansion #2	\$ 6,200,001	20.0%		73.6%	6.4%
20	Twinning Allin Ridge Supply Line	\$ 3,200,001	20.0%		73.6%	6.4%
100	Unallocated Offsite Levies Collected	\$ -				100.0%
		\$ 32,595,146				

*Allocations were determined by County staff.

**Financial oversizing is determined by separating out the pro rata portion of developer cost beyond the 25-year review period, in comparison with the anticipated year of construction. As the years move forward and rates are updated, these additional developer costs will be included in rate calculations. For example, a project which is slated to be constructed in year 20 of the 25-year review period will have 20% (5/25) of its costs in rates today, and 80% (20/25) of its costs will sit beyond the 25-year review period.

C5. Existing Receipts & Adjusted Levy Cost

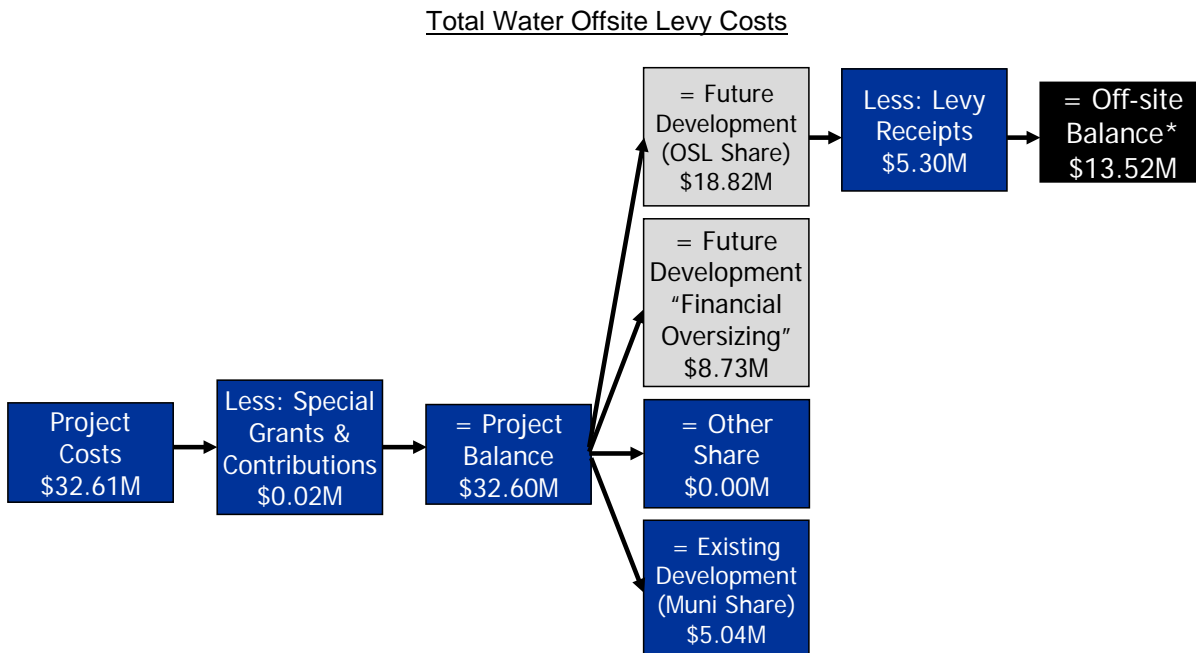
Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of approximately **\$18.82 million**. However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. County staff have advised that approximately **\$5.30 million** in water levies have been applied/collected as shown in the table below. This results in an adjusted offsite levy cost of approximately **\$13.52 million**.

Offsite Levy Funds Applied to Date

Item	Project Description	OSL / Developer Cost	Offsite Levy Funds Collected to Dec 31, 2018	Offsite Levy Funds Collected Starting Jan 1, 2019	Adjusted Developer (Levy) Cost
1	Allin Ridge New Pump (Expansion Project)	\$ 3,084,546	\$ 959,949	\$ 15,447	\$ 2,109,150
2	Allin Ridge Reservoir (Expansion Project)	\$ 3,173,021	\$ 877,695	\$ 16,553	\$ 2,278,773
3	Upper Manor Pointe (East) - Starkey Road Water Looping Connection	\$ 82,254	\$ 82,254	\$ 0	\$ 0
4	Summerbrook Reservoir Pump Station Improvements (Interior)	\$ 1,098,393	\$ -	\$ 8,445	\$ 1,089,948
5	Allin Ridge Reservoir to Tuscany Hills and Regency Estates (Watermain Looping for Fire Protection)	\$ 550,380	\$ -	\$ 2,404	\$ 547,976
6	Upper Vicount Estates to Lower Vicount Estates and Sturgeon Heights	\$ 1,101,347	\$ -	\$ 8,288	\$ 1,093,059
7	Coal Mine Road from Summerbrook Reservoir to Flynn Way	\$ 569,533	\$ -	\$ 3,717	\$ 565,815
8	Summerbrook Reservoir to Southwest Summerbrook Estates	\$ 517,366	\$ -	\$ 3,362	\$ 514,004
9	Watermain to Noroncal via Crozier Avenue	\$ 724,115	\$ -	\$ 4,726	\$ 719,389
10	Noroncal Water and Fire Servicing	\$ 1,230,898	\$ -	\$ 8,034	\$ 1,222,863
11	Sturgeon Heights Fire Servicing	\$ 271,417	\$ -	\$ 2,042	\$ 269,375
12	PRV Improvements	\$ 512,746	\$ -	\$ 3,226	\$ 509,520
13	127th Street Reservoir and Pumphouse (Allin Ridge initial construction of Reservoir)	\$ 783,581	\$ 783,581	\$ -	\$ -
14	127th Street Water Supply Line (Allin Ridge supply line from EPCOR)	\$ 2,338,868	\$ 1,837,150	\$ 3,184	\$ 498,534
15	Sturgeon Road Pressure Reducing Valve	\$ 61,513	\$ 61,513	\$ 0	\$ 0
16	East River Crossing	\$ 621,463	\$ 621,463	\$ (0)	\$ (0)
17	Summerbrook Reservoir Exterior Improvements	\$ 732,262	\$ -	\$ -	\$ 732,262
18	Allin Ridge Reservoir Expansion #1	\$ 768,000	\$ -	\$ -	\$ 768,000
19	Allin Ridge Reservoir Expansion #2	\$ 396,800	\$ -	\$ -	\$ 396,800
20	Twinning Allin Ridge Supply Line	\$ 204,800	\$ -	\$ -	\$ 204,800
100	Unallocated Offsite Levies Collected	\$ -	\$ -	\$ -	\$ -
		\$ 18,823,303	\$ 5,223,604	\$ 79,429	\$ 13,520,269

C6. Summary of Water Offsite Levy Cost Flow-through

As shown in the figure below, the total cost for water infrastructure that forms the basis of the rate is approximately **\$13.52 million**. The cost allocations to each benefitting party are based on the benefitting percentages shown in previous section. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).



C7. Water Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a “1” below applicable area numbers. Benefiting areas were determined by County staff. The lands anticipated to develop over the 25-years in each offsite levy benefiting area are used to determine rates.

Water Allocations to Benefitting Areas

[illegible]

C8. Reserve Balance

At December 31st, 2020 the water reserve balance was in a deficit of **\$(3,449,056.39)**. This amount takes into consideration expenditures and front-ending repayments up to end-2020. A negative balance indicates the presence of front-ending—i.e., this amount is owed to the County from the levy account via future collections. The County's ledgers should be amended to reflect this balance as it includes expenditures to date. This balance assumes that all remaining cash in the account is withdrawn and used to pay down a portion of front-ending obligations owed to the County.

Water Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures (incl loan interest if any) to December 31, 2018		\$ 9,782,045.78	\$ (9,782,045.78)
Allocated Receipts to December 31, 2018	\$ 5,223,604.71		\$ (4,558,441.07)
Unallocated Receipts to December 31, 2018	\$ 1,339,133.25		\$ (3,219,307.82)
Closing Balance 2018			\$ (3,219,307.82)
2019			\$ (3,219,307.82)
Interest on Opening Balance		\$ 104,627.50	\$ (3,323,935.32)
Withdrawals/Applied to OSL Projects		\$ -	\$ (3,323,935.32)
Net Project Expenditures (OSL Share) In Addition to Withdrawals Applied to Projects		\$ 50,067.18	\$ (3,374,002.50)
OSL Receipts	\$ 71,028.00		\$ (3,302,974.50)
Other Receipts	\$ -		\$ (3,302,974.50)
Debenture Interest Expenditures		\$ -	\$ (3,302,974.50)
Interest on Project Expenditures		\$ 406.80	\$ (3,303,381.30)
Interest on Offsite Levy Receipts	\$ 355.14		\$ (3,303,026.16)
Interest on Other Receipts	\$ -		\$ (3,303,026.16)
Interest on Debenture Expenditure		\$ -	\$ (3,303,026.16)
2020			\$ (3,303,026.16)
Interest on Opening Balance		\$ 107,348.35	\$ (3,410,374.51)
Withdrawals/Applied to OSL Projects		\$ -	\$ (3,410,374.51)
Net Project Expenditures (OSL Share) In Addition to Withdrawals Applied to Projects		\$ 46,745.24	\$ (3,457,119.75)
OSL Receipts	\$ 8,401.16		\$ (3,448,718.59)
Other Receipts	\$ -		\$ (3,448,718.59)
Debenture Interest Expenditures		\$ -	\$ (3,448,718.59)
Interest on Project Expenditures		\$ 379.81	\$ (3,449,098.40)
Interest on Offsite Levy Receipts	\$ 42.01		\$ (3,449,056.39)
Interest on Other Receipts	\$ -		\$ (3,449,056.39)
Interest on Debenture Expenditure		\$ -	\$ (3,449,056.39)

C9. Development and Water Infrastructure Staging Impacts

Water offsite infrastructure will be constructed in staged fashion over the 25-year review period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of water infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party that constructs and pays up front for infrastructure that benefits other parties.

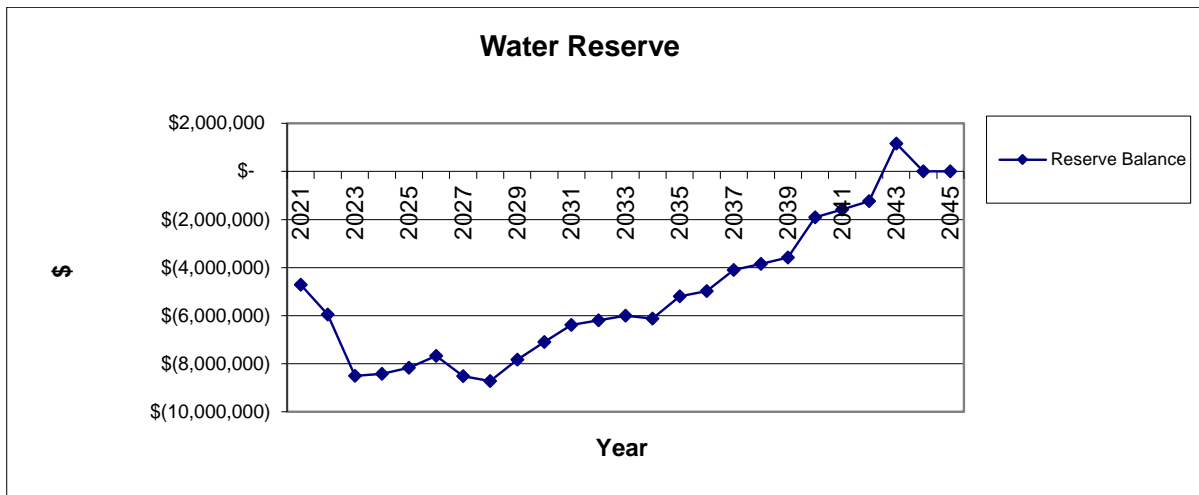
To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **2.09%**⁸ interest allowance has been charged to the reserve when it is

⁸ The 20-year debenture rate at the Alberta Capital Finance Authority at the time of writing was ~2.09%. Historic charge rates used in the model are 3.25% (2019-2020).

forecast to be in a negative balance. Further, a **1.00%**⁹ interest credit has been provided to the reserve when it is forecast to be in a positive balance. The graph and table below outline the forecast water levy reserve balances over the 25-year development period.

If necessary, an interest staging adjustment has been applied to rates (slightly positive or slightly negative) to ensure that the forecast reserve balance at the end of the 25-year review period always returns to break-even (i.e., developers are not charged too much thereby providing a windfall to the County, nor are they charged too little thereby placing an unequitable burden on taxpayers).

Anticipated Water Offsite Levy Reserve Balances



⁹ Historic earning rates used in the model are 1.00% (2019-2020).

Anticipated Water Offsite Levy Reserve Balances

			Opening Balance	\$ (3,449,056)
Year	Receipts	Expenditure	Interest	Balance
2021	\$ 80,297	\$ 1,245,008	\$ (96,428)	\$ (4,710,194)
2022	\$ -	\$ 1,120,361	\$ (121,859)	\$ (5,952,414)
2023	\$ 249,430	\$ 2,626,537	\$ (174,087)	\$ (8,503,608)
2024	\$ 809,256	\$ 554,416	\$ (172,399)	\$ (8,421,166)
2025	\$ 418,666	\$ -	\$ (167,252)	\$ (8,169,752)
2026	\$ 654,664	\$ -	\$ (157,065)	\$ (7,672,154)
2027	\$ 938,026	\$ 1,607,479	\$ (174,340)	\$ (8,515,946)
2028	\$ 635,318	\$ 663,818	\$ (178,579)	\$ (8,723,026)
2029	\$ 1,048,590	\$ -	\$ (160,396)	\$ (7,834,831)
2030	\$ 883,609	\$ -	\$ (145,281)	\$ (7,096,503)
2031	\$ 845,411	\$ -	\$ (130,648)	\$ (6,381,739)
2032	\$ 311,955	\$ -	\$ (126,859)	\$ (6,196,643)
2033	\$ 321,313	\$ -	\$ (122,794)	\$ (5,998,124)
2034	\$ 1,106,626	\$ 1,106,041	\$ (125,349)	\$ (6,122,888)
2035	\$ 1,039,659	\$ -	\$ (106,239)	\$ (5,189,468)
2036	\$ 309,629	\$ -	\$ (101,989)	\$ (4,981,828)
2037	\$ 966,742	\$ -	\$ (83,915)	\$ (4,099,001)
2038	\$ 328,485	\$ -	\$ (78,804)	\$ (3,849,319)
2039	\$ 338,340	\$ -	\$ (73,379)	\$ (3,584,359)
2040	\$ 1,712,862	\$ -	\$ (39,114)	\$ (1,910,611)
2041	\$ 358,945	\$ -	\$ (32,430)	\$ (1,584,096)
2042	\$ 369,713	\$ -	\$ (25,381)	\$ (1,239,763)
2043	\$ 2,392,602	\$ -	\$ 11,528	\$ 1,164,367
2044	\$ -	\$ 1,164,367	\$ -	\$ (0)
2045	\$ -	\$ -	\$ -	\$ (0)

APPENDIX D: SANITARY

D1. Sanitary Offsite Infrastructure

In order to support future growth, sanitary offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) future debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$24.33 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by County staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support development during the 25-year review period. The remainder of this section outlines how the “net” costs for development are determined.

Summary of Sanitary Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Future Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	Rivers Gate Gravity Sewer Eng.	\$ 8,120	\$ -	\$ -	\$ 8,120
2	Rivers Gate Southwest Lift Station	\$ 2,495,325	\$ -	\$ -	\$ 2,495,325
3	Sturgeon Road Gravity Sewer (450mm) Diameter	\$ -	\$ -	\$ 3,926,213	\$ 3,926,213
4	Upgrade Tuscany Hills Lift Station	\$ -	\$ -	\$ 496,011	\$ 496,011
5	Bellerose Gravity Sewer and Force Main	\$ 724,181	\$ -	\$ -	\$ 724,181
6	Bellerose Lift Station	\$ 288,164	\$ -	\$ -	\$ 288,164
7	Summerbrook / Upper Manor Sewer Design	\$ 1,703,653	\$ -	\$ -	\$ 1,703,653
8	Upper Manor Gravity Trunk	\$ 778,252	\$ -	\$ -	\$ 778,252
9	Forcemain Twinning to St. Albert	\$ 429,558	\$ -	\$ -	\$ 429,558
10	Sturgeon Road Forcemain Upgrade	\$ 186,748	\$ -	\$ -	\$ 186,748
11	Bellerose Lift Station Upgrade	\$ 790,827	\$ -	\$ -	\$ 790,827
12	Sturgeon Valley Force Main - Rivers Gate Lift Station to Start Line	\$ -	\$ -	\$ 4,000,000	\$ 4,000,000
13	Sturgeon Valley Gravity Main - Sturgeon Heights to Rivers Gate (West Trunk)	\$ -	\$ -	\$ 2,500,001	\$ 2,500,001
14	SV East/CFB Edmonton Trunk	\$ -	\$ -	\$ 2,000,000	\$ 2,000,000
15	SV East/CFB Edmonton Lift Station to START*	\$ -	\$ -	\$ 4,000,000	\$ 4,000,000
100	Unallocated Offsite Levies Collected	\$ -	\$ -	\$ -	\$ -
		\$ 7,404,827	\$ -	\$ 16,922,225	\$ 24,327,052

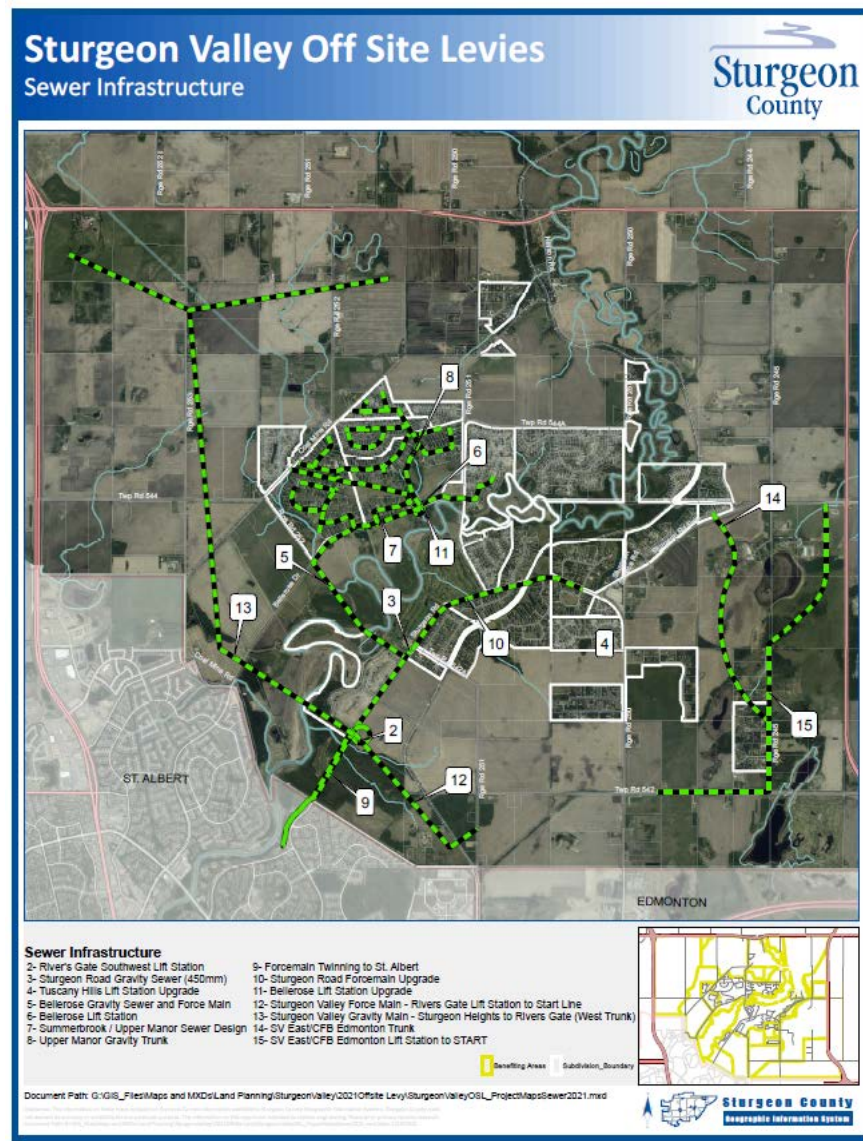
*Past expenditures include past financing expenditures (interest) if any.

**Costs estimates provided by County staff.

***Estimates include engineering and contingencies.

****Unallocated levies to end-2018 (if any) were set-up as an individual project (#100) and credited 100% to future development and to all offsite levy areas (see *Section D5*).

*****Offsite infrastructure definitions are contained in Appendix F.



D2. Sanitary Offsite Infrastructure Grants & Contributions to Date

The MGA enables the County to allocate the costs of offsite infrastructure to development, other than those costs that have been provided by way of special ear-marked grant or contribution (i.e., contributed infrastructure). Sturgeon County has/will receive approximately **\$1.63 million** in special ear-marked grants and contributions for sanitary offsite levy infrastructure as shown in the table below (note, if the County receives additional ear-marked grants or contributions in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). The result is that the total reduced project estimated cost is **\$22.70 million**.

Special Grants and Contributions for Sanitary Offsite Infrastructure

Item	Project Description	Total Project Estimated Cost	Special Grants	Developer Agreement Contributions	Other Contributions	Reduced Project Estimated Cost
1	Rivers Gate Gravity Sewer Eng.	\$ 8,120	\$ -	\$ -	\$ -	\$ 8,120
2	Rivers Gate Southwest Lift Station	\$ 2,495,325	\$ -	\$ -	\$ -	\$ 2,495,325
3	Sturgeon Road Gravity Sewer (450mm) Diameter	\$ 3,926,213	\$ -	\$ -	\$ -	\$ 3,926,213
4	Upgrade Tuscany Hills Lift Station	\$ 496,011	\$ -	\$ -	\$ -	\$ 496,011
5	Bellerose Gravity Sewer and Force Main	\$ 724,181	\$ -	\$ -	\$ -	\$ 724,181
6	Bellerose Lift Station	\$ 288,164	\$ -	\$ -	\$ -	\$ 288,164
7	Summerbrook / Upper Manor Sewer Design	\$ 1,703,653	\$ 509,236	\$ 1,117,964	\$ -	\$ 76,453
8	Upper Manor Gravity Trunk	\$ 778,252	\$ -	\$ -	\$ -	\$ 778,252
9	Forcemain Twinning to St. Albert	\$ 429,558	\$ -	\$ -	\$ -	\$ 429,558
10	Sturgeon Road Forcemain Upgrade	\$ 186,748	\$ -	\$ -	\$ -	\$ 186,748
11	Bellerose Lift Station Upgrade	\$ 790,827	\$ -	\$ -	\$ -	\$ 790,827
12	Sturgeon Valley Force Main - Rivers Gate Lift Station to Start Line	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 4,000,000
13	Sturgeon Valley Gravity Main - Sturgeon Heights to Rivers Gate (West Trunk)	\$ 2,500,001	\$ -	\$ -	\$ -	\$ 2,500,001
14	SV East/CFB Edmonton Trunk	\$ 2,000,000	\$ -	\$ -	\$ -	\$ 2,000,000
15	SV East/CFB Edmonton Lift Station to START*	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 4,000,000
100	Unallocated Offsite Levies Collected	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 24,327,052	\$ 509,236	\$ 1,117,964	\$ -	\$ 22,699,852

D3. Year of Construction

The timing of construction is used to determine the impact of inflation on cost, the impact of forecast reserve balances, and the estimate of financial oversizing (described in the Section that follows). The County anticipates construction of offsite infrastructure as outlined in the table below. Note, if this schedule is adjusted in the future, it will be reflected in one of the County's annual rate/bylaw updates.

Forecast Year of Construction

Item	Project Description	Construction Start Year
1	Rivers Gate Gravity Sewer Eng.	2015
2	Rivers Gate Southwest Lift Station	2013
3	Sturgeon Road Gravity Sewer (450mm) Diameter	2022
4	Upgrade Tuscany Hills Lift Station	2023
5	Bellerose Gravity Sewer and Force Main	2002
6	Bellerose Lift Station	2003
7	Summerbrook / Upper Manor Sewer Design	2005
8	Upper Manor Gravity Trunk	2005
9	Forcemain Twinning to St. Albert	2005
10	Sturgeon Road Forcemain Upgrade	2006
11	Bellerose Lift Station Upgrade	2008
12	Sturgeon Valley Force Main - Rivers Gate Lift Station to Start Line	2050
13	Sturgeon Valley Gravity Main - Sturgeon Heights to Rivers Gate (West Trunk)	2050
14	SV East/CFB Edmonton Trunk	2050
15	SV East/CFB Edmonton Lift Station to START*	2050

*The share of projects constructed beyond the 25-year review period are not included in rates today (see financial oversizing in next section).

**Project costs are inflated by 2% per annum to 2022 and 3% per annum thereafter to the year of construction.

D4. Sanitary Offsite Infrastructure Benefiting Parties

The sanitary offsite infrastructure previously outlined will benefit various parties to varying

degrees. Three potential benefiting parties were identified including:

1. Sturgeon County – a portion of the sanitary infrastructure which is required to service existing residents. This residual benefit is determined at the point in time when the project is added to the bylaw (i.e., it does not fluctuate from year-to-year).
2. Other Stakeholders – other municipalities that benefit from the infrastructure.
3. Future Development:
 - Financial Oversizing – that portion of cost (i.e., levyable sanitary infrastructure costs) which benefits future development beyond the 25-year review period.
 - **In Rates – that portion of cost (i.e., levyable sanitary infrastructure costs) which benefits future development within the 25-year review period.**

The table below outlines the allocation of sanitary offsite levy infrastructure costs to benefiting parties.

Allocation of Sanitary Infrastructure to Benefiting Parties

Item	Project Description	Reduced Project Estimated Cost	Muni Share %	Other Stakeholder Share	Developer Share Beyond 25 Yrs (Financial Oversizing %)	OSL / Developer Share %
1	Rivers Gate Gravity Sewer Eng.	\$ 8,120			0.00%	100.00%
2	Rivers Gate Southwest Lift Station	\$ 2,495,325			0.00%	100.00%
3	Sturgeon Road Gravity Sewer (450mm) Diameter	\$ 3,926,213			4.00%	96.00%
4	Upgrade Tuscany Hills Lift Station	\$ 496,011			0.00%	100.00%
5	Bellerose Gravity Sewer and Force Main	\$ 724,181	17.26%		0.00%	82.74%
6	Bellerose Lift Station	\$ 288,164	17.26%		0.00%	82.74%
7	Summerbrook / Upper Manor Sewer Design	\$ 76,453		100.00%	0.00%	0.00%
8	Upper Manor Gravity Trunk	\$ 778,252	17.26%		0.00%	82.74%
9	Forcemain Twinning to St. Albert	\$ 429,558	17.26%		0.00%	82.74%
10	Sturgeon Road Forcemain Upgrade	\$ 186,748	17.26%		0.00%	82.74%
11	Bellerose Lift Station Upgrade	\$ 790,827	17.26%		0.00%	82.74%
12	Sturgeon Valley Force Main - Rivers Gate Lift Station to Start Line	\$ 4,000,000	17.26%		82.74%	0.00%
13	Sturgeon Valley Gravity Main - Sturgeon Heights to Rivers Gate (West Trunk)	\$ 2,500,001	17.26%		82.74%	0.00%
14	SV East/CFB Edmonton Trunk	\$ 2,000,000	17.26%		82.74%	0.00%
15	SV East/CFB Edmonton Lift Station to START*	\$ 4,000,000	17.26%		82.74%	0.00%
100	Unallocated Offsite Levies Collected	\$ -				100.0%
		\$ 22,699,852				

*Allocations were determined by County staff.

**Financial oversizing is determined by separating out the pro rata portion of developer cost beyond the 25-year review period, in comparison with the anticipated year of construction. As the years move forward and rates are updated, these additional developer costs will be included in rate calculations. For example, a project which is slated to be constructed in year 20 of the 25-year review period will have 20% (5/25) of its costs in rates today, and 80% (20/25) of its costs will sit beyond the 25-year review period.

D5. Existing Receipts & Adjusted Levy Cost

Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of approximately **\$9.41 million**. However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. County staff have advised that approximately **\$2.55 million** in sanitary levies

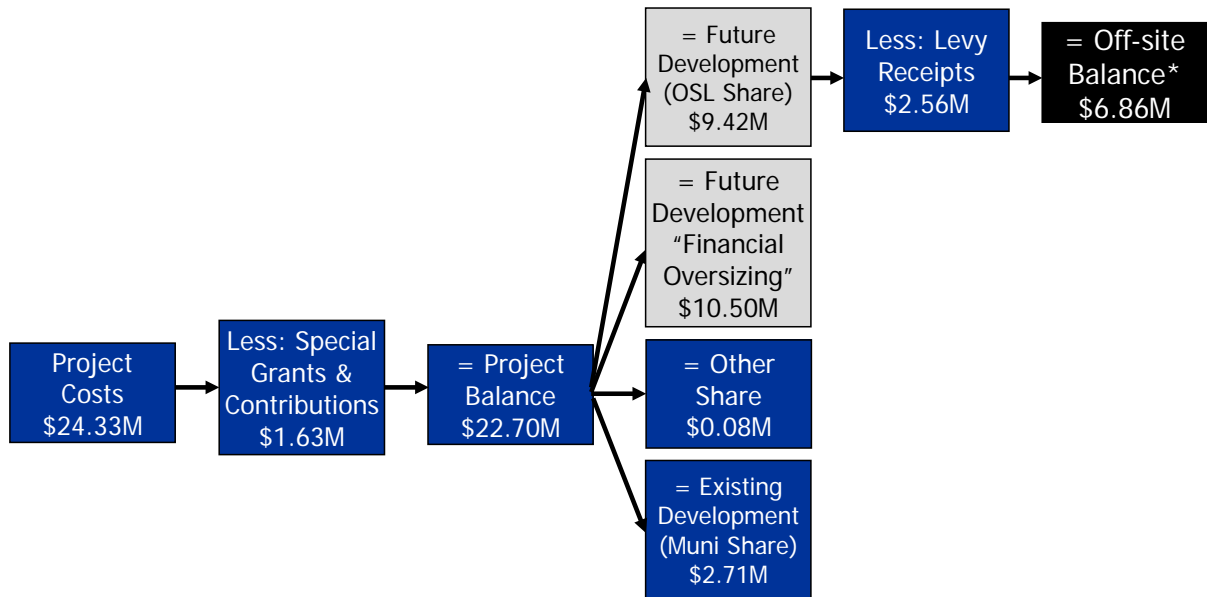
have been applied/collected as shown in the table below. This results in an adjusted offsite levy cost of approximately **\$6.86 million**.

Offsite Levy Funds Applied to Date

Item	Project Description	OSL / Developer Cost	Offsite Levy Funds Collected to Dec 31, 2018	Offsite Levy Funds Collected Starting Jan 1, 2019	Adjusted Developer (Levy) Cost
1	Rivers Gate Gravity Sewer Eng.	\$ 8,120	\$ -	\$ 117	\$ 8,003
2	Rivers Gate Southwest Lift Station	\$ 2,495,325	\$ 762,626	\$ 24,873	\$ 1,707,825
3	Sturgeon Road Gravity Sewer (450mm) Diameter	\$ 3,769,165	\$ -	\$ 18,138	\$ 3,751,027
4	Upgrade Tuscany Hills Lift Station	\$ 496,011	\$ -	\$ -	\$ 496,011
5	Bellerose Gravity Sewer and Force Main	\$ 599,187	\$ 158,686	\$ 1,237	\$ 439,265
6	Bellerose Lift Station	\$ 238,427	\$ 52,653	\$ 522	\$ 185,252
7	Summerbrook / Upper Manor Sewer Design	\$ -	\$ -	\$ -	\$ -
8	Upper Manor Gravity Trunk	\$ 643,926	\$ 551,056	\$ -	\$ 92,870
9	Forcemain Twinning to St. Albert	\$ 355,416	\$ 262,537	\$ 261	\$ 92,619
10	Sturgeon Road Forcemain Upgrade	\$ 154,515	\$ 154,520	\$ -	\$ (5)
11	Bellerose Lift Station Upgrade	\$ 654,330	\$ 561,460	\$ 1,340	\$ 91,530
12	Sturgeon Valley Force Main - Rivers Gate Lift Station to Start Line	\$ -	\$ -	\$ -	\$ -
13	Sturgeon Valley Gravity Main - Sturgeon Heights to Rivers Gate (West Trunk)	\$ -	\$ -	\$ -	\$ -
14	SV East/CFB Edmonton Trunk	\$ -	\$ -	\$ -	\$ -
15	SV East/CFB Edmonton Lift Station to START*	\$ -	\$ -	\$ -	\$ -
100	Unallocated Offsite Levies Collected	\$ -	\$ -	\$ -	\$ -
		\$ 9,414,422	\$ 2,503,538	\$ 46,487	\$ 6,864,397

D6. Summary of Sanitary Offsite Levy Cost Flow-through

As shown in the figure below, the total costs for sanitary infrastructure that forms the basis of the rate is approximately **\$6.86 million**. The cost allocations to each benefitting party are based on the benefitting percentages shown in the previous section. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

Total Sanitary Offsite Levy Costs

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a “1” below applicable area numbers. Benefiting areas were determined by County staff. The lands anticipated to develop over the 25-years in each offsite levy benefiting area are used to determine rates.

[illegible]

D8. Reserve Balance

At December 31st, 2020 the sanitary reserve balance was at a deficit of **\$(2,013,341.82)**. This amount takes into consideration expenditures and front-ending repayments up to end-2020. A negative balance indicates the presence of front-ending—i.e., this amount is owed to the County from the levy account via future collections. The County's ledgers should be amended to reflect this balance as it includes expenditures to date. This balance assumes that all remaining cash in the account is withdrawn and used to pay down a portion of front-ending obligations owed to the County.

Sanitary Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures (incl loan interest if any) to December 31, 2018		\$ 5,140,472.25	\$ (5,140,472.25)
Allocated Receipts to December 31, 2018	\$ 2,503,537.91		\$ (2,636,934.34)
Unallocated Receipts to December 31, 2018	\$ 711,885.12		\$ (1,925,049.22)
			\$ (1,925,049.22)
Closing Balance 2018			\$ (1,925,049.22)
2019			\$ (1,925,049.22)
Interest on Opening Balance		\$ 62,564.10	\$ (1,987,613.32)
Withdrawals/Applied to OSL Projects		\$ -	\$ (1,987,613.32)
Net Project Expenditures (OSL Share) In Addition to Withdrawals Applied to Projects		\$ 8,774.00	\$ (1,996,387.32)
OSL Receipts	\$ 39,256.00		\$ (1,957,131.32)
Other Receipts	\$ -		\$ (1,957,131.32)
Debenture Interest Expenditures		\$ -	\$ (1,957,131.32)
Interest on Project Expenditures		\$ 71.29	\$ (1,957,202.61)
Interest on Offsite Levy Receipts	\$ 196.28		\$ (1,957,006.33)
Interest on Other Receipts	\$ -		\$ (1,957,006.33)
Interest on Debenture Expenditure		\$ -	\$ (1,957,006.33)
2020			\$ (1,957,006.33)
Interest on Opening Balance		\$ 63,602.71	\$ (2,020,609.03)
Withdrawals/Applied to OSL Projects		\$ -	\$ (2,020,609.03)
Net Project Expenditures (OSL Share) In Addition to Withdrawals Applied to Projects		\$ -	\$ (2,020,609.03)
OSL Receipts	\$ 7,231.06		\$ (2,013,377.97)
Other Receipts	\$ -		\$ (2,013,377.97)
Debenture Interest Expenditures		\$ -	\$ (2,013,377.97)
Interest on Project Expenditures		\$ -	\$ (2,013,377.97)
Interest on Offsite Levy Receipts	\$ 36.16		\$ (2,013,341.82)
Interest on Other Receipts	\$ -		\$ (2,013,341.82)
Interest on Debenture Expenditure		\$ -	\$ (2,013,341.82)

D9. Development and Sanitary Infrastructure Staging Impacts

Sanitary offsite infrastructure will be constructed in staged fashion over the 25-year development period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of sanitary infrastructure from time to time—front ending of infrastructure will be required. A front-ender is the party that constructs and pays up front for infrastructure that benefits other parties.

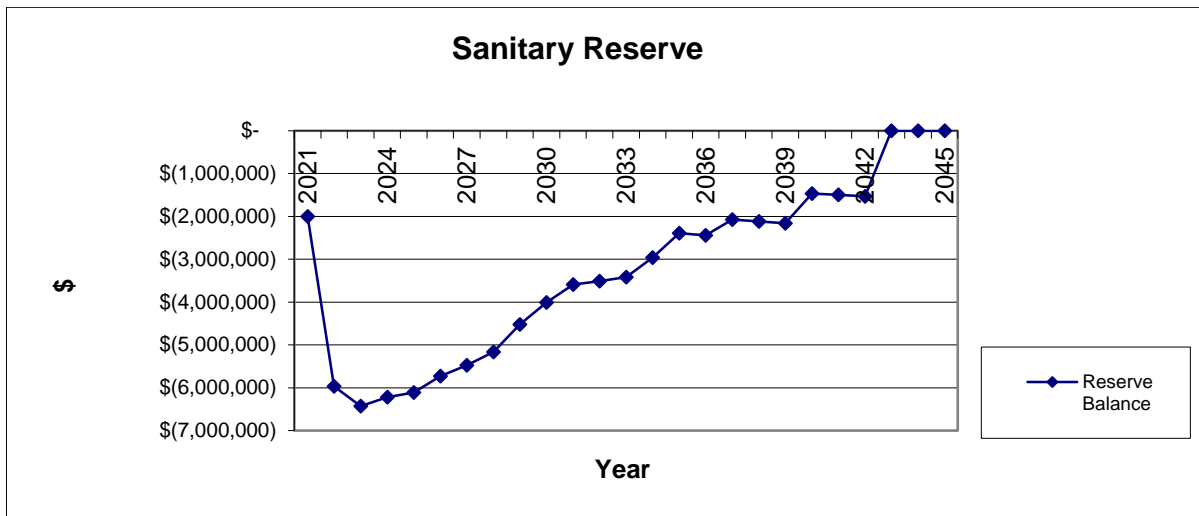
To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **2.09%**¹⁰ interest allowance has been charged to the reserve when it is

¹⁰ The 20-year debenture rate at the Alberta Capital Finance Authority at the time of writing was ~2.09%. Historic charge rates used in the model are 3.25% (2019-2020).

forecast to be in a negative balance. Further, a **1.00%**¹¹ interest credit has been provided to the reserve when it is forecast to be in a positive balance. The graph and table below outline the forecast water levy reserve balances over the 25-year development period.

If necessary, an interest staging adjustment has been applied to rates (slightly positive or slightly negative) to ensure that the forecast reserve balance at the end of the 25-year review period always returns to break-even (i.e., developers are not charged too much thereby providing a windfall to the County, nor are they charged too little thereby placing an unequitable burden on taxpayers).

Anticipated Sanitary Offsite Levy Reserve Balances



¹¹ Historic earning rates used in the model are 1.00% (2019-2020).

Anticipated Sanitary Offsite Levy Reserve Balances

		Opening Balance		\$ (2,013,342)
Year	Receipts	Expenditure	Interest	Balance
2021	\$ 50,971	\$ -	\$ (41,014)	\$ (2,003,384)
2022	\$ -	\$ 3,844,548	\$ (122,222)	\$ (5,970,154)
2023	\$ 189,757	\$ 516,050	\$ (131,596)	\$ (6,428,042)
2024	\$ 333,899	\$ -	\$ (127,368)	\$ (6,221,511)
2025	\$ 236,598	\$ -	\$ (125,085)	\$ (6,109,997)
2026	\$ 498,044	\$ -	\$ (117,290)	\$ (5,729,243)
2027	\$ 364,129	\$ -	\$ (112,131)	\$ (5,477,246)
2028	\$ 420,776	\$ -	\$ (105,680)	\$ (5,162,149)
2029	\$ 729,910	\$ -	\$ (92,634)	\$ (4,524,873)
2030	\$ 594,173	\$ -	\$ (82,152)	\$ (4,012,852)
2031	\$ 494,423	\$ -	\$ (73,535)	\$ (3,591,964)
2032	\$ 154,527	\$ -	\$ (71,842)	\$ (3,509,280)
2033	\$ 159,163	\$ -	\$ (70,017)	\$ (3,420,134)
2034	\$ 515,295	\$ -	\$ (60,711)	\$ (2,965,551)
2035	\$ 619,661	\$ -	\$ (49,029)	\$ (2,394,919)
2036	\$ -	\$ -	\$ (50,054)	\$ (2,444,973)
2037	\$ 411,227	\$ -	\$ (42,505)	\$ (2,076,250)
2038	\$ -	\$ -	\$ (43,394)	\$ (2,119,644)
2039	\$ -	\$ -	\$ (44,301)	\$ (2,163,945)
2040	\$ 725,532	\$ -	\$ (30,063)	\$ (1,468,476)
2041	\$ -	\$ -	\$ (30,691)	\$ (1,499,167)
2042	\$ -	\$ -	\$ (31,333)	\$ (1,530,500)
2043	\$ 1,530,500	\$ -	\$ -	\$ 0
2044	\$ -	\$ -	\$ -	\$ 0
2045	\$ -	\$ -	\$ -	\$ 0

APPENDIX E: STORMWATER

E1. Stormwater Offsite Infrastructure

In order to support future growth, stormwater offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) future debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$36.75 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by County staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support development during the 25-year review period. The remainder of this section outlines how the “net” costs for development are determined.

Summary of Stormwater Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Future Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	Sturgeon West Stormwater Drainage Sytem	\$ -	\$ -	\$ 21,356,846	\$ 21,356,846
2	Sturgeon East Stormwater Drainage System	\$ -	\$ -	\$ 12,340,541	\$ 12,340,541
3	SV East 1.5 km Trunk	\$ -	\$ -	\$ 3,051,000	\$ 3,051,000
100	Unallocated Offsite Levies Collected to Dec 31, 2018	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ 36,748,387	\$ 36,748,387

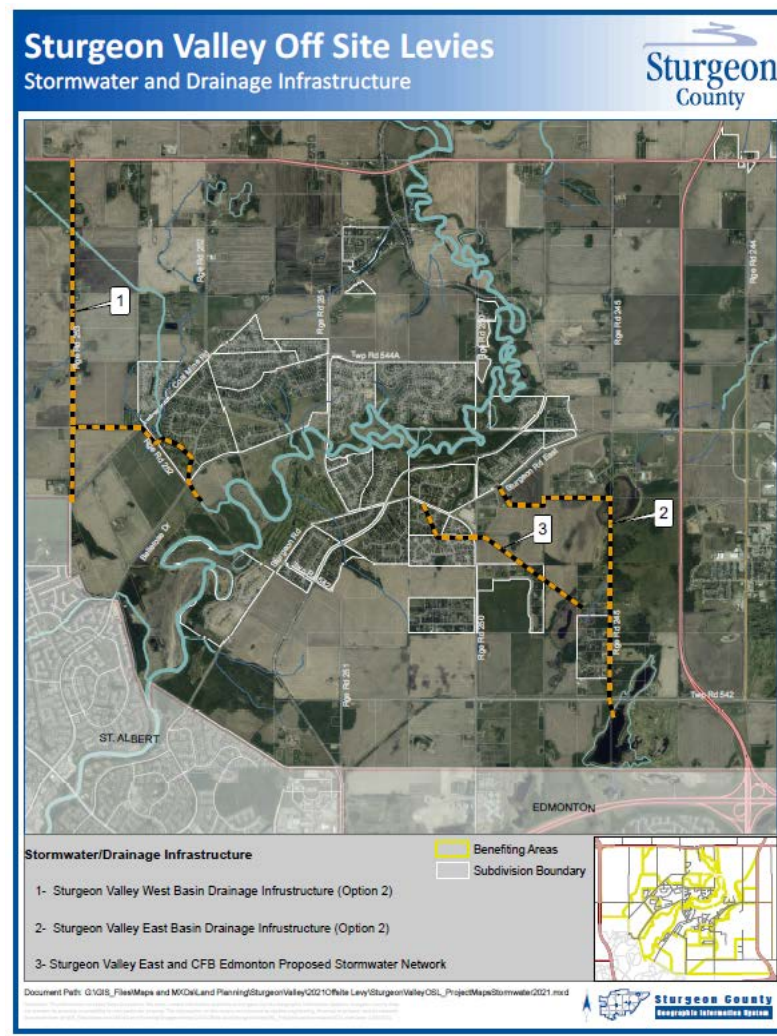
*Past expenditures include past financing expenditures (interest) if any.

**Costs estimates provided by County staff.

***Estimates include engineering and contingencies.

****Unallocated levies to end-2018 (if any) were set-up as an individual project (#100) and credited 100% to future development and to all offsite levy areas (see *Section E5*).

*****Offsite infrastructure definitions are contained in Appendix F.



E2. Stormwater Offsite Infrastructure Grants & Contributions to Date

The MGA enables the County to allocate the costs of offsite infrastructure to development, other than those costs that have been provided by way of special ear-marked grant or contribution (i.e., contributed infrastructure). Sturgeon County has/will receive approximately **\$0.00** in special ear-marked grants and contributions for stormwater offsite levy infrastructure as shown in the table below (note, if the County receives other ear-marked grants or contributions in the future, it will be reflected in one of the annual updates and rates adjusted accordingly). The result is that the total reduced project estimated cost is **\$36.75 million**.

Special Grants and Contributions for Stormwater Offsite Infrastructure

Item	Project Description	Total Project Estimated Cost	Special Provincial Grants	Developer Agreement Contributions	Other Contributions	Reduced Project Estimated Cost
1	Sturgeon West Stormwater Drainage Sytem	\$ 21,356,846	\$ -	\$ -	\$ -	\$ 21,356,846
2	Sturgeon East Stormwater Drainage System	\$ 12,340,541	\$ -	\$ -	\$ -	\$ 12,340,541
3	SV East 1.5 km Trunk	\$ 3,051,000	\$ -	\$ -	\$ -	\$ 3,051,000
100	Unallocated Offsite Levies Collected to Dec 31, 2018	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 36,748,387	\$ -	\$ -	\$ -	\$ 36,748,387

E3. Year of Construction

The timing of construction is used to determine the impact of inflation on cost, the impact of forecast reserve balances, and the estimate of financial oversizing (described in the Section that follows). The County anticipates construction of offsite infrastructure as outlined in the table below. Note, if this schedule is adjusted in the future, it will be reflected in one of the County's annual rate/bylaw updates.

Forecast Year of Construction

Item	Project Description	Construction Start Year
1	Sturgeon West Stormwater Drainage Sytem	2050
2	Sturgeon East Stormwater Drainage System	2050
3	SV East 1.5 km Trunk	2050

*The share of projects constructed beyond the 25-year review period are not included in rates today (see financial oversizing in next section).

**Project costs are inflated by 2% per annum to 2022 and 3% per annum thereafter to the year of construction.

E4. Stormwater Offsite Infrastructure Benefiting Parties

The stormwater offsite infrastructure previously outlined will benefit various parties to varying degrees. Three potential benefiting parties were identified including:

1. Sturgeon County – a portion of the stormwater infrastructure which is required to service existing residents. This residual benefit is determined at the point in time when the project is added to the bylaw (i.e., it does not fluctuate from year-to-year).
2. Other Stakeholders – other municipalities that benefit from the infrastructure.
3. Future Development:
 - Financial Oversizing – that portion of cost (i.e., levyable stormwater infrastructure costs) which benefits future development beyond the 25-year review period.
 - **In Rates – that portion of cost (i.e., levyable stormwater infrastructure costs) which benefits future development within the 25-year review period.**

The table below outlines the allocation of stormwater offsite levy infrastructure costs to benefiting parties.

Allocation of Stormwater Infrastructure to Benefiting Parties

Item	Project Description	Reduced Project Estimated Cost	Muni Share %	Other Stakeholder Share	Developer Share Beyond 25 Yrs (Financial Oversizing %)	OSL / Developer Share %
1	Sturgeon West Stormwater Drainage Sytem	\$ 21,356,846			100.0%	0.0%
2	Sturgeon East Stormwater Drainage System	\$ 12,340,541			100.0%	0.0%
3	SV East 1.5 km Trunk	\$ 3,051,000			100.0%	0.0%
100	Unallocated Offsite Levies Collected to Dec 31, 2018	\$ -				100.0%
		\$ 36,748,387				

*Allocations were determined by County staff.

**Financial oversizing is determined by separating out the pro rata portion of developer cost beyond the 25-year review period, in comparison with the anticipated year of construction. As the years move forward and rates are updated, these additional developer costs will be included in rate calculations. For example, a project which is slated to be constructed in year 20 of the 25-year review period will have 20% (5/25) of its costs in rates today, and 80% (20/25) of its costs will sit beyond the 25-year review period.

E5. Existing Receipts & Adjusted Levy Cost

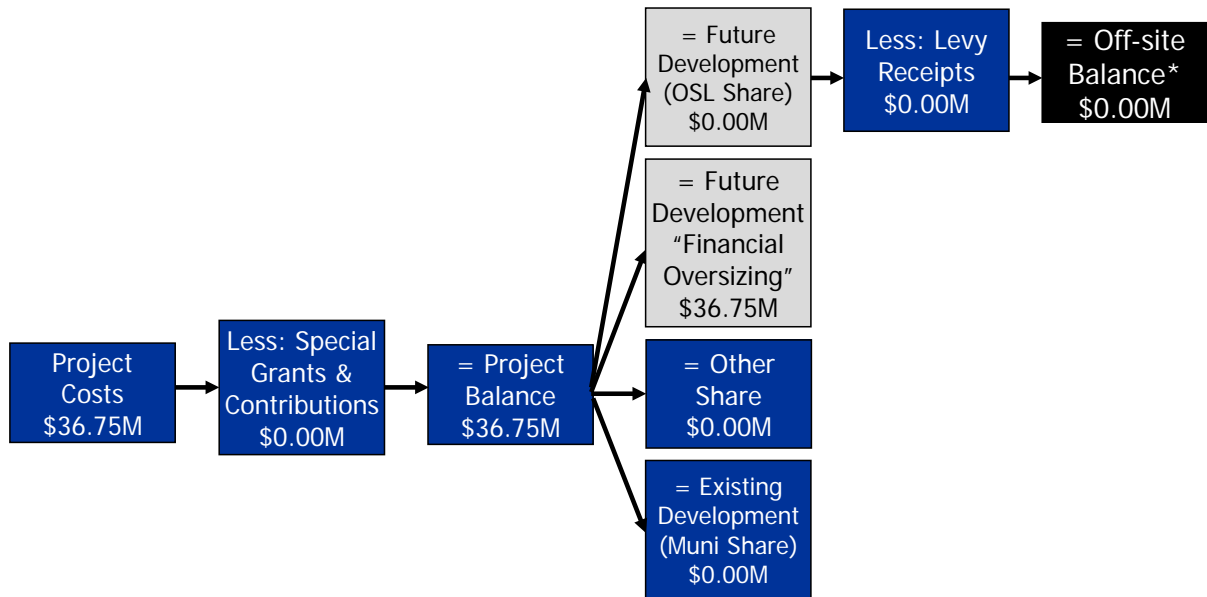
Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of **\$0.00**. However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. County staff have advised that **\$0.00** in stormwater levies have been applied/collected as shown in the table below. This results in an adjusted offsite levy cost of **\$0.00**.

Offsite Levy Funds Applied to Date

Item	Project Description	OSL / Developer Cost	Offsite Levy Funds Collected to Dec 31, 2018	Offsite Levy Funds Collected Starting Jan 1, 2019	Adjusted Developer (Levy) Cost
1	Sturgeon West Stormwater Drainage Sytem	\$ -	\$ -	\$ -	\$ -
2	Sturgeon East Stormwater Drainage System	\$ -	\$ -	\$ -	\$ -
3	SV East 1.5 km Trunk	\$ -	\$ -	\$ -	\$ -
100	Unallocated Offsite Levies Collected to Dec 31, 2018	\$ -	\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -	\$ -

E6. Summary of Stormwater Offsite Levy Cost Flow-through

As shown in the figure below, the total cost for stormwater infrastructure that forms the basis of the rate is **\$0.00**. The cost allocations to each benefiting party are based on the benefiting percentages shown in previous section. The offsite levy balance (due from developers) is allocated to various benefiting areas (as described in the next section).

Total Stormwater Offsite Levy Costs

E7. Stormwater Infrastructure Benefiting Areas

Net developer costs for each project have been allocated to multiple benefiting offsite levy area (see tables below). Allocations are denoted with a “1” below applicable area numbers. Benefiting areas were determined by County staff. The lands anticipated to develop over the 25-years in each offsite levy benefiting area are used to determine rates.

Stormwater Allocations to Benefitting Areas

[illegible][illegible][illegible][illegible]

E8. Reserve Balance

At December 31st, 2020 the stormwater reserve balance was **\$118,955.57**. This amount takes into consideration expenditures and front-ending repayments up to end-2020. This balance assumes that cash in the reserve is excess of this amount is withdrawn and used to pay down front-ending obligations owed to the County.

Stormwater Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures (incl loan interest if any) to December 31, 2018		\$ -	\$ -
Allocated Receipts to December 31, 2018	\$ -		\$ -
Unallocated Receipts to December 31, 2018	\$ 116,611.68		\$ 116,611.68
Closing Balance 2018			\$ 116,611.68
2019			
Interest on Opening Balance	\$ 1,166.12		\$ 116,611.68
Withdrawals/Applied to OSL Projects		\$ -	\$ 117,777.79
Net Project Expenditures (OSL Share) In Addition to Withdrawals Applied to Projects		\$ -	\$ 117,777.79
OSL Receipts	\$ -		\$ 117,777.79
Other Receipts	\$ -		\$ 117,777.79
Debenture Interest Expenditures		\$ -	\$ 117,777.79
Interest on Project Expenditures		\$ -	\$ 117,777.79
Interest on Offsite Levy Receipts	\$ -		\$ 117,777.79
Interest on Other Receipts	\$ -		\$ 117,777.79
Interest on Debenture Expenditure		\$ -	\$ 117,777.79
2020			
Interest on Opening Balance	\$ 1,177.78		\$ 117,777.79
Withdrawals/Applied to OSL Projects		\$ -	\$ 118,955.57
Net Project Expenditures (OSL Share) In Addition to Withdrawals Applied to Projects		\$ -	\$ 118,955.57
OSL Receipts	\$ -		\$ 118,955.57
Other Receipts	\$ -		\$ 118,955.57
Debenture Interest Expenditures		\$ -	\$ 118,955.57
Interest on Project Expenditures		\$ -	\$ 118,955.57
Interest on Offsite Levy Receipts	\$ -		\$ 118,955.57
Interest on Other Receipts	\$ -		\$ 118,955.57
Interest on Debenture Expenditure		\$ -	\$ 118,955.57

E9. Development and Stormwater Infrastructure Staging Impacts

Stormwater offsite infrastructure will be constructed in staged fashion over the 25-year development period.

To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **2.09%**¹² interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **1.00%**¹³ interest credit has been provided to the reserve when it is forecast to be in a positive balance. The graph and table below outline the forecast water levy reserve balances over the 25-year development period.

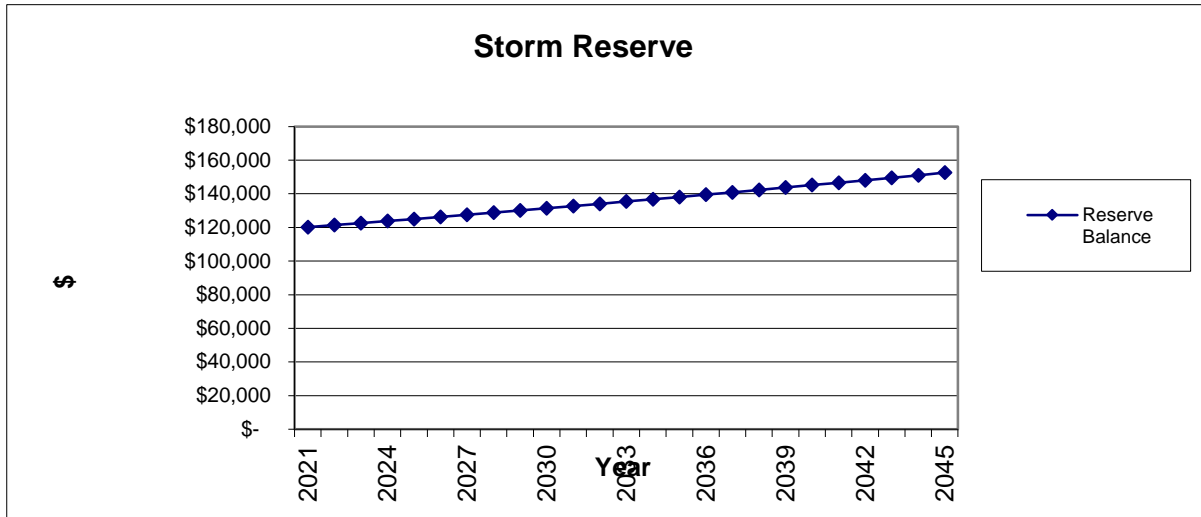
If necessary, an interest staging adjustment has been applied to rates (slightly positive or slightly negative) to ensure that the forecast reserve balance at the end of the 25-year

¹² The 20-year debenture rate at the Alberta Capital Finance Authority at the time of writing was ~2.09%. Historic charge rates used in the model are 3.25% (2019-2020).

¹³ Historic earning rates used in the model are 1.00% (2019-2020).

review period always returns to break-even (i.e., developers are not charged too much thereby providing a windfall to the County, nor are they charged too little thereby placing an unequitable burden on taxpayers)¹⁴.

Anticipated Stormwater Offsite Levy Reserve Balances



¹⁴ In this case, the stormwater account cannot reach zero at the end of the 25-year review period because there are no projects within the 25-year review period and, therefore, no rates currently.

Anticipated Stormwater Offsite Levy Reserve Balances

		Opening Balance			\$ 118,956
Year	Receipts	Expenditure	Interest	Balance	
2021	\$ -	\$ -	\$ 1,190	\$	120,145
2022	\$ -	\$ -	\$ 1,201	\$	121,347
2023	\$ -	\$ -	\$ 1,213	\$	122,560
2024	\$ -	\$ -	\$ 1,226	\$	123,786
2025	\$ -	\$ -	\$ 1,238	\$	125,024
2026	\$ -	\$ -	\$ 1,250	\$	126,274
2027	\$ -	\$ -	\$ 1,263	\$	127,536
2028	\$ -	\$ -	\$ 1,275	\$	128,812
2029	\$ -	\$ -	\$ 1,288	\$	130,100
2030	\$ -	\$ -	\$ 1,301	\$	131,401
2031	\$ -	\$ -	\$ 1,314	\$	132,715
2032	\$ -	\$ -	\$ 1,327	\$	134,042
2033	\$ -	\$ -	\$ 1,340	\$	135,383
2034	\$ -	\$ -	\$ 1,354	\$	136,736
2035	\$ -	\$ -	\$ 1,367	\$	138,104
2036	\$ -	\$ -	\$ 1,381	\$	139,485
2037	\$ -	\$ -	\$ 1,395	\$	140,880
2038	\$ -	\$ -	\$ 1,409	\$	142,288
2039	\$ -	\$ -	\$ 1,423	\$	143,711
2040	\$ -	\$ -	\$ 1,437	\$	145,148
2041	\$ -	\$ -	\$ 1,451	\$	146,600
2042	\$ -	\$ -	\$ 1,466	\$	148,066
2043	\$ -	\$ -	\$ 1,481	\$	149,547
2044	\$ -	\$ -	\$ 1,495	\$	151,042
2045	\$ -	\$ -	\$ 1,510	\$	152,552

APPENDIX F: OFFSITE INFRASTRUCTURE DEFINITIONS

F1. Roadways

Sturgeon County maintains a roadway classification system consistent with the definition of arterial, collector, and local roads contained in the Transportation Association of Canada's Manual of Geometric Design Standards for Canadian Roads.

Arterial Roadways are typically designed as free flowing, with controlled intersection spacing and providing connectivity to the Provincial highway network therefore, Arterials are considered a benefit to the County at large. The cost of such facilities is then assessed proportionately against all benefiting lands through an offsite levy charge.

Collector roads are intended to address interregional travel demands, as secondary connections to the Provincial highway network and origin – destinations. These roadways are typically the second highest volume of traffic which is usually between 200 vehicles per day and 500 vehicles per day and are typically paved. Collectors are considered a benefit to the County at large. The cost of such facilities is then assessed proportionately against all benefiting lands through an offsite levy charge.

Local roads are any roadway which is not classified as either an Arterial, or Collector. Local roads within new development area are constructed by developers, at their cost, in conjunction with the developments.

F2. Water

Sturgeon County's philosophy regarding its waterworks system improvements is that development is responsible, at their cost, for the construction of all new distribution mains up to and including 300 mm diameter in size. Primary feeder mains (water mains larger than 300 mm diameter), treated water, storage reservoirs, pumping facilities and water quality monitoring stations benefit the entire water distribution system and thus, the cost of such facilities is then assessed proportionately against all benefiting lands through an offsite levy charge.

Capital improvements to the water supply system are the responsibility of EPCOR. The cost of such improvements are assessed proportionately against the County through the Commission's water utility rate structure and these costs are not included in the County's offsite levy charge.

F3. Sanitary

The sanitary sewage collection system in Sturgeon County provides wastewater servicing to its residential and non-residential customers through local collection, conveyance, and treatment via wastewater lagoons, or through the Alberta Capital Region Wastewater Commission (ACRWC) infrastructure. The communities / locations serviced by the ACRWC include: Cardiff, Sturgeon Valley, Sturgeon Industrial Park, and the Alberta Industrial Heartland.

Sanitary Sewer systems typically have a hierarchical classification based primarily upon the

size of diameter of pipe and the area they serve. In the case of the sanitary sewer system in Sturgeon County, laterals (locals) are typically 200 mm and 250 mm diameter in size, collectors are 300 mm and 375 mm diameter in size, and trunks are sewer pipe systems greater than 375 mm in diameter.

Trunks, forcemains, and lift stations, benefit the entire sanitary collection system. The cost of such facilities is then assessed proportionately against all benefiting lands through an offsite levy charge.

Development shall be fully responsible for the construction of lateral and collectors for the sanitary sewer system at their entire cost.

Capital improvements to the Regional Treatment Plant and Transmission Line are the responsibility of the ACRWC of which Sturgeon County is a member. The cost of such capital improvements are assessed proportionately against Sturgeon County through the ACRWC sewage utility rate structure and are not included in the Sturgeon County offsite levy charge.

F4. Stormwater

Sturgeon County's storm drainage networks primarily consists of a system of drainage ditches, swales and culverts. The networks also includes sewer pipes in some residential subdivisions, and a few stormwater management facilities. Most drainage from the Sturgeon Valley flows into the Sturgeon River, and the majority of the existing residential developments rely on road ditches, drainage channels and natural swales to convey runoff to the River.

Storm drainage networks have a hierarchical classification based primarily upon the size of diameter of pipe. Sturgeon County storm drainage networks consist of laterals between 300 mm and 1050 mm diameter in size which discharges into a trunk line. Trunk lines are greater than 1200 mm in diameter (or equivalent to in capacity, e.g. 2 x 600 mm) and discharge into an outfall. Outfalls can be any structure (man-made or natural) where stormwater is discharged into a river.

Trunks, forcemains, lift stations, and outfalls benefit the entire collection system and the cost of such facilities are assessed proportionately against all benefiting land through an offsite levy charge.

Development shall be fully responsible for the construction of laterals for the storm sewer system at their entire cost.

For rural cross-sections that utilize overland ditching, drainage corridors will be established and the cost of certain rural ditches will be funded by offsite levy charge. Development shall be fully responsible for the construction of other ditches, ponds, etc for the storm sewer system at their entire cost.

APPENDIX G: COMPARISON OF RATES

The table below compares the new Sturgeon Valley offsite levy rates to residential rates in other municipalities.

Municipality / Area	Average Per Ha.
Strathcona County* (roads, water, sewer, storm)	\$9,600 – 73,700 (2018)
City of Beaumont* Residential (roads, water, sewer)	\$53,900 - \$77,600 (2019)
City of Fort Saskatchewan (West Park) (roads, water, sewer, storm)	\$62,900 - \$76,700 (2017)
Town of Stony Plain (roads, water, sewer, recreation)	In Process (2021)
Parkland County* (roads, water, sewer, storm)	\$82,500 (2018)
Sturgeon County – Sturgeon Valley* (roads, water, sewer)	\$82,794
City of Spruce Grove* (roads, water, sewer)	\$83,000 (2020)
Town of Calmar* (roads, water, sewer)	\$95,700 (2020)
City of Fort Saskatchewan (South Fort) (roads, water, sewer, storm)	\$104,100 (2017)
Leduc County* - Nisku (roads, water, sewer)	\$109,000 (2017)
Town of Devon* (roads, water, sewer)	\$119,900 (2019)
Town of High River (roads, water, sewer)	\$130,000 (2013)
City of Leduc* (roads, water, sewer)	\$133,100 (2020)
City of St. Albert* (roads, water, sewer, storm)	+\$300,000 (2020)
City of Edmonton (roads, water, sewer, storm)	+\$300,000
City of Calgary (roads, water, sewer, storm, rec, stabilization)	+\$350,000

*CORVUS clients

**Information adapted from online sources as at Jan 1st, 2021.