

**TRANSPORTATION OFF-SITE LEVY BYLAW NO. 005-19**  
**OF THE CITY OF CHESTERMERE**

**A BYLAW OF THE CITY OF CHESTERMERE, IN THE PROVINCE OF ALBERTA, TO ESTABLISH OFF-SITE LEVIES FOR LAND THAT IS TO BE SUBDIVIDED OR DEVELOPED WITHIN THE CITY OF CHESTERMERE**

**WHEREAS:**

- A. Section 648 of the *Municipal Government Act* allows Council to pass a bylaw for the imposition and payment of off-site levies in respect of land that is to be developed or subdivided;
- B. Council deems it necessary and expedient to collect Off-Site Levies to pay for the capital cost of infrastructure required to service the Growth of the City;
- C. The City has engaged in consultation with landowners and representatives of the development industry to address and define existing and future infrastructure required for Growth of the City and the allocation of the capital costs of such infrastructure;
- D. Council has received the Report, which set out a fair and equitable calculation of Off-Site Levies in accordance with the *Municipal Government Act* and the Off-Site Levy Regulation;
- E. Council has advertised its intention to consider the enactment of this Bylaw pursuant to the requirements of the *Municipal Government Act*;

NOW THEREFORE, Council duly assembled, enacts as follows:

**1. Name of Bylaw**

This Bylaw shall be known and referred to as the "Transportation Off-Site Levy Bylaw".

**2. Definitions**

The following terms shall have the following meanings in this Bylaw:

- (a) "Bylaw" means this off-site levy bylaw;
- (b) "Chief Administrative Officer" means the chief administrative officer for the City, regardless of the specific title that may be conferred on that officer from time to time;
- (c) "City" means the City of Chestermere;
- (d) "Council" means the council for the City;

- (e) “Developable Land” means all land contained within the Development Area:
  - (i) upon which Development takes place after the date of enactment of this Bylaw; or
  - (ii) for which Subdivision approval is obtained after the date of enactment of this Bylaw;excluding all Developed Land;
- (f) “Developed Land” means land that has been subject to Development or a Subdivision prior to the date this Bylaw comes into force, and in respect of which off-site levies for the same infrastructure have been paid;
- (g) “Development” means “development” as defined in the *Municipal Government Act*;
- (h) “Development Agreement” means “development agreement” as referred to in the *Municipal Government Act*;
- (i) “Development Area” includes the area of land within the municipal boundaries of the City identified in Schedule “A” to this Bylaw;
- (j) “Growth” means:
  - (i) the creation of new Lots through Subdivision; and
  - (ii) the occurrence of Development;
- (k) “Lot” means “lot” as defined in the *Municipal Government Act*;
- (l) “*Municipal Government Act*” means the *Municipal Government Act*, RSA 2000, c. M 26, as amended or repealed and replaced from time to time;
- (m) “Off-Site Infrastructure” means those components and projects referred to in the Report, in relation to roads and related transportation infrastructure to be paid for in whole or in part by Off-Site Levies under the Bylaw;
- (n) “Off-Site Levies” means the off-site levies imposed pursuant to this Bylaw;
- (o) “Off-Site Levy Regulation” means the Principles and Criteria for Off-Site Levies Regulation, Alta. Reg. 46/2004, as amended or repealed and replaced from time to time;
- (p) “Report” means the City of Chestermere: Offsite Levy Rates Update, November 26<sup>th</sup>, 2018, prepared by Corvus Business Advisors, attached as Schedule “C” to this Bylaw;
- (q) “Subdivision” means “subdivision” as defined in the *Municipal Government Act*.

**3. Object of Levy**

The object of the Off-Site Levies is to provide funds to pay for all or part of the capital costs of the Off-Site Infrastructure required for Growth, as determined in the Report.

**4. Imposition of Levy**

- (a) The Off-Site Levies are hereby established and imposed in respect of all Developable Land on the basis set out in the Report.
- (b) The amount of the Off-Site Levies imposed is as calculated in the Report and set out in Schedule "B".
- (c) The Off-Site Levies will be assessed on all Developable Land on a per hectare basis, excluding those portions of Developable Land that are designated pursuant to a Subdivision as:
  - (i) environmental reserve;
  - (ii) school reserve;
  - (iii) municipal reserve; or
  - (iv) arterial road right of way.
- (d) Unless otherwise agreed, payment of Off-Site Levies imposed under this Bylaw is due:
  - (i) in the case of Subdivision, at or prior to plan endorsement; and
  - (ii) in the case of Development, as a condition of the issuance of the development permit.

**5. Authority of the Chief Administrative Officer**

- (a) The Chief Administrative Officer is delegated the authority to enforce and administer this Bylaw, including, but not limited to the authority to:
  - (i) enter into Development Agreements on behalf of the City with respect to, among other things, the collection of Off-Site Levies;
  - (ii) defer or waive collection of Off-Site Levies imposed pursuant to this Bylaw; and
  - (iii) require security for payment of any deferred levies.
- (b) The Chief Administrative Officer may delegate the authority to enforce and administer this Bylaw.

**6. Development Agreement**

- (a) Council may, from time to time adopt policies or guidelines for the assistance and direction of the Chief Administrative Officer in determining which Development and Subdivision applications require a Development Agreement.
- (b) Where it is determined that a Development Agreement is appropriate for any application for Development or Subdivision, the developer or the owner, as the case may be, shall enter into a Development Agreement with the City that provides for the payment of Off-Site Levies in accordance with this Bylaw or that provides for the deferral of Off-Site Levies, including requiring security for the payment of such deferred levies.

**7. Annual Report**

On or before December 31 in each calendar year, the Chief Administrative Officer shall provide an annual report to Council regarding the Off-Site Levies imposed under this Bylaw, including:

- (a) Off-Site Infrastructure constructed during the previous calendar year;
- (b) Construction costs of Off-Site Infrastructure constructed in the previous calendar year;
- (c) Estimated construction costs for Off-Site Infrastructure yet to be constructed and an explanation as to any adjustments to the estimates since the previous annual report;
- (d) Amount collected in Off-site Levies; and
- (e) Specifics of total value of Off-site Levies being held by City and yet to be expended on Off-Site Infrastructure, interest earned and commitments for future expenditures of such monies.

**8. Accounting**

All funds collected pursuant to this Bylaw shall be accounted for in a special fund for each category of infrastructure and expended only as permitted under the *Municipal Government Act*.

**9. Review**

The City shall review the rates for Off-Site Levies annually and, if required, shall amend this Bylaw accordingly to update the rates for Off-Site Levies.

**10. General**

- (a) Nothing in this Bylaw precludes the City from:

- (i) imposing further or different levies, duly enacted by bylaw, on any portion of the Developable Lands in respect of which the City has not collected Off-Site Levies;
  - (ii) deferring collection of Off-Site Levies on any portion of Developable Lands, including requiring security for payment of such deferred levies; or
  - (iii) reducing or forgiving payment of the Off-Site Levies required pursuant to this Bylaw, or otherwise providing for credits for other Off-Site Infrastructure or oversize infrastructure constructed by a developer in calculating and/or collecting the Off-Site Levies that become payable pursuant to this Bylaw.
- (b) Schedules "A" and "B" to this Bylaw, and specifically, without restricting the generality of the foregoing, the rates for Off-Site Levies set out in the Report, may be updated or amended from time to time by resolution of Council.
  - (c) In the event that any provision of this Bylaw is declared invalid or void by any Court having competent jurisdiction, then such invalid or void provision shall be severed from the Bylaw and the remaining provisions of the Bylaw shall be maintained and deemed valid.

#### 11. **Transition**

- (a) This Bylaw applies to:
  - (i) any Subdivision where the date of subdivision approval occurs on or after the date this Bylaw comes into force; and
  - (ii) any Development where the date of issuance of a development permit occurs on or after the date this Bylaw comes into force.
- (b) Development Agreements entered into prior to the enactment of this Bylaw shall remain valid and in effect.
- (c) Any off-site levies payable under Development Agreements entered into prior to the enactment of this Bylaw, are confirmed and shall continue to be payable notwithstanding the repeal of previous off-site levy bylaws pursuant to subsection (d).
- (d) Bylaw 010-17 is hereby repealed.

#### 12. **Execution**

This Bylaw shall take effect and come into force effective after final reading and signature thereof by the Chief Elected Official and Chief Administrative Officer, or their authorized delegates.

FIRST READING passed in open Council duly assembled in the City of Chestermere, in the Province of Alberta, this 2<sup>nd</sup> day of April, 2019.

SECOND READING passed in open Council duly assembled in the City of Chestermere, in the Province of Alberta, this 2<sup>nd</sup> day of April, 2019.

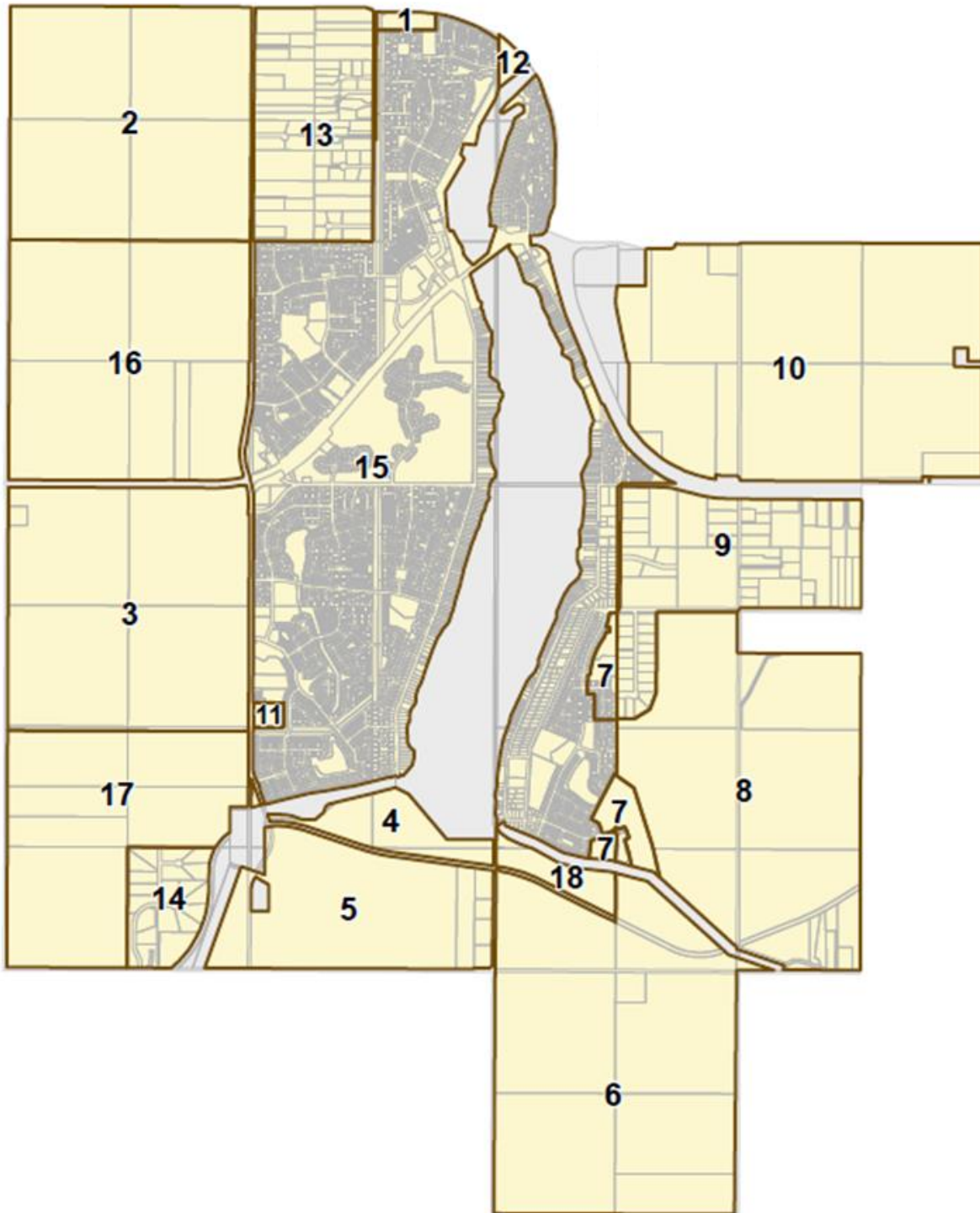
THIRD AND FINAL READING passed in open Council duly assembled in the City of Chestermere, in the Province of Alberta, this 2<sup>nd</sup> day of April, 2019.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Chief Administrative Officer

### SCHEDULE A

### Map of Development Areas



## SCHEDULE B

### Summary by Development Area

<b>Area</b>	<b>Transportation Off-site Levies (per Ha)</b>
1.	\$81,022
2.	\$81,022
3.	\$81,022
4.	\$81,022
5.	\$81,022
6.	\$81,022
7.	\$81,022
8.	\$81,022
9.	\$81,022
10.	\$81,022
11.	\$81,022
12.	\$81,022
13.	\$81,022
14.	\$81,022
15.	\$81,022
16.	\$81,022
17.	\$81,022
18.	\$81,022



**SCHEDULE C**

**City of Chesteremere: Offsite Levy Rates Update, November 26<sup>th</sup> 2018,  
prepared by CORVUS Business Advisors**

DRAFT



## City of Chestermere: Offsite Levy Rates Update

November 26<sup>th</sup>, 2018

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November 26<sup>th</sup>, 2018

City Council  
City of Chestermere  
105 Marina Road  
Chestermere, Alberta  
T1X 1V7

**RE: City of Chestermere Offsite Levy Rates Update**

Enclosed is our report for the Offsite Levy Rates Update. If you have any questions do not hesitate to contact me.

Yours truly,

A handwritten signature in black ink, appearing to read "Greg Weiss", with a horizontal line extending to the right.

Greg Weiss  
President

DRAFT

## 1 DOCUMENT INFORMATION

Version		
Number	Revision Date	Summary of Changes and Author
1.0	August 22 <sup>nd</sup> , 2018	FINAL: Created by CORVUS Business Advisors and reviewed by City and CUI Administration
2.0	September 6 <sup>th</sup> , 2018	FINAL: Final amendments by City and CUI Administration
3.0	November 26 <sup>th</sup> , 2018	FINAL: Final amendments by City

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## 3 INTRODUCTION

### 3.1 Introduction

Bylaws 010-17, 011-17, and 012-17 established by the City of Chestermere (“the City”) in 2017 defines offsite levy charges for transportation stormwater and water/sanitary infrastructure in the municipality. The City wishes to update these bylaws, amending and removing certain infrastructure, adding new infrastructure in alignment with the City’s current master plans, and ensuring updated costs and development forecasts are reflected fairly and equitably in new rates, thereby ensuring a financially sustainable community. In addition, the City wishes to adopt a recreation offsite levy bylaw in alignment with recent changes to Section 648 of the Municipal Government Act (MGA).

This report outlines the methodology and information used to update the offsite levy charges for the City, as well as other key findings and recommendations.

### 3.2 Methodology

The City and Chestermere Utilities Inc. (“CUI”) have various infrastructure plans, and these plans have been used to generate key inputs for this offsite levy rates review. City and CUI staff and their engineering advisors reviewed existing plans and identified offsite projects for water, sanitary, transportation, and stormwater infrastructure<sup>1</sup>. The City and CUI assessments also included determination of benefits to existing development, future development, and benefiting areas.

Support provided by CORVUS Business Advisors included:

- Provision of the newest CORVUS offsite levy model, including configuration, priming, and data transfer/loading.
- Incorporation of offsite levy area measurements and land development forecasts (provided by City staff).
- Incorporation of infrastructure costs and allocation percentages for existing development, new development, and other parties (provided by City and CUI staff and engineering advisors).
- Reconciliation of offsite levy reserve opening balances (historical details provided by City and CUI staff).
- Development of water, sanitary, transportation, and stormwater offsite levy rates.
- Presentation of offsite levy rates to Administration and Council.
- Provision of offsite levy model training for staff.

Offsite levy rates within the City’s offsite levy model are forecast using a rolling 25-year

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<sup>1</sup> It was not within CORVUS’ scope of work to review or assess infrastructure plans. Infrastructure requirements and allocations were determined by the City, CUI, and their engineering advisors.

review period. During this review, a cut-off date of **December 31<sup>st</sup>, 2017** was established, and so the 25-year review period stems from **2018 to 2042**. Project expenditures, offsite levy receipts etc. were gathered as “actuals” from City and CUI financial records up to the cut-off date. Beyond the cut-off date, all financial details are estimates. When the City completes its next rate update, information from January 1<sup>st</sup>, 2018 up to the new cut-off date will be converted from estimates to actuals.

Costs that benefit development prior to and within the 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 2042 will gradually find their way into rates.

## 4 KEY FINDINGS

Key findings pertaining to the update of City offsite levy rates are as follows:

- Offsite infrastructure costs to be included in the offsite levy bylaw total approximately **\$373.26 million** (2017/18 dollars). An overview of offsite infrastructure costs and maps is provided in Appendices B1, C1, D1, E1, and F1.

Before determining how the infrastructure costs will be allocated to parties that benefit (e.g., existing development, new development, other municipalities etc.), financing provided by way of special ear-marked grants and other contributions are deducted from offsite infrastructure costs. For this update, the City has identified approximately **\$8.47 million** in special grants and contributions. An overview of special grants and contributions and resulting net costs is provided in Appendices B2, C2, D2, E2, and F2.

The residual benefit allocated to existing development (the City’s share or CUI’s share) is approximately **\$41.10 million**. The share allocated to other stakeholders (e.g., neighbouring municipalities) is **\$0.00**.

That portion of cost which is allocated to future development (versus existing development and other allocations) totals approximately **\$323.69 million** and is based on the allocations shown in Appendices B4, C4, D4, E4, and F4. However, a portion of the cost allocated to 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, E3, and F3.

Of the **\$323.69 million** in total offsite infrastructure costs allocated to future development, the share allocated to future development that is included in rates today (the offsite levy share) is approximately **\$200.99 million**, as shown in the table below. A complete summary of offsite infrastructure net cost “flow-thru” is provided in Appendices B6, C6, D6, E6, and F6.

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	\$ 5,516,794	\$ 5,400,000	\$ -	\$ 57,727,809	\$ 71,998,428	\$ 140,643,031
Water	\$ 1,850,941	\$ -	\$ -	\$ 13,060,596	\$ 35,410,529	\$ 50,322,066
Sanitary	\$ 1,100,000	\$ 6,418,886	\$ -	\$ 3,703,920	\$ 53,229,270	\$ 64,452,075
Stormwater	\$ -	\$ -	\$ -	\$ 8,229,654	\$ 10,359,230	\$ 18,588,883
Recreation	\$ -	\$ 29,284,349	\$ -	\$ 39,979,925	\$ 29,993,954	\$ 99,258,227
Fire	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Police	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Library	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 8,467,735	\$ 41,103,234	\$ -	\$ 122,701,904	\$ 200,991,410	\$ 373,264,283

Before allocating infrastructure costs to benefitting lands, offsite levy costs must be reduced by the amount of levies collected to date. Up to December 31<sup>st</sup>, 2016, the City has collected **\$15.84 million** as shown in Appendices B5, C5, D5, E5, and F5.

- To facilitate the allocation of infrastructure costs to those lands that benefit from the infrastructure, the City is parsed into **18** offsite levy areas. The area boundaries, numbering schema, and area measurements are described in Appendix A along with an offsite levy map; and, an overview of offsite infrastructure allocations to each benefitting area is provided in Appendices B7, C7, D7, E7, and F7.
- 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 update, the City is forecasting development of approximately **897 ha.** over the 25-year review period. The land development forecast and underpinning assumptions are shown in Appendix A.

- **Offsite Levy Reserves.** The City and CUI are currently managing offsite levy receipts and withdrawals via 4 reserves/accounts, in alignment with MGA requirements (i.e., one reserve/account for each infrastructure type). In addition, the City will add a fifth offsite levy reserve/account for newly added recreation infrastructure. The reason this is a requirement 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.). An overview of updated reserve/account balances is shown in Appendices B8, C8, D8, E8, and F8.
- **Interest.** Offsite levy reserves/accounts (both actual and forecast) are impacted by interest. Actual reserve inflows and forecast reserve balances that are in a positive position earn interest (as required by the MGA). Actual reserve outflows and forecast reserve balances that are in a negative position are charged interest (forecast balances that are negative indicate that front-ending will be required).



An overview of reserve/account interest rates and forecast balances over the 25-year review period is shown in Appendices B9, C9, D9, E9, and F9.

- **Front-ending.** Front-ending is an extremely important concept that underpins rigorous management of offsite levies. Front-ending represents debts owed by future development to the municipality for past construction undertaken by the municipality on behalf of future development—i.e., a municipality 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 to pay for future development's share of the project.

Because front-ending balances represent debts owed to the municipality, they need to be clearly reflected in official City and CUI documents such as levy account/reserve balances, financial statements (e.g., front-ending notes), or accounts receivables, etc. This documentation enables the City and CUI to collect on these debts as future development occurs, and offsite levies are collected.

At end 2017, City and CUI documentation reflected closing balances of: Water: \$1,292,987.46, Sanitary: -(\$2,466,230.75), Transportation: -(\$441,341.14), Stormwater - \$589,476, and Recreation - \$0. In other words, City and CUI documentation did not reflect any front-ending balance for, Water, or Stormwater, or Recreation infrastructure and a front-ending balance of \$2,466,230.75 for Sanitary infrastructure and \$441,341.14 for Transportation infrastructure (see Appendix G). However, City and CUI documentation did not include development's share of historical expenditures. In actuality, at end 2017 there was approximately **\$32.20 million** in front-ending debt owed to the City and CUI stemming from their construction and payment of development's share of historical offsite infrastructure (Water projects #1 and #2, Sanitary projects #1, #2, #3, and #4, Transportation project #3 and #5). This front-ending balance is now captured in the City's offsite levy model so that the City and CUI will be properly reimbursed as levies and other contributions are collected over time.

A complete reconciliation of reserve balances for each of the 5 reserves/accounts is provided in Appendices B8, C8, D8, E8, and F8.

## 5 RATES

For future development to pay for its share of the **\$373.26 million** infrastructure costs in the City, rates are approximately **\$219,638** per net hectare on a weighted average basis. A comparison of rates to other municipalities is outlined in Appendix H. Most importantly, these rates reflect the actual cost of infrastructure required to facilitate development in the City.

Since the last update, rates have increased from an average of \$142,353 per net hectare to \$219,638 per net hectare. There are 2 primary reasons for this increase. First, infrastructure costs allocated to development within the 25-year review period have increased 32% from \$152 million to \$201 million—an increase in costs means higher rates all other things being equal. Part of this cost increase stems from the addition of recreation infrastructure to the bylaw. Second, forecast land development with the 25-year review period has decreased 6% from 954 hectares to 897 hectares—a decrease in land development also means higher

rates all other things being equal.

Summary of Offsite Levy Charges<sup>2 & 3</sup>

	Transportation Charges	Water Charges	Sanitary Charges	Storm Charges	Recreation Charges	Total
High	\$ 81,022	\$ 32,477	\$ 113,148	\$ 15,762	\$ 33,729	\$ 276,139
Low	\$ 81,022	\$ 32,477	\$ 27,331	\$ -	\$ 33,729	\$ 174,560
Weighted Average	\$ 81,022	\$ 32,477	\$ 60,790	\$ 11,619	\$ 33,729	\$ 219,638

Area #	Transportation Levies	Water Levies	Sanitary Levies	Stormwater Levies	Recreation Levies	Total
1.0	\$ 81,022	\$ 32,477	\$ 35,343	\$ -	\$ 33,729	\$ 182,572
2.0	\$ 81,022	\$ 32,477	\$ 113,148	\$ 15,762	\$ 33,729	\$ 276,139
3.0	\$ 81,022	\$ 32,477	\$ 62,416	\$ 15,762	\$ 33,729	\$ 225,407
4.0	\$ 81,022	\$ 32,477	\$ 35,343	\$ -	\$ 33,729	\$ 182,572
5.0	\$ 81,022	\$ 32,477	\$ 35,343	\$ 15,762	\$ 33,729	\$ 198,335
6.0	\$ 81,022	\$ 32,477	\$ 67,635	\$ 15,762	\$ 33,729	\$ 230,627
7.0	\$ 81,022	\$ 32,477	\$ 27,331	\$ -	\$ 33,729	\$ 174,560
8.0	\$ 81,022	\$ 32,477	\$ 67,635	\$ 15,762	\$ 33,729	\$ 230,627
9.0	\$ 81,022	\$ 32,477	\$ 67,635	\$ 15,762	\$ 33,729	\$ 230,627
10.0	\$ 81,022	\$ 32,477	\$ 67,635	\$ 15,762	\$ 33,729	\$ 230,627
11.0	\$ 81,022	\$ 32,477	\$ 35,343	\$ -	\$ 33,729	\$ 182,572
12.0	\$ 81,022	\$ 32,477	\$ 27,331	\$ -	\$ 33,729	\$ 174,560
13.0	\$ 81,022	\$ 32,477	\$ 103,342	\$ 15,762	\$ 33,729	\$ 266,333
14.0	\$ 81,022	\$ 32,477	\$ 35,343	\$ 15,762	\$ 33,729	\$ 198,335
15.0	\$ 81,022	\$ 32,477	\$ 27,331	\$ -	\$ 33,729	\$ 174,560
16.0	\$ 81,022	\$ 32,477	\$ 72,222	\$ 15,762	\$ 33,729	\$ 235,213
17.0	\$ 81,022	\$ 32,477	\$ 35,343	\$ 15,762	\$ 33,729	\$ 198,335
18.0	\$ 81,022	\$ 32,477	\$ 67,635	\$ 15,762	\$ 33,729	\$ 230,627

## 6 RECOMMENDATIONS

CORVUS recommends the following:

1. Implement the updated offsite levy rates outlined in Section 5.
2. Amend the offsite levy reserve balances in alignment with Appendices B8, C8, D8, E8, and F8. This recommendation is a carryover from the previous rate update in 2017. In so doing, remove excess cash from reserves to pay down front-ending debts.
3. Establish sub-ledgers for each reserve/account to track amounts owed to front-ending parties. This recommendation is a carryover from the previous rate update in 2017.

<sup>2</sup> Highs, lows, and weighted averages are shown for information purposes only. Developers pay the actual offsite levy charges pertaining to their specific offsite levy area.

<sup>3</sup> Offsite levies in Chestermere may be charged via separate bylaws (i.e., one bylaw for water and sewer charges, one bylaw for transportation charges, one bylaw for stormwater charges, and one bylaw for recreation charges).

4. Update offsite levy reserve/account balances annually (and financial statements, and other internal documentation) to reflect the true balance, including front-ending. If the City/CUI has added the full value of front-ended infrastructure to its TCA, the TCA should be amended to reflect only the City's/CUI's equity portion of the asset. The balance of the asset should be reflected as a loan to be repaid by future development as levies are collected. This recommendation is a carryover from the previous rate update in 2017.
5. Align project descriptions and numbering sequence reflected in the City's/CUI's general ledgers and capital plans, with the project descriptions and numbering sequence reflected in the offsite levy bylaw. This recommendation is a carryover from the previous rate update in 2017.
6. In advance of the next rate update, consider if the City wishes to include new offsite infrastructure in the bylaw in alignment with changes to the MGA (i.e., fire halls, police stations, and libraries).

## 7 ACKNOWLEDGEMENTS

CORVUS Business Advisors would like to thank all City of Chestermere and CUI staff who supported the work of this rate update.

## 8 DISCLAIMER

CORVUS Business Advisor has relied upon the City of Chestermere, CUI, and their engineering advisors to provide all 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 educated 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 STAGING

### A1. Offsite Levy Areas

The City is parsed into 18 offsite levy areas, as shown in the map below. This includes the addition of 3 new areas (Areas 16, 17, and 18). Areas take into consideration existing/planned infrastructure basins (i.e., water, sanitary, transportation, stormwater, and recreation basins) as well as 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 across all offsite

levy areas, is approximately **2088 net ha**. In calculating net development area only those lands remaining to be developed (at Dec 31, 2016) that have not previously paid offsite levies have been considered (as required by legislation/regulation). Further, allowances have been made to net development area calculations for environmental reserves, municipal reserves, and arterial road right of way.

DRAFT

Offsite Levy Net Development Area

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.)	Area Developed since 1 Jan 2017 (ha.)
1.1	A13 Westmere	Residential - Low Density	3.79		3.79	-		3.79	-
1.2	A13 Westmere	Residential - Medium/High Density			-	-		-	-
1.3	A13 Westmere	Commercial	0.47		0.47	-		0.47	-
1.4	A13 Westmere	Industrial			-	-		-	-
1.5	A13 Westmere	Other			-	-		-	-
2.1	B13 Waterbridge	Residential - Low Density	140.40		140.40	14.04		126.36	-
2.2	B13 Waterbridge	Residential - Medium/High Density			-	-		-	-
2.3	B13 Waterbridge	Commercial			-	-		-	-
2.4	B13 Waterbridge	Industrial	118.60		118.60	-		118.60	-
2.5	B13 Waterbridge	Other			-	-		-	-
3.1	C13 Waterbridge	Residential - Low Density	241.77	15.57	226.20	34.10	1.33	190.77	-
3.2	C13 Waterbridge	Residential - Medium/High Density			-	-		-	-
3.3	C13 Waterbridge	Commercial	14.23		14.23	-		14.23	-
3.4	C13 Waterbridge	Industrial			-	-		-	-
3.5	C13 Waterbridge	Other			-	-		-	-
4.1	D13 Edgewater	Residential - Low Density	31.36		31.36	3.61	0.02	27.73	-
4.2	D13 Edgewater	Residential - Medium/High Density			-	-		-	-
4.3	D13 Edgewater	Commercial			-	-		-	-
4.4	D13 Edgewater	Industrial			-	-		-	-
4.5	D13 Edgewater	Other			-	-		-	-
5.1	E13 Edgewater	Residential - Low Density	132.17	6.50	125.67	12.57	1.71	111.39	-
5.2	E13 Edgewater	Residential - Medium/High Density			-	-		-	-
5.3	E13 Edgewater	Commercial	2.16		2.16	-		2.16	-
5.4	E13 Edgewater	Industrial			-	-		-	-
5.5	E13 Edgewater	Other			-	-		-	-
6.1	F13 Light Industrial	Residential - Low Density			-	-		-	-
6.2	F13 Light Industrial	Residential - Medium/High Density			-	-		-	-
6.3	F13 Light Industrial	Commercial			-	-		-	-
6.4	F13 Light Industrial	Industrial	311.10		311.10	31.11	4.20	275.79	-
6.5	F13 Light Industrial	Other			-	-		-	-
7.1	G13 Kinniburgh	Residential - Low Density	15.53		15.53	1.18	-	14.35	-
7.2	G13 Kinniburgh	Residential - Medium/High Density			-	-		-	-
7.3	G13 Kinniburgh	Commercial			-	-		-	-
7.4	G13 Kinniburgh	Industrial			-	-		-	-
7.5	G13 Kinniburgh	Other			-	-		-	-
8.1	H13 Sierra Vista	Residential - Low Density	285.48		285.48	28.55	-	256.93	-
8.2	H13 Sierra Vista	Residential - Medium/High Density			-	-		-	-
8.3	H13 Sierra Vista	Commercial			-	-		-	-
8.4	H13 Sierra Vista	Industrial			-	-		-	-
8.5	H13 Sierra Vista	Other			-	-		-	-
9.1	I13 East Acreages	Residential - Low Density	67.60	21.80	45.80	-		45.80	-
9.2	I13 East Acreages	Residential - Medium/High Density	51.70	12.50	39.20	-		39.20	-
9.3	I13 East Acreages	Commercial	21.30	1.70	19.60	-		19.60	-
9.4	I13 East Acreages	Industrial			-	-		-	-
9.5	I13 East Acreages	Other	6.54		6.54	-		6.54	-

City of Chestermere Offsite Levy Rates Update

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.)	Area Developed since 1 Jan 2017 (ha.)
10.1	J13 Bayfield	Residential - Low Density	56.66		56.66	5.67	1.30	49.69	-
10.2	J13 Bayfield	Residential - Medium/High Density	38.89		38.89	3.89		35.00	-
10.3	J13 Bayfield	Commercial	33.33		33.33	3.33	1.00	29.00	-
10.4	J13 Bayfield	Industrial	189.80		189.80	18.98	5.50	165.32	-
10.5	J13 Bayfield	Other	4.86		4.86	0.49		4.37	-
11.1	K13 Goodacre	Residential - Low Density			-	-		-	-
11.2	K13 Goodacre	Residential - Medium/High Density			-	-		-	-
11.3	K13 Goodacre	Commercial	3.26		3.26			3.26	-
11.4	K13 Goodacre	Industrial			-	-		-	-
11.5	K13 Goodacre	Other			-	-		-	-
12.1	L13 Residential	Residential - Low Density	3.64		3.64	0.36	0.20	3.08	-
12.2	L13 Residential	Residential - Medium/High Density			-	-		-	-
12.3	L13 Residential	Commercial			-	-		-	-
12.4	L13 Residential	Industrial			-	-		-	-
12.5	L13 Residential	Other			-	-		-	-
13.1	M13 North Acreages	Residential - Low Density	119.25		119.25	11.93		107.33	-
13.2	M13 North Acreages	Residential - Medium/High Density			-	-		-	-
13.3	M13 North Acreages	Commercial			-	-		-	-
13.4	M13 North Acreages	Industrial	1.25		1.25			1.25	1.25
13.5	M13 North Acreages	Other			-	-		-	-
14.1	Paradise	Residential - Low Density	36.53		36.53	3.65	-	32.88	-
14.2	Paradise	Residential - Medium/High Density			-	-	-	-	-
14.3	Paradise	Commercial			-	-	-	-	-
14.4	Paradise	Industrial			-	-	-	-	-
14.5	Paradise	Other			-	-	-	-	-
15.1	Existing Development	Residential - Low Density			-	-	-	-	-
15.2	Existing Development	Residential - Medium/High Density			-	-	-	-	-
15.3	Existing Development	Commercial			-	-	-	-	-
15.4	Existing Development	Industrial			-	-	-	-	-
15.5	Existing Development	Other			-	-	-	-	-
16.1	Area 3 From Previous Bylaw	Residential - Low Density	226.40	7.70	218.70	24.12	1.36	193.22	-
16.2	Area 3 From Previous Bylaw	Residential - Medium/High Density			-	-	-	-	-
16.3	Area 3 From Previous Bylaw	Commercial	19.69		19.69			19.69	-
16.4	Area 3 From Previous Bylaw	Industrial			-	-	-	-	-
16.5	Area 3 From Previous Bylaw	Other			-	-	-	-	-
17.1	Area 3 From Previous Bylaw	Residential - Low Density	179.13	2.60	176.53	18.69	1.33	156.51	-
17.2	Area 3 From Previous Bylaw	Residential - Medium/High Density			-	-	-	-	-
17.3	Area 3 From Previous Bylaw	Commercial	6.98		6.98			6.98	-
17.4	Area 3 From Previous Bylaw	Industrial			-	-	-	-	-
17.5	Area 3 From Previous Bylaw	Other			-	-	-	-	-
18.1	Area 7 From Previous Bylaw	Residential - Low Density	29.21	3.32	25.89	2.93	-	22.96	-
18.2	Area 7 From Previous Bylaw	Residential - Medium/High Density			-	-	-	-	-
18.3	Area 7 From Previous Bylaw	Commercial	3.87		3.87			3.87	-
18.4	Area 7 From Previous Bylaw	Industrial			-	-	-	-	-
18.5	Area 7 From Previous Bylaw	Other			-	-	-	-	-
		<b>Total</b>	<b>2,396.94</b>	<b>71.69</b>	<b>2,325.26</b>	<b>219.19</b>	<b>17.95</b>	<b>2,088.12</b>	<b>1.25</b>



Summary of Offsite Levy Net Development Area

Description	ha.
Gross Development Area	2,396.94
Less Environment Reserve	71.69
Less Municipal Reserve	219.19
Less ROW Allowance	17.95
Net Development Area	2,088.12

\*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 the City of Chestermere. 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.
  - Less: A 10% allowance for Municipal Reserves.
  - Less: Arterial road right of way that bisects the development lands.
- Equals: Net Developable Area, which is the area subject to offsite levies.

**A2. Development Staging**

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 **2088 net ha.** of development area available across all offsite levy development areas, planners estimate that approximately **897 net ha. (43%)** 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 Since Model Created	1.25	0.1%
Developed In Next 25 Years	896.74	42.9%
Developed Beyond 25 Years	1,190.13	57.0%
Net Development Area	2,088.12	

Anticipated Development During the 25-year Rate Planning Period

Area Ref. #	Area Developed in Next 25 years (Net ha.)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
1.1	3.790	3.79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.3	0.470	0.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1	40.230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.22	6.89	7.03	8.02	6.05	5.02
2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1	190.510	10.90	22.68	10.99	6.61	7.80	22.57	11.62	9.84	18.16	5.01	17.61	5.43	6.08	19.42	3.92	4.61	5.41	1.85	-	-	-	-	-	-	-
3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.3	14.230	-	-	-	-	8.83	0.20	-	-	0.05	-	-	-	-	-	-	-	-	5.15	-	-	-	-	-	-	-
3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.1	27.700	-	-	9.31	-	-	6.39	-	-	-	12.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1	82.050	-	-	-	-	-	-	-	-	-	-	6.86	6.33	5.17	6.11	6.27	6.29	6.38	3.82	3.94	5.79	3.07	6.12	6.38	5.77	3.75
5.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.3	2.160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.16	-	-	-	-	-	-	-
5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.4	103.600	-	-	-	-	-	-	-	-	-	-	23.03	-	15.77	-	16.20	-	16.20	-	16.20	-	16.20	-	-	-	-
6.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.1	14.350	4.12	-	5.46	-	4.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.1	21.990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.33	-	7.33	-	7.33	-	-	-	-	-
8.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

City of Chestermere Offsite Levy Rates Update

Area Ref. #	Area Developed in Next 25 years (Net ha.)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.3	3,260	-	-	-	-	-	-	-	3.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.1	3,075	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.1	183,060	-	1.62	20.55	-	-	4.64	6.13	3.70	8.30	6.33	7.31	10.45	9.13	8.71	6.34	5.02	8.73	6.07	8.90	6.24	6.05	11.37	6.43	9.39	21.65
16.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.3	19,690	-	-	-	-	-	-	-	1.52	-	-	5.88	-	-	-	-	10.54	-	-	-	-	-	-	-	1.75	-
16.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.1	156,510	-	9.45	-	5.15	-	5.62	-	3.49	-	4.21	13.60	4.68	5.13	4.65	29.61	4.45	4.65	22.70	-	-	28.52	-	-	10.60	-
17.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.3	6,980	-	0.66	-	-	-	-	-	-	-	-	-	-	-	-	1.28	-	-	5.04	-	-	-	-	-	-	-
17.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.1	19,210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.06	-	-	5.83	-	-	5.75	-	5.57
18.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.3	3,870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.87	-	-	-	-	-	-	-	-
18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	896.74	19.28	34.41	46.31	11.76	21.40	39.42	17.75	21.81	26.51	27.55	74.29	26.89	41.28	38.89	63.62	38.24	47.30	54.12	29.04	35.49	60.73	24.52	28.33	31.81	35.99

## APPENDIX B: WATER OFFSITE INFRASTRUCTURE

### B1. Water Offsite Infrastructure Costs

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) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$50.32 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by CUI staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the “net” costs for future development are determined.

#### Summary of Water Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	East Calgary Regional Water Line - Tie-In and Oversizing	\$ 2,126,144	\$ -	\$ -	\$ 2,126,144
2	Water Reservoir Expansion & ECRW Line Tie-In to Reservoir	\$ 14,743,959	\$ 2,285,111	\$ -	\$ 17,029,071
3	NW Water Reservoir & Pump Station	\$ -	\$ -	\$ 9,000,000	\$ 9,000,000
4	New Water Supply Main from Calgary	\$ -	\$ -	\$ 9,700,000	\$ 9,700,000
5	Main Pump Station Upgrade	\$ -	\$ -	\$ 5,750,000	\$ 5,750,000
6	Distribution Trunk in Chestermere Blvd (North)	\$ -	\$ -	\$ 2,061,000	\$ 2,061,000
7	Distribution trunk in Rainbow Road (West)	\$ -	\$ -	\$ 3,300,000	\$ 3,300,000
8	Distribution trunk in Twp Rd. 240 (South)	\$ 903	\$ -	\$ 1,466,000	\$ 1,466,903
9	Distribution trunk in Range Rd. 281 (East)	\$ -	\$ -	\$ 1,420,000	\$ 1,420,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -	\$ -	\$ (1,531,052)	\$ (1,531,052)
		<b>\$ 16,871,006</b>	<b>\$ 2,285,111</b>	<b>\$ 31,165,948</b>	<b>\$ 50,322,066</b>

\*Costs are based on 2017/18 estimates.

\*\*Estimates include engineering costs and contingencies.

\*\*\*Offsite levy project details, source, allocations, etc. are summarized in Appendix I.

\*\*\*\*A portion of debenture interest cost is also included in the cost of work completed for Project #2.

### B2. Water Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City/CUI to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City/CUI has/will receive approximately **\$1.85 million** in special grants and contributions for water offsite levy infrastructure as shown in the table below (note, if the City/CUI receives other 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 **\$48.47 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	East Calgary Regional Water Line - Tie-In and Oversizing	\$ 2,126,144	\$ -	\$ -	\$ -	\$ 2,126,144
2	Water Reservoir Expansion & ECRW Line Tie-In to Reservoir	\$ 17,029,071	\$ 1,850,941	\$ -	\$ -	\$ 15,178,130
3	NW Water Reservoir & Pump Station	\$ 9,000,000	\$ -	\$ -	\$ -	\$ 9,000,000
4	New Water Supply Main from Calgary	\$ 9,700,000	\$ -	\$ -	\$ -	\$ 9,700,000
5	Main Pump Station Upgrade	\$ 5,750,000	\$ -	\$ -	\$ -	\$ 5,750,000
6	Distribution Trunk in Chestermere Blvd (North)	\$ 2,061,000	\$ -	\$ -	\$ -	\$ 2,061,000
7	Distribution trunk in Rainbow Road (West)	\$ 3,300,000	\$ -	\$ -	\$ -	\$ 3,300,000
8	Distribution trunk in Twp Rd. 240 (South)	\$ 1,466,903	\$ -	\$ -	\$ -	\$ 1,466,903
9	Distribution trunk in Range Rd. 281 (East)	\$ 1,420,000	\$ -	\$ -	\$ -	\$ 1,420,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (1,531,052)	\$ -	\$ -	\$ -	\$ (1,531,052)
		<b>\$ 50,322,066</b>	<b>\$ 1,850,941</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 48,471,125</b>

**B3. Water Infrastructure Staging**

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). CUI 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 annual rate/bylaw updates.

Water Infrastructure Staging

Item	Project Description	Construction Start Year
1	East Calgary Regional Water Line - Tie-In and Oversizing	Prior
2	Water Reservoir Expansion & ECRW Line Tie-In to Reservoir	Prior
3	NW Water Reservoir & Pump Station	2034
4	New Water Supply Main from Calgary	2030
5	Main Pump Station Upgrade	2019
6	Distribution Trunk in Chestermere Blvd (North)	2025
7	Distribution trunk in Rainbow Road (West)	2019
8	Distribution trunk in Twp Rd. 240 (South)	2018
9	Distribution trunk in Range Rd. 281 (East)	2025

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

\*\*Costs are inflated to the year of construction using an inflation rate of 2% for the next 2 years, and 3% thereafter.

**B4. Water Offsite Infrastructure Benefiting Parties**

The water offsite infrastructure previously outlined will benefit various parties to varying degrees as determined by CUI staff and engineering advisors. During this review four potential benefiting parties were identified including:

- City of Chestermere – that portion of cost which is required to service existing residents.
- Other Stakeholders - other parties (such as neighboring municipalities) that benefit from the infrastructure.
- City of Chestermere Future Development (Financial Oversizing) - that portion of cost which benefits future development beyond the 25-year review period.

- City of Chestermere Future Development (in Rates) – all growth-related infrastructure (i.e., levyable water infrastructure costs) during the 25-year rate planning 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	East Calgary Regional Water Line - Tie-In and Oversizing	\$ 2,126,144			0.0%	100.0%
2	Water Reservoir Expansion & ECRW Line Tie-In to Reservoir	\$ 15,178,130			0.0%	100.0%
3	NW Water Reservoir & Pump Station	\$ 9,000,000			68.0%	32.0%
4	New Water Supply Main from Calgary	\$ 9,700,000			52.0%	48.0%
5	Main Pump Station Upgrade	\$ 5,750,000			8.0%	92.0%
6	Distribution Trunk in Chestermere Blvd (North)	\$ 2,061,000			32.0%	68.0%
7	Distribution trunk in Rainbow Road (West)	\$ 3,300,000			8.0%	92.0%
8	Distribution trunk in Twp Rd. 240 (South)	\$ 1,466,903			4.0%	96.0%
9	Distribution trunk in Range Rd. 281 (East)	\$ 1,420,000			32.0%	68.0%
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (1,531,052)			0.0%	100.0%
		<b>\$ 48,471,125</b>				

\*Allocations were determined by the CUI and engineering advisors (see Appendix I).

\*\*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 **\$35.41 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. The City/CUI has collected **\$6.64 million** (\$6.44M + \$0.20M) in offsite levies to date and results in an adjusted offsite levy cost of approximately **\$28.77 million**.

Offsite Levy Funds Collected to Date & Adjusted Levy Cost

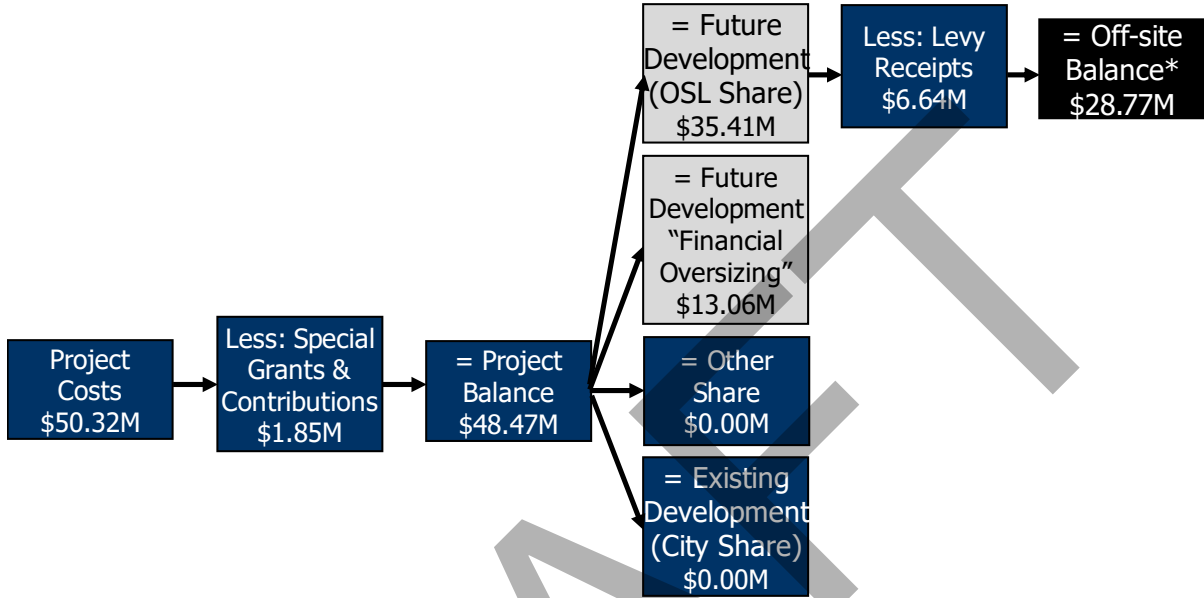
Item	Project Description	OSL / Developer Cost	Offsite Levy Funds Collected to Dec 31, 2016	Offsite Levy Funds Collected Starting Jan 1, 2017	Adjusted Developer (Levy) Cost
1	East Calgary Regional Water Line - Tie-In and Oversizing	\$ 2,126,144	\$ -	\$ 15,990	\$ 2,110,154
2	Water Reservoir Expansion & ECRW Line Tie-In to Reservoir	\$ 15,178,130	\$ 6,440,676	\$ 65,710	\$ 8,671,744
3	NW Water Reservoir & Pump Station	\$ 2,880,000	\$ -	\$ 21,659	\$ 2,858,341
4	New Water Supply Main from Calgary	\$ 4,656,000	\$ -	\$ 35,016	\$ 4,620,984
5	Main Pump Station Upgrade	\$ 5,290,000	\$ -	\$ 26,735	\$ 5,263,265
6	Distribution Trunk in Chestermere Blvd (North)	\$ 1,401,480	\$ -	\$ 10,540	\$ 1,390,940
7	Distribution trunk in Rainbow Road (West)	\$ 3,036,000	\$ -	\$ 10,679	\$ 3,025,321
8	Distribution trunk in Twp Rd. 240 (South)	\$ 1,408,227	\$ -	\$ 9,825	\$ 1,398,402
9	Distribution trunk in Range Rd. 281 (East)	\$ 965,600	\$ -	\$ 7,262	\$ 958,338
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (1,531,052)	\$ -	\$ -	\$ (1,531,052)
		<b>\$ 35,410,529</b>	<b>\$ 6,440,676</b>	<b>\$ 203,415</b>	<b>\$ 28,766,438</b>

**B6. 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 **\$28.77 million**. The cost allocations to each benefiting party are

based on the benefitting percentages shown in Section B4. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

Total Water Offsite Levy Costs



**B7. Water Infrastructure Benefitting Areas**

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

Benefitting Areas for Water Offsite Infrastructure

Item	Project Description	Developer Cost	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5	6.1	6.2	6.3	6.4	6.5
1	East Calgary Regional Water Line - Tie-In and Oversizing	\$ 2,110,154	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	Water Reservoir Expansion & ECRW Line Tie-In to Reservoir	\$ 8,671,744	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	NW Water Reservoir & Pump Station	\$ 2,858,341	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	New Water Supply Main from Calgary	\$ 4,620,984	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	Main Pump Station Upgrade	\$ 5,263,265	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	Distribution Trunk in Chestermere Blvd (North)	\$ 1,390,940	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	Distribution trunk in Rainbow Road (West)	\$ 3,025,321	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	Distribution trunk in Twp Rd. 240 (South)	\$ 1,398,402	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	Distribution trunk in Range Rd. 281 (East)	\$ 958,338	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 Levies Collected to Dec 31, 2016	\$ (1,531,052)	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	
		\$ 28,766,438																														

Item	Project Description	Developer Cost	7.1	7.2	7.3	7.4	7.5	8.1	8.2	8.3	8.4	8.5	9.1	9.2	9.3	9.4	9.5	10.1	10.2	10.3	10.4	10.5	11.1	11.2	11.3	11.4	11.5	12.1	12.2	12.3	12.4	12.5
1	East Calgary Regional Water Line - Tie-In and Oversizing	\$ 2,110,154	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	Water Reservoir Expansion & ECRW Line Tie-In to Reservoir	\$ 8,671,744	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	NW Water Reservoir & Pump Station	\$ 2,858,341	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	New Water Supply Main from Calgary	\$ 4,620,984	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	Main Pump Station Upgrade	\$ 5,263,265	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	Distribution Trunk in Chestermere Blvd (North)	\$ 1,390,940	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	Distribution trunk in Rainbow Road (West)	\$ 3,025,321	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	Distribution trunk in Twp Rd. 240 (South)	\$ 1,398,402	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	Distribution trunk in Range Rd. 281 (East)	\$ 958,338	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 Levies Collected to Dec 31, 2016	\$ (1,531,052)	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	
		\$ 28,766,438																														

Item	Project Description	Developer Cost	13.1	13.2	13.3	13.4	13.5	14.1	14.2	14.3	14.4	14.5	15.1	15.2	15.3	15.4	15.5	16.1	16.2	16.3	16.4	16.5	17.1	17.2	17.3	17.4	17.5	18.1	18.2	18.3	18.4	18.5
1	East Calgary Regional Water Line - Tie-In and Oversizing	\$ 2,110,154	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	Water Reservoir Expansion & ECRW Line Tie-In to Reservoir	\$ 8,671,744	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	NW Water Reservoir & Pump Station	\$ 2,858,341	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	New Water Supply Main from Calgary	\$ 4,620,984	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	Main Pump Station Upgrade	\$ 5,263,265	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	Distribution Trunk in Chestermere Blvd (North)	\$ 1,390,940	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	Distribution trunk in Rainbow Road (West)	\$ 3,025,321	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	Distribution trunk in Twp Rd. 240 (South)	\$ 1,398,402	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	Distribution trunk in Range Rd. 281 (East)	\$ 958,338	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 Levies Collected to Dec 31, 2016	\$ (1,531,052)	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
		\$ 28,766,438																														

### B8. Reserve Balance

The balance of the CUI’s water reserve at December 31<sup>st</sup>, 2017 as reflected in current CUI documentation is **\$1,292,987.46**, as highlighted in Appendix G. During this update, it was determined that the balance at December 31<sup>st</sup>, 2017 should be amended to – **(\$7,050,483.70)**, as shown in the table below. This updated amount takes into consideration expenditures up to end-2017 and assumes that front-ending debts will be drawn down via a withdrawal of all available cash in the account.

CUI also needs to establish a set of “sub-ledgers” to track the amounts due to front-ending parties, including interest impacts in accordance with the interest rates underpinning the bylaw.

#### Water Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures to December 31, 2016		\$ 14,803,503.78	\$ (14,803,503.78)
Offsite Levy Receipt Allocations to December 31, 2016	\$ 6,440,675.57		\$ (8,362,828.21)
Debenture Interest Accrued to December 31,2016		\$ -	\$ (8,362,828.21)
Unallocated Receipts to December 31, 2016	\$ 1,531,051.62		\$ (6,831,776.59)
<b>Opening Balance</b>			<b>\$ (6,831,776.59)</b>
<b>2017</b>			\$ (6,831,776.59)
Interest on Opening Balance		\$ 204,953.30	\$ (7,036,729.89)
Project Expenditures (OSL Share)		\$ 216,561.89	\$ (7,253,291.78)
Offsite Levy Receipts	\$ 203,415.22		\$ (7,049,876.56)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (7,049,876.56)
Debenture Interest Accrued This Year		\$ -	\$ (7,049,876.56)
Interest on Project Expenditure		\$ 1,624.21	\$ (7,051,500.77)
Interest on Offsite Levy Receipts	\$ 1,017.08		\$ (7,050,483.70)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (7,050,483.70)
Interest on Debenture Interest		\$ -	\$ (7,050,483.70)

### B9. Development and Water Infrastructure Staging Impacts

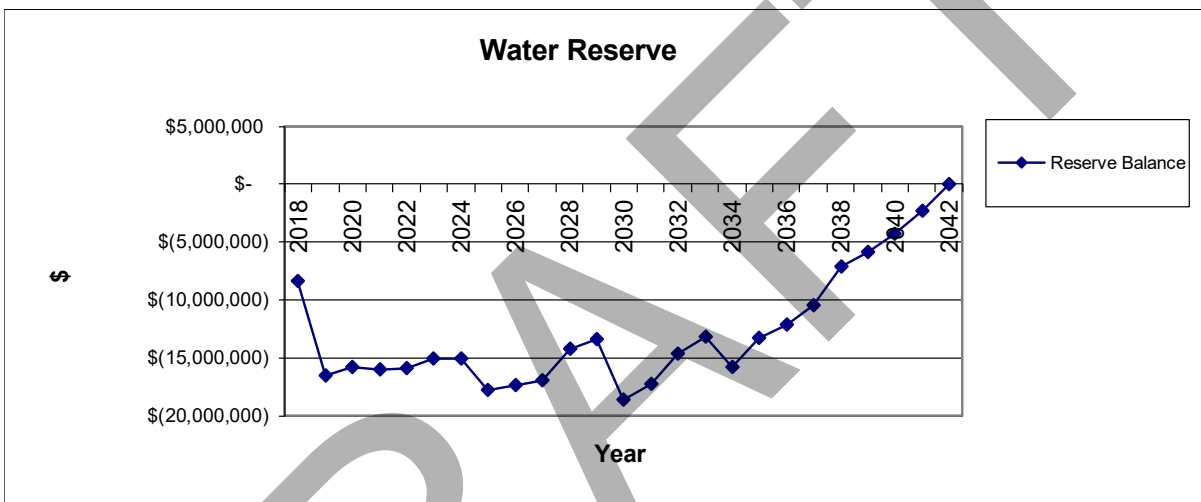
Water offsite infrastructure will be constructed in staged fashion over the 25-year review period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of water infrastructure 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. The front-ender (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality’s front-ending repayment policies.



To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **3.10%**<sup>4</sup> interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **2.00%** 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 CUI, nor are they charged too little thereby placing an unequitable burden on taxpayers).

Anticipated Water Offsite Levy Reserve Balances



<sup>4</sup> The 20-year debenture rate at the Alberta Capital Finance Authority at the project outset was ~3.10%.

Anticipated Water Offsite Levy Reserve Balances

			Opening Balance	\$ (7,050,484)
<b>Year</b>	<b>Receipts</b>	<b>Expenditure</b>	<b>Interest</b>	<b>Balance</b>
2018	\$ 626,156	\$ 1,710,381	\$ (252,176)	\$ (8,386,885)
2019	\$ 1,139,883	\$ 8,802,154	\$ (497,524)	\$ (16,546,679)
2020	\$ 1,564,771	\$ 315,827	\$ (474,230)	\$ (15,771,965)
2021	\$ 409,280	\$ 162,651	\$ (481,285)	\$ (16,006,621)
2022	\$ 767,121	\$ 167,530	\$ (477,618)	\$ (15,884,648)
2023	\$ 1,455,473	\$ 172,556	\$ (452,654)	\$ (15,054,385)
2024	\$ 675,030	\$ 177,733	\$ (451,270)	\$ (15,008,357)
2025	\$ 854,314	\$ 3,038,021	\$ (532,954)	\$ (17,725,017)
2026	\$ 1,069,569	\$ 188,557	\$ (522,164)	\$ (17,366,169)
2027	\$ 1,144,875	\$ 194,213	\$ (508,881)	\$ (16,924,388)
2028	\$ 3,179,831	\$ -	\$ (426,081)	\$ (14,170,638)
2029	\$ 1,185,500	\$ -	\$ (402,539)	\$ (13,387,677)
2030	\$ 1,874,510	\$ 6,510,069	\$ (558,720)	\$ (18,581,956)
2031	\$ 1,818,961	\$ -	\$ (519,653)	\$ (17,282,648)
2032	\$ 3,064,900	\$ -	\$ (440,750)	\$ (14,658,499)
2033	\$ 1,897,482	\$ -	\$ (395,592)	\$ (13,156,608)
2034	\$ 2,417,454	\$ 4,532,251	\$ (473,414)	\$ (15,744,819)
2035	\$ 2,848,997	\$ -	\$ (399,770)	\$ (13,295,592)
2036	\$ 1,574,592	\$ -	\$ (363,351)	\$ (12,084,351)
2037	\$ 1,981,771	\$ -	\$ (313,180)	\$ (10,415,760)
2038	\$ 3,493,407	\$ -	\$ (214,593)	\$ (7,136,946)
2039	\$ 1,452,793	\$ -	\$ (176,209)	\$ (5,860,362)
2040	\$ 1,728,888	\$ -	\$ (128,076)	\$ (4,259,549)
2041	\$ 1,999,499	\$ -	\$ (70,062)	\$ (2,330,111)
2042	\$ 2,330,111	\$ -	\$ 0	\$ 0

## APPENDIX C: SANITARY OFFSITE INFRASTRUCTURE

### C1. Sanitary Offsite Infrastructure Costs

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) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$64.45 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by CUI staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the “net” costs for future development are determined.

Summary of Sanitary Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	Lift Station #13	\$ 12,689,549	\$ 3,716,028	\$ -	\$ 16,405,577
2	Lift Station #13 Forcemain	\$ 8,061,869	\$ 196,764	\$ 748,000	\$ 9,006,633
3	Great Plains Sanitary Trunk	\$ 6,856,731	\$ 613,697	\$ -	\$ 7,470,428
4	Rainbow Road Gravity Sewer Trunk Phase 1	\$ 3,290,816	\$ 24,402	\$ 3,367,000	\$ 6,682,218
5	Rainbow Road Gravity Sewer Trunk Phase 2	\$ 36,751	\$ -	\$ 10,741,500	\$ 10,778,251
6	Lift Station #14 Phase 1	\$ 872	\$ -	\$ 3,700,000	\$ 3,700,872
7	Lift Station #14 Forcemain	\$ 1,097	\$ -	\$ 1,705,000	\$ 1,706,097
8	Lift Station #13 - Pump Upgrade 1	\$ -	\$ -	\$ 902,000	\$ 902,000
9	Rainbow Road Gravity Sewer Trunk Phase 3	\$ -	\$ -	\$ 3,900,000	\$ 3,900,000
10	Rainbow Road Gravity Sewer Trunk Phase 4	\$ -	\$ -	\$ 3,900,000	\$ 3,900,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -	\$ -	\$ -	\$ -
		<b>\$ 30,937,685</b>	<b>\$ 4,550,890</b>	<b>\$ 28,963,500</b>	<b>\$ 64,452,075</b>

\*Costs are based on 2017/18 estimates.

\*\*Estimates include engineering costs and contingencies.

\*\*\*Offsite levy project details, source, allocations, etc. are summarized in Appendix I.

\*\*\*\*A portion of debenture interest costs are also included in the cost of work completed for Projects #1, #2, #3, and #4.

### C2. Sanitary Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City/CUI to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City/CUI has/will receive **\$1.10 million** in special grants and contributions for sanitary offsite levy infrastructure as shown in the table below (note, if the City/CUI receives additional 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 **\$63.35 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	Lift Station #13	\$ 16,405,577	\$ -	\$ -	\$ -	\$ 16,405,577
2	Lift Station #13 Forcemain	\$ 9,006,633	\$ -	\$ -	\$ -	\$ 9,006,633
3	Great Plains Sanitary Trunk	\$ 7,470,428	\$ -	\$ -	\$ 1,100,000.00	\$ 6,370,428
4	Rainbow Road Gravity Sewer Trunk Phase 1	\$ 6,682,218	\$ -	\$ -	\$ -	\$ 6,682,218
5	Rainbow Road Gravity Sewer Trunk Phase 2	\$ 10,778,251	\$ -	\$ -	\$ -	\$ 10,778,251
6	Lift Station #14 Phase 1	\$ 3,700,872	\$ -	\$ -	\$ -	\$ 3,700,872
7	Lift Station #14 Forcemain	\$ 1,706,097	\$ -	\$ -	\$ -	\$ 1,706,097
8	Lift Station #13 - Pump Upgrade 1	\$ 902,000	\$ -	\$ -	\$ -	\$ 902,000
9	Rainbow Road Gravity Sewer Trunk Phase 3	\$ 3,900,000	\$ -	\$ -	\$ -	\$ 3,900,000
10	Rainbow Road Gravity Sewer Trunk Phase 4	\$ 3,900,000	\$ -	\$ -	\$ -	\$ 3,900,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 64,452,075	\$ -	\$ -	\$ 1,100,000	\$ 63,352,075

\*The contribution of \$1.1 million for Project #3 was provided by the City of Calgary.

**C3. Sanitary Infrastructure Staging**

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). CUI 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 annual rate/bylaw updates.

Sanitary Infrastructure Staging

Item	Project Description	Construction Start Year
1	Lift Station #13	2015
2	Lift Station #13 Forcemain	2017
3	Great Plains Sanitary Trunk	
4	Rainbow Road Gravity Sewer Trunk Phase 1	2017
5	Rainbow Road Gravity Sewer Trunk Phase 2	2019
6	Lift Station #14 Phase 1	2019
7	Lift Station #14 Forcemain	2017
8	Lift Station #13 - Pump Upgrade 1	2026
9	Rainbow Road Gravity Sewer Trunk Phase 3	2019
10	Rainbow Road Gravity Sewer Trunk Phase 4	2034

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

\*\*Costs are inflated to the year of construction using an inflation rate of 2% for the next 2 years, and 3% thereafter.

**C4. Sanitary Offsite Infrastructure Benefiting Parties**

The sanitary offsite infrastructure previously outlined will benefit various parties to varying degrees as determined by CUI staff and engineering advisors. During this review four potential benefiting parties were identified including:

- City of Chestermere – that portion of cost which is required to service existing residents.
- Other Stakeholders - other parties (such as neighboring municipalities) that benefit

from the infrastructure.

- City of Chestermere Future Development (Financial Oversizing) - that portion of cost which benefits future development beyond the 25-year review period.
- City of Chestermere Future Development (in Rates) – all growth-related infrastructure (i.e., levyable sanitary infrastructure costs) during the 25-year rate planning 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	Lift Station #13	\$ 16,405,577	20.0%		0.0%	80.0%
2	Lift Station #13 Forcemain	\$ 9,006,633	20.0%		0.0%	80.0%
3	Great Plains Sanitary Trunk	\$ 6,370,428			0.0%	100.0%
4	Rainbow Road Gravity Sewer Trunk Phase 1	\$ 6,682,218	20.0%		0.0%	80.0%
5	Rainbow Road Gravity Sewer Trunk Phase 2	\$ 10,778,251			4.0%	96.0%
6	Lift Station #14 Phase 1	\$ 3,700,872			8.0%	92.0%
7	Lift Station #14 Forcemain	\$ 1,706,097			0.0%	100.0%
8	Lift Station #13 - Pump Upgrade 1	\$ 902,000			36.0%	64.0%
9	Rainbow Road Gravity Sewer Trunk Phase 3	\$ 3,900,000			4.0%	96.0%
10	Rainbow Road Gravity Sewer Trunk Phase 4	\$ 3,900,000			64.0%	36.0%
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -			0.0%	100.0%
		<b>\$ 63,352,075</b>				

\*Allocations were determined by CUI and engineering advisors (see Appendix I).

\*\*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.

\*\*\*The residual benefit identified as "Muni Share %" would be recovered by CUI via utility rates.

### C5. Existing Receipts & Adjusted Levy Cost

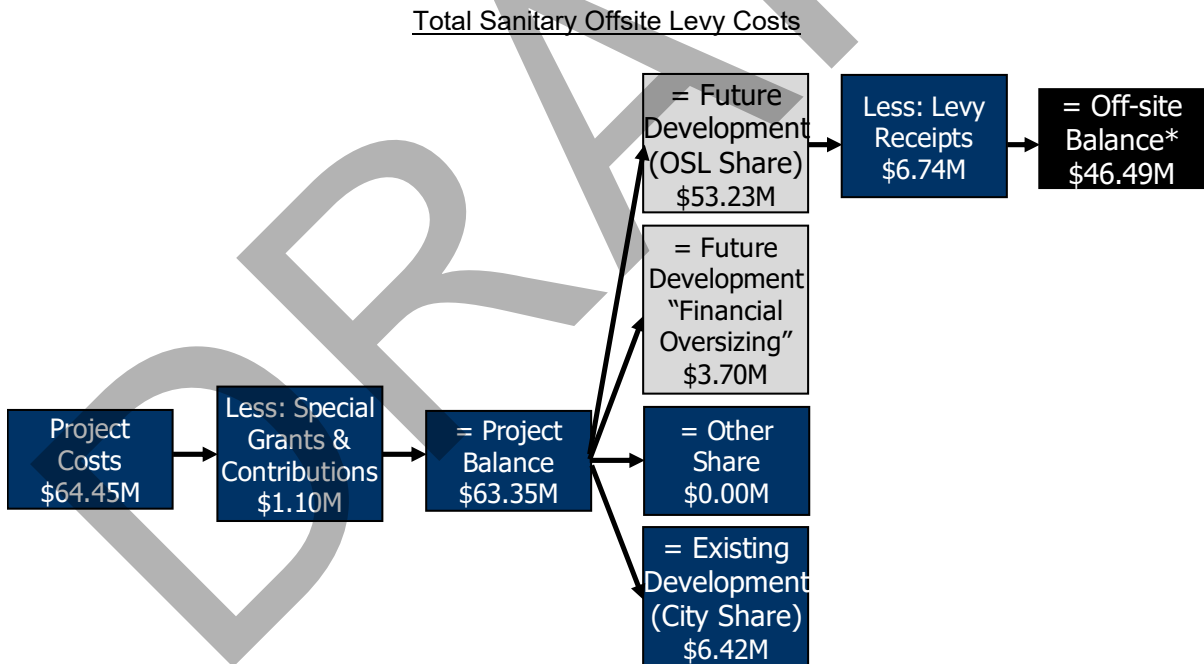
Using the offsite levy share percentages shown in the previous section and applying those percentages to project costs results in an offsite levy cost of approximately **\$53.23 million**. However, prior to allocating these costs to benefiting areas, existing offsite levy receipts collected from developers need to be considered in determining the residual/net costs to developers. The City/CUI has collected **\$6.74 million** (\$6.69M + \$0.05M) in offsite levies to date. and results in an adjusted offsite levy cost of approximately **\$46.49 million**.

Offsite Levy Funds Collected to Date & Adjusted Levy Cost

Item	Project Description	OSL / Developer Cost	Offsite Levy Funds Collected to Dec 31, 2016	Offsite Levy Funds Collected Starting Jan 1, 2017	Adjusted Developer (Levy) Cost
1	Lift Station #13	\$ 13,124,462	\$ 2,724,818	\$ 15,278	\$ 10,384,365
2	Lift Station #13 Forcemain	\$ 7,205,306	\$ 240,241	\$ 13,014	\$ 6,952,052
3	Great Plains Sanitary Trunk	\$ 6,370,428	\$ 3,379,289	\$ 4,168	\$ 2,986,971
4	Rainbow Road Gravity Sewer Trunk Phase 1	\$ 5,345,775	\$ 347,258	\$ 6,623	\$ 4,991,893
5	Rainbow Road Gravity Sewer Trunk Phase 2	\$ 10,347,120	\$ -	\$ 11,320	\$ 10,335,800
6	Lift Station #14 Phase 1	\$ 3,404,802	\$ -	\$ -	\$ 3,404,802
7	Lift Station #14 Forcemain	\$ 1,706,097	\$ -	\$ 1,289	\$ 1,704,808
8	Lift Station #13 - Pump Upgrade 1	\$ 577,280	\$ -	\$ 804	\$ 576,476
9	Rainbow Road Gravity Sewer Trunk Phase 3	\$ 3,744,000	\$ -	\$ -	\$ 3,744,000
10	Rainbow Road Gravity Sewer Trunk Phase 4	\$ 1,404,000	\$ -	\$ -	\$ 1,404,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -	\$ -	\$ -	\$ -
		<b>\$ 53,229,270</b>	<b>\$ 6,691,606</b>	<b>\$ 52,497</b>	<b>\$ 46,485,167</b>

**C6. 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 **\$36.17 million**. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section C4. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).



**C7. Sanitary Infrastructure Benefiting Areas**

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

**Benefiting Areas for Sanitary Offsite Infrastructure**

Item	Project Description	Developer Cost	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5	6.1	6.2	6.3	6.4	6.5
1	Lift Station #13	\$ 10,384,365	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	Lift Station #13 Forcemain	\$ 6,952,052	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	Great Plains Sanitary Trunk	\$ 2,986,971	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	Rainbow Road Gravity Sewer Trunk Phase 1	\$ 4,991,893	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	Rainbow Road Gravity Sewer Trunk Phase 2	\$ 10,335,800						1	1	1	1	1	1	1	1	1	1															
6	Lift Station #14 Phase 1	\$ 3,404,802																														
7	Lift Station #14 Forcemain	\$ 1,704,808																														
8	Lift Station #13 - Pump Upgrade 1	\$ 576,476	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	Rainbow Road Gravity Sewer Trunk Phase 3	\$ 3,744,000						1	1	1	1	1	1	1	1	1	1															
10	Rainbow Road Gravity Sewer Trunk Phase 4	\$ 1,404,000						1	1	1	1	1	1	1	1	1	1															
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -	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	
		<b>\$ 46,485,167</b>																														

Item	Project Description	Developer Cost	7.1	7.2	7.3	7.4	7.5	8.1	8.2	8.3	8.4	8.5	9.1	9.2	9.3	9.4	9.5	10.1	10.2	10.3	10.4	10.5	11.1	11.2	11.3	11.4	11.5	12.1	12.2	12.3	12.4	12.5
1	Lift Station #13	\$ 10,384,365	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	Lift Station #13 Forcemain	\$ 6,952,052	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	Great Plains Sanitary Trunk	\$ 2,986,971	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	Rainbow Road Gravity Sewer Trunk Phase 1	\$ 4,991,893	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	Rainbow Road Gravity Sewer Trunk Phase 2	\$ 10,335,800																														
6	Lift Station #14 Phase 1	\$ 3,404,802																														
7	Lift Station #14 Forcemain	\$ 1,704,808																														
8	Lift Station #13 - Pump Upgrade 1	\$ 576,476	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	Rainbow Road Gravity Sewer Trunk Phase 3	\$ 3,744,000																														
10	Rainbow Road Gravity Sewer Trunk Phase 4	\$ 1,404,000																														
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -	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	
		<b>\$ 46,485,167</b>																														

Item	Project Description	Developer Cost	13.1	13.2	13.3	13.4	13.5	14.1	14.2	14.3	14.4	14.5	15.1	15.2	15.3	15.4	15.5	16.1	16.2	16.3	16.4	16.5	17.1	17.2	17.3	17.4	17.5	18.1	18.2	18.3	18.4	18.5
1	Lift Station #13	\$ 10,384,365	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	Lift Station #13 Forcemain	\$ 6,952,052	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	Great Plains Sanitary Trunk	\$ 2,986,971	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	Rainbow Road Gravity Sewer Trunk Phase 1	\$ 4,991,893	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	Rainbow Road Gravity Sewer Trunk Phase 2	\$ 10,335,800																														
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7	Lift Station #14 Forcemain	\$ 1,704,808																														
8	Lift Station #13 - Pump Upgrade 1	\$ 576,476	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	Rainbow Road Gravity Sewer Trunk Phase 3	\$ 3,744,000																														
10	Rainbow Road Gravity Sewer Trunk Phase 4	\$ 1,404,000																														
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -	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	
		<b>\$ 46,485,167</b>																														

**C8. Reserve Balance**

The balance of CUI’s sanitary reserve at December 31<sup>st</sup>, 2017 as reflected in current CUI documentation is **–(\$2,466,230.75)**, as highlighted in Appendix G. During this update, it was determined that the balance at December 31<sup>st</sup>, 2017 should be amended to **–(\$25,118,197.76)**, as shown in the table below. This updated amount takes into consideration expenditures up to end-2017.

CUI also needs to establish a set of “sub-ledgers” to track the amounts due to front-ending parties, including interest impacts in accordance with the interest rates underpinning the bylaw.

Sanitary Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures to December 31, 2016		\$ 16,521,232.65	\$ (16,521,232.65)
Offsite Levy Receipt Allocations to December 31, 2016	\$ 405,561.30		\$ (16,115,671.35)
Debt Interest Accrued to December 31, 2016		\$ -	\$ (16,115,671.35)
Unallocated Receipts to December 31, 2016	\$ -		\$ (16,115,671.35)
<b>Opening Balance</b>			<b>\$ (16,115,671.35)</b>

<b>2017</b>			\$ (16,115,671.35)
Interest on Opening Balance		\$ 483,470.14	\$ (16,599,141.49)
Project Expenditures (OSL Share)		\$ 8,508,005.40	\$ (25,107,146.89)
Offsite Levy Receipts	\$ 52,496.69		\$ (25,054,650.20)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (25,054,650.20)
Debenture Interest Accrued This Year		\$ -	\$ (25,054,650.20)
Interest on Project Expenditure		\$ 63,810.04	\$ (25,118,460.24)
Interest on Offsite Levy Receipts	\$ 262.48		\$ (25,118,197.76)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (25,118,197.76)
Interest on Debenture Interest		\$ -	\$ (25,118,197.76)

### C9. 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. The front-ender (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality's front-ending repayment policies.

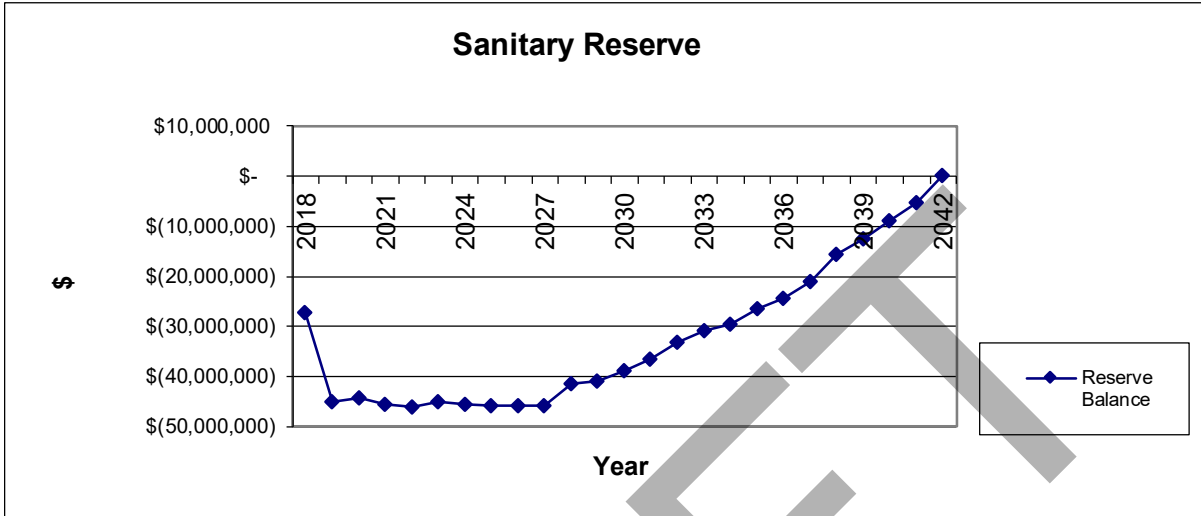
To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **3.10%**<sup>5</sup> interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **2.00%** interest credit has been provided to the reserve when it 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 CUI, nor are they charged too little thereby placing an unequitable burden on taxpayers).

<sup>5</sup> The 20-year debenture rate at the Alberta Capital Finance Authority at the project outset was ~3.10%.



Anticipated Sanitary Offsite Levy Reserve Balances



Anticipated Sanitary Offsite Levy Reserve Balances

			Opening Balance	\$ (25,118,198)
Year	Receipts	Expenditure	Interest	Balance
2018	\$ 1,050,389	\$ 2,442,662	\$ (821,825)	\$ (27,332,295)
2019	\$ 2,154,566	\$ 18,560,547	\$ (1,355,887)	\$ (45,094,162)
2020	\$ 2,867,511	\$ 692,423	\$ (1,330,491)	\$ (44,249,565)
2021	\$ 706,628	\$ 572,552	\$ (1,367,580)	\$ (45,483,069)
2022	\$ 1,469,573	\$ 530,724	\$ (1,380,871)	\$ (45,925,091)
2023	\$ 2,733,138	\$ 546,646	\$ (1,355,897)	\$ (45,094,496)
2024	\$ 1,501,128	\$ 563,045	\$ (1,368,849)	\$ (45,525,262)
2025	\$ 1,599,582	\$ 515,461	\$ (1,377,675)	\$ (45,818,817)
2026	\$ 2,378,502	\$ 1,079,425	\$ (1,380,112)	\$ (45,899,852)
2027	\$ 1,781,042	\$ 373,143	\$ (1,379,251)	\$ (45,871,203)
2028	\$ 5,937,635	\$ 243,428	\$ (1,245,487)	\$ (41,422,483)
2029	\$ 2,085,124	\$ 250,731	\$ (1,227,231)	\$ (40,815,321)
2030	\$ 3,536,281	\$ 258,253	\$ (1,163,656)	\$ (38,700,949)
2031	\$ 3,473,520	\$ 266,000	\$ (1,100,296)	\$ (36,593,726)
2032	\$ 4,672,674	\$ 273,980	\$ (998,046)	\$ (33,193,079)
2033	\$ 3,563,093	\$ 282,200	\$ (927,278)	\$ (30,839,463)
2034	\$ 4,576,050	\$ 2,500,138	\$ (891,670)	\$ (29,655,221)
2035	\$ 4,265,412	\$ 299,386	\$ (796,365)	\$ (26,485,561)
2036	\$ 3,134,930	\$ 308,367	\$ (733,429)	\$ (24,392,427)
2037	\$ 4,206,820	\$ 317,618	\$ (635,600)	\$ (21,138,825)
2038	\$ 6,073,007	\$ -	\$ (467,040)	\$ (15,532,858)
2039	\$ 3,343,847	\$ -	\$ (377,859)	\$ (12,566,870)
2040	\$ 3,969,781	\$ -	\$ (266,510)	\$ (8,863,599)
2041	\$ 3,757,262	\$ -	\$ (158,296)	\$ (5,264,633)
2042	\$ 5,264,633	\$ -	\$ 0	\$ (0)

## APPENDIX D: TRANSPORTATION OFFSITE INFRASTRUCTURE

### D1. Transportation Offsite Infrastructure Costs

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) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$140.64 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by City staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the “net” costs for future development are determined.

#### Summary of Transportation Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Cost
1	Rainbow Rd Twinning - Chestermere to W Merganser	\$ 1,045,273	\$ -	\$ -	\$ 1,045,273
2	Rainbow South Fronting	\$ 581,327	\$ -	\$ -	\$ 581,327
3	Rainbow Road Tie-in and Signalization at Chestermere Blvd	\$ 570,000	\$ -	\$ -	\$ 570,000
4	Project Removed	\$ -	\$ -	\$ -	\$ -
5	A.4, A.4a, A.4b, A.5, A.6, A.7, A.7a Upgrade Township Road 240 from west boundary to each boundary to Urban Industrial 2-Lane (expandable to 4-Lane), including 2 canal crossings and 1 railway crossing	\$ 3,045,004	\$ -	\$ 18,215,405	\$ 21,260,410
6	A.1 Upgrade Rainbow Road to Urban 2-Lane (expandable to 4-Lane)	\$ -	\$ -	\$ 4,400,000	\$ 4,400,000
7	A.2a New Western Headwork Canal Bridge	\$ -	\$ -	\$ 4,140,000	\$ 4,140,000
8	A.2b Railway Crossing Improvements	\$ -	\$ -	\$ 500,000	\$ 500,000
9	B.1/C.1 Upgrade Chestermere Boulevard to Urban 2-lane (expandable to 4-Lane)	\$ -	\$ -	\$ 11,200,000	\$ 11,200,000
10	B.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ -	\$ -	\$ 11,200,000	\$ 11,200,000
11	C.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ -	\$ -	\$ 5,500,000	\$ 5,500,000
12	C.3 Replace Causeway with New 4-Lane Structure	\$ -	\$ -	\$ 7,200,000	\$ 7,200,000
13	C.4 New 2-Lane Rainbow Road (Urban)	\$ -	\$ -	\$ 10,000,000	\$ 10,000,000
14	C.5 Rainbow Road Interchange (50% of half-diamond)	\$ -	\$ -	\$ 15,774,000	\$ 15,774,000
15	C.7 Upgrade Range Road 281 to 2-Lane Rural	\$ -	\$ -	\$ 4,800,000	\$ 4,800,000
16	C.8 Upgrade Township Road 240 from 2-Lane to 4-Lane	\$ -	\$ -	\$ 8,000,000	\$ 8,000,000
17	D.3 Upgrade Township Road 243 to Urban 2-Lane (expandable to 4-Lane)	\$ -	\$ -	\$ 1,840,000	\$ 1,840,000
18	D.5 Highway 791 / Highway 1 Interchange (1/4 Share)	\$ -	\$ -	\$ 25,000,000	\$ 25,000,000
19	E.1 Median BRT	\$ -	\$ -	\$ 5,280,000	\$ 5,280,000
20	E.2 BRT Stations	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000
21	E.3 Regional BRT Park'n Ride	\$ -	\$ -	\$ 4,000,000	\$ 4,000,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -	\$ -	\$ (2,647,978)	\$ (2,647,978)
		<b>\$ 5,241,604</b>	<b>\$ -</b>	<b>\$ 135,401,427</b>	<b>\$ 140,643,031</b>

\*Costs are based on 2017/18 estimates.

\*\*Estimates include engineering costs and contingencies.

\*\*\*Offsite levy project details, source, allocations, etc. are summarized in Appendix I.

### D2. Transportation Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City has/will receive **\$5.52 million** in special grants and contributions for transportation offsite levy infrastructure as shown in the

table below (note, if the City receives other 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 **\$135.13 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	Rainbow Rd Twinning - Chestermere to W Merganser	\$ 1,045,273	\$ -	\$ -	\$ -	\$ 1,045,273
2	Rainbow South Fronting	\$ 581,327	\$ -	\$ -	\$ -	\$ 581,327
3	Rainbow Road Tie-in and Signalization at Chestermere Blvd	\$ 570,000	\$ -	\$ -	\$ -	\$ 570,000
4	Project Removed	\$ -	\$ -	\$ -	\$ -	\$ -
5	A.4, A.4a, A.4b, A.5, A.6, A.7, A.7a Upgrade Township Road 240 from west boundary to each boundary to Urban Industrial 2-Lane (expandable to 4-Lane), including 2 canal crossings and 1 railway crossing	\$ 21,260,410	\$ 4,000,000	\$ 1,516,794	\$ -	\$ 15,743,616
6	A.1 Upgrade Rainbow Road to Urban 2-Lane (expandable to 4-Lane)	\$ 4,400,000	\$ -	\$ -	\$ -	\$ 4,400,000
7	A.2a New Western Headwork Canal Bridge	\$ 4,140,000	\$ -	\$ -	\$ -	\$ 4,140,000
8	A.2b Railway Crossing Improvements	\$ 500,000	\$ -	\$ -	\$ -	\$ 500,000
9	B.1/C.1 Upgrade Chestermere Boulevard to Urban 2-lane (expandable to 4-Lane)	\$ 11,200,000	\$ -	\$ -	\$ -	\$ 11,200,000
10	B.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 11,200,000	\$ -	\$ -	\$ -	\$ 11,200,000
11	C.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 5,500,000	\$ -	\$ -	\$ -	\$ 5,500,000
12	C.3 Replace Causeway with New 4-Lane Structure	\$ 7,200,000	\$ -	\$ -	\$ -	\$ 7,200,000
13	C.4 New 2-Lane Rainbow Road (Urban)	\$ 10,000,000	\$ -	\$ -	\$ -	\$ 10,000,000
14	C.5 Rainbow Road Interchange (50% of half-diamond)	\$ 15,774,000	\$ -	\$ -	\$ -	\$ 15,774,000
15	C.7 Upgrade Range Road 281 to 2-Lane Rural	\$ 4,800,000	\$ -	\$ -	\$ -	\$ 4,800,000
16	C.8 Upgrade Township Road 240 from 2-Lane to 4-Lane	\$ 8,000,000	\$ -	\$ -	\$ -	\$ 8,000,000
17	D.3 Upgrade Township Road 243 to Urban 2-Lane (expandable to 4-Lane)	\$ 1,840,000	\$ -	\$ -	\$ -	\$ 1,840,000
18	D.5 Highway 791 / Highway 1 Interchange (1/4 Share)	\$ 25,000,000	\$ -	\$ -	\$ -	\$ 25,000,000
19	E.1 Median BRT	\$ 5,280,000	\$ -	\$ -	\$ -	\$ 5,280,000
20	E.2 BRT Stations	\$ 1,000,000	\$ -	\$ -	\$ -	\$ 1,000,000
21	E.3 Regional BRT Park'n Ride	\$ 4,000,000	\$ -	\$ -	\$ -	\$ 4,000,000
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (2,647,978)	\$ -	\$ -	\$ -	\$ (2,647,978)
		<b>\$ 140,643,031</b>	<b>\$ 4,000,000</b>	<b>\$ 1,516,794</b>	<b>\$ -</b>	<b>\$ 135,126,237</b>

**D3. Transportation Infrastructure Staging**

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 City 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 annual rate/bylaw updates.

Transportation Infrastructure Staging

Item	Project Description	Construction Start Year
1	Rainbow Rd Twinning - Chestermere to W Merganser	2006
2	Rainbow South Fronting	2012
3	Rainbow Road Tie-in and Signalization at Chestermere Blvd	2014
4	Project Removed	
5	A.4, A.4a, A.4b,A.5, A.6, A.7, A.7a Upgrade Township Road 240 from west boundary to each boundary to Urban Industrial 2-Lane (expandable to 4-Lane), including 2 cannal crossings and 1 railway crossing	2019
6	A.1 Upgrade Rainbow Road to Urban 2-Lane (expandable to 4-Lane)	2024
7	A.2a New Western Headwork Canal Bridge	2024
8	A.2b Railway Crossing Improvements	2024
9	B.1/C.1 Upgrade Chestermere Boulevard to Urban 2-lane (expandable to 4-Lane)	2021
10	B.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	2024
11	C.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	2025
12	C.3 Replace Causeway with New 4-Lane Structure	2025
13	C.4 New 2-Lane Rainbow Road (Urban)	2029
14	C.5 Rainbow Road Interchange (50% of half-diamond)	2029
15	C.7 Upgrade Range Road 281 to 2-Lane Rural	2029
16	C.8 Upgrade Township Road 240 from 2-Lane to 4-Lane	2034
17	D.3 Upgrade Township Road 243 to Urban 2-Lane (expandable to 4-Lane)	2034
18	D.5 Highway 791 / Highway 1 Interchange (1/4 Share)	2034
19	E.1 Median BRT	2039
20	E.2 BRT Stations	2039
21	E.3 Regional BRT Park'n Ride	2039

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

\*\*Costs are inflated to the year of construction using an inflation rate of 2% for the next 2 years, and 3% thereafter.

**D4. Transportation Offsite Infrastructure Benefiting Parties**

The transportation offsite infrastructure previously outlined will benefit various parties to varying degrees as determined by the City’s staff and engineering advisors. During this review four potential benefiting parties were identified including:

- City of Chestermere – that portion of cost which is required to service existing residents.
- Other Stakeholders - other parties (such as neighboring municipalities) that benefit from the infrastructure.
- City of Chestermere Future Development (Financial Oversizing) - that portion of cost which benefits future development beyond the 25-year review period.
- City of Chestermere Future Development (in Rates) – all growth-related infrastructure (i.e., levyable transportation infrastructure costs) during the 25-year rate planning period.

The table below outlines the allocation of transportation offsite levy infrastructure costs to benefiting parties. Project allocations were determined by City staff.

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	Rainbow Rd Twinning - Chestermere to W Merganser	\$ 1,045,273			0.0%	100.0%
2	Rainbow South Fronting	\$ 581,327			0.0%	100.0%
3	Rainbow Road Tie-in and Signalization at Chestermere Blvd	\$ 570,000			0.0%	100.0%
4	Project Removed	\$ -				100.0%
5	A.4, A.4a, A.4b, A.5, A.6, A.7, A.7a Upgrade Township Road 240 from west boundary to each boundary to Urban Industrial 2-Lane (expandable to 4-Lane), including 2 canal crossings and 1 railway crossing	\$ 15,743,616			8.0%	92.0%
6	A.1 Upgrade Rainbow Road to Urban 2-Lane (expandable to 4-Lane)	\$ 4,400,000			28.0%	72.0%
7	A.2a New Western Headwork Canal Bridge	\$ 4,140,000			28.0%	72.0%
8	A.2b Railway Crossing Improvements	\$ 500,000			28.0%	72.0%
9	B.1/C.1 Upgrade Chestermere Boulevard to Urban 2-lane (expandable to 4-Lane)	\$ 11,200,000			12.0%	88.0%
10	B.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 11,200,000			28.0%	72.0%
11	C.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 5,500,000			28.0%	72.0%
12	C.3 Replace Causeway with New 4-Lane Structure	\$ 7,200,000	75.0%		7.0%	18.0%
13	C.4 New 2-Lane Rainbow Road (Urban)	\$ 10,000,000			48.0%	52.0%
14	C.5 Rainbow Road Interchange (50% of half-diamond)	\$ 15,774,000			48.0%	52.0%
15	C.7 Upgrade Range Road 281 to 2-Lane Rural	\$ 4,800,000			48.0%	52.0%
16	C.8 Upgrade Township Road 240 from 2-Lane to 4-Lane	\$ 8,000,000			68.0%	32.0%
17	D.3 Upgrade Township Road 243 to Urban 2-Lane (expandable to 4-Lane)	\$ 1,840,000			68.0%	32.0%
18	D.5 Highway 791 / Highway 1 Interchange (1/4 Share)	\$ 25,000,000			68.0%	32.0%
19	E.1 Median BRT	\$ 5,280,000			88.0%	12.0%
20	E.2 BRT Stations	\$ 1,000,000			88.0%	12.0%
21	E.3 Regional BRT Park'n Ride	\$ 4,000,000			88.0%	12.0%
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (2,647,978)			0.0%	100.0%
		<b>\$ 135,126,237</b>				

\*Allocations were determined by the City and engineering advisors (see Appendix I).

\*\*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 **\$72.00 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. The City has collected **\$2.44 million** (\$2.35M + \$0.09M) in offsite levies to date, and results in an adjusted offsite levy cost of approximately **\$69.56 million**.

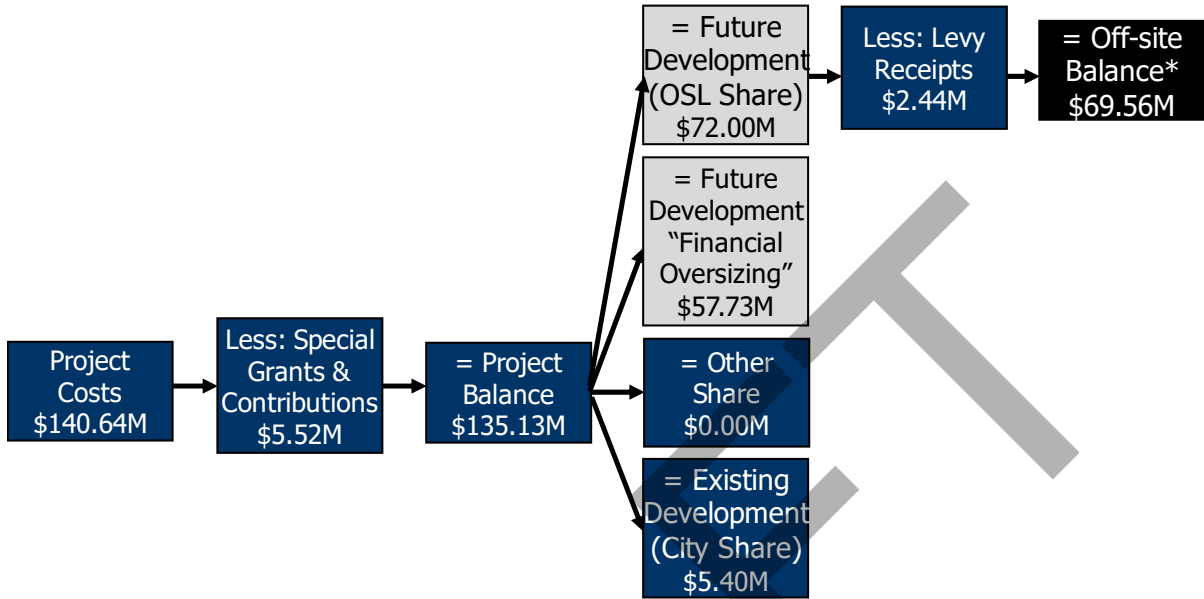
Offsite Levy Funds Collected to Date & Adjusted Levy Cost

Item	Project Description	OSL / Developer Cost	Offsite Levy Funds Collected to Dec 31, 2016	Offsite Levy Funds Collected Starting Jan 1, 2017	Adjusted Developer (Levy) Cost
1	Rainbow Rd Twinning - Chestermere to W Merganser	\$ 1,045,273	\$ 1,044,741	\$ 1	\$ 531
2	Rainbow South Fronting	\$ 581,327	\$ 581,327	\$ -	\$ -
3	Rainbow Road Tie-in and Signalization at Chestermere Blvd	\$ 570,000	\$ 444,000	\$ -	\$ 126,000
4	Project Removed	\$ -	\$ -	\$ 412	\$ (412)
5	A.4, A.4a, A.4b,A.5, A.6, A.7, A.7a Upgrade Township Road 240 from west boundary to each boundary to Urban Industrial 2-Lane (expandable to 4-Lane), including 2 cannal crossings and 1 railway crossing	\$ 14,484,127	\$ 283,150	\$ 15,093	\$ 14,185,884
6	A.1 Upgrade Rainbow Road to Urban 2-Lane (expandable to 4-Lane)	\$ 3,168,000	\$ -	\$ 4,050	\$ 3,163,950
7	A.2a New Western Headwork Canal Bridge	\$ 2,980,800	\$ -	\$ 3,811	\$ 2,976,989
8	A.2b Railway Crossing Improvements	\$ 360,000	\$ -	\$ 460	\$ 359,540
9	B.1/C.1 Upgrade Chestermere Boulevard to Urban 2-lane (expandable to 4-Lane)	\$ 9,856,000	\$ -	\$ 10,309	\$ 9,845,691
10	B.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 8,064,000	\$ -	\$ 10,309	\$ 8,053,691
11	C.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 3,960,000	\$ -	\$ 3,656	\$ 3,956,344
12	C.3 Replace Causeway with New 4-Lane Structure	\$ 1,296,000	\$ -	\$ 299	\$ 1,295,701
13	C.4 New 2-Lane Rainbow Road (Urban)	\$ 5,200,000	\$ -	\$ 6,648	\$ 5,193,352
14	C.5 Rainbow Road Interchange (50% of half-diamond)	\$ 8,202,480	\$ -	\$ 10,486	\$ 8,191,994
15	C.7 Upgrade Range Road 281 to 2-Lane Rural	\$ 2,496,000	\$ -	\$ 3,191	\$ 2,492,809
16	C.8 Upgrade Township Road 240 from 2-Lane to 4-Lane	\$ 2,560,000	\$ -	\$ 3,273	\$ 2,556,727
17	D.3 Upgrade Township Road 243 to Urban 2-Lane (expandable to 4-Lane)	\$ 588,800	\$ -	\$ 753	\$ 588,047
18	D.5 Highway 791 / Highway 1 Interchange (1/4 Share)	\$ 8,000,000	\$ -	\$ 10,227	\$ 7,989,773
19	E.1 Median BRT	\$ 633,600	\$ -	\$ 810	\$ 632,790
20	E.2 BRT Stations	\$ 120,000	\$ -	\$ 153	\$ 119,847
21	E.3 Regional BRT Park'n Ride	\$ 480,000	\$ -	\$ 614	\$ 479,386
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (2,647,978)	\$ -	\$ -	\$ (2,647,978)
		<b>\$ 71,998,428</b>	<b>\$ 2,353,218</b>	<b>\$ 84,552</b>	<b>\$ 69,560,657</b>

**D6. 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 **\$69.56 million**. The cost allocations to each benefitting party are based on the benefitting percentages shown in Section D4. The offsite levy balance (due from developers) is allocated to various benefitting areas (as described in the next section).

Total Transportation Offsite Levy Costs



**D7. 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 City staff. The lands anticipated to develop over the 25-years in each offsite levy benefiting area are used to determine rates.

Benefiting Areas for Transportation Offsite Infrastructure

Item	Project Description	Developer Cost	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5	6.1	6.2	6.3	6.4	6.5	
1	Rainbow Rd Twinning - Chestermere to W Merganser	\$ 531	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	Rainbow South Fronting	\$ 126,000	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	Rainbow Road Tie-in and Signalization at Chestermere Blvd	\$ (412)	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	Project Removed	\$ 14,185,884																															
5	A.4, A.4a, A.4b, A.5, A.6, A.7, A.7a Upgrade Township Road 240 from west boundary to each boundary to Urban Industrial 2-Lane (expandable to 4-Lane), including 2-canal crossing and 1 railway crossing	\$ 3,163,950	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	A.1 Upgrade Rainbow Road to Urban 2-Lane (expandable to 4-Lane)	\$ 2,976,989	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	A.2a New Western Headwork Canal Bridge	\$ 359,540	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	A.2b Railway Crossing Improvements	\$ 9,845,691	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	B.1/C.1 Upgrade Chestermere Boulevard to Urban 2-Lane (expandable to 4-Lane)	\$ 8,053,691	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	B.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 3,953,344	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	C.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 1,295,001	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	C.3 Replace Gasaway with New 4-Lane Structure	\$ 5,153,352	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	C.4 New 2-Lane Rainbow Road (Urban)	\$ 8,194,994	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	C.5 Rainbow Road Interchange (50% of half-diamond)	\$ 2,492,809	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	C.7 Upgrade Ranee Road 281 to 2-Lane Rural	\$ 2,558,727	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	C.8 Upgrade Township Road 248 from 2-Lane to 4-Lane	\$ 588,047	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	D.3 Upgrade Township Road 243 to Urban 2-Lane (expandable to 4-Lane)	\$ 7,893,773	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	D.5 Highway 781 / Highway 1 Interchange (1/4 Share)	\$ 532,750	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	E.1 Median BRT	\$ 119,847	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	E.2 BRT Stations	\$ 479,386	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	E.3 Regional BRT Park'n Ride	\$ (2,647,975)	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 Levies Collected to Dec 31, 2016	\$ 69,560,651																															



City of Chestermere Offsite Levy Rates Update

Item	Project Description	Developer Cost	7.1	7.2	7.3	7.4	7.5	8.1	8.2	8.3	8.4	8.5	8.6	9.1	9.2	9.3	9.4	9.5	10.1	10.2	10.3	10.4	10.5	11.1	11.2	11.3	11.4	11.5	12.1	12.2	12.3	12.4	12.5		
1	Rainbow Rd Twinning - Chestermere to W Merganser	\$ 531	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	Rainbow South Fronting	\$ -	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	Rainbow Road Tie-in and Signalization at Chestermere Blvd	\$ 126,000	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	Project Removed	\$ (412)	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	A.4, A.4a, A.4b, A.5, A.6, A.7, A.7a Upgrade Township Road 240 from west boundary to each boundary to Urban Industrial 2-Lane (expandable to 4-Lane), including 2 canal crossings and 1 railway crossing	\$ 14,185,884	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	A.1 Upgrade Rainbow Road to Urban 2-Lane (expandable to 4-Lane)	\$ 3,163,950	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	A.2a New Western Headwork Canal Bridge	\$ 2,976,989	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	A.2b Railway Crossing Improvements	\$ 359,540	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	B.1/C.1 Upgrade Chestermere Boulevard to Urban 2-Lane (expandable to 4-Lane)	\$ 9,845,691	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	B.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 8,053,691	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	C.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 3,956,344	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	C.3 Replace Causeway with New 4-Lane Structure	\$ 1,295,701	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	C.4 New 2-Lane Rainbow Road (Urban)	\$ 5,193,352	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	C.5 Rainbow Road Interchange (50% of half-diamond)	\$ 8,191,994	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	C.7 Upgrade Range Road 281 to 2-Lane Rural	\$ 2,492,809	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	C.8 Upgrade Township Road 240 from 2-Lane to 4-Lane	\$ 2,556,727	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
17	D.3 Upgrade Township Road 243 to Urban 2-Lane (expandable to 4-Lane)	\$ 588,047	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
18	D.5 Highway 781 / Highway 1 Interchange (1/4 Share)	\$ 7,889,773	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
19	E.1 Median BRT	\$ 632,790	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
20	E.2 BRT Stations	\$ 119,847	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
21	E.3 Regional BRT Park'n Ride	\$ 479,386	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
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (2,647,978)	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	
		\$ 69,560,657																																	

Item	Project Description	Developer Cost	13.1	13.2	13.3	13.4	13.5	14.1	14.2	14.3	14.4	14.5	15.1	15.2	15.3	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	17.1	17.2	17.3	17.4	17.5	18.1	18.2	18.3	18.4	18.5	
1	Rainbow Rd Twinning - Chestermere to W Merganser	\$ 531	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	Rainbow South Fronting	\$ -	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	Rainbow Road Tie-in and Signalization at Chestermere Blvd	\$ 126,000	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	Project Removed	\$ (412)	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	A.4, A.4a, A.4b, A.5, A.6, A.7, A.7a Upgrade Township Road 240 from west boundary to each boundary to Urban Industrial 2-Lane (expandable to 4-Lane), including 2 canal crossings and 1 railway crossing	\$ 14,185,884	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	A.1 Upgrade Rainbow Road to Urban 2-Lane (expandable to 4-Lane)	\$ 3,163,950	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
7	A.2a New Western Headwork Canal Bridge	\$ 2,976,989	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
8	A.2b Railway Crossing Improvements	\$ 359,540	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
9	B.1/C.1 Upgrade Chestermere Boulevard to Urban 2-Lane (expandable to 4-Lane)	\$ 9,845,691	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	B.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 8,053,691	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
11	C.2 Upgrade Rainbow Road from 2-Lane to 4-Lane	\$ 3,956,344	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
12	C.3 Replace Causeway with New 4-Lane Structure	\$ 1,295,701	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
13	C.4 New 2-Lane Rainbow Road (Urban)	\$ 5,193,352	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
14	C.5 Rainbow Road Interchange (50% of half-diamond)	\$ 8,191,994	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
15	C.7 Upgrade Range Road 281 to 2-Lane Rural	\$ 2,492,809	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
16	C.8 Upgrade Township Road 240 from 2-Lane to 4-Lane	\$ 2,556,727	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
17	D.3 Upgrade Township Road 243 to Urban 2-Lane (expandable to 4-Lane)	\$ 588,047	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
18	D.5 Highway 781 / Highway 1 Interchange (1/4 Share)	\$ 7,889,773	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
19	E.1 Median BRT	\$ 632,790	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
20	E.2 BRT Stations	\$ 119,847	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
21	E.3 Regional BRT Park'n Ride	\$ 479,386	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
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (2,647,978)	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
		\$ 69,560,657																																	

D8. Reserve Balance

The balance of the City’s transportation reserve at December 31<sup>st</sup>, 2017 as reflected in current City documentation is **–(\$441,341.15)**, as highlighted in Appendix g. During this update, it was determined that the balance at December 31<sup>st</sup>, 2017 should be amended to **–(\$33,888.32)**, as shown in the table below. This updated amount takes into consideration expenditures up to end-2017 and assumes that front-ending debts will be drawn down via a withdrawal of all available cash from the offsite levy reserve.

The City also needs to establish a set of “sub-ledgers” to track the amounts due to front-ending parties, including interest impacts in accordance with the interest rates underpinning the bylaw.

Transportation Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures to December 31, 2016</			



<b>2017</b>			\$ 2,488,689.26
Interest on Opening Balance	\$ 24,886.89		\$ 2,513,576.15
Project Expenditures (OSL Share)		\$ 2,612,842.94	\$ (99,266.79)
Offsite Levy Receipts	\$ 84,552.03		\$ (14,714.76)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (14,714.76)
Debenture Interest Accrued This Year		\$ -	\$ (14,714.76)
Interest on Project Expenditure		\$ 19,596.32	\$ (34,311.08)
Interest on Offsite Levy Receipts	\$ 422.76		\$ (33,888.32)
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ (33,888.32)
Interest on Debenture Interest		\$ -	\$ (33,888.32)

## D9. Development and Transportation Infrastructure Staging Impacts

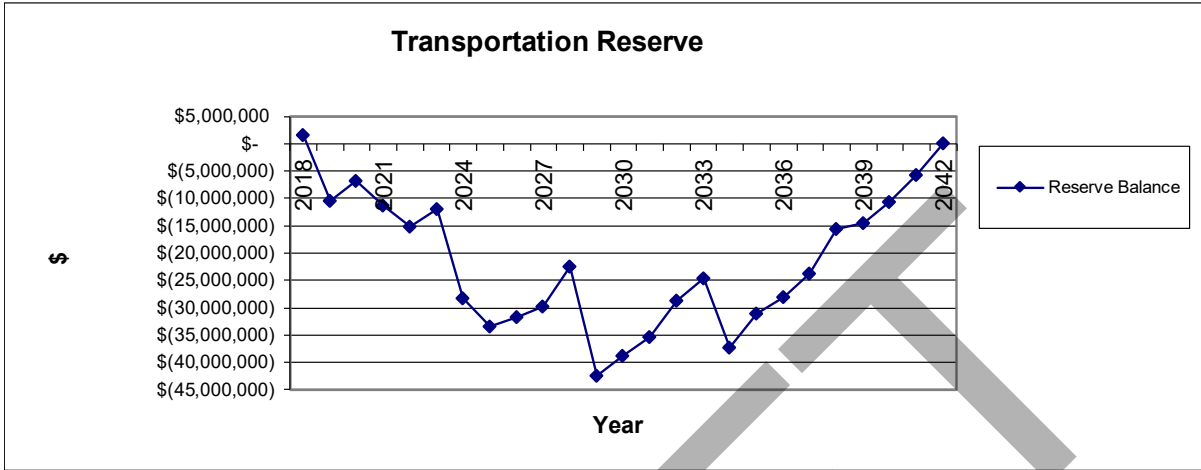
Transportation offsite infrastructure will be constructed in staged fashion over the 25-year review period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of transportation infrastructure from time to time—front ending of infrastructure will be required. A front-end is the party that constructs and pays up front for infrastructure that benefits other parties. The front-end (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality's front-ending repayment policies.

To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **3.10%**<sup>6</sup> interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **2.00%** 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 City, nor are they charged too little thereby placing an unequitable burden on taxpayers).

<sup>6</sup> The 20-year debenture rate at the Alberta Capital Finance Authority at the project outset was ~3.10%.

Anticipated Transportation Offsite Levy Reserve Balances



Anticipated Transportation Offsite Levy Reserve Balances

Year	Receipts	Expenditure	Reserve Balance	Interest	Balance
2018	\$ 1,562,113	\$ -	\$ 30,565		\$ 1,558,790
2019	\$ 2,843,743	\$ 14,478,333	\$ (312,350)		\$ (10,388,150)
2020	\$ 3,903,738	\$ -	\$ (201,017)		\$ (6,685,429)
2021	\$ 1,021,058	\$ 5,280,904	\$ (339,304)		\$ (11,284,578)
2022	\$ 1,913,789	\$ 5,439,331	\$ (459,114)		\$ (15,269,233)
2023	\$ 3,631,066	\$ -	\$ (360,783)		\$ (11,998,950)
2024	\$ 1,684,043	\$ 17,064,448	\$ (848,760)		\$ (28,228,115)
2025	\$ 2,131,315	\$ 6,339,308	\$ (1,005,519)		\$ (33,441,627)
2026	\$ 2,668,326	\$ -	\$ (953,972)		\$ (31,727,273)
2027	\$ 2,856,196	\$ -	\$ (895,003)		\$ (29,766,080)
2028	\$ 7,932,938	\$ -	\$ (676,827)		\$ (22,509,970)
2029	\$ 2,957,547	\$ 21,581,964	\$ (1,275,166)		\$ (42,409,553)
2030	\$ 4,676,466	\$ -	\$ (1,169,726)		\$ (38,902,812)
2031	\$ 4,537,883	\$ -	\$ (1,065,313)		\$ (35,430,241)
2032	\$ 7,646,211	\$ -	\$ (861,305)		\$ (28,645,336)
2033	\$ 4,733,776	\$ -	\$ (741,258)		\$ (24,652,818)
2034	\$ 6,030,984	\$ 17,544,848	\$ (1,121,167)		\$ (37,287,850)
2035	\$ 7,107,585	\$ -	\$ (935,588)		\$ (31,115,853)
2036	\$ 3,928,241	\$ -	\$ (842,816)		\$ (28,030,428)
2037	\$ 4,944,058	\$ -	\$ (715,677)		\$ (23,802,048)
2038	\$ 8,715,237	\$ -	\$ (467,691)		\$ (15,554,502)
2039	\$ 3,624,379	\$ 2,250,515	\$ (439,600)		\$ (14,620,238)
2040	\$ 4,313,174	\$ -	\$ (319,519)		\$ (10,626,583)
2041	\$ 4,988,285	\$ -	\$ (174,787)		\$ (5,813,085)
2042	\$ 5,813,085	\$ -	\$ 0		\$ 0

## APPENDIX E: STORMWATER OFFSITE INFRASTRUCTURE

### E1. Stormwater Offsite Infrastructure Costs

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) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$18.59 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by CUI staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the “net” costs for future development are determined.

Summary of Stormwater Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	CSMI - Stage 1	\$ -	\$ -	\$ 2,443,060	\$ 2,443,060
2	CSMI - Stage 2	\$ -	\$ -	\$ 4,339,200	\$ 4,339,200
3	CSMI - Stage 3	\$ -	\$ -	\$ 4,132,033	\$ 4,132,033
4	CSMI - Stage 4	\$ -	\$ -	\$ 4,132,033	\$ 4,132,033
5	CSMI - Stage 5	\$ -	\$ -	\$ 4,132,033	\$ 4,132,033
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ -	\$ -	\$ (589,476)	\$ (589,476)
		\$ -	\$ -	\$ 18,588,883	\$ 18,588,883

\*Costs are based on 2017/18 estimates.

\*\*Estimates include engineering costs and contingencies.

\*\*\*Offsite levy project details, source, allocations, etc. are summarized in Appendix I.

### E2. Stormwater Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City/CUI to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City/CUI has/will receive **\$0.00** in special grants and contributions for stormwater offsite levy infrastructure as shown in the table below (note, if the City/CUI receives other 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 **\$18.59 million**.

Special Grants and Contributions for Stormwater Offsite Infrastructure

Item	Project Description	Total Project Estimated Cost	Special Provincial Grants	Developer Agreement Contributions	Reduced Project Estimated Cost
1	CSMI - Stage 1	\$ 2,443,060	\$ -	\$ -	\$ 2,443,060
2	CSMI - Stage 2	\$ 4,339,200	\$ -	\$ -	\$ 4,339,200
3	CSMI - Stage 3	\$ 4,132,033	\$ -	\$ -	\$ 4,132,033
4	CSMI - Stage 4	\$ 4,132,033	\$ -	\$ -	\$ 4,132,033
5	CSMI - Stage 5	\$ 4,132,033	\$ -	\$ -	\$ 4,132,033
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (589,476)	\$ -	\$ -	\$ (589,476)
		<b>\$ 18,588,883</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 18,588,883</b>

**E3. Stormwater Infrastructure Staging**

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). CUI 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 annual rate/bylaw updates.

Stormwater Infrastructure Staging

Item	Project Description	Construction Start Year
1	CSMI - Stage 1	2019
2	CSMI - Stage 2	2022
3	CSMI - Stage 3	2024
4	CSMI - Stage 4	2033
5	CSMI - Stage 5	2042

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

\*\*Costs are inflated to the year of construction using an inflation rate of 2% for the next 2 years, and 3% thereafter.

**E4. Stormwater Offsite Infrastructure Benefiting Parties**

The stormwater offsite infrastructure previously outlined will benefit various parties to varying degrees as determined by CUI staff and engineering advisors. During this review four potential benefiting parties were identified including:

- City of Chestermere – that portion of cost which is required to service existing residents.
- Other Stakeholders - other parties (such as neighboring municipalities) that benefit from the infrastructure.
- City of Chestermere Future Development (Financial Oversizing) - that portion of cost which benefits future development beyond the 25-year review period.
- City of Chestermere Future Development (in Rates) – all growth-related infrastructure (i.e., levyable stormwater infrastructure costs) during the 25-year rate

planning period.

The table below outlines the allocation of stormwater offsite levy infrastructure costs to benefiting parties. Project allocations were determined by CUI staff.

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	CSMI - Stage 1	\$ 2,443,060			4.0%	96.0%
2	CSMI - Stage 2	\$ 4,339,200			16.0%	84.0%
3	CSMI - Stage 3	\$ 4,132,033			24.0%	76.0%
4	CSMI - Stage 4	\$ 4,132,033			60.0%	40.0%
5	CSMI - Stage 5	\$ 4,132,033			96.0%	4.0%
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (589,476)				100.0%
		<b>\$ 18,588,883</b>				

\*Allocations were determined by CUI and engineering advisors (see Appendix I).

\*\*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 approximately **\$10.36 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. The City/CUI has collected **\$0.01 million** in offsite levies to date, and results in an adjusted offsite levy cost of approximately **\$10.35 million**.

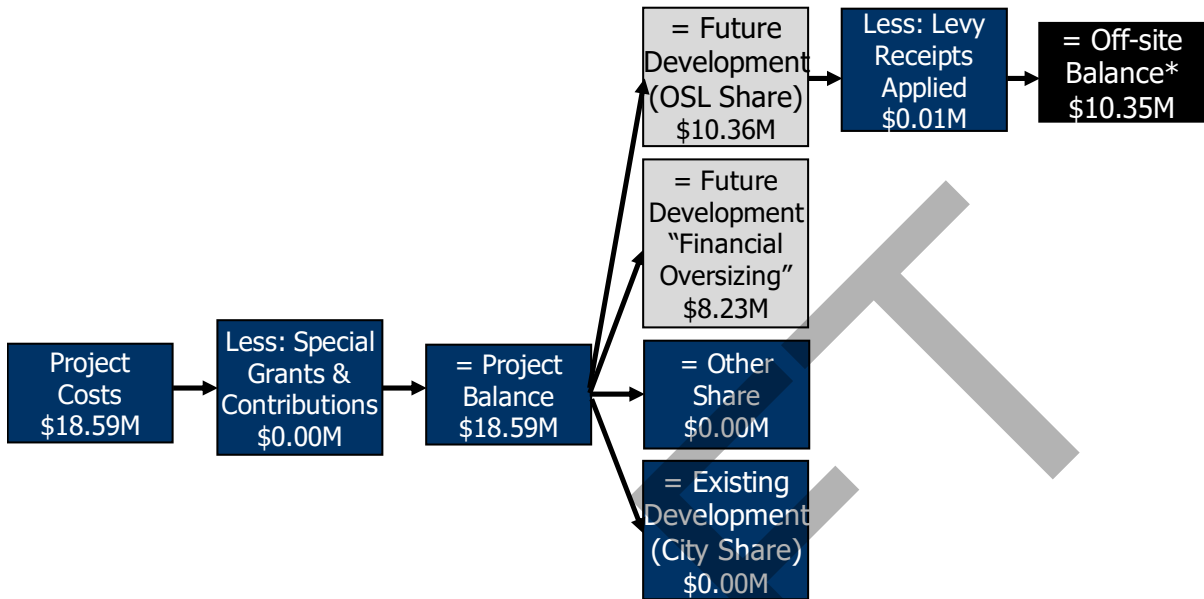
Offsite Levy Funds Collected to Date & Adjusted Levy Cost

Item	Project Description	OSL / Developer Cost	Offsite Levy Funds Collected to Dec 31, 2016	Offsite Levy Funds Collected Starting Jan 1, 2017	Adjusted Developer (Levy) Cost
1	CSMI - Stage 1	\$ 2,345,338	\$ -	\$ 3,043	\$ 2,342,294
2	CSMI - Stage 2	\$ 3,644,928	\$ -	\$ 4,700	\$ 3,640,228
3	CSMI - Stage 3	\$ 3,140,345	\$ -	\$ 4,028	\$ 3,136,317
4	CSMI - Stage 4	\$ 1,652,813	\$ -	\$ 2,014	\$ 1,650,799
5	CSMI - Stage 5	\$ 165,281	\$ -	\$ -	\$ 165,281
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (589,476)	\$ -	\$ -	\$ (589,476)
		<b>\$ 10,359,230</b>	<b>\$ -</b>	<b>\$ 13,786</b>	<b>\$ 10,345,443</b>

**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 approximately **\$10.35 million**. The cost allocations to each benefiting party are based on the benefiting percentages shown in Section E4. 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 CUI staff. The lands anticipated to develop over the 25-years in each offsite levy benefiting area are used to determine rates.

Benefiting Areas for Stormwater Offsite Infrastructure

Item	Project Description	Developer Cost	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5	6.1	6.2	6.3	6.4	6.5
1	CSMI - Stage 1	\$ 2,342,294						1	1	1	1	1	1	1	1	1	1						1	1	1	1	1	1	1	1	1	1
2	CSMI - Stage 2	\$ 3,640,228						1	1	1	1	1	1	1	1	1	1						1	1	1	1	1	1	1	1	1	1
3	CSMI - Stage 3	\$ 3,136,317						1	1	1	1	1	1	1	1	1	1						1	1	1	1	1	1	1	1	1	1
4	CSMI - Stage 4	\$ 1,650,799						1	1	1	1	1	1	1	1	1	1						1	1	1	1	1	1	1	1	1	1
5	CSMI - Stage 5	\$ 165,281						1	1	1	1	1	1	1	1	1	1						1	1	1	1	1	1	1	1	1	1
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (589,476)						1	1	1	1	1	1	1	1	1	1						1	1	1	1	1	1	1	1	1	1
		\$ 10,345,443																					1	1	1	1	1	1	1	1	1	1

Item	Project Description	Developer Cost	7.1	7.2	7.3	7.4	7.5	8.1	8.2	8.3	8.4	8.5	9.1	9.2	9.3	9.4	9.5	10.1	10.2	10.3	10.4	10.5	11.1	11.2	11.3	11.4	11.5	12.1	12.2	12.3	12.4	12.5	
1	CSMI - Stage 1	\$ 2,342,294						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	CSMI - Stage 2	\$ 3,640,228						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	CSMI - Stage 3	\$ 3,136,317						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	CSMI - Stage 4	\$ 1,650,799						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	CSMI - Stage 5	\$ 165,281						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 Levies Collected to Dec 31, 2016	\$ (589,476)						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	
		\$ 10,345,443																															

Item	Project Description	Developer Cost	13.1	13.2	13.3	13.4	13.5	14.1	14.2	14.3	14.4	14.5	15.1	15.2	15.3	15.4	15.5	16.1	16.2	16.3	16.4	16.5	17.1	17.2	17.3	17.4	17.5	18.1	18.2	18.3	18.4	18.5	
1	CSMI - Stage 1	\$ 2,342,294	1	1	1	1	1	1	1	1	1	1										1	1	1	1	1	1	1	1	1	1	1	
2	CSMI - Stage 2	\$ 3,640,228	1	1	1	1	1	1	1	1	1	1										1	1	1	1	1	1	1	1	1	1	1	
3	CSMI - Stage 3	\$ 3,136,317	1	1	1	1	1	1	1	1	1	1										1	1	1	1	1	1	1	1	1	1	1	
4	CSMI - Stage 4	\$ 1,650,799	1	1	1	1	1	1	1	1	1	1										1	1	1	1	1	1	1	1	1	1	1	
5	CSMI - Stage 5	\$ 165,281	1	1	1	1	1	1	1	1	1	1										1	1	1	1	1	1	1	1	1	1	1	
100	Unallocated Offsite Levies Collected to Dec 31, 2016	\$ (589,476)	1	1	1	1	1	1	1	1	1	1										1	1	1	1	1	1	1	1	1	1	1	
		\$ 10,345,443																					1	1	1	1	1	1	1	1	1	1	1

**E8. Reserve Balance**

The balance of CUI’s stormwater reserve at December 31<sup>st</sup>, 2017 as reflected in current City documentation is **\$589,475.63**, as highlighted in Appendix G. During this update, it was determined that the balance at December 31<sup>st</sup>, 2017 should be amended to **\$609,225.64**.

This updated amount takes into consideration expenditures up to end-2017, as shown in the table below.

CUI also needs to establish a set of “sub-ledgers” to track the amounts due to front-ending parties, including interest impacts in accordance with the interest rates underpinning the bylaw.

Stormwater Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures to December 31, 2016		\$ -	\$ -
Offsite Levy Receipt Allocations to December 31, 2016	\$ -		\$ -
Unallocated Receipts to December 31, 2016	\$ 589,475.63		\$ 589,475.63
<b>Opening Balance</b>			<b>\$ 589,475.63</b>
<b>2017</b>			<b>\$ 589,475.63</b>
Interest on Opening Balance	\$ 5,894.76		\$ 595,370.39
Project Expenditures (OSL Share)		\$ -	\$ 595,370.39
Offsite Levy Receipts	\$ 13,786.32		\$ 609,156.71
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ 609,156.71
Debenture Interest Accrued This Year		\$ -	\$ 609,156.71
Interest on Project Expenditure		\$ -	\$ 609,156.71
Interest on Offsite Levy Receipts	\$ 68.93		\$ 609,225.64
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ 609,225.64
Interest on Debenture Interest		\$ -	\$ 609,225.64

**E9. Development and Stormwater Infrastructure Staging Impacts**

Stormwater 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 stormwater infrastructure from time to time—front ending of infrastructure will be required. A front-end is the party that constructs and pays up front for infrastructure that benefits other parties. The front-end (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality’s front-ending repayment policies.

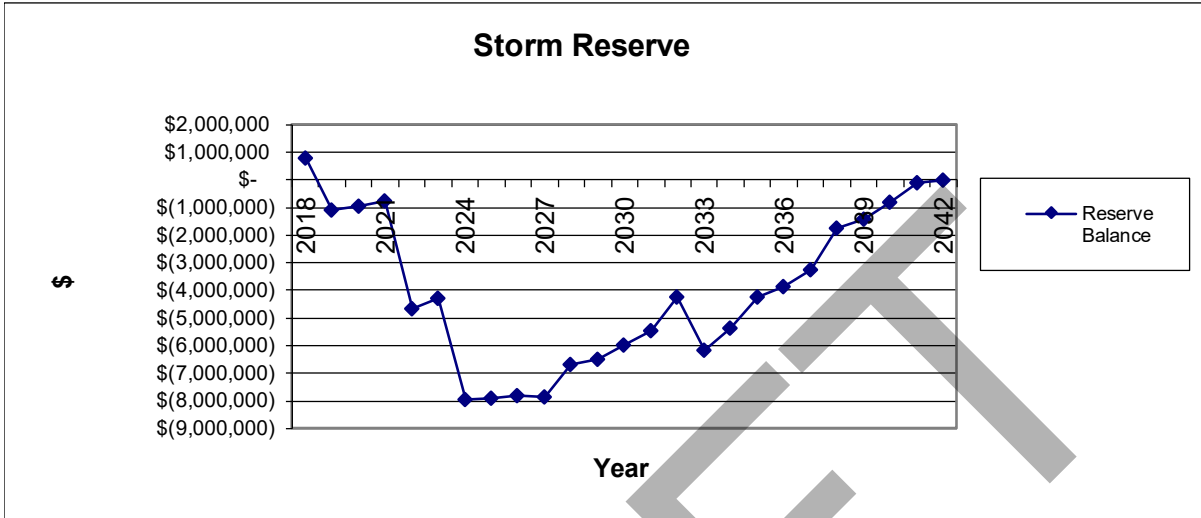
To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **3.10%**<sup>7</sup> interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **2.00%** interest credit has been provided to the reserve when it 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 CUI, nor are they charged too little thereby placing an unequitable burden on taxpayers).

<sup>7</sup> The 20-year debenture rate at the Alberta Capital Finance Authority at the project outset was ~3.10%.



Anticipated Stormwater Offsite Levy Reserve Balances



Anticipated Stormwater Offsite Levy Reserve Balances

Year	Receipts	Expenditure	Opening Balance	Interest	Balance
			\$ 609,226		
2018	\$ 171,807	\$ -	\$ 15,621	\$ 796,653	
2019	\$ 527,176	\$ 2,392,244	\$ (33,121)	\$ (1,101,536)	
2020	\$ 180,224	\$ -	\$ (28,561)	\$ (949,872)	
2021	\$ 198,637	\$ -	\$ (23,288)	\$ (774,524)	
2022	\$ 289,322	\$ 4,023,127	\$ (139,758)	\$ (4,648,087)	
2023	\$ 508,735	\$ -	\$ (128,320)	\$ (4,267,672)	
2024	\$ 214,472	\$ 3,677,279	\$ (239,645)	\$ (7,970,125)	
2025	\$ 282,311	\$ -	\$ (238,322)	\$ (7,926,136)	
2026	\$ 356,573	\$ -	\$ (234,656)	\$ (7,804,220)	
2027	\$ 185,954	\$ -	\$ (236,166)	\$ (7,854,432)	
2028	\$ 1,391,418	\$ -	\$ (200,353)	\$ (6,663,367)	
2029	\$ 351,764	\$ -	\$ (195,660)	\$ (6,507,263)	
2030	\$ 708,546	\$ -	\$ (179,760)	\$ (5,978,477)	
2031	\$ 685,083	\$ -	\$ (164,095)	\$ (5,457,489)	
2032	\$ 1,339,259	\$ -	\$ (127,665)	\$ (4,245,896)	
2033	\$ 800,015	\$ 2,525,271	\$ (185,106)	\$ (6,156,257)	
2034	\$ 956,721	\$ -	\$ (161,186)	\$ (5,360,722)	
2035	\$ 1,227,627	\$ -	\$ (128,126)	\$ (4,261,220)	
2036	\$ 529,993	\$ -	\$ (115,668)	\$ (3,846,896)	
2037	\$ 709,335	\$ -	\$ (97,264)	\$ (3,234,825)	
2038	\$ 1,526,558	\$ -	\$ (52,956)	\$ (1,761,224)	
2039	\$ 378,136	\$ -	\$ (42,876)	\$ (1,425,964)	
2040	\$ 648,639	\$ -	\$ (24,097)	\$ (801,422)	
2041	\$ 683,962	\$ -	\$ (3,641)	\$ (121,101)	
2042	\$ 450,591	\$ 329,491	\$ 0	\$ 0	



## APPENDIX F: RECREATION OFFSITE INFRASTRUCTURE

### F1. Recreation Offsite Infrastructure Costs

To support future growth, recreation offsite infrastructure is required. The estimated cost of this infrastructure is based upon: (a) actual construction costs to the cut-off date, (b) debenture interest associated with financing, and (c) future cost estimates. Total cost is approximately **\$99.26 million** as outlined in the table below. Actual costs, debenture interest (if any), and cost estimates were provided by City staff. It is important to note that these costs represent “gross” costs, of which only a portion will go to support future development during the 25-year review period. The remainder of this section outlines how the “net” costs for future development are determined.

#### Summary of Recreation Offsite Infrastructure

Item	Project Description	Cost of Completed Work	Debenture Interest	Estimated Cost of Work Yet to be Completed	Total Project Estimated Cost
1	Waterbridge Recreation Facility Land (Beyond MR)	\$ -	\$ -	\$ 5,070,000	\$ 5,070,000
2	Rec Facility Phase 1, Field House, Fitness, Track	\$ -	\$ -	\$ 33,200,932	\$ 33,200,932
3	Rec Facility Phase 2, Leisure Aquatics	\$ -	\$ -	\$ 23,463,501	\$ 23,463,501
4	Rec Facility Phase 3, Arena (2 sheets)	\$ -	\$ -	\$ 37,523,794	\$ 37,523,794
		\$ -	\$ -	\$ 99,258,227	\$ 99,258,227

\*Costs are based on 2017/18 estimates.

\*\*Estimates include engineering costs and contingencies.

\*\*\*Offsite levy project details, source, allocations, etc. are summarized in Appendix I.

### F2. Recreation Offsite Infrastructure Grants & Contributions to Date

The MGA enables the City to allocate the costs of offsite infrastructure to future development, other than those costs that have been provided by way of special grant or contribution (i.e., contributed infrastructure). The City has/will receive **\$0.00** in special grants and contributions for recreation offsite levy infrastructure as shown in the table below (note, if the City receives other 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 **\$99.26 million**.

#### Special Grants and Contributions for Recreation Offsite Infrastructure

Item	Project Description	Total Project Estimated Cost	Special Provincial Grants	Developer Agreement Contributions	Other Contributions	Reduced Project Estimated Cost
1	Waterbridge Recreation Facility Land (Beyond MR)	\$ 5,070,000	\$ -	\$ -	\$ -	\$ 5,070,000
2	Rec Facility Phase 1, Field House, Fitness, Track	\$ 33,200,932	\$ -	\$ -	\$ -	\$ 33,200,932
3	Rec Facility Phase 2, Leisure Aquatics	\$ 23,463,501	\$ -	\$ -	\$ -	\$ 23,463,501
4	Rec Facility Phase 3, Arena (2 sheets)	\$ 37,523,794	\$ -	\$ -	\$ -	\$ 37,523,794
		\$ 99,258,227	\$ -	\$ -	\$ -	\$ 99,258,227

### F3. Recreation Infrastructure Staging

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 City 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 annual rate/bylaw updates.

Recreation Infrastructure Staging

Item	Project Description	Construction Start Year
1	Waterbridge Recreation Facility Land (Beyond MR)	2024
2	Rec Facility Phase 1, Field House, Fitness, Track	2024
3	Rec Facility Phase 2, Leisure Aquatics	2030
4	Rec Facility Phase 3, Arena (2 sheets)	2037

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

\*\*Costs are inflated to the year of construction using an inflation rate of 2% for the next 2 years, and 3% thereafter.

### F4. Recreation Offsite Infrastructure Benefiting Parties

The recreation offsite infrastructure previously outlined will benefit various parties to varying degrees as determined by City staff and engineering advisors. During this review four potential benefiting parties were identified including:

- City of Chestermere – that portion of cost which is required to service existing residents.
- Other Stakeholders - other parties (such as neighboring municipalities) that benefit from the infrastructure.
- City of Chestermere Future Development (Financial Oversizing) - that portion of cost which benefits future development beyond the 25-year review period.
- City of Chestermere Future Development (in Rates) – all growth-related infrastructure (i.e., levyable recreation infrastructure costs) during the 25-year rate planning period.

The table below outlines the allocation of recreation offsite levy infrastructure costs to benefiting parties. Project allocations were determined by City staff.

Allocation of Recreation 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	Waterbridge Recreation Facility Land (Beyond MR)	\$ 5,070,000	34.8%		15.7%	49.6%
2	Rec Facility Phase 1, Field House, Fitness, Track	\$ 33,200,932	58.3%		10.0%	31.7%
3	Rec Facility Phase 2, Leisure Aquatics	\$ 23,463,501	34.8%		31.3%	33.9%
4	Rec Facility Phase 3, Arena (2 sheets)	\$ 37,523,794	0.0%		76.0%	24.0%
		<b>\$ 99,258,227</b>				

\*Allocations were determined by the City and its advisors (see Appendix I).

\*\*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.

## F5. 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 **\$30.00 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. The City has collected **\$0.00** in offsite levies to date, and results in an adjusted offsite levy cost of approximately **\$30.00 million**.

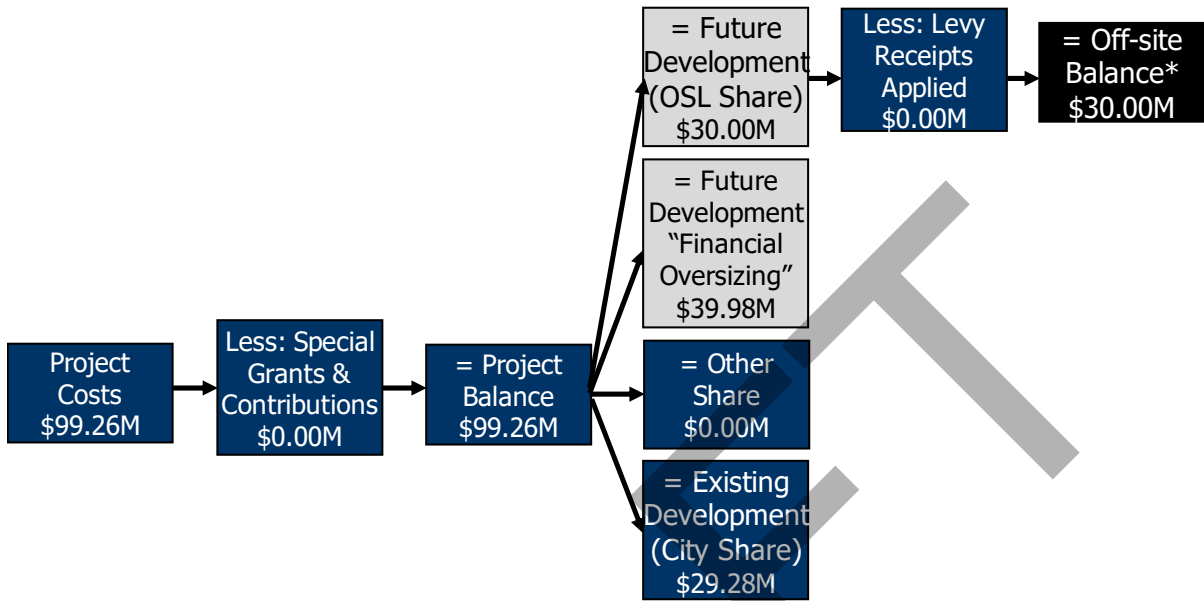
Offsite Levy Funds Collected to Date & Adjusted Levy Cost

Item	Project Description	OSL / Developer Cost	Offsite Levy Funds Collected to Dec 31, 2016	Offsite Levy Funds Collected Starting Jan 1, 2017	Adjusted Developer (Levy) Cost
1	Waterbridge Recreation Facility Land (Beyond MR)	\$ 2,513,828	\$ -	\$ -	\$ 2,513,828
2	Rec Facility Phase 1, Field House, Fitness, Track	\$ 10,514,470	\$ -	\$ -	\$ 10,514,470
3	Rec Facility Phase 2, Leisure Aquatics	\$ 7,959,946	\$ -	\$ -	\$ 7,959,946
4	Rec Facility Phase 3, Arena (2 sheets)	\$ 9,005,711	\$ -	\$ -	\$ 9,005,711
		<b>\$ 29,993,954</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 29,993,954</b>

## F6. Summary of Recreation Offsite Levy Cost Flow-through

As shown in the figure below, the total cost for recreation infrastructure that forms the basis of the rate is approximately **\$30.00 million**. The cost allocations to each benefiting party are based on the benefiting percentages shown in Section F4. The offsite levy balance (due from developers) is allocated to various benefiting areas (as described in the next section).

Total Recreation Offsite Levy Costs



**F7. Recreation 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 City staff. The lands anticipated to develop over the 25-years in each offsite levy benefiting area are used to determine rates.

Benefiting Areas for Recreation Offsite Infrastructure

Item	Project Description	Developer Cost	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5	6.1	6.2	6.3	6.4	6.5	
1	Waterbridge Recreation Facility Land (Beyond MR)	\$ 2,513,828	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	Rec Facility Phase 1, Field House, Fitness, Track	\$ 10,514,470	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	Rec Facility Phase 2, Leisure Aquatics	\$ 7,959,946	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	Rec Facility Phase 3, Arena (2 sheets)	\$ 9,005,711	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
		\$ 29,993,954																															

Item	Project Description	Developer Cost	7.1	7.2	7.3	7.4	7.5	8.1	8.2	8.3	8.4	8.5	9.1	9.2	9.3	9.4	9.5	10.1	10.2	10.3	10.4	10.5	11.1	11.2	11.3	11.4	11.5	12.1	12.2	12.3	12.4	12.5	
1	Waterbridge Recreation Facility Land (Beyond MR)	\$ 2,513,828	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	Rec Facility Phase 1, Field House, Fitness, Track	\$ 10,514,470	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	Rec Facility Phase 2, Leisure Aquatics	\$ 7,959,946	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	Rec Facility Phase 3, Arena (2 sheets)	\$ 9,005,711	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	
		\$ 29,993,954																															

Item	Project Description	Developer Cost	13.1	13.2	13.3	13.4	13.5	14.1	14.2	14.3	14.4	14.5	15.1	15.2	15.3	15.4	15.5	16.1	16.2	16.3	16.4	16.5	17.1	17.2	17.3	17.4	17.5	18.1	18.2	18.3	18.4	18.5
1	Waterbridge Recreation Facility Land (Beyond MR)	\$ 2,513,828	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	Rec Facility Phase 1, Field House, Fitness, Track	\$ 10,514,470	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	Rec Facility Phase 2, Leisure Aquatics	\$ 7,959,946	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	Rec Facility Phase 3, Arena (2 sheets)	\$ 9,005,711	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
		\$ 29,993,954																														

**F8. Reserve Balance**

The balance of City’s recreation reserve at December 31<sup>st</sup>, 2017 as reflected in current City documentation is **\$0.00**, as shown in the table below.

The City needs to establish a set of “sub-ledgers” to track the amounts due to front-ending parties, including interest impacts in accordance with the interest rates underpinning the bylaw.

Recreation Offsite Levy Reserve Balance

Description	Dr	Cr	Balance
Offsite Levy Expenditures to December 31, 2016		\$ -	\$ -
Offsite Levy Receipt Allocations to December 31, 2016	\$ -		\$ -
Debenture Interest Accrued to December 31, 2016		\$ -	\$ -
Unallocated Receipts to December 31, 2016	\$ -		\$ -
<b>Opening Balance</b>			<b>\$ -</b>
<b>2017</b>			<b>\$ -</b>
Interest on Opening Balance			\$ -
Project Expenditures (OSL Share)		\$ -	\$ -
Offsite Levy Receipts	\$ -		\$ -
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ -
Debenture Interest Accrued This Year		\$ -	\$ -
Interest on Project Expenditure		\$ -	\$ -
Interest on Offsite Levy Receipts	\$ -		\$ -
Offsite Levy Receipts Collected Under Old Agreement or Old Bylaw (if any)	\$ -		\$ -
Interest on Debenture Interest		\$ -	\$ -

**F9. Development and Recreation Infrastructure Staging Impacts**

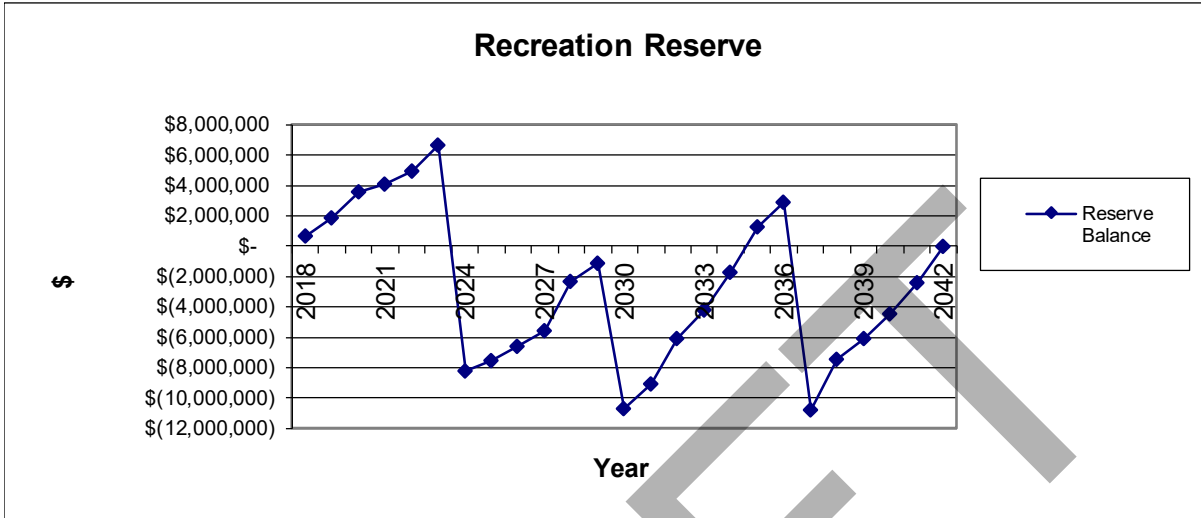
Recreation offsite infrastructure will be constructed in staged fashion over the 25-year review period. We have reviewed the availability of offsite levy funds to meet these construction requirements and found that offsite levy reserve funds will not be sufficient to pay for construction of recreation infrastructure from time to time—front ending of infrastructure will be required. A front-end is the party that constructs and pays up front for infrastructure that benefits other parties. The front-end (be it a municipality or a developer) is reimbursed over time as levies are collected, and in accordance with the municipality's front-ending repayment policies.

To compensate parties for capital they provide in front-ending offsite infrastructure construction, a **3.10%**<sup>8</sup> interest allowance has been charged to the reserve when it is forecast to be in a negative balance. Further, a **2.00%** 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 City, nor are they charged too little thereby placing an unequitable burden on taxpayers).

<sup>8</sup> The 20-year debenture rate at the Alberta Capital Finance Authority at the project outset was ~3.10%.

Anticipated Recreation Offsite Levy Reserve Balances



Anticipated Recreation Offsite Levy Reserve Balances

Year	Receipts	Expenditure	Opening Balance	Interest	Balance
2018	\$ 650,304	\$ -	\$ 13,006	\$ 663,310	
2019	\$ 1,183,844	\$ -	\$ 36,943	\$ 1,884,097	
2020	\$ 1,625,117	\$ -	\$ 70,184	\$ 3,579,398	
2021	\$ 425,064	\$ -	\$ 80,089	\$ 4,084,552	
2022	\$ 796,706	\$ -	\$ 97,625	\$ 4,978,883	
2023	\$ 1,511,604	\$ -	\$ 129,810	\$ 6,620,297	
2024	\$ 701,063	\$ 15,255,867	\$ (245,970)	\$ (8,180,477)	
2025	\$ 887,262	\$ -	\$ (226,090)	\$ (7,519,305)	
2026	\$ 1,110,818	\$ -	\$ (198,663)	\$ (6,607,150)	
2027	\$ 1,189,028	\$ -	\$ (167,962)	\$ (5,586,083)	
2028	\$ 3,302,464	\$ -	\$ (70,792)	\$ (2,354,412)	
2029	\$ 1,231,220	\$ -	\$ (34,819)	\$ (1,158,011)	
2030	\$ 1,946,802	\$ 11,129,681	\$ (320,568)	\$ (10,661,457)	
2031	\$ 1,889,110	\$ -	\$ (271,943)	\$ (9,044,289)	
2032	\$ 3,183,100	\$ -	\$ (181,697)	\$ (6,042,887)	
2033	\$ 1,970,660	\$ -	\$ (126,239)	\$ (4,198,466)	
2034	\$ 2,510,685	\$ -	\$ (52,321)	\$ (1,740,102)	
2035	\$ 2,958,871	\$ -	\$ 24,375	\$ 1,243,144	
2036	\$ 1,635,318	\$ -	\$ 57,569	\$ 2,936,031	
2037	\$ 2,058,200	\$ 15,486,424	\$ (325,258)	\$ (10,817,452)	
2038	\$ 3,628,133	\$ -	\$ (222,869)	\$ (7,412,187)	
2039	\$ 1,508,821	\$ -	\$ (183,004)	\$ (6,086,371)	
2040	\$ 1,795,564	\$ -	\$ (133,015)	\$ (4,423,822)	
2041	\$ 2,076,612	\$ -	\$ (72,764)	\$ (2,419,974)	
2042	\$ 2,419,974	\$ -	\$ 0	\$ 0	

## APPENDIX G: OFFSITE LEVY RESERVE DOCUMENTATION

The table below was generated from the City's and CUI's financial systems and provides a summary of expenditures, interest adjustments, and closing balances in each offsite levy reserve<sup>9</sup>.

	2016	2017
<b>Water Offsite Levy</b>		
CUI		
Opening Balance (Per GL)	\$1,531,051.62	\$1,531,051.62
Additions (KINNIBURGH NORTH PHASE 5A OSL (2))		\$173,502.70
Additions (KINNIBURGH NORTH PHASE 5A OSL (2))		\$29,912.52
TD Non RB EPCOR Loan 1 - principal & interest		(\$384,060.02)
TD Non RB EPCOR Loan 2 - principal & interest		(\$3,079.69)
TD Non RB EPCOR Payout Loan - principal & interest		(\$53,436.79)
Project # 741102 - Distribution Trunk TWP RD 240 (South)		(\$902.88)
Closing Balance (Per GL)	\$1,531,051.62	\$1,292,987.46
<b>Adjustments:</b>		
2017 Closing Balance Adjustment (GL Reversal)	(\$1,531,051.62)	
2016 Closing Balance Adjustment (OSL Share of Exp as reported)	(\$14,803,503.78)	
2016 Closing Balance Adjustment (Withdrawals from reserve as reported)	\$6,440,675.57	
2016 Closing Balance Adjustment (Unallocated levies as reported)	\$1,531,051.62	
2017 Closing Balance Adjustment (GL Reversal)		(\$1,292,987.46)
2017 Closing Balance Adjustment (OSL Share of Exp as reported)		(\$216,561.89)
2017 Closing Balance Adjustment (Receipts as reported)		\$203,415.22
2017 Interest Adjustment (Correction Per Model)		(\$205,560.44)
Amended Closing Balance	(\$6,831,776.59)	(\$7,050,483.70)

<sup>9</sup> The recreation offsite levy reserve is new in 2018. As such, there is no historical information.

City of Chestermere Offsite Levy Rates Update

	2016	2017
<b>Sewer Offsite Levy</b>		
CUI		
Opening Balance (Per GL)	(\$202,445.88)	(\$202,445.88)
Additions (KINNIBURGH NORTH PHASE 5A OSL (2))		\$3,273.65
Additions (LIFT STATION #13 FM LOAN)		\$5,654,846.40
Additions (243232 RAINBOW ROAD OSL (1))		\$49,223.04
Additions (RRST PHASE 1 LOAN)		\$575,414.40
Alberta Capital Finance Authority Loan Repayment - principal and interest		(\$181,281.16)
Project #742101 - LS #13 Forcemain		(\$2,903,116.62)
Project #742402 - LS #13 Forcemain ROW (Correction From 2016 Not incl in 2017 Data)		\$76,066.30
Project #742401 - LS #13 Land		\$38,240.00
Project #742118 - RRST Phase 1		(\$2,071,868.78)
Project #742119 - RRST Phase 2		(\$36,750.52)
Project #742105 - LS #13 Forcemain Phase 2		(\$3,032,378.25)
Project # 742202 - LS #14 Phase 1		(\$871.50)
Project # 74112 - LS #14 FM		(\$1,097.08)
TD Non RB EPCOR Loan - principal & interest		(\$341,195.68)
TD Non RB EPCOR Payout Loan - principal portion		(\$59,171.34)
TD Non RB LS #13 FM Loan - interest		(\$33,117.73)
Closing Balance (Per GL)	(\$202,445.88)	(\$2,466,230.75)
<b>Adjustments:</b>		
2016 Closing Balance Adjustment (GL Reversal)	\$202,445.88	
2016 Closing Balance Adjustment (OSL Share of Exp as reported)	(\$16,521,232.65)	
2016 Closing Balance Adjustment (Withdrawals from reserve as reported)	\$405,561.30	
2016 Closing Balance Adjustment (Unallocated levies as reported)	\$0.00	
2017 Closing Balance Adjustment (GL Reversal)		\$2,466,230.75
2017 Closing Balance Adjustment (OSL Share of Exp as reported)		(\$8,508,005.40)
2017 Closing Balance Adjustment (Withdrawals from reserve as reported)		\$52,496.69
2017 Interest Adjustment (Correction Per Model)		(\$547,017.70)
Amended Closing Balance	(\$16,115,671.35)	(\$25,118,197.76)
<b>Roads Offsite Levy</b>		
4-32-00-760-00		
Opening Balance (Per GL)	\$2,971,697.93	\$2,647,978.00
Withdrawals	(\$323,719.93)	(\$126,000.00)
Project #5 Expenditure/Withdrawals		(\$1,101,000.00)
Project #5 Expenditure/Withdrawals		(\$249,000.00)
Project #5 Expenditure/Withdrawals		(\$200,176.81)
Project #5 Expenditure/Withdrawals		(\$1,638,001.08)
Funding Correction		\$16,166.52
Grant Proceeds		\$116,253.43
OSL Receipts		\$84,552.03
Interest		\$7,886.76
Closing Balance (Per GL)	\$2,647,978.00	(\$441,341.15)
<b>Adjustments:</b>		
2016 Closing Balance Adjustment (GL Reversal)	(\$2,647,978.00)	
2016 Closing Balance Adjustment (Correction Per Model)	\$2,488,689.26	
Funding Correction		\$568,915.00
2017 Interest Adjustment (GL Reversal)		(\$7,886.76)
2017 Interest Adjustment (Correction Per Model)		\$5,713.33
Amended Closing Balance	\$2,488,689.26	(\$33,888.32)
<b>Storm Sewers Offsite Levy</b>		
CUI		
Opening Balance (Per GL)	\$589,475.63	\$589,475.63
Closing Balance (Per GL)	\$589,475.63	\$589,475.63
<b>Adjustments:</b>		
2017 Closing Balance Adjustment (OSL Receipts as reported)		\$13,786.32
2017 Interest Adjustment (Correction Per Model)		\$5,963.69
Amended Closing Balance	\$589,475.63	\$609,225.64



## APPENDIX H: BENCHMARK COMPARISONS

The table below compares the weighted average offsite levy rate in the City to rates in other municipalities.

Municipality / Area	Average Per Ha.
Town of Okotoks (being updated)	\$85,000
Town of Strathmore	\$93,300
Red Deer County (Gasline Alley)	\$96,500
Town of Redcliff*	\$109,200
Leduc County* (2009)	\$106,300
Town of Devon*	\$119,960
Town of High River	\$130,000
Town of Beaumont*	\$161,000
Town of Cochrane	~\$180,000
City of Red Deer	\$203,300
City of Chestermere*	\$219,638
City of Lethbridge	\$249,000
City of Medicine Hat* (subsidy)	\$250,000
City of Lloydminster* (in process)	\$281,800
City of St. Albert*	\$290,000
City of Edmonton	+\$300,000
City of Calgary (incl rec & stabilization)	+\$350,000

\*CORVUS Clients



