
Subject: 2020 Budget-Water and Wastewater Operating Budget, Rate Setting and Requisition

Report to: Budget Review Committee of the Whole

Report date: Thursday, November 28, 2019

Recommendations

1. That the 2020 net Water & Wastewater operating base budget increase of \$2,340,055 or 2.00% over the 2019 operating budget **BE APPROVED** in accordance with Council approved budget planning direction;
2. That the 2020 net Water & Wastewater operating budget increase of an additional 3.15% over the 2019 operating budget **BE APPROVED** to accommodate enhanced Capital financing contributions in accordance with Council approved Safe Drinking Water Act Financial Plan as follows:
 - a. \$1,350,459 or 1.16% over the 2019 operating budget representing an increase in capital financing contributions for water; and
 - b. \$2,332,479 or 1.99% over the 2019 operating budget representing an increase in capital financing contributions for wastewater;
3. That the 2020 gross Water Operations operating budget of \$46,300,620 and net budget in the amount of \$45,920,957 as outlined in Appendix 6 for the Water Budget, Rates and Requisition **BE APPROVED**;
4. That the proposed fixed water requisition shown in Table 3 of report CSD 71-2019, based on 25% of the Region's water net operating budget for the year and divided by 12 to determine the monthly charge, to be billed to each of the serviced Local Area Municipalities starting January 1, 2020, apportioned based on their previous three year's average water supply volumes, **BE APPROVED**;
5. That the Region's proposed 2020 variable water rate of \$0.602, shown in Table 4 of report CSD 71-2019, to be effective January 1, 2020 and calculated by taking 75% of the Region's water net operating budget and dividing by the estimated supply volume, to be billed on a monthly basis to each serviced Local Area Municipality based on the previous month's metered flows, **BE APPROVED**;
6. That the 2020 gross Wastewater Operations operating budget of \$80,504,266 and net budget in the amount of \$77,020,694 as outlined in Appendix 6 for the Wastewater Budget, Rates and Requisition **BE APPROVED**;

7. That the proposed 2020 fixed wastewater requisition as shown in Table 5 of report CSD 71-2019, based on 100% of the Region's net operating budget for the year and divided by 12 to determine the monthly charge, to be billed to each of the Local Area Municipalities starting January 1, 2020, apportioned based on their previous three year's average wastewater supply volumes, **BE APPROVED**;
8. That the 2020 wastewater monthly bills **INCLUDE** reconciliation for the 2018 net requisition allocation based on actual wastewater flows versus the estimated flows, as shown in Table 6 of report CSD 71-2019;
9. That the necessary by-laws **BE PREPARED** and **PRESENTED** to Council for consideration; and
10. That a copy of Report CSD 71-2019 **BE CIRCULATED** to the Local Area Municipalities.

Key Facts

- The proposed net Water budget before enhanced capital financing represents a \$0.33 million increase, or 0.75% over 2019; the proposed net Wastewater budget before enhanced capital financing represents a \$2.3 million increase, or 2.76% over 2019, for a combined Water & Wastewater Budget increase of 2.00% as shown in Table 1.
- The budget is representative of the Council approved 2020 budget planning direction of 2.0% for base budget expenditure.
- Staff are requesting a separate 3.15% increase for capital financing to support infrastructure requirements as outlined in the Council approved Safe Drinking Water Act (SDWA) Financial Plan.
- Included in the 2020 base program change (and therefore accommodated within the 2% budget planning direction) is a program change totaling \$7 thousand representing 1 new FTEs.
- The requisition methodology conforms to Council approved cost recovery methodology from 2011, which was reaffirmed through report CSD 61-2015, on July 2, 2015. The methodology apportions to the local area municipalities water at 75% variable rate and 25% as a fixed component and wastewater 100% fixed.
- The proposed variable water rate is increased to \$0.584 for base expenditure and by an additional \$0.018 for capital for a total of \$0.602 (2019 = \$0.580) attributed to the budget increase with no projected change in water flows.

Financial Considerations

The Water and Wastewater Division's proposed 2020 net budget amount of \$122.94 million represents a \$6.02 million net increase or 5.15% from the 2019 budget, as shown in Table 1. \$77.02 million of the total net cost is related to the Wastewater program, representing a net increase of \$4.34 million, or 5.97% from 2019. The

remaining \$45.92 million relates to the Water program, which has increased by \$1.68 million, or 3.80% from 2019. The proposed gross budget and comparison to the 2019 net budget are outlined in Table 1.

Table 1 – Summary of Proposed Water and Wastewater Base Budgets

| 2020 Proposed Budget - Gross & Net | | | |
|---|-------------------|-------------------|--------------------|
| | Water | Wastewater | Total |
| Net 2019 Budget Requisition | 44,238,899 | 72,679,759 | 116,918,658 |
| 2020 Budget: | | | |
| Total Operating Expenses | 21,928,290 | 48,378,209 | 70,306,499 |
| Business support | 2,043,659 | 3,013,601 | 5,057,260 |
| Reserve Transfer & Debt Charges | 20,978,212 | 26,779,977 | 47,758,189 |
| Gross 2020 Budget Total | 44,950,161 | 78,171,787 | 123,121,948 |
| Less: Revenues* | (379,663) | (3,483,572) | (3,863,235) |
| Less: Reserve Funding* | - | - | - |
| Net 2020 Budget Requisition - Before Increased Capital Financing | 44,570,498 | 74,688,215 | 119,258,713 |
| Percentage Change | 0.75% | 2.76% | 2.00% |
| Increased Capital Requirement | 1,350,459 | 2,332,479 | 3,682,938 |
| Net 2020 Budget Requisition - After Increased Capital Financing | 45,920,957 | 77,020,694 | 122,941,651 |
| Percentage Change | 3.80% | 5.97% | 5.15% |

*Revenue amounts presented in this table do not include revenue amounts in water and wastewater shared services (included as an offset in total operating expenses).

Analysis

The 2020 Water and Wastewater budgets were developed giving consideration to historical results (2018 actuals, 2019 forecast), operational concerns, legislative compliance, standard operating procedures, collaborations with LAMs, and cross-divisional and corporate business support costs.

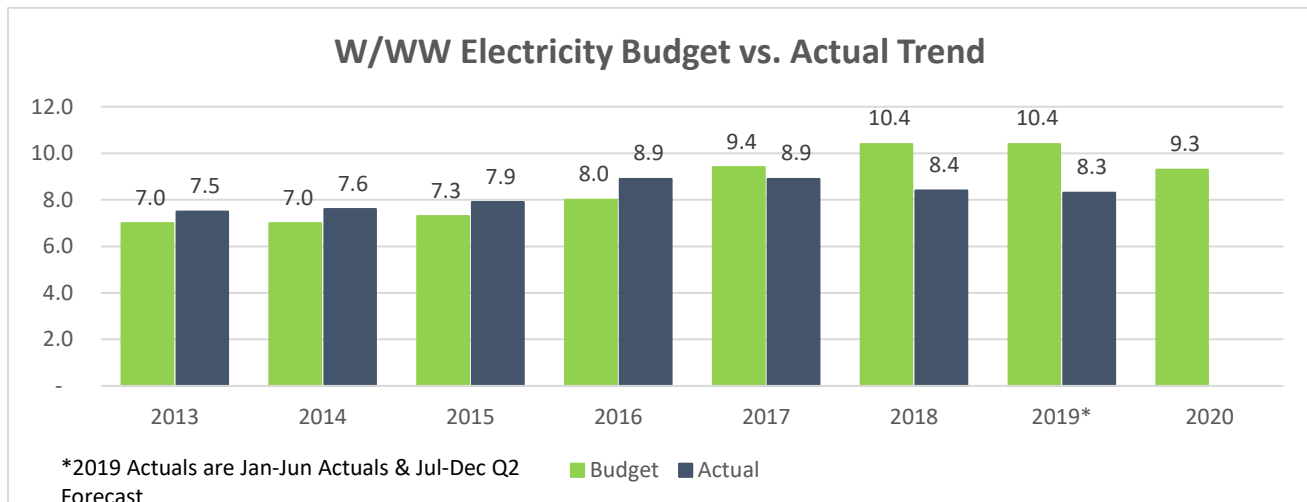
The total program cost includes both operating expenditures (representing 55% of total program costs), as well as transfers to reserve and debt charges in support of the capital program (representing 41% of the total program costs) with the remaining as business support (4%).

Pressures

Despite the pressures discussed below, the based combined operating budget impact for 2020 over 2019 has been limited to \$2,340,055 or 2.00% as per Council approved budget planning direction. Pressures to the 2020 budget include:

- Labour Related Costs (\$1.1 million) – Base labour related costs increased by \$576,000 or 2.4% over 2019. The remainder of the increase can be attributed to a shift in resources directly attributed and funded by capital to asset management planning (\$74k), a staffing program change as outlined in Table 2 (\$80k gross) and the inclusion of 2.5 temporary FTEs that were added in 2019 by way of delegated authority and funded through salary gapping for capital project management.
- W/WW Master Servicing Plans (MSP) (Gross = \$0.8 million, Net = \$0.08 million) and Biosolids MSP (Gross = \$0.5 million, Net = \$0) - The MSP project was included in the Development Charge background study and is funded 90% from development charges with the remainder being funded by the existing ratepayers. Staff are recommending that the Biosolids MSP be funded from the wastewater stabilization reserve which will result in a net impact for 2020 of \$0. The biosolids MSP was not identified in the Development Charges background study as an eligible project for development charge funding.
- Computer software support as a result of Asset Management improvements (\$0.2 million) - Staff have identified an opportunity to enhance existing processes for water and wastewater asset management through a betterment to existing software. This software licensing fee has been accommodated within the base budget expenditure. Water and wastewater staff have communicated the need for this software enhancement with the corporate asset management office. It has been indicated that this enhancement does not overlap with future enhancement with the corporate asset management office.
- Large diameter mains inspection program (\$0.3 million), chemicals based on usage and cost increases (\$0.5 million), property taxes (\$0.2 million) and indirect allocation support costs (\$0.4 million).
- Anticipated savings in electricity (\$1.1 million) - Savings experienced in the budget for electricity expenditures amounts to \$1.1 million for 2020. As noted in Chart 1, historical actual electricity expenditures have shown a consistent year over year increase since 2013 through 2016. This trend however has leveled off starting in 2017. The budgeted decrease in electricity expenditures forecasted for 2020 is to right size the budget based on the recent flattened trend. It is expected that the current level of electricity expenditure will continue on the current trajectory until the expiry of the Fair Hydro Act in 2021.

Chart 1 – Electricity Budget vs. Actuals 2013 to 2020



The proposed 2020 operating budget includes in the base budget a staff initiative for one FTE as a program change. This program change is summarized below in **Table 2**.

Table 2 – Summary of Proposed Water and Wastewater Program Change

| Division | FTE | Item | Net Amount | Details |
|-----------------------|----------|--------------------|----------------|---|
| Wastewater Operations | 1 | Biosolids Operator | \$7.1 K | Compensation cost mostly offset by savings in sludge collection of \$73K; currently there is only 1 employee at each facility; having a backup will enable processing to continue if existing staff is not available. |
| Total | 9 | | \$7.1 K | |

Reserve Management - Capital/Infrastructure

Council provided budget planning direction of 2% for base services in accordance with core CPI. Staff have prepared the base budget in accordance with this planning direction but are making a specific request for enhanced financing for 2020 to align with the SDWA financial plan. As per the Council approved SDWA Financial Plan, staff presented a 5.15% increase for water and wastewater infrastructure within CSD 40-2019 – 2020 Budget Planning.

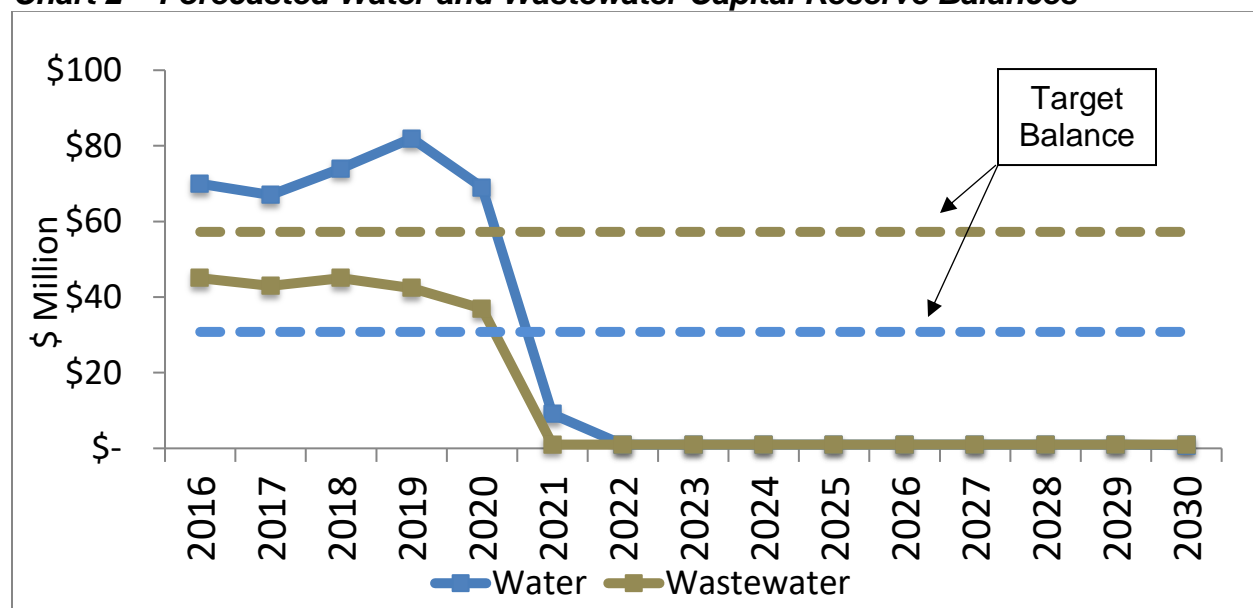
In 2017, Council approved a comprehensive Asset Management Plan (AMP). The detailed information available in the AMP was utilized in the 2020 capital budget preparation. The consultant reviewed the 10 year budget and established that even if the entire available capital dollars were applied against the replacement and rehabilitation of existing assets the Region's annual funding gap would be \$77M (10

year Average Annual Renewal investment - AARI). This annual investment would address the average 10 year requirement and backlog as of December 2016.

During 2018, Regional Council reviewed and approved the Safe Water Drinking Act (SDWA) Financial Plan which identified increasing capital financing as an urgent need in order to address the current infrastructure gap. At that time Council approved in principle a combined annual 5.15% increase for water and wastewater. For 2019, this 3.15% increase for capital resulted in an additional combined water and wastewater transfer from operating to capital of \$3M. If approved for 2020, a similar amount would be allocated to the capital financing.

As presented within the financial strategy, staff proposed as a guiding principle that a minimum reserve balance of 2% of the current asset value be maintained. The dotted lines on the chart below illustrate the 2% target compared against the forecasted reserve balance for each year. Without the additional 3.15% annual contribution towards capital, both the water and wastewater reserve are fully committed through the end of the forecast period and the capital financing does not adequately address the capital infrastructure needs for the future.

Chart 2 – Forecasted Water and Wastewater Capital Reserve Balances



Water Requisition

Fixed Water Requisition

As per Council's approved methodology, \$11,480,239 (25%) of the net Water budget will be recovered from fixed monthly requisitions to the local municipalities based on historical flows. The historical water flows and percentages utilized are included in **Appendix 1 and 2**. This annual amount based on the historical flows is then divided by

12 to determine the monthly charge to be billed to each of the services LAMs starting January 1, 2020. Also included as part of **Appendix 1** is the annual impact on the fixed water requisition amount between 2019 and 2020 for each LAM. Table 3 summarizes the fixed amounts to be billed to each LAM based on the above methodology.

Table 3 – Fixed Water Requisition for 2020 Net Budget

| Fixed Water Requisition for 2020 Net Budget | | | |
|---|-----------------|---------------------|------------------|
| Municipality | 3-Year Avg. (%) | Allocation (\$) | Monthly (\$) |
| Fort Erie | 7.84% | \$899,645 | \$74,970 |
| Grimsby | 5.30% | \$608,082 | \$50,674 |
| Lincoln | 3.94% | \$452,771 | \$37,731 |
| Niagara Falls | 26.23% | \$3,011,163 | \$250,930 |
| Niagara-on-the-Lake | 5.43% | \$623,711 | \$51,976 |
| Pelham | 2.06% | \$236,558 | \$19,713 |
| Port Colborne | 5.31% | \$610,016 | \$50,835 |
| St. Catharines | 26.51% | \$3,042,931 | \$253,578 |
| Thorold | 3.72% | \$427,215 | \$35,601 |
| Welland | 12.13% | \$1,392,536 | \$116,045 |
| West Lincoln | 1.53% | \$175,609 | \$14,634 |
| Total | 100.00% | \$11,480,239 | \$956,687 |

Variable Water Rate

The remaining \$34,440,718 (75%) will be charged through the variable water rates. Staff is recommending that the variable rate be set at \$0.602 per cubic metre as outlined in Table 4 using a water forecast based on the average flow volumes that have been realized over the past three years. For 2020, staff are projecting water flows to be consistent with the amount estimated for the 2019 budget. An overview of the water trends and related risk is outlined in more detail in **Appendix 2**. The proposed variable water rate is increased by \$0.004 (0.67%) for base and \$0.018 (3.05%) for capital for a total of \$0.602 (2019 = \$0.580) which is attributed to budget increases with no projected change in water flows. Despite above average growth for the Region in recent years the flow estimates are still volatile and are dependent on weather conditions for the year. Staff are projecting that the 2019 estimated flows will not be achieved by year end. By maintaining the flow forecast it will assist in mitigating the risks associated with the volatility in weather conditions (particularly wet weather conditions).

Table 4 – Variable Water Rate for 2020 Net Budget

| 2020 Variable Water Rate | |
|---|--------------|
| Variable Allocation (75% x \$45,920,957) | \$34,440,718 |
| 2020 Water Flow Forecast (m ³) | 57,250,000 |
| Variable Rate (\$/m ³) | \$0.602 |

Wastewater Requisition

100% of the net wastewater requisition will be recovered from fixed monthly requisitions to the local municipalities. The historical wastewater flows and percentages utilized are included in **Appendix 3**. This annual amount based on the historical flows is then divided by 12 to determine the monthly charge to be billed to each of the services Local Area Municipalities starting January 1, 2020. Also included as part of **Appendix 3** is the annual impact of the fixed wastewater requisition amount between 2019 and 2020 for each LAM. Table 5 summarizes the fixed amounts to be billed to each LAM based on the above methodology.

Table 5 – Fixed wastewater Requisition for 2020 Net Budget

| Fixed Wastewater Requisition for 2020 Net Budget | | | |
|--|-----------------|---------------------|--------------------|
| Municipality | 3-Year Avg. (%) | Allocation (\$) | Monthly (\$) |
| Fort Erie | 10.44% | \$8,043,911 | \$670,326 |
| Grimsby | 4.86% | \$3,740,290 | \$311,691 |
| Lincoln | 3.83% | \$2,948,685 | \$245,724 |
| Niagara Falls | 19.62% | \$15,113,526 | \$1,259,460 |
| Niagara-on-the-Lake | 4.14% | \$3,185,401 | \$265,450 |
| Pelham | 1.79% | \$1,379,048 | \$114,921 |
| Port Colborne | 5.90% | \$4,544,117 | \$378,676 |
| St. Catharines | 28.45% | \$21,916,001 | \$1,826,333 |
| Thorold | 5.06% | \$3,899,808 | \$324,984 |
| Welland | 14.30% | \$11,012,336 | \$917,695 |
| West Lincoln | 1.61% | \$1,237,572 | \$103,131 |
| Total | 100.00% | \$77,020,694 | \$6,418,391 |

As per Council's approved cost recovery methodology, the 2020 monthly Wastewater charges will include reconciliation of the 2018 Wastewater requisition payments. Municipal 2018 rebates or charges will be based on their respective share of actual flows versus the estimated share used to initially allocate the 2018 charges. This reconciliation results in a total of \$1,176,562 in payments to, and \$1,176,562 in rebates from, the local municipalities. Tables outlining the calculation of the reconciliation have been included as **Appendix 4**, and the total charge including the 2020 requisition and 2018 reconciliation by local municipality has been included as **Appendix 5**.

Table 6 – Wastewater Reconciliation for 2018 included in 2020 Requisition

| Wastewater Reconciliation (2018) | | | |
|----------------------------------|---------------------|---------------------|----------------------|
| Municipality | Reconciliation (\$) | Monthly Rebate (\$) | Monthly Payment (\$) |
| Fort Erie | (189,542) | (15,795) | |
| Grimsby | 72,923 | | 6,077 |
| Lincoln | 23,238 | | 1,937 |
| Niagara Falls | (711,135) | (59,261) | |
| Niagara-on-the-Lake | 114,819 | | 9,568 |
| Pelham | (83,549) | (6,962) | |
| Port Colborne | 159,962 | | 13,330 |
| St. Catharines | 448,367 | | 37,364 |
| Thorold | 300,668 | | 25,056 |
| Welland | (192,335) | (16,028) | |
| West Lincoln | 56,585 | | 4,715 |
| Total | (0) | (98,047) | 98,047 |

Risks

- Water revenue is weather dependant and therefore subject to fluctuations that are outside the Region's control.
- Wastewater costs can also be weather dependent and therefore subject to fluctuations that are outside the Region's control.
- Unanticipated equipment and underground infrastructure failure which may impact operating expenditures.
- Unanticipated new provincial standards that may create operational pressures.
- Limited operational financial flexibility until the budget fully addresses the asset management plan/SDWA and may create further pressure on the already forecasted decline in reserves.
- Additional capital expenditures may be required as a result of Ontario Power Generation's operational and maintenance activities with respect to the Hydro Power Canal closure.

Alternatives Reviewed

1. Council may elect to not approve the enhanced capital financing as presented representing an increase of 3.15% over 2019. This alternative is **NOT RECOMMENDED**. This alternative would limit the increase in the requisition from 2019 to 2020 to 2.00% which is within Council's approved budget directions. This alternative would not provide the requisite capital financing needed to support future capital expenditures as identified within the SDWA Financial Plan as approved by Council.
2. If Council approves the 3.15% or \$3.68 million to enhance capital financing, staff **RECOMMEND** that \$479,990 be allocated to debt servicing, \$550,000 allocated

to reserve funding with the remaining \$2,652,948 as a contribution to the reserve for capital project utilization in 2021 or future, to support an amendment to the 2020 Capital budget to address previously deferred projects as follows:

- Dain City Station Forcemain Replacement (\$550k) – ***Reserve Financed***
- Thundering Waters Sanitary Trunk Sewer Rehab (\$8.3M) – ***Debt Financed***
- The Niagara Falls WWTP Secondary Treatment Upgrade (\$58M) which was also deferred is not recommended to be added back to 2020 as WWW staff have indicated that the Ministry of Environment , Conservation and Parks (MECP) has granted an extension on the project which will enable time to obtain necessary approvals and complete detailed design.
- The Port Dalhousie WWTP Upgrade (\$14M) which was also deferred is not recommended to be added back to 2020 as WWW staff have indicated that a phased approach for this project is more appropriate due to the limited space to accommodate contractors on site, as such phase 2 should remain in 2021.

Relationship to Council Strategic Priorities

The 2020 Water and Wastewater proposed budgets support Council's strategic priorities of organizational excellence, by meeting or exceeding legislative requirements and having 41% of the total program costs related to infrastructure renewal and replacement.

Other Pertinent Reports

| | |
|-------------|---|
| CSD 21-2017 | Asset Management Plan |
| PDS 37-2016 | Niagara 2041 Growth Strategy – Local Municipal Growth Allocations |
| PW 22-2017 | 2016 Water & Wastewater Master Servicing Plan Update |
| PW 5-2019 | Safe Drinking Water Act Financial Plan |

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Appendices

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|------------|---|
| Appendix 1 | Water Flows and Fixed Water Requisition by Local Area Municipality |
| Appendix 2 | Water Volume Analysis |
| Appendix 3 | Wastewater Flows and Fixed Wastewater Requisition by Local Area Municipality |
| Appendix 4 | 2017 By-law Wastewater Reconciliation |
| Appendix 5 | Fixed Wastewater Requisition including Reconciliation by Local Area Municipality |
| Appendix 6 | Water and Wastewater Schedule of Revenues and Expenditures by Object of Expenditure |

Appendix 1 - Water Flows and Fixed Water Requisition by Local Area Municipality

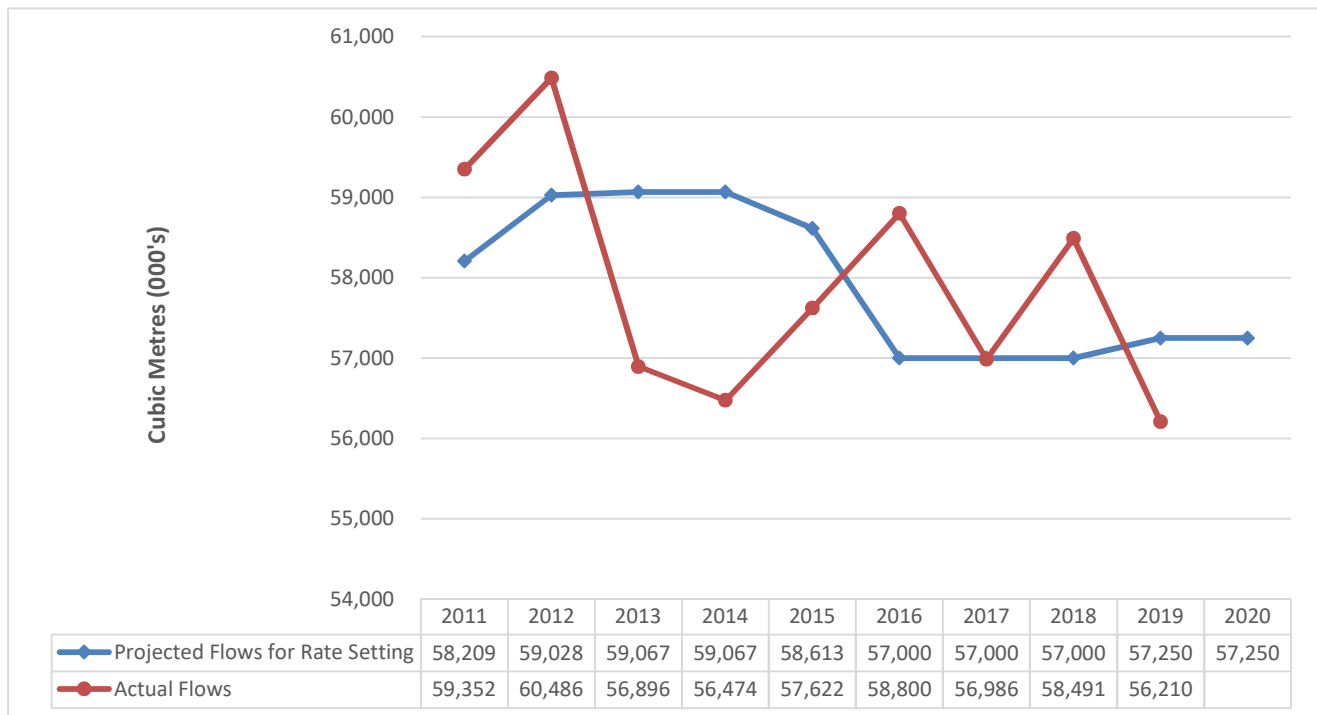
Table 1 - Water Flows by Municipality

| Municipality | 3-Year Avg. per 2019 By-law | | 3-Year Avg. per 2020 By-law | |
|---------------------|--------------------------------|-------------|--------------------------------|-------------|
| | Megalitres | % | Megalitres | % |
| Fort Erie | 4,686 | 8.06% | 4,478 | 7.84% |
| Grimsby | 3,258 | 5.60% | 3,027 | 5.30% |
| Lincoln | 2,315 | 3.98% | 2,254 | 3.94% |
| Niagara Falls | 15,424 | 26.53% | 14,989 | 26.23% |
| Niagara-on-the-Lake | 3,147 | 5.41% | 3,105 | 5.43% |
| Pelham | 1,266 | 2.18% | 1,178 | 2.06% |
| Port Colborne | 3,093 | 5.32% | 3,037 | 5.31% |
| St. Catharines | 15,350 | 26.41% | 15,148 | 26.51% |
| Thorold | 2,076 | 3.57% | 2,127 | 3.72% |
| Welland | 6,653 | 11.45% | 6,932 | 12.13% |
| West Lincoln | 862 | 1.48% | 874 | 1.53% |
| Total | 58,130 | 100% | 57,148 | 100% |

Table 2 - Fixed Water Requisition by Municipality

| Municipality | Fixed Requisition | | | |
|---------------------|-------------------|-----------------|------------|--------------|
| | 2019 (\$000) | 2020 (\$000) | Difference | |
| | | | \$000s | % |
| Fort Erie | 892 | 900 | 8 | 0.91% |
| Grimsby | 620 | 608 | (12) | -1.89% |
| Lincoln | 440 | 453 | 12 | 2.80% |
| Niagara Falls | 2,935 | 3,011 | 77 | 2.61% |
| Niagara-on-the-Lake | 599 | 624 | 25 | 4.16% |
| Pelham | 241 | 237 | (4) | -1.81% |
| Port Colborne | 588 | 610 | 22 | 3.66% |
| St. Catharines | 2,920 | 3,043 | 123 | 4.19% |
| Thorold | 395 | 427 | 32 | 8.14% |
| Welland | 1,266 | 1,393 | 127 | 10.02% |
| West Lincoln | 164 | 176 | 12 | 7.12% |
| Total | 11,060 | 11,480 | 421 | 3.80% |

Appendix 2 - Water Volume Analysis



The 2019 actual flows are estimate to finish the year approximately 1.82% lower than project flows. The forecasted water usage in 2019 is estimated to total to 56,210 ML.

The water volume forecast for 2020 has been prepared giving consideration to historical trends and input received from some local area municipalities.

The volume forecast for 2020 is above the 3-year calendar average of 57,229 ML and below the 5-year average of 57,622 ML. This includes 2015 and 2018 which were more typical summer weather years. 2016 experienced drought conditions during the summer. 2017 and 2019 experienced very wet summers. The 2020 estimate reflects no change over previous year's projections as a result of not meeting expected forecast for 2019.

Appendix 3 - Wastewater Flows and Fixed Requisition By Local Area Municipality

Table 1 - Wastewater Flows by Municipality

| Municipality | 3-Year Avg. per 2019 By-law | | 3-Year Avg. per 2020 By-law | |
|---------------------|-----------------------------|-------------|-----------------------------|-------------|
| | Megalitres | % | Megalitres | % |
| Fort Erie | 7,348 | 10.45% | 7,931 | 10.44% |
| Grimsby | 3,216 | 4.57% | 3,688 | 4.86% |
| Lincoln | 2,745 | 3.90% | 2,907 | 3.83% |
| Niagara Falls | 14,247 | 20.26% | 14,901 | 19.62% |
| Niagara-on-the-Lake | 2,864 | 4.07% | 3,141 | 4.14% |
| Pelham | 1,309 | 1.86% | 1,360 | 1.79% |
| Port Colborne | 3,944 | 5.61% | 4,480 | 5.90% |
| St. Catharines | 20,064 | 28.54% | 21,608 | 28.45% |
| Thorold | 3,420 | 4.86% | 3,845 | 5.06% |
| Welland | 10,025 | 14.26% | 10,858 | 14.30% |
| West Lincoln | 1,125 | 1.60% | 1,220 | 1.61% |
| Total | 70,306 | 100% | 75,938 | 100% |

Tables 2 - Fixed Wastewater Requisition by Municipality

| Municipality | Fixed Requisition | | | |
|---------------------|-------------------|---------------|--------------|--------------|
| | 2019 (\$000) | 2020 (\$000) | Difference | |
| | | | \$000s | % |
| Fort Erie | 7,596 | 8,044 | 448 | 5.90% |
| Grimsby | 3,324 | 3,740 | 416 | 12.52% |
| Lincoln | 2,837 | 2,949 | 112 | 3.94% |
| Niagara Falls | 14,728 | 15,114 | 386 | 2.62% |
| Niagara-on-the-Lake | 2,961 | 3,185 | 224 | 7.58% |
| Pelham | 1,354 | 1,379 | 25 | 1.85% |
| Port Colborne | 4,077 | 4,544 | 467 | 11.46% |
| St. Catharines | 20,741 | 21,916 | 1,175 | 5.67% |
| Thorold | 3,536 | 3,900 | 364 | 10.29% |
| Welland | 10,363 | 11,012 | 649 | 6.27% |
| West Lincoln | 1,163 | 1,238 | 75 | 6.41% |
| Total | 72,680 | 77,021 | 4,341 | 5.97% |

Appendix 4 - 2018 By-law Wastewater Reconciliation

| Wastewater Flows (Mega Litres) | | |
|--------------------------------|----------------|---|
| Municipality | Prior 3-Yr Avg | 2018 By-Law Period Actual Flows ¹ |
| Fort Erie | 7,159 | 7,737 |
| Grimsby | 3,143 | 3,571 |
| Lincoln | 2,575 | 2,885 |
| Niagara Falls | 14,018 | 14,770 |
| Niagara-on-the-Lake | 2,655 | 3,076 |
| Pelham | 1,299 | 1,349 |
| Port Colborne | 3,934 | 4,547 |
| St. Catharines | 19,583 | 22,246 |
| Thorold | 3,183 | 3,870 |
| Welland | 9,951 | 10,835 |
| West Lincoln | 1,072 | 1,254 |
| Total | 68,571 | 76,140 |

| Wastewater Fixed Allocation Percentages | | | |
|---|----------------|---|-------------|
| Municipality | Prior 3-Yr Avg | 2018 By-Law Period Actual Flows ¹ | Difference |
| Fort Erie | 10.4% | 10.2% | -0.3% |
| Grimsby | 4.6% | 4.7% | 0.1% |
| Lincoln | 3.8% | 3.8% | 0.0% |
| Niagara Falls | 20.4% | 19.4% | -1.0% |
| Niagara-on-the-Lake | 3.9% | 4.0% | 0.2% |
| Pelham | 1.9% | 1.8% | -0.1% |
| Port Colborne | 5.7% | 6.0% | 0.2% |
| St. Catharines | 28.6% | 29.2% | 0.7% |
| Thorold | 4.6% | 5.1% | 0.4% |
| Welland | 14.5% | 14.2% | -0.3% |
| West Lincoln | 1.6% | 1.6% | 0.1% |
| Total | 100.0% | 100.0% | 0.0% |

| Wastewater Fixed Allocation charge (\$000) | | | |
|--|---------------------------------------|---|---|
| Municipality | 2018 By-Law Charges ^{1,2} | Charges Based on Actual Flows ¹ | Underpayment/ (Overpayment) ³ |
| Fort Erie | \$ 7,114 | \$ 6,925 | \$ (190) |
| Grimsby | 3,123 | 3,196 | 73 |
| Lincoln | 2,559 | 2,582 | 23 |
| Niagara Falls | 13,930 | 13,219 | (711) |
| Niagara-on-the-Lake | 2,639 | 2,753 | 115 |
| Pelham | 1,291 | 1,207 | (84) |
| Port Colborne | 3,910 | 4,070 | 160 |
| St. Catharines | 19,462 | 19,910 | 448 |
| Thorold | 3,163 | 3,464 | 301 |
| Welland | 9,890 | 9,697 | (192) |
| West Lincoln | 1,066 | 1,122 | 57 |
| Total | \$ 68,146 | \$ 68,146 | \$ 0 |

| | |
|---------------------------|---------|
| Sum of Overpayment: | (1,177) |
| Percentage of Requisition | 1.73% |

Notes:

1. 2018 By-Law period consists of the 12 month period from January 2018 to December 2018
2. Charges paid excluded payments made/rebates received for 2017 reconciliation.
3. Underpayments/(Overpayments) based on comparing 2 difference allocation methodologies (3-yr average vs. actual flows during By-law period).

Appendix 5 - Fixed Wastewater Requisition Including Reconciliation by Municipality Comparison

| Municipality | Requisition | | Reconciliation Payment / (Refund) | | Total Charge (Requisition + Reconciliation) | | | |
|---------------------|---------------|---------------|-----------------------------------|------------------|---|---------------|--------------|--------------|
| | 2019 By-Law | 2020 By-Law | 2019 (2017 Rec.) | 2020 (2018 Rec.) | 2019 By-Law | 2020 By-Law | Difference | |
| | (\$000) | (\$000) | (\$000) | (\$000) | (\$000) | (\$000) | (\$000) | % |
| Fort Erie | 7,596 | 8,044 | 328 | (190) | 7,924 | 7,854 | (70) | -0.88% |
| Grimsby | 3,324 | 3,740 | 165 | 73 | 3,489 | 3,813 | 324 | 9.29% |
| Lincoln | 2,837 | 2,949 | 231 | 23 | 3,068 | 2,972 | (96) | -3.13% |
| Niagara Falls | 14,728 | 15,114 | 805 | (711) | 15,532 | 14,402 | (1,130) | -7.28% |
| Niagara-on-the-Lake | 2,961 | 3,185 | 338 | 115 | 3,299 | 3,300 | 1 | 0.04% |
| Pelham | 1,354 | 1,379 | (65) | (84) | 1,289 | 1,295 | 7 | 0.54% |
| Port Colborne | 4,077 | 4,544 | (181) | 160 | 3,896 | 4,704 | 808 | 20.75% |
| St. Catharines | 20,741 | 21,916 | (1,427) | 448 | 19,314 | 22,364 | 3,050 | 15.79% |
| Thorold | 3,536 | 3,900 | 179 | 301 | 3,715 | 4,200 | 486 | 13.08% |
| Welland | 10,363 | 11,012 | (404) | (192) | 9,960 | 10,820 | 860 | 8.64% |
| West Lincoln | 1,163 | 1,238 | 32 | 57 | 1,195 | 1,294 | 99 | 8.32% |
| Total | 72,680 | 77,021 | - | - | 72,680 | 77,021 | 4,341 | 5.97% |

D_67000B

| | 2018 Actual | 2019 | | 2020 | | | | | | |
|--|----------------------|----------------------|----------------------|----------------------|--------------------|-----------------|------------------------------------|----------------------|--------------------|------------------|
| | Total | Q2 Forecast Total | Budget Total | Base Services | Base Variance | Base Variance % | Budget Total Program Changes | Total | Total Variance | Total Variance % |
| A_40000AB Compensation | 22,214,973 | 23,254,127 | 23,739,732 | 24,852,445 | 1,112,713 | 4.7% | - | 24,852,445 | 1,112,713 | 4.7% |
| A_41000AB Administrative | 1,966,527 | 2,312,550 | 2,017,200 | 3,432,915 | 1,415,715 | 70.2% | - | 3,432,915 | 1,415,715 | 70.2% |
| A_44000AB Operational & Supply | 12,679,974 | 12,903,298 | 12,709,326 | 13,166,433 | 457,108 | 3.6% | - | 13,166,433 | 457,108 | 3.6% |
| A_50000AB Occupancy & Infrastructure | 16,059,319 | 18,134,584 | 17,950,464 | 17,699,503 | (250,961) | (1.4%) | - | 17,699,503 | (250,961) | (1.4%) |
| A_52000AB Equipment, Vehicles,Technology | 6,164,859 | 6,661,316 | 6,142,880 | 6,588,120 | 445,240 | 7.2% | - | 6,588,120 | 445,240 | 7.3% |
| A_54000AB Community Assistance | 153 | 965 | - | - | - | - | - | - | - | - |
| A_56000AB Partnership, Rebate, Exemption | 2,450,015 | 18,198,031 | 4,015,000 | 4,010,000 | (5,000) | (0.1%) | - | 4,010,000 | (5,000) | (0.1%) |
| A_58000AB Financial Expenditures | 9,053 | 31,302 | - | - | - | - | - | - | - | - |
| A_75100AC Transfers To Funds | 40,018,792 | 37,037,556 | 37,037,556 | 37,065,780 | 28,224 | 0.1% | 3,682,938 | 40,748,718 | 3,711,162 | 10.0% |
| A_60000AC Allocation Between Departments | 1,753,677 | 1,743,136 | 1,823,753 | 1,777,083 | (46,669) | (2.6%) | - | 1,777,083 | (46,669) | (2.6%) |
| A_60260AC Allocation Within Departments | - | 0 | 0 | - | 0 | - | - | - | 0 | - |
| Gross Expenditure Subtotal | 103,317,341 | 120,276,865 | 105,435,911 | 108,592,279 | 3,156,368 | 3.0% | 3,682,938 | 112,275,217 | 6,839,306 | 6.5% |
| A_30000AB Taxation | (112,013,218) | (116,315,656) | (116,918,658) | (119,146,062) | (2,227,403) | 1.9% | (3,795,589) | (122,941,651) | (6,022,993) | 5.2% |
| A_32400AB By-Law Charges & Sales | (1,260,444) | (1,488,933) | (1,358,200) | (1,421,278) | (63,078) | 4.6% | - | (1,421,278) | (63,078) | 4.6% |
| A_34950AB Other Revenue | (1,275,273) | (7,293,962) | (2,481,106) | (3,161,957) | (680,851) | 27.4% | - | (3,161,957) | (680,851) | 27.4% |
| A_75000AC Transfers From Funds | (3,863,227) | (9,658,836) | - | (500,000) | (500,000) | - | - | (500,000) | (500,000) | - |
| Gross Revenue Subtotal | (118,412,163) | (134,757,387) | (120,757,964) | (124,229,297) | (3,471,333) | 2.9% | (3,795,589) | (128,024,886) | (7,266,922) | 6.0% |
| Net Expenditure (revenue) before indirect allocations | (15,094,821) | (14,480,522) | (15,322,053) | (15,637,017) | (314,964) | 2.1% | (112,651) | (15,749,669) | (427,616) | 2.8% |
| A_70000AC Indirect Allocation | 3,602,252 | 4,254,855 | 4,366,304 | 4,709,867 | 343,564 | 7.9% | 112,651 | 4,822,519 | 456,215 | 10.5% |
| A_70200AC Capital Financing Allocation | 9,413,115 | 10,963,017 | 10,955,749 | 10,927,150 | (28,600) | (0.3%) | - | 10,927,150 | (28,600) | (0.3%) |
| Allocation Subtotal | 13,015,368 | 15,217,872 | 15,322,053 | 15,637,017 | 314,964 | 2.1% | 112,651 | 15,749,669 | 427,616 | 2.8% |
| Net Expenditure (revenue) after indirect allocations | (2,079,454) | 737,350 | 0 | - | 0 | - | - | - | 0 | - |
| FTE - Reg | | | 261.6 | 262.6 | 1.0 | | - | 262.6 | 1.0 | |
| FTE - Temp | | | 4.5 | 7.0 | 2.5 | | - | 7.0 | 2.5 | |

D_67000C

| | 2018 Actual | 2019 | | 2020 | | | | | | |
|--|---------------------|----------------------|---------------------|---------------------|------------------|-----------------|------------------------------------|---------------------|--------------------|------------------|
| | Total | Q2 Forecast Total | Budget Total | Base Services | Base Variance | Base Variance % | Budget Total Program Changes | Total | Total Variance | Total Variance % |
| A_40000AB Compensation | 7,120,433 | 7,570,603 | 7,810,164 | 7,954,489 | 144,325 | 1.8% | - | 7,954,489 | 144,325 | 1.9% |
| A_41000AB Administrative | 690,749 | 862,265 | 770,733 | 594,726 | (176,007) | (22.8%) | - | 594,726 | (176,007) | (22.8%) |
| A_44000AB Operational & Supply | 1,887,750 | 1,931,846 | 1,719,988 | 1,759,425 | 39,437 | 2.3% | - | 1,759,425 | 39,437 | 2.3% |
| A_50000AB Occupancy & Infrastructure | 5,064,546 | 5,283,782 | 6,125,436 | 5,639,309 | (486,127) | (7.9%) | - | 5,639,309 | (486,127) | (7.9%) |
| A_52000AB Equipment, Vehicles, Technology | 933,836 | 1,059,384 | 1,014,655 | 1,175,515 | 160,860 | 15.9% | - | 1,175,515 | 160,860 | 15.9% |
| A_56000AB Partnership, Rebate, Exemption | 10,000 | (13,750) | 15,000 | 10,000 | (5,000) | (33.3%) | - | 10,000 | (5,000) | (33.3%) |
| A_58000AB Financial Expenditures | 168 | 326 | - | - | - | - | - | - | - | - |
| A_75100AC Transfers To Funds | 18,414,458 | 18,425,078 | 18,425,078 | 18,435,757 | 10,679 | 0.1% | 1,350,459 | 19,786,216 | 1,361,138 | 7.4% |
| A_60000AC Allocation Between Departments | 594,720 | 595,713 | 605,396 | 629,912 | 24,516 | 4.0% | - | 629,912 | 24,516 | 4.1% |
| A_60260AC Allocation Within Departments | 3,986,249 | 3,836,537 | 3,842,500 | 4,164,914 | 322,414 | 8.4% | - | 4,164,914 | 322,414 | 8.4% |
| Gross Expenditure Subtotal | 38,702,909 | 39,551,784 | 40,328,950 | 40,364,047 | 35,097 | 0.1% | 1,350,459 | 41,714,506 | 1,385,556 | 3.4% |
| A_30000AB Taxation | (43,867,547) | (43,635,898) | (44,238,899) | (44,518,840) | (279,940) | 0.6% | (1,402,117) | (45,920,957) | (1,682,057) | 3.8% |
| A_32400AB By-Law Charges & Sales | (11,943) | (10,649) | (5,000) | (12,000) | (7,000) | 140.0% | - | (12,000) | (7,000) | 140.0% |
| A_34950AB Other Revenue | (512,580) | (513,441) | (408,615) | (367,663) | 40,952 | (10.0%) | - | (367,663) | 40,952 | (10.0%) |
| A_75000AC Transfers From Funds | (29,108) | - | - | - | - | - | - | - | - | - |
| Gross Revenue Subtotal | (44,421,178) | (44,159,988) | (44,652,514) | (44,898,503) | (245,988) | 0.6% | (1,402,117) | (46,300,620) | (1,648,105) | 3.7% |
| Net Expenditure (revenue) before indirect allocations | (5,718,269) | (4,608,204) | (4,323,564) | (4,534,456) | (210,891) | 4.9% | (51,658) | (4,586,114) | (262,550) | 6.1% |
| A_70000AC Indirect Allocation | 1,220,919 | 1,523,527 | 1,674,950 | 1,890,908 | 215,957 | 12.9% | 51,658 | 1,942,566 | 267,616 | 16.0% |
| A_70200AC Capital Financing Allocation | 2,047,974 | 2,637,521 | 2,648,614 | 2,643,548 | (5,066) | (0.2%) | - | 2,643,548 | (5,066) | (0.2%) |
| Allocation Subtotal | 3,268,893 | 4,161,048 | 4,323,564 | 4,534,456 | 210,892 | 4.9% | 51,658 | 4,586,114 | 262,550 | 6.1% |
| Net Expenditure (revenue) after indirect allocations | (2,449,376) | (447,156) | 0 | - | 0 | - | - | - | 0 | - |

| | | | | | | |
|------------|------|------|-------|---|------|-------|
| FTE - Reg | 82.0 | 81.0 | (1.0) | - | 81.0 | (1.0) |
| FTE - Temp | 2.0 | 2.0 | - | - | 2.0 | - |

D_68000C

| | 2018 Actual | 2019 | | 2020 | | | | | | |
|--|---------------------|----------------------|---------------------|---------------------|--------------------|-----------------|------------------------------------|---------------------|--------------------|------------------|
| | Total | Q2 Forecast Total | Budget Total | Base Services | Base Variance | Base Variance % | Budget Total Program Changes | Total | Total Variance | Total Variance % |
| A_40000AB Compensation | 9,637,596 | 10,112,827 | 10,324,944 | 10,773,458 | 448,514 | 4.3% | - | 10,773,458 | 448,514 | 4.3% |
| A_41000AB Administrative | 824,074 | 936,355 | 934,994 | 742,955 | (192,039) | (20.5%) | - | 742,955 | (192,039) | (20.5%) |
| A_44000AB Operational & Supply | 10,512,270 | 10,617,090 | 10,386,744 | 10,854,079 | 467,335 | 4.5% | - | 10,854,079 | 467,335 | 4.5% |
| A_50000AB Occupancy & Infrastructure | 10,307,189 | 12,201,423 | 11,470,028 | 11,340,226 | (129,802) | (1.1%) | - | 11,340,226 | (129,802) | (1.1%) |
| A_52000AB Equipment, Vehicles,Technology | 3,019,774 | 3,569,019 | 3,088,313 | 3,301,033 | 212,720 | 6.9% | - | 3,301,033 | 212,720 | 6.9% |
| A_54000AB Community Assistance | 153 | 965 | - | - | - | - | - | - | - | - |
| A_56000AB Partnership, Rebate, Exemption | 2,440,015 | 18,211,781 | 4,000,000 | 4,000,000 | - | - | - | 4,000,000 | - | - |
| A_58000AB Financial Expenditures | 827 | 331 | - | - | - | - | - | - | - | - |
| A_75100AC Transfers To Funds | 21,604,334 | 18,612,478 | 18,612,478 | 18,630,023 | 17,545 | 0.1% | 2,332,479 | 20,962,502 | 2,350,024 | 12.6% |
| A_60000AC Allocation Between Departments | 854,035 | 865,676 | 893,415 | 862,801 | (30,613) | (3.4%) | - | 862,801 | (30,613) | (3.4%) |
| A_60260AC Allocation Within Departments | 5,864,550 | 5,608,971 | 5,396,046 | 6,503,657 | 1,107,611 | 20.5% | - | 6,503,657 | 1,107,611 | 20.5% |
| Gross Expenditure Subtotal | 65,064,815 | 80,736,917 | 65,106,961 | 67,008,233 | 1,901,272 | 2.9% | 2,332,479 | 69,340,712 | 4,233,751 | 6.5% |
| A_30000AB Taxation | (68,145,671) | (72,679,758) | (72,679,759) | (74,627,222) | (1,947,463) | 2.7% | (2,393,472) | (77,020,694) | (4,340,936) | 6.0% |
| A_32400AB By-Law Charges & Sales | (1,244,048) | (1,475,126) | (1,353,200) | (1,409,278) | (56,078) | 4.1% | - | (1,409,278) | (56,078) | 4.1% |
| A_34950AB Other Revenue | (761,455) | (6,780,521) | (2,072,491) | (2,074,294) | (1,803) | 0.1% | - | (2,074,294) | (1,803) | 0.1% |
| A_75000AC Transfers From Funds | (3,834,119) | (9,658,836) | - | - | - | - | - | - | - | - |
| Gross Revenue Subtotal | (73,985,294) | (90,594,241) | (76,105,450) | (78,110,794) | (2,005,344) | 2.6% | (2,393,472) | (80,504,266) | (4,398,817) | 5.8% |
| Net Expenditure (revenue) before indirect allocations | (8,920,478) | (9,857,325) | (10,998,489) | (11,102,561) | (104,073) | 0.9% | (60,993) | (11,163,555) | (165,066) | 1.5% |
| A_70000AC Indirect Allocation | 1,971,987 | 2,301,818 | 2,691,354 | 2,818,960 | 127,606 | 4.7% | 60,993 | 2,879,953 | 188,599 | 7.0% |
| A_70200AC Capital Financing Allocation | 7,318,414 | 8,288,210 | 8,307,135 | 8,283,602 | (23,534) | (0.3%) | - | 8,283,602 | (23,534) | (0.3%) |
| Allocation Subtotal | 9,290,401 | 10,590,029 | 10,998,489 | 11,102,561 | 104,073 | 0.9% | 60,993 | 11,163,555 | 165,066 | 1.5% |
| Net Expenditure (revenue) after indirect allocations | 369,923 | 732,704 | - | - | - | - | - | - | - | - |
| FTE - Reg | | | 115.6 | 116.6 | 1.0 | | - | 116.6 | 1.0 | |
| FTE - Temp | | | 0.5 | - | (0.5) | | - | - | (0.5) | |