



# City of Moose Jaw

**COMMUNICATION # CC-2020-0300**

**TITLE:** Smart Water Meter Financing

**TO:** City Council

**FROM:** Department of Financial Services

**DATE:** November 18, 2020

**PUBLIC:** PUBLIC DOCUMENT

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## **RECOMMENDATION**

1. THAT Communication # EC-2019-0249 be lifted from the table and considered in conjunction with this report.
2. THAT approval be granted to issue and award a request for proposals (RFP) for a phased Smart Water Metering project with a total budget of \$6,571,000 with each phase being budgeted at \$1,642,750 in 2021, 2022, 2023 and 2024; and

THAT financing for the first phase of the Smart Water Meter project come from a self-funded loan from the City's Operating Accounts; and

THAT the loan be established with a term of 10 years at an annual interest rate of 2.50% compounded semi-annually with repayment to come from savings generated by the smart water metering project; and further

THAT funding of other phases of the project (2, 3 & 4) be either through additional self-funding or directly from water and wastewater reserves if they are sufficient to finance.

## **EXECUTIVE SUMMARY**

The City of Moose Jaw's water meters are in need of replacement; with a life expectancy of 20 years, many have exceeded their useful life. Smart Water Meter technology will save the City operational costs and increase revenues while also enhancing functionality.

The City does not, at this point in time, have sufficient funding in the Water and Wastewater Utility to fund this project. Therefore, it is proposed that Phase I of the project be self-funded from the City's funds held in its bank accounts.

This will allow the project to move forward in a phased approach and for the City to start to realize the savings and increased revenues while providing a more productive return on some of the funds held in the City's bank accounts.

## **BACKGROUND**

The former Engineering Department had done extensive review and research on a smart water meter replacement project for the City of Moose Jaw. Attachment #1 to this report contains an overview of that work.

The need for water meter replacement is necessary due to the age of the existing metering system and a new smart metering system will provide significant savings and additional functionality. The cost to replace the City's aging metering system with a smart metering system is estimated to be \$6,570,965.

The savings were estimated to range from 4% to 6% of the volume portion of water and wastewater rates (\$500,000 to \$750,000 annually) as well as operational savings of approximately \$250,000 annually. The simple payback for this project is less than 10 years.

City Council approved the project in principle in 2019 but held off final approval pending a source of funding being identified. Due to the pandemic in 2020, this item was not brought forward to City Council as implementation during a pandemic is not feasible.

The motion approved by Council in November of 2019 was:

"THAT the matter be tabled pending the financial component of the costing to be included in the next report."

The report that follows discusses the proposed financing option.

## **DISCUSSION**

The tabled report entitled Smart Water Metering provides a thorough analysis of the rationale and estimated cost and benefits of a smart water metering project. Therefore, this discussion will focus on the financing of that project.

It is proposed that the project be broken into four phases and executed over a four-year period for several reasons:

- The pandemic will not allow for full implementation in 2021 making a phased approach more realistic.
- The logistics of managing and implementing the project will be simpler if done in a phased approach.
- The City is not in a position to finance the whole project in one or two years.
- The amount of additional construction work due to the need to service non-functioning curb water turnoffs will be more manageable.

The proposed means of financing Phase I of the project, that will occur in 2021, is for the City to self-fund the phase from Operating cash flows currently held in the City's bank accounts. The interest rate paid on these monies has decreased significantly with the onset of the pandemic dropping from 2.35% to 0.85%. The use of some of these monies can occur without any impact to the City's ability to have sufficient funds to cover its day-to-day cashflow requirements.

Specifics of the borrowing are contained in the table below:

### Smart Water Meter Financing

		Principal =		\$ 1,642,750			
		Interest Rate =		2.50			
		Term =		10 yrs			
		Semi-Annual Payment =		\$ 93,340			
		Semi-Annual Interest					
Year	Opening Balance	Semi Interest	Semi Payment	Mid Balance	Semi Interest	Semi Payment	Closing Balance
1	1,642,750	20,534	93,340	1,569,944	19,624	93,340	1,496,229
2	1,496,229	18,703	93,340	1,421,592	17,770	93,340	1,346,021
3	1,346,021	16,825	93,340	1,269,507	15,869	93,340	1,192,036
4	1,192,036	14,900	93,340	1,113,596	13,920	93,340	1,034,176
5	1,034,176	12,927	93,340	953,763	11,922	93,340	872,345
6	872,345	10,904	93,340	789,909	9,874	93,340	706,443
7	706,443	8,831	93,340	621,934	7,774	93,340	536,368
8	536,368	6,705	93,340	449,733	5,622	93,340	362,014
9	362,014	4,525	93,340	273,200	3,415	93,340	183,274
10	183,274	2,291	93,340	92,225	1,153	93,340	38
		117,146			106,943		
Annual Payment =			186,680				
Principal Payments =			1,642,750				
Interest Payments =			224,088				
Total Payments =			1,866,838				

The financing will have a term of 10 years at an interest rate of 2.50% compounded semi-annually. The payments will be made from the projected savings that will result in the Water and Wastewater Utility. Annual payments will be \$186,680.

The RFP will be issued for the full four phases of the project and future financing of Phases 2, 3 and 4 will either be from additional self-funding or from the Water and Wastewater Reserves if sufficient funding exists to fund further phases of the project.

## **FINANCIAL IMPLICATIONS**

- This project will see significant savings and additional revenues of between \$500,000 and \$750,000 annually once fully implemented.
- In addition, operational savings of approximately \$250,000 are expected once fully implemented.
- The payback for the project will be less than 10 years.
- The self-funding will provide some additional interest earnings to the operating budget as compared to the interest earnings received in the City's bank accounts.
- The net benefit to the City is estimated at just over \$10,000,000.

### **Full Project Costing & Benefit Analysis:**

	<b>Principal and Interest*</b>	<b>Cost Savings/ Revenue Generation</b>	<b>Net Impact</b>
2021	-	-	-
2022	186,680	218,750	32,070
2023	373,360	437,500	64,140
2024	560,040	656,250	96,210
2025	746,720	875,000	128,280
2026	746,720	875,000	128,280
2027	746,720	875,000	128,280
2028	746,720	875,000	128,280
2029	746,720	875,000	128,280
2030	746,720	875,000	128,280
2031	746,720	875,000	128,280
2032	560,040	875,000	314,960
2033	373,360	875,000	501,640
2034	186,680	875,000	688,320
2035	-	875,000	875,000
2036	-	875,000	875,000
2037	-	875,000	875,000
2038	-	875,000	875,000
2039	-	875,000	875,000
2040	-	875,000	875,000
2041	-	875,000	875,000
2042		656,250	656,250
2043		437,500	437,500
2044		218,750	218,750
	<b>\$ 7,467,200</b>	<b>\$ 17,500,000</b>	<b>\$ 10,032,800</b>

#### **Assumptions:**

- ==> One phase implemented each of 2021, 2022, 2023 & 2024
- ==> All 4 phases are financed
- ==> 20 year life expectancy
- ==> Loan repayments start in 2022 for 10 yr terms at 2.50%
- ==> Assumes staff savings \$250,000 and \$625,000 additional revenue

## **OPTIONS TO RECOMMENDATION**

- That the project does not proceed at this point in time and be reconsidered at a future date.
- THAT the City externally borrow the full \$6,571,000 and proceed to RFP and award with full implementation of the project in 2021/2022.

## **PRESENTATION**

The Director of Financial Services will be in attendance at the meeting to provide a verbal overview of the report and the Director of Public Works and Utilities will be in attendance to answer any project related questions.

## **ATTACHMENTS**

1. Communication #EC-2019-0249.

## **REPORT APPROVAL**

Written by: Brian Acker, B.Comm, CPA, CMA; Director of Financial Services  
Reviewed by: Tracy Wittke, Assistant City Clerk  
Approved by: Jim Puffalt, City Manager  
Approved by: Fraser Tolmie, Mayor

*To be completed by the Clerk's Department only.*

Presented to Regular Council or Executive Committee on \_\_\_\_\_.

Resolution No. \_\_\_\_\_

## Report Approval Details

Document Title:	Smart Meter Project Financing - CC-2020-0300.docx
Attachments:	- Attach 1 Communication EC-2019-0249.pdf
Final Approval Date:	Nov 23, 2020

This report and all of its attachments were approved and signed as outlined below:



Tracy Wittke



Jim Puffalt



Fraser Tolmie