

**2015 to 2019 Utility Capital Budget Plan**

Program/Proj	Reporting Program	Reporting Group	2015	2016	2017	2018	2019
Program	Drainage	Drainage System Upgrading	455.0	455.0	280.0	280.0	280.0
		Drainage Infrastructure & New Development	2,400.0	2,400.0	2,400.0	2,300.0	3,300.0
	<b>Drainage Total</b>		<b>2,855.0</b>	<b>2,855.0</b>	<b>2,680.0</b>	<b>2,580.0</b>	<b>3,580.0</b>
	Wastewater	Wastewater Collection	10,055.0	25,055.0	19,880.0	18,880.0	11,880.0
	<b>Wastewater Total</b>		<b>10,055.0</b>	<b>25,055.0</b>	<b>19,880.0</b>	<b>18,880.0</b>	<b>11,880.0</b>
	Water Distribution/Pumping/Supply	Water Distribution	5,785.0	7,535.0	7,535.0	7,535.0	7,535.0
		Water Pumping	-	750.0	1,000.0	2,000.0	3,000.0
		Water Supply	-	1,000.0	1,000.0	1,000.0	1,000.0
		Other Capital Initiatives	320.0	840.0	820.0	820.0	840.0
	<b>Water Distribution/Pumping/Supply and Other Total</b>		<b>6,105.0</b>	<b>10,125.0</b>	<b>10,355.0</b>	<b>11,355.0</b>	<b>12,375.0</b>
<b>Program Total</b>			<b>19,015.0</b>	<b>38,035.0</b>	<b>32,915.0</b>	<b>32,815.0</b>	<b>27,835.0</b>
Project	Drainage	Drainage System Upgrading	3,200.0	4,150.0	6,500.0	8,450.0	10,200.0
		Drainage Infrastructure & New Development	4,630.0	-	-	1,750.0	-
	<b>Drainage Total</b>		<b>7,830.0</b>	<b>4,150.0</b>	<b>6,500.0</b>	<b>10,200.0</b>	<b>10,200.0</b>
	Wastewater	Wastewater Collection	3,360.0	300.0	600.0	100.0	4,600.0
		Wastewater Treatment	15,000.0	-	200.0	-	-
	<b>Wastewater Total</b>		<b>18,360.0</b>	<b>300.0</b>	<b>800.0</b>	<b>100.0</b>	<b>4,600.0</b>
	Water Distribution/Pumping/Supply	Water Distribution	3,185.0	9,000.0	13,250.0	14,600.0	21,600.0
		Water Pumping	-	-	-	800.0	800.0
		Water Supply	7,000.0	12,000.0	8,500.0	12,500.0	16,000.0
		Other Capital Initiatives	2,158.0	1,325.0	1,625.0	6,325.0	11,325.0
<b>Water Distribution/Pumping/Supply and Other Total</b>		<b>12,343.0</b>	<b>22,325.0</b>	<b>23,375.0</b>	<b>34,225.0</b>	<b>49,725.0</b>	
<b>Project Total</b>			<b>38,533.0</b>	<b>26,775.0</b>	<b>30,675.0</b>	<b>44,525.0</b>	<b>64,525.0</b>
<b>Grand Total</b>			<b>57,548.0</b>	<b>64,810.0</b>	<b>63,590.0</b>	<b>77,340.0</b>	<b>92,360.0</b>

**Funding Breakdown**

Project/Program	Funding Source	2015	2016	2017	2018	2019
Program	Utility Reserve	19,015.0	34,975.0	30,755.0	6,280.0	4,475.0
	Service Agreement Fees (Utility)	-	3,060.0	2,160.0	1,800.0	360.0
	Debentures	-	-	-	24,735.0	23,000.0
<b>Program Total</b>		<b>19,015.0</b>	<b>38,035.0</b>	<b>32,915.0</b>	<b>32,815.0</b>	<b>27,835.0</b>
Project	Utility Reserve	26,669.0	15,019.0	15,721.0	26,195.0	19,060.0
	Service Agreement Fees (Utility)	9,946.0	8,468.0	12,762.0	15,590.0	23,355.0
	Debentures	-	-	-	-	18,000.0
	Moose Jaw	1,918.0	3,288.0	2,192.0	2,740.0	4,110.0
<b>Project Total</b>		<b>38,533.0</b>	<b>26,775.0</b>	<b>30,675.0</b>	<b>44,525.0</b>	<b>64,525.0</b>
<b>Grand Total</b>		<b>57,548.0</b>	<b>64,810.0</b>	<b>63,590.0</b>	<b>77,340.0</b>	<b>92,360.0</b>

## Drainage

Program/Proj	Reporting Group	Project Name	2015	2016	2017	2018	2019
Program	Drainage System Upgrading	Catch Basin Replacement	80.0	80.0	80.0	80.0	80.0
		Drainage Pumping Station Upgrading	375.0	375.0	200.0	200.0	200.0
	<b>Drainage System Upgrading Total</b>		<b>455.0</b>	<b>455.0</b>	<b>280.0</b>	<b>280.0</b>	<b>280.0</b>
	Drainage Infrastructure & New Development	Dykes, Drainage Channels and Lake Improvements	Drainage Infrastructure Renewal	400.0	400.0	400.0	300.0
			2,000.0	2,000.0	2,000.0	2,000.0	3,000.0
<b>Drainage Infrastructure &amp; New Development Total</b>		<b>2,400.0</b>	<b>2,400.0</b>	<b>2,400.0</b>	<b>2,300.0</b>	<b>3,300.0</b>	
<b>Program Total</b>			<b>2,855.0</b>	<b>2,855.0</b>	<b>2,680.0</b>	<b>2,580.0</b>	<b>3,580.0</b>
Project	Drainage System Upgrading	Area #1 & 17 Upgrades(North Central & Rosemont)	-	400.0	4,000.0	-	2,200.0
		Area #10 Upgrades (Core Park)	500.0	-	-	450.0	3,000.0
		Area #5 Upgrades (Glencairn)	-	-	-	-	500.0
		Area #6 Upgrades (Argyle Park)	-	750.0	2,000.0	-	-
		Tigar Boom Mower	200.0	-	-	-	-
		Area #2B Upgrade (Albert Park)	-	-	500.0	3,500.0	-
		Area #13A Upgrades (Highland Park/Cityview)	-	-	-	4,500.0	4,500.0
		Area #8 Upgrades (Douglas Place)	500.0	3,000.0	-	-	-
	Area #11 & 14B Upgrades	2,000.0	-	-	-	-	
	<b>Drainage System Upgrading Total</b>		<b>3,200.0</b>	<b>4,150.0</b>	<b>6,500.0</b>	<b>8,450.0</b>	<b>10,200.0</b>
	Drainage Infrastructure & New Development	Armour Road Detention Pond and Drainage Route	550.0	-	-	-	-
		Detention Pond and Drainage Route – The Towns	-	-	-	1,750.0	-
		Fleet Street Business Park Agricultural Bypass Ditch	330.0	-	-	-	-
		Greens on Gardiner Detention Pond - MR5	1,430.0	-	-	-	-
Harbour Landing Detention Pond - MR8 & MR10		110.0	-	-	-	-	
Hawkstone Detention Pond (E) - (MR2)		800.0	-	-	-	-	
Hawkstone Detention Pond (F) - West of Argyle Street and South of Rochdale Boulevard		1,200.0	-	-	-	-	
Kensington Greens Detention Ponds - MR1 & MR3	210.0	-	-	-	-		
<b>Drainage Infrastructure &amp; New Development Total</b>		<b>4,630.0</b>	<b>-</b>	<b>-</b>	<b>1,750.0</b>	<b>-</b>	
<b>Project Total</b>			<b>7,830.0</b>	<b>4,150.0</b>	<b>6,500.0</b>	<b>10,200.0</b>	<b>10,200.0</b>
<b>Grand Total</b>			<b>10,685.0</b>	<b>7,005.0</b>	<b>9,180.0</b>	<b>12,780.0</b>	<b>13,780.0</b>

## Funding Breakdown

Project/Program	Funding Source	2015	2016	2017	2018	2019
Program	Utility Reserve	2,855.0	2,855.0	2,680.0	2,580.0	580.0
	Debentures	-	-	-	-	3,000.0
<b>Program Total</b>		<b>2,855.0</b>	<b>2,855.0</b>	<b>2,680.0</b>	<b>2,580.0</b>	<b>3,580.0</b>
Project	Utility Reserve	3,200.0	4,150.0	6,500.0	8,450.0	2,200.0
	Service Agreement Fees (Utility)	4,630.0	-	-	1,750.0	-
	Debentures	-	-	-	-	8,000.0
<b>Project Total</b>		<b>7,830.0</b>	<b>4,150.0</b>	<b>6,500.0</b>	<b>10,200.0</b>	<b>10,200.0</b>
<b>Grand Total</b>		<b>10,685.0</b>	<b>7,005.0</b>	<b>9,180.0</b>	<b>12,780.0</b>	<b>13,780.0</b>

## Catch Basin Replacement

There are over 25,000 Drainage Catch Basins across the City. Reactive maintenance of catch basins is required to ensure public safety and prevent property damage. Funding for this program is provided from the Utility Reserve.

## Drainage Pumping Station Upgrading

The City's drainage pumping stations are aging and require upgrading to restore or improve the level of service and to reduce emergency repair costs. This program will include assessment, documentation, prioritization, pre-design, rehabilitation, upgrades and/or replacement of existing pumping stations. The Utility Reserve funds this program.

## **Dykes, Drainage Channels and Lake Improvements**

This program rehabilitates and improves the level of service of facilities such as dykes, channels, streams, lakes and ponds. Periodic assessments, repairs, modifications and improvements are required to ensure the integrity and capacity of these systems. The Utility Reserve funds this program.

### **Drainage Infrastructure Renewal**

The drainage system requires ongoing rehabilitation and upgrading to maintain and improve the level of service and to ensure the system's reliability. This program includes inspections, assessments, relining, replacement, and rehabilitation. The condition assessments may be done in conjunction with scheduled roadway renewal projects or proactively at locations as warranted. The Utility Reserve funds this program.

### **Area #1 & 17 Upgrades(North Central & Rosemont)**

This project will upgrade the drainage system in Area 1 & 17 to improve the desired drainage level of service in the areas. The Utility Reserve funds this program.

### **Area #10 Upgrades (Core Park)**

This project will upgrade the drainage system in Area 10 to improve the desired drainage level of service in the area. Funding for this program is provided from the Utility Reserve.

### **Area #5 Upgrades (Glencairn)**

This project will upgrade the drainage system in Area 5 to improve the desired drainage level of service in the area. Funding for this program is provided from the Utility Reserve.

### **Area #6 Upgrades (Argyle Park)**

This project will upgrade the drainage system in Area 6 to improve the desired drainage level of service in the area. Funding for this program is provided from the Utility Reserve.

### **Tigar Boom Mower**

This funding will be utilized to purchase a Tiger 30' Saber Boom Mower and a John Deer 7130 Tractor. This unit will be able to mow the storm channels and drainage ditches with ease and reduce the manpower and amount of time allocated to undertaking this work. Because this unit is designed to work on steep slopes, it will also improve staff safety. Funding is provided from the General Utility Reserve.

### **Area #2B Upgrade (Albert Park)**

This project will provide improvement for the drainage level of service in the Albert Park area. Funding will be used to construct drainage improvement systems. The Utility Reserve funds this program.

### **Area #13A Upgrades (Highland Park/Cityview)**

This program will upgrade the drainage system in Highland Park to improve the desired drainage level of service in the area. The Utility Reserve funds this program.

### **Area #8 Upgrades (Douglas Place)**

This project will upgrade the drainage system in Area 8 (Assiniboia East) to improve the desired drainage level of service in the area. Funding for this program is provided from the Utility Reserve.

### **Area #11 & 14B Upgrades**

This project will upgrade the drainage system in Areas 11 and 14B to improve the desired drainage level of service in the area. The Utility Reserve funds this program.

### **Armour Road Detention Pond and Drainage Route**

This project involves the design and construction of a detention pond and drainage route to manage pre-existing flows for the lands north of Diefenbaker Drive and between the N-S portion of Armour Road and Pasqua Street / Highway #11. The project is 100% through Utility Servicing Agreement Fees.

### **Detention Pond and Drainage Route – The Towns**

This project provides for the design and construction of a detention pond and drainage channel or storm trunk main to Chuka Creek in the Towns subdivision. The project includes design and construction for the excavation, outlet and landscaping. This project is 100% funded from Utility Servicing Agreement Fees.

### **Fleet Street Business Park Agricultural Bypass Ditch**

This project involves the design and construction of an agricultural bypass ditch to manage pre-existing flows for the lands within the Fleet Street Business Park, otherwise referred to as the East Regina Industrial Lands located between Fleet Street and Prince of Wales Drive north of the Canadian Pacific Railway tracks. The project is 100% through Utility Servicing Agreement Fees.

### **Greens on Gardiner Detention Pond – MR5**

This project involves the design and construction of a detention pond within MR5 of Greens on Gardiner to the 1:100 year storm water management level of service for the lands developed within the pond catchment area. The project is 100% through Utility Servicing Agreement Fees.

### **Harbour Landing Detention Pond - MR8 & MR9**

This project involves the construction of detention ponds within MR8 and MR9 in Harbour Landing. The funding is a continuation of the project originally approved within the 2013 Utility Budget. The project is 100% funded through Utility Servicing Agreement Fees.

### **Hawkstone Detention Pond (E) - (MR2)**

This project involves the continuation of the construction of a Detention Pond E within MR2 for a portion of Hawkstone development area located north of Rochdale Boulevard and East of Argyle Street. The project is 100% through Utility Servicing Agreement Fees.

### **Hawkstone Detention Pond (F) - West of Argyle Street and South of Rochdale Boulevard**

This project involves the design and construction of a Detention Pond F within the Hawkstone development area located west of Argyle Street and south of Rochdale Boulevard. The project is 100% through Utility Servicing Agreement Fees.

### **Kensington Greens Detention Ponds - MR1 & MR3**

This project involves the remaining construction of two detention ponds within MR1 and MR3 of Kensington Greens development area. Construction to date was fully funded by the developer, but remaining construction for this project is 100% through Utility Servicing Agreement Fees.

**Wastewater**

Program/Proj	Reporting Group	Project Name	2015	2016	2017	2018	2019
Program	Wastewater Collection	Trunk Relief Initiative	1,500.0	17,000.0	12,000.0	10,000.0	2,000.0
		Wastewater Infrastructure Renewal - Sewer Connection Replacement	680.0	680.0	680.0	680.0	680.0
		Wastewater Infrastructure Renewal - Integrated & Proactive	7,500.0	7,000.0	7,000.0	8,000.0	9,000.0
		Lift Station Upgrade	375.0	375.0	200.0	200.0	200.0
		<b>Wastewater Collection Total</b>	<b>10,055.0</b>	<b>25,055.0</b>	<b>19,880.0</b>	<b>18,880.0</b>	<b>11,880.0</b>
<b>Program Total</b>			<b>10,055.0</b>	<b>25,055.0</b>	<b>19,880.0</b>	<b>18,880.0</b>	<b>11,880.0</b>
Project	Wastewater Collection	CCTV Camera Truck Upgrades	-	200.0	-	-	-
		Fleet Street Sewage Pumping Station	1,000.0	-	-	-	4,500.0
		Rochdale Sanitary Trunk Main	1,600.0	-	-	-	-
		Sanitary Mains Oversizing	-	100.0	100.0	100.0	100.0
		Sanitary Trunk Main - Kensington - Kingbird Rd to CPR Lanigan Line	550.0	-	-	-	-
		Sanitary Trunk Main Oversizing - Greens on Gardiner	150.0	-	-	-	-
		Sanitary Trunk Main Oversizing - Westerra - Pump Station to Dewdney Avenue	-	-	500.0	-	-
		Trailer Mounted Mobile Cleaning & Thawing System (Steamer)	60.0	-	-	-	-
		<b>Wastewater Collection Total</b>	<b>3,360.0</b>	<b>300.0</b>	<b>600.0</b>	<b>100.0</b>	<b>4,600.0</b>
		Wastewater Treatment	Utility Greenhouse Gas Reduction Program To Achieve Council Goals	-	-	200.0	-
Septage Hauling Station	15,000.0		-	-	-	-	
<b>Wastewater Treatment Total</b>		<b>15,000.0</b>	<b>-</b>	<b>200.0</b>	<b>-</b>	<b>-</b>	
<b>Project Total</b>			<b>18,360.0</b>	<b>300.0</b>	<b>800.0</b>	<b>100.0</b>	<b>4,600.0</b>
<b>Grand Total</b>			<b>28,415.0</b>	<b>25,355.0</b>	<b>20,680.0</b>	<b>18,980.0</b>	<b>16,480.0</b>

**Funding Breakdown**

Project/Program	Funding Source	2015	2016	2017	2018	2019
Program	Utility Reserve	10,055.0	21,995.0	17,720.0	880.0	2,520.0
	Service Agreement Fees (Utility)	-	3,060.0	2,160.0	1,800.0	360.0
	Debentures	-	-	-	16,200.0	9,000.0
<b>Program Total</b>		<b>10,055.0</b>	<b>25,055.0</b>	<b>19,880.0</b>	<b>18,880.0</b>	<b>11,880.0</b>
Project	Utility Reserve	15,060.0	200.0	200.0	-	-
	Service Agreement Fees (Utility)	3,300.0	100.0	600.0	100.0	4,600.0
<b>Project Total</b>		<b>18,360.0</b>	<b>300.0</b>	<b>800.0</b>	<b>100.0</b>	<b>4,600.0</b>
<b>Grand Total</b>		<b>28,415.0</b>	<b>25,355.0</b>	<b>20,680.0</b>	<b>18,980.0</b>	<b>16,480.0</b>

**Trunk Relief Initiative**

This project is intended to identify and implement solutions to alleviate sewer overflow, focusing around preservation, capacity and operation of the wastewater collection system. Immediate Solution – Review the process relating to sanitary bypass operations during wet weather events in order to optimize the response time to relieve the vulnerable areas of the wastewater collection system during the anticipated surcharging event. Mid term solution: Finding the optimal combination of solutions to improve the current capacity restriction. (i.e. McCarthy Pump Station upgrade to increase capacity downstream of collection system with a combination of trunk twinning upstream). Long term solution: Elimination of Inflow & infiltration (I/I) sources (i.e. Cross connection, weeping tile discharge to domestic, defective sewers & connections and reduction of base flows). Funding for this initiative is provided by the General Utility Reserve. Individual projects within this initiative may be eligible for funding from the Utility Service Agreement Fee Reserve.

**Wastewater Infrastructure Renewal - Sewer Connection Replacement**

This project involves the design and construction of a Detention Pond F within the Hawkstone development area located west of Argyle Street and south of Rochdale Boulevard. The project is 100% through Utility Servicing Agreement Fees.

## **Wastewater Infrastructure Renewal - Integrated & Proactive**

The wastewater collection system requires ongoing rehabilitation and upgrading to maintain and improve the level of service and to ensure the system's reliability. This program includes inspections, assessments, relining, replacement, and rehabilitation. The condition assessment and rehabilitation is done both in conjunction with scheduled roadway renewal projects and proactive locations identified in the system. The Utility Reserve funds this program.

### **Lift Station Upgrade**

The City's wastewater pumping stations are aging and require upgrading to restore or improve the level of service and to reduce emergency repair costs. This program will include assessment, pre-design, rehabilitation, upgrades and/or replacement of existing pumping stations. The Utility Reserve funds this program.

### **CCTV Camera Truck Upgrades**

Currently Sewer and Drainage Operations (SDO) focuses CCTV camera work on branch operations and maintenance work only. As domestic and storm jetting programs are cleaning these lines, the CCTV camera truck will inspect these areas after the jetting is done. The CCTV camera truck also investigates service requests of problematic areas. Funding is provided by the General Utility Reserve.

### **Fleet Street Sewage Pumping Station**

This project involves the construction of a sewage pumping station, force main, and in-line storage to serve the Fleet Street Business Park. The project is 100% funded through Utility Servicing Agreement Fees.

### **Rochdale Sanitary Trunk Main**

This project is additional funding required due to a significant change in the scope of work by a third party regulatory body (Ministry of Highways and Infrastructure) for the trenchless crossing of Highway #11 and Highway #6. The infrastructure is required in order to service the Kensington Greens and Somerset Developments. The project is 100% funded through Utility Servicing Agreement Fees.

### **Sanitary Mains Oversizing**

This program provides for the oversizing of new sanitary mains to be constructed within new development areas to provide for capacity of additional development that will utilize the same infrastructure. Funding for this program is 100% from Utility Servicing Agreement Fees.

### **Sanitary Trunk Main - Kensington - Kingbird Rd to CPR Lanigan Line**

This project involves the construction of a trunk sanitary main through Kensington Greens from Kingbird Road to the CPR Lanigan rail line. The project is 100% funded through Utility Servicing Agreement Fees.

### **Sanitary Trunk Main Oversizing - Greens on Gardiner**

This project involves the construction of oversized sanitary mains within the Greens on Gardiner to support future development. The oversizing rebate is 100% funded through Utility Servicing Agreement Fees.

### **Sanitary Trunk Main Oversizing - Westerra - Pump Station to Dewdney Avenue**

This project involves the construction of an oversized sanitary trunk main from the Sewage Pumping Station along yet to be named road within the Westerra development lands to Dewdney Ave. The oversizing rebate is 100% funded through Utility Servicing Agreement Fees.

### **Trailer Mounted Mobile Cleaning & Thawing System (Steamer)**

This funding would be utilized to purchase a mobile cleaning & thawing system (Steamer) to allow SDO to thaw frozen catch basins and culverts during spring melt. Funding is provided by the General Utility Reserve.

### **Septage Hauling Station**

This project provides for the development of a permanent Septage Hauling Station. In the past waste hauler trucks discharged sewage at the McCarthy Boulevard Pumping Station. Upgrades at the pumping station resulted in the relocation of the discharge to a temporary location at the Waste Water Treatment Plant. Planning is underway to identify possible locations and construction options. This project is currently funded from the Utility Reserve with additional funding anticipated from sharing agreements with regional partners. It is intended that revenue from the facility will recover construction and operating costs.

### **Utility Greenhouse Gas Reduction Program To Achieve Council Goals**

This funding will allow for pilot project and/or studies to support City Council's goal to reduce greenhouse gas emissions. This project is funded from the Utility Reserve.

**Water Distribution/Pumping/Supply and Other**

Program/Proj	Reporting Group	Project Name	2015	2016	2017	2018	2019
Program	Water Distribution	Water Infrastructure Renewal - Reactive Hydrant Replacement	250.0	250.0	250.0	250.0	250.0
		Water Infrastructure Renewal - Reactive Water Valve Replacement	285.0	285.0	285.0	285.0	285.0
		Water Infrastructure Renewal - Integrated and Proactive Programs	5,250.0	7,000.0	7,000.0	7,000.0	7,000.0
	<b>Water Distribution Total</b>		<b>5,785.0</b>	<b>7,535.0</b>	<b>7,535.0</b>	<b>7,535.0</b>	<b>7,535.0</b>
	Water Pumping	Water Pumping Station Upgrades and Equipment Replacement	-	750.0	1,000.0	2,000.0	3,000.0
	<b>Water Pumping Total</b>		<b>-</b>	<b>750.0</b>	<b>1,000.0</b>	<b>2,000.0</b>	<b>3,000.0</b>
	Water Supply	Supply Line Improvements	-	1,000.0	1,000.0	1,000.0	1,000.0
	<b>Water Supply Total</b>		<b>-</b>	<b>1,000.0</b>	<b>1,000.0</b>	<b>1,000.0</b>	<b>1,000.0</b>
	Other Capital Initiatives	Capital Maintenance Contingency Fund	-	500.0	500.0	500.0	500.0
		Trench Settlement Remediation	300.0	300.0	300.0	300.0	300.0
Utility Billing Equipment Replacement Program		20.0	40.0	20.0	20.0	40.0	
<b>Other Capital Initiatives Total</b>		<b>320.0</b>	<b>840.0</b>	<b>820.0</b>	<b>820.0</b>	<b>840.0</b>	
<b>Program Total</b>			<b>6,105.0</b>	<b>10,125.0</b>	<b>10,355.0</b>	<b>11,355.0</b>	<b>12,375.0</b>
Project	Water Distribution	Courtney Street Trunk Water Main - Whelan Dr to Diefenbaker Dr	-	-	-	-	1,000.0
		Eastern Pressure Zone	-	5,000.0	10,000.0	12,000.0	14,000.0
		Trunk Water Main - Somerset	-	1,900.0	-	-	-
		Trunk Water Main, Kensington - Kingbird Rd to CPR Lanigan Line	520.0	-	-	-	-
		Water Distribution Main Oversizing	-	100.0	100.0	100.0	100.0
		Water Distribution Main Oversizing - Gordon Road - Campbell St to West Boundary of Harbour Landing West Phase 2	-	-	350.0	-	-
		Water Infrastructure Renewal - Water Service Connection Replacement	2,000.0	2,000.0	2,000.0	2,000.0	2,000.0
		Water Main Oversizing, Westerra - Courtney St to Pinkie Rd	-	-	800.0	-	-
		Watermain Oversizing - Parliament Avenue James Hill Road to Campbell Street	300.0	-	-	-	-
		Chuka Boulevard Trunk Water Main Extension	365.0	-	-	500.0	1,000.0
	Second Pressure Zone System Upgrades	-	-	-	-	3,500.0	
	<b>Water Distribution Total</b>		<b>3,185.0</b>	<b>9,000.0</b>	<b>13,250.0</b>	<b>14,600.0</b>	<b>21,600.0</b>
	Water Pumping	Fire & Security Vulnerability Upgrade - Monitoring	-	-	-	800.0	800.0
	<b>Water Pumping Total</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>800.0</b>	<b>800.0</b>
	Water Supply	Groundwater Well Renewals	-	-	-	-	1,000.0
		Reservoir Inspection and Rehabilitation	-	-	500.0	2,500.0	-
		Buffalo Pound Water Treatment Plant Upgrades	7,000.0	12,000.0	8,000.0	10,000.0	15,000.0
<b>Water Supply Total</b>		<b>7,000.0</b>	<b>12,000.0</b>	<b>8,500.0</b>	<b>12,500.0</b>	<b>16,000.0</b>	
Other Capital Initiatives	Development Standards Manual Update	50.0	-	-	-	-	
	Future Equipment Purchase	-	250.0	250.0	250.0	250.0	
	Hazard Setback Study	33.0	-	-	-	-	
	ITS Infrastructure - Utility Portion	325.0	325.0	325.0	325.0	325.0	
	Utility Billing System Upgrade	-	-	300.0	-	-	
	Wastewater System Masterplan - System Wide	1,000.0	-	-	-	-	
	Water Meter Installations	750.0	750.0	750.0	750.0	750.0	
Water Meters and AMR Replacement	-	-	-	5,000.0	10,000.0		
<b>Other Capital Initiatives Total</b>		<b>2,158.0</b>	<b>1,325.0</b>	<b>1,625.0</b>	<b>6,325.0</b>	<b>11,325.0</b>	
<b>Project Total</b>			<b>12,343.0</b>	<b>22,325.0</b>	<b>23,375.0</b>	<b>34,225.0</b>	<b>49,725.0</b>
<b>Grand Total</b>			<b>18,448.0</b>	<b>32,450.0</b>	<b>33,730.0</b>	<b>45,580.0</b>	<b>62,100.0</b>

**Funding Breakdown**

Project\_Segment (Multiple Items)

Project/Program	Funding Source	Data				
		2015	2016	2017	2018	2019
Program	Utility Reserve	6,105.0	10,125.0	10,355.0	2,820.0	1,375.0
	Debentures	-	-	-	8,535.0	11,000.0
<b>Program Total</b>		<b>6,105.0</b>	<b>10,125.0</b>	<b>10,355.0</b>	<b>11,355.0</b>	<b>12,375.0</b>
Project	Utility Reserve	8,409.0	10,669.0	9,021.0	17,745.0	16,860.0
	Service Agreement Fees (Utility)	2,016.0	8,368.0	12,162.0	13,740.0	18,755.0
	Debentures	-	-	-	-	10,000.0
	Moose Jaw	1,918.0	3,288.0	2,192.0	2,740.0	4,110.0
<b>Project Total</b>		<b>12,343.0</b>	<b>22,325.0</b>	<b>23,375.0</b>	<b>34,225.0</b>	<b>49,725.0</b>
<b>Grand Total</b>		<b>18,448.0</b>	<b>32,450.0</b>	<b>33,730.0</b>	<b>45,580.0</b>	<b>62,100.0</b>



### **Water Infrastructure Renewal - Reactive Hydrant Replacement**

The City has over 4,000 hydrants in the network and as the City grows more hydrants are added to the network. Accidents (predominately automobile related) cause a failure to Hydrants which then require reactive maintenance for repair or replacement. The Utility Reserve funds this program.

### **Water Infrastructure Renewal - Reactive Water Valve Replacement**

Water valve failures have a direct impact on customer levels of service. These valves are maintained historically through reactive maintenance. This funding provides for reactive replacement of water valves. The General Utility Reserve funds this work.

### **Water Infrastructure Renewal - Integrated and Proactive Programs**

The underground water distribution system requires ongoing rehabilitation and upgrading to maintain expected level of service and ensure the reliability and safety of the water distribution system. This program typically includes inspection, assessment, replacement, rehabilitation and upgrading of water distribution mains, fire hydrants, service connections, and other appurtenances and associated structures. The condition assessment and rehabilitation is done both in conjunction with scheduled roadway renewal projects and proactive locations identified in the system. Funding is also provided for proactive water main relining. The Utility Reserve funds this program.

### **Water Pumping Station Upgrades and Equipment Replacement**

This work is intended to ensure that the pump stations throughout the City are maintained in good operating condition. Work required includes lifecycle upgrades to replace obsolete equipment as well as upgrades to improve energy efficiency and to ensure reliable service. The Utility Reserve funds this work.

### **Supply Line Improvements**

This program inspects, repairs, and replaces main valves, valve structures and other miscellaneous work on the Buffalo Pound supply pipeline and other major supply mains within the City. As the pipelines age, inspection, rehabilitation, and improvements are necessary to ensure the reliability of the water quality and supply to the City and reduce the number of emergency repairs. The Utility Reserve funds this work.

### **Capital Maintenance Contingency Fund**

This funding is intended to allow operational branches to undertake minor capital maintenance and emergency renewal projects to resolve operational concerns identified through preventative maintenance programs and customer complaints. Funding is intended to be utilized to prevent further deterioration of assets and to protect customer property. Further development of this program is required prior to implementation. A business case will be further developed prior to requesting approval for the 2016 budget. The Utility Reserve will fund this program.

### **Trench Settlement Remediation**

Cracking and settling of sidewalks, curbs, gutter and pavement occur as a result of backfill settlement at watermain work locations, resulting in drainage problems. This program corrects settlement at these locations. The Utility Reserve funds this program.

### **Utility Billing Equipment Replacement Program**

In order to obtain readings from AMR meters, the City has deployed a number of hand-held and vehicle-mounted (VXU) radio-read devices. These devices, along with other larger equipment used in the Utility Billing operation, such as curb box locators, are warranted and can be repaired and upgraded for a period of time, but in order to manage upgrades effectively a consistent program is more appropriate. This program is funded from the Utility Reserve.

### **Courtney Street Trunk Water Main - Whelan Dr to Diefenbaker Dr**

This project involves the design and construction of a trunk watermain along Courtney Street from Whelan Dr to Diefenbaker Dr. The project is required for the servicing of the 235K lands north of the Mapleridge neighbourhood and south of Diefenbaker Dr. The project is 100% through Utility Servicing Agreement Fees.

### **Eastern Pressure Zone**

In order to maintain current service levels as the city grows, a third Pressure Zone in east Regina is required. While pressure is sufficient to meet minimum firefighting conditions, as the City continues to grow, customers may notice a decrease in water pressure. Funding for a pre-design study was initially provided in the 2014 utility budget. Additional funding will provide for the detailed design and construction of new infrastructure required to complete an Eastern Pressure Zone. This project is 100% funded from Utility Servicing Agreement Fees

### **Trunk Water Main - Somerset**

This project involves the construction of trunk watermains to supply the Somerset development area. The project is 100% funded through Utility Servicing Agreement Fees.

### **Trunk Water Main, Kensington - Kingbird Rd to CPR Lanigan Line**

This project involves the construction of a trunk water main through Kensington Greens from Kingbird Rd to the CPR Lanigan rail line. The project is 100% funded through Utility Servicing Agreement Fees.

### **Water Distribution Main Oversizing**

This program provides for the construction of new water distribution mains requiring oversizing to allow for distribution of water to future developments beyond the concept plan area. This project is 100% funded from Utility Servicing Agreement Fees.

### **Water Distribution Main Oversizing - Gordon Road - Campbell St to West Boundary of Harbour Landing West Phase 1**

This project involves the construction of an oversized trunk watermain along Gordon Rd from Campbell St to the West Boundary of Harbour Landing West Phase 1. The oversizing rebate is 100% funded through Utility Servicing Agreement Fees.

### **Water Infrastructure Renewal - Water Service Connection Replacement**

Water service connection failures have a direct impact on customer levels of service. These connections are maintained historically through reactive maintenance. This funding provides for reactive replacement of water service connections. The General Utility Reserve funds this work.

### **Water Main Oversizing, Westerra - Courtney St to Pinkie Rd**

This project involves the construction of an oversized trunk watermain through Westerra from Courtney St to Pinkie Rd. The oversizing rebate is 100% funded through Utility Servicing Agreement Fees.

### **Water Main Oversizing - Parliament Avenue James Hill Road to Campbell Street**

This project involves the construction of a trunk watermain along Parliament Avenue from James Hill to Campbell St which is to be oversized to provide the required level of service for development of lands further west. The oversizing is 100% funded through Utility Servicing Agreement Fees.

### **Chuka Boulevard Trunk Water Main Extension**

This work is the extension of the water trunk main to service north portions of Greens on Gardiner development area as well as future development of the Towns. The project is funded 100% through Utility Servicing Agreement Fees.

## **Second Pressure Zone System Upgrades**

The Second Pressure Zone was installed in 2011-2014 and is expected to be fully operational in late 2014. This budget request is a placeholder intended to allow for substantial upgrades to the system that are anticipated for approximately 2019. Funding is provided from the General Utility Reserve (73%) and from Utility Servicing Agreement Fees (27%).

## **Fire & Security Vulnerability Upgrade - Monitoring**

A Water and Sewer Utility – Fire and Site Security Audit Report was completed for the City of Regina in January of 2013. This Audit Report identified shortfalls with regards to fire and site security at the Buffalo Pound Lake Intake Pumping Station, the Buffalo Pound Water Treatment Plant, and at four pumping stations within the City. This project provides for monitoring communication upgrades and CCTV based security monitoring, which will substantially reduce vulnerability. The Utility Reserve funds this work.

## **Groundwater Well Renewals**

The emergency wells in the City have only historically been used to supplement BPWTP water during shortage periods and the quality of water in the wells is not sufficient in itself without boil water notices. Well renewal work is planned to improve the robustness of the system. The Utility Reserve funds this work.

## **Reservoir Inspection and Rehabilitation**

The City's reservoirs require on-going inspection, rehabilitation and upgrading to maintain expected level of service and ensure the reliability and safety of the water supply system. This program typically includes inspection, assessment, replacement and rehabilitation of water reservoirs and associated equipment and infrastructure. The Utility Reserve funds this work.

## **Buffalo Pound Water Treatment Plant Upgrades**

Improvements to replace and expand the facility and equipment are required at the Buffalo Pound Water Treatment Plant to ensure there is sufficient capacity and ability to continue to: meet regulatory requirements, protect public health and safety; and ensure sufficient reliable supply that meets quantity and quality expectations of a growing Community. Improvements will address the impacts of aging infrastructure, regulatory changes, changes in engineering and building standards, industry best practices to protect public health and safety, and growth within the community. For 2015 and 2016, this work will provide an additional disinfection barrier to the finished water to deactivate Giardia and Cryptosporidium cysts by means of Ultra Violet radiation as well as Preliminary Design and Detailed Design for an electrical substation at the plant which will replace the existing plant substation. Funding is provided by the City of Regina's Utility Reserve (61.15%), Utility Servicing Agreement Fees (11.5%) and external contributions from the City of Moose Jaw (27.35%).

## **Development Standards Manual Update**

The Development Standards Manual (DSM) provides a comprehensive guidance document for developers and their consultants on how to design new developments. A review and revision to the document is necessary to ensure it is updated to meet the objectives of the most recent guiding policy documents including the new Official Community Plan (OCP) and Transportation Master Plan (TMP) as well as other regulatory, policy, reference documents, industry best practices and innovative sustainable development standards. Funding for this project is provided 100% through Servicing Agreement Fees equally split between the Roads and Related, Utility and Parks and Recreation Facility reserves.

## **Future Equipment Purchase**

As equipment requirements change within the utility, additional or new specialized pieces of equipment are required to manage ongoing operations. This program is intended to operate as a placeholder for the purposes of planning in the Utility Model and is based on average expected new or specialized equipment purchases based on previous five year history. Funding is provided from the Utility Reserve.

### **Hazard Setback Study**

The City of Regina requires new developments to consider adjacent or nearby hazards such as rail corridors, pipelines and other sources of risk when considering the type of land use and associated setbacks that are warranted to mitigate hazard associated risks. The study is intended to examine the City's current methodology, research best practices and trends when considering requirements as it relates to different types of hazards for new developments. Funding for this project is provided 100% through Servicing Agreement Fees equally split between the Roads and Related, Utility and Parks and Recreation Facility reserves.

### **ITS Infrastructure - Utility Portion**

This program provides for the Utility contribution to ITS projects that support the Utility as approved in the General Capital Program. Funding is provided from the Utility Reserve.

### **Utility Billing System Upgrade**

This funding is intended to ensure that the Utility Billing system is maintained in a supportable condition and allows for the ongoing review of improved functionality of the system, implementation of selected functionality, as well as required updates to system architecture. This program is funded from the Utility Reserve.

### **Wastewater System Master Plan - System Wide**

This project provides funding for an integrated master plan for the wastewater system. The Plan would be created through most of 2015-16 and would be followed by preliminary and detailed design of the preferred solution(s), starting in 2017. This project is funded from the Utility Reserve.

### **Water Meter Installations**

The City's expanding community requires the installation of water meters in new homes. This program includes the purchase and installation of new water meters for new construction. Funding is provided from the Utility Reserve.

### **Water Meters and AMR Replacement**

In 2002 through 2004, the City completed a meter replacement and Automated Meter Reading (AMR) system installation program. The meters installed during that program have an expected life of approximately 15 to 20 years. As well, the batteries in the AMR units have a maximum expected life of 20 years. Purchase and installation of meters will ensure accurate metering and billing based on actual use. Funding is provided from the Utility Reserve.