THE WAY WE FINANCE

UTILITIES BUDGET

2012

CITY COUNCIL DISCUSSIONS

TRANSFORMING | EDMONTON

BRINGING OUR CITY VISION TO LIFE

2012 Operating and Capital Utility Budgets - For Discussion

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Utilities

Introduction

The City of Edmonton operates three public utilities: Sanitary Drainage, Stormwater Drainage, and Waste Management Services. The Utilities report to Council's Utility Committee, with the Utility Advisor providing direct advice to the Committee.

The Utilities operate under their respective Council-approved Fiscal Policies and 2012-2014 Business Plans in a manner that combines the desire to provide the best service at the lowest cost (public utility) with approaches to encourage innovation and use of a cost structure that sends the proper price signal to the customers (private utility).

The Proposed Budgets for the Utilities reflect the strategic directions and initiatives identified in their 2012-2014 Business Plans presented to the Utility Committee on June 16, 2011. These include:

Drainage Services:

1. Maintain efficient and effective service
2. Build and renew drainage infrastructure
3. Improve environmental protection and maintain public health and safety
4. Support economic growth and development
5. Improve coordination and collaboration
6. Nurture innovation and creativity

Waste Management Services:

1. Deliver efficient collection services focused on environmental protection
2. Process waste to recover resources and minimize landfilling
3. Provide responsive services that meet the changing needs of our customers
4. Maintain our leadership status by focusing on innovation and attracting green businesses
5. Engage the citizens of Edmonton to facilitate their full participation in waste reduction, reuse and recycling

The proposed 2012 Budgets are intended to improve the results of the various financial indicators defined under each Utility's Fiscal Policy.

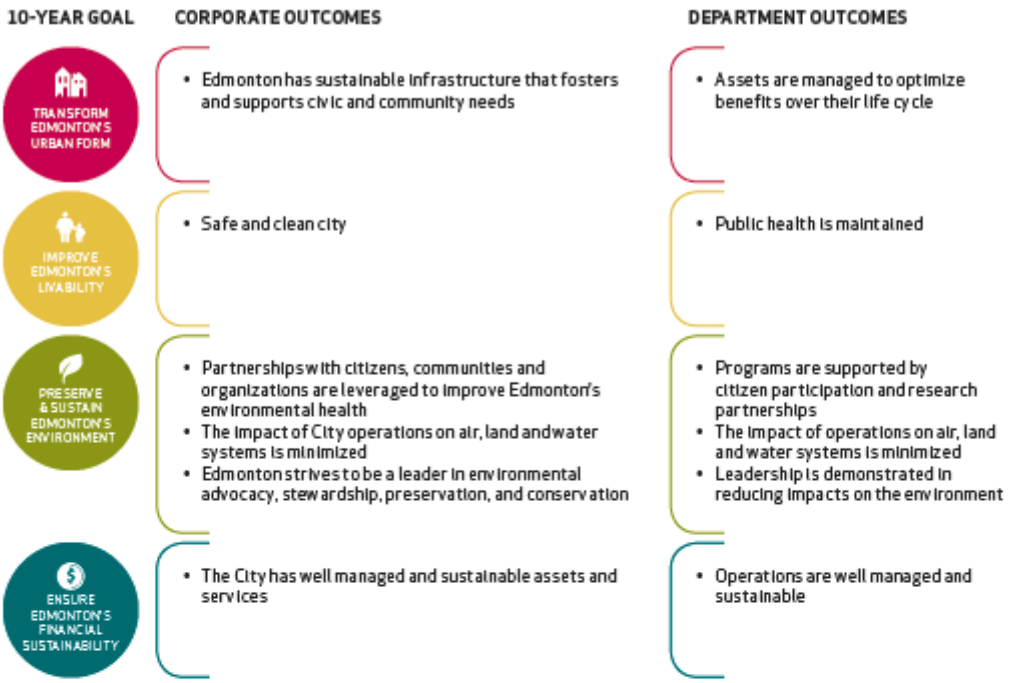
All three Utilities underwent Cost of Service studies in 2011. The proposed 2012 Budget has been prepared based on the existing rate structures with small shifts across customer classes. Further changes relating the studies and their recommendations will be proposed to the Utility Committee for consideration in the 2013 Budget.

Utilities

Public Utilities		
Sanitary Drainage Utility	**Stormwater Drainage Utility**	**Waste Management Utility**
Planning	Planning	Collection Services
Development Services	Development Services	Processing and Disposal Services
Operations	Operations	
Program Support	Program Support	

Utilities

STRATEGIC ROADMAP



Utilities

DEPARTMENT SCORECARD

10-YEAR GOAL	DEPARTMENT MEASURES	STATUS	TREND	3-YEAR TARGET	2010 ACTUAL	2011 FORECAST
TRANSFORM EDMONTON'S URBAN FORM	Actual expenditures as a percentage of the approved capital budget (non-contributed) for drainage services		▼	TBD	81%	85%
	Length of sewer renewed (per year)		▼	TBD	53	67
IMPROVE EDMONTON'S LIVABILITY	Number of wastewater main line blockages (per 100 km of sewers)		▼	TBD	2.14	2.60
	% of neighbourhoods completed as part of the flood prevention program (cumulative total)		▲	TBD	39%	39%
	Number of missed collection stops per 10,000		■	TBD	4	4
PRESERVE & SUSTAIN EDMONTON'S ENVIRONMENT	% of homeowners recycling		■	TBD	89%	90%
	Number of users of Eco Stations and Big Bin events		▲	TBD	220,000	231,000
	% of generated biosolids disposed of		▼	TBD	85%	87%
	Edmonton watershed contamination reduction index	■	▼	7.6	7.3	7.6
	Number of new developments utilizing drainage low impact development principles (per year)		▲	TBD	1	4
	Proportion of residential waste diverted from landfill	■	▲	70%	44%	60%
	Proportion of non-residential waste diverted from landfill			TBD	47,000	54,000
ENSURE EDMONTON'S FINANCIAL SUSTAINABILITY	Cost per tonne for curbside collection of refuse and recyclables		■	TBD	$111	$116
	Cost per tonne of material processed at Edmonton Waste Management Centre		▲	TBD	$74	$65

LEGEND

STATUS	DESCRIPTION
■	Measure is meeting or exceeding established target
■	Measure is moderately off of established target
■	Measure is not meeting established target

TBD - In development | n/a - Currently not available

TREND	DESCRIPTION
▲	Measure is trending favourably up over last reporting period
▲	Measure is trending unfavourably up over last reporting period
■	Measure has not changed over last reporting period
▼	Measure is trending unfavourably down over last reporting period
▼	Measure is trending favourably down over last reporting period

Utilities

Summary and Highlights of 2012 Budget

With Council's adoption of the Utility Fiscal Policies (C304C and C558), a set of key Financial Indicators and targets have been approved for the Utilities. In addition to including resources that strive to achieve the Strategic Directions set out in the respective Business Plans, the Proposed 2012 Budgets are making strides to improve the Utility Financial Indicators.

The challenges for each of the three Utilities are different. The primary challenge affecting Sanitary Drainage is the need to generate sufficient revenues to improve its available Cash Balance in order to support the capital investments planned for the utility. There is limited flexibility in reducing the proposed Return on Rate Base for Sanitary Drainage because even a 1% reduction in the Return would result in the Utility being unable to pay for its planned Capital Investments by as early as 2014.

With the recent investments in the Flood Prevention Program, the Drainage Neighbourhood Renewal Program, and the elimination of access to previously available grant funding, the Stormwater Drainage Debt to Net Assets Ratio has been increasing steadily. The proposed rate increase will stop this trend however the Stormwater Drainage Debt to Net Assets Ratio is not expected to decrease until 2017.

The 2012 Budget represents the first year in which the Waste Management Utility is fully supported by customer rates and program revenues. However, the primary challenge for the Utility relates to the operational and capital impacts of the Clover Bar Landfill closure. Although transitioning to an integrated system that minimizes hauling to a distant landfill has been ongoing since 2009, the full operating impacts of capital investments will not be incurred until 2014.

The breakdown of the monthly impact of the Proposed Budgets to the average residential customer is summarized as follows:

		Average Monthly Usage	2011		Proposed 2012		% Increase	$ Increase
			Rate	Monthly Charge	Rate	Monthly Charge		
Sanitary Drainage	**Rate Impact**		$3.59 + $0.686/$m^3$		$4.83 + $0.923/$m^3$		34.5%	
	Customer Impact	2011 - 17.18 m^3 2012 - 16.60 m^3		$15.38		$20.15	31.0%	**$ 4.77**
Stormwater Drainage		average residential lot size (592m^2)	$0.0214/$m^2$ with run-off coefficient of 0.5	$6.34	$0.0264/$m^2$ with run-off coefficient of 0.5	$7.80	23.0%	**$ 1.46**
Waste Management		single family	$31.34	$31.34	$33.60	$33.60	7.2%	**$ 2.26**
Projected Impact to Typical Customer				**$53.06**		**$61.55**		**$8.49**

The following captures the major reasons for the proposed rate changes.

	Sanitary Drainage	Stormwater Drainage	Waste Management
Return on Rate Base	$ 2.50	$ 0.87	$ 1.00
Local Access Fees	$2.94 { 0.44	n/a	n/a
Depreciation & Interest - Mature Neighbourhood	0.89	0.28	n/a
Depreciation & Interest - Other	0.10	0.14	0.55
Biosolids	0.44	n/a	n/a
D&C Revenues	0.26	n/a	n/a
Operations & Maintenance	0.15	0.17	0.71 *
Resulting Monthly Increase	$ 4.77	$ 1.46	$ 2.26

* $0.21 of this amount is required for continued phase in of Shared Services cost allocation.

Waste Management Utility

Introduction

The Waste Management Utility is a leader in urban waste solutions and delivers waste management services to the residential and non-residential sectors under two main areas of operation: Collection Services and Processing and Disposal Services.

The City's integrated waste management system contributes to a number of City Councils' strategic goals. In particular, the Utility plays a pivotal role in preserving and sustaining Edmonton's environment. The Utility's environmental advocacy, stewardship, preservation and conservation activities, and its partnerships with citizens, communities and organizations improve Edmonton's environmental health.

The consistent delivery of responsive services and a commitment to customer engagement have enabled a strong partnership with residents. This partnership is reflected in the 5,000 volunteer hours contributed each year by residents, and the high rates of voluntary participation in waste reduction, reuse and recycling.

The Waste Management Utility also contributes to Improving Edmonton's livability by creating a safe and clean city. Moreover, the Utility is supporting the diversification of the City's economy by attracting new green businesses such as Global Electric and Electronic Processing (GEEP), Greys Paper Recycling Inc. and Enerkem Alberta Biofuels.

An operational review by the Utility, an independent Cost of Services Study, as well as the Waste Management Utility Audit conducted by the Office of the City Auditor all illustrate a well managed Utility in its formative years.

Vision:

To be a customer-driven world leader in sustainable and innovative waste management.

Mission:

To provide waste management services for the City of Edmonton with due regard to the needs of residents, the preservation of natural resources, the protection of the environment and the financial capabilities of the City.

Opportunities and Challenges

Opportunity

1. Provision of Weekly Collection Service

The Waste Management Utility 2012-2014 Business Plan provides for the change to year-round weekly collection services delivered on the same day of the week. This change supports optimal utilization of resources and does not require any additional increase in customer rates. The current collection service model requires scheduling changes from winter to non-winter months and changes in the day of collection with every statutory holiday throughout the year.

Outcome: Operations are well managed and sustainable

Challenges: The proposed service requires a minimum 85% fleet availability. The Waste Management Utility and Fleet Services will meet this requirement by the end of 2011.

Action/Timeline: The change would be effective June 1, 2012 with the start of new collection contracts that cover half of the City. The current collection contract based on existing service levels ends at this time.

Challenges

1 . Achieving Long Term Financial Sustainability in Accordance with Policy C558

Outcome: Operations are well managed and sustainable.

Challenge: On June 1, 2011 Council approved Policy C558, which sets out Financial Indicators Targets (FIT) that would lead to a financially sustainable utility.

Given that the Utility has been established only since January 1, 2009, and the closure of the Clover Bar Landfill in August 2009 necessitated a fundamental change to the provision of waste services, the Utility is not expected to achieve the FIT in the short term.

Action and Timeframe: The proposed 2012 Budget will eliminate the necessity of accessing Retained Earnings to subsidize the actual cost of service (over 2009-2011 forecast, $16.1 million has been accessed or forecasted to be accessed). The Debt Coverage Ratio and Debt to Net Asset Ratio are targeted to steadily improve annually. The Return on Rate Base Ratio is expected to take 5 years to reach the minimum target. The proposed 2012 Budget and 10-year financial forecast represent a balanced approach to making positive strides on the Utility Fiscal Policy with due regard to customer rates. The need to eliminate reliance on Retained Earnings accounts for $1.00 of the total proposed monthly increase of $2.26.

2. Capital Investments - Continued Implementation of Processing and Hauling Systems

Outcome: Leadership is demonstrated in reducing impacts on the environment.

Challenge: The change to an integrated processing operation that focuses on diversion and reduces the need for hauling to a distant landfill has necessitated above normal capital investment over the past five years. These investments required capital financing and operational impacts that are higher than in the past when relatively cheap landfill capacity was available in the City of Edmonton.

Action and Timeframe: New facilities owned by the Utility have been completed or are anticipated to be completed in 2012:

- Completed 2010 - Phase 1 (tip floor) and Phase 2 (pre-processing to separate organic material for composting) of the Integrated Processing and Transfer Facility.
- Scheduled for commissioning in fall 2011 - Advanced Energy Research Facility (largely funded by a grant from Alberta Innovates-Energy and Environment Solutions) and the Commingled Construction and Demolition Waste Processing Facility.
- Targeted for completion in 2012 - Phase 3 of the Integrated Processing and Transfer Facility to produce refuse-derived feedstock for Enerkem's Alberta Biofuels Facility which is expected to be fully commissioned by the end 2014. The approximate 24-month delay in the Biofuels Facility reflects longer than anticipated time to finalize improved process design in detailed engineering drawings and manufacture process equipment.

This, along with operating impacts of other capital investments account for $0.55 of the proposed $2.26 monthly increase.

3. Low Volume Generator Program

Outcome: Leadership is demonstrated in reducing impacts on the environment. The Program provides financial benefit to residents who produce and set out less waste for collection.

Challenge: The challenge in implementing this program is in providing a financial incentive to customers who produce less waste without reducing the overall revenue to the Utility.

Action and Timeframe: At the September 1 meeting of the Utility Committee, the Waste Management Utility was directed to develop a public consultation plan for delivery in early 2012. The consultation plan will be presented to Utility Committee for consideration at their first meeting in 2012.

4. Detailed Examination of Operations

Outcome: Operations are well managed and sustainable.

Challenge: Optimizing operations in an environment in which some cost drivers are uncontrollable, e.g. the price of fuel.

Action and Timeframe: Operating costs (activities) that are directly controlled by the Utility were examined in detail and optimized. This results in $0.50 of the proposed rate increase being related to increased operating costs in 2012 and is less than inflation.

5. Diversion of Non-Residential (Non-Regulated) Waste from Landfill

Outcome: Leadership is demonstrated in reducing impacts on the environment.

Challenge: Non-residential waste is unregulated and therefore the Waste Management Utility does not control the processing and disposal options for this waste stream. The choice of disposal method is at the discretion of the generator and/or their contracted waste hauler.

Action and Timeframe: Two approaches are being pursued to influence non-residential waste diversion. With availability of the Commingled Construction and Demolition Waste Facility, the Utility now has the ability to actively pursue the commingled construction and demolition waste stream for processing and diversion. In addition, as directed by Council, the Utility is delivering a collection and recycling service to commercial waste generators. The proposed 2012 Budget projects 190 new commercial collection accounts in this competitive sector.

In 2012 the Waste Management Utility and Buildings and Landscape Services will examine options for recycling more construction and demolition waste from City buildings projects. Buildings and Landscape Services currently require all LEED buildings and major renovation projects to recycle a minimum of 75% of all waste material. The work in 2012 will examine the possibility of diverting more waste materials from City buildings projects through the Commingled Construction and Demolition Waste Facility.

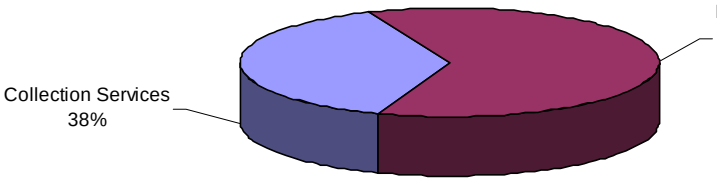
Waste Management Utility

Proposed 2012 Budget – Utility Summary ($000)

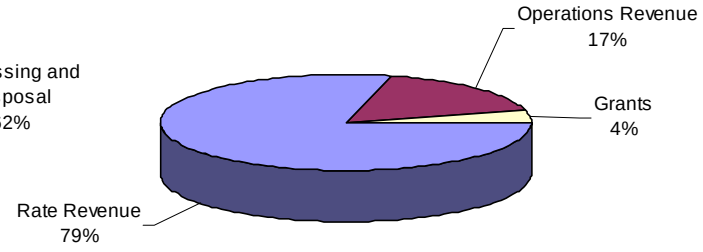
	2010 Actual	2011 Budget	$ Change '11-'12	2012 Budget	% Change '11-'12
Revenue					
Rate Revenue	$ 97,915	$ 104,143	$ 9,655	113,797	9.3
Operations Revenue	19,744	23,090	1,464	24,555	6.3
Grants	75	13,400	(7,400)	6,000	(55.2)
Transfers	8,500	3,400	(3,400)	-	(100.0)
Total Revenue	126,234	144,033	319	144,352	0.2
Expenditure & Transfers					
Collection Services	48,431	52,396	2,640	55,036	5.0
Processing and Disposal	77,803	91,637	(2,321)	89,316	(2.5)
Total Expenditure & Transfers	126,234	144,033	319	144,352	0.2
Net Income	$ -	$ -	$ -	$ -	
Full-time Equivalents	413.7	424.5	22.5	447.0	

Expenditures and Transfers include all corporate and departmental overheads, Shared Services, and financing charges.

Where the Budget will be spent



Funding by Source



Waste Management Utility

Proposed 2012 Budget – Branch Summary ($000)

	2010 Actual	2011 Budget	$ Change '11-'12	2012 Budget	% Change '11-'12
Revenue					
Rate Revenue	$ 97,916	$ 104,143	$ 9,655	113,797	9.3
Operations Revenue	19,744	23,090	1,464	24,555	6.3
Grants	75	13,400	(7,400)	6,000	(55.2)
Transfers	8,500	3,400	(3,400)	-	(100.0)
Total Revenue	126,235	144,033	319	144,352	0.2
Expenditure & Transfers					
Personnel	27,404	30,424	1,971	32,394	6.5
Materials, Goods & Supplies	4,411	4,701	527	5,228	11.2
Contracts	51,611	51,435	1,004	52,439	2.0
Fleet Services	10,362	11,358	602	11,959	5.3
Shared Services	4,250	5,050	701	5,751	13.9
Intra-Municipal Services	1,470	312	531	843	170.1
Utilities	3,206	4,595	(429)	4,166	(9.3)
Other Expenses	1,120	1,097	143	1,241	13.0
Customer Billing Services	3,876	4,239	199	4,438	4.7
Financial	23,943	25,696	2,413	28,109	9.4
Biofuels Grant	-	13,400	(6,560)	6,840	(49.0)
Subtotal	131,653	152,306	1,102	153,408	0.7
Biosolid/Nutri-Gold Recoveries	(5,418)	(6,335)	(814)	(7,149)	12.8
Litter Collection	-	(1,938)	30	(1,907)	(1.6)
Intra-Municipal Recoveries	(5,418)	(8,273)	(784)	(9,056)	9.5
Total Expenditure & Transfers	126,235	144,033	319	144,352	0.2
Net Operating Requirement	$ -	$ -	$ -	$ -	
Full-time Equivalents	413.7	424.5	22.5	447.0	

Budget Changes for 2012 ($000)

Revenue - Changes

Rate Revenue $9,655

The proposed increase to the monthly user fee charged on the utility bill will generate about $7,656 in additional rate revenue, with the remaining $1,999 coming from an increased number of customers based upon the corporate projection on population growth.

Operations Revenue $1,464

Program Revenues are generated from tipping fees collected at the Waste Management Centre and Eco Stations for processing and disposal services, provision of waste services to non-regulated customers and extra services to regulated customers in the multi-family sector, sale of recyclables and compost and partnership and environmental offset revenue from a number of private sector businesses (e.g. Global Electronics and Electric Processors, Greys Paper, etc.). The major components of the 2012 revenue increase relate to continued improvement in the markets for recyclable material, and revenue expected from the full year operation of the Construction and Demolition Facility.

Waste Management Utility

Revenue - Changes

Grants ($7,400)

The Waste Management Utility acts as the intermediary for the flow of grant support from the Province for the Enerkem Alberta Biofuels Facility and the Advanced Energy Research Facility. The City of Edmonton acts as a manager of the grant, distributing the funding upon Enerkem's achievement of various milestones. It is expected that all grants received for this project will have been disbursed by the end of 2012.

Transfers ($3,400)

Over the past three years, Retained Earnings was used to reduce customer rates. This was necessary due to the fundamental change to the waste operations as a result of the closure of the Clover Bar Landfill. 2011 marks the end of using Retained Earnings to reduce customer rate requirements. The $3.4 million addition to the customer rate requirement in 2012 translates to $1.00 of the $2.26 monthly rate increase.

Expenditures & Transfers - Changes

Personnel $1,971

Movement within the salary ranges, changes in benefits and the last year of a 3-year 1% LAPP contribution increase account for $214. To effectively manage operations of the new facilities at the EWMC an increase of $232 in Overtime is needed. New staffing requirements to manage projected customer growth and provide a full-year's operation of the Construction and Demolition Facility, increased volume of material to handle at the EWMC, and the start up of the final phase of the Integrated Processing and Transfer Facility in the fall of 2012 $1,525 (22.5 FTE).

Material, Goods & Supplies $527

The 2012 increase relates to costs associated with the in-service operations of the Integrated Processing and Transfer Facility.

Contracts $1,004

Contract cost increases relate to increased disposal at the Ryley landfill as a result of expected unavailability of West Edmonton Landfill, tempered by increased diversion of non-residential waste stream. Other increases relate to higher revenue share payment to the MRF operator with overall anticipated higher revenues projected from commodity market price trends, the start up of the final phase of the Integrated Processing and Transfer Facility in the fall of 2012, and collection contract renewals. Contract decreases are expected in composting operations due to plant process improvements.

Fleet Services $602

An increase in Fleet Services of $404 is attributable to fuel cost increases. An increase of $455 is attributed to rate increase and changes in volume due to growth in the number of customers. This is offset by a reduction of $257 in fixed cost as the Utility is providing for its own fleet replacement through depreciation.

Shared Services $701

The proposed 2012 rates include an addition of $905 to reflect the phased-in process to full costing of Shared Services (2012-79.6%; 2011- 67.5%). This is offset by an overall reduction in total Shared Services cost of $204 stemming from the Corporate re-organization.

Intra-municipal Services $531

2012 intra-municipal services include charges from Transportation Department for bus service to Quality One staff employed at the EWMC, as well as operational support (signage, gravel) at the site. It also includes on-demand building maintenance and custodial services at all Waste Management facilities, as well as a share of the Infrastructure Services administration.

Waste Management Utility

Expenditures & Transfers - Changes

Utilities ($429)

Utilities include Power, water, wastewater, waste management, and natural gas.The reduction in 2012 is primarily the result of energy efficiencies in the organics operation stemming from the Composting Facility upgrade.

Other Expenses $143

Included in Other Expenses are consulting and professional services, employee development and other administraive support costs. The change for 2012 is based on historical trends, and rate design study, development and public testing of options for low volume generators.

Customer Billing Services $199

The Waste Management Utility contracts with EPCOR to provide customer billing and collection services. The existing agreement expires the end of 2011. The Proposed 2012 Budget reflects $84 in inflationary increases, $67 from customer growth, and $48 in Bad Debt from a higher volume.

Financial $2,413

The change in financial budgets reflect full year depreciation on assets projected to be put into service in 2011 and half year depreciation on 2012 in-service assets $1,565. The change also includes the addition of a full year payment on debt taken out in 2011 and an assumed half year payment on projected 2012 debenture borrowing $794.

Biofuels Grant ($6,560)

The Waste Management Utility acts as the intermediary for the flow of grant support from the Province for the Enerkem Alberta Biofuel's Facility and the Advanced Energy Research Facility. The decrease reflects payment to be made in 2011, with the remainder of the grant expected to be paid in 2012.

Biosolid/Nutri-Gold Recoveries ($814)

Waste Management processes and disposes of biosolids (residuals from the wastewater treatment process) for Drainage Services. The proposed 2012 budget reflects a three-year phase-in period over which the subsidy that has been provided by Waste Management will end, along with an increase in the volume of biosolids processed from 87% to 90% of the annual production.

Litter Collection $30

The Waste Management Utility provides litter collection on behalf of the City of Edmonton in downtown, Old Strathcona, and various Business Revitalization Zones. The 2012 change reflects anticipated costs based on 2011 experience.

Full-time Equivalents - Changes

The 2012 FTE change reflects new staffing requirements to manage projected customer growth and to provide a full-year's operation of the Construction and Demolition Facility, increased volume of material to handle at the EWMC, and the start up of the final phase of the Integrated Processing and Transfer Facility in the fall of 2012. This results in a total of 22.5 permanent FTE.

Waste Management Utility

Proposed 2012-2014 Capital Budget and 2015-2021 Plan ($000's)

Capital Projects	Proposed Capital Budget					2015 -2021 Plan	Budget & Plan 2012-2021	Existing 2012-2014 Budget Approval	Current Budget Request
	From 2011	2012	2013	2014	Subtotal Including Carryforward				
Collection Services Facilities									
NE Eco Station	-	7,668	5,500	-	13,168	-	13,168	12,000	1,168
Kennedale Facility	3,500	2,500	-	-	6,000	-	6,000	2,500	3,500
NW Eco Station					-	13,450	13,450		
	3,500	10,168	5,500	-	19,168	13,450	32,618	14,500	4,668
Processing & Disposal Facilities									
Integrated Processing & Transfer Facility	3,500	-	-	-	3,500	-	3,500	-	3,500
Collection Services and Processing & Disposal Infrastructure									
Eco Station Facilities Rehabilitation	1,800	-	500	-	2,300	2,725	5,025	-	2,300
EWMC Infrastructure Rehabilitation	-	9,494	9,511	12,328	31,333	61,436	92,769	-	31,333
	1,800	9,494	10,011	12,328	33,633	64,161	97,794	-	33,633
Vehicles and Equipment									
Waste Containers	-	1,550	1,955	2,528	6,033	15,274	21,307	-	6,033
Equipment and Vehicles	-	7,946	6,631	8,357	22,934	64,523	87,457	-	22,934
	-	9,496	8,586	10,885	28,967	79,797	108,763	-	28,967
Total	8,800	29,158	24,097	23,213	85,268	157,408	242,676	14,500	70,768

With the completion of the Processing and Disposal Facilities at the Edmonton Waste Management Centre (except for the IPTF although funding has been put in place in 2011), the level of capital investments is projected to begin returning to the pre-landfill closure level starting in 2012. The Proposed 2012 Operating Budget and Pro-Forma Statements reflect the operating impacts of capital investments of $242.7 million over the next 10 years. The funding strategy for the Proposed 2012-2014 Capital Budget (without carry forward) is as follows:

	2012	2013	2014	3-Year Total
Long Term Debt - 10 Years	10,233	9,115	9,311	28,658
Long Term Debt - 15 Years	-	1,000	4,280	5,280
Long Term Debt - 25 Years	10,168	5,500	-	15,668
Waste Retained Earnings	8,758	8,482	9,623	26,862
Total Financing	29,158	24,097	23,213	76,468

In general, the Waste Management Utility is moving towards the principle of financing equipment and vehicles through retained earnings while matching other capital investments to be equal to their projected useful lives. Approval of this 3 - Year Capital Budget will result in improvement to the following Financial Indicators:

	2011 Budget	2012 Forecast	2013 Forecast	2014 Forecast
Debt Coverage Ratio	1.1	1.1	1.2	1.2
Debt to Net Assets Ratio	87%	85%	83%	81%

There are no new capital projects introduced in this planning period. Updates of the capital projects follow in this document.

Waste Management Utility

Capital Project Update: Northeast (Kennedale) Eco Station

This is a status update of an approved project.

Background

There are currently three Eco Stations where household hazardous waste (HHW), recyclables, and bulky waste can be dropped off. Much of the material received is reused or recycled. HHW materials that cannot be reused or recycled are sent to the Swan Hills Waste Treatment Centre for disposal and general refuse that cannot be reused or recycled is sent to landfill.

The current Eco locations are Strathcona (opened in 1995), Coronation (opened in 2000), and Ambleside (opened in 2009). In return for having these sites available to the general public regardless of their residency, the Province provided a grant towards the capital cost of these facilities and funds the ongoing disposal of HHW received. A small user fee is levied on other waste materials, intended to partially cover the cost of operations without discouraging the use of the facilities. In 2011, the Eco Station rates for waste material are $8 for a small item, $12 for a large item, $25 for a partial truck load, $35 for a truck load, and $45 for a heaping truck load.

Reasonable and easy access to a disposal facility helps to reduce the potential for illegal dumping and helps residents manage their HHW responsibly. Alberta Environment suggests 15 kilometers or approximately 7 minutes of travel time to a facility. In the 2009-2011Capital Budget, City Council approved the addition of a facility in northeast Edmonton to meet this general guideline.

Acquisition of a site adjacent to the City's Kennedale Integrated Yard has been identified and is expected to be purchased by the end of 2011. The projected construction completion is 2013.

Ambleside Eco Station (Template for Northeast Eco Station)

Financial Implications

The approved 2009-2011Capital Budget provided $3.5 million for siting and land acquisition. The 2012-2014 Capital Budget includes the additional funding of $13.2 million for detailed design and construction. Total project capital cost is $ 16.7 million.

The Northeast Eco Station (to be called Kennedale Eco Station on commissioning) is to be financed through self liquidating debt over a 25-year term. The projected financial and operating impacts of this facility have been reflected in the Waste Management Utility Operating Budget Model in the years required.

Waste Management Utility

Capital Project Update: Kennedale Facility Expansion

This is a status update of an approved project.

Background

Waste collection services for single family and multifamily homes directly provided by the Waste Management Utility originate at facilities at the Kennedale Integrated Yard. These facilities house staff and collection vehicles.

Growth of the City and new initiatives in recent years have necessitated increased staff and vehicles. In the 2009-2011 Capital Budget, City Council approved the provision of additional space at the Kennedale Integrated Yard for vehicle storage and staff accommodation. Current logistics with respect to movement of vehicles and staff are not safe, and costly equipment is not properly housed. The new facility comprises 3,100 square metres for vehicle storage and 1,400 square metres for staff accommodation. Construction of the facility is underway and occupancy of the facility is projected for July 2012.

Financial Implications

Council has approved funding of $11.4 million in the 2009-2011 Capital Budget with the remainder of $2.5 million to be approved in the 2012-2014 Capital Budget. Total project capital cost is $13.9 million. The required annual capital expenditures are provided in the accompanying Table.

Annual Capital Expenditure

Year	Annual Expenditure
2009 (Actual)	$ 145,000
2010 (Actual)	424,000
2011 (Forecast)	7,286,000
2012 (Forecast)	6,000,000
Total	$13,855,000

Three decisions have been taken to deliver the project as budgeted. A design-build contract was determined to be the approach for delivering the project within budget. All existing buildings are retained without modification. The needed vehicle storage and office space are accommodated in one structure on an independent footprint to maximize capital investment. The projected financial and operating impacts of this facility have been reflected in the Waste Management Utility Operating Budget Model in the years required.

Kennedale Facility

Waste Management Utility

Capital Project Update: Integrated Processing & Transfer Facility

This is a status update of an approved project.

Background

The Integrated Processing and Transfer Facility (IPTF) is a key element of the Utility's response to the closure of Clover Bar Landfill and the increased focus on diversion of materials from landfill. The facility was approved by City Council in 2007, and provides three main functions:

Phase 1: Tipping and Transfer Operation - The loading of residual and non-processable waste into trailers for hauling to landfill (transfer operation). Phase 1 was completed and became operational in October 2009.

Phase 2: Pre-processing Operations - Residential and suitable commercial waste is sorted mechanically and manually into three streams: organic material that is conveyed to the Edmonton Composting Facility; metals and cardboard are recovered for recycling; and non-recyclable, high energy content waste is conveyed to an adjacent operation (Phase 3) for conversion into refuse derived fuel. Phase 2 became operational in April 2010, with capacity of up to 1,000 tonnes per day.

Phase 3: Refuse Derived Fuel Feedstock Production - Mechanical processing of non-recyclable, high energy content waste into feedstock and delivery to the Enerkem Alberta Biofuels Facility. When completed in 2012, this phase of the Facility will be capable of producing up to 400 tonnes of refuse derived fuel per day. Production will ramp up from late 2012 through to full production in 2014 to match the planned ramp up of the Biofuels Facility production.

Financial Implications

The Integrated Processing & Transfer Facility has an approved budget of $88.7 million; of which $27.7 million is financed through a 10-year debenture and the balance through a 25-year debenture.

The 2012 Proposed Budget reflects principal and interest payments on $85 million of debenture ($70 million of which has been issued to June 2011), depreciation expense on $37.5 million of the assets that have been put into service, and full annual operating costs of Phase 1 and 2 of the facility. Operational costs relating to Phase 3 will ramp up from 2012 through 2014 as the Biofuels Facility demand for feedstock climbs.

The projected financial and operating impacts of this facility have been reflected in the Waste Management Utility Operating Budget Model in the years required.

Integrated Processing &Transfer Facility

Waste Management Utility

Capital Project Update: Infrastructure Rehabilitation

This is a status update of an approved project.

Background

To deliver waste collection, processing and disposal services to customers, the Waste Management Utility uses a variety of capital assets. With the exception of a portion of the Advanced Energy Research Facility, paid by a grant, capital investments are made by the Utility through customer rates and/or retained earnings. Expenses related to the rehabilitation of Clover Bar Landfill and the systems that are required for post closure care of the landfill, such as the Leachate Treat Plant, are financed from an established Post Closure Reserve. At December 31, 2010 the gross book value of all capital assets is $325 million, with $110 million depreciated. While regular maintenance takes place as part of the ongoing operating budgets, more significant rehabilitation, upgrades, renovation, and/or replacement of processing equipment are needed. This work is categorized under two categories as follows

Collection Services Infrastructure - includes work related to Collection Services facilities at Kennedale, at Eco Stations and at Recycle Depots.

Processing and Disposal Infrastructure - Includes work related to the Edmonton Waste Management Centre (EWMC) site such as Clover Bar Landfill rehabilitation, site roadway improvements, the overall site drainage system improvements and utility services network expansion/ improvement. It also includes work related to established facilities and systems at the EWMC such as the Integrated Processing & Transfer Facility, Composting Facility, Materials Recovery Facility, Construction & Demolition Facility, Biofuels Research Facility and smaller facilities on site.

Financial Implications

Two projects drive the need for funding in the 2012-2014Capital Budget:

1. Eco Station Facilities Rehabilitation (Proposed 2012-14 capital need - $2.30 million)

   Funding is needed to upgrade the Coronation Eco Station to address traffic congestion, reduce impact on adjacent businesses, increase customer convenience and allow for large item reuse activities. Pavement replacement is also needed at the Strathcona Eco Station.

2. EWMC Infrastructure Rehabilitation (Proposed 2012-14 capital need - $28.73 million)

   The EWMC is a 233 hectare site that includes infrastructure elements as outlined above. Approximately $9.5 million is required annually to expand, rehabilitate, and replace systems as they reach the end of their useful lives or are replaced by improved systems for greater operational efficiency. While the exact areas of focus vary from year to year, annual investments typically include the rehabilitation (soil capping and revegetation) of the landfill, upgrades to the aging landfill groundwater diversion system, expansion of the groundwater monitoring system, and upgrades to the leachate collection and treatment systems to manage continuing leachate production at the landfill. Investment in this work is necessary to meet the requirements of regulatory approvals and operational needs. Investments are also made in rehabilitation of roadways and expansion of utilities as needed. From 2012 t0 2014 there will also be ongoing investment in upgrading of components of the Composting Facility and the Materials Recovery Facility to keep up with growing volumes for processing.

Edmonton Waste Management Centre

The projected financial and operating impacts of these projects have been reflected in the Waste Management Utility Operating Budget Model in the years required.

Waste Management Utility

Capital Project Update: Vehicles and Equipment Acquisition

This is a status update of an approved ongoing project.

Background/Status Update

Currently, the Waste Management Utility uses 102 collection vehicles - 80 for single family, 15 for multi-family, 4 for Recycling Depots and 3 for Eco Stations. The Utility also uses 14 highway tractors and 44 long haul trailers to transport non-recyclable and non-compostable waste to landfills. The service lives of these vehicles are typically 200,000 km for waste collection vehicles, 8 years for highway tractors and 10 years for long haul trailers.

The Utility requires front-load bins (8100 units), side-load bins (600 units) and roll-off bins (33 units) in providing services to its customers and for internal movement of materials at the Edmonton Waste Management Centre. Front-load bins are used for servicing the multi-family sector, automated side load bins for servicing Recycle Depots, and roll-off bins for the Big Bin Program and Edmonton Waste Management Centre operations. These receptacles vary in age and state of repair. The containers can have average useful lives of 15 years. In addition to vehicles and waste containers, the Utility relies on numerous pieces of specialty portable equipment in its operations. These include screens, conveyors, compost turning machines, wood grinding units, and other specialized equipment.

Financial Implications

Two projects drive the need for funding in the 2012-2014 Capital Budget:

1. Vehicles and Equipment (Proposed 2012-14 capital need - $22.93 million)

   Funding is needed for acquisitions of vehicles (replacement and growth) and for specialty portable equipment.

2. Waste Containers (Proposed 2012-14 capital need - $6.03 million)

   Funding is needed for containers described above. Efforts are made to spread the replacement of containers evenly over the long term, with an average replacement requirement of $2 million annually.

The total proposed 2012-2014 Capital Budget for Vehicle and Equipment Acquisition totals approximately $29 million. The useful lives of these capital assets vary between 5 and 15 years. Given that the Utility strives to level out the annual capital requirement for vehicles and equipment, and that such assets are continually being replaced as they reach the end of their useful lives, $27 million of the $29 million required is being funded through retained earnings. In the long term, the intention is to fully fund these types of capital expenditures through retained earnings and not through borrowing.

The projected financial and operating impacts of these projects have been reflected in the Waste Management Utility Operating Budget Model in the years required.

Branch — Waste Management Services

Proposed 2012 Budget—User Fee Information

Facility User Fees (Non-regulated Rates)

Fee Description	Proposed Change (2010 to 2011)	Explanation
Fees charged for waste disposal at the Edmonton Waste Management Centre	• Commercial waste fee increase from $68.00 to $75.00 per tonne • Commingled construction and demolition waste increase from $55.00 to $60.00 per tonne • Source Separated construction and demolition waste increase from $35.00	Increase in facility user fees for the Edmonton Waste Management Centre reflects the transition to higher cost processing systems to replace landfill capacity in Edmonton.

Utility Fees (Regulated Rates)

Driver for Change in Regulated Rate	Proposed Change (2011 to 2012)	Proposed Percentage Change (2011 to 2012)
Change in Single Family Monthly Utility Fees End use of Retained Earnings to reduce fee increases. $1.00 Depreciation and debt repayment expenses $0.55 Collection, processing and disposal operations. $0.50 Continued phase in of full allocation of Shared Services costs. $0.21 **Total Change** **$2.26**	Increase in single family monthly utility fee $2.26 (from $31.34 in 2011 to $33.60 in 2012) Increase in multi-family monthly utility fee $1.47 (from $20.37 in 2011to $21.84 in 2012)	Change in the monthly utility fee 7.2%

Bylaw Requiring Approval

Bylaw Number	Description
Waste Management Bylaw #15931	To amend current Bylaw #13777 for facility fees and monthly utility rate.

Waste Management Utility

Pro-Forma Statements

	2012 Forecast	2013 Forecast	2014 Forecast	2015 Forecast	2016 Forecast
Revenues					
Rate Revenue	113,797	123,109	132,701	142,992	151,244
Program Revenue	24,555	27,504	29,519	30,525	31,560
Grant Revenue	6,000	-	-	-	-
Total Revenues	**144,352**	**150,613**	**162,220**	**173,517**	**182,804**
Expenses					
Operating & Maintenance	114,103	115,688	122,895	127,292	134,055
Shared Services	6,249	7,183	8,143	8,363	8,587
Customer Billing Service	4,438	4,676	4,923	5,182	5,470
Depreciation	16,805	18,086	19,123	19,786	21,603
Interest	11,814	12,325	12,360	12,418	12,517
Subtotal	153,409	157,958	167,444	173,041	182,232
Biosolids Revenue	(7,149)	(7,465)	(7,606)	(7,811)	(8,021)
Recovery for City Litter Collection	(1,908)	(1,955)	(2,294)	(2,356)	(2,419)
Net Expenses	**144,352**	**148,538**	**157,544**	**162,874**	**171,792**
Net Income	**-**	**2,075**	**4,676**	**10,643**	**11,012**
Opening Retained Earnings	40,516	45,905	52,196	61,863	75,008
Net income (loss)	-	2,075	4,676	10,643	11,012
Post closure liability draw for capital	750	875	511	-	-
Amortization of contributed capital	(330)	(330)	(330)	(330)	(330)
Vehcile equity transfer	4,969	3,672	4,810	2,832	2,616
Ending Retained Earnings	**45,905**	**52,196**	**61,863**	**75,008**	**88,306**
Single Family Monthly Unit Rate	$33.60	$35.75	$37.90	$40.17	$41.79
Monthly $ Increase over previous year	$2.26	$2.15	$2.15	$2.27	$1.62
Rate Increase	7.2%	6.4%	6.0%	6.0%	4.0%

Waste Management Utility

Pro-Forma Statements

	2012 Forecast	2013 Forecast	2014 Forecast	2015 Forecast	2016 Forecast
Assets					
Cash	14,002	10,782	15,021	21,929	29,039
Other Current Assets	13,188	13,188	13,188	13,188	13,188
Total Assets	27,190	23,970	28,209	35,117	42,227
Liabilities					
Liabilities	15,753	15,753	15,839	15,839	15,839
Landfill closure and post-closure	17,163	15,761	14,708	14,166	13,610
Long-term Debt	235,147	235,308	231,927	232,418	229,842
Total liabilities	268,062	266,822	262,474	262,424	259,291
Net Financial Assets (Net Debt)	**(240,872)**	**(242,852)**	**(234,265)**	**(227,307)**	**(217,065)**
Non-Financial Assets					
Contributed Tangible Capital Assets	10,957	10,627	10,296	9,966	9,636
Non-Contributed Tangible Capital Assets	275,809	284,410	285,820	292,337	295,724
Other Assets	11	11	11	11	11
Total Non-Financial Assets	286,777	295,048	296,128	302,315	305,371
Retained Earnings	45,905	52,196	61,863	75,008	88,306

Waste Management Utility

Financial Indicators

	2012 Forecast	2013 Forecast	2014 Forecast	2015 Forecast	2016 Forecast
1 Rates Sufficient to Meet Expenses					
Implementation Plan - Retained Earnings					
Net Income (loss)	$ -	$ 2,074	$ 4,676	$ 10,643	$ 11,013
Target	*Positive Net Income*				
2 Fair and Reasonable Return					
Return on Rate Base	0.0%	0.7%	1.5%	3.5%	3.5%
Target	*Return to be between 4% and 10%*				
Monthly Billing Increase	*$ 2.26*	*$ 2.15*	*$ 2.15*	*$ 2.27*	*$ 1.62*
Impact of Customer Rate	*7.2%*	*6.4%*	*6.0%*	*6.0%*	*4.0%*
3 Financing of Capital Investments					
Debt Coverage Ratio	1.1	1.2	1.2	1.4	1.4
Debt to Net Assets Ratio	85%	83%	81%	80%	78%
Target	*Debt Coverage Ratio Not Less than 1.3* *Debt to Net asset ratio at 60%*				
4 Cash Balance					
Uncommitted Cash Balance	$ 14,002	$ 10,782	$ 15,021	$ 21,929	$ 29,039
Next Year's Capital Financed by RE	$ 8,482	$ 9,623	$ 7,195	$ 7,184	$ 8,291
Target	*Sufficient cash for planned capital investment to be financed by Retained Earnings*				
5 Long Range Plans					
Pro-forma Information	10 Years	10 Years	10 Years	10 Years	10 Years
Target	*10 year financial planning horizon*				

City of Edmonton Waste Management Utility

2012 Utility Rate Filing

September 12, 2011

Waste Management Utility Rate Filing Table of Contents

1.0 Introduction

The 2012 Rates Report represents the second year of rate filing for the Waste Management Utility. Established by City Council as a Utility in January 2009, this Utility is expected to have completed its transition from a partially tax funded operation to a full Utility operation by the end of 2011. The upcoming year will also mark substantial completion of City-funded capital development to transform Waste Management Services (WMS) from primarily a landfill operation to a fully integrated processing and disposal service with the focus on waste diversion.

In 2011, City Council established a new governance framework for the Utilities. The Utility Committee (UC), comprised of four members of Council, is responsible for reviewing all matters relating to the Utilities' operations and make recommendations to Council where budgets and policies are involved. City Council also retains the services of a Utility Advisor (UA) to provide advisory services to Council and the UC.

Over the course of 2011, Waste Management Utility provided the UC with the following key documents, which were either approved or received for information:

- 2010 Waste Management Utility Annual Report
- Policy C558 Waste Management Utility Fiscal Policy
- Waste Management Utility Cost of Service Study
- 2012-14 Waste Management Utility Strategic Business Plan

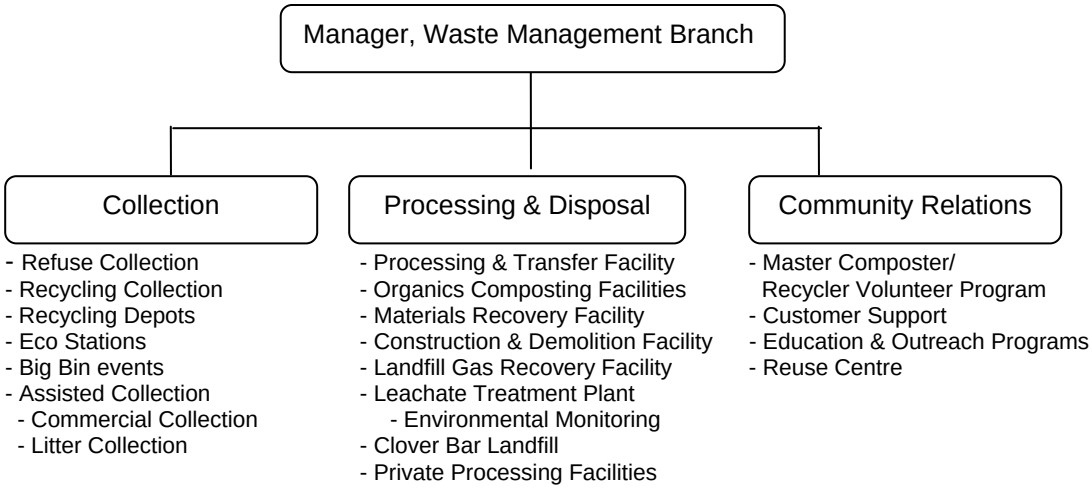
The following operational changes and enhancements approved in the 2012-2014 Waste Management Utility Strategic Business Plan have been accommodated in the 2012 Budget:

- Full operation of the Construction and Demolition Facility on a net revenue basis.
- Expected increased cost of new contracts for single family collection services.
- Change in schedule for single family refuse and recyclables collection from rotating and part bi-weekly to weekly and non-rotating. With services provided on a 4 day10 hour basis to maximize productivity, this change is cost neutral.

The Waste Management Utility 2012 Rate Filing has been prepared based upon the directions contained in the documents listed above. In addition to this 2012 Rate Filing, Administration has prepared the 2012 Budget Documents for the Waste Management Utility following the corporate format to enable communication with citizens. This document will be publicly released on October 26, 2011.

The Office of the City Auditor has completed an operational audit of the Waste Management Utility that is scheduled for consideration at the November 7, 2011 Audit Committee Meeting.

2.0 Functional Organization Structure



3.0 Methodology and Key Assumptions

The 2012 Rates Report is based upon the 2011 Forecast prepared as of July 31, 2011. The City of Edmonton provided corporate budget guidelines that include the following:

	2012	2013	2014
Population projection	812,000	825,000	837,000
Consumer Price Index	2.65%	2.67%	2.69%
Economic increases	Please see confidential memo		
Canada Pension Plan	$45,900	$47,000	$48,200
	4.95%	4.95%	4.95%
Local Authorities Pension Plan – maximum	$49,400	$50,500	$51,700
Below maximum	9.91%	10.43%	10.43%
Above maximum	13.74%	14.47%	14.47%
Employment Insurance – maximum	$45,200	$46,200	$47,300
Premium rate	2.42%	2.42%	2.42%
Maximum contribution	$1,095	$1,119	$1,146
Major Medical - with dependents:			
C.U.P.E. Local 30	$1,016	$1,128	$1,253
A.T.U. Local 569	1,138	1,264	1,403
I.B.E.W. Local 1007	1,016	1,128	1,253
Civic Service Union Local 52	896	995	1,105
Non-union and Management	495	550	611
Major Medical - without dependents:			
C.U.P.E. Local 30	$ 508	$ 564	$ 626
A.T.U. Local 569	569	632	702
I.B.E.W. Local 1007	508	564	626
Civic Service Union Local 52	449	498	553
Non-union and Management	495	550	611
Dental Plan - with dependents:			
C.U.P.E. Local 30	$1,057	$1,131	$1,211
A.T.U. Local 569	1,057	1,131	1,211
I.B.E.W. Local 1007	1,057	1,131	1,211
Civic Service Union Local 52	1,134	1,214	1,299
Non-union and Management	1,178	1,261	1,350
Dental Plan - without dependents:			
C.U.P.E. Local 30	$ 423	$ 453	$ 485
A.T.U. Local 569	423	453	485
I.B.E.W. Local 1007	423	453	485
Civic Service Union Local 52	454	486	520
Non-union and Management	471	504	540
Health Spending Account			
Union employees – full time	$ 500	$ 500	$ 500
Non-union employees – full time	500	500	500
CEMA – full time	1,100	1,100	1,100
Union employees – part time	250	250	250
Non-union employees – part time	250	250	250
CEMA – part time	550	550	550

Other assumptions used included the following:

- Cost of debt
  - 10 year term (4.85%, 5.05%, 5.25%)
  - 15 year term (5.15%, 5.35%, 5.55%)
  - 25 year term (5.45%, 5.65%, 5.85%)
- Staff vacancy – unless otherwise stated, the typical expectation for staff vacancy is 3% for operational staff and 2% for the remainder. This has been modified where necessary based on historic trends and 2011 forecast.
- Growth – customer growth assumption is derived from the corporate projection of population. The 2012 budget customer billing base is made up of a monthly average of 184,605 (1.5% growth) for the single family sector and 149,145 (2.0% growth) for the multi-family sector.

4.0 Operational Performance

The Waste Management Utility's strategic directions align with the City Council's 30-year vision. The table below lists the City's 10-year goals and corresponding outcomes and measures pertaining to waste management services.

Strategic Goal	Corporate Outcome	Corporate Measure	Department Outcome	Department Measure	2009	2010	2011 Target	2012 Target
Preserve & Sustain Edmonton's Environment	Partnerships with citizens, communities and organizations are leveraged to improve Edmonton's environmental health	% growth of partnerships the city has entered into in support of environmental sustainability practices	Programs are supported by citizen participation and research partnerships	Percentage of homeowners recycling	89%	89%	90%	91%
				Number of users of Eco Stations and Big Bin events	196,000	220,000	231,000	241,000
	Edmonton strives to be a leader in environmental advocacy, stewardship, preservation, and conservation	Proportion of waste diverted from landfill	Leadership is demonstrated in reducing impacts on the environment	Proportion of waste diverted from landfill	41%	44%	60%	60%
				Tonnes of non-residential waste diverted from landfill	N/A	47,000	54,000	70,000
Improve Edmonton's Livability	Safe and Clean City	% citizens who feel Edmonton is a clean city	Public Health is Maintained	Number of missed collection stops per 10,000	4	4	4	4
Ensure Edmonton's Financial Sustainability	The City has well managed and sustainable assets and services	Fiscal Sustainability Index	Operations are well managed and sustainable	Cost per tonne of material processed at Edmonton Waste Management Centre	$41	$77	$68	$65
				Cost per tonne for curbside collection of refuse and recyclables	$115	$115	$122	$124

5.0 Rate Request and Factors Influencing Rate Requirement

The 2012 Rates Report includes a request for rate increase as follows:

	2011 Monthly Fee	Proposed 2012 Monthly Fee	Requested Monthly Increase	Annual Increase
Single Family Residential	$31.34	$33.60	$2.26	$27.12
Multi-Family Residential	$20.37	$21.84	$1.47	$17.64

The proposed rates achieve the following:

- Ending the use of Retained Earnings to reduce rate requirements resulting from the change from a landfill to a waste diversion operational focus.
- Substantial completion of the capital investments needed for changing the service delivery methodology from one that relies primarily on landfill of waste materials to one that focuses on waste diversion from landfill.
  - Includes first year depreciation (at 50%) of $35 million of capital assets put into service.
  - Reflects full year cost of interest expense on debt issued in 2011 for capital investments.
- Reflects the 2nd year of a 4-year strategy to full costing of Shared Services.
- Meet operational needs of the Utility.

Ending the use of Retained Earnings

Approximately $19 million has been set aside in years prior to 2008 for the purpose of smoothing out the rate impacts resulting from the transition of the Waste Management operations from landfill to integrated waste processing and diversion initiatives. The amounts accessed are as follows:

2009 actual	$ 5,246
2010 actual	8,500
2011 budget	3,400
2012 proposed	0

The $3.4 million addition to the customer rate requirement in 2012 translates to $1.00 of the $2.26 monthly rate increase.

Depreciation Expense

The proposed rates reflect full year depreciation on assets projected to be put into service in 2011 of $55 million and half year rule for new 2012 in-service assets of $35 million. The projected 2012 Depreciation Expense is $16.8 million, an increase of $1 million over the 2011 amount. This accounts for $0.31 of the $2.26 monthly rate increase.

Interest Expense

The proposed rates include the additions of a full year payment on debt taken out in 2011 of $46 million and half year payment on projected 2012 debt of $29 million. This increases the annual interest expense by $2.3 million and accounts for $0.23 of the $2.26 monthly rate increase.

Implementation of 2nd Year of Shared Services Full Costing

Prior to WMS becoming a Utility in 2009, the costs associated with Corporate Overhead, Finance, Information Technology, Human Resources, Materials Management, etc. were paid for through property taxes and not through customer rates. Through the 2011 Budget Process, City Council directed that $5.1 million of the $7.5 million be reflected in the customer rates, with the balance to be phased-in over a 3-year period. The proposed 2012 rates include an addition of $0.7 million towards full costing of Shared Services. This accounts for $0.21 of the $2.26 monthly rate increase.

Operational Needs

After accounting for the changes that are not within the direct control of the Utility, there remains a need for rate increase to maintain the services provided to the customers. The proposed 2012 budget contains an additional $2.4 million (net of increases in Program Revenue and Rate Revenue due to customer growth) to meet operational and maintenance needs, of which $0.7 million relates to changes in Shared Services discussed above. The remaining increase of $1.7 million represents an increase of 1.6% over the 2011 budget; accounting for a monthly increase is $0.50. Details of these are provided for in Section 8.0 of this filing.

6.0 Financial Indicators

City Council approved Policy C558 Waste Management Utility Fiscal Policy on June 1, 2011. The Policy identifies a number of Financial Indicators which when achieved, will provide assurance on the financial sustainability of the Utility in the long-term.

As indicated to City Council when the Policy was debated, the Waste Management Utility is not expected to achieve the stated targets for a period of time, given that it is in its infancy and need for prudency in balancing between financial risks and customer rates. The goal is to systematically progress towards the stated targets while balancing the impacts to customer rates. Below is a summary of the Financial Indicators and the expected outcomes if the Proposed 2012 Budget is approved.

	Actual		Forecast										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1 Rates Sufficient to Meet Expenses													
Implementation Plan - Retained Earnings	$ (5,246)	$ (8,500)	$ (2,348)					$ -	$ -	$ -	$ -	$ -	$ -
Net Income (loss)				$ (0)	$ 2,074	$ 4,676	$10,643	$11,013	$14,923	$19,198	$23,580	$27,970	$ 33,357
Target			***Positive Net Income***										
2 Fair and Reasonable Return													
Return on Rate Base	-2.6%	-4.0%	-1.0%	0.0%	0.7%	1.5%	3.5%	3.5%	4.7%	6.1%	7.4%	8.7%	10.5%
Target			***Return to be between 4% and 10%***										
Monthly Billing Increase	*$ 2.10*	*$ 3.26*	*$ 1.49*	*$ 2.26*	*$ 2.15*	*$ 2.15*	*$ 2.27*	*$ 1.62*	*$ 1.67*	*$ 1.73*	*$ 1.81*	*$ 1.86*	*$ 1.95*
Impact of Customer Rate	*8.6%*	*12.3%*	*5.0%*	*7.2%*	*6.4%*	*6.0%*	*6.0%*	*4.0%*	*4.0%*	*4.0%*	*4.0%*	*4.0%*	*4.0%*
3 Financing of Capital Investments													
Debt Coverage Ratio	0.9	0.8	1.1	1.1	1.2	1.2	1.4	1.4	1.5	1.6	1.8	1.9	2.1
Debt to Net Assets Ratio	96%	90%	87%	85%	83%	81%	80%	78%	75%	71%	69%	66%	64%
Target			***Debt Coverage Ratio Not less than 1.3 Debt to Net Assets Ratio at 60%***										
4 Cash Balance													
Uncommitted Cash Balance	$ 68,573	$ 41,032	$18,868	$14,002	$10,782	$15,021	$21,929	$29,039	$37,595	$43,901	$60,955	$81,610	$110,857
Next Year's Capital Financed by RE	11,237	8,809	8,758	8,482	9,623	7,195	7,184	8,291	12,968	7,255	9,228	5,718	5,718
			Sufficient cash for planned capital investment that are to be financed by Retained Earnings plus working capital										
5 Long Range Plans													
Pro-forma Information		10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Target			***10-year financial planning horizon***										

7.0 Utility Summary Schedule ($000's)

Line #		Reference	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Budget	% Variance	2012 Budget vs 2011 Forecast	% Variance
Expenses											
1	Operating and Maintenance	Schedule 8.0	86,108	102,292	104,938	105,608	109,403	4,465	4.3%	3,795	3.6%
2	Depreciation Expense (net)	Schedule 9.0	12,040	14,867	15,240	15,836	16,805	1,565	10.3%	969	6.1%
3	Debt Interest	Schedule 9.3	7,777	9,341	11,021	9,560	11,814	794	7.2%	2,255	23.6%
4	Other Financial Costs	Schedule 8.0	5,510	(265)	(565)	(590)	(510)	55	-9.7%	80	-13.6%
5	Return on Rate Base	Schedule 11.1	-	-	-	-	-	-	0.0%	-	0.0%
	Subtotal		**111,435**	**126,235**	**130,634**	**130,413**	**137,512**	**6,878**		**7,099**	
Non-Rate Revenues		Schedule 10.1	**20,698**	**19,819**	**23,091**	**23,423**	**23,715**	624	2.7%	292	1.2%
Draw from retained earnings			**5,246**	**8,500**	**3,400**	**2,348**	**-**	(3,400)	-100.0%	(2,348)	-100.0%
Existing Rate Revenues			**85,490**	**97,916**	**104,143**	**104,143**	**106,141**	1,998	1.9%	1,998	1.9%
Funding Required through Rate Increase			**0**	**0**	**(0)**	**500**	**7,656**	**7,656**		**7,157**	
						Total Rate Revenue	**113,797**				

Note: This table has been adjusted to remove the impacts of the one-time Biofuels Grant for comparison purposes.

The 2012 total proposed expenditure budget of $137.5 million represents an increase of $6.9 million over the 2011 budget or $7.0 million over the 2011 forecast results. Just under half of the proposed increase ($3.3 million) relates to factors that are a reflection of past decisions. The remaining $3.8 million increase is explained in the following schedules. These schedules have been prepared with comparisons based on the Proposed Budget against the 2011 Forecast.

The Proposed 2012 Budget contains a couple of key uncertainties. All unionized staff have been without a contract since January 2011 and while negotiations are ongoing, it is not clear as to whether or not a negotiated agreement will be reached prior to the deliberation of the 2012 budget. In addition, the major collection contract is also up for renewal, the results of which will not be known until late fall. Please see separate confidential memo that outlines the approach taken with respect to these two uncertainties.

Non-rate Revenues is projected to increase by $0.3 million.

As indicated earlier, the use of Retained Earnings to reduce rate requirements ended in 2011. The Proposed 2012 Budget reflects rates that fully support the identified cost of service.

Included in the Existing Rate Revenues is increased number of customers based upon the corporate projection on population growth.

8.0 Operations and Maintenance ($000's)

Line #		Reference	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2011 Forecast vs Budget	% Variance	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
Operations & Maintenance Expense											
1	Personnel	**Schedule 8.1**	21,447	27,404	30,424	30,408	(16)	-0.1%	32,394	1,987	
2	Materials, Goods, and Supplies		4,726	4,411	4,701	4,683	(18)	-0.4%	5,228	545	
3	External Services - Contracts	**Schedule 8.2**	44,783	51,611	51,435	52,447	1,012	2.0%	52,439	(8)	
4	Fleet Services	**Schedule 8.3**	9,273	10,362	11,358	11,931	573	5.0%	11,959	28	
5	Other Expenses		2,133	2,590	1,409	1,428	19	1.3%	2,083	655	
6	Utilities		2,680	3,206	4,596	3,892	(704)	-15.3%	4,166	274	
7	Shared Services	**Schedule 8.4**	3,495	4,250	5,050	5,050	-	0.0%	5,751	701	
8	Customer Billing Services		4,131	3,876	4,239	4,239	-	0.0%	4,438	199	
	Subtotal		92,667	107,710	113,211	114,077	866		118,459	4,382	3.8%
9	Biosolid/Nutri-Gold Recoveries		(6,560)	(5,418)	(6,335)	(6,532)	(197)		(7,149)	(617)	
10	Recovery for City Litter Collection		-	-	(1,938)	(1,938)	0		(1,907)	31	
	O & M Expenses		**86,108**	**102,292**	**104,938**	**105,608**	**670**		**109,403**	**3,795**	**3.6%**
11	Depreciation	**Schedule 9.0**	12,040	14,867	15,240	15,836	596	3.9%	16,805	969	6.1%
12	Debt Interest	**Schedule 9.1**	7,777	9,341	11,021	9,560	(1,461)	-13.3%	11,814	2,255	23.6%
13	Other Financial Charges		5,510	(265)	(565)	(590)	(25)	4.4%	(510)	80	-13.6%
	Expenses before One-Time		111,435	126,235	130,633	130,413	(220)		137,512	7,099	
14	Grant Payment		6,600	-	13,400	7,400	(6,000)	-44.8%	6,840	(560)	
	Net Expenses		**118,035**	**126,235**	**144,033**	**137,813**	**(6,220)**		**144,352**	**6,539**	4.7%

Line 2 – Materials, Goods, and Supplies

Of the proposed increase of $545, the majority ($485) relates to costs associated with the in-service operations of the Integrated Processing and Transfer Facility.

Line 5 – Other Expenses

Included in Other Expenses are Professional Fees, Consulting Services, Other General Costs, and Intra-municipal Charges. The Proposed 2012 Budget has been provided based upon historical trends, along with adjustments for the anticipated rate design study, development and public testing of options for low volume generators, and changes to Intra-municipal Charges that reflect 25% share of the General Manager's Office.

Line 6 – Utilities

Utilities include Power, Water and Sewer, Natural Gas, Waste, and Telephone Expenses. The 2011 forecasted expense is significantly lower than the original budget as the Composter was shut down for one month; retrofit work performed resulted in improved energy efficiency; and natural gas rates remained lower than expected through the winter months. The 2012 Proposed Budget reflects current commodity prices, and adjustments for the 2011 shut-down and increased energy consumption expected when the final phase of the Integrated Processing and Transfer Facility comes on stream.

Line 8 – Customer Billing Services

The Waste Management Utility contracts with EPCOR to provide customer billing and collection services. The existing agreement expires the end of 2011. The Proposed 2012 Budget reflects inflationary increases and customer growth.

Line 9 – Biosolid/Nutri-gold Recoveries

The Waste Management utility provides services to Sanitary Drainage for properly disposing the residuals left behind from the wastewater treatment process. There are strict regulations around the proper disposal of biosolids.

Currently, the methods employed include composting at the Edmonton Waste Management Centre and the Nutri-gold program (spread on farmland), which is subject to weather conditions and soil composition. As part of a legacy agreement from a previous operator of the Composting Facility, Sanitary Drainage has not paid the full cost for composting services.

The Proposed 2012 budget reflects a three-year phase-in period over which the subsidy that has been provided by the Waste Management Utility will end, along with an increase in the volume of biosolids processed from 87% to 90% of the annual production.

Line 10 – Recovery for City Litter Collection

The Waste Management Utility provides litter collection on behalf of the City of Edmonton in downtown, Old Strathcona, and various Business Revitalization Zones. A small adjustment is made to reflect anticipated costs based on 2011 experience.

Line 13 – Other Financial Costs

Other Financial Costs are reflected as a negative expense as it is anticipated that the costs associated with landfill post closure activities and the Leachate Treatment plant will be funded from the Post Closure Liability.

Line 14 – Grant

The Waste Management Utility acts as the intermediary for the flow of grant support from the Province for the Enerkem Alberta Biofuel's Facility and the Advanced Energy Research Facility.

8.1 Personnel Costs ($000's)

Line #		2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
Personnel Costs								
1	Salaries & Wages	15,668	19,908	21,986	21,970	23,107	1,138	5.2%
2	Overtime	491	1,004	877	778	1,010	232	29.8%
3	Allowances and Benefits	5,288	6,491	7,560	7,660	8,277	617	8.1%
	Total Personnel	**21,447**	**27,404**	**30,424**	**30,408**	**32,394**	**1,987**	

As indicated earlier, union contracts for all non-management staff expired December 31, 2010. Negotiations with all unions are ongoing; however, no settlements have been reached to date. Please see confidential memo for further information.

Salaries and Wages are forecasted to be close to the 2011 budgeted amount. The relatively small increase above inflation reflects the addition of new staff.

The 2012 Proposed Budget includes an increase of 22.5 FTEs. Two staff are required under Collection Services to manage projected customer growth. The 2012 Proposed Budget includes a full-year's operation of the Construction and Demolition Facility, increased volume of material to handle, and the start up of the final phase of the Integrated Processing and Transfer Facility in the fall of 2012. A total of 20.5 FTEs are required under Processing and Disposal to staff for these two facilities and to manage the added volume.

The Proposed 2012 Budget for Overtime has been adjusted to take into consideration the 2010 actual results. Overtime is used where there are unplanned peak requirements that are most effectively managed through the use of existing staff and for planned activities that produces the overall lowest cost of a service.

The projected increase for Allowances and Benefits has been projected at $617, with virtually all employer paid benefits increasing at rates greater than inflation.

8.2 External Services ($000's)

Line #		2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
External Services								
1	Collection Services - Refuse	10,909	10,931	12,005	11,505	11,900	395	3.4%
2	Collection Services - Recycling	4,090	4,275	4,946	4,920	5,078	158	3.2%
3	Eco Station Material Processing	973	996	1,427	1,427	1,508	81	5.7%
4	Organic Processing	11,326	11,620	10,805	8,765	8,569	(196)	-2.2%
5	Contracted Landfill Disposal	5,764	8,895	6,198	8,300	8,429	129	1.6%
6	Refuse Hauling to Ryley Landfill	-	1,106	724	1,700	943	(757)	-44.5%
7	Nutri-Gold Program	2,836	1,976	1,805	3,600	1,854	(1,746)	-48.5%
8	Integrated Processing Transfer Facility	326	3,350	2,282	3,096	2,843	(254)	-8.2%
9	Materials Recovery Facility	5,645	6,607	7,125	6,543	7,310	767	11.7%
10	EWMC Site Operations & Maintenance	1,323	1,337	2,967	1,441	2,394	953	66.2%
11	Construction and Demolition Recovery	-	15	410	410	520	111	27.1%
12	Other	868	504	741	741	1,091	350	47.3%
	Total External Services	**44,060**	**51,611**	**51,435**	**52,447**	**52,439**	**(8)**	

Line 1 and 2 – Collection Services

The major contract for single family collection services expire mid-2012 and new contracts will be tendered and awarded at end of 2012. As such, a small allowance has been provided for contract increases and volume growth. For further discussions, please see confidential memo.

Line 3 – Eco Station Material Processing

Contracted collection and processing of material, including hazardous material collected at the three Eco Stations.

Line 4 - Organic Processing

The decrease in expenses reflects the reduction in staff overtime with plant process improvements.

Line 5 – Contracted Landfill Disposal

Since the approval of the 2011 Budget, the West Edmonton Landfill is quickly approaching its capacity and access to the site is not possible or significantly restricted in inclement weather. As a result, there has been increased hauling to the distant Ryley Landfill. The Proposed 2012 Budget reflects increased disposal at the distant landfill as a result of expected unavailability of West Edmonton Landfill, tempered with increased diversion of non-residential waste stream.

Line 6 – Refuse Hauling to Ryley Landfill

To complement the City's long haul operations, contracted haulers are engaged to haul material from the Waste Management Centre to the Ryley landfill. 2011 projection reflects inaccessibility of West Edmonton landfill during the wet summer, and the use of the transfer facility of the Waste Management Centre, and consequent haul to Ryley.

Line 7 – Nutri-gold Program

The Nutri-gold Program is one of two methods employed by Waste Management Utility in the proper disposal of biosolids. The unusually favourable weather conditions in August and September has allowed a large volume of material to be hauled and spread onto farmland. The Proposed 2012 Budget reflects a more typical operation.

Line 8 – Integrated Processing and Transfer Facility

Start up of this facility in 2010 saw higher than budgeted expense related to stocking of replacement parts, de-bottlenecking work, & learning of new Standard Operating Procedures. The 2011 Forecast reflects the need for longer operating hours during extended peak volume peaks. The lower 2012 Budget reflects diversion of volume to the new mixed construction and demolition operation.

Line 9 – Materials Recovery Facility

The Proposed 2012 Budget reflects higher revenue share payment to the MRF operator with overall anticipated higher revenues projected from commodity market price trends.

Line 10 – EWMC Site Operations and Maintenance

This captures operations and maintenance activities throughout the Waste Management Centre that support the overall site operation. Included would be physical maintenance of the site, engineering studies (GHG verification as an example), the sale and marketing of compost, and funding for pursuit of business opportunities and the availability of the Advanced Energy and Research facility for research activity.

The change between the 2011 projection and 2012 is related to targeted reductions to meet spending targets, increased cost of mattress handling (bed bugs), and no funds required for business development in 2011.

Line 11 – Construction and Demolition Facility

Costs reflect start of the new mixed processing facility in 2011 and full-year's operation in 2012.

Line 12 – Other

This category of cost captures contractor services for long haul to landfill, hauling and disposal of materials from Eco Stations, and the Advanced Energy Research Facility (AERF). This category also includes consultant services for the Edmonton Waste Management Centre, compost marketing and business development. The 2012 increase primarily reflects increased contractor long haul and Eco Station costs and full-year's operation of the AERF.

8.3 Fleet Services ($000's)

Line #		2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
Fleet Services								
1	Fleet Charges							
	- fixed	3,902	1,921	2,329	2,329	2,072	(257)	-11.0%
	- variable	4,200	5,157	5,731	5,769	6,174	405	7.0%
2	Fuel	-	1,569	1,805	1,914	2,209	295	15.4%
3	Major Repairs	1,170	1,715	1,493	1,919	1,504	(415)	-21.6%
	Total Fleet	**9,273**	**10,362**	**11,358**	**11,931**	**11,959**	**28**	

Fleet maintenance is provided by the City of Edmonton through the Fleet Services Branch. It operates on a cost recovery basis which include direct administration costs, but not corporate overheads.

Historically, annual Fixed Charges were paid to Fleet Services for the eventual replacement of the vehicles that they maintained. The capital assets were recorded on the books of Fleet Services. With the conversion of Waste Management to a full Utility, the Waste Management Utility has been taking back vehicles as they are replaced on an annual basis. When the vehicles are transferred, Fleet Services no longer levy a fixed charge on those vehicles while Waste Management starts reporting the associated depreciation expense. As a result, the number of vehicles "owned" by Fleet Service (and therefore the fixed charge) will decrease annually until the entire fleet is transferred back to Waste Management.

Variable Charges are costs paid the Waste Management utility for the ongoing maintenance of the fleet that it operates. The charges are based upon the type of vehicle and either the mileage driven or operating hours for heavy equipment.

Fuel commodity prices have increased in 2011 and are projected to continue to increase in 2012. The Proposed 2012 Budget reflects both increases to the commodity pricing and the number of vehicles and mileage driven.

Over 2011, as a result of the poor accessibility at the West Edmonton Landfill, a number of vehicles were damaged, leading to the City electing to haul refuse to Ryley during inclement weather conditions. The Proposed 2012 Budget reflects a typical operation year.

8.4 Shared Services ($000's)

Line #		2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
Shared Services								
1	Corporate Allocation (Central Management)	1,299	1,119	1,175	1,175	1,029	(146)	
2	Communications			199	199	215	16	
3	Transformation Services			2	2	-	(2)	
4	Finance & Treasury		663	1,027	1,027	1,409	382	
5	Corporate Information System			488	488	418	(70)	
6	Human Resources	2,196		463	463	691	228	
7	Legal Services		1,505	136	136	199	63	
8	Materials Management			186	186	210	24	
9	Information Technology			487	487	857	370	
10	Space Rent					503		
11	Buildings Services		963	887	887	220	(164)	
	Total Shared Services	**3,495**	**4,250**	**5,050**	**5,050**	**5,751**	**701**	13.9%

The Proposed 2012 Budget for Shared Services reflects an increase of $701. This is part of the phased-in process that results in the Utility paying for 79.6% (2011- 67.5%) of the full Shared Services Costs to the City of Edmonton. The remaining 21.4% will be reflected over the next 2 years.

The City of Edmonton undertook a major re-organization in June 2011, resulting in significant changes to the organizational structure, with shifts between Central Management Charges and other Departmental Charges. This made it difficult to compare the real increases in the cost of different services. At 100% of costs, the 2011 Shared Services Cost to Waste Management Utility was $7.5 million, compared to $7.2 million in 2012. The decrease is a reflection of the overall cost reductions stemming from the re-organization.

9.0 Depreciation and Interest Expense ($000's)

Line #		Reference	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
Depreciation Expense									
1	Depreciation Expense	**Schedule 9.1**	12,040	14,955	15,611	16,089	17,135	1,046	6.5%
2	Amortization (CIAC)	**Schedule 9.2**	-	(88)	(371)	(253)	(330)	(77)	30.4%
	Net Depreciation Expense		**12,040**	**14,867**	**15,240**	**15,836**	**16,805**	**969**	
3	Interest Expense		7,777	9,341	11,021	9,560	11,814	2,255	23.6%
4	Principal Repayment		7,999	9,426	12,163	10,996	13,772	2,750	25.0%

Depreciation Expense represents the amount of asset life used up during the operating period. It includes both Contributed and Non-Contributed Assets. The depreciation rate is dependent upon the different classes of assets, each with a pre-determined estimated useful life based upon historic experience. Waste Management's assets are divided into 41 different classes, with useful lives varying between 5 years and extending to 60 years.

Amortization represents the amount of benefit from Contributed Assets that are realized during the operating period. It is used to offset the amount of Depreciation.

Interest Expense and Principal Repayment represents the total annual cash requirement to service outstanding debt. As a result in delaying the start of construction of the third phase (production of refuse derived fuel) of the Integrated Processing and Transfer Facility and the

full completion of the Ambleside Eco Station, instead of planned issuance of $34.1 million in debt, only $12.4 million was actually issued. This resulted in a 2011 Forecast savings of $1.5 million. The Proposed 2012 Budget is based upon new debt issuance of $29.2 million.

9.1 Schedule of Depreciation Expense ($000's)

Line #		Asset Class	Expected Useful Life in Years	Accumulated Depreciation Forecasted Dec 2011	2012 Depreciation on Existing	1/2 Year Depreciation on New	2012 Total Depreciation
Depreciation Expense on Total Assets							
1	Major Building Structure	751001	60	584	617	34	651
2	Major Building Shell	751002	20	362	540	46	585
3	Major Building Interior	751003	15	491	522	28	550
4	Major Building Services	751004	20	1,229	1,298	144	1,442
5	Major Building Equipment	751005	25	94	94	-	94
6	Minor Building	751006	50	74	74	-	74
7	Major Building Temporary	751007	25	3	3	-	3
8	Composter Tipping Floor Building	331100	30	194	194	-	194
9	Composter Mixing Drums	331101	10	1,510	338	-	338
10	Bio-Solids De-watering Building	331102	30	36	36	-	36
11	Bio-Solids De-watering Plant	331103	12	757	757	-	757
12	Composter Aeration Building	331104	30	768	768	-	768
13	Composter Primary Download	331105	12	265	265	-	265
14	Composter Aeration System	331106	12	1,111	1,111	-	1,111
15	Composter Finishing Circuits	331107	12	381	381	-	381
16	Composter Wet Air System	331108	12	570	570	-	570
17	Composter Electrical	331109	20	267	267	-	267
18	Composter HVAC	331110	15	370	370	-	370
19	Landfill	331111	35	56	56	-	56
20	Landfill Pumphouse #1	331112	40	4	4	-	4
21	Landfill Pumphouse #2	331113	40	4	4	-	4
22	Leachate Collection System	331114	40	96	96	-	96
23	Groundwater Collection System	331115	40	46	46	-	46
24	Material Recovery Facility	331116	30	240	240	-	240
25	Material Recovery Equipment	331117	20	281	281	-	281
26	Cure Site	331118	30	247	247	-	247
27	EWMC Roads & Utilities	331119	35	286	356	42	398
28	Leachate Treatment Plant	331120	30	127	127	-	127
29	IPTF Tipping Floor	331121	15	144	144	-	144
30	Municipal Use Property	991200	N/A	-	-	-	-
31	MUP / ST Utility	991210	N/A	-	-	-	-
32	MUP / CF	991201	N/A	-	-	-	-
33	Site Improvements	331300	25	596	670	95	765
34	Major Building Site Work	751300	20	470	470	31	501
35	Waste Management Equipment	331400	15	957	989	52	1,040
36	IPTF Process Equipment	331401	20	797	1,095	103	1,198
37	IPTF Electrical Equipment	331402	10	209	268	-	268
36	Furniture	991400	20	87	88	-	88
37	Office Equipment	991401	5	-	-	-	-
38	General Equipment	991402	3 / 5/ 8/ 15	187	173	-	173
39	Vehicles - 5 Year	331500	5	116	116	40	156
40	Vehicles - 8 Year	331501	8	1,634	1,906	354	2,260
41	Vehicles - 12 Year	331502	12	439	503	84	587
	Total Depreciation			**16,089**	**16,083**	**1,052**	**17,135**

9.2 Amortization of Contributed Assets ($000's)

Line #		Asset Class	Expected Useful Life in Years	Accumulated Depreciation Forecasted Dec 2011	2012 Amortization on Existing	1/2 Year Amortization on New	2012 Total Amortization
Amortization on Contributed Assets							
1	Major Building Structure	751001	60	(21)	(21)	-	(21)
2	Major Building Shell	751002	20	(31)	(31)	-	(31)
3	Major Building Interior	751003	15	(29)	(29)	-	(29)
4	Major Building Services	751004	20	(18)	(18)	-	(18)
5	Major Building Equipment	751005	25	(68)	(68)	-	(68)
6	Major Building Site Work	751300	20	(7)	(7)	-	(7)
7	Furniture	991400	20	(2)	(2)	-	(2)
8	Equiupment - Processing	331401	20	(66)	(132)	-	(132)
9	Equiupment - Electrical	331402	10	(11)	(22)		(22)
	Total Amortization			**(253)**	**(330)**	**-**	**(330)**

Amortization is related to grant funded infrastructure for the Advanced Energy Research Facility

9.3 Schedule on Debt Servicing Costs ($000's)

Line #	Description	Debenture #	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast
Debt Servicing - Interest								
1	Materials Recovery Facility	Bylaw# 11959	29					
2	Compost Facility	Bylaw# 12604	4,977	5,045	4,936	4,936	4,750	(186)
3	Compost Plant Enhancements	Bylaw# 13610	171	136	114	114	90	(25)
4	SW ECO Station	Bylaw# 14230	282	302	331	287	341	54
5	EWMC Expansion - Land	Bylaw# 14232A	105	91	284	81	280	199
6	Organics Management System	Bylaw# 14232B	314	255	228	228	198	(31)
7	Processing and Transfer Facility	Bylaw# 14482	1,193	978	901	901	800	(101)
8	Kennedale Expansion-Land	Bylaw# 14942	44	40	37	37	33	(4)
9	Processing and Transfer Facility	Bylaw# 15111	633	2,001	2,432	1,962	2,771	809
10	Waste Mgmt Centre Infrastructure	Bylaw# 15213	12	280	716	562	707	146
11	Waste Containers	Bylaw# 15213	9	30	28	28	25	(3)
12	Waste Mgmt Branch Equipment - P&D	Bylaw# 15213	7	146	197	134	141	7
13	Kennedale Facilities Expansion	Bylaw# 15214	1	21	299	51	553	502
14	Equipment Storage & Maintenance Building	Bylaw# 15249	0	15	251	163	221	58
15	C & D Operation	Bylaw# 15344		3	132	75	194	119
16	NE ECO Station	Bylaw in 2011			88	-	385	385
17	Eco Station Facilities Upgrade	Bylaw in 2011			45	-	49	49
18	EWMC Facility Upgrade	Bylaw in 2011					262	262
19	Waste Mgmt Branch Equipment-Collection	Bylaw in 2011					16	16
		Total Debt Servicing	**7,777**	**9,341**	**11,021**	**9,560**	**11,814**	**2,255**
Average Cost of Debt			4.3%	5.1%	4.8%	4.4%	5.0%	

10.0 Non-Rate Revenue

Non-Rate Revenues are sources of financing that are raised through the operations of the Waste Management Utility and are used to offset the revenue requirement needed to provide regulated services to customers.

10.1 Breakdown of Non-Rate Revenue ($000's)

Line #		2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
1	Program Revenues	19,753	19,154	22,598	22,930	23,189	259	1.1%
2	Interest Revenue	655	337	200	200	225	25	12.5%
3	Late Payment Penalty	291	327	292	292	300	8	2.7%
	Total Non-Rate Revenues	**20,698**	**19,818**	**23,090**	**23,423**	**23,715**	**292**	1.2%
Other Revenues								
4	Grants	6,600	-	13,400	7,400	6,840	(560)	-7.6%
5	Draw from Retained Earnings	5,246	8,500	3,400	2,348	-	(2,348)	-100.0%
		11,846	8,500	16,800	9,748	6,840	(2,908)	

Line 1 – Program Revenues include the following:

Tipping fees – revenues collected at the Waste Management Centre and Eco Stations for processing and disposal services.

Non-residential and enhanced collections – revenues generated from providing waste services to non-regulated customers and extra services to regulated customers in the multi-family sector.

Sale of recyclables and compost – revenues generated from materials recovered at the Materials Recovery Facility and from the production of compost.

Partnership and environmental offset – The Waste Management Utility partners with a number of private sector businesses (e.g. Global Electronics and Electric Processors, Greys Paper, etc.) to augment the City's vision of waste diversion from landfill. There are some revenue opportunities that are primarily dependent upon the success of its partners.

Line 4 – Grants

A Grant has been provided by the Province through Alberta Innovates –Energy and Environment Solutions towards the Enerkem Alberta Biofuels Facility and the Advanced Energy Research Facility. The City of Edmonton acts as a manager of the grant, distributing the funding upon Enerkem's achievement of various milestones. It is expected that all grants received for this project will have been disbursed by the end of 2012.

Line 5 – Draw from Retained Earnings

As indicated earlier, 2011 marks the end of using Retained Earnings to reduce customer rate requirements. Access to Retained Earnings over the past three years was necessary because of the fundamental change to the waste operations as a result of the closure of the Clover Bar Landfill.

10.2 Revenue Requirement ($000's)

Line #		Reference	2011 Budget	2011 Forecast	2012 Requirement
Operating & Maintenance Expense					
1	Operations & Maintenance	**Schedule 8.0**	104,938	105,608	109,403
2	Shared Services	**Schedule 8.0**	5,050	5,050	5,751
3	Customer Billing Services	**Schedule 8.0**	4,239	4,239	4,438
4	Recoveries	**Schedule 8.0**	(8,273)	(8,470)	(9,056)
Depreciation net of Amortization		**Schedule 9.0**	15,240	15,836	16,295
Interest Expense		**Schedule 9.3**	11,021	9,560	11,814
Return on Rate Base		**Schedule 11.1**	-	-	-
Total Revenue Requirement			**132,215**	**131,823**	**138,645**
Less Non-Rate Revenues		**Schedule 10.1**	**23,091**	**23,423**	**23,715**
Total Rate Revenue Required			**109,124**	**108,400**	**114,930**
Revenue to be Recovered from Rates		**Schedule 7.0**	**104,143**	**104,143**	**113,797**
Draw from Retained Earnings			**3,400**	**2,348**	**-**
Revenue at current rate and forecast volumes			**99,189**	**99,189**	**106,141**
Revenue to be derived from rate increase			**6,535**	**4,954**	**7,656**
Required rate increase			**6.6%**	**5.0%**	**7.2%**

As indicated in Section 7.0, the disbursement of the grant provided by the Province through Alberta Innovates – Energy and Environment Solutions has not been reflected in the calculation of Revenue Requirement as it is a one-time revenue that has no impact on the customer rates.

11.0 Return on Rate Base

Waste Management Utility defines rate base as the mid-year Net Book Value on Non-Contributed Assets, plus working capital equals to 45 days of cash operating expense, and any shortfall between depreciation expense and principal repayment.

Policy C558 Waste Management Utility Fiscal Policy, adopted by City Council on June 1, 2011, establishes the following target for calculating the Return on Rate Base for Waste Management Utility:

> "City Council, as Regulator, will aim to achieve a targeted Return on Rate Base between 4% and 10%, subject to City Council decision making during the budget process. The lower limit of 4% reflects the lowest expectation for average cost of debt. The return should cover the cost of debt used to finance capital investment. The upper limit at 10% provides for a reasonable return for a public utility."

Since the Utility was only established in 2009 when $5.2 million was drawn from Retained Earnings, followed by $8.5 million in 2010 and a Forecasted $2.3 million in the current year, the focus has been to create a balance budget before targeting for achieving any returns. The Proposed 2012 Budget represents the first year whereby there is no anticipated draw from Retained Earnings, leaving the Return on Rate Base at 0% instead of a deficit.

In future years, the Utility plans to incrementally generate a Return on Rate Base that will meet the minimum 4% target over a period of years.

11.1 Calculation of Rate Base ($000's)

		2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
1	**Investments in Tangible Capital Assets**					
	Gross Book Value - Non Contributed	283,889	315,083	380,082	380,082	418,785
	Gross Book Value - Contributed	3,734	10,178	11,629	11,629	11,629
	Gross Book Value - All Assets	287,623	325,261	391,711	391,711	430,414
	Accumulated Depreciation - Non Contributed	(94,819)	(110,424)	(126,513)	(126,513)	(143,648)
	Accumulated Depreciation - Contributed	-	(88)	(341)	(341)	(671)
	Accumulated Depreciation - All Assets	(94,819)	(110,512)	(126,854)	(126,854)	(144,319)
	Net Book Value - Non Contributed	189,070	204,659	253,569	253,569	275,137
	Net Book Value - Contributed	3,734	10,090	11,288	11,288	10,958
	Net Book Value - All Assets	192,804	214,749	264,857	264,857	286,095
	Mid-Year Non-Contributed Assets	**N/A**	**196,865**	**229,114**	**229,114**	**264,353**
2	**Working Capital Requirement**					
	Cash Expense before Transfers	100,444	117,051	124,231	123,637	130,273
	Minimum of 45 Days Operations	**12,384**	**14,431**	**15,316**	**15,243**	**16,061**
3	Depreciation Expense - Non-Contributed	12,040	14,867	15,240	15,836	16,805
	Principal Repayment	7,999	9,426	12,163	10,996	13,772
	Timing Difference	**4,041**	**5,441**	**3,077**	**4,840**	**3,033**
Rate Base at Mid-Year			**211,295**	**244,430**	**244,357**	**280,414**

11.2 Return on Rate Base ($000's)

Line #		Reference	2011 Budget	2011 Forecast	2012 Requirement
1	Mid-Year Rate Base	**Schedule 11.1**	211,295	244,430	280,414
2	Net income		(3,400)	(2,348)	-
3	**Return on Rate Base**		**-2%**	**-1%**	**0%**

11.3 Long Term Debt ($000's)

Line #		Debenture #	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast
Outstanding Long Term Debt - Existing								
1	Materials Recovery Facility	Bylaw# 11959	-					
2	Compost Facility	Bylaw# 12604	80,180	77,431	74,506	74,506	71,396	(3,111)
3	Compost Plant Enhancements	Bylaw# 13610	3,074	2,580	2,062	2,062	1,520	(542)
4	SW ECO Station	Bylaw# 14230	7,509	6,765	5,989	5,989	5,181	(808)
5	EWMC Expansion - Land	Bylaw# 14232A	2,085	1,863	6,038	1,631	1,388	(243)
6	Organics Management System	Bylaw# 14232B	6,096	5,432	4,740	4,740	4,016	(724)
7	Processing and Transfer Facility	Bylaw# 14482	25,424	23,035	20,550	20,550	17,964	(2,586)
8	Kennedale Expansion-Land	Bylaw# 14942	1,037	939	837	837	731	(106)
9	Processing and Transfer Facility	Bylaw# 15111	42,206	41,290	40,329	40,329	39,323	(1,007)
10	Waste Mgmt Centre Infrastructure	Bylaw# 15213	7,804	14,685	13,240	13,343	11,956	(1,387)
11	Waste Containers	Bylaw# 15213A	900	823	744	744	662	(82)
12	Waste Mgmt Branch Equipment - P&D	Bylaw# 15213B	4,482	4,098	3,700	3,700	3,290	(411)
13	Kennedale Facilities Expansion	Bylaw# 15214	435	925	415	904	881	(22)
14	Equipment Storage & Maintenance Building	Bylaw# 15249	233	3,321	5,695	3,154	2,979	(174)
15	C & D Operation	Bylaw# 15344		1,300	968	1,270	1,239	(31)
		Total Outstanding	**181,464**	**184,487**	**179,815**	**173,759**	**162,525**	**(11,234)**
New Capital Funded by Debt								
16	SW ECO Station	Bylaw# 14230			2,495	2,561	2,344	(217)
17	EWMC Expansion - Land	Bylaw# 14232A				4,800	4,409	(391)
18	Waste Mgmt Branch Equipment - P&D	Bylaw# 15213			2,730		799	799
19	Waste Mgmt Centre Infrastructure	Bylaw# 15213B			8,541	3,839	7,946	4,107
20	Kennedale Facilities Expansion	Bylaw# 15214			10,952	7,059	12,854	5,795
21	Equipment Storage & Maintenance Building	Bylaw# 15249				2,616	2,480	(136)
22	C & D Operation	Bylaw# 15344			3,266	2,988	2,923	(65)
23	Processing and Transfer Facility	Bylaw#15111			18,444	15,134	18,288	3,154
24	NE ECO Station	Bylaw in 2011			3,464	3,500	11,022	7,522
25	Eco Station Facilities Upgrade	Bylaw in 2011			1,782	-	1,783	1,783
26	EWMC Facility Upgrade	Bylaw in 2011				3,461	7,143	3,682
27	Waste Mgmt Branch Equipment-Collection	Bylaw in 2012					631	631
		Total New Debt Issued/to be Issued	**-**	**-**	**51,675**	**45,959**	**72,622**	**26,663**
Total Debt			**181,464**	**184,487**	**231,489**	**219,718**	**235,147**	**15,429**
Mid-Year Long Term Debt				**182,976**	**207,988**	**202,103**	**227,433**	**25,330**

11.4 Principal Repayment ($000's)

Line #		Debenture #	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast
Principal Repayment								
1	Materials Recovery Facility	Bylaw# 11959	1,258					
2	Compost Facility	Bylaw# 12604	2,584	2,749	2,924	2,924	3,111	186
3	Compost Plant Enhancements	Bylaw# 13610	472	494	518	518	542	25
4	SW ECO Station	Bylaw# 14230	547	744	880	814	1,026	212
5	EWMC Expansion - Land	Bylaw# 14232A	212	222	625	232	633	401
6	Organics Management System	Bylaw# 14232B	635	663	693	693	724	31
7	Processing and Transfer Facility	Bylaw# 14482	2,037	2,388	2,485	2,485	2,586	101
8	Kennedale Expansion-Land	Bylaw# 14942	94	98	102	102	106	4
9	Processing and Transfer Facility	Bylaw# 15111	160	916	1,150	960	1,353	392
11	Waste Containers	Bylaw# 15213		77	79	79	82	3
12	Waste Mgmt Centre Infrastructure	Bylaw# 15213		669	1,669	1,503	1,902	399
13	Waste Mgmt Branch Equipment-P&D	Bylaw# 15213		384	512	397	443	46
14	Kennedale Facilities Expansion	Bylaw# 15214		10	123	27	228	200
15	Equipment Storage & Maintenance Building	Bylaw# 15249		12	294	219	310	92
10	C & D Operation	Bylaw# 15344			55	42	97	55
16	NE ECO Station				36	-	146	146
17	Eco Station Facilities Upgrade				18	-	17	17
18	EWMC Facility Upgrade						440	440
19	Waste Mgmt Branch Equipment-Collection						26	
		Total Principal Repaid	**7,999**	**9,426**	**12,163**	**10,996**	**13,772**	**2,750**

12.0 Proposed 2012-2014 Capital Budget and 2015-2021 Plan ($000's)

Capital Projects	Approved in Prior Years	Budget Adjustment - Carryforward Request	Proposed Capital Budget					Remaining 10-Year Plan							Budget & Plan 2012-2021
			From 2011	2012	2013	2014	Subtotal Including Carryforward	2015	2016	2017	2018	2019	2020	2021	
Collection Services Facilities															
NE Eco Station	3,500	-	-	7,668	5,500	-	13,168	-	-	-	-	-	-	-	13,168
Kennedale Facility	11,355	(3,500)	3,500	2,500	-	-	6,000	-	-	-	-	-	-	-	6,000
NW Eco Station							-	-	2,050	1,500	1,500	8,400	-	-	13,450
	14,855	(3,500)	3,500	10,168	5,500	-	19,168	-	2,050	1,500	1,500	8,400	-	-	32,618
Processing & Disposal Facilities															
Integrated Processing & Transfer Facility	88,600	(3,500)	3,500	-	-	-	3,500	-	-	-	-	-	-	-	3,500
Collection Services and Processing & Disposal Infrastructure															
Eco Station Facilities Rehabilitation	1,800	(1,800)	1,800	-	500	-	2,300	1,050	-	725	950	-	-	-	5,025
EWMC Infrastructure Rehabilitation	-	-	-	9,494	9,511	12,328	31,333	17,994	13,237	6,399	8,594	4,558	4,598	6,056	92,769
	1,800	(1,800)	1,800	9,494	10,011	12,328	33,633	19,044	13,237	7,124	9,544	4,558	4,598	6,056	97,794
Vehicles and Equipment															
Waste Containers	-	-	-	1,550	1,955	2,528	6,033	2,200	2,050	2,450	2,655	1,911	2,008	2,000	21,307
Equipment and Vehicles	-	-	-	7,946	6,631	8,357	22,934	5,059	7,652	8,569	10,927	10,440	14,440	7,435	87,456
	-	-	-	9,496	8,586	10,885	28,967	7,259	9,702	11,019	13,582	12,351	16,448	9,435	108,763
Total	105,255	(8,800)	8,800	29,158	24,097	23,213	85,268	26,303	24,989	19,643	24,626	25,309	21,046	15,491	242,675

With the completion of the various Processing and Disposal Facilities at the site (except for the IPTF although funding has been put in place in 2011), the level of capital investments at the Edmonton Waste Management Centre is projected to begin returning to the pre-landfill closure level starting in 2012. The Proposed 2012 Operating Budget and Pro-Forma Statements reflect the operating impacts of capital investments of $233.9 million over the next 10 years. The funding strategy for the Proposed 2012-2014 Capital Budget (without carryforwards) is as follows:

	2012	2013	2014	3-Year Total
Long Term Debt - 10 Years	10,233	9,115	9,311	28,658
Long Term Debt - 15 Years	-	1,000	4,280	5,280
Long Term Debt - 25 Years	10,168	5,500	-	15,668
Waste Retained Earnings	8,758	8,482	9,623	26,862
Total Financing	29,158	24,097	23,213	76,468

In general, the Waste Management Utility is moving towards the principle of financing equipment and vehicles through retained earnings while matching other capital investments to their projected useful lives. The proposed 2012-2014 Capital Budget results in improvement to the Utility's Debt Coverage Ratio from 1.0 in 2011 to 1.1 in Budget 2012, and achieving the desired target of 1.3 by 2014. The Utility's Debt to Net Assets Ratio will improve from 87% to 85% in Budget 2012, and to 82% by 2014 (target is 60%).

Further details on the proposed capital projects for the next 3 years are included in the following pages.

Capital Investment — Collection Facilities: NE Eco Station

Background/Status Update

There are currently three Eco Stations where household hazardous waste (HHW), recyclables, and bulky waste can be dropped off. Much of the material received is reused or recycled. HHW materials that cannot be reused or recycled are sent to the Swan Hills Waste Treatment Centre for disposal and general refuse that cannot be reused or recycled is sent to landfill.

The current Eco locations are Strathcona (opened in 1995), Coronation (opened in 2000), and Ambleside (opened in 2009). In return for having these sites available to the general public regardless of their residency, the Province provided a grant towards the capital cost of these facilities and funds the ongoing disposal of HHW received. A small user fee is levied on other waste materials, intended to partially cover the cost of operations without discouraging the use of the facilities. In 2011, the Eco Station rates for waste material are $8 for a small item, $12 for a large item, $25 for a partial truck load, $35 for a truck load, and $45 for a heaping truck load.

Reasonable and easy access to a disposal facility helps to reduce the potential for illegal dumping and helps residents manage their HHW responsibly. Alberta Environment suggests 15 kilometers or approximately 7 minutes of travel time to a facility. In the 2009-2011Capital Budget, City Council approved the addition of a facility in northeast Edmonton to meet this general guideline.

Acquisition of a site adjacent to the City's Kennedale Integrated Yard has been identified and is expected to be purchased by the end of 2011. Construction completion is expected in 2013.

Ambleside Eco Station shown here is the template for NE Eco Station

Financial Implications

The approved 2009-2011Capital Budget provided $3.5 million for siting and land acquisition. The 2012-2014 Capital Budget includes the additional funding of $13.2 million for detailed design and construction. Total project capital cost is $ 16.7 million.

The Northeast Eco Station (to be called Kennedale Eco Station on commissioning) is to be financed through self liquidating debt over a 25-year term. The projected financial and operating impacts of this new Eco Station have been reflected in the Waste Management Utility Operating Budget Model in the years required and is summarized as follows:

Portion of Monthly Utility Bill needed for Eco Stations

Direct operating costs	$1.72
Overhead/Shared Services/Customer Billing	0.33
Depreciation	0.16
Debenture Interest	0.12
Sub-total Expenses	2.33
Gate revenue	(0.58)
Provincial Ongoing Funding	(0.15)
Net Eco Stations Requirement	**$1.60 per Month**

Capital Investment — Collection Facilities: Kennedale Facility

Background/Status Update

Waste collection services for single family and multifamily homes directly provided by the Waste Management Utility originate at facilities at the Kennedale Integrated Yard. These facilities house staff and collection vehicles.

Growth of the City and new initiatives in recent years has necessitated increased staff and vehicles. In the 2009-2011 Capital Budget, City Council approved the provision of additional space at the Kennedale Integrated Yard for vehicle storage and staff accommodation. Current logistics with respect to movement of vehicles and staff are not safe, and costly equipment is not properly housed. The new facility comprises 3,100 square metres for vehicle storage and 1,400 square metres for staff accommodation. The major activities of the project are listed in Table 1. Occupancy of the facility is projected for July 2012.

Table 1: Major Activities Timeline

Time	Major Activity
July 2009	Programming/Conceptual Design Studies
Feb-May 2010	RFQ and RFP processes
Feb-Jun 2011	Selection of General Contractor
July 2011	Construction start
July 2012	Construction completion

Financial Implications

Council has approved funding of $11.4 million in the 2009-2011 Capital Budget with the remainder of $2.5 million to be approved in the 2012-2014 Capital Budget. Total project capital cost is $ 13.9 million. The required annual capital expenditures are provided in Table 2.

Table 2: Annual Capital Expenditure

Time	Major Activity
2009	$ 145,000 (actual)
2010	$ 424,000 (actual)
2011	$ 7,286,000 (projection)
2012	$ 6,000,000 (projection)
Total	$13,855,000

Two approaches have been taken to deliver the project as budgeted: a Design-Bid-Build development model was determined to be the preferred approach for delivering the project within budget; and existing buildings are retained without modification and needed new vehicle storage and office space developed on an independent footprint to maximize capital investment and reduce risks of over-expenditure.

The projected financial and operating impacts of this facility have been reflected in the Waste Management Utility Operating Budget Model in the years required.

Capital Investment — Processing and Disposal Facilities: Integrated Processing and Transfer Facility

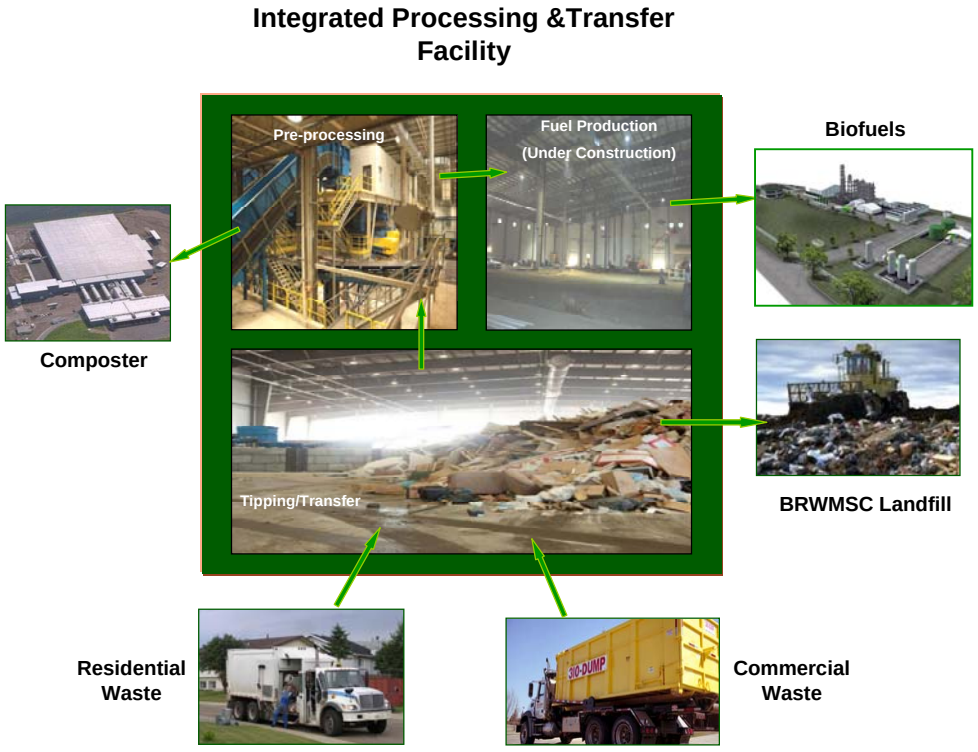
Background/Status Update

The Integrated Processing and Transfer Facility (IPTF) is a key element of the Utility's response to the closure of Clover Bar Landfill and the increased focus on diversion of materials from landfill. The facility was approved by City Council in 2007, and provides three main functions:

Phase 1: Tipping and Transfer Operation - The loading of residual and non-processable waste into trailers for hauling to landfill (transfer operation). Phase 1 was completed and became operational in October 2009.

Phase 2: Pre-processing Operations - Residential and suitable commercial waste is sorted mechanically and manually into three streams: organic material that is conveyed to the Edmonton Composting Facility; metals and cardboard are recovered for recycling; and non-recyclable, high energy content waste is conveyed to an adjacent operation (Phase 3) for conversion into refuse derived fuel. Phase 2 became operational in April 2010, with capacity of up to 1,000 tonnes per day.

Phase 3: Refuse Derived Fuel Feedstock Production - Mechanical processing of non-recyclable, high energy content waste into feedstock and delivery to the Enerkem Alberta Biofuels Facility. When completed in 2012, this phase of the Facility will be capable of producing up to 400 tonnes of refuse derived fuel per day. Production will ramp up from late 2012 through to full production in 2014 to match the planned ramp up of the Biofuels Facility production.



Financial Implications

The Integrated Processing & Transfer Facility has an approved budget of $88.7 million; of which $27.7 million is financed through a 10-year debenture and the balance through a 25-year debenture.

The 2012 Proposed Budget reflects principal and interest payments on $85 million of debenture ($70 million of which has been issued to June 2011), depreciation expense on $60.8 million of the assets that have been put into service, and full annual operating costs of phase 1 and 2 of the facility. Operational costs relating to Phase 3 will ramp up from 2012 through 2014 as the Biofuels Facility demand for feedstock climbs.

The projected financial and operating impacts of this facility have been reflected in the Waste Management Utility Operating Budget Model in the years required.

Capital Investment — Collection Services and Processing and Disposal Infrastructure

Background/Status Update

To deliver waste collection, processing and disposal services to customers, the Waste Management Utility uses a variety of capital assets. With the exception of a portion of the Advanced Energy Research Facility, paid by a grant, capital investments are made by the Utility through customer rates and/or retained earnings. Expenses related to the rehabilitation of Clover Bar Landfill and the systems that are required for post closure care of the landfill, such as the Leachate Treat Plant, are financed from an established Post Closure Reserve. At December 31, 2010 the gross book value of all capital assets is $325 million, $110 million has been depreciated. While regular maintenance takes place as part of the ongoing operating budgets, more significant rehabilitation, upgrades, renovation, and/or replacement of processing equipment are needed. This work is categorized under two categories as follows

Collection Services Infrastructure - includes work related to Collection Services facilities at Kennedale, at Eco Stations and at Recycle Depots.

Processing and Disposal Infrastructure - Includes work related to the Edmonton Waste Management Centre (EWMC) site such as Clover Bar Landfill rehabilitation, site roadway improvements, the overall site drainage system improvements and utility services network expansion/ improvement. It also includes work related to established facilities and systems at the EWMC such as the Integrated Processing & Transfer Facility, Composting Facility, Materials Recovery Facility, Construction & Demolition Facility, Biofuels Research Facility and smaller facilities on site.

Financial Implications

Two projects drive the need for funding in the 2012-2014Capital Budget:

1. Eco Station Facilities Rehabilitation (Proposed 2012-14 capital need - $2.3 million)

   Funding is needed to upgrade the Coronation Eco Station to address traffic congestion, reduce impact on adjacent businesses, increase customer convenience and allow for large item reuse activities. Pavement replacement is also need at the Strathcona Eco Station.

2. EWMC Infrastructure Rehabilitation (Proposed 2012-14 capital need - $31.3 million)

   The EWMC is a 233 hectare site that includes infrastructure elements as outlined above. Approximately $9.5 million is required annually to expand, rehabilitate, and replace systems as they reach the end of their useful lives or are replaced by improved systems for greater operational efficiency. While the exact areas of focus vary from year to year, annual investments typically include the rehabilitation (soil capping and revegetation) of the landfill, upgrades to the aging landfill groundwater diversion system, expansion of the groundwater monitoring system, and upgrades to the leachate collection and treatment systems to manage continuing leachate production at the landfill. Investment in this work is necessary to meet the requirements of regulatory approvals and operational needs. Investments are also made in rehabilitation of roadways and

expansion of utilities as needed. From 2012 t0 2014 there will also be ongoing investment in upgrading of components of the Composting Facility and the Materials Recovery Facility to keep up with growing volumes for processing.

The projected financial and operating impacts of these projects have been reflected in the Waste Management Utility Operating Budget Model in the years required.

Capital Investment — Vehicles and Equipment Acquisition

Background/Status Update

Currently, the Waste Management Utility uses 102 collection vehicles - 80 for single family, 15 for multi-family, 4 for Recycling Depots and 3 for Eco Stations. The Utility also uses 14 highway tractors and 44 long haul trailers to transport non-recyclable and non-compostable waste to private sector landfills. The service lives of these vehicles are typically 200,000 km for waste collection vehicles, 8 years for highway tractors and 10 years for long haul trailers.

The Utility requires front-load bins, side-load bins and roll-off bins in providing services to its customers and for internal movement of materials at the Edmonton Waste Management Centre. Front-load bins are used for servicing the multi-family sector, automated side load bins for servicing Recycle Depots, and roll-off bins specific for the Big Bin Program and Edmonton Waste Management Centre operations. These receptacles vary in age and state of repair. The containers can have average useful lives of 15 years. In addition to vehicles and waste containers, WMU relies on numerous pieces of specialty portable equipment in its operations. These include screens, conveyors, compost turning machines, wood grinding units, office furniture & equipment, and other specialized equipment.

Financial Implications

Two projects drive the need for funding in the 2012-2014Capital Budget:

1. Vehicles and Equipment (Proposed 2012-14 capital need - $22.93 million)

   Funding is needed for acquisitions of vehicles (replacement and growth) and for specialty portable equipment.

2. Waste Containers (Proposed 2012-14 capital need - $6.03 million)
   Funding is needed for containers described above. Efforts are made to spread the replacement of containers evenly over the long term, with an average replacement requirement of $2 million annually.

The total proposed 2012-2014 Capital Budget for Vehicle and Equipment Acquisition totals approximately $29 million. The useful lives of these capital assets vary between 5 and 15 years. Given that the Utility strives to level out the annual capital requirement for vehicles and equipment, and that such assets are continually being replaced as they reach the end of their useful lives, $27 million of the $29 million required is being funded through retained earnings. In the long term, the intention is to fully fund these types of capital expenditures through retained earnings and not through borrowing.

The projected financial and operating impacts of these projects have been reflected in the Waste Management Utility Operating Budget Model in the years required.

13.0 Program Revenues and Expenses ($000's)

Collection Services

Line #		2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
1	Personnel	13,750	15,882	17,922	17,532	18,310	778	4.4%
2	Materials, Goods, and Supplies	1,023	1,293	1,149	993	1,084	91	9.2%
3	External Services - Contracts	16,632	16,562	18,918	18,392	19,453	1,061	5.8%
4	Fleet Services	8,292	7,755	8,619	8,677	8,707	30	0.3%
5	Other Expenses	550	1,154	498	498	848	350	70.3%
6	Utilities	342	409	546	546	660	114	20.9%
7	Shared Services	1,596	2,149	2,957	2,957	3,368	411	13.9%
8	Customer Billing Services	2,022	1,922	1,897	1,897	1,986	89	4.7%
	Subtotal	44,207	47,126	52,506	51,492	54,416	2,924	
9	Biosolid/Nutri-Gold Recoveries	-	-	-	-	-	-	0.0%
10	Recovery for City Litter Collection	-	-	(1,938)	(1,938)	(1,907)	31	-1.6%
	O & M Expenses	44,207	47,126	50,568	49,554	52,509	2,955	
11	Depreciation	-	795	1,000	1,044	1,200	156	14.9%
12	Debt Interest	181	510	828	403	1,327	924	229.3%
13	Other Financial Charges	-	-	-	-	-	-	0.0%
	Expenses before One-Time	44,388	48,431	52,396	51,001	55,036	4,035	
14	Grant Payment	-	-	-	-	-	-	0.0%
15	Grant Revenue	-	(75)	-	-	-	-	0.0%
16	Program Revenues	(3,248)	(3,879)	(4,062)	(4,062)	(3,827)	235	-5.8%
17	Rate Revenues	(41,140)	(44,477)	(48,334)	(46,939)	(51,209)	(4,270)	9.1%
	Net Loss/(Net Income)	-	-	-	-	-	-	

Processing and Disposal

Line #		2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
1	Personnel	7,697	11,522	12,501	12,875	14,085	1,210	9.4%
2	Materials, Goods, and Supplies	3,703	3,118	3,552	3,690	4,144	454	12.3%
3	External Services - Contracts	28,151	35,049	32,517	34,055	32,986	(1,069)	-3.1%
4	Fleet Services	981	2,607	2,739	3,253	3,253	-	0.0%
5	Other Expenses	1,583	1,436	912	930	1,235	305	32.8%
6	Utilities	2,338	2,797	4,049	3,347	3,505	158	4.7%
7	Shared Services	1,899	2,101	2,093	2,093	2,383	290	13.9%
8	Customer Billing Services	2,109	1,953	2,342	2,342	2,452	110	4.7%
	Subtotal	48,461	60,583	60,705	62,585	64,043	1,458	
9	Biosolid/Nutri-Gold Recoveries	(6,560)	(5,418)	(6,335)	(6,532)	(7,149)	(617)	9.4%
10	Recovery for City Litter Collection	-	-	-	-	-	-	0.0%
	O & M Expenses	41,901	55,165	54,370	56,053	56,894	841	
11	Depreciation	12,040	14,071	14,240	14,792	15,605	813	5.5%
12	Debt Interest	7,775	8,830	10,192	9,157	10,487	1,330	14.5%
13	Other Financial Charges	5,331	(263)	(565)	(590)	(510)	80	-13.6%
	Expenses before One-Time	67,047	77,803	78,237	79,412	82,476	3,064	
14	Grant Payment	6,600	-	13,400	7,400	6,840	(560)	-7.6%
15	Grant Revenue	(6,600)	-	(13,400)	(7,400)	(6,000)	1,400	-18.9%
16	Program Revenues	(17,159)	(15,867)	(19,028)	(19,361)	(20,728)	(1,367)	7.1%
17	Rate Revenues	(44,642)	(53,436)	(55,809)	(57,703)	(62,588)	(4,885)	8.5%
	Net Loss/(Net Income)	5,246	8,500	3,400	2,348	-	(2,348)	

Note: Certain prior period figures have been reclassified for comparison purposes. For ease of review, the annual Net Income/Loss has been reflected entirely under Processing and Disposal Operations.

14.0 Related Parties Transaction

Line #		2009 Actual	2010	Actual	2011 Budget	2011 Forecast	2012 Budget	2012 Budget vs 2011 Forecast	% Variance
1	Shared Services	3,495		4,250	5,050	5,050	5,751	701	12.2%
2	Customer Billing Services	4,131		3,876	4,239	4,239	4,438	199	4.5%
3	Intra-municipal Services	968		1,470	312	326	842	516	61.3%
4	Recovery from Biosolids	(6,560)		(5,418)	(6,335)	(6,532)	(7,149)	(617)	8.6%
5	Recovery from Litter Collection	-		-	(1,938)	(1,938)	(1,907)	31	-1.6%
	Total	**2,034**		**4,178**	**1,328**	**1,145**	**1,975**	**830**	

Line 1 – Shared Services

Please see section 8.4 for details.

Line 2 – Customer Billing Services

This service is provided by EPCOR Inc., a wholly owned subsidiary of the City of Edmonton, on a contract basis.

Line 3 – Intra-municipal Services

Included are transportation costs paid to Transportation Services for bus service for Quality One staff employed at the EWMC, as well as technical services related to the landfill. Parking charges, on-demand building maintenance and additional custodial services requested on an as needed basis are also reflected here. Waste Management Utility also pays a portion of the Project Management Office based upon its total share of the annual capital projects managed through Infrastructure Services.

Line 4 – Recovery from Biosolids

Reflects the amount received from Drainage Services for the disposal of biosolids generated from the wastewater treatment process.

Line 5 – Recovery from Litter Collection

Reflects services provided to the City of Edmonton for the litter collection.

Utility — Drainage Services

Introduction

Drainage Services includes both the Sanitary Drainage Utility and Stormwater Drainage Utility. Together, they provide high quality and reliable services to customers in a safe and sustainable manner.

Drainage Services contributes to a number of City Councils' strategic goals. The Utility plays an essential role in preserving and sustaining Edmonton's environment by monitoring the quality and quantity of water returned to the river and through innovative drainage planning approaches such as the Low Impact Design program that minimize the impacts of sanitary and stormwater drainage on water system. Drainage Services also contributes to transforming Edmonton's urban form through proactive asset management like the Drainage Neighbourhood Renewal Program.

Drainage assets have an estimated replacement value of $14.9 billion as of 2010 and approximately 73% of these assets are pipe structures turned over to the Drainage Utilities by developers, called Contributed Assets. The assets include:

- 2,366 km of storm sewers
- 2,169 km of sanitary sewers
- 943 km of combined sewers
- 35 km of foundation drains
- 332,128 service connections
- 72 pump stations
- 155 stormwater management facilities

Vision: *Excellence and innovation in wastewater, stormwater and biosolids management through customer service, environmental stewardship, and fiscal responsibility.*

Mission: *We protect public health and the environment by managing wastewater, stormwater and biosolids through environmentally and financially sustainable practices for the City of Edmonton, the North Saskatchewan River system, and our regional partners.*

Branch Opportunities and Challenges

1. Financial Sustainability

Outcome: Operations are well managed and sustainable.

Challenge: On June 1, 2011 City Council approved the revised Policy C304C - Drainage Services Utilities Fiscal Policy that sets out a series of Financial Indicator Targets. These targets are established to enable financial sustainability over the long term.

One of the Council-approved Financial Indicator Targets of the revised Policy is a minimum Return on Rate Base of 4% to support the long-term financial sustainability of both the Sanitary and Stormwater Utilities. The revised Policy also affirms the Debt Coverage Ratio and the Debt to Net Asset Ratio for the Utilities. The payment of a dividend from the Sanitary Utility is eliminated as of 2012, which will reduce the pressure on customer rates.

Action and Timeframe: The proposed 2012 Budgets for Sanitary and Stormwater Drainage reflect a Return on Rate Base of 4.0% and 7.0% respectively. The proposed budgets will enable both utilities to reach Debt Coverage Ratio targets in 2012. Debt to Net Assets ratios are improving and progressing towards the stated targets and the Sanitary Drainage Utility will reach its target by 2013 while the Stormwater drainage is projected to reach its target by 2020.

Making progress toward these financial targets will require a monthly increase in 2012 of $2.94 to the average residential Sanitary Drainage customer, and $0.87 to the average residential Stormwater Drainage customer. Reducing the proposed rate changes will leave the Utilities in a negative cash position within 5 years.

2. Drainage Neighbourhood Renewal

Outcome: Assets are managed to optimize benefits over their life cycle

Challenge: In response to the Council's direction relating to the Transportation Neighbourhood Renewal Program, Drainage accelerated its Drainage Neighbourhood Renewal Program from $12 million of expenditures in 2007 to $41 million in 2011.

This acceleration ensures that the underground work needed for Neighbourhood Renewal is completed the year prior to the road surface work being undertaken. Typically, for every $4 million of road and sidewalk reconstruction, $1 million is needed to complete the drainage infrastructure renewal. While the actual cost ratio between Sanitary and Stormwater infrastructure renewal varies depending on the neighbourhood's requirements, for budget purposes the typical percentage split of 50/50 is used.

Action and Timeframe: Based on discussions with Transportation Services, it is expected that between $40 million to $60 million ($147 million in the 2012-2014 proposed Capital Budgets) will be needed for Drainage Neighbourhood Renewal annually to match the planned renewal work. While the 2011 Approved Budget (and therefore customer rates) reflects an investment of about $41 million, the full cost impact of the capital work (mostly depreciation and interest) will not be reflected until 2012. The monthly impacts on Sanitary and Stormwater rates are projected at $0.99 and $0.42, respectively, for the typical single family residential customer.

3. Biosolids Management

Outcome: The impact of operations on air, land and water systems is minimized.

Challenge: Biosolids are a residual waste product from the treatment of wastewater. While the amount of biosolids that has been beneficially disposed of increased to 85% in 2010, the Sanitary Utility has diverted the remainder to be stored in the Clover Bar Lagoons. An accumulated estimated total of 185,000 dry tonnes of biosolids is currently in storage.

There are strict regulations around the proper disposal of biosolids. Currently, the beneficial methods employed by Drainage Services include: the NutriGold program (spread on farmland; which is subject to weather condition and soil composition); and using biosolids as feedstock into the City's Waste Management Composter Facility (capacity and cost issues). As part of a legacy agreement from a previous operator of the Composter Facility, Sanitary Drainage has paid an amount less than full cost to the Waste Management Utility.

Action and Timeframe: The Proposed 2012 budget includes the first of a three-year phase-in period in which the Drainage Utility will pay full cost recovery to the Waste Management Utility for biosolid composting. In addition, the Proposed Budget includes funding required to allowing increased biosolid disposal to 90% of the biosolids generated in 2012, 93% in 2013, 96% in 2014, and 100% in 2015. This strategy requires a monthly rate increase of $0.96 over the 4-year period, of which $0.44 is needed in 2012.

4. Financial Segregation of Drainage Design & Construction

Outcome: Operations are well managed and sustainable.

Challenge: City Council approved the financial segregation of Drainage Design & Construction from the Sanitary Drainage Utility as part of the 2010 Budget process and in support of the Utility Model. Drainage Design & Construction's activities are non-regulated and carry significant fluctuations in volume and net income depending on the local economy.

Action and Timeframe: The final phase-out of Drainage Design & Construction's net income is reflected in the Proposed 2012 Budget. This results in a revenue reduction of $1.25 million and translates to a $0.26 monthly increase for the typical single family residential customer for Drainage Services.

5. Operations and Maintenance

Outcome: Operations are well managed and sustainable.

Challenge: The Sanitary and Stormwater Drainage Utilities are facing growth and inflationary pressures. Operations and Maintenance costs (excluding Biosolids, local access fees, depreciation, and interest) represent 48% and 60% of the Utilities' total expenditures respectively. A large portion of these costs are labour-related.

Action and Timeframe: Combined, the proposed 2012 Budgets for Drainage Utilities include a 2.6% increase in the overall 2011 Operations and Maintenance costs. The proposed budget incorporates the operational impacts of maintaining 5,400 km of pipes supporting over 237,000 customers. The monthly impacts on Sanitary and Stormwater rates are projected at $0.15 and $0.17, respectively, for the typical single family residential customer.

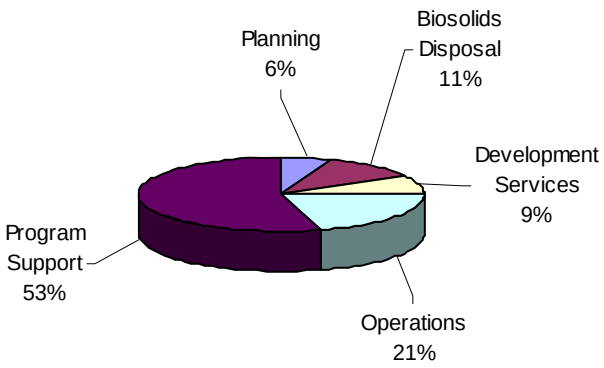
Drainage Services — Sanitary Utility

Proposed 2012 Budget – Sanitary Utility Summary ($000)

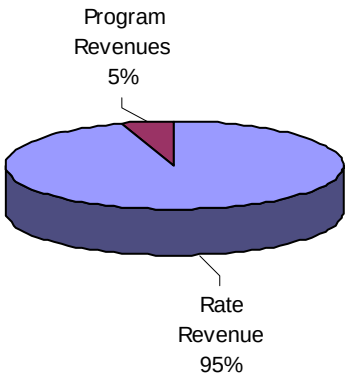
	2010 Actual	2011 Budget	$ Change '11-'12	2012 Budget	% Change '11-'12
Revenue & Transfers					
Rate Revenue	$ 63,817	$ 70,376	$ 22,111	$ 92,487	31.4
Program Revenues	3,014	4,078	660	4,738	16.2
Transfer from Design & Construction	1,500	1,250	(1,250)	-	(100.0)
Total Revenue & Transfers	68,331	75,704	21,521	97,225	28.4
Expenditure & Transfers					
Planning	4,949	4,589	(232)	4,357	(5.1)
Biosolids Disposal	5,418	6,335	2,110	8,445	33.3
Development Services	6,572	7,359	(560)	6,799	(7.6)
Operations	12,850	15,156	894	16,050	5.9
Program Support	33,616	35,130	7,399	42,529	21.1
Total Expenditure & Transfers	63,405	68,569	9,611	78,180	14.0
Net Income	**$ 4,926**	**$ 7,135**	**$ 11,910**	**$ 19,045**	166.9
Full-time Equivalents	202.6	205.7	10.0	215.7	4.9

For further budget details at a program level, please refer to Section 7.8 of the Rate Filing prepared for the Utility Advisor.

Where the Budget will be spent



Funding by Source



Drainage Services — Sanitary Utility

Proposed 2012 Budget – Summary ($000)

	2010 Actual	2011 Budget	$ Change '11-'12	2012 Budget	% Change '11-'12
Revenue & Transfers					
Rate Revenue	$ 63,817	$ 70,376	$ 22,111	$ 92,487	31.4
Program Revenues	3,014	4,078	660	4,738	16.2
Transfer from Design & Construction	1,500	1,250	(1,250)	-	(100.0)
Total Revenue & Transfers	68,331	75,704	21,521	97,225	28.4
Expenditure & Transfers					
Personnel	19,764	18,166	1,050	19,216	5.8
Materials, Goods & Supplies	1,624	2,294	120	2,414	5.2
External Services	4,090	4,008	136	4,144	3.4
Customer Billing	3,509	3,909	427	4,336	10.9
Fleet Services	2,009	1,959	(95)	1,864	(4.8)
Shared Services	4,583	6,049	(829)	5,220	(13.7)
Other Intra-municipal Services	(2,659)	526	398	924	75.7
Biosolids Disposal	5,418	6,335	2,110	8,445	33.3
Local Access Fees	5,116	5,306	2,093	7,399	39.4
Interest and Depreciation	18,433	19,073	4,713	23,786	24.7
Other Charges	1,836	1,764	(100)	1,664	(5.7)
Transfer to Reserves	1,300	1,300	-	1,300	-
Subtotal	65,023	70,689	10,023	80,712	14.2
Intra-municipal Recoveries	(1,618)	(2,120)	(412)	(2,532)	19.4
Total Expenditure & Transfers	63,405	68,569	9,611	78,180	14.0
Net Income	**$ 4,926**	**$ 7,135**	**$ 11,910**	**$ 19,045**	166.9
Full-time Equivalents	202.6	205.7	10.0	215.7	4.9

Budget Changes for 2012

Revenue & Transfers - Changes

Rate Revenue $22,111

The proposed increase to the monthly user fee charged on the utility bill will generate approximately $22,850 in additional rate revenue while customer growth accounts for another $883 increase in revenues. This is partially offset by decreased rate revenue due to reduced projected customer consumption, $1,622.

Program Revenue $660

This increase is primarily due to new negotiated rates with the ACRWC for bio-solids management and supernatant treatment as a result of the 2010 Cost of Services Study, phasing in the rate adjustment over a 3-year period. It has been off-set by a decrease of $414 in interest revenue as a lower ending cash balance is forecasted which relates to the lack of Return on Rate Base and increased capital investment.

Transfer from Design & Construction ($1,250)

The proposed 2012 Budget reflects the end of using Net Income from Design and Construction to reduce the overall revenue requirement.

Drainage Services — Sanitary Utility

Expenditures & Transfers - Changes

Personnel $1,050

Personnel cost changes relate to increases in the City share of employee benefit costs, $277, and new staffing requirements to support the higher operating and maintenance costs due to projected customer growth and increased capital such as Neighbourhood Renewal and Flood Prevention, $753.

Material, Goods & Supplies $120

The increase of $120 is primarily due to additional material costs for pump stations, gate stations and sensor stations, $66, and additional costs for the Odour Control Application project, $91.

External Services $136

The increase of $136 is primarily due to higher lab costs for testing and monitoring for additional facilities for the Environmental Monitoring Program to fulfill the requirements of the Approval to Operate, $60.

Customer Billing $427

The Proposed 2012 Budget reflects inflationary increases, adjusted for customer growth.

Fleet Services ($95)

An increase in Fleet Services of $162 is attributable to fuel cost increases. An increase of $159 is attributed to rate increase and changes in volume due to growth in the number of customers. This is offset by a reduction of $416 as Drainage Services now purchases vehicles through the capital program instead of leasing through Fleet.

Shared Services ($829)

The Proposed 2012 Budget for Shared Services reflects a decrease of $829 primarily due to the allocation of costs to Stormwater and Drainage Design & Construction to better reflect their true portion of these costs.

Intra-municipal Services $398

The proposed increase represents inflation as well as an allocation of items that were previously considered Shared Service costs.

Biosolids Disposal $2,110

The additional costs for biosolids disposal represents the first of a 3-year phase-in period that will result in Drainage Services paying full cost associated with the disposal of biosolids to the Waste Management Utility. It also includes disposal volume increase from 85% to 90%.

Local Access Fees $2,093

The Local Access Fee is calculated based on 8% of Rate Revenue, therefore as the total amount of Rate Revenue increases, so does the amount of Local Access Fee to be paid to the City of Edmonton.

Interest and Depreciation $4,713

The proposed increase of $4,713 is due to increased interest expense of $2,975 as a result of higher financing required to fund the capital plan and $1,738 in increased Depreciation resulting from additional capital assets put into service .

Other Charges ($100)

Additional costs for power & natural gas for pump stations, gate stations and sensor stations are expected as well as inflationary increases.

Intra-municipal Recoveries ($412)

Capital recoveries have increased due to additional capital work.

Full-time Equivalents - Changes

The 2012 FTE change reflects new staffing requirements to manage the projected customer growth and support the increased invested capital in programs such as Neighbourhood Renewal and Flood Prevention. This results in a total of 10.0 permanent FTE.

Drainage Services — Sanitary Utility

Pro-Forma Statements ($000)

	2012	2013	2014	2015	2016
Revenues					
Rate Revenue	92,487	99,374	106,599	112,205	119,612
Program Revenue	4,693	5,164	5,599	5,767	5,940
Interest Income	45	251	502	601	563
Total Revenues	**97,225**	**104,789**	**112,700**	**118,573**	**126,115**
Expenses					
Operating & Maintenance	36,139	39,192	41,798	42,922	44,077
Interest	13,432	15,330	17,223	19,331	21,758
Depreciation	10,354	11,285	12,225	11,930	12,948
Local Access Fees	7,399	7,950	8,528	8,976	9,569
Shared Services	5,220	5,359	5,504	5,652	5,804
Customer Billing Service	4,336	4,452	4,572	4,695	4,821
Sanitary Servicing Strategy Fund Payment	1,300	1,300	1,300	1,300	1,300
Total Expenses	**78,180**	**84,868**	**91,149**	**94,807**	**100,278**
Net Income	**19,045**	**19,921**	**21,550**	**23,767**	**25,837**
Opening Retained Earnings	828,861	903,325	969,809	1,029,680	1,100,057
Net income (loss)	19,045	19,921	21,550	23,767	25,837
Net Change in Contributed Assets	56,133	46,562	38,321	46,611	32,868
Dividend Payment	(714)	-	-	-	-
Ending Retained Earnings	**903,325**	**969,809**	**1,029,680**	**1,100,057**	**1,158,763**
Monthly $ Increase over previous year	$4.77	$1.15	$1.18	$0.84	$1.14
Typical Single Family Monthly Unit Rate	$20.15	$21.30	$22.48	$23.32	$24.46

Drainage Services — Sanitary Utility

Pro-Forma Statements ($000)

	2012	2013	2014	2015	2016
Financial Assets					
Cash	12,530	25,086	30,043	28,154	29,988
Other Current Assets	56,121	56,121	56,121	56,121	56,121
Total Assets	68,651	81,207	86,164	84,275	86,109
Liabilities					
Liabilities	6,759	6,759	6,759	6,759	6,759
Long-term Debt	281,462	316,848	342,175	381,676	418,046
Total liabilities	288,221	323,607	348,934	388,435	424,805
Net Financial Assets (Net Debt)	**(219,570)**	**(242,400)**	**(262,770)**	**(304,160)**	**(338,696)**
Non-Financial Assets					
Contributed Tangible Capital Assets	635,127	681,689	720,010	766,621	799,489
Non-Contributed Tangible Capital Assets	487,768	530,520	572,440	637,596	697,970
Total Non-Financial Assets	1,122,895	1,212,209	1,292,449	1,404,217	1,497,459
Retained Earnings	**903,325**	**969,809**	**1,029,680**	**1,100,057**	**1,158,763**

Drainage Services — Sanitary Utility

Financial Indicators

	2012	2013	2014	2015	2016
1 Rates Sufficient to Meet Expenses					
Net Income (loss)	$ 19,045	$ 19,921	$ 21,550	$ 23,767	$ 25,837
Target	*Positive Net Income*				
2 Fair and Reasonable Return					
Return on Rate Base	4.0%	4.0%	4.0%	4.0%	4.0%
Target	*Return to be between 4% and 10%*				
Typical Residential Monthly Billing Increase	*$ 4.77*	*$ 1.15*	*$ 1.18*	*$ 0.84*	*$ 1.14*
Impact of Customer Rate	*34.5%*	*6.5%*	*6.3%*	*4.5%*	*5.6%*
3 Financing of Capital Investments					
Debt Coverage Ratio	1.7	1.7	1.7	1.6	1.6
Debt to Net Assets Ratio	58%	60%	60%	60%	60%
Target	*Debt Coverage Ratio Not Less than 1.3* *Debt to Net asset ratio at 60%*				
4 Cash Balance					
Uncommitted Cash Balance	$ 12,530	$ 25,086	$ 30,043	$ 28,154	$ 29,988
Next Year's Capital Financed by RE	$ 6,519	$ 15,183	$ 23,190	$ 21,348	$ 17,253
Target	*Sufficient cash for planned capital investment to be financed by Retained Earnings*				
5 Long Range Plans					
Pro-forma Information	10 Years	10 Years	10 Years	10 Years	10 Years
Target	*10 year financial planning horizon*				

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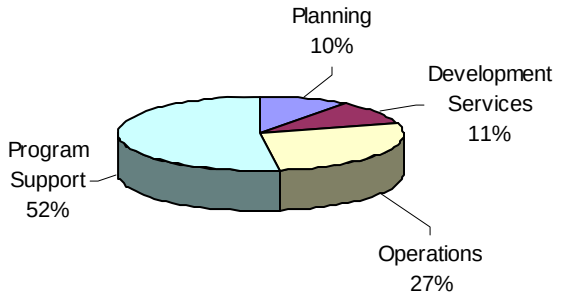
Drainage Services — Stormwater Utility

Proposed 2012 Budget – Stormwater Utility Summary ($000)

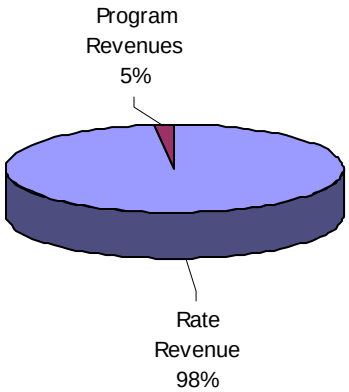
	2010 Actual	2011 Budget	$ Change '11-'12	2012 Budget	% Change '11-'12
Revenue & Transfers					
Rate Revenue	$ 26,357	$ 28,617	$ 7,897	$ 36,514	27.6
Program Revenues	558	619	155	774	25.0
Total Revenue & Transfers	26,915	29,236	8,052	37,288	27.5
Expenditure & Transfers					
Planning	1,500	2,749	(181)	2,568	(6.6)
Development Services	2,954	2,335	272	2,607	11.6
Operations	4,617	6,162	474	6,636	7.7
Program Support	8,603	10,183	2,693	12,876	26.4
Total Expenditure & Transfers	17,674	21,429	3,258	24,687	15.2
Net Income	**$ 9,241**	**$ 7,807**	**$ 4,794**	**$ 12,601**	61.4
Full-time Equivalents	94.8	96.7	4.0	100.7	4.1

For further budget details at a program level, please refer to Section 7.8 of the Rate Filing prepared for the Utility Advisor.

Where the Budget will be spent



Funding by Source



Drainage Services — Stormwater Utility

Proposed 2012 Budget – Summary ($000)

	2010 Actual	2011 Budget	$ Change '11-'12	2012 Budget	% Change '11-'12
Revenue & Transfers					
Rate Revenue	$ 26,357	$ 28,617	$ 7,897	$ 36,514	27.6
Program Revenues	558	619	155	774	25.0
Total Revenue & Transfers	26,915	29,236	8,052	37,288	27.5
Expenditure & Transfers					
Personnel	4,122	8,220	553	8,773	6.7
Materials, Goods & Supplies	892	857	71	928	8.3
External Services	1,568	1,958	31	1,989	1.6
Customer Billing	814	908	105	1,013	11.6
Fleet Services	398	824	(34)	790	(4.1)
Shared Services	1,382	1,828	46	1,874	2.5
Other Intra-municipal Services	3,742	172	181	353	105.2
Interest and Depreciation	5,548	7,614	2,329	9,943	30.6
Other Charges	418	481	(39)	442	(8.1)
Subtotal	18,884	22,862	3,243	26,105	14.2
Intra-municipal Recoveries	(1,210)	(1,433)	15	(1,418)	(1.0)
Total Expenditure & Transfers	17,674	21,429	3,258	24,687	15.2
Net Income	**$ 9,241**	**$ 7,807**	**$ 4,794**	**$ 12,601**	61.4
Full-time Equivalents	94.8	96.7	4.0	100.7	4.1

Budget Changes for 2012

Revenue & Transfers - Changes

Rate Revenue $7,897

The proposed increase to the monthly user fee charged on the utility bill will generate about $6,850 in additional rate revenue with the remaining coming from projected customer growth, $1,047.

Program Revenue $155

This increase is primarily due to an increase of $146 in interest revenue as a higher ending cash balance is forecasted.

Drainage Services — Stormwater Utility

Expenditures & Transfers - Changes

Personnel $553

Personnel cost changes relate to increases in the City share of employee benefit costs, $114, and new staffing requirements to support the higher operating and maintenance costs due to projected customer growth and increased capital such as Neighbourhood Renewal and Flood Prevention, $424.

Material, Goods & Supplies $71

The increase of $71 is primarily due to additional material costs for the new Groat Road Stormwater filter facility, $50, and additional costs for the Odour Control Application project, $39.

External Services $31

The increase of $31 is primarily due to higher lab costs for testing and monitoring for additional facilities for the Environmental Monitoring Program to fulfill the requirements of the Approval to Operate, $40.

Customer Billing $105

The Proposed 2012 Budget reflects inflationary increases, adjusted for customer growth.

Fleet Services ($34)

An increase in Fleet Services of $58 is attributable to fuel cost increases. An increase of $57 is attributed to rate increase and changes in volume due to growth in the number of customers. This is offset by a reduction of $149 as Drainage Services now purchases vehicles through the capital program instead of leasing through Fleet.

Shared Services $46

The Proposed 2012 Budget for Shared Services reflects an increase of $46 primarily due to the allocation of costs to Stormwater from Sanitary to better reflect their true portion of these costs.

Intra-municipal Services $181

The proposed increase represents inflation as well as an allocation of items that were previously considered Shared Service costs.

Interest and Depreciation $2,329

The proposed increase of $2,329 is primarily due to increased interest expense as a result of the higher financing required to fund the capital plan.

Other Charges ($39)

Additional costs for power & natural gas for pump stations, gate stations and sensor stations are expected as well as inflationary increases.

Intra-municipal Recoveries $15

Capital recoveries have increased due to additional capital work.

Full-time Equivalents - Changes

The 2012 FTE change reflects new staffing requirements to manage the projected customer growth and support the increased invested capital in programs such as Neighbourhood Renewal and Flood Prevention. This results in a total of 4.0 permanent FTE.

Drainage Services — Stormwater Utility

Pro-Forma Statements

	2012	2013	2014	2015	2016
Revenues					
Rate Revenue	36,514	42,664	49,454	56,712	64,304
Program Revenue	346	355	365	376	387
Interest Income	428	513	499	571	676
Total Revenues	**37,288**	**43,532**	**50,318**	**57,659**	**65,368**
Expenses					
Operating & Maintenance	11,857	12,494	12,948	13,296	13,654
Customer Billing Service	1,013	1,040	1,068	1,097	1,126
Shared Services	1,874	1,924	1,976	2,029	2,084
Depreciation	3,845	4,424	5,288	6,136	7,098
Interest	6,097	7,918	9,878	12,158	14,536
Total Expenses	**24,687**	**27,800**	**31,158**	**34,716**	**38,497**
Net Income	**12,601**	**15,732**	**19,160**	**22,943**	**26,871**
Opening Retained Earnings	1,017,122	1,065,902	1,113,025	1,162,465	1,215,957
Net income (loss)	12,601	15,732	19,160	22,943	26,871
Net Change in Contributed Assets	36,179	31,392	30,279	30,549	30,020
Ending Retained Earnings	**1,065,902**	**1,113,025**	**1,162,465**	**1,215,957**	**1,272,847**
Monthly $ Increase over previous year	$1.47	$1.20	$1.30	$1.37	$1.40
Typical Single Family Monthly Unit Rate	$7.81	$9.01	$10.31	$11.68	$13.08

Drainage Services — Stormwater Utility

Pro-Forma Statements

	2012	2013	2014	2015	2016
Financial Assets					
Cash	25,625	24,962	28,568	33,819	44,086
Other Current Assets	2,586	2,586	2,586	2,586	2,586
Total Assets	28,211	27,548	31,154	36,405	46,672
Liabilities					
Liabilities	4,378	4,378	4,378	4,378	4,378
Long-term Debt	140,693	171,197	206,089	245,363	283,306
Total liabilities	145,071	175,575	210,467	249,741	287,684
Net Financial Assets (Net Debt)	**(116,859)**	**(148,027)**	**(179,313)**	**(213,336)**	**(241,011)**
Non-Financial Assets					
Contributed Tangible Capital Assets	984,355	1,015,747	1,046,026	1,076,574	1,106,594
Non-Contributed Tangible Capital Assets	198,407	245,306	295,752	352,719	407,265
Total Non-Financial Assets	1,182,762	1,261,052	1,341,778	1,429,293	1,513,859
Retained Earnings	**1,065,902**	**1,113,025**	**1,162,465**	**1,215,957**	**1,272,847**

Drainage Services — Stormwater Utility

Financial Indicators

	2012	2013	2014	2015	2016
1 Rates Sufficient to Meet Expenses					
Net Income (loss)	$ 12,601	$ 15,732	$ 19,160	$ 22,943	$ 26,871
Target	*Positive Net Income*				
2 Fair and Reasonable Return					
Return on Rate Base	7.0%	7.0%	7.0%	7.0%	7.0%
Target	*Return to be between 4% and 10%*				
Typical Residential Monthly Billing Increase	*$ 1.46*	*$ 1.20*	*$ 1.30*	*$ 1.37*	*$ 1.40*
Impact of Customer Rate	*23.1%*	*15.4%*	*14.5%*	*13.3%*	*12.0%*
3 Financing of Capital Investments					
Debt Coverage Ratio	2.4	2.3	2.3	2.3	2.3
Debt to Net Assets Ratio	71%	70%	70%	70%	70%
Target	*Debt Coverage Ratio Not Less than 1.3* *Debt to Net asset ratio at 60%*				
4 Cash Balance					
Uncommitted Cash Balance	$ 25,625	$ 24,962	$ 28,568	$ 33,819	$ 44,086
Next Year's Capital Financed by RE	$ 16,569	$ 15,694	$ 17,776	$ 16,725	$ 42,995
Target	*Sufficient cash for planned capital investment to be financed by Retained Earnings*				
5 Long Range Plans					
Pro-forma Information	10 Years	10 Years	10 Years	10 Years	10 Years
Target	*10 year financial planning horizon*				

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Drainage Services — Sanitary and Stormwater Utilities

2012-2014 Capital Budgets and 2015-2021 Plan (000's)

Capital Projects	Carryforward from 2011	Proposed Capital Budget 2012	2013	2014	2012 -2014 Budget Including Carryforward from 2011	2015 - 2021 Plan	2012 - 2014 Budget & 2015 - 2021 Plan	Total Project Plan	Budget Approved in Prior Years	Current Budget Request
UTILITY FINANCED CAPITAL PROJECTS										
Drainage Neighbourhood Renewal										
Drainage Neighbourhood Renewal Coordination	-	36,826	50,317	59,975	147,118	341,862	488,981	488,981	-	488,981
Sewer Upgrading	-	529	550	570	1,649	93,073	94,722	1,649	-	1,649
Service Connection Renewal	-	529	550	570	1,649	191,609	193,258	1,649	-	1,649
	-	**37,884**	**51,417**	**61,115**	**150,416**	**626,545**	**776,961**	**492,279**	**-**	**492,279**
Drainage System Rehabilitation										
Creek Erosion Protection	-	529	550	570	1,649	11,677	13,326	1,649	-	1,649
Structures Rehabilitation	-	6,253	6,500	6,736	19,490	55,006	74,496	19,490	-	19,490
Sewer Rehabilitation	-	13,226	13,529	13,678	40,433	101,393	141,826	40,433	-	40,433
	-	**20,009**	**20,579**	**20,984**	**61,572**	**168,076**	**229,648**	**61,572**	**-**	**61,572**
Drainage Facilities Upgrading										
Facilities, Equipment & System Renewal	-	2,508	2,349	2,627	7,484	26,303	33,787	7,484	-	7,484
Residuals Disposal Facility	-	212	330	342	884	5,964	6,847	6,847	-	6,847
	-	**2,719**	**2,679**	**2,969**	**8,368**	**32,267**	**40,635**	**14,331**	**-**	**14,331**
Flood Prevention										
Neighbourhood Flood Prevention Projects	(2,186)	5,631	5,130	2,865	11,440	45,694	57,135	129,518	121,738	7,780
Opportunistic Flood Prevention Project	-	-	1,100	5,699	6,799	2,367	9,166	9,166	-	9,166
Overland Drainage	-	851	884	916	2,651	7,483	10,135	2,651	-	2,651
Morris Pond	-	5,233	3,984	-	9,217	-	9,217	18,228	60,327	(42,099)
	(2,186)	**11,715**	**11,098**	**9,481**	**30,108**	**55,544**	**85,652**	**159,563**	**182,065**	**(22,502)**
Environmental Quality Enhancement										
Environmental Enhancement Projects	-	2,800	3,289	3,977	10,065	14,586	24,651	10,065	-	10,065
Mill Creek End of Pipe Treatment Facility	-	-	385	456	841	8,346	9,187	9,187	-	9,187
	-	**2,800**	**3,674**	**4,433**	**10,906**	**22,932**	**33,838**	**19,252**	**-**	**19,252**
Combined Sewer Overflow Strategy										
Opportunistic Sewer Separation	-	3,629	3,520	3,875	11,024	29,616	40,641	58,210	47,410	10,800
WESS W12	-	6,349	2,733	-	9,082	-	9,082	45,509	44,913	596
Combined Sewer Overflow Control Projects	-	4,867	3,190	3,989	12,046	35,696	47,742	12,046	-	12,046
	-	**14,845**	**9,443**	**7,865**	**32,153**	**65,312**	**97,465**	**115,765**	**92,323**	**23,442**
Subtotal - Utility Financed Capital Projects	**(2,186)**	**89,972**	**98,889**	**106,847**	**293,522**	**970,676**	**1,264,198**	**862,763**	**274,388**	**588,375**
CONTRIBUTED CAPITAL PROJECTS										
Sanitary Servicing Strategy										
Sanitary Servicing Strategy Projects	-	21,479	21,041	15,673	58,193	135,368	193,561	193,561	-	193,561
SSSF Developer Built Projects	6,300	-	-	-	6,300	-	6,300	6,300	6,300	-
Mill Woods Double Barrel Replac/SESS SA1	1,218	7,976	6,599	2,508	18,301	-	18,301	56,929	53,163	3,766
	7,518	**29,455**	**27,640**	**18,180**	**82,794**	**135,368**	**218,162**	**256,790**	**59,463**	**197,327**
Drainage System Expansion										
System Expansion Projects	-	20,528	12,407	10,578	43,513	97,014	140,526	43,513	-	43,513
	-	**20,528**	**12,407**	**10,578**	**43,513**	**97,014**	**140,526**	**43,513**	**-**	**43,513**
Subtotal - Contributed Capital Projects	**7,518**	**49,984**	**40,047**	**28,758**	**126,306**	**232,382**	**358,688**	**300,303**	**59,463**	**240,840**
TOTAL - CAPITAL PROJECTS	**5,332**	**139,956**	**138,936**	**135,604**	**419,828**	**1,203,058**	**1,622,886**	**1,163,065**	**333,851**	**829,214**

In order to provide efficient & effective services, maintain the current drainage infrastucture, and ensure the necessary infrastructure is in place to support the growing needs of the City of Edmonton, Drainage Services is focused on key capital investments such as Neighbourhood Renewal, Flood Prevention, and System Rehabilitation. The funding strategy for the proposed 2012-2014 Capital Budget is as follows:

	2012	2013	2014	3-Year Total
Sanitary - Long Term Debt (25 years)	40,660	47,517	38,962	127,139
Sanitary - Retained Earnings	7,298	6,519	15,183	29,000
Sanitary - Utility Financed	**47,958**	**54,036**	**54,145**	**156,139**
Stormwater - Long Term Debt (25 years	36,959	34,755	40,040	111,753
Stormwater - Retained Earnings	8,819	16,569	15,694	41,082
Stormwater - Utility Financed	**45,777**	**51,324**	**55,734**	**152,835**
Total - Utility Financed	93,735	105,360	109,879	308,974
Total - Contributed	46,221	33,575	25,725	105,521
Total - Capital Financing	**139,956**	**138,935**	**135,604**	**414,495**

Drainage Services — Sanitary and Stormwater Utilities

2012-2014 Capital Budgets and 2015-2021 Plan (000's)

In general, the Sanitary and Stormwater Utilities are moving towards a capital financing strategy of 60% debt and 40% equity. Approval of this 3-Year Capital Budget will result in the eventual meeting of this target. Sanitary is forecasted to achieve this target in 2014 while Storwater is forecasted to meet this target in 2020.

	2011 Budget	2012 Forecast	2013 Forecast	2014 Forecast
Sanitary				
Debt Coverage Ratio	1.3	1.1	1.7	1.7
Debt to Net Assets Ratio	54%	56%	58%	60%
Stormwater				
Debt Coverage Ratio	2.5	2.4	2.3	2.3
Debt to Net Assets Ratio	73%	71%	70%	70%

Please refer to the 2012 Rate Filings for a summary of the capital plan from 2015-2021, along with discussions surrounding each of the capital program.

Drainage Services — Sanitary and Stormwater Utilities

Bylaws Requiring Approval (rate increases, debentures, etc.)

Bylaw #	Description
#15924 (Amendment #28)	**Sewers Use Bylaw** - To set sanitary sewer and land drainage rates to provide for the operation of the Drainage utility in accordance with the Utility Fiscal Policy.
#15926 (Amendment #6)	**Surface Drainage Bylaw** - To set lot grading inspection fees to cover the cost of service provided by Drainage Services.
#15925 (Amendment #16)	**Sewers** - To set sanitary sewer trunk charge rates that allow for the connection of a private drainage system to a sewer service that connects or will be connected to a sanitary or combined sewer.

Drainage Services — Sanitary and Stormwater Utilities

Proposed 2012 Budget—User Fee Information

	2011 Fee	$ Increase	% Increase	Proposed 2012 Fee
Sewers Use - Bylaw 9675				
Residential Collection & Transmission				
Monthly Charge	$3.59	$1.24	34.5%	$4.83
Consumption Charge (per m^3)	$0.6863	$0.24	34.5%	$0.9231
Commercial / Industrial Collection & Transmission				
Monthly Charge	$3.59	$1.24	34.5%	$4.83
Consumption Charge (first 10,000m^3)	$0.6863	$0.24	34.5%	$0.9231
Consumption Charge (over 10,000m^3)	$0.5310	$0.18	34.5%	$0.7142
Transmission of wastewater through the City owned sewerage system (cost per m^3)	$0.11	$0.07	62.0%	$0.18
Service calls for investigating and releasing of plugged sewer	$212.20	$21.22	10.0%	$233.42
Land Drainage monthly rate (per m^2)	$0.021426	$0.00	23.1%	$0.026375
Hauled Wastewater				
per axle	$14.65	$0.39	2.7%	$15.04
With Settleable solids > 100ml/L	Double			Double
Application Fees				
Permit to Release	$316.20	$8.38	2.7%	$324.58
Compliance Approval	$316.20	$8.38	2.7%	$324.58
Records Search	$97.92	$2.59	2.7%	$100.51
Application for Sewer Metering	$250.00	$0.00	0.0%	$250.00
Application for Contributive Sewer Utility	$250.00	$0.00	0.0%	$250.00
Application for Reduction in LDU Intensity Factor	$250.00	$0.00	0.0%	$250.00
Surface Drainage - Bylaw 11501				
Lot Grading Inspection Fees				
Single detached	$120.00	$10.00	8.3%	$130.00
Semi-detached	$120/u	$10.00	8.3%	$130/u
Multiple family	$200+$50/u	$20.00	10.0%	$220+$55/u
Any other land use	$200/ha	$20.00	10.0%	$220/ha
Sewers - Bylaw 9425				
Sanitary Sewer Trunk Charge				
Residential - 1-2 Dwellings	$1,156.00	$43.00	3.7%	$1,199.00
Residential - Secondary/garage/garden Suites	$512.00	$19.00	3.7%	$531.00
Residential - 3 or more Dwellings	$826.00	$31.00	3.8%	$857.00
Commercial	$5,782.00	$217.00	3.8%	$5,999.00
Industrial	$5,782.00	$217.00	3.8%	$5,999.00
Institutional	$5,782.00	$217.00	3.8%	$5,999.00

City of Edmonton Drainage Services Utilities

2012 Utility Rate Filing

September 13, 2011

Drainage Services Utility Rate Filing Table of Contents

1.0 Introduction

In 2011, City Council established a new governance framework for all of the City of Edmonton's Utilities. The Utility Committee (UC), comprised of four members of Council, is responsible for reviewing all matters relating to the Utilities' operations and to make recommendations to Council where budgets and policies are involved. City Council also retained the services of a Utility Advisor (UA) to provide technical expertise in advising the Committee in Utility matters.

Over the course of 2011, Drainage Services provided the UC with the following key documents, which were either approved or received for information:

- Sanitary and Land (Stormwater) Drainage Utilities – Capital Program Review
- 2010 Drainage Services Annual Report
- Policy C304C Drainage Services Utility Fiscal Policy – Sanitary and Stormwater Utilities
- Drainage Services Cost of Service Study
- Drainage Services 2012-14 Strategic Business Plan Development – Strategic Framework
- Deferred Maintenance of Local Services
- Drainage Utility Challenges Affecting Customer Rates
- Combined Sewer Overflow Control Strategy Update

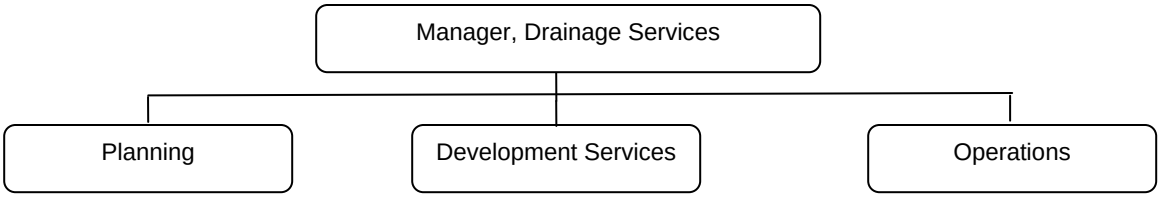
The 2012 rate filing has been prepared based upon the directions contained within these documents and/or provided by the UC during their review. In addition to this 2012 Rates Report, Administration prepared Budget Documents for Drainage Services following the corporate format to enable communication with citizens. This document will be publicly released on October 26, 2011.

The Sanitary Utility (SAN) and Stormwater Utility (STM) have been operating under Policy C304B Drainage Services Utility Fiscal Policy until it was revised on June 1, 2011. Prior to the revision, SAN paid the City of Edmonton a Local Access Fee based upon 8% of qualifying revenue. In addition, 30% of actual net income was paid as a Dividend in the following year. STM, established by City Council as a Utility in January 2003, was exempt from paying Local Access Fees and Dividends for a 10-year period.

The revised Policy C304C was approved by City Council on June 1, 2011 and provided clarification with respect to the rationale behind Local Access Fees; the elimination of Dividend payment from 2012 operations onwards; the inclusion of full Shared Services and Corporate Overhead charges; and set financial targets to ensure the long-term sustainability of these Utilities. The financing of the Utilities' capital investments from Self-liquidating Debt and Retained Earnings was also reaffirmed. Council further confirmed that STM is expected to pay Local Access Fees to the City when the Utility reaches financial sustainability. The Proposed 2012 Budget reflects the revised Policy to the extent that it is manageable within the customer rates. Please see Section 6.0 for discussion on the proposed customer rates and their impacts on the Financial Indicators.

This rate filing has been organized to include both the rate requirements of the Sanitary Utility and the Stormwater Utility. Where there is commonality in the overall description of the services, they have been reflected concurrently. The Proposed Budgets are presented separately to demonstrate the different rate requirements for the Utilities.

2.0 Organization Structure



- strategic planning
- business planning
- environmental planning
- asset management
- biosolids management
- public education
- EPCOR & ACRWC coordination
- performance measures
- Sanitary Servicing Strategy Fund management

- land development review and approval
- service connections
- lot grading & flood proofing
- regulatory inspections and compliance
- local improvements
- environmental monitoring and reporting
- infrastructure records

- maintenance of: collection system, sewer, manholes, catch basins, pump stations, wet & dry ponds
- environmental services
- customer services
- compliance report under Approval to Operate

3.0 Methodology and Key Assumptions

The 2012 Rates Report is based upon the 2011 Forecast prepared as of July 31, 2011. The City of Edmonton provided corporate budget guidelines and includes the following:

	2012	2013	2014
Population projection	812,000	825,000	837,000
Consumer Price Index	2.65%	2.67%	2.69%
Economic increases	Please see confidential memo		
Canada Pension Plan	$45,900	$47,000	$48,200
	4.95%	4.95%	4.95%
Local Authorities Pension Plan – maximum	$49,400	$50,500	$51,700
Below maximum	9.91%	10.43%	10.43%
Above maximum	13.74%	14.47%	14.47%
Employment Insurance – maximum	$45,200	$46,200	$47,300
Premium rate	2.42%	2.42%	2.42%
Maximum contribution	$1,095	$1,119	$1,146
Major Medical - with dependents:			
C.U.P.E. Local 30	$1,016	$1,128	$1,253
A.T.U. Local 569	1,138	1,264	1,403
I.B.E.W. Local 1007	1,016	1,128	1,253
Civic Service Union Local 52	896	995	1,105
Non-union and Management	495	550	611
Major Medical - without dependents:			
C.U.P.E. Local 30	$ 508	$ 564	$ 626
A.T.U. Local 569	569	632	702
I.B.E.W. Local 1007	508	564	626
Civic Service Union Local 52	449	498	553
Non-union and Management	495	550	611
Dental Plan - with dependents:			
C.U.P.E. Local 30	$1,057	$1,131	$1,211
A.T.U. Local 569	1,057	1,131	1,211
I.B.E.W. Local 1007	1,057	1,131	1,211
Civic Service Union Local 52	1,134	1,214	1,299
Non-union and Management	1,178	1,261	1,350
Dental Plan - without dependents:			
C.U.P.E. Local 30	$ 423	$ 453	$ 485
A.T.U. Local 569	423	453	485
I.B.E.W. Local 1007	423	453	485
Civic Service Union Local 52	454	486	520
Non-union and Management	471	504	540
Health Spending Account			
Union employees – full time	$ 500	$ 500	$ 500
Non-union employees – full time	500	500	500
CEMA – full time	1,100	1,100	1,100
Union employees – part time	250	250	250
Non-union employees – part time	250	250	250
CEMA – part time	550	550	550

Other assumptions used included the following:

- Cost of debt
  - 10 year term (4.85%, 5.05%, 5.25%)
  - 15 year term (5.15%, 5.35%, 5.55%)
  - 25 year term (5.45%, 5.65%, 5.85%)

- Staff vacancy – unless otherwise stated, the typical expectation for staff vacancy is 3% for operational staff and 2% for the remainder. This has been modified where necessary based on historic trends and 2011 forecast.

- Growth – customer growth assumption is derived from the corporate projection of population. The 2012 budget customer billing base is made up of the following:

Customer Type	# of Customers	Consumption	Density
Sanitary Utility:			
Residential customers	224,080 (2.1% growth)	16.6m^3	N/A
Multi-family customers	3,413 (0.7% growth)	410.0m^3	N/A
Non-Residential < 10,000m^3	15,264 (1.4% growth)	102.9m^3	N/A
Non-Residential > 10,000m^3	17 (-1.5% growth)	29,567m^3	N/A
Stormwater Utility:			
Residential customers	218,899 (2.1% growth)	N/A	296
Commercial customers	16,491 (0.8% growth)	N/A	3,068

4.0 Operational Performance

The Drainage Services Utilities strategic directions align with the City Council's 30-year vision. The table below lists the City's 10-year goals and corresponding outcomes and measures pertaining to Sanitary and Stormwater Drainage Services.

Strategic Goal	Corporate Outcome	Corporate Measure	Department Outcome	Department Measure	2009	2010	2011 Target	2012 Target
Preserve & Sustain Edmonton's Environment	The impact of City operations on air, land and water systems is minimized	Diversion of waste to city landfills by City of Edmonton operations	The impact of operations on air, land and water systems is minimized	Percentage of generated biosolids disposed of	109%	97%	87%	90%
	Edmonton strives to be a leader in environmental advocacy, stewardship, preservation, and conservation	Edmonton Watershed Contaminant Reduction Index	Leadership is demonstrated in reducing impacts on the environment	Edmonton Watershed Contaminant Reduction Index	7.4	7.3	7.6	7.6
				Number of new developments utilizing drainage low impact development principles (per year)	0	1	5	4
Improve Edmonton's Livability	Safe and Clean City	% citizens who feel Edmonton is a clean city	Public Health is Maintained	Number of neighborhoods completed as part of the Flood Prevention Program (cumulative total)	6	12	12	13
				Number of wastewater main line blockages (per 100 km of sewers)	2.93	2.14	2.6	2.6
Transform Edmonton's Urban Form	Edmonton has sustainable infrastructure that fosters and supports civic and community needs	% of infrastructure in Poor/Very Poor physical condition in existing neighborhoods	Assets are managed to optimize benefits over their life cycle	Length of sewer renewed (per year)	78	42	65	67
				Percentage difference between actual expenditure and approved capital budget for Drainage Services	8%	19%	15%	15%

5.0 Rate Request and Factors Influencing Rate Requirement

The 2012 Rates Report includes a request for rate increase as follows:

	2011	2012	Change
Sanitary Utility:			
Monthly Fixed Rate	$3.59	$4.83	$1.24
Monthly Variable Rate < 10,000m^3	0.69	0.92	0.23
Monthly Variable Rate > 10,000m^3	0.53	0.71	0.18
Stormwater Utility:			
Monthly Rate per m^2	$0.021426	$0.026375	$0.00495

Impacts on Typical Residential Customer	2011 Typical Monthly Fee	Proposed 2012 Typical Monthly Fee	Requested Monthly Increase	Annual Increase
Sanitary Drainage	$15.38	$20.15	$4.77	$57.24
Stormwater Drainage	$ 6.34	$ 7.80	$1.46	$17.52

5.1 Sanitary Utility

The proposed Sanitary Utility rates achieve the following:

- Bring the Return on Rate Base from 2011 Forecast of 0.5% to the minimum target identified in the Utility Fiscal Policy of 4.0%.
- Meet the Depreciation and Interest obligations resulting from projected capital investments of $54.5 million incurred in 2011 and continues with the Drainage Neighbourhood Renewal Coordination Program that will see another seven neighbourhoods receiving reconstruction work.
- Begin a three-year implementation plan to pay for the full cost in the disposal of biosolids, and increasing the disposal ratio from 87% in 2011 to 90% in 2012. The goal is to meet a disposal ratio of 100% of annual biosolids generated by 2015.
- End the subsidy that has been provided by Drainage Design and Construction.

Return on Rate Base

Return on Rate Base (RORB) is a key mechanism used by a Utility to ensure its long-term financial sustainability. The Utility Fiscal Policy identifies 4.0% as the minimum targeted return since it approximates the average cost of long-term debt. The Policy also identifies other Financial Indicators whereby progress towards improving their results will rely heavily on improving the RORB. The Utility's RORB has been as follows:

2010 Actual	1.2%
2011 Budget	1.7%
2011 Forecast	0.5%
2012 Proposed	4.0%

Achieving a 4% RORB accounts for $2.50 of the $4.77 monthly rate increase. Since Local Access Fee is calculated based upon the amount of rate revenue generated, the 4% return also adds a further $0.44 to make up part of the total $4.77 monthly increase.

Drainage Neighbourhood Renewal Coordination Program

The Drainage Neighbourhood Renewal Coordination Program is in response to the Council's direction relating to the Transportation Neighbourhood Renewal Program. Drainage accelerated its rehabilitation work in neighbourhoods from $12 million of expenditures in 2007 to a 2011 budget of $41 million.

This acceleration ensures that the underground work needed for Neighbourhood Renewal is completed at least one year prior to the road surface work being undertaken. Typically, for every $4 million of road and sidewalk reconstruction, $1 million is needed to complete the drainage infrastructure renewal. While the actual cost ratio between Sanitary and Stormwater infrastructure varies from neighbourhood to neighbourhood, for budget purposes, a 50%-50% split is used.

The 2011 capital investment in neighbourhood renewals is projected at $40.8 million (involving 6 new neighbourhoods in addition to those carried forwarded from 2010). This investment has depreciation and interest expense implications to the 2012 operating budget requirements. The Proposed 2012 Budget also adds another seven neighbourhoods to the renewal plan, with an estimated capital cost of $36.8 million. The operating impacts of these investments translate to a $0.89 monthly increase of the $4.77 increase.

Depreciation and Interest Expenses for Other capital investments and Neighbourhood Renewal account for a total of $0.10 from the $4.77 monthly increase.

Biosolids Management

Over the past few budgets, SAN has identified the need to increase its biosolids disposal rate. Historically, the Utility has been adding to the volume of biosolids sent to the lagoons. Furthermore, SAN has enjoyed a discounted rate on the disposal cost as a result of a legacy agreement from the previous owner of the Composter.

In 2010, SAN achieved a disposal rate of 85% on the annual volume generated. The 2011 Budget increased the planned disposal rate to 87%. The Proposed 2012 Budget increases the disposal rate to 90%. Based on current projections, it will take until 2015 to fully dispose of the annual volume of biosolids generated before those that have been stored in the lagoons could be addressed, likely being drawn down over a much longer timeframe.

In addition, the 2012 Proposed Budget also reflects a 3-year implementation plan that will see SAN paying the actual full cost of disposal.

The implementation of the biosolids disposal plan accounts for $0.44 of the $4.77 monthly increase.

End Subsidy from Drainage Design and Construction

City Council has directed the Utility to discontinue the subsidy provided by Drainage Design and Construction to SAN. Starting in 2009, SAN limited the subsidy received from the net income of Drainage Design and Construction to $3.0 million. In 2010, the subsidy was further reduced to $1.5 million and in 2011, $1.25 million. The Proposed 2012 Budget ends all subsidies from these non-regulated activities. The financial impact is a $0.26 monthly increase from the $4.77 total.

Operational Needs

After accounting for the changes that are not within the direct control of the Utility, there remains a need for a rate increase to maintain the services provided to the customers. The proposed 2012 budget contains an addition of $695,000 over the 2011 Budget or $497,000 over the 2011 Forecast to meet operational and maintenance needs. Operation and Maintenance requirements accounts for a monthly increase of $0.15 out of the $4.77 total monthly increase. Details of these are provided for in Section 7.0 of this filing.

5.2 Stormwater Utility

The proposed Stormwater Utility rates achieve the following:

- Provides sufficient cash to allow for the continued investment in the Drainage Neighbourhood Renewal Coordination Program that starts to reverse the trend of debt financing in excess of 70%.
- Meet the Depreciation and Interest obligations resulting from projected capital investments of $52.2 million incurred in 2011 and continues with the Drainage Neighbourhood Renewal Coordination Program that will see another seven neighbourhoods receiving reconstruction work.

Cash Requirement

STM was established as a Utility in 2003. As capital investment needs increased, the Utility has steadily increased its reliance on the use of long term debt to fund these investments, with a Debt to Net Assets Ratio as follows:

2009 Actual	69%
2010 Actual	70%
2011 Budget	73%
2011 Forecast	69%
2012 Proposed Budget	71%
2013 – 2016 Plan	70%

To maintain a healthy cash balance, the Proposed 2012 Budget includes the use of $8.8 million in cash to finance $45.8 million of capital investments (debt financing of 81%) to achieve a debt financing ratio of 70%. That ratio will then be maintained over the next 5 years to ensure the capital plan is achievable and the Utility becomes financially stable. Over this time frame, the forecasted cash balance after financing the following year's capital ranges from $1 million to $9 million.

Once financial stability is achieved, the use of debt financing will be gradually reduced from 2017 to 2021 to eventually achieve the desired 60% debt financing ratio in years 9 and 10.

To implement this strategy, the RORB needs to be maintained at 7.0% over the next 10 years to generate sufficient cash balance to pay for the following year's capital financed by equity. This strategy accounts for $0.87 of the $1.46 monthly increase.

Depreciation and Interest Expense

While STM faces similar capital challenges presented to SAN by the Drainage Neighbourhood Renewal Coordination Program, it has the added impact of also implementing the Flood Prevention Program after the major storm event in 2004. The operating impacts resulting from added Depreciation Expense and Interest Expense translate to a total of $0.42 of the required $1.47 monthly increase ($0.28 for Drainage Neighbourhood Renewal and $0.14 for the remainder of stormwater capital investment).

Operational Needs

After accounting for the changes that are not within the direct control of the Utility, there remains a need for a rate increase to maintain the services provided to the customers. The proposed 2012 budget contains an addition of approximately $1 million over the 2011 Budget and Forecast to meet operational and maintenance needs. Operation and Maintenance requirements accounts for a monthly increase of $0.17 out of the $1.47 total monthly increase. Details of these are provided for in Section 8.0 of this filing.

6.0 Financial Indicators

City Council approved Policy C304C Drainage Services Utility Fiscal Policy on June 1, 2011. The Policy identifies a number of Financial Indicators which when achieved, will provide assurance on the financial sustainability of the Utility in the long-term.

As indicated to City Council when the Policy was debated, while SAN is currently within the target for many of the Financial Indicators, its lack of Return on Rate Base has started a trend towards deteriorating results that if not addressed, will create uncertainties for the Utility in the longer term.

STM, being a relatively new Utility, has challenges that are more immediate from the perspective of cash availability and capital investment requirements. Given its small non-contributed asset base, it is more difficult to effect significant progress within a short timeframe.

6.1 Sanitary Utility

	Actual	Approved Budget	Forecast										
	2010	2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1 Rates Sufficient to Meet Expenses													
Net Income	4,926	7,135	$ 2,380	$ 19,045	$ 19,921	$ 21,550	$ 23,767	$ 25,837	$ 28,102	$ 30,379	$ 32,484	$ 34,896	$ 37,360
Target			***Positive Net Income***										
2 Fair and Reasonable Return													
Return on Rate Base	1.2%	1.7%	0.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Target			***Return to be between 4% and 10%***										
Monthly Billing Increase	$ 1.02	$ 0.63	$ 0.63	$ 4.77	$ 1.15	$ 1.18	$ 0.84	$ 1.14	$ 1.18	$ 1.14	$ 1.14	$ 1.35	$ 1.25
Impact of Customer Rate	-13.0%	5.4%	5.4%	34.5%	6.5%	6.3%	4.5%	5.6%	5.6%	5.2%	5.0%	5.6%	5.0%
3 Financing of Capital Investments													
Debt Coverage Ratio	1.2	1.3	1.1	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.7	1.7	1.6
Debt to Net Assets Ratio	53.3%	53.9%	56.0%	57.7%	59.7%	59.8%	59.9%	59.9%	59.8%	59.9%	60.0%	60.0%	60.1%
Target			***Debt Coverage Ratio non less than 1.3 Debt to Net Assets Ratio at 60%***										
Cash Balance													
Cash Available to Utility	8,817	5,420	2,245	12,530	25,086	30,043	28,154	29,988	38,270	48,258	58,498	67,037	79,453
Next year's capital financed by RE	$ 7,761	$ 7,298	$ 7,298	$ 6,519	$ 15,183	$ 23,190	$ 21,348	$ 17,253	$ 18,029	$ 20,621	$ 24,487	$ 22,782	$ 25,971
Planned Capital Expenditures	$ 33,944	$ 33,436	$ 51,544	$ 47,958	$ 54,036	$ 54,145	$ 77,086	$ 73,322	$ 61,406	$ 68,018	$ 74,529	$ 83,546	$ 81,937
Target			***Sufficient cash for planned capital investment to be financed by Retained Earnings plus working capital***										
5 Long Range Plans													
Pro-forma Information	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Target			***10 year financial planning horizon***										

6.2 Stormwater Utility

	Actual	Approved Budget	Forecast										
	2010	2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1 Rates Sufficient to Meet Expenses													
Net Income	9,241	7,807	$ 8,661	$ 12,601	$ 15,732	$ 19,160	$ 22,943	$ 26,871	$ 30,421	$ 33,779	$ 37,602	$ 41,872	$ 46,029
Target			***Positive Net Income***										
2 Fair and Reasonable Return													
Return on Rate Base	9.7%	5.1%	6.5%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Target			***Return to be between 4% and 10%***										
Monthly Billing Increase	$ 0.48	$ 0.38	$ 0.38	$ 1.46	$ 1.20	$ 1.30	$ 1.37	$ 1.40	$ 1.03	$ 0.99	$ 1.23	$ 1.36	$ 1.44
Impact of Customer Rate	8.0%	6.4%	6.4%	23.1%	15.4%	14.5%	13.3%	12.0%	7.9%	7.0%	8.2%	8.3%	8.1%
3 Financing of Capital Investments													
Debt Coverage Ratio	3.4	2.5	2.7	2.4	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.3	2.3
Debt to Net Assets Ratio	70%	73%	68%	71%	70%	70%	70%	70%	63%	61%	61%	60%	60%
Target			***Debt Coverage Ratio non less than 1.3 Debt to Net Assets Ratio at 60%***										
Cash Balance													
Cash Available to Utility	29,774	17,178	21,385	25,625	24,962	28,568	33,819	44,086	31,835	35,971	50,199	61,793	84,997
Next year's capital financed by RE	$ 21,772	$ 8,819	$ 8,819	$ 16,569	$ 15,694	$ 17,776	$ 16,725	$ 42,995	$ 30,214	$ 23,960	$ 30,822	$ 23,104	$ 24,693
Planned Capital Expenditures	$ 31,796	$ 92,675	$ 52,241	$ 45,777	$ 51,324	$ 55,734	$ 63,102	$ 61,644	$ 54,458	$ 57,998	$ 69,421	$ 72,974	$ 68,491
Target			***Sufficient cash for planned capital investment to be financed by Retained Earnings plus working capital***										
5 Long Range Plans													
Pro-forma Information	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years	10 Years
Target			***10 year financial planning horizon***										

7.0 Sanitary Utility Summary Schedule ($000's)

The following sub-sections provide a detailed breakdown of the Proposed 2012 Budget for the Sanitary Utility.

7.1 Sanitary Utility Summary Schedule ($000's)

Line #		Reference	2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Expenses								
1	Operating and Maintenance	Schedule 7.2	27,816	33,139	36,753	37,250	497	1.4%
2	SSSF Payments		1,300	1,300	1,300	1,300	-	0.0%
3	Biosolids		5,931	5,418	6,335	8,445	2,110	33.3%
4	Depreciation Expense (net)	Schedule 7.3	10,896	8,528	9,642	10,354	712	7.4%
5	Debt Interest	Schedule 7.3.3	8,986	9,905	10,554	13,432	2,878	27.3%
6	Local Access Fees	Schedule 7.4	5,826	5,116	5,306	7,399	2,093	39.4%
7	Gold Bar Expense		6,369	-	-	-	-	0.0%
	Expenditure		67,124	63,407	69,890	78,180	8,290	
8	Return on Rate Base	Schedule 7.6.2	8,986	4,926	2,380	19,045	16,665	700.2%
	Revenue Requirement		**76,110**	**68,333**	**72,270**	**97,225**	**24,955**	
9	**Non-Rate Revenues**	Schedule 7.5	9,584	4,514	5,094	4,738	(356)	-7.0%
10	**Existing Rate Revenues**		66,526	63,819	67,175	68,753	1,578	2.3%
11	**Funding Required Through Rate Increase**		**-**	**-**	**-**	**23,734**	**23,734**	
					Total Rate Revenue	**92,487**		

Note: Existing Rate Revenues in 2009 includes 3 months operation of the Gold Bar Wastewater Treatment Plant

The 2012 total proposed expenditure budget of $78.2 million represents an increase of $8.3 million over the 2011 forecast results. Nearly 70% of the proposed increase ($5.7 million) relates to factors that are a reflection of past decisions. Another 25% of the increase ($2.1 million) relates to biosolids disposal. This leaves $0.5 million of the increase to be explained in Sections 7.2 to 7.6. The information has been prepared with comparisons based on the Proposed Budget against the 2011 Forecast.

The Proposed 2012 Budget contains uncertainties around labour costs. All unionized staff has been without a contract since January 2011 and while negotiations are ongoing, it is not clear as to whether or not a negotiated agreement will be reached prior to the deliberation of the 2012 budget. Please see separate confidential memo that outlines the approach taken for budget purposes.

Non-rate Revenues accounts for $4.8 million representing approximately 5% of the total revenues. Non-rate Revenues are comprised of Program Revenues such as regulatory compliance inspections, bio-solids management and supernatant treatment for the ACRWC, and interest income.

Existing Rate Revenues reflects increased number of customers based upon corporate projection on population growth. Details are provided under Section 3.0.

7.2 Operations and Maintenance ($000's)

Line #		Reference	2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Operations & Maintenance Expense								
1	Personnel	Schedule 7.2.1	17,448	19,763	18,045	19,216	1,171	6.5%
2	Materials, Goods, and Supplies		1,851	1,624	2,294	2,414	120	5.2%
3	External Services	Schedule 7.2.2	3,342	4,091	4,181	4,144	(37)	-0.9%
4	Fleet Services	Schedule 7.2.3	2,198	2,009	1,959	1,864	(95)	-4.8%
5	Shared Services	Schedule 7.2.4	5,260	4,583	6,549	5,220	(1,329)	-20.3%
6	Customer Billing Services		4,103	3,509	4,210	4,336	126	3.0%
7	Other Expenses		1,895	1,836	1,637	1,664	27	1.6%
8	Interdepartmental Charges/(Recoveries)		(8,281)	(4,277)	(2,122)	(1,607)	515	-24.3%
	Total Operating & Maintenance		**27,816**	**33,139**	**36,753**	**37,250**	**497**	

Line 6 – Customer Billing Services

Drainage Services contracts with EPCOR to provide customer billing and collection services. The existing agreement expires at the end of 2011. The Proposed 2012 Budget reflects inflationary increases, adjusted for customer growth.

Line 8 – Interdepartmental Charges/(Recoveries)

Change from 2009 & 2010 Actual costs to 2011 Forecast and 2012 Budget a result of an allocation between Sanitary and Stormwater to reflect true costs.

7.2.1 Personnel Costs ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Personnel Costs							
1	Salaries & Wages	12,231	13,955	12,662	13,567	905	7.1%
2	Overtime	1,662	1,562	1,231	1,220	(11)	-0.9%
3	Allowances and Benefits	3,555	4,246	4,152	4,429	277	6.7%
	Total Personnel	**17,448**	**19,763**	**18,045**	**19,216**	**1,171**	

As indicated earlier, union contracts for all non-management staff expired December 31, 2010. Negotiations with all unions are ongoing; however, no settlements have been reached to date. Please see confidential memo for further information.

From an operational perspective, operational and administrative staff do not distinguish their time spent working on Sanitary versus Stormwater Infrastructure. As a result, budget has been allocated between Sanitary Utility and Stormwater Utility on the following basis:

Operational staff	70% SAN	30% STM	Ratio of non-contributed assets
Administration staff	60% SAN	40% STM	Planning is done on a holistic basis

The accounting and payroll systems have been adjusted in 2011 to reflect the total costs on this basis. Also, the Proposed 2012 Budget contains a request for an increase of 10 FTE's.

The Proposed 2012 Budget for Overtime has been modified to reflect the continuing direction and trend to reduce the requirement for Overtime. Overtime is used to manage unplanned peak requirements that are most effectively managed through the use of existing staff.

The projected increase for Allowances and Benefits has been prepared to reflect rates provided corporately.

7.2.2 External Services ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
External Services							
1	Planning	1,340	2,232	2,299	2,066	(233)	-10.1%
2	Development Services	612	1,135	1,005	1,111	105	10.5%
3	Operations & Maintenance	1,233	663	571	719	149	26.1%
4	Other	157	61	306	248	(58)	-18.9%
	Total External Services	**3,342**	**4,091**	**4,181**	**4,144**	**(37)**	

Line 1 - Planning

The Budget for External Services relate mostly to the need for studies in the overall planning of the Drainage System. There are two key projects planned for 2012. The Biosolids Management Study to find alternative technologies to increase the disposal volume of biosolids at a cost effective manner. The Rate Design Study is expected to be undertaken to ensure the distribution of rates between customer classes is appropriate.

Line 2 – Development Services

The majority of this budget is related to the Environmental Monitoring Program and the associated lab testing to fulfill the requirements of the Approval to Operate. Cost increases are mainly due to higher lab costs and additional facilities requiring monitoring.

Line 3 – Operations & Maintenance

The Proposed Budget has been increased from the 2011 forecast to reflect projected requirements. The 2011 forecast is relatively lower due to delays in engaging external parties.

7.2.3 Fleet Services ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Fleet Services							
1	Fleet Charges	927	510	629	540	(89)	-14.1%
3	Fuel	403	478	425	580	155	36.6%
4	Major Repairs	868	1,021	905	744	(161)	-17.8%
	Total Fleet	**2,198**	**2,009**	**1,959**	**1,864**	**(95)**	

Fleet maintenance is provided by the City of Edmonton through the Fleet Services Branch. It operates on a cost recovery basis which include direct administration costs, but not corporate overheads.

Line 1 – Fleet Charges

The reduction in Fleet Charges is the result of Drainage Services now purchasing vehicles through the capital program instead of leasing through Fleet. As the vehicles leased through Fleet Services are replaced by purchased vehicles, Fleet Charges will continue to decline. The reduction is also due in part to a reallocation of costs to Drainage Design & Construction.

Line 2 – Fuel

Fuel commodity prices have increased significantly over 2011 and are projected to continue to increase in 2012. The Proposed 2012 Budget reflects both increases to the commodity pricing and the number of vehicles and mileage driven.

Line 3 – Major Repairs

The Proposed 2012 Budget reflects the projected decreases in required repairs as well as a reallocation of costs to Drainage Design & Construction.

7.2.4 Shared Services ($000's)

Line #		2009 Actuals	2010 Actuals	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Shared Services							
1	Human Resources			558	601	43	7.7%
2	Legal Services			97	210	113	116.5%
3	Communications			283	122	(161)	-56.9%
4	Corporate Information System	3,357	3,350	166	167	1	0.4%
5	Information Technology			1,532	1,608	76	4.9%
6	Materials Management			346	568	222	64.3%
7	Financial Services			978	835	(143)	-14.6%
8	Space Rent, Facility Maintenance & Land Services			1,424	800	(624)	-43.8%
9	Central Management Fees	1,903	1,233	1,165	309	(856)	-73.5%
	Total Shared Services	**5,260**	**4,583**	**6,549**	**5,220**	**(1,329)**	

The Proposed 2012 Budget for Shared Services reflects a decrease of $1.3 million due to an allocation of costs to Stormwater and Drainage Design & Construction to better reflect their true portion of these costs.

In addition, the City of Edmonton undertook a major re-organization in June 2011, resulting in significant changes to the organizational structure, with shifts between Central Management Charges and other Departmental Charges. This made it difficult to compare the real increases in the cost of different services.

7.3 Depreciation and Interest Expense ($000's)

Line #		Reference	2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Depreciation Expense								
1	Depreciation Expense	Schedule 7.3.1	15,272	15,733	17,461	18,911	1,450	8.3%
2	Amortization (CIAC)	Schedule 7.3.2	(4,376)	(7,205)	(7,819)	(8,557)	(738)	9.4%
	Net Depreciation Expense		**10,896**	**8,528**	**9,642**	**10,354**	**712**	
3	Interest Expense	Schedule 7.3.3	8,986	9,905	10,554	13,432	2,878	27.3%
4	Principal Repayment	Schedule 7.6.2	8,073	9,234	9,911	11,102	1,191	12.0%

Depreciation Expense represents the amount of asset life used up during the operating period. It includes both Contributed and Non-Contributed Assets. The depreciation rate is dependent upon the different classes of assets, each with a pre-determined estimated useful life based upon historic experience.

Amortization represents the amount of benefit from Contributed Assets that are realized during the operating period. It is used to offset the amount of Depreciation.

Interest Expense and Principal Repayment represents the total annual cash requirement to service outstanding debt. As a result of $30.9 million in debt issued in 2010 and planned issuance of $44.3 million in 2011, Interest Expense is projected in increase by $2.9 million in 2012.

7.3.1 Schedule of Depreciation Expense ($000's)

Line #		Asset Class	Expected Useful Life in Years	Forecast Accumulated Depreciation Dec 2011	2012 Depreciation on Existing	1/2 Year Depreciation on 2012 New	2012 Total Depreciation
Depreciation Expense on Total Assets							
1	Bldgs-Office	**110300**	44	1,282	87		87
2	Bldgs-Warehouses	**110310**	44	5,932	1,295		1,295
3	Bldgs-Labs/R&D	**110320**	44	395	40		40
4	Vehicles-Autos	**110400**	10	6	2		2
5	Vehicles-Trucks	**110410**	10	522	212		212
6	Vehicles-Trucks	**5A_TRAIL**	10	21	12		12
7	Office Furn & Eqpt	**110500**	5	95	11		11
8	Computer Eqpt.	**110510**	5	5,630	626		626
9	GBIS/SCADA/DC Eqpt	**110520**	10	994	225	108	333
10	Machinery & Eqpt	**110530**	5	6,373	808		808
11	GA-Com-Support	**111000**	75	5,017	190		190
12	GA-Com-Pipes	**111010**	75	22,205	937	828	1,765
13	GA-San-Support	**111020**	75	28,444	1,652		1,652
14	GA-San-Pipes	**111050**	75	100,172	8,856		8,856
15	GA-San-Serv Conn	**111070**	75	22,115	1,604		1,604
16	GA-San-Misc Struct.	**111084**	75	1,614	421		421
17	GA-Com-Misc Struct.	**111086**	75	143	18		18
18	GA-San-Pumpstations	**111090**	44	11,746	849		849
19	GA-WW-Biosolids	**111140**	44	2,287	122	1	123
20	GA-WW-Support I/F	**111160**	44	214	7		7
	Total Depreciation			**215,207**	**17,974**	**937**	**18,911**

7.3.2 Amortization of Contributed Assets ($000's)

Line #		Asset Class	Expected Useful Life in Years	Accumulated Amortization Dec 2010	2012 Amortization on Existing	1/2 Year Amortization on 2012 New	2012 Total Amortization
Amortization on Contributed Assets							
1	Bldgs-Office	**110300**	44				-
2	Bldgs-Warehouses	**110310**	44				-
3	Bldgs-Labs/R&D	**110320**	44				-
4	Vehicles-Autos	**110400**	10				-
5	Vehicles-Trucks	**110410**	10				-
6	Office Furn & Eqpt	**110500**	5				-
7	Computer Eqpt.	**110510**	5				-
8	GBIS/SCADA/DC Eqpt	**110520**	10				-
9	Machinery & Eqpt	**110530**	5				-
10	GA-Com-Support	**111000**	75				-
11	GA-Com-Pipes	**111010**	75				-
12	GA-San-Support	**111020**	75				-
13	GA-San-Pipes	**111050**	75	(83,610)	(8,173)	(384)	(8,557)
14	GA-San-Serv Conn	**111070**	75				-
15	GA-San-Misc Struct.	**111084**	75				-
16	GA-Com-Misc Struct.	**111086**	75				-
17	GA-San-Pumpstations	**111090**	44				-
18	GA-WW-Biosolids	**111140**	44				-
19	GA-WW-Support I/F	**111160**	44				-
	Total Amortization			**(83,610)**	**(8,173)**	**(384)**	**(8,557)**

7.3.3 Schedule on Debt Servicing Costs ($000's)

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
1	03071A	2	1	-	-
2	03269A	5	2	-	-
3	03336A	4	3	2	1
4	03799A	2	2	1	1
5	03800A	6	5	3	2
6	11039C	64	61	58	54
7	11039D	6	6	6	5
8	11760C	2	-	-	-
9	11960B	38	-	-	-
10	11961A	149	144	138	132
11	11961F	1	1	1	1
12	12285A	103	51	-	-
13	12285D	52	(3)	-	-
14	12285G	46	31	15	-
15	12286F	62	60	58	55
16	12535A	297	287	277	266
17	12535D	184	179	173	166
18	12535E	2	2	2	2
19	12899A	110	107	104	101
20	13080B	159	154	149	143
21	13080E	299	291	282	273
22	13294D	122	119	116	113
23	13677A	109	91	72	52
24	13677C	61	51	41	31
25	13678A	338	328	318	308
26	13678B	54	53	51	49
27	14015A	185	161	135	109
28	14015D	64	57	49	41
29	14016A	52	50	49	47
30	14016C	2	2	2	2
31	14016D	67	65	63	61
32	14016E	15	15	14	14
33	14082A	3	3	3	2
34	14082B	6	5	4	4
35	14084A	111	108	105	102
36	14084B	379	371	363	354
37	14084C	10	212	207	202
38	14084D	-	0	10	9
39	14293A	(4)	-	-	-
40	14293B	100	87	77	67
41	14293C	143	127	110	92
42	14294A	11	11	11	10
43	14294B	37	36	35	34
44	14294C	58	57	56	54
45	14294D	-	5	96	94
46	14421A	47	46	45	44
47	14421B	182	179	175	170
48	14421C	132	164	160	156
49	14421D	0	4	4	4
50	14591A	6	5	4	4
51	14592A	185	180	176	171
52	14592B	618	606	592	578
53	14592C	128	159	155	151
54	14592D	9	182	178	174
55	14592E	-	35	44	43

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
56	14592F	-	5	19	19
57	14893A	83	82	80	78
58	14893B	15	313	306	298
59	14893C	-	39	48	47
60	14893D	-	20	77	76
61	14893E	-	6	137	134
62	15244A	48	1,025	1,002	978
63	15244B	-	129	504	428
64	15244C	-	354	436	489
65	15244D	-	11	233	228
66	15245A	18	(13)	19	387
67	15245B	-	411	384	6
68	10778A	113	107	100	93
69	10778B	213	202	191	179
70	10778C	58	55	52	49
71	11039A	394	373	351	326
72	11039B	85	81	76	72
73	11249A	464	442	418	394
74	11249B	208	199	189	178
75	11249C	342	330	318	306
76	11760B	10	-	-	-
77	11761A	65	62	59	56
78	11761B	322	310	297	283
79	11761C	25	24	23	22
80	11960A	20	-	-	-
81	11961B	12	12	11	11
82	11961C	325	314	302	290
83	11961D	9	8	8	8
84	11961E	205	200	194	187
85	12285B	2	1	1	-
86	12285C	56	38	19	-
87	12285D	(4)	43	30	20
88	12285E	57	46	35	24
89	12285F	31	27	22	18
90	12286A	200	193	185	178
91	12286B	31	30	29	28
92	12286C	210	203	196	188
93	12286D	401	388	375	362
94	12286E	60	58	56	54
95	12534A	23	15	8	-
96	12535B	110	106	102	98
97	12535C	66	64	62	60
98	13080A	45	43	42	40
99	13080C	85	82	80	77
100	13080D	1	1	1	1
101	13293A	24	20	16	12
102	13293B	39	35	30	26
103	13294A	198	192	187	181
104	13294B	193	188	182	177
105	13294C	92	90	88	86
106	13294E	85	84	82	80
107	13294F	46	83	81	79
108	13677B	86	73	58	43
109	13784A	386	375	364	352
110	13784B	153	149	144	139

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
111	13784C	396	385	373	361
112	13784D	886	863	838	813
113	14015B	81	72	62	52
114	14015C	382	345	307	266
115	14015E	98	89	81	72
116	14015F	64	75	67	60
117	14015G	0	1	1	1
118	14016B	141	137	133	129
119	14016F	28	50	49	48
120	14293A	23	20	17	15
121	14293D	86	79	71	63
122	14591B	422	385	347	308
123	14591C	102	119	107	95
124	14591D	19	32	29	26
125	14591E	1	2	2	1
	December 2011 Borrowing			88	2,239
	December 2012 Borrowing				1,211
	Less EPCOR Debt	(4,272)	(5,429)	(5,121)	(4,824)
	Total Debt Servicing	**8,986**	**9,905**	**10,554**	**13,432**
Average Cost of Debt		5%	5%	4%	5%

7.4 Local Access Fee ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
1	Rate Revenue	74,829	63,817	67,176	92,487		
2	Local Access Fee Rate	8.0%	8.0%	8.0%	8.0%		
	Local Access Fee	**5,826**	**5,116**	**5,306**	**7,399**	**2,093**	39%

Local Access Fee is calculated based on 8% of Qualifying Revenues, essentially Rate Revenue. As the total amount of Rate Revenue increases, so does the amount of Local Access Fee to be paid to the City of Edmonton.

7.5 Breakdown of Non-Rate Revenue ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
1	Program Revenues	4,205	4,208	3,619	4,693	1,074	29.7%
2	Transfer from Design and Construction	5,227	-	1,250	-	(1,250)	-100.0%
3	Interest Revenue	152	306	225	45	(180)	-80.0%
	Total Non-Rate Revenues	**9,584**	**4,514**	**5,094**	**4,738**	**(356)**	

Line 1 – Program Revenues

The increase is primarily due to new negotiated rates with the ACRWC for bio-solids management and supernatant treatment as a result of the 2010 Cost of Service Study.

Line 2 – Transfer from Design and Construction

The Proposed 2012 Budget reflects the end of using Net Income from Design and Construction to reduce overall revenue requirement.

Line 3 – Interest Revenue

The forecasted ending Cash Balance for Sanitary Utility is $2.2 million, down from $8.8 million in 2010. This highlights the overall issue relating to the lack of Return on Rate Base and the increased capital investment.

7.6 Revenue Requirement ($000's)

Line #		Reference	2011 Forecast	2012 Budget
Operating & Maintenance Expense				
1	Personnel	Schedule 7.2	18,045	19,216
2	Materials, Goods, and Supplies	Schedule 7.2	2,294	2,414
3	External Services	Schedule 7.2	4,181	4,144
4	Fleet Services	Schedule 7.2	1,959	1,864
5	Shared Services	Schedule 7.2	6,549	5,220
6	Biosolids		6,335	8,445
7	Customer Billing Services	Schedule 7.2	4,210	4,336
8	Other Expenses	Schedule 7.2	1,637	1,664
9	Interdepartmental Charges/(Recoveries)	Schedule 7.2	(2,122)	(1,607)
Depreciation net of Amortization		Schedule 7.3	9,642	10,354
Interest Expense		Schedule 7.3.3	10,554	13,432
Local Access Fee		Schedule 7.4	5,306	7,399
SSSF Payments			1,300	1,300
Return on Rate Base		Schedule 7.6.2	2,380	19,045
Total Revenue Requirement			**72,270**	**97,225**
Less Non-Rate Revenues		Schedule 7.5	5,094	4,738
Total Rate Revenue Required			**67,175**	**92,487**

7.6.1 Calculation of Rate Base ($000's)

SAN defines rate base as the mid-year Net Book Value on Non-Contributed Assets, plus working capital equals to 45 days of cash operating expense, and any shortfall between depreciation expense and principal repayment.

Policy C304C Drainage Services Utility Fiscal Policy, adopted by City Council on June 1, 2011, establishes the following target for calculating the Return on Rate Base:

> "City Council, as Regulator, will aim to achieve a targeted Return on Rate Base between 4% and 10%, subject to City Council decision making during the budget process. The lower limit of 4% reflects the lowest expectation for average cost of debt. The return should cover the cost of debt used to finance capital investment. The upper limit at 10% provides for a reasonable return for a public utility."

	2010 Actual	2011 Forecast	2012 Budget
1 Investments in Tangible Capital Assets			
Gross Book Value - Non Contributed	530,789	582,333	630,290
Gross Book Value - Contributed	600,433	662,604	727,294
Gross Book Value - All Assets	1,131,222	1,244,937	1,357,584
Accumulated Depreciation - Non Contributed	122,526	132,168	142,522
Accumulated Depreciation - Contributed	75,791	83,610	92,167
Accumulated Depreciation - All Assets	198,317	215,778	234,689
Net Book Value - Non Contributed	408,263	450,165	487,768
Net Book Value - Contributed	524,642	578,994	635,127
Net Book Value - All Assets	932,905	1,029,159	1,122,895
Mid-Year Non-Contributed Assets	**395,181**	**429,214**	**468,967**
2 Working Capital Requirement			
Cash Expense before Transfers	44,343	48,607	51,982
Minimum of 45 Days Operations	**5,467**	**5,993**	**6,409**
Depreciation Expense - Non-Contributed	8,528	9,642	10,354
Principal Repayment	9,234	9,911	11,102
Principal Shortfall	**(706)**	**(269)**	**(748)**
Working Capital	**6,173**	**6,261**	**7,157**
Rate Base at Mid-Year	**401,354**	**435,475**	**476,123**

7.6.2 Return on Rate Base ($000's)

Line #		Reference	2011 Forecast	2012 Budget
1	Mid-Year Rate Base	**Schedule 7.6.1**	435,475	476,123
2	Return on Rate Base		0.5%	4.0%
3	**Return on Rate Base**		**2,380**	**19,045**

7.7 Long Term Debt

The Sanitary Utility has been steadily increasing its Debt to Net Assets Ratio as it relies more heavily on the use of debt to finance its capital investments. As a result, its Cash Balance has been declining year over year. By the end of 2011, it is forecasted that only $2.2 million will remain to provide for the daily operations of over $78 million in annual expenditures.

The Utility can no longer finance its capital requirements through Retained Earnings and continuing with the current rate of borrowing will result in the Utility breaching the 60% Debt to Net Assets Ratio. This is the primary reason for the need to earn a Return on Rate Base of 4% in the foreseeable future if the capital program is to be implemented.

7.7.1 Outstanding Long Term Debt ($000's)

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
Outstanding Long Term Debt - Existing					
1	03071A	17	-	-	-
2	03269A	38	-	-	-
3	03336A	52	40	28	14
4	03799A	26	20	14	7
5	03800A	67	52	36	19
6	11039C	996	944	888	829
7	11039D	84	79	74	69
8	11760C	-	-	-	-
9	11960B	-	-	-	-
10	11961A	2,308	2,220	2,126	2,027
11	11961F	23	22	21	20
12	12285A	901	-	-	-
13	12285D	746	-	-	-
14	12285G	618	317	-	-
15	12286F	962	925	886	845
16	12535A	5,011	4,830	4,638	4,434
17	12535D	3,058	2,958	2,852	2,740
18	12535E	34	33	32	30
19	12899A	1,831	1,776	1,718	1,656
20	13080B	2,636	2,550	2,458	2,362
21	13080E	4,961	4,812	4,655	4,488
22	13294D	2,517	2,455	2,390	2,321
23	13677A	2,224	1,818	1,394	950
24	13677C	1,278	1,043	798	543
25	13678A	6,229	6,049	5,859	5,659
26	13678B	1,044	1,013	980	946
27	14015A	3,905	3,321	2,712	2,077
28	14015D	1,433	1,253	1,065	869
29	14016A	1,088	1,056	1,023	989
30	14016C	40	39	38	37

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
Outstanding Long Term Debt - Existing					
31	14016D	1,480	1,440	1,397	1,352
32	14016E	280	274	268	261
33	14082A	75	65	56	45
34	14082B	116	104	91	77
35	14084A	2,461	2,393	2,322	2,248
36	14084B	7,126	6,972	6,810	6,640
37	14084C	4,655	4,553	4,445	4,333
38	14084D	-	225	220	214
39	14293A	-	-	-	-
40	14293B	2,001	1,788	1,566	1,333
41	14293C	3,194	2,791	2,372	1,935
42	14294A	247	240	233	226
43	14294B	756	738	718	697
44	14294C	1,095	1,071	1,046	1,020
45	14294D	-	2,275	2,223	2,168
46	14421A	979	955	929	903
47	14421B	3,430	3,356	3,278	3,196
48	14421C	3,266	3,197	3,124	3,047
49	14421D	91	89	87	85
50	14591A	116	104	91	77
51	14592A	3,818	3,724	3,625	3,521
52	14592B	11,631	11,380	11,116	10,837
53	14592C	3,167	3,100	3,029	2,954
54	14592D	3,995	3,907	3,815	3,719
55	14592E	-	989	966	942
56	14592F	-	500	488	475
57	14893A	1,568	1,534	1,498	1,461
58	14893B	6,862	6,711	6,553	6,388
59	14893C	-	1,088	1,063	1,036
60	14893D	-	2,000	1,952	1,902
61	14893E	-	3,241	3,166	3,089
62	15244A	22,486	21,991	21,473	20,931
63	15244B	-	9,889	9,660	9,421
64	15244C	-	13,000	12,686	12,360
65	15244D	-	5,500	5,373	5,241
66	15245A	8,609	8,420	8,221	8,014
67	15245B	-	500	488	475
68	10778A	1,338	1,257	1,170	1,077
69	10778B	2,764	2,612	2,450	2,276
70	10778C	900	853	803	749
71	11039A	4,681	4,400	4,096	3,768
72	11039B	1,106	1,046	981	911
73	11249A	7,230	6,850	6,447	6,019
74	11249B	3,541	3,370	3,188	2,997
75	11249C	5,762	5,553	5,332	5,099
76	11760B	-	-	-	-
77	11761A	1,082	1,029	974	915
78	11761B	4,779	4,582	4,371	4,147
79	11761C	416	401	385	368
80	11960A	-	-	-	-

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
Outstanding Long Term Debt - Existing					
81	11961B	205	198	190	182
82	11961C	5,476	5,277	5,067	4,845
83	11961D	142	138	133	128
84	11961E	3,408	3,306	3,198	3,083
85	12285B	26	13	-	-
86	12285C	753	386	-	-
87	12285D	-	574	393	201
88	12285E	876	674	461	237
89	12285F	647	550	449	344
90	12286A	3,097	2,978	2,853	2,719
91	12286B	530	510	490	469
92	12286C	3,544	3,416	3,280	3,137
93	12286D	6,646	6,428	6,198	5,954
94	12286E	993	960	926	889
95	12534A	303	155	-	-
96	12535B	1,848	1,781	1,710	1,635
97	12535C	1,098	1,062	1,024	983
98	13080A	744	719	693	666
99	13080C	1,403	1,361	1,317	1,269
100	13080D	13	13	12	12
101	13293A	499	407	312	212
102	13293B	883	772	656	535
103	13294A	4,170	4,050	3,923	3,791
104	13294B	4,277	4,159	4,035	3,906
105	13294C	1,912	1,865	1,815	1,763
106	13294E	1,606	1,571	1,535	1,497
107	13294F	1,674	1,638	1,600	1,560
108	13677B	1,813	1,480	1,133	771
109	13784A	7,119	6,913	6,696	6,468
110	13784B	2,945	2,857	2,765	2,668
111	13784C	8,338	8,097	7,844	7,580
112	13784D	19,672	19,128	18,560	17,966
113	14015B	1,805	1,577	1,341	1,094
114	14015C	7,922	7,079	6,197	5,275
115	14015E	2,294	2,078	1,853	1,619
116	14015F	2,108	1,919	1,723	1,520
117	14015G	22	20	18	16
118	14016B	3,122	3,035	2,945	2,851
119	14016F	1,007	985	962	938
120	14293A	508	444	377	308
121	14293D	2,023	1,832	1,634	1,427
122	14591B	9,875	8,944	7,975	6,967
123	14591C	3,354	3,054	2,742	2,419
124	14591D	830	757	680	600
125	14591E	47	43	38	34
	December 2011 Borrowing			44,339	43,416
	December 2012 Borrowing				40,362
	Less: EPCOR Debt	(105,435)	(99,407)	(93,520)	(87,740)
	Total Outstanding	**187,369**	**217,477**	**251,904**	**281,462**

7.7.2 Principal Repayment ($000's)

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
1	03071A	16	17	-	-
2	03135A	-	-	-	-
3	03269A	35	38	-	-
4	03336A	11	12	12	13
5	03799A	5	6	6	7
6	03800A	14	15	16	17
7	06808B	-	-	-	-
8	06808D	-	-	-	-
9	11039C	49	52	56	59
10	11039D	4	5	5	5
11	11760A	-	-	-	-
12	11760C	27	-	-	-
13	11960B	663	-	-	-
14	11961A	83	88	94	99
15	11961F	1	1	1	1
16	12285A	849	901	-	-
17	12285D	163	-	-	-
18	12285G	286	301	317	-
19	12286F	35	37	39	41
20	12535A	172	182	192	203
21	12535D	95	100	106	112
22	12535E	1	1	1	1
23	12899A	52	55	58	62
24	13080B	82	86	91	97
25	13080E	141	149	158	167
26	13294D	59	62	65	68
27	13677A	388	406	424	444
28	13677C	225	235	245	255
29	13678A	171	180	190	200
30	13678B	30	31	33	34
31	14015A	559	583	609	635
32	14015D	173	181	188	196
33	14016A	30	31	33	34
34	14016C	1	1	1	1
35	14016D	39	41	43	45
36	14016E	6	6	6	7
37	14082A	9	9	10	10
38	14082B	12	12	13	13
39	14084A	65	68	71	74
40	14084B	146	154	162	171
41	14084C	-	102	107	112
41	14084D	-	-	5	5
42	14293A	-	-	-	-
43	14293B	204	213	223	233
44	14293C	386	402	419	437
45	14294A	7	7	7	7
46	14294B	18	19	20	21
47	14294C	22	24	25	26
47	14294D	-	-	52	55
48	14421A	23	24	25	27

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
49	14421B	70	74	78	82
50	14421C	34	70	73	77
51	14421D	-	2	2	2
52	14591A	12	12	13	13
53	14592A	90	94	99	104
54	14592B	238	251	264	278
55	14592C	33	68	71	75
56	14592D	-	88	92	96
57	14592E	-	11	23	24
58	14592F	-	-	12	13
59	14893A	32	34	36	38
60	14893B	-	151	158	165
61	14893C	-	12	25	26
62	14893D	-	-	48	50
62	14893E	-	-	75	78
63	15244A	-	495	518	542
64	15244B	-	111	229	239
65	15244C	-	-	314	326
65	15244D	-	-	127	132
66	15245A	-	189	198	207
67	15245B	-	-	12	13
68	06808C	-	-	-	-
69	10778A	74	80	87	94
70	10778B	141	151	162	174
71	10778C	45	47	50	53
72	11039A	260	281	304	328
73	11039B	56	60	65	70
74	11249A	358	380	403	428
75	11249B	162	171	181	192
76	11249C	197	209	221	233
77	11760B	181	-	-	-
78	11761A	50	52	55	59
79	11761B	186	198	210	224
80	11761C	14	15	16	17
81	11960A	358	-	-	-
82	11961B	7	7	8	8
83	11961C	188	198	210	222
84	11961D	4	4	5	5
85	11961E	97	102	108	115
86	12285B	12	13	13	-
87	12285C	349	367	386	-
88	12285D	-	172	181	191
89	12285E	192	202	213	224
90	12285F	93	97	101	105
91	12286A	111	118	126	133
92	12286B	18	19	20	21
93	12286C	121	128	136	144
94	12286D	206	218	230	244
95	12286E	31	33	34	36
96	12534A	140	148	155	-

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
97	12535B	63	67	71	75
98	12535C	34	36	38	40
99	13080A	23	24	26	27
100	13080C	40	42	45	47
101	13080D	0	0	0	0
102	13293A	88	92	95	100
103	13293B	107	111	116	121
104	13294A	115	121	126	132
105	13294B	113	118	123	129
106	13294C	45	47	50	52
107	13294E	33	35	36	38
108	13294F	17	36	38	40
109	13677B	319	333	347	362
110	13784A	195	206	217	229
111	13784B	83	88	92	97
112	13784C	230	241	253	264
113	13784D	520	544	568	593
114	14015B	218	227	237	247
115	14015C	807	843	882	922
116	14015E	208	216	225	234
117	14015F	92	189	196	203
118	14015G	1	2	2	2
119	14016B	83	86	90	94
120	14016F	10	22	23	24
121	14293A	61	64	67	69
122	14293D	183	191	198	206
123	14591B	895	931	969	1,008
124	14591C	146	300	312	323
125	14591D	36	74	77	80
126	14591E	2	4	4	5
	December 2011 Borrowing				923
	December 2012 Borrowing				297
	Less: EPCOR Debt Repayment	(6,211)	(6,027)	(5,888)	(5,780)
	Total Principal Repaid	**8,073**	**9,234**	**9,911**	**11,102**

7.8 Program Budget Details

The day to day operations of SAN is divided into four areas; Planning, Development Services, Operations, and Other Expenses. Each area's budget is provided below.

Planning	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
Personnel	1,502	2,588	2,330	2,418	2,447
Materials, Goods & Supplies	28	31	338	338	244
External Services	1,340	2,232	2,281	2,299	2,066
Fleet Services	-	-	19	20	-
Biosolids	5,931	5,418	6,335	6,335	8,445
Other Expenses	245	185	45	48	48
	9,046	**10,454**	**11,348**	**11,458**	**13,250**
Interdepartmental Charges/(Recoveries)	9	(87)	(424)	(407)	(448)
	9,055	**10,367**	**10,924**	**11,051**	**12,802**

Development Services	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
Personnel	4,578	4,951	5,109	5,109	5,118
Materials, Goods & Supplies	499	502	563	563	487
External Services	612	1,135	1,006	1,005	1,111
Fleet Services	71	100	88	88	91
Other Expenses	411	222	249	249	260
	6,171	**6,910**	**7,015**	**7,014**	**7,066**
Interdepartmental Charges/(Recoveries)	(462)	(338)	344	(284)	(267)
	5,709	**6,572**	**7,359**	**6,730**	**6,799**

Operations	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
Personnel	11,065	12,049	10,170	10,170	11,047
Materials, Goods & Supplies	1,196	983	1,375	1,375	1,595
External Services	1,233	663	571	571	719
Fleet Services	2,127	1,909	1,852	1,851	1,773
Other Expenses	821	908	953	953	1,113
	16,442	**16,512**	**14,921**	**14,920**	**16,247**
Interdepartmental Charges/(Recoveries)	(3,706)	(3,662)	235	(347)	(197)
	12,736	**12,850**	**15,156**	**14,573**	**16,050**

Other Expenses	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
Personnel	303	175	557	348	604
Materials, Goods & Supplies	128	108	18	18	88
External Services	157	61	150	306	248
Shared Services	5,260	4,583	6,049	6,549	5,220
Customer Billing Services	4,103	3,509	3,909	4,210	4,336
Other Expenses	418	521	517	387	243
Net Depreciation	10,896	8,528	8,616	9,642	10,354
Debt Interest	8,986	9,905	10,457	10,554	13,432
Local Access Fee	5,826	5,116	5,306	5,306	7,399
Gold Bar Expense	6,369	-	-	-	-
	42,446	**32,506**	**35,579**	**37,320**	**41,923**
Interdepartmental Charges/(Recoveries)	(4,122)	(190)	(1,749)	(1,084)	(695)
	38,324	**32,316**	**33,830**	**36,236**	**41,229**

7.9 2012-14 Capital Budgets and 2015-21 Capital Priorities Plan

Capital Projects	Approved in Prior Years	Budget Adjustment Request	Proposed Capital Budget					Remaining 10-Year Plan							Budget & Plan
			From 2011	2012	2013	2014	Subtotal	2015	2016	2017	2018	2019	2020	2021	2012-2021
Major Project Class															
Drainage Neighbourhood Renewal															
Drainage Neighbourhood Renewal Coordination	-	-	-	18,413	25,158	29,988	73,559	37,728	28,987	16,812	20,396	22,468	23,433	21,107	244,490
Sewer Upgrading	-	-	-	265	275	285	824	5,917	6,152	6,391	6,637	6,893	7,143	7,403	47,361
Service Connection Renewal	-	-	-	265	275	285	824	2,958	6,152	9,587	13,274	17,233	21,430	25,169	96,629
	-	**-**	**-**	**18,942**	**25,708**	**30,557**	**75,207**	**46,603**	**41,292**	**32,790**	**40,307**	**46,594**	**52,007**	**53,679**	**388,480**
Drainage System Rehabilitation															
Structures Rehabilitation	-	-	-	4,222	4,389	4,548	13,158	4,722	4,910	5,100	5,296	5,501	5,700	5,907	50,295
Sewer Rehabilitation	-	-	-	6,613	6,764	6,839	20,216	7,100	6,829	7,094	7,135	7,410	7,429	7,699	70,913
	-	**-**	**-**	**10,835**	**11,153**	**11,387**	**33,375**	**11,822**	**11,739**	**12,194**	**12,431**	**12,911**	**13,130**	**13,606**	**121,207**
Drainage Facilities Upgrading															
Facilities, Equipment & System Renewal	-	-	-	1,254	1,175	1,313	3,742	1,130	1,107	1,221	1,195	2,930	3,607	1,962	16,893
Sanitary Dumping Facility	-	-	-	212	330	342	884	4,733	1,230	-	-	-	-	-	6,847
	-	**-**	**-**	**1,465**	**1,505**	**1,655**	**4,625**	**5,864**	**2,338**	**1,221**	**1,195**	**2,930**	**3,607**	**1,962**	**23,741**
Flood Prevention															
Neighbourhood Flood Prevention Projects	45,582	-	-	2,853	4,956	249	8,058	2,937	6,300	4,247	2,708	277	2,556	-	27,083
	45,582	**-**	**-**	**2,853**	**4,956**	**249**	**8,058**	**2,937**	**6,300**	**4,247**	**2,708**	**277**	**2,556**	**-**	**27,083**
Environmental Quality Enhancement															
Environmental Enhancement Projects	-	-	-	1,683	2,111	1,884	5,678	1,956	1,342	1,395	1,448	1,504	1,559	1,615	16,498
	-	**-**	**-**	**1,683**	**2,111**	**1,884**	**5,678**	**1,956**	**1,342**	**1,395**	**1,448**	**1,504**	**1,559**	**1,615**	**16,498**
Combined Sewer Overflow Strategy															
Opportunistic Sewer Separation	47,410		-	3,629	3,520	3,875	11,024	4,260	4,676	3,835	3,982	4,136	4,286	4,442	40,641
WESS W12	33,465		-	3,174	1,367	-	4,541	-	-	-	-	-	-	-	4,541
Combined Sewer Overflow Control Projects			-	4,867	3,190	3,989	12,046	3,077	5,045	5,113	5,310	5,515	5,715	5,922	47,742
	80,875	**-**	**-**	**11,671**	**8,077**	**7,865**	**27,612**	**7,337**	**9,721**	**8,947**	**9,292**	**9,651**	**10,001**	**10,364**	**92,924**
Sanitary Servicing Strategy															
Sanitary Servicing Strategy Projects	-	-	-	21,479	21,041	15,673	58,193	22,780	11,136	22,241	20,376	22,541	15,716	20,580	193,561
SSSF Developer Built Projects	17,720	(6,300)	6,300	-	-	-	6,300	-	-	-	-	-	-	-	6,300
Mill Woods Double Barrel Replac/SESS SA1	32,573	(144)	144	2,915	634	-	3,693	-	-	-	-	-	-	-	3,693
	50,293	**(6,444)**	**6,444**	**24,395**	**21,675**	**15,673**	**68,186**	**22,780**	**11,136**	**22,241**	**20,376**	**22,541**	**15,716**	**20,580**	**203,554**
Drainage System Expansion															
System Expansion Projects	-		-	13,803	8,095	6,793	28,691	8,710	7,334	9,408	7,911	10,147	8,515	10,897	91,612
	-	**-**	**-**	**13,803**	**8,095**	**6,793**	**28,691**	**8,710**	**7,334**	**9,408**	**7,911**	**10,147**	**8,515**	**10,897**	**91,612**
Total	**176,750**	**(6,444)**	**6,444**	**85,647**	**83,278**	**76,063**	**251,433**	**108,008**	**91,201**	**92,441**	**95,668**	**106,555**	**107,091**	**112,703**	**965,100**

Since many of the capital projects are part of a larger program involving Sanitary Utility, the description for each of these Programs have been provided in a combined basis in Section 9.0.

8.0 Stormwater Utility Budget Details

The following sub-sections provide a detailed breakdown of the Proposed 2012 Budget for the Stormwater Utility.

8.1 Stormwater Utility Summary Schedule ($000's)

Line #		Reference	2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Expenses								
1	Operating and Maintenance	**Schedule 8.2**	11,636	12,126	13,708	14,744	1,036	7.6%
2	Depreciation Expense (net)	**Schedule 8.3**	1,228	2,902	3,396	3,845	449	13.2%
3	Debt Interest	**Schedule 8.3.2**	1,944	2,646	3,471	6,097	2,626	75.6%
4	Local Access Fee		-	-	-	-	-	0.0%
	Expenditures		14,808	17,674	20,575	24,686	4,111	
5	Return on Rate Base	**Schedule 8.5.2**	-	9,241	8,661	12,601	3,940	45.5%
	Revenue Requirement		**14,808**	**26,915**	**29,236**	**37,286**	**8,050**	
Non-Rate Revenues		**Schedule 8.4**	550	558	620	774	155	25.0%
Existing Rate Revenues			14,258	26,356	28,617	29,662	1,045	3.7%
Funding Required Through Rate Increase			**0**	**0**	**(0)**	**6,850**	**6,850**	
				Total Rate Revenue		**36,512**		

The 2012 total proposed expenditure budget of $24.7 million represents an increase of $4.1 million over the 2011 forecast results. Approximately 75% of the proposed increase ($3.0 million) relates to factors that are a reflection of past decisions. The remaining $1.1 million increase is explained in Sections 8.2 to 8.6. The information has been prepared with comparisons based on the Proposed Budget against the 2011 Forecast.

The Proposed 2012 Budget contains uncertainties around labour costs. All unionized staff has been without a contract since January 2011 and while negotiations are ongoing, it is not clear as to whether or not a negotiated agreement will be reached prior to the deliberation of the 2012 budget. Please see separate confidential memo that outlines the approach taken for budget purposes.

Non-rate Revenues is not a significant activity for STM, essentially comprised of Program Revenues such as lot grading and Interest Income.

Existing Rate Revenues reflects increased number of customers based upon corporate projection on population growth. Details are provided under Section 3.0.

8.2 Operations and Maintenance ($000's)

Line #		Reference	2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Operations & Maintenance Expense								
1	Personnel	**Schedule 8.2.1**	4,064	4,122	8,147	8,773	626	7.7%
2	Materials, Goods, and Supplies		941	892	857	928	71	8.3%
3	External Services	**Schedule 8.2.2**	1,164	1,568	1,970	1,989	18	0.9%
4	Fleet Services	**Schedule 8.2.3**	739	398	824	790	(33)	-4.0%
5	Shared Services	**Schedule 8.2.4**	926	1,382	1,828	1,874	46	2.5%
6	Customer Billing Services		747	814	983	1,013	30	3.0%
7	Other Expenses		615	418	408	442	35	8.5%
8	Interdepartmental Charges/(Recoveries)		2,440	2,533	(1,309)	(1,065)	243	-18.6%
	Total Operating & Maintenance		**11,636**	**12,126**	**13,708**	**14,744**	**1,036**	

Line 6 – Customer Billing Services

Drainage Services contracts with EPCOR to provide customer billing and collection services. The existing agreement expires at the end of 2011. The Proposed 2012 Budget reflects inflationary increases, adjusted for customer growth.

Line 8 – Interdepartmental Charges/(Recoveries)

Change from 2009 & 2010 Actual costs to 2011 Forecast and 2012 Budget a result of an allocation between Sanitary and Stormwater to reflect true costs.

8.2.1 Personnel Costs ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Personnel Costs							
1	Salaries & Wages	3,052	3,179	6,008	6,483	475	7.9%
2	Overtime	111	110	242	257	16	6.4%
3	Allowances and Benefits	901	833	1,897	2,032	135	7.1%
	Total Personnel	**4,064**	**4,122**	**8,147**	**8,773**	**626**	

As indicated earlier, union contracts for all non-management staff expired December 31, 2010. Negotiations with all unions are ongoing; however, no settlements have been reached to date. Please see confidential memo for further information.

From an operational perspective, operational and administrative staff do not distinguish their time spent working on Sanitary Infrastructure versus Stormwater Infrastructure. As a result, budget has been allocated between Sanitary Utility and Stormwater Utility on the following basis:

Operational staff	30% STM	70% SAN	Ratio of non-contributed assets
Administration staff	40% STM	60% SAN	Planning is done on a holistic basis

The accounting and payroll systems have been adjusted during 2011 to reflect the total costs on this basis.

In addition, the Proposed 2012 Budget contains a request for increase staffing level of 4 FTE's.

The Proposed 2012 Budget for Overtime has been adjusted to reflect the 2011 forecasted results. Overtime is used where there are unplanned peak requirements that are most effectively managed through the use of existing staff.

The projected increase for Allowances and Benefits has been prepared to reflect rates provided corporately.

8.2.2 External Services ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
External Services							
1	Planning	552	720	1,110	1,019	(91)	-8.2%
2	Development Services	251	477	446	532	86	19.3%
3	Operations & Maintenance	319	362	225	291	66	29.4%
4	Other	42	9	189	147	(42)	-22.4%
	Total External Services	**1,164**	**1,568**	**1,970**	**1,989**	**18**	

Line 1 - Planning

The Budget for External Services relate mostly to the need for studies in the overall planning of the Drainage System. A Rate Design Study is expected to be undertaken to ensure the distribution of rates between customer classes is appropriate.

Line 2 – Development Services

The majority of this budget is related to the Environmental Monitoring Program and the associated lab testing to fulfill the requirements of the Approval to Operate. Cost increases are mainly due to higher lab costs and additional facilities requiring monitoring.

Line 4 – Operations & Maintenance

The Proposed Budget has been reduced from the 2011 Budget to reflect forecasted requirements.

8.2.3 Fleet Services ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Fleet Services							
1	Fleet Charges	643	316	265	229	(36)	-13.6%
3	Fuel	30	25	179	246	67	37.7%
4	Major Repairs	66	57	380	315	(65)	-17.1%
	Total Fleet	**739**	**398**	**824**	**790**	**(34)**	

Fleet maintenance is provided by the City of Edmonton through the Fleet Services Branch. It operates on a cost recovery basis which include direct administration costs, but not corporate overheads.

Line 1 – Fleet Charges

The reduction in Fleet Charges is the result of Drainage Services now purchasing vehicles through the capital program instead of leasing through Fleet. As the vehicles leased through Fleet Services are replaced by purchased vehicles, Fleet Charges will continue to decline. The reduction is also due in part to a reallocation of costs to Drainage Design & Construction.

Line 2 – Fuel

Fuel commodity prices have increased significantly over 2011 and are projected to continue to increase in 2012. The Proposed 2012 Budget reflects both increases to the commodity pricing and the number of vehicles and mileage driven.

Line 3 – Major Repairs

The Proposed 2012 Budget reflects the projected decreases in required repairs as well as a reallocation of costs to Drainage Design & Construction.

8.2.4 Shared Services ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Shared Services							
1	Human Resources			136	216	80	58.8%
2	Legal Services			144	75	(69)	-47.9%
3	Communications			33	44	11	33.3%
4	Corporate Information System	506	1,563	54	60	6	11.1%
5	Information Technology			49	577	528	1077.6%
6	Materials Management			301	204	(97)	-32.2%
7	Financial Services			238	300	62	26.1%
8	Space Rent, Facility Maintenance & Land Services			460	287	(173)	-37.6%
9	Central Management Fees	420	467	413	111	(302)	-73.1%
	Total Shared Services	**926**	**2,030**	**1,828**	**1,874**	**46**	

The Proposed 2012 Budget for Shared Services reflects an increase of $46 thousand due to an allocation of costs to Stormwater and Drainage Design & Construction to better reflect their true portion of these costs.

In addition, the City of Edmonton undertook a major re-organization in June 2011, resulting in significant changes to the organizational structure, with shifts between Central Management Charges and other Departmental Charges. This made it difficult to compare the real increases in the cost of different services.

8.3 Depreciation and Interest Expense ($000's)

Line #		Reference	2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
Depreciation Expense								
1	Depreciation Expense	**Schedule 8.3.1**	13,553	16,492	18,096	19,197	1,101	6.1%
2	Amortization (CIAC)	**Schedule 8.3.2**	(12,325)	(13,590)	(14,700)	(15,352)	(652)	4.4%
	Net Depreciation Expense		**1,228**	**2,902**	**3,396**	**3,845**	**449**	
3	Interest Expense	**Schedule 8.3.3**	1,944	2,646	3,471	6,097	2,626	75.7%
4	Principal Repayment	**Schedule 8.6.2**	1,273	2,211	2,300	3,387	1,087	47.3%

Depreciation Expense represents the amount of asset life used up during the operating period. It includes both Contributed and Non-Contributed Assets. The depreciation rate is dependent upon the different classes of assets, each with a pre-determined estimated useful life based upon historic experience.

Amortization represents the amount of benefit from Contributed Assets that are realized during the operating period. It is used to offset the amount of Depreciation.

Interest Expense and Principal Repayment represents the total annual cash requirement to service outstanding debt. As a result of $18.8 million in debt issued in 2010 and planned issuance of $34 million in 2011, Interest Expense is projected in increase by $2.6 million in 2012.

8.3.1 Schedule of Depreciation Expense ($000's)

Line #	Asset Class	Expected Useful Life in Years	Forecast Accumulated Depreciation Dec 2011	2012 Depreciation on Existing	1/2 Year Depreciation on 2012 New	2012 Total Depreciation
Depreciation Expense on Total Assets						
1 Bldgs-Warehouses	**110310**	10	1,507			-
2 Computer Eqpt.	**110510**	5	773	522	65	587
3 GBIS/SCADA/DC Eqpt	**110520**	10	411	45		45
4 Machinery & Eqpt	**110530**	5	535			-
5 GA-Com-Support	**111000**	75	2,819	84		84
6 GA-Com-Pipes	**111010**	75	14,424	516		516
7 GA-Stm-Support	**111030**	75	73,934	4,478		4,478
8 GA-Stm-Sup-Swales	**111040**	75	2,162	134		134
9 GA-Stm-Pipes	**111060**	75	239,385	11,873	534	12,407
10 GA-Stm-Serv Conn	**111080**	75	9,168	575		575
11 GA-Stm-Misc Struct.	**111085**	75	1,020	311		311
12 GA-Com-Misc Struct.	**111086**	75	130	16		16
13 GA-Stm-Pumpstations	**111100**	44	304	44		44
Total Depreciation			**346,572**	**18,598**	**599**	**19,197**

8.3.2 Amortization of Contributed Assets ($000's)

Line #	Asset Class	Expected Useful Life in Years	Forecast Accumulated Amortization Dec 2011	2012 Amortization on Existing	1/2 Year Amortization on 2012 New	2012 Total Amortization
Amortization on Contributed Assets						
1 Bldgs-Warehouses	**110310**	10				-
2 Computer Eqpt.	**110510**	5				-
3 GBIS/SCADA/DC Eqpt	**110520**	10				-
4 Machinery & Eqpt	**110530**	5				-
5 GA-Com-Support	**111000**	75				-
6 GA-Com-Pipes	**111010**	75				-
7 GA-Stm-Support	**111030**	75				-
8 GA-Stm-Sup-Swales	**111040**	75				-
9 GA-Stm-Pipes	**111060**	75	(204,949)	(15,054)	(298)	(15,352)
10 GA-Stm-Serv Conn	**111080**	75				-
11 GA-Stm-Misc Struct.	**111085**	75				-
12 GA-Com-Misc Struct.	**111086**	75				-
13 GA-Stm-Pumpstations etc	**111100**	44				-
Total Amortization			**(204,949)**	**(15,054)**	**(298)**	**(15,352)**

8.3.3 Schedule on Debt Servicing Costs ($000's)

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Requirement
Debt Servicing - Interest					
1	13401A	157	153	148	144
2	13401B	58	56	55	53
3	13401C	1	1	1	1
4	13676A	135	131	127	123
5	13676B	1	1	1	1
6	13731A	27	23	18	13
7	13731B	10	9	7	6
8	13826A	56	55	53	52
9	13826B	46	45	43	42
10	14017A	27	24	20	16
11	14017B	11	9	8	7
12	14018A	156	152	148	143
13	14018B	46	45	43	42
14	14083A	15	13	11	9
15	14083B	24	21	19	16
16	14291A	43	38	33	28
17	14291B	14	12	11	9
18	14292A	56	54	53	51
19	14292B	20	25	24	24
20	14422A	164	160	157	153
21	14422B	40	50	48	47
22	14422C	0	2	2	2
23	14422D	-	59	232	227
24	14593A	317	310	302	294
25	14593B	345	338	330	323
26	14593C	132	164	160	156
27	14890A	13	13	12	12
28	14890B	4	87	85	83
29	15243A	26	548	536	523
30	15243B	-	20	77	76
31	15243C	-	29	616	601
	December 2011 Borrowing			89	1,722
	December 2012 Borrowing				1,100
Total Debt Servicing		**1,944**	**2,646**	**3,471**	**6,097**

8.4 Breakdown of Non-Rate Revenue ($000's)

Line #		2009 Actual	2010 Actual	2011 Forecast	2012 Budget	Change from Forecast	% Variance
1	Program Revenues	317	364	337	346	9	3%
2	Interest Revenue	233	194	282	428	146	52%
	Total Non-Rate Revenues	**550**	**558**	**620**	**774**	**155**	

Program Revenues comprise of lot grading fees, inspections, and compliance review. The projected increase in Interest Revenue is based upon earning 2% on the cash balance of the Utility.

8.5 Revenue Requirement ($000's)

Line #		Reference	2011 Forecast	2012 Budget
Operating & Maintenance Expense				
1	Personnel	**Schedule 8.1**	8,147	8,773
2	Materials, Goods, and Supplies		857	928
3	External Services	**Schedule 8.2**	1,970	1,989
4	Fleet Services	**Schedule 8.3**	824	790
5	Shared Services	**Schedule 8.4**	1,828	1,874
6	Customer Billing Services		983	1,013
7	Other Expenses		408	442
8	Interdepartmental Charges/(Recoveries)		(1,309)	(1,065)
Depreciation net of Amortization		**Schedule 9.0**	3,396	3,845
Interest Expense		**Schedule 9.3**	3,471	6,097
Return on Rate Base		**Schedule 11.1**	8,661	12,601
Total Revenue Requirement			**29,236**	**37,286**
Less Non-Rate Revenues		**Schedule 10.1**	**620**	**774**
Total Rate Revenue Required		**Schedule 7.0**	**28,617**	**36,512**

8.5.1 Calculation of Rate Base ($000's)

STM defines rate base as the mid-year Net Book Value on Non-Contributed Assets, plus working capital equals to 45 days of cash operating expense, and any shortfall between depreciation expense and principal repayment.

Policy C304C Drainage Services Utility Fiscal Policy, adopted by City Council on June 1, 2011, establishes the following target for calculating the Return on Rate Base:

> "City Council, as Regulator, will aim to achieve a targeted Return on Rate Base between 4% and 10%, subject to City Council decision making during the budget process. The lower limit of 4% reflects the lowest expectation for average cost of debt. The return should cover the cost of debt used to finance capital investment. The upper limit at 10% provides for a reasonable return for a public utility."

	2009 Actual	2010 Actual	2011 Forecast	2012 Requirement
1 Investments in Tangible Capital Assets				
Gross Book Value - Non Contributed	215,235	245,855	298,096	343,873
Gross Book Value - Contributed	978,832	1,097,449	1,153,127	1,204,658
Gross Book Value - All Assets	1,194,067	1,343,304	1,451,223	1,548,531
Accumulated Depreciation - Non Contributed	135,544	138,227	141,623	145,468
Accumulated Depreciation - Contributed	176,659	190,249	204,949	220,301
Accumulated Depreciation - All Assets	312,203	328,476	346,572	365,769
Net Book Value - Non Contributed	79,691	107,628	156,473	198,405
Net Book Value - Contributed	802,173	907,200	948,178	984,357
Net Book Value - All Assets	881,864	1,014,828	1,104,651	1,182,762
Mid-Year Non-Contributed Assets	**68,239**	**93,660**	**132,051**	**177,439**
2 Working Capital Requirement				
Cash Expense before Transfers	13,580	14,772	17,179	20,841
Minimum of 45 Days Operations	**1,674**	**1,821**	**2,118**	**2,569**
Depreciation Expense - Non-Contributed	1,228	2,902	3,396	3,845
Principal Repayment	1,273	1,692	2,300	3,387
Principal Shortfall	45	-	-	-
Working Capital	**1,674**	**1,821**	**2,118**	**2,569**
Rate Base at Mid-Year	**69,913**	**95,481**	**134,168**	**180,008**

8.5.2 Return on Rate Base ($000's)

Line #		Reference	2011 Forecast	2012 Budget
1	Mid-Year Rate Base	**Schedule 11.2**	134,168	180,008
2	Rate of Return		6.5%	7.0%
3	**Return on Rate Base**		**8,661**	**12,601**

The Proposed 2012 Budget includes a RORB of 7.0%, and increase over 2011 Budget of 6.5%. This level of return is necessary to generate sufficient cash over the long term to fund the capital investment needs of the utility through cash. At this level, the Debt to Net Assets Ratio must still remain at 70% per year for the next four years before gradually reducing it towards the 60% target. It is projected that this target will be reached at the end of nine years.

8.6 Long Term Debt

Since STM became a Utility, it has steadily increased its reliance on Long Term Debt to finance its capital investments. By the end of 2010, the Cash balance totaled $29.8 million; and outstanding debt was $75.3 million.

Based on the current capital investments plan, the Utility will have to increase the annual amount of capital to be financed by debt unless the Cash position can be improved. The 2010 Debt to Net Assets Ratio is 70% while the target provided for in the Utility Fiscal Policy is 60%. The Proposed 2012 Budget reflects a 0.5% increase in the Return on Rate Base to provide the catalyst in changing the mix of capital financing over 2012-2016 such that the ratio can drop below 70% by 2017.

8.6.1 Outstanding Long Term Debt ($000's)

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
Outstanding Long Term Debt - Existing					
1	13401A	2,613	2,535	2,452	2,364
2	13401B	1,068	1,037	1,004	970
3	13401C	24	23	22	21
4	13676A	2,492	2,420	2,344	2,264
5	13676B	23	22	21	21
6	13731A	556	455	348	238
7	13731B	207	176	144	110
8	13826A	1,189	1,155	1,119	1,081
9	13826B	945	921	897	871
10	14017A	575	489	399	306
11	14017B	237	207	176	143
12	14018A	3,297	3,201	3,101	2,997
13	14018B	945	921	897	871
14	14083A	323	275	224	172
15	14083B	542	474	403	328
16	14291A	965	843	717	585
17	14291B	281	251	220	187
18	14292A	1,235	1,201	1,165	1,128
19	14292B	495	484	473	462
20	14422A	3,076	3,010	2,940	2,866
21	14422B	990	969	947	923
22	14422C	44	43	42	41
23	14422D	-	6,000	5,855	5,705
24	14593A	6,557	6,395	6,225	6,047
25	14593B	6,489	6,349	6,202	6,046
26	14593C	3,266	3,197	3,124	3,047
27	14890A	245	240	234	228
28	14890B	1,900	1,858	1,814	1,769
29	15243A	12,018	11,753	11,477	11,187
30	15243B	-	2,000	1,952	1,902
31	15243C	-	14,520	14,186	13,837
32	CMHC Loan	2,391	1,904	1,904	1,904
	December 2011 Borrowing			34,094	33,384
	December 2012 Borrowing				36,688
	Total Outstanding	**54,986**	**75,327**	**107,121**	**140,693**

8.6.2 Principal Repayment ($000's)

Line #	Debenture #	2009 Actual	2010 Actual	2011 Forecast	2012 Budget
1	13401A	74	78	83	88
2	13401B	29	31	33	34
3	13401C	1	1	1	1
4	13676A	68	72	76	80
5	13676B	1	1	1	1
6	13731A	97	101	106	111
7	13731B	30	31	32	34
8	13826A	33	34	36	38
9	13826B	22	23	24	26
10	14017A	82	86	90	94
11	14017B	29	30	31	32
12	14018A	91	95	100	105
13	14018B	22	23	24	26
14	14083A	46	48	50	53
15	14083B	66	68	71	74
16	14291A	117	122	127	132
17	14291B	29	30	31	33
18	14292A	33	34	36	37
19	14292B	5	11	11	12
20	14422A	63	66	70	74
21	14422B	10	21	22	23
22	14422C	-	1	1	1
23	14422D	-	-	145	151
24	14593A	155	162	170	178
25	14593B	133	140	147	155
26	14593C	34	70	73	77
27	14890A	5	5	6	6
28	14890B	-	42	44	46
29	15243A	-	265	277	290
30	15243B	-	-	48	50
31	15243C	-	-	334	349
	New Capital				980
	Total Principal Repaid	**1,273**	**1,692**	**2,300**	**3,387**

8.7 Program Budget Details

The day to day operations of STM is divided into four areas; Planning, Development Services, Operations, and Other Expenses. Each area's budget is provided below.

Planning	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
Personnel	576	789	1,552	1,610	1,630
Materials, Goods & Supplies	2	6	225	225	163
External Services	551	720	1,202	1,214	1,019
Other Expenses	124	31	31	33	33
	1,253	**1,546**	**3,010**	**3,082**	**2,845**
Interdepartmental Charges/(Recoveries)	(85)	(46)	(261)	(252)	(277)
	1,168	**1,500**	**2,749**	**2,830**	**2,568**

Development Services	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
Personnel	2,446	2,158	2,260	2,260	2,332
Materials, Goods & Supplies	254	298	3	3	3
External Services	252	477	446	446	532
Other Expenses	222	42	107	106	113
	3,174	**2,975**	**2,816**	**2,815**	**2,980**
Interdepartmental Charges/(Recoveries)	13	(21)	(481)	(421)	(373)
	3,187	**2,954**	**2,335**	**2,394**	**2,607**

Operations	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
Personnel	834	1,118	4,152	4,152	4,525
Materials, Goods & Supplies	670	577	622	622	725
External Services	319	362	225	225	291
Fleet Services	739	398	824	824	790
Other Expenses	167	211	214	215	234
	2,729	**2,666**	**6,037**	**6,038**	**6,566**
Interdepartmental Charges/(Recoveries)	2,890	1,951	125	(4)	70
	5,619	**4,617**	**6,162**	**6,034**	**6,636**

Other Expenses	2009 Actual	2010 Actual	2011 Budget	2011 Forecast	2012 Budget
Personnel	208	57	256	125	286
Materials, Goods & Supplies	15	11	7	7	37
External Services	42	9	85	85	147
Shared Services	926	2,030	1,828	1,828	1,874
Customer Billing Services	747	814	908	983	1,013
Other Expenses	102	134	129	54	62
Debt Interest	1,944	2,646	3,946	3,471	6,097
Net Depreciation	1,228	2,902	3,668	3,396	3,845
	5,212	**8,603**	**10,827**	**9,949**	**13,361**
Interdepartmental Charges/(Recoveries)	(378)	-	(644)	(632)	(485)
	4,834	**8,603**	**10,183**	**9,317**	**12,876**

8.8 Stormwater Utility 2012-2014 Capital Budgets and 2015-2021 Capital Priorities Plan

Capital Projects	Approved in Prior Years	Budget Adjustment Request	Proposed Capital Budget					Remaining 10-Year Plan							Budget & Plan
			From 2011	2012	2013	2014	Subtotal	2015	2016	2017	2018	2019	2020	2021	2012-2021
Drainage Neighbourhood Renewal															
Drainage Neighbourhood Renewal Coordinatio	-	-	-	18,413	25,159	29,988	73,560	37,728	28,987	16,812	20,396	22,468	23,433	21,107	244,491
Sewer Upgrading	-	-	-	265	275	285	824	5,917	6,152	6,391	6,637	6,893	7,143	7,403	47,361
Service Connection Renewal	-	-	-	265	275	285	824	2,958	6,152	9,587	13,274	17,233	21,430	25,169	96,629
	-	**-**	**-**	**18,942**	**25,709**	**30,557**	**75,209**	**46,603**	**41,292**	**32,790**	**40,307**	**46,594**	**52,007**	**53,679**	**388,481**
Drainage System Rehabilitation															
Creek Erosion Protection	-	-	-	529	550	570	1,649	592	1,230	1,278	1,327	1,379	1,429	4,442	13,326
Structures Rehabilitation	-	-	-	2,032	2,112	2,188	6,332	2,272	2,362	2,454	2,549	2,647	2,743	2,843	24,202
Sewer Rehabilitation	-	-	-	6,613	6,764	6,839	20,216	7,100	6,829	7,094	7,135	7,410	7,429	7,699	70,913
	-	**-**	**-**	**9,174**	**9,426**	**9,597**	**28,197**	**9,964**	**10,422**	**10,826**	**11,011**	**11,436**	**11,601**	**14,983**	**108,440**
Drainage Facilities Upgrading															
Facilities, Equipment & System Renewal	-	-	-	1,254	1,174	1,314	3,742	1,130	1,107	1,221	1,195	2,930	3,607	1,962	16,893
	-	**-**	**-**	**1,254**	**1,174**	**1,314**	**3,742**	**1,130**	**1,107**	**1,221**	**1,195**	**2,930**	**3,607**	**1,962**	**16,893**
Flood Prevention															
Neighbourhood Flood Prevention Projects	76,156	2,186	(2,186)	2,778	174	2,616	3,382	602	6,289	2,516	4,611	7,691	4,960	-	30,051
Opportunistic Flood Prevention Project	-	-	-	-	1,100	5,699	6,799	2,367	-	-	-	-	-	-	9,166
Overland Drainage	-	-	-	851	884	916	2,651	951	989	1,028	1,067	1,108	1,149	1,190	10,135
Morris Pond	60,327	-	-	5,233	3,984	-	9,217	-	-	-	-	-	-	-	9,217
	136,483	**2,186**	**(2,186)**	**8,862**	**6,142**	**9,232**	**22,050**	**3,920**	**7,278**	**3,544**	**5,678**	**8,799**	**6,109**	**1,190**	**58,569**
Environmental Quality Enhancement															
Environmental Enhancement Projects	-	-	-	1,116	1,178	2,093	4,387	917	954	352	365	379	393	407	8,153
Mill Creek End of Pipe Treatment Facility	-	-	-	-	385	456	841	592	1,230	6,391	133	-	-	-	9,187
	-	**-**	**-**	**1,116**	**1,563**	**2,549**	**5,228**	**1,509**	**2,184**	**6,743**	**498**	**379**	**393**	**407**	**17,340**
Combined Sewer Overflow Strategy															
WESS W12	11,448		-	3,174	1,366	-	4,540	-	-	-	-	-	-	-	4,540
	11,448	**-**	**-**	**3,174**	**1,366**	**-**	**4,540**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4,540**
Sanitary Servicing Strategy															
Sanitary Servicing Strategy Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mill Woods Double Barrel Replac/SESS SA1	20,590	(1,074)	1,074	5,061	5,966	2,508	14,608	-	-	-	-	-	-	-	14,608
	20,590	**(1,074)**	**1,074**	**5,061**	**5,966**	**2,508**	**14,608**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**14,608**
Drainage System Expansion															**-**
System Expansion Projects	-		-	6,725	4,312	3,784	14,821	4,639	4,085	5,011	4,407	5,404	4,743	5,804	48,914
	-	**-**	**-**	**6,725**	**4,312**	**3,784**	**14,821**	**4,639**	**4,085**	**5,011**	**4,407**	**5,404**	**4,743**	**5,804**	**48,914**
Total	**168,521**	**1,112**	**(1,112)**	**54,308**	**55,657**	**59,541**	**168,395**	**67,765**	**66,369**	**60,134**	**63,095**	**75,543**	**78,461**	**78,025**	**657,786**

Since many of the capital projects are part of a larger program involving Sanitary Utility, the description for each of these Programs have been provided in a combined basis in Section 9.0.

9.0 Proposed 3-Year Capital Budget and 2015-2021 Priorities Plan ($000's)

Capital Projects		Approved in Prior Years	Budget Adjustment Request	Proposed Capital Budget					Remaining 10-Year Plan							Budget & Plan
				From 2011	2012	2013	2014	Subtotal	2015	2016	2017	2018	2019	2020	2021	2012-2021
Major Project Class																
Drainage Neighbourhood Renewal																
12-23-9510	Drainage Neighbourhood Renewal Coordination	-	-	-	36,826	50,317	59,975	147,118	75,456	57,974	33,624	40,791	44,936	46,867	42,214	488,981
12-23-9703	Sewer Upgrading	-	-	-	529	550	570	1,649	11,834	12,305	12,782	13,274	13,787	14,287	14,806	94,722
12-23-9512	Service Connection Renewal	-	-	-	529	550	570	1,649	5,917	12,305	19,173	26,548	34,466	42,861	50,339	193,258
		-	**-**	**-**	**37,884**	**51,417**	**61,115**	**150,416**	**93,206**	**82,584**	**65,579**	**80,614**	**93,189**	**104,015**	**107,358**	**776,961**
Drainage System Rehabilitation																
12-31-9604	Creek Erosion Protection	-	-	-	529	550	570	1,649	592	1,230	1,278	1,327	1,379	1,429	4,442	13,326
12-23-9503	Structures Rehabilitation	-	-	-	6,253	6,500	6,736	19,490	6,994	7,272	7,554	7,845	8,148	8,444	8,750	74,496
12-23-9504	Sewer Rehabilitation	-	-	-	13,226	13,529	13,678	40,433	14,200	13,658	14,188	14,270	14,820	14,858	15,398	141,826
		-	**-**	**-**	**20,009**	**20,579**	**20,984**	**61,572**	**21,786**	**22,161**	**23,020**	**23,442**	**24,347**	**24,731**	**28,590**	**229,648**
Drainage Facilities Upgrading																
12-23-6100	Facilities, Equipment & System Renewal	-	-	-	2,508	2,348	2,627	7,483	2,260	2,215	2,441	2,389	5,859	7,215	3,923	33,787
12-23-5422	Sanitary Dumping Facility	-	-	-	212	330	342	884	4,733	1,230	-	-	-	-	-	6,847
		-	**-**	**-**	**2,719**	**2,678**	**2,969**	**8,367**	**6,994**	**3,445**	**2,441**	**2,389**	**5,859**	**7,215**	**3,923**	**40,634**
Flood Prevention																
07-23-9511	Neighbourhood Flood Prevention Projects	121,738	2,186	(2,186)	5,631	5,130	2,865	11,440	3,539	12,589	6,763	7,319	7,968	7,516	-	57,135
12-23-9516	Opportunistic Flood Prevention Project	-	-	-	-	1,100	5,699	6,799	2,367	-	-	-	-	-	-	9,166
12-23-9517	Overland Drainage	-	-	-	851	884	916	2,651	951	989	1,028	1,067	1,108	1,149	1,190	10,135
03-31-9613	Morris Pond	60,327	-	-	5,233	3,984	-	9,217	-	-	-	-	-	-	-	9,217
		182,065	**2,186**	**(2,186)**	**11,715**	**11,098**	**9,481**	**30,108**	**6,857**	**13,579**	**7,790**	**8,386**	**9,077**	**8,665**	**1,190**	**85,652**
Environmental Quality Enhancement																
12-23-9616	Environmental Enhancement Projects	-	-	-	2,800	3,289	3,977	10,065	2,873	2,296	1,746	1,813	1,883	1,952	2,022	24,651
13-31-9617	Mill Creek End of Pipe Treatment Facility	-	-	-	-	385	456	841	592	1,230	6,391	133	-	-	-	9,187
		-	**-**	**-**	**2,800**	**3,674**	**4,433**	**10,906**	**3,465**	**3,526**	**8,137**	**1,946**	**1,883**	**1,952**	**2,022**	**33,838**
Combined Sewer Overflow Strategy																
05-23-2160	Opportunistic Sewer Separation	47,410	-	-	3,629	3,520	3,875	11,024	4,260	4,676	3,835	3,982	4,136	4,286	4,442	40,641
04-23-9302	WESS W12	44,913	-	-	6,349	2,733	-	9,082	-	-	-	-	-	-	-	9,082
12-23-9702	Combined Sewer Overflow Control Projects	-	-	-	4,867	3,190	3,989	12,046	3,077	5,045	5,113	5,310	5,515	5,715	5,922	47,742
Total Environmental		**92,323**	**-**	**-**	**14,845**	**9,443**	**7,865**	**32,153**	**7,337**	**9,721**	**8,947**	**9,292**	**9,651**	**10,001**	**10,364**	**97,465**
Sanitary Servicing Strategy																
12-23-9210	Sanitary Servicing Strategy Projects	-	-	-	21,479	21,041	15,673	58,193	22,780	11,136	22,241	20,376	22,541	15,716	20,580	193,561
08-23-9205	SSSF Developer Built Projects	17,720	(6,300)	6,300	-	-	-	6,300	-	-	-	-	-	-	-	6,300
08-31-9202	Mill Woods Double Barrel Replac/SESS SA1	53,163	(1,218)	1,218	7,976	6,599	2,508	18,301	-	-	-	-	-	-	-	18,301
		70,883	**(7,518)**	**7,518**	**29,455**	**27,640**	**18,180**	**82,794**	**22,780**	**11,136**	**22,241**	**20,376**	**22,541**	**15,716**	**20,580**	**218,162**
Drainage System Expansion																
12-23-9619	System Expansion Projects	-	-	-	20,528	12,407	10,578	43,513	13,348	11,419	14,418	12,318	15,551	13,258	16,701	140,526
		-	**-**	**-**	**20,528**	**12,407**	**10,578**	**43,513**	**13,348**	**11,419**	**14,418**	**12,318**	**15,551**	**13,258**	**16,701**	**140,526**
Total Growth																
Total		**345,271**	**(5,332)**	**5,332**	**139,956**	**138,935**	**135,604**	**419,827**	**175,773**	**157,570**	**152,575**	**158,763**	**182,097**	**185,552**	**190,728**	**1,622,885**

Each of the eight Program Area descriptions is provided in the following pages.

9.1 Drainage Neighborhood Renewal

1. Introduction

The City of Edmonton owns and operates over 5,400 km of sanitary, storm and combined sewers and about 332,000 sanitary service connections. The average age of the pipes is 42 years with an expected asset life of 100 years. Due to aging and deterioration of drainage infrastructure, the City may be vulnerable to unexpected failures that disrupt not only sewer service to homeowners but above-ground activities as well. Given the enormous cost of replacement of this infrastructure, actions are being taken to proactively renew and upgrade the drainage system. The Drainage Neighbourhood Renewal Program comprises of three projects:

- Drainage Neighbourhood Renewal Coordination
- Sewer Upgrading, and
- Service Connections Renewal.

It is imperative that decisions made about infrastructure inspections, renewal and upgrades are based on reliable engineering and cost data, and solid engineering principles. The ultimate goal is to ensure that the right type of drainage asset is renewed at the right time, with the application of the right technology. The Drainage Neighbourhood Renewal Program provides a long-term strategy to systematically address the needs of our drainage infrastructure, in coordination with Transportation Services as well as other franchised utility companies, to reduce inconvenience and service disruption, and is the key to better investment decisions in the renewal of drainage infrastructure.

The measure of progress and success of the program is completion of the planned projects on time and within budget. Number of emergency repairs and sanitary sewer back-up are other measures of success.

2. Program Scope

The **Drainage Neighbourhood Renewal Coordination** project (previously called Mature Neighbourhood Rehabilitation Program) has been successfully developed and implemented since 2007. The Program includes mainline sewer replacements using open cut method or relining method, manhole repairs as well as service connections renewal. The work is determined by the result of CCTV inspections so the scope of each neighbourhood will vary depending on the physical condition of the drainage assets.

The **Sewer Upgrading Strategy** involves increasing the capacity of the sewers in coordination with the Drainage Neighbourhood Renewal Coordination projects where practicable. This Strategy is needed to address pipe capacity issues by upgrading the pipes from their current size to a larger size. The strategy aims to improve the service level of the drainage sewer systems in all the 255 neighbourhoods in the City that were built prior to 1989. So far, 87 of these neighbourhoods have been assessed, with 66 having concept designs completed. The 168 remaining neighbourhoods will need to be evaluated in the upcoming years.

The City has begun to develop a long term **Service Connection Renewal** program, which could be coordinated with the Drainage Neighbourhood Renewal Coordination project. The scope over the next 2-3 years will mainly include the program development followed by design and construction works. This will include a strategy to work with the homeowners, to develop a communication plan, and to prioritize locations for renewal.

3. Business Drivers

Growth/Demand Implications

The program was initiated to systematically rehabilitate deteriorated drainage infrastructure on a neighbourhood by neighbourhood approach. Close co-ordination is maintained with Transportation Services to support their Roadway Neighbourhood Renewal Program so as to avoid disturbing newly reconstructed pavements and to minimize public inconvenience during construction.

Operational Efficiencies

The goal of this program is to investigate and renew drainage infrastructure in order to maintain the performance of the drainage infrastructure at an acceptable level and to manage the risk of its failure. This program will have a positive impact on the operating budget over time due to the reduction in unpredictable emergency repairs required as a result of the renewal. There may also be a reduction of maintenance activities for a period of time once the infrastructure is renewed.

Safety Implications

The implementation of this program will protect persons and property from injury and damage due to basement flooding, street flooding, or roadway subsidence. Timely repairs are needed to maintain the integrity of the sewer infrastructure and to prevent claims against the City for property damage, public health concerns and possible environmental infractions as well as to protect pedestrian and vehicular traffic from potential roadway collapse and flooding damages.

4. Business Benefits

Tangible Benefits

This program will have a positive impact on the operating budget due to the reduction in unpredictable emergency repairs required as a result of the renewal. There may also be a reduction of maintenance activities for a period of time once the infrastructure is renewed.

Intangible Benefits

This program aligns with the "**The Way We Live**" strategic goal because it allows Drainage Services to continue to provide a high level of service to the residents by reducing the occurrence of sewer back-ups due to sewer or service connection blockages and by minimizing disruptions to the public through orderly execution of construction works. It will result in higher customer satisfaction.

5. Impacts and Challenges

Impacts

Failure of drainage system infrastructure will generally impact many different areas. For residents, it is flooded basements, collapsed road and/or sewer related odour. For the environment, it is the proper disposal of sanitary sewage.

Challenges

From the results of a computer model designed to simulate the change in sewer conditions based on known deterioration patterns, it is estimated that an investment in the order of $30M-$40M per year (in 2010 dollars) is required for the next 30 years to achieve the objective of maintaining the overall current condition of the drainage pipes (excluding sewer service connections).

Key Risks

To comply with the 3 year no-cut policy for newly re-constructed pavement, Drainage Services strives to match the number of neighbourhoods scheduled for reconstruction each year by Transportation Services, which at the present time are seven neighbourhoods per year. However, there are neighbourhoods where the condition of sewers infrastructure is poor but the pavement condition does not warrant roadway reconstruction, Drainage Services will still require funding to manage such rehabilitation, likely resulting in more than seven neighbourhoods per year. If the required funding is not available, this will result in inability to co-ordinate with the roadway reconstruction program and/or further deterioration in the condition of sewers in the older neighbourhoods.

Opportunity also exists to undertake the renewal of deteriorated sewer service connections as part of the Drainage Neighbourhood Renewal Program. A recent study revealed that if no action is taken in the near future, the conditions of the sewer service connections will become critical in the next 20 years. The investment

required, in addition to the amount above, will build up over the next 10 years to become about $35M per year.

6. Program Alternatives

An alternative to the planned Drainage Neighbourhood Renewal Program is wait until the drainage infrastructure actually fails before replacement. The risk of failure will be higher as the drainage system is getting older and there will be less control over timing and capacity to complete the work. More expensive repairs will result from the emergency situations. Furthermore, emergency works are more costly than planned renewal works.

Drainage Services is constantly looking for new technologies for cost effective rehabilitation and renewal of sewer pipes. Currently about 80% of the renewal works are performed using trenchless cured-in-place lining method at one-fifth of the cost of open cut. However, the relining method is not an effective method where the sewer needs to increase in size. The most cost effective method is selected during the design stage.

7. Financial Analysis and Assumptions

Summary of Proposed Capital Budgets

Project Name	2012	2013	2014
Neighbourhood Renewal Coordination	$36.8M	$50.3M	$60.0M
Sewer Upgrading	$0.5M	$0.6M	$0.6M
Sewer Connections Renewal	$0.5M	$0.6M	$0.6M

Neighbourhood Renewal Coordination

The budget proposed for the Drainage Neighbourhood Renewal Coordination projects is developed based on a high level assessment of the renewal needs using known patterns of deterioration and the age of the pipes. Such budget numbers will be refined as more accurate condition and cost details become available from CCTV inspection results and actual renewal works. The budget required for renewal of mainline sewers in a total of 20 neighbourhoods planned during the period from 2012 to 2014 is approximately $147M. The details of planned neighborhoods to begin in 2012, 2013 or 2014 are shown in Table 2 (based upon current condition assessment) along with the budget amount to complete the entire neighbourhood. These are subject to change if conditions require different sequencing.

Planned Neighbourhood Schedule and Estimated Budget for 2012-2014

	2012		2013		2014
Hazeldean	$ 5.55	Cromdale	$ 2.03	Central MacDougall	$4.68
Gariepy	1.94	Calder	6.40	Lansdowne	2.45
Delton	4.90	Griesbach	13.51	Rosslyn	5.22
Boyle Street*	6.01	Homesteader	2.91	Westmount	13.03
Laurier Heights West	5.80	Lorelei	4.72	McKernan	4.27
McCauley	10.82	Queen Alexandra	7.76	Spruce Avenue	3.67
Avonmore	5.49			Strathcona	9.71

*Boyle Street will be funded by The Quarters Downtown CRL rather than by Utility rates.

Sewer Upgrading

The proposed budget for the Sewer Upgrading program is $1.7M over the next 3 year budget period. This budget is required to continue the ongoing evaluation of 168 remaining neighbourhoods that were built prior to 1989 to determine the asset condition and to plan for their renewal.

Service Connections Renewal

At the April 5, 2011 Utility Committee, Service Connection Renewal was identified as a risk area that requires attention. The proposed program over the next 3 budget period of $1.7M will provide for the development of a program that will systematically address the concern before the asset fails. Further funding will be required in the next budget period and beyond for design and construction costs.

Funding and Financial Assumptions

Funding for this Program is borne by the utility customers at large. This is equitable as each neighbourhood will require rehabilitation at some point over the assets' lifecycle. The model assumes that the Program will be funded by a combination of 25-year debenture and retained earnings. Over time, the goal is to provide 40% of the project cost through retained earnings; however, the actual financing sources will differ between Sanitary versus Stormwater Drainage depending upon the availability of cash within the respective Utility.

8. Resource Requirements

The implementation of this Program will not prompt new personnel (FTE) requirements. Many of the projects will require external resources for both the design and construction phases.

9. Recommendation

The Drainage Neighbourhood Renewal Coordination projects are needed to systematically rehabilitate or replace deteriorated sewers on a neighbourhood by neighbourhood basis. This program is closely coordinated with Transportation Services to facilitate their Neighbourhood Roadway Reconstruction Program to avoid disturbing newly reconstructed pavements and to minimize public inconvenience during construction.

The Sewer Upgrading Strategy is needed to address pipe capacity issues such as basement backups or surface flooding. In many areas of the City, level of service is considered below current standards and therefore requires sewer upgrades.

The Service Connection Renewal Program is needed to maintain the condition of the infrastructure and to design an affordable program that addresses the risks of connection failure.

9.2 Drainage System Rehabilitation

1. Introduction

The Drainage System Rehabilitation Program covers infrastructure not included in the scope of the Drainage Neighbourhood Renewal Program. This program undertakes planned rehabilitation works to reduce the risk of sewerage and drainage system infrastructure failures, thus minimizing damage to public and private properties. It consists of three sub-programs:

The objective for this Program is to maintain an acceptable level of service and minimize the risk of sewer infrastructure failure in order to meet the City's Strategic Goals.

2. Program Scope

Infrastructure such as sewers and structures in the drainage system deteriorate over time. The critical need for reinvestment was brought to City Council's attention in 1998 with the Infrastructure Strategy. The Strategy's overall goal was "to ensure that the City's infrastructure is in a good state of repair and that rehabilitation and development programs are adequately funded on an ongoing basis and are as efficient as possible". Since then, the City has been examining all elements of its infrastructure to determine inventory, condition and reinvestment needs.

In line with the Infrastructure Strategy, the Drainage System Rehabilitation Program is to renew drainage and sewerage systems that are in poor condition. Of the 5,400 kilometers of sewers the City owns, close to 30% are more than 50 years old. The typical average expected life of such assets is 100 years.

The program rehabilitates the sewerage and drainage system infrastructure as it ages and includes the following projects:

Trunk Sewer Rehabilitation – provides funds for the condition survey and minor repair of combined, sanitary and storm trunk sewers. The large diameter (1,200 to 5,250 mm) trunk sewers were inspected by walking the sewers while the smaller diameter (600 to 1,050 mm) trunk sewers were televised. Inspections will continue in a 10 year cycle to monitor the rate of deterioration.

City Wide Odour Control – provides funds for the construction and upgrading of drainage related odour control facilities throughout the City and addresses odour issues. Various facilities have been implemented throughout the City to control drainage related odour.

Pump Station Rehabilitation – The City has more than 70 pump stations and these pump stations are rehabilitated through this annual capital program.

Drill Drop Manhole Rehabilitation – These are small diameter (600 mm) corrugated steel pipes installed as drop manholes to deep sewer tunnels throughout the City. The drill drop manholes are prone to corrosion and deteriorate much quicker than standard concrete manholes. This program will rehabilitate these drill drop manholes according to their needs.

Storm Outfall Rehabilitation – There are more than 300 drainage system outfalls into the River and creeks. These outfalls require inspection and rehabilitation in order to counteract river action, ice flow damage, erosion, and bank instability. This program includes the inspection of the outfalls thoroughly on a 20 year cycle and repairs them on a priority basis.

High Priority Repair – provides funds to carry out emergency repairs to the sewer system. Most of the emergency repairs are undertaken using an open-cut repair method.

Local Sewer Rehabilitation – The Local Sewer Rehabilitation provides for the systematic inspection and repair of deteriorated sewers, manholes, catch basins and catch basin leads. Local sewers are defined as sewers that are less than 600 mm in diameter in the combined, sanitary and storm sewer systems.

Roadway/Drainage Rehabilitation Coordination – This program is used to coordinate sewer rehabilitation with Transportation Services' Arterial Road Reconstruction Program. Transportation Services identifies their arterial and collector roadway reconstruction locations and any required renewal of sewer infrastructures at the same locations will be undertaken prior to the paving works.

Creek Erosion Protection – Permanent Area Contribution (PAC) on creek erosion protection are being collected from developers contributing flow to Whitemud/Blackmud Creek basin. The PAC will be used to carry out erosion protection works. A similar PAC will be established for the Gold Bar Creek as well.

3. Business Drivers

Growth/Demand Implications

Sustainable investment programs for municipal infrastructure have been the general expectation of the public. The demand on infrastructure reinvestment increases as the City grows. Drainage and sewage infrastructure accounts for the most significant share among City infrastructure dollars, with a total replacement value of close to $15 billion at the end of 2010. In particular, the number of pump stations has been increasing over the last few years at a rate of about 2 to 3 per year. Although the rehabilitation requirement for the new pump stations is minimal during the initial years of operation, the rehabilitation needs increase as the pump stations age. The increase in the number of pump stations will significantly increase the rehabilitation requirements in future years.

Changes to Policy

Beginning in 2009, all Canadian municipalities were required, under the Public Sector Accounting Board (PSAB) reporting requirement, to account for and report all tangible capital assets, and amortize the costs over the expected asset service lives. This program is established according to the requirements of asset management and in conformance to City Council's direction as documented in the Infrastructure Strategy.

Regulatory Drivers

Both the Federal and Provincial governments have various legislations to control the collection and transmission of sanitary and stormwater drainage. If drainage system infrastructure is not properly maintained, failure could result in the spillage of raw sewage into the environment, which is a reportable violation.

Operational Efficiencies

The initial impacts of this program on the operating budget will be small because rehabilitated infrastructure does not require much maintenance and should extend the useful life of the infrastructure. However, as the infrastructure condition changes with age, more maintenance efforts and expenses will be required. For best practices, appropriate amounts should be set aside for the renewal of the infrastructure at the end of its life cycle.

Safety Implications

The implementation of this program will protect persons and property from injury and damage due to basement flooding, street flooding, or roadway subsidence through continuous rehabilitation of aging sewer infrastructure. Timely repairs are needed to maintain the integrity of the sewer infrastructure and to minimize claims against the City for property damage, public health concerns and possible environmental infractions. It will also reduce disruptions to pedestrian and vehicular traffic which will result from roadway collapses and flooding.

Other considerations

Proactive corrective action prevents further deterioration of drainage system infrastructure which could lead to an emergency situation requiring immediate attention at a higher cost. Sewer rehabilitation carried out at the same time as roadway rehabilitation will result in overall savings to the City and minimize inconvenience to the public.

4. Business Benefits

Tangible Benefits

This program will have a positive impact on the operating budget due to the reduction in unpredictable emergency repairs required as a result of the renewal. There may also be a reduction of maintenance activities for a period of time once the infrastructure is renewed.

Intangible Benefits

This program aligns with the "**The Way We Live**" strategic goal because it allows Drainage Services to continue to provide a high level of service to the residents by reducing the possibility of sewer back-ups due to sewer or service connection blockages and by minimizing disruptions to the public through orderly execution of construction works. It will result in higher customer satisfaction.

5. Impacts and Challenges

Impacts

Failure of drainage system infrastructure will generally impact many different areas. For residents, it is flooded basements, collapsed road and/or sewer related odour. For the environment, it is the proper containment of sanitary sewage.

Challenges

The challenge for this program is to develop an adequately funded program that effectively rehabilitates drainage system infrastructure. Infrastructure condition is the key criteria in determining the need and the timing for rehabilitation. In general, emergency repairs are more expensive than rehabilitation works planned through a proactive program. A proactive program can utilize this cost advantage (replacement costs are about 4 times higher than trenchless relining costs) and rehabilitate sewers before they reach an imminent and irreversible failure mode. The challenge is to develop a program that is financially sustainable, socially just and environmentally responsible.

Key Risks

Risk assessment of Edmonton's drainage and sewage infrastructure was done. This assessment is a high level analysis that began with identification of infrastructure categories that were homogeneous in nature. The results of the model indicate that Edmonton's infrastructure will continue to decline over the next 10 years. It would involve expenditures of about $70- $80 million a year to maintain them at their current condition level. The reality the model brings is that infrastructure managers will have to live with some degree of risk. This heightens the need to control the risk with asset management systems. The expenditure for this program is developed based on historical knowledge gained from the implementation of the sub-programs.

6. Program Alternatives

Alternative Strategies

One alternative to the Drainage System Rehabilitation Program is to do nothing. If nothing is done, all drainage infrastructures will be at-risk of failure. The risk of failure will be higher as the drainage system is getting older. More expensive repairs will result from the emergency situations. Delay in rehabilitating the sewer system now will only delay, but not resolve, the problem and will pass the ultimately required and higher expenditures to the next generation.

Technical Solutions and Alternatives within the Program

The program is being reviewed on a regular basis to ensure the implementation schedule can be adjusted to deliver the rehabilitation works as intended and to react to emerging conditions. Alternative engineering solutions are evaluated during the design phase to ensure that project objectives are being fulfilled with the implementation. Projects are also optimized during the design phase to explore more cost-effective alternatives. The only exception would be the High Priority Rehabilitation where optimization and alternatives are normally explored on site as the construction is being done.

7. Financial Analysis and Assumptions

Program Costs

The Drainage System Rehabilitation Program is a composite program that undertakes rehabilitation works to prevent and rectify sewerage and drainage system infrastructure failures, preventing sewer backups for customers. The Program cost for 2012 to 2014 is listed as follows:

Program Name	Funding Source	2012 Budget	2013 Budget	2014 Budget
Structural Rehabilitation	Rates	$6.3M	$6.5M	$6.7M
Sewer Rehabilitation	Rates	$13.2M	$13.5M	$13.7M
Creek Erosion Protection	PAC*	$ 0.5M	$ 0.6M	$ 0.6M
Total		**$20.0M**	**$20.6M**	**$21.0M**

*Permanent Area Contributions

Financing Alternatives

Financing through utility rates for the sub-programs of Structure Rehabilitation (9503) and Sewer Rehabilitation (9504) is deemed to be the most appropriate because the associated work scopes and benefits are for all the utility rate payers. The sub-program of Creek Erosion Protection (9604) is financed through Permanent Area Contribution because this is specific for the erosion protection works. There were no financing alternatives considered for this program.

Financial Assumptions Used

All three sub-programs are composite programs that have budget approved every 3 years as part of the Capital Budget. The total budget for this program in the 2012 to 2014 budget cycle is 61.6 million with the majority of the budget going to the Structures Rehabilitation (9503) and Sewer Rehabilitation (9504). The most common construction methods to be used within the Program are the open-cut repairs using in-house work crew and trenchless pipe relining using outside contractors. There are other specialized construction works to be done such as mechanical and electrical repairs under the pump stations rehabilitation, bank stabilization works for creek erosion protection and outfall rehabilitation, and odour control facility upgrades. Inflation factors have been included in the budget.

8. Resource Requirements

The implementation of this Program will not require additional personnel (FTE) requirements. Many of the projects will require external resources for both the design and construction phases.

9. Recommendation

The Drainage System Rehabilitation Program is a composite capital program to implement rehabilitation works to address aging sewerage and drainage infrastructure and repairs infrastructure to restore service. Expenditures to rehabilitate sewer

infrastructure have been included in this capital program for many years to address sewer problems and to reduce emergency work, thus saving costs and minimizing customer impacts. The long term impact of this program on the operating budget will be positive because the life span of many of the aging infrastructures will be improved. This will lessen the efforts required to operate, maintain and repair the aging infrastructure through expensive emergency repairs. It will be a success if fewer drainage infrastructure failures occur and thus higher customer satisfaction with fewer service interruptions. The drainage systems can be maintained at the existing level of performance with minimum failures. This project is ongoing because sewer infrastructure will need to be rehabilitated as it ages. Therefore, this Program should be approved as proposed.

9.3 Drainage Facilities Upgrading

1. Introduction

This program will renew and upgrade the capacity of the facilities required to support constructing, renewing and upgrading of the drainage system. Stewardship of Drainage Services buildings and equipment supports the maintenance of Drainage Services capacity to support the corporate outcome that “The City has sustainable assets and services, and a resilient financial position”.

2. Program Scope

This program includes; replacement equipment such as vehicles, printers, furnishings, a residuals disposal facility as well as the development of an overall IT strategy for Drainage Services (Business Intelligence, future direction, future of the DRAINS database, future operational efficiencies), support of the Drainage Facility Inventory database (DRAINS), control of development (Permanent Area Contributions system, project status), and operational efficiencies (Pump well Preventative Maintenance, Regulatory Services, data conversions).

3. Business Drivers

Growth/Demand Implications

New and enhanced IT applications allow all areas of Drainage Services to meet the needs of growth driven by population, densification and system expansion due to new development. Two on-going projects in the next few years will improve the efficiency of Drainage Services’ interactions with the development industry. Vehicle and office equipment for increasing staff numbers due to growth are accommodated with this budget.

Demand for the Residuals Disposal Facility is driven by uncertainty surrounding the accessibility of the lagoons site dumping facility beyond 2014. The long range strategy to address our needs beyond 2014 includes the construction of the facility. The amount requested includes Conceptual Study and Pre-design of dumping facility. This program is recommended in order to ensure that equipment safety and ability to respond is

maintained and that a long range strategy is implemented to address sanitary dumping needs.

Regulatory Drivers

Occupational Health and Safety drives the replacement of equipment while environmental and safety regulations influence the sanitary dumping activities.

Operational Efficiencies

IT systems allow staff to do more, e.g. computerized pump well system requires less manpower and informs staff of problems early for proactive maintenance. Better printers allow full use of new computer capabilities. Newer vehicles are more fuel efficient.

Sanitary dumping efficiencies are influenced by facility accessibility and availability, and ease of content discharge.

Safety Implications

Newer equipment, ergonomic furnishings and replacement of broken furnishings protect employee health & safety. Better data increases safety – knowledge of utility locations for dig-ups, etc. The Drainage Facility database (DRAINS) is an important element of Alberta First Call. Sanitary dumping facility accessibility and availability ease content discharge and provide safety to the operator and prevent environmental discharge.

4. Business Benefits

Tangible Benefits

Equipment replacement may reduce sick days taken due to inadequate or broken equipment. Drainage IT applications facilitate better understanding of the sewer system, and fewer utility hits due to Alberta First Call locating data availability. Lower staff costs due to efficiencies gained. Digitization of records reduces the amount of floor space taken up by paper files. Residual disposal activities are necessary to support Drainage Services preventative maintenance programs to address sewer blockages before they occur and sustain sewer asset functionality throughout the asset life.

Intangible Benefits

Equipment replacement will increase job satisfaction when staff is provided proper equipment that is in good condition. Drainage IT applications will improve customer satisfaction through higher confidence in data accuracy. Employee satisfaction will increase with reduced work frustrations caused by poor (or still paper) systems when systems are upgraded. Residual disposal activities are necessary to support direct, uninterrupted public service and avoid adverse environmental impacts by way of sewer blockage and system surcharge.

5. Impacts and Challenges

Impacts

In order to maintain service levels it is necessary to renew and upgrade the capacity of the facilities required to support constructing, renewing and upgrading of the drainage system in order to support the corporate outcome that “The City has sustainable assets and services, and a resilient financial position”. Long term plans for the operation of the sludge lagoons are being considered, which may impact opportunities to discharge residual material into the lagoons beyond 2014. The concept study and pre-design is vital in order to complete the construction of the alternative facility by 2016.

Challenges

Predicting the timing for replacement and upgrading of equipment and the IT system can be challenging. Unforeseen equipment failure and advances in IT technology necessitates that this program remains as a composite program.

Long term plans for the operation of the sludge lagoons are being considered, which may impact opportunities to discharge residual material into the lagoons beyond 2014. The concept study and pre-design is vital in order to complete the construction of the alternative facility by 2016.

Key Risks

Lack of support for existing IT systems limits productivity and the capacity of the facilities required to support constructing, renewing and upgrading of the drainage system. Lack of support for adequate office furnishings and equipment will adversely affect productivity. Change in long term plans for existing disposal facilities or environmental regulations will not be met are key risks.

6. Program Alternatives

Alternative Strategies

The alternative to this program would be to do nothing and allow supporting systems, equipment and facilities to deteriorate which may seriously hamper Drainage Services' capacity to maintain the agreed service levels to its customers and potentially putting employees at an occupational health and safety risk.

A do nothing strategy around the Residuals Disposal Facility will be to eliminate preventative maintenance flushing programs and need for residuals disposal facility which will adversely affect the service provided to the customers.

Technical Solutions and Alternatives within the Program

Equipment maintenance and IT systems support will continue but is not an alternative to the eventual replacement required. For the Residuals Disposal Facility it may be possible to explore other practices for cleaning traps or for remote treatment of residual material at a higher operating cost or requiring significant technical capital investment.

7. Financial Analysis and Assumptions

Program Costs

This is an ongoing program where opportunities are identified during the annual Capital Priorities Process. The needs of this program vary from year to year depending on specific challenges/opportunities.

Program Name	Funding Source	2012 Budget	2013 Budget	2014 Budget
Facilities, Equipment & System Renewal	Rates	$2.5M	$2.3M	$2.6M
Residuals Disposal Facility (5422)	Rates	$0.2M	$0.3M	$0.3M
Total		**$2.7M**	**$2.6M**	**$2.9M**

Financial Assumptions Used

City of Edmonton budget guidelines for inflation projections have been used.

8. Resource Requirements

Internal

The implementation of this Program will not require additional personnel (FTE) requirements.

9. Recommendation

This program is recommended in order to ensure that equipment safety and ability to respond to service requests is maintained, that efficiencies are realized and that a long range strategy is implemented to address sanitary dumping needs. The composite program will renew and upgrade the capacity of the facilities required to support constructing, renewing and upgrading of the drainage system in order to maintain Drainage Services' capacity to support the corporate outcome that "The City has sustainable assets and services, and a resilient financial position". The alternative to this program would be to do nothing and allow equipment to deteriorate which may decrease Drainage Services' capacity to maintain system service levels. Therefore, it is recommended that the on-going Program be approved as proposed.

9.4 Environmental Quality Enhancements

1. Introduction

Storm water runoff from urban environments can contain a number of pollutants, including suspended solids, metals, nutrients, bacteria, salts, oils and grease. These pollutants, washed off impervious urban surfaces, can have significant impacts on the surrounding watershed and ecosystem health. Biosolids management facilities, if not properly constructed and maintained, may exhibit risks to the environment through leakage and collapse. Unchecked, these effects may be further exacerbated as the City grows and develops.

The goal of this Environmental Quality Enhancement Program (EQEP) identifies and funds innovative projects targeting protection, maintenance and enhancement of water quality in the North Saskatchewan River and surrounding watershed. It supports implementation of strategic plans such as the Storm Water Quality Control Strategy & Action Plan (SWQC), and the Biosolids Management Strategy (BMS).

Drainage Services' environmental management system has continuous improvement as one of its three guiding principles. The Environmental Quality Enhancement Program is an ongoing program that will evolve to address regulatory changes, adopt sustainable approaches to watershed management and continually improve watershed health.

2. Project Scope

The EQEP program includes two types of capital projects: Environmental Enhancement projects and the Mill Creek End-of-Pipe Treatment Facility. The general scope of the program includes the interconnection control, stormwater low flow diversion, stormwater end of pipe treatment, wetland acquisition, low impact development (LID) demonstration projects, sewage lagoon rehabilitation, and environmental monitoring.

Project 12-23-9616 is a composite project which consists of following sub-projects:

- Interconnection Control (IC)
- Low Flow Diversion for Quesnell Storm Basin

- Low Impact Development demonstration projects
- Environmental monitoring to ensure regulatory compliance
- Sewage lagoon rehabilitation (Clover bar lagoon and Bremner Lagoon).

Included in this Program are:

- Low flow diversion, which usually has the highest pollutant concentration to the sanitary sewer for treatment at the Plant, will be constructed by 2014 at Quesnell,
- 30ha of land development will be served by LID to reduce runoff volumes and intercept pollutants,
- 40 inter-connections will be disconnected between sanitary and storm sewers,
- over 300 drainage facilities (locations) will be monitored to prevent groundwater contamination, and
- concept development, design and construction for projects to improve the quality of water discharged to the river from the stormwater drainage system in Mill Creek.

The total required budget (2012-2014) is $10.9 million.

3. Business Drivers

Growth/Demand Implications

- City development has been growing at an average rate of 400 ha/year which significantly increase the hard surface and consequently the runoff. Increased surface runoff leads to more frequent flooding, decreases ground water recharge, decreases evaporation from soil to the atmosphere, increases erosion and sediment in the receiving waters, and increases pollutants into the North Saskatchewan River. These negative impacts to the natural hydrologic cycle threaten the healthy watershed and ecological system. A sustainable stormwater management approach will help to mitigate the impact of urban development to the watershed and ecosystem.
- Recent studies by the North Saskatchewan Watershed Alliance (NSWA) indicate that climate change most likely increases the rainfall intensity and the monthly rainfall variations. This could bring a challenge to the conventional drainage system in terms of managing flooding. New stormwater management approaches need to be explored and implemented in order to adapt to the climate change.

Changes to Policy

“The Way We Green” - Corporate Strategic Plan

The Way We Green environmental plan showcases the City’s commitment to stewardship and environmental protection in line with sustainable development. Protecting the water quality in the North Saskatchewan River is clearly committed in *The Way We Green*. The Environmental Quality Enhancement Program directly supports the water quality protection and improvement.

LEED Silver standard for buildings

The City is endorsing green buildings through LEED certification, under which the water re-use, sanitary and storm water management are required. The EQEP responds to these requirements by supporting Low Impact Development, on-site stormwater management, and water and stormwater re-use.

Eco-Industrial development approaches

The City has developed new policies regarding the industrial land development, in which sustainable ecological design are required/encouraged. EQEP supports the policies to achieve the sustainable design targets.

Integrated Watershed Management Plan (IWMP)

The North Saskatchewan Water Alliance (NSWA) is developing an integrated watershed management plan (IWMP) for the North Saskatchewan River (NSR) to achieve goals of: (1) safe, secure drinking water; (2) healthy aquatic ecosystem; and (3) reliable, quality water supplies for a sustainable economy. As a key stakeholder of NSWA, the City of Edmonton is obliged to take proactive approaches to protecting the watershed and the NSR. The EQEP will be a key contributor to these proactive strategies.

Regulatory Drivers

The Alberta environment is moving along the direction of accumulative effect in term of river and watershed protection. Total loading has been a key target in the accumulative effects assessment. The City of Edmonton is obliged under its drainage system's *Approval-to-Operate* to develop and implement a total loadings plan to gradually reduce the impacts of city development to the water quality in the NSR. All initiatives and projects under the EQEP are toward to goal of reducing pollutant loadings into the receiving waters.

Operational Efficiencies

All projects under the EQEP program will improve the operational efficiencies for Drainage Services. For example, Low flow diversion projects will divert low stormwater flow into the wastewater treatment plant for a higher treatment efficiency; the construction of flow monitoring sites will increase the flow and water quality data collection in a faster and more reliable manner, which will help the tracking and reporting of drainage system operations and performance. The LID pilot projects and LID monitoring and assessment will demonstrate the effectiveness and efficiency of LID in runoff and pollutant reduction, as well as other environmental and social benefits.

4. Business Benefits

Implementing the Environmental Quality Enhancement program will bring environmental, social and economical benefits to the City either in tangible or intangible way.
The benefits of the projects under the EQEP are summarized below.

Project	Tangible benefits	Intangible benefits
Sewer Interconnection Control	Improves the water quality in the North Saskatchewan River through controlling sewer interconnections city wide.	Improves the water quality in the North Saskatchewan River
Quesnell Basin Low Flow	Low flow diversion will divert the low stormwater flow to the Wastewater	

Diversions	treatment plant for treatment. Low stormwater flows usually contain higher concentration of pollutants.	
LID demonstration projects	LID practices deliver multiple environmental and economic benefits such as reducing polluted stormwater runoff, air quality, carbon reduction, increased property prices.	In addition to the environmental and economic benefits, the LID practices delivers social values such as recreation and community livability; therefore, to support a sustainable development.
Mill Creek End of Pipe Treatment facility	End of pipe facilities provide an effective pollutant removal from stormwater runoff.	Reducing point source and non-point source pollutions also contribute to the reinstatement of Mill Creek as a natural urban water course.
Sewage Lagoon Rehabilitation	Proactive rehabilitation or upgrade will prevent environmental release from the lagoon which is very costly to remediate and repair.	Reduces impact to the watershed and ecosystem
Environmental Monitoring	Environmental monitoring using advanced data automation technologies significantly reduces costs of operating and maintaining drainage system by a faster and more reliable data collection and reporting process.	Supports the protection of watershed and ecosystem; increases the drainage system's sustainability

5. Impacts and Challenges

Impacts

The Environmental Quality Enhancement Program (EQEP) will increase City's profile as a leading watershed steward; improve water quality and environmental health of the watershed. All projects under the EQEP use proactive approaches to managing the City's water resources. The program directly supports the City's ten year goal of "*preserve and sustain Edmonton's Environment"*, and indirectly supports the goal of "*improve Edmonton's livability*".

Challenges

Environmental protection involves many areas of society, which needs the collaboration of all stakeholders. The construction of an end of pipe treatment facility in natural ravines and creeks is environmental sensitive and careful investigation and planning is strongly required. Low Impact Development (LID) has a potential of large scope crossing into multi-disciplinary and multi-department collaboration. The integration of LID best management practices into stakeholder's business processes is a big challenge.

Key Risks

The implementation of this Environmental Quality Enhancement Program (EQEP) is proactive to manage increasing risks from regulations and development growth. Both Federal and provincial environmental regulations are increasingly stringent and may force action at greater cost and with lost opportunities if a proactive approach to storm water management is not taken. As the population in Edmonton are increasing and more land is being developed, stormwater runoff and biosolids produced from the wastewater treatment process are increasing, which, without effective and proactive management, will deliver adverse impacts to the watershed and ecosystem. Also, the delay of this program will miss the opportunity to coordinate with existing City strategies and efforts (such as *The Way We Green*).

6. Program Alternatives

Alternative Strategies

The alternatives to the EQEP is either to do nothing and simply react to changes in regulations, or to introduce regulations and enforce by-laws to individuals to implement case specific wastewater and stormwater treatment measures. The option of do nothing will result in non-compliance with federal and provincial regulations. Enforcement may be more cost effective but is very time consuming and does not proactively contribute to the achievement of goals of “The Way We Green” or “The Way we Live”.

Technical Solutions and Alternatives within the Program

Most of projects within this program were selected from completed technical studies as the most feasible alternatives.

7. Financial Analysis and Assumptions

Program Costs

The total costs of the EQEP in the next three years will be $10.9 million. The three year project costs are listed below.

Project Name	Funding Source	2012 Budget	2013 Budget	2014 Budget
Environmental Enhancement Projects	Rates	$2.8M	$3.3M	$4.0M
Mill Creek end of pipe treatment	Rates	$ -	$0.4M	$.5M
Total Costs for (2012-2014)		**$2.8M**	**$3.7M**	**$4.4M**

Financing Alternatives

The program will be funded by the Stormwater Utility and Sanitary Utility. Other funding avenues such as federal and provincial grants will be pursued opportunistically.

Financial Assumptions Used

City of Edmonton budget guidelines for inflation projections have been used.

8. Resource Requirements

Internal

There will be no additional FTE required in this three year period. However, one drainage operator (Labourer I) will be required from 2015 to maintain Low Impact Development sites (bioswales, bioretentions, etc.), with an annual cost of $22K.

External

Consulting services are required for conceptual design and detailed design. Some of the design work will be done through Drainage's Design and Construction section. It is expected that most of the construction work will be done by Design and Construction section.

9. Recommendation

All projects under the Environmental Quality Enhancement Program (EQEP) serve the purpose of complying with federal and provincial regulations, especially the Environmental Protection and Enhancement Act (EPEA) of the Province of Alberta. It is recommended to continue with the program as any delay of the program may result in the rejection of the City's Approval-to-Operate by the Alberta Environment.

9.5 Flood Prevention Program

1. Introduction

Severe rainstorms in early July 2004 caused flooding on streets, roadways and in more than 4,000 homes throughout Edmonton. Damage to public and private property was extensive. Drainage Services developed flood prevention strategies with 3 key goals:

- Find the main causes of flooding in at-risk neighbourhoods
- Identify options for reducing the risk of flooding in the future, and
- Work with communities and other stakeholders to implement viable solutions

Engineering studies and community input resulted in a plan to address issues in 43 at-risk neighbourhoods.

Major problem areas are being addressed first to ensure severe flood risk is minimized. Neighbourhood sewer and stormwater system improvements are being worked on simultaneously to hasten the work.

2. Program Scope

In the fall of 2006, City Council approved $146 million for flood prevention. This funding allows dozens of projects to be completed during the next several years. The Flood Prevention Program will implement capital projects for flood prevention purposes and includes four sub-programs in addressing flood prevention in general, Neighbourhood Flood Prevention Projects, Opportunistic Flood Prevention Project, Overland Drainage, and Morris Pond.

Neighbourhood Flood Prevention Projects

The Neighbourhood Flood Prevention Program was developed in response to the unusually heavy rains that caused flooding and sewer back-up in more than 4,000 homes in 2004. Subsequently, the Administration identified a number of potential works to

reduce the risk of future flooding in these neighbourhoods. The Flood Prevention Program was subsequently approved by City Council in 2006 to implement the proposed upgrade works.

The approved Neighbourhood Flood Prevention Program budget in 2006 was for $146 million over 12 years with an implementation schedule from 2006 to 2017. The scope was to construct various identified drainage improvement projects according to the greatest concentration of flood-impacted neighbourhoods. The flood prevention projects have been prioritized into three categories (Group A, B & C) within 8 project areas affecting 31 neighbourhoods. The current plan has identified a total of 41 projects and has the following number of projects in each category:

- Group A: 17 projects
- Group B: 14 projects
- Group C: 10 projects

During the 2010 budget approval process, the budget for the Flood Prevention Program was increased to $134 million to cover inflation/cost escalation and the implementation schedule has been extended to year 2020 such that rate impacts to both the Stormwater and Sanitary Utilities will be acceptable.

Up to the end of 2011, about 41% of the projects (17 out of 41), will have been completed and about $109 million has been spent on the program. The flood prevention works have been substantially completed in twelve (12) of the 31 neighbourhoods. In 2012 to 2014, the flood prevention works in another 10 neighbourhoods are scheduled to be completed.

Opportunistic Flood Prevention Project

This project was developed to acquire a surplus school site for retrofitting a stormwater management facility on an opportunistic basis. The school boards have declared Prince Rupert school site as surplus to their needs. This surplus school site is located in a mature neighbourhood that is prone to flooding. This program will acquire the site and develop the stormwater management facility for the purpose of flood prevention. The Prince Rupert site is also recommended for development as a stormwater management facility because it can provide relief to the combined sewers near the school site.

Overland Drainage

This is a composite project that responds, investigates, evaluates, and undertakes minor works to address overland drainage concerns. Overland drainage represents the surface drainage system and is designed to accommodate major storm events. The purpose of this program is to ensure that the existing overland drainage system is functioning properly and efficiently and does not result in a nuisance, flooding or maintenance problem to the residents.

Morris Pond

The Morris Pond is a single project that will lead to the construction of a stormwater management facility west of 34 Street between 84 Avenue and 92 Avenue. It will serve as a flood control facility that will address flooding concerns in the Gold Bar Creek Basin. It will also help to reduce erosion potential downstream and result in some water quality improvement. The pond is designed to control storm water flows within Gold Bar Creek for upstream existing and future proposed development.

6. Business Drivers

Growth/Demand Implications

In the development of the Neighbourhood Flood Prevention Projects, Administration undertook an extensive public involvement campaign. The feedback from the public showed a lot of support and demand to get something done to the affected neighbourhoods. In general, citizens are demanding and expecting a higher level of service, especially those from the affected neighbourhoods. The implementation of the Flood Prevention Program fulfills the commitments to the residents. Retrofitting dry ponds in surplus school sites are effective for neighbourhoods with significant flooding concerns but no defined major drainage system.

Regulatory Drivers

There is no regulatory driver for this program. Morris Pond is a natural wetland and has strategic importance to Gold Bar Creek. Alberta Environment has expressed support in the construction of this pond.

Operational Efficiencies

The initial impacts of this program on the operating budget will be small because new sewers and ponds do not require much maintenance. Some dry ponds and stormwater management facilities will require periodic inspection and cleanup after storm events. These activities have been budgeted. However, as the sewer condition changes with age, more maintenance efforts and expenses will be required. Also appropriate amounts should be set aside for the rehabilitation of the sewers at the end of their life cycles.

Safety Implications

The safety implication for this program is that the neighbourhoods with the implemented drainage improvements will have significantly less flooding if similar storms fall on those areas. Another implication is that the residents normally using the dual-use dry pond facilities for recreational purposes can use the fields relatively quickly after a storm event.

Other

Morris Pond, located in a natural wetland, will provide additional environmental benefits after being developed into a stormwater management facility.

4. Business Benefits

Tangible Benefits

The neighbourhoods with flood prevention projects implemented will have lower flood risk from future storm events. The lower flood risk will translate into lower response requirements for the Drainage Operations staff during storm events. In addition, the new sewers and ponds will require lower maintenance requirements.

The pond facilities will act as surge ponds during rain storms such that storm runoffs are directed away from the residents' basements and the roads. They also provide added stormwater quality treatment to storm runoff. Basement flooding, besides disrupting resident's lives and ruining their belongings, results in the need to landfill the damaged basement contents and rebuild the basements. An additional environmental benefit for this project is the establishment of a healthy landscape

surrounding the pond areas.

Intangible Benefits

The major social benefit is the protection of properties in the affected neighbourhoods, and the reassurance to the homeowners that they have additional level of protection. Neighbourhoods with the dual-use facilities will also gain some enhanced sports and recreation amenities for the community. The facilities can be turned into central focal points of activities for the community.

5. Impacts and Challenges

Impacts

Some flood prevention projects such as the construction of dry ponds require land for their implementation. The availability of open area for pond installation is a challenge. In addition, it may also impact the end usage of the land when the pond is completed. In 2012 to 2014, two dry ponds will be constructed, one in the open field in Duggan and the other in Laurier Heights. Stakeholder consultations will be conducted in order to identify all the impacts.

Challenges

Flood prevention projects involve the construction of new pipes and sewer infrastructure upgrades. One challenge is to define the appropriate level of service for the proposed upgrades. The fact that Edmonton's sewer system has been developed under different and evolving design standards over more than 100 years of history makes it even more challenging. Upgrading the system to current design standards can prove to be financially prohibitive and unpractical. For example, some neighbourhoods were developed without surface drainage systems and retrofitting surface drainage systems to these neighbourhoods will be very expensive and disruptive. This Program was developed and implemented on a priority schedule based on cost-effectiveness of the projects.

Another challenge is to account for the potential change to design requirements from climate change. The Program was developed based on current knowledge and may have to be adjusted when we have more detailed results from research.

Key Risks

The key risks for not proceeding with the program are:

- Neighbourhoods will be at risk of flooding during similar storm events
- Citizens will not be satisfied with the lack of progress
- The City will not fulfill the promise to upgrade the at-risk neighbourhoods

6. Program Alternatives

Alternative Strategies

One alternative to the Flood Prevention Program is to do nothing. If nothing is done, the neighbourhoods will be at-risk of flooding with similar storm events. The risk of flooding to the neighbourhoods will be higher as the drainage system is getting older.

Technical Solutions and Alternatives within the Program

The program is being reviewed on a regular basis to ensure the implementation schedule can be adjusted to deliver the improvement works as intended. Alternative

engineering solutions are evaluation during the design phase to ensure that project objectives are being fulfilled with the implementation. Projects are also optimized during the design phase to explore more cost-effective alternatives.

7. Financial Analysis and Assumptions

Program Costs

The Flood Prevention Program is a mixture of single and composite programs that undertakes capital construction works to improve flood protection. The Neighbourhood Flood Prevention Projects (9511) and Morris Pond (9613) and the Opportunistic Flood Prevention Project - Prince Rupert Surplus School Site (9516) are single projects and Overland Drainage (9517) is a composite project.

The Program cost for 2012 to 2014 is listed as follows:

Program Name	Funding Source	2012 Budget	2013 Budget	2014 Budget
Neighbourhood Flood Prevention Projects	Rates	$5.6M	$5.1M	$2.9M
Opportunistic Flood Prevention	Rates	-$0	$1.1M	$5.7M
Overland Drainage	Rates	$0.9M	$0.9M	$0.9M
Morris Pond	Rates	$5.2M	$4.0M	-
Total	**Mixed**	**$11.7M**	**$11.1M**	**$9.5M**

Financing Alternatives

Four alternative financing options were investigated for the Neighbourhood Flood Prevention Projects, including:

- Flood Prevention Fee;
- Land Drainage Flood Prevention Fee and Sanitary Rate Increase;
- Rate Increase; and
- Dividend Transfer for Land Drainage Works.

The Rate Increases option was deemed to be the most cost effective and is the financing option adopted for the Neighbourhood Flood Prevention Projects. Flood Prevention Program is a dynamic program. Many factors will influence future decisions on the implementation of the remaining projects. As demonstrated in the 2010 budget adjustment, the program can be changed in terms of scope and/or schedule to the needs of the time.

Financial Assumptions Used

The Neighbourhood Flood Prevention Projects was approved on a single project basis. As mentioned before, the Neighbourhood Flood Prevention Projects will be completed by 2020 and the total budget from 2012 to 2020 is $59.320 million. There are two different types of construction within the Program, open trench construction using outside contractors and trenchless construction using in-house work crews. Different inflation factors have been included in the budget to account for inflation. In addition, the budget reflects the latest available cost estimates for the different projects.

8. Resource Requirements

Internal

The implementation of this Program will not immediately require additional personnel (FTE) requirements.

External

Many of the projects will require external resources for both the design and construction phases. External engineering consultants will be used for both the design phase on most of the projects and construction phase for some of the projects. In general, external contractors will be used for open trench construction and specialized trenchless construction such as pipe jacking. Some minor repairs using open trench construction will be done through in-house work crews.

9. Recommendation

The Flood Prevention Program was developed to reduce the risk of flooding. In particular the Neighbourhood Flood Prevention Projects was to address the at-risk neighbourhoods from the 2004 storm events. On the basis of the findings of the engineering studies, the original program has prioritized the proposed works and identified approximately $146 million of capital projects to implement over 12 years from 2006 to 2017. The program was revised to $134 million to cover inflation/cost escalation and extended to 2020 during the 2010 budget process. Up to the end of 2011, about 41% of the projects, 17 of the 41 identified projects, will have been completed and about $109 million will have been spent on the program. The flood prevention works have been completed in nine (9) of the 31 neighbourhoods. There is about $59 million remaining in the budget for this program. Continuing this program will fulfill our commitment to the citizens on the flood prevention works. The Opportunistic Flood Prevention Project - Prince Rupert Surplus School Site can retrofit a stormwater management facility in a flood prone neighbourhood. The Overland Drainage will address minor concerns on overland drainage system. Finally, the Morris Pond will provide flood control to Gold Bar Creek. Therefore, this program should be approved as proposed for flood prevention purposes.

9.6 Combined Sewer Overflow Strategy

1. Introduction

Edmonton's combined sewer system serves an area of approximately 4,274 hectares, and consists of about 930 km of sewers. The City of Edmonton currently has 18 Combined Sewer Overflow (CSO) sites. These CSO sites release excess flows to the North Saskatchewan River when wet weather flows overload the system. Drainage Services has developed an affordable and cost effective CSO Control implementation plan to reduce the amount of CSO to the river.

The City's CSO Control Strategy consists of improvements to both the combined sewer system and the wastewater treatment plant. The 16-year plan is estimated to cost about $270 million (2010 dollars). The Strategy is expected to result in an increase in the average annual capture and treatment of wet weather flows in the combined sewer system from 56% to 86%, and a reduction in average annual CSO occurrences from 89 to 46. System performance evaluation will be undertaken as the Strategy nears completion.

The Current Implementation Plan includes the following components:

- The Early Action Control Plan (EACP) which involves the real time control (RTC) of flows at three locations in the combined sewer system designed to utilize available capacity in the conveyance system for storage of wet weather flow;
- Implementation of the Rat Creek Crossing (W12) which will convey a significant amount of CSO volume that would normally be discharged to the North Saskatchewan River to the GBWWTP;
- Opportunistic sewer separation which consists of separation of the combined sewer systems where it is cost effective to do so;
- Modifications to weirs at CSO sites to improve capture of CSOs.

Implementations of several Strategy components have been completed and are in operation.

Next Stage of the Strategy:

- Overall, the CSO Control Strategy Implementation Plan is about 50% complete. The remainder of the identified projects will be implemented as planned.
- The current Approval-to-Operate issued to the City by Alberta Environment requires the submission of a new Combined Sewer Discharge Strategy by June 2013.

2. Program Scope

Strategy Fundamentals

The fundamental decisions made in shaping Edmonton's CSO Control Strategy are:

- total system-wide sewer separation would not be pursued because:
- It costs approximately $2 – $3 billion and has a high level of public disruption;
- Loading to the river will still need to be mitigated
- upgrades would be made to the sewer system and the Gold Bar Wastewater Treatment Plant (GBWWTP) to convey and treat as much wet weather flows as possible; and
- sewer separation would be pursued on an opportunistic basis when determined to be cost-effective;

Performance Objectives

- average annual capture and treatment of wet weather flows is expected to increase from about 56% to about 86%; and
- average annual occurrences of CSOs are expected to decrease from about 89 to about 46.

Strategy Components

Early Action Control Plan - In-Line System Storage through Real Time Control (RTC)

This component involves the utilization/mobilization of storage capacity available in the existing sewer system through the 'real time control' of moveable gates/dams. Excess flows in the system during small events can be stored by closing moveable gates in 'real-time', for later slow release through the system to the wastewater treatment plant. The gates would move automatically in response to changes in water levels at key locations in the adjacent sewers based on programmed control logic. For moderate to larger events, the gates would remain open, resulting in overflows to the River, but protecting the upstream contributing system from sewer backup. Since there tends to be many more small events than larger events in a season, this approach will result in an estimated 200,000 m3 of CSO reduction annually.

Three locations in the combined system were identified for implementation of RTC gates. The first two were completed in 2002 and 2004. The third real time control gate is currently under construction and is scheduled to be completed in 2012.

Long Term Control Plan - Rat Creek River Crossing (W12) Tunnel

This project involves the construction of a 2.5 m diameter, 1.2 km long tunnel under the North Saskatchewan River to convey significantly higher flow to the Gold Bar Wastewater Treatment Plant for treatment instead of spilling into the river. The location of the tunnel is at 84 St/Jasper Ave to the north and McNally High School to

the south. Construction of the tunnel started in 2005 and is scheduled to be completed in 2013.

Long Term Control Plan - Opportunistic Sewer Separation

Although no requirement to undertake separation exists, this component involves upgrading/converting combined sewer systems into separate sanitary sewers and storm sewers on an opportunistic and cost effective manner. Opportunities arise when the cost of separation could be optimized as the result of synergy with other projects such as the Neighbourhood Renewal Program.

Since the start of the program in 2005, three out of the nine identified projects have been completed resulting in 34 hectares of the combined sewer area being separated. Two projects are currently under construction and four projects are in the design stage. All nine projects when complete will separate a total of 320 hectares out of a total of 4,270 hectares of combined sewer area.

This program is expected to continue after the completion of the 16 year CSO Control Strategy.

Long Term Control Plan - CSO Structure Modifications

This program adjusts weir heights to retain more flow in the combined sewer system without causing flooding. Through this program, it was determined that one CSO site in the downtown area could be closed, and this was completed in 2008. There are now 18 CSO sites within the city, and 14 are expected to have significant CSO control benefit when modified. One CSO structure weir modification was completed in 2009. Weir modification to four other CSO sites is scheduled in 2011. The remaining nine CSO sites are scheduled after 2012.

3. Business Drivers

CSO impact on the River

During the development of the Strategy it became clear that while CSO discharges in Edmonton contribute a number of contaminants to the river, the main issue of concern was the human health risk to the river users from bacteria. Edmonton's CSOs were identified to be one of the sources of bacteria that cause in-stream river levels to exceed water quality criteria for primary contact recreation. Contributions of all other contaminants from Edmonton's CSO discharges do not cause river levels to exceed water quality criteria.

Population growth

Increase in population will result in increase of pollutant loadings in both storm water runoff and sanitary flows.

Regulatory Drivers

The City of Edmonton is responsible to develop and implement a plan to control combined sewer overflows, as outlined in the City's Approval-to-Operate (No. 639-02-07) under the Environmental Protection and Enhancement Act. The City is also committed to work towards a long term goal of sewer separation or its environmental equivalent.

4. Business Benefits

As mentioned earlier, the City's CSO Control Strategy is very cost effective as compare to the total sewer separation option.

A review of the CSO Control Strategy completed in 2009 has concluded that the existing and future works could potentially decrease the number of CSO overflows from 89 to 36 and volume of CSO reduction from 86% to 93%. The reduction of CSO will greatly improve the health of the river.

5. Financial Analysis and Assumptions

Program Costs

On March 14, 2000, City Council's Transportation and Public Works (TPW) Committee approved the Combined Sewer Overflow Control Strategy Implementation Plan. The approved budget was $149M (1999 $) or $270M (2010$).

Implementation of the Combined Sewer Overflow Control Strategy was scheduled between 2000 and 2016. To date, the City has spent about $141M on the recommended upgrades.

The amounts budgeted to be spent for the various projects within this program during the years 2012-2014 are:

Program Name	Funding Source	2012 Budget	2013 Budget	2014 Budget
Opportunistic Sewer Separation	Rates	$3.6M	$3.5M	$3.9M
Rat Creek River Crossing (W12) Tunnel	Rates	$6.3M	$2.7M	-
Other Combined Sewer Overflow Control Projects	Rates	$4.9M	$3.2M	$4.0M
Total		**$14.8M**	**$9.4M**	**$7.9M**

Financial Assumptions Used

Inflation assumptions are consistent with those recommended by the City's Chief Economist.

6. Recommendation

The Combined Sewer Overflow Control Strategy, as outlined herein, is recommended to be continued to completion in order to meet regulatory requirements as specified in the City' Approval-to-Operate.

9.7 Sanitary Sewer Servicing Strategy

1. Introduction

The Sanitary Servicing Strategy program was initiated as a long-range servicing plan to facilitate both development in undeveloped areas and redevelopment in some mature neighbourhoods. This program was approved by City Council on July 9, 1998 and initiated on January 1, 1999 with the establishment of the Sanitary Servicing Strategy Fund. The 75 year program includes the planning and construction of new sanitary transmission trunks larger than 1050 mm in diameter or those that service areas greater than 1,400 ha.

Projects constructed under this strategy are development driven and funded by the Sanitary Servicing Strategy Fund. The majority of the projects are constructed by the City with some by the developers on behalf of the City. The projects are implemented on an as-needed basis. Capital Budget is approved by City Council as part of Drainage Services Capital Plan. The total budget of all projects for 2012 to 2014 is $75M.

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The Sanitary Servicing Strategy Fund (SSSF) pools funds from the Sanitary Sewer Trunk Charge, the Expansion Assessment, and contribution from the Sanitary Utility (contribution for existing developed areas that benefits from the SSS trunks). The first two charges are development levies, and the levy rates are set annually. The Sanitary Utility contributed $2.6M per year to the Fund during the period from 1999 to 2006, but the amount was reduced to $1.3M since 2007 with the contributing period extended from 2014 to 2024.

The implementation of this program opens up new areas within the City for development, which could not otherwise be affordable. The funding mechanism has proven to be very successful over the past 12 years. Positive cash flow balance has been maintained throughout the period and is projected to continue into future years. It would be economically inhibitive for the developers to finance and construct these major off-site sanitary transmission trunks under the traditional Permanent Area Contribution (PAC) assessment system. With the exception of the annual contribution of $1.3 million this program has no impact on the utility rate therefore continuation of this program is vital for City growth and should be approved.

2. Program Scope

By the early 1990's, development in the City reached a point where the existing sanitary sewer system could no longer accommodate anticipated flows generated from future development areas. The concepts of five new major trunk systems along with existing system upgrades were developed to convey sewage from the growth areas to the Gold Bar Wastewater Treatment Plant (GBWWTP) and the Albert Capital Region Wastewater Treatment Plant (ACRWTP). These together form a long range servicing plan to facilitate development growth in the City for the next 75 years. The five trunk systems are:

- North Edmonton Sanitary Trunk (NEST) – ultimate system discharges to ACRWTP
- South Edmonton Sanitary Sewer (SESS) – ultimate system discharges to ACRWTP and/or GBWWTP
- West Edmonton Sanitary Sewer (WESS) – discharges to GBWWTP
- Clareview Sanitary Trunk (CST) – discharges to ACRWTP
- Terwillegar University Farms Sewer (TUFS) – discharges to GBWWTP

Since the program started in 1999, a total of approximately 28 km of tunnels and trunk sewers comprising various portions of the ultimate NEST, SESS, WESS and CST systems have been installed and put into service. This supports approximately 40,000 single family lots in addition to other multi-family residential, commercial and industrial developments. Implementation of those trunk systems is staged in such a way that some of the completed sections are serving as wet weather flow storage facilities to allow controlled discharge to the existing downstream sewer system during the storm events in the interim period. Once fully completed, the trunk sewers will function as a transmission system to the treatment plants.

Projects (trunk sections) included in the 2012 – 2014 construction plan, as determined from development forecast and servicing demand are:

NEST- NL3/ NL2/ N1

2012 will include some minor works to complete this 3.8 km tunnel section for northeast Edmonton, which started in 2007

SESS - SA1

- Provides an adequate outlet for the southwest and southeast service areas to bypass the capacity constraint in the Alberta Capital Region Wastewater Commission's (ACRWC) Southeast Regional Trunk Sewer (SERTS) and connect directly to the City sewer downstream at 99 Street and 30 Avenue NW;
- Expands the in-line storage capacity for wet weather flow in the SESS system for servicing of the southwest and southeast areas.

SESS - SA10

- Supports development growth in the Pylypow and Maple Ridge industrial areas by providing wet weather flow storage in the pipe for a controlled discharge to the existing sewer north of Sherwood Park Freeway.

SESS – SE4

- Supports development in the Orchards as well as the Ellerslie Industrial areas located south of 25 Avenue SW and east of Gateway Boulevard. The trunk sewers will be installed at the same time when the infrastructures for the new subdivisions in those areas are built by the developers to avoid disruptions to newly constructed utilities and road pavement.

WESS - W13

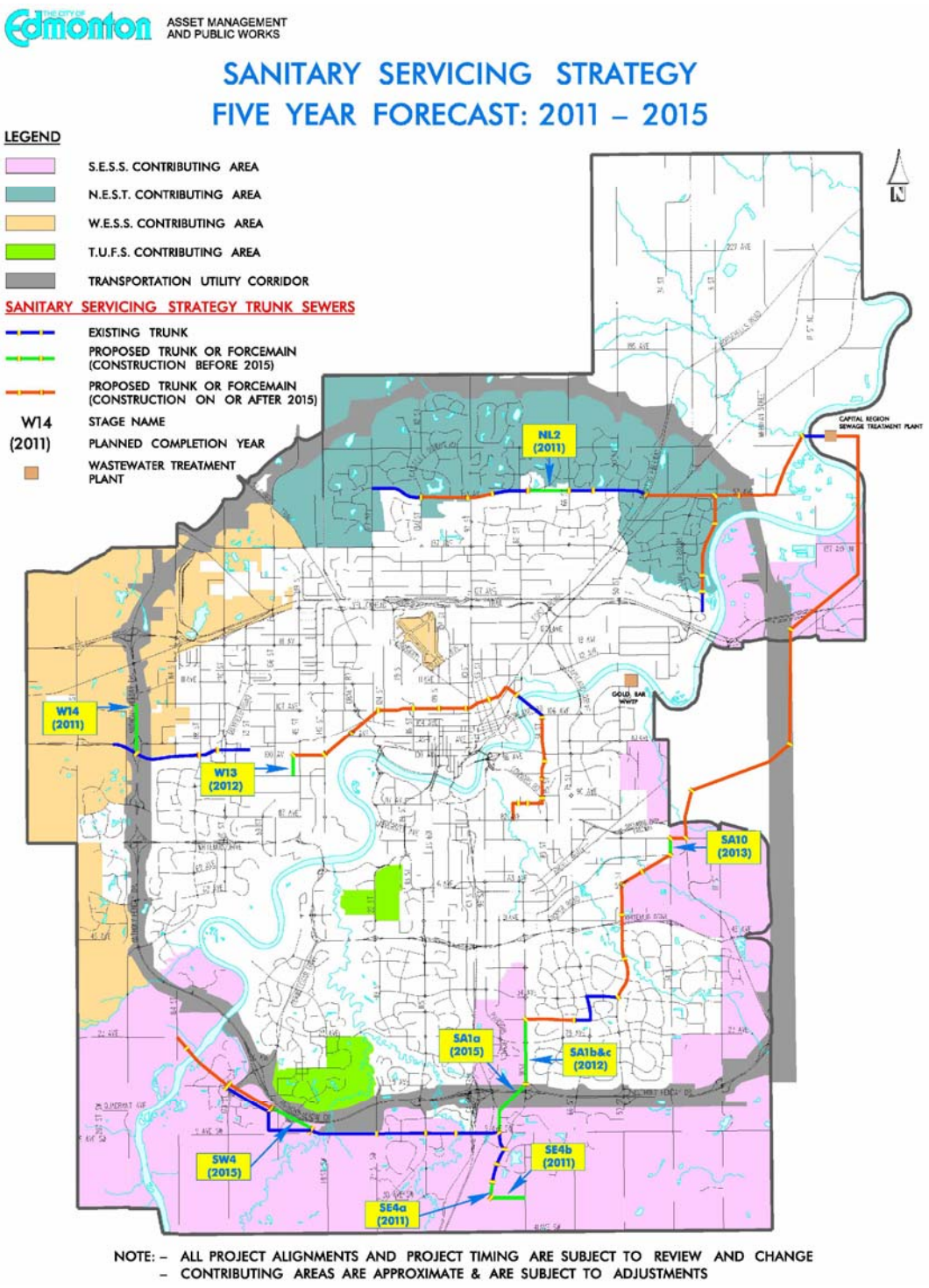
- Provides a capacity upgrade to an existing trunk sewer in West Edmonton, thereby allowing new developments in the Grange and Lewis Farms areas to proceed without the need for on-site wet weather flow storage.

WESS - W14

- Provides an off-site sanitary trunk to service the Big Lake residential and Winterburn industrial areas.

Mill Woods Double Barrel Replacement

- This involves the construction of a major storm trunk to provide flood relief to the Mill Woods neighbourhoods. Upon completion of the new storm trunk, the existing double barrel pipe can be converted into a sanitary sewer in order to provide more sanitary outlet capacity for the Mill Woods area.



3. Business Drivers

Growth/Demand Implications

All the Sanitary Servicing Strategy projects are development driven. The projects, usually constructed by the City, are scheduled on an as- needed basis and the Capital Budget is approved by City Council. The program supports residential and industrial development and intensification of existing developed areas.

Operational Efficiencies

The planned trunk sewers allow storage of wet weather flow during storm events thus reduces the frequency and quantity of combined sewer overflow to the North Saskatchewan River. It will also help to optimize the operation of the wastewater treatment plants by reducing the magnitude of flow fluctuation to the plants.

Other

The Regional Wastewater Exchange Agreement between the City and the ACRWC mandates the two jurisdictions to accept each other's sewage flows up to an established level of service flow quantities. The Sanitary Servicing Strategy provides sewer planning and construction as needed to accommodate both the City and regional flows for conveyance to both the GBWWTP and the ACRWTP. It also contributes to regional cooperation by providing an opportunity for ACRWC to stage the extension of their owned sewer infrastructure.

4. Business Benefits

Tangible Benefits

- Land development is not restricted or delayed due to sanitary servicing constraints.
- The funding mechanism for sewer construction is equitable and affordable to developers.
- Reduces the risk of basement flooding to developed areas by controlling discharges to existing sewer system during storm events.

Intangible Benefits

- Promotes economical growth of the City, especially by rendering industrial lands serviceable.
- Promotes regional collaboration

5. Impacts and Challenges

Impacts

- Future developments will put more dry weather flows into the existing sanitary and combined sewer systems, at least during the interim periods in some areas; however, the wet weather impact from future developments is reduced.
- Both dry weather and wet weather flows to both plants will continue to increase due to development growth; plant expansions will be necessary accordingly.
- Storage dewatering from the trunk systems during post-storm periods can take up to 2 days; this can lead to odour issues if not properly controlled.

Challenges

- Capacity limitations in the existing sewer systems dictate how much the interim trunk systems may release flows into it during dry weather and storage dewatering without increasing combined sewer overflows from the existing

system.

- The inner City redevelopment projects (e.g. downtown; Edmonton City Centre Airport) may further reduce the available capacity in the existing sewer system to accept discharges from the new areas.
- Under certain circumstances, a segment of the system may have to be installed ahead of the schedule determined by development needs, due to factors related to road construction, land availability, etc.
- Revenue and cost uncertainty may impact the ability of the Fund to implement planned projects as scheduled.

Key Risks

- Due to the increased development in South Edmonton, sanitary sewage loads may be higher than previously predicted; some trunk segments in and from this area may be required earlier than previously scheduled.
- Some expensive segments cost the equivalent of more than 2 years of revenue to the fund. Segments must be carefully scheduled far in advance to ensure that adequate funds will be available. Any commitment on major expenditures must take into consideration the long term impacts to the SSSF.

6. Program Alternatives

Alternative Strategies

The do nothing option is not acceptable. Without this program, further development within the City would not be possible.

Technical Solutions and Alternatives within the Program

This is a dynamic program. Many factors will influence future decisions on the implementation of the remaining system. The future treatment technologies at the GBWWTP and its ability to accept additional sewage and wet weather flows will play an important role in refining the scope and schedule of the program. Another factor is collaboration with the ACRWC in the development of integrated trunk sewer infrastructure to meet servicing demands from both the City and the regional customers.

7. Financial Analysis and Assumptions

Program Costs

Up to the end of 2010, $136M was spent on the program while the revenue collected is $153M ($27M contributed by the Sanitary Utility). When first initiated, the entire program was expected to run until around 2075. The budget for the projects, as well as the recommended Sanitary Sewer Trunk Charge, are submitted to City Council for approval as part of the Drainage Utilities budget approval process. The construction schedule is reviewed and updated on a regular basis as per latest forecast and needs. The budget for projects planned in 2012 - 2014 is as follows:

	2012 Budget	2013 Budget	2014 Budget	2012-2014
Sanitary Servicing Strategy Projects (NL3/NL2/N1, SA1a, SA10, SE4, W13, W14)	$21.5M	$21.0M	$15.7M	$58.2M
Mill Woods Double Barrel Replacement (including SA1b & SA1c)	$8.0M	$6.6M	$2.5M	$17.1M
Total	$29.5M	$27.6M	$18.2M	$75.3M

Financing Alternatives

The front-end cost of major trunks would be too high for individual developers to finance under the traditional PAC system. Hence, the Sanitary Servicing Strategy Fund was established in consultation with the private development industry to provide a more affordable means of sanitary servicing for new development. The program is primarily development driven and mainly funded by external revenues collected during the subdivision approval process. The sources of funding that are pooled together to establish and maintain the Sanitary Servicing Strategy Fund are described below:

Sanitary Utility (SAN) Contribution

- For diversion of sanitary flows from serviced City lands to the new trunk system constructed under the SSSF
- Annual contribution of $1.3M for 17 years commencing on January 1, 2007 (originally set at $2.6M per year from 1999 to 2013)
- Sanitary Sewer Trunk Charge (SSTC)
- Applies to all new and re-developments in the City
- Collected when an application is made for a development permit or sanitary service connection
- 2011 Rates:

Single-family/ Duplex Residential	$1,156/ dwelling
Secondary Suite	$ 512/ dwelling
Multi-family Residential	$ 826/ dwelling
Commercial, Industrial, Institutional	$5,782/ ha

Expansion Assessment (EA)

- Area based assessment – collected at the time of subdivision, development permit application or sanitary service connection application.
- Applies to areas that did not have an approved NSP before January 1, 1999
- 2011 Rates:

NEST	$16,515/ha
SESS	$16,515/ha
TUFS	$16,515/ha
WESS	$20,645/ha

Financial Assumptions Used

Assumptions consistent with City practice are used.

8. Resource Requirements

Internal

- SSSF Management and Operating Committees – management of the Strategy and Fund
- Drainage Planning – concept development resources
- Drainage Design & Construction – design; construction contract management; in-house tunnel and shaft construction; open cut work subject to crew availability

External

- Consulting services – concept planning studies; conceptual, preliminary and detailed designs; specialist investigations; value engineering and risk management workshop facilitation.
- Construction services – construction of sewer, structures and pump stations.

9. Recommendation

Approve the on-going program as proposed including the following:

- Maintain long term construction schedules to ensure that essential segments are built as required. Priority should be given to segments that will provide overall benefit over segments that service localized areas.
- Evaluate the existing combined sewer trunks to verify the requirements for inner City segments. Segments of the WESS System may be required sooner than currently anticipated, as the growth of areas served by this system has been accelerated in the past few years. The downtown redevelopment projects and the Edmonton City Centre Airport redevelopment plan are also factors influencing the WESS system implementation requirements.
- Monitor the balance of the Sanitary Servicing Strategy Fund to ensure that sufficient funds will be available for construction as segments are required. The latest development forecasts should be used to project cash-flow requirements.

9.8 Drainage System Expansion

1. Introduction

The Drainage System Expansion program was initiated to support planned and orderly urban growth in partnership with developers and the general public. The goal is to ensure that developers provide adequate drainage servicing to new lots and to accommodate servicing requests from the public. This program is made up of several projects which extend the existing drainage network. Program scope includes service connections design review and approval, administration of cost-sharing programs, construction inspection and as-built recording of developer-built facilities, and extension of sewer systems through local improvement bylaws. The program consists of three major projects; Local Improvements, and Service Connections, and Review/Inspect Developer Built Sewers. This program has no impact on utility rates as all financing is through developer contributions.

2. Program Scope

The Local Improvements Project brings new customers into Drainage Services Systems through the local improvement bylaw. It will ensure that future sewers are appropriately constructed prior to acceptance as City infrastructure. This program provides customer services by the extension of storm and sanitary sewers to existing private properties which are not currently serviced by the sewer systems. Work will be completed as requested during the year, dependent on owner petitions. This project will create additional revenue and customer base. This program is aimed at the provision of drainage services to un-serviced land and those locations are not known until initiated by developers. Typical installations take 18 months from the initiation to completion of construction.

The Service Connections Project provides connection of new or existing houses to the sewer systems and supports the City's goal to encourage infill development. It will ensure that lateral service connections from the main sewers to the private property lines are appropriately constructed. This program provides customer service by the provision of

the installation of water, storm and sanitary sewer services to private properties from city sewers. Work will be completed as requested during the year. This project creates additional revenue and customer base. This program is aimed at the continued growth in developed areas. Those locations are not known until initiated by the owners of the private lot. Typical installations take 2 months from application to completion of construction.

The Review/Inspect Developer–Built Sewers Project supports orderly and environmentally friendly urban growth. To accomplish this, the City provides resources to review and approve developers' consultant designs, administer the cost-sharing programs on behalf of developers, monitor construction activities and record as-built information of developer-funded drainage facilities. Developers' projects take more than a year from the initial design review to the issuance of the Final Acceptance Certificate. This project generates revenue through the collection of inspection fees at the execution of servicing agreements based on assessable area of the development.

3. Business Drivers

Growth/Demand Implications

The Local Improvement program is primarily driven by the demand to develop industrial and commercial land currently not serviced by the sewer systems. Edmonton's economic trends and the supply of serviced land can have an effect on the demand for the local improvement program.

A small amount of the local improvement program is driven by owners of residential buildings.

The majority of the Service Connections Review Project is driven by the demand to develop industrial, commercial and residential land. Edmonton's economic trends and the supply of serviced land can have an effect on the demand.

The Review/Inspect Developer Built Sewers Project is primarily driven by the public demand for serviced residential, commercial and industrial lots. Developers initiate their planning and development processes in order to meet the demand in a timely manner.

Changes to Policy

Recent clarification of policy related to Local Improvements may increase interest in servicing residential land by developers.

Regulatory Drivers

The City has a responsibility to supply drainage utility connections to meet customer demands and requests as required under the Municipal Government Act. The City is also obligated to install sewer service connections to meet prior local improvement obligations.

Safety Implications

Some Local Improvements will divert sanitary sewer discharge from private sewer systems to the sanitary sewer treatment system. This will positively impact public health and the environment.

4. Business Benefits

Tangible Benefits

Additional serviced land means more revenue to the City and customers contributing to the support of the system. Land values may also increase and may prompt further land development.

Intangible Benefits

Developers find it more appealing to develop on land that is serviced or where servicing is nearby which will result in increased customer satisfaction. The program contributes to Council's goal of maintaining public health and developing sustainable neighbourhoods.

5. Impacts and Challenges

Impacts

Increased development may occur as it is more appealing to develop on land that is serviced. Customer Satisfaction Survey results may improve due to increased availability of serviced land, and reduced overland flooding due to Stormwater servicing. There will be positive health and environmental impacts due to proper management of sanitary and stormwater flows.

Challenges

All projects in this program are composites due to the nature of the work and customer demand. The economy has a great influence over demand as it can be cyclical and cause delays. Developers may delay projects during prolonged slow economic periods. During strong economic times, meeting demand may be difficult if the program is over subscribed. Project completion times are also difficult to forecast due to the varying nature of each application and unseasonable weather conditions that may prolong construction.

Key Risks

Economic conditions, soil conditions, environmental policies, financial risk if developer defaults on assessments.

6. Program Alternatives

Alternative Strategies

Servicing Agreements can be utilized to provide funding to mitigate risk.

Technical Solutions and Alternatives within the Program

Currently construction is delivered through Drainage Design & Construction. During periods of high demand, construction work can be contracted out to private industry.

7. Financial Analysis and Assumptions

Program Costs

Under the Local Improvement Project all applicable costs are recovered through the assessment.

The Service Connections Review Project recovers a majority of costs through the fees that are pre-paid by the developer. Payment of services is based on a fee schedule or estimated costs, while the actual charge to Drainage Services is the

actual Drainage Design & Construction cost. This means that occasionally full cost recovery is not achieved when cost in excess of the estimate is experienced.

Approximately 50% of the expenditures incurred under the Review/Inspect Developer Built Sewers Project costs is recovered through the inspection fees agreed with the Urban Development Institute. Drainage Services is currently exploring the pros and cons of full cost recovery for this service.

The budget for projects undertaken in 2012-2014 is as follows:

Program Name	2012 Budget	2013 Budget	2014 Budget
System Expansion Projects	$20.5M	$12.4M	$10.6M

Financing Alternatives

- Under the Local Improvements Project a developer can pay cash rather than a bylaw assessment.
- Under the Service Connections Review Project the applicant must pre-pay for services so financing alternatives are not required.
- Under the Review/Inspect Developer Built Project, the developer pays the fees for the services when the Servicing Agreement with the City is executed.

Financial Assumptions Used

The Service Connection Review fee schedule is reviewed on an annual basis.

Fees for the Review/Inspect Developer Built Sewers Project are adjusted at the beginning of each year based on a negotiated amount with the Urban Development Institute.

8. Resource Requirements

Internal

Drainage Services has sufficient FTE's to administer the program as long as the program scope stays the same. If the program demand grows, then more FTE's may be required. Once the City receives the contributed asset built under this program, Drainage Operations will be required to inspect and maintain the assets. Initially, the impact of this program on the operating budget will be minimal as new drainage facilities generally require very little maintenance over the initial 10 years of use. As the facilities' condition changes with age, more maintenance efforts and expenses will be required. Appropriate funds need to be set aside for the rehabilitation of the facilities as they get close to the end of their life cycles. This may require additional FTE's and equipment to maintain to expected level of service.

External

If the program demand grows, then more FTE's may be required by Drainage Design and Construction or private contractors and consultants will have to be employed.

9. Recommendation

The Drainage System Expansion program is recommended to be continued to be funded at the current level (with inflation) in order to support planned and orderly

urban growth in partnership with developers and the general public. Without this program Drainage Services will not be able to achieve the goal of ensuring that developers provide adequate drainage servicing to new lots and to accommodate servicing requests from the public.

UTILITY ADVISOR

RESPONSE TO THE CITY OWNED UTILITIES

- **Waste Management**
- **Drainage**

2012 RATE SUBMISSIONS

October 11, 2011

1.0 PURPOSE OF THIS REPORT

This report is prepared to provide advice to Edmonton City Council on the budget submissions of the City-regulated utilities, Waste Management and Drainage. Pursuant to the terms of reference for the Utilities Advisor, the budget submissions have been reviewed by the Utilities Advisor, and several requests for additional information were sent and received.

Currently, City Council acts as both the governor and regulator of the City managed utilities, approving both operating and capital budgets as well as the utility customer rates.

As noted in a City of Edmonton internal legal memo dated December 7, 2009, the Municipal Government Act (MGA) provides Council with the authority to pass bylaws and otherwise regulate municipal public utilities. The MGA does not provide for any specific guidance for Council regarding municipal utility governance. To that end, the regulation of these municipal public utilities would be subject to the same duty of good faith that applies to general municipal governance. Municipal public utilities are regulated by the municipalities which operate those utilities within the municipalities. Unlike investor-owned utilities, the shareowners of the utility, and the customers of the utility are, to a large extent, the same. However, that does not change the overall objective of regulating such utilities, the establishment of just and reasonable rates, in the public interest, and not unduly discriminatory. The major difference between investor-owned utilities and municipally-owned utilities is the determination of what makes up the public interest.

2.0 EXECUTIVE SUMMARY

Last year, the Utility Advisor review of the rate filings of the City-owned utilities was 96 pages long. In part, this was due to a need on the part of the Utility Advisor to better understand the operations and revenue requirement forecasts of these utilities. However a significant portion of that report was a result of the relative inexperience of utility management in putting together rate applications that meet standard utility practice. The Utility Advisor is pleased to advise that the 2012 rate applications represent a major step forward for these utilities. As a result, this report will be briefer than last year's report.

On first review, the rate increase for the Waste Management utility appears very high. However further analysis of the rate application shows that the residential increase due to matters that are within the control of utility management is quite modest. Similar conclusions can be drawn from analysis of the Sanitary and Stormwater Drainage utility rate filings.

3.0 RECOMMENDATIONS

The 2012 rate submissions of Waste, Sanitary Drainage, and Stormwater Drainage show a marked improvement over the 2011 submissions. Utility management should be encouraged to continue this trend.

In addition, the availability of detailed 2010 actual results, with variance explanations, and the cost of service studies performed during 2010/2011 were of significant value to the Utility Advisor in reviewing these rate submissions. Again, utility management should be encouraged to continue this trend.

While the rate increases proposed in these rate submissions are significant, the majority of the increases are due to well-thought out plans to move towards adherence with the recently approved utility fiscal policies. The Utilities Advisor notes with approval the attention that has been paid to fiscal viability, as reflected in the proposals to move toward adherence to the fiscal policy targets on Return of Ratebase and the debt/equity ratios.

4.0 ANALYSIS OF RATE INCREASES

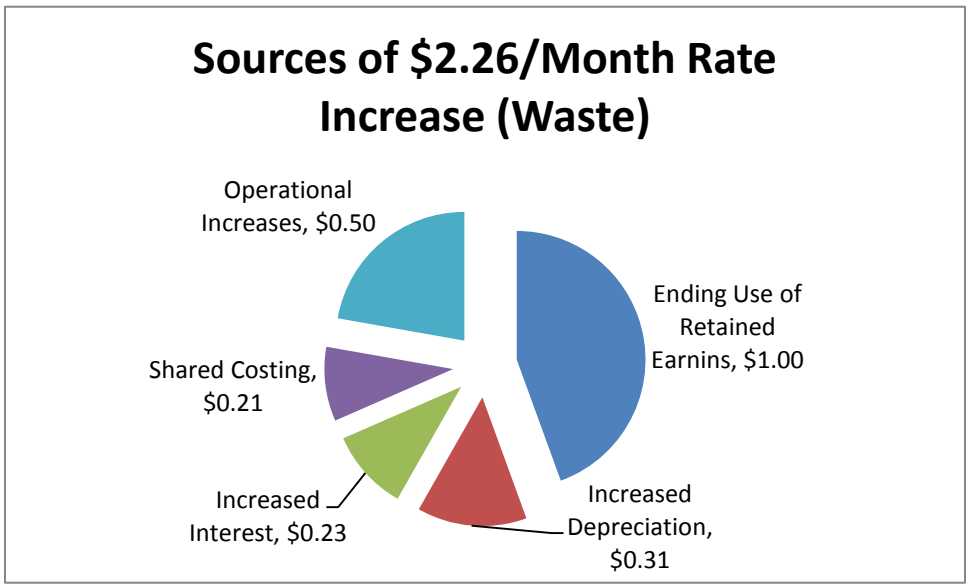
Because of the detailed information presented in the rate applications, the source of the proposed rate increases is easily determined. The following graphs and tables present the source of the rate increases for each utility.

4.1 Waste

The 2012 Rates Report includes a request for rate increase as follows:

	2011 Monthly Fee	Proposed 2012 Monthly Fee	Requested Monthly Increase	Annual Increase
Single Family Residential	$31.34	$33.60	$2.26	$27.12
Multi-Family Residential	$20.37	$21.84	$1.47	$17.64

Focussing on Single Family Residential, where the rate increase is projected to be $2.26/month, the sources of the rate increase are given as follows



It is clear from the rate application that significant effort has been expended to incorporate the key principles of the fiscal policy applicable to this utility. The most significant principle of the policy is the understanding that the equity component of this utility, and the resulting Return on Equity, must

result in a sustainable funding source for new capital additions. This is achieved through a gradual increase in Utility return, which is managed in such a way that the equity component of ratebase increases from its 2010 level of 10% to a forecast 2021 level of 36%. In reviewing management's proposal, the Utility Advisor is satisfied that the proposed plan will lead to a sustainable utility financial structure, in accordance with the fiscal policy.

This plan does come with a cost, however. Increasing the Utility return, and gradually increasing the equity component of ratebase will create upward pressure on rates. In the case of the Waste 2012 rate application, the largest cost increase (reducing reliance on retained earnings, $1.00) is a direct result of this plan.

Increased interest expense ($0.23), and increased depreciation ($0.31) are the next largest component of the rate increase. Both of these expense increases occur as a result of past decisions to add capital assets to the utility, and are out of management's control.

The final increase is in the area of operational requirements ($0.50). A $0.50 increase over the 2011 base rate of $31.34/ month in 2011 represents a percentage increase of 1.6%, which is quite modest.

The utility advisor did perform a review of each component which makes up the proposed operational requirements of $0.50/month, and found no forecasts which did not appear reasonable, or for which reasonable explanations were missing.

4.2 Drainage

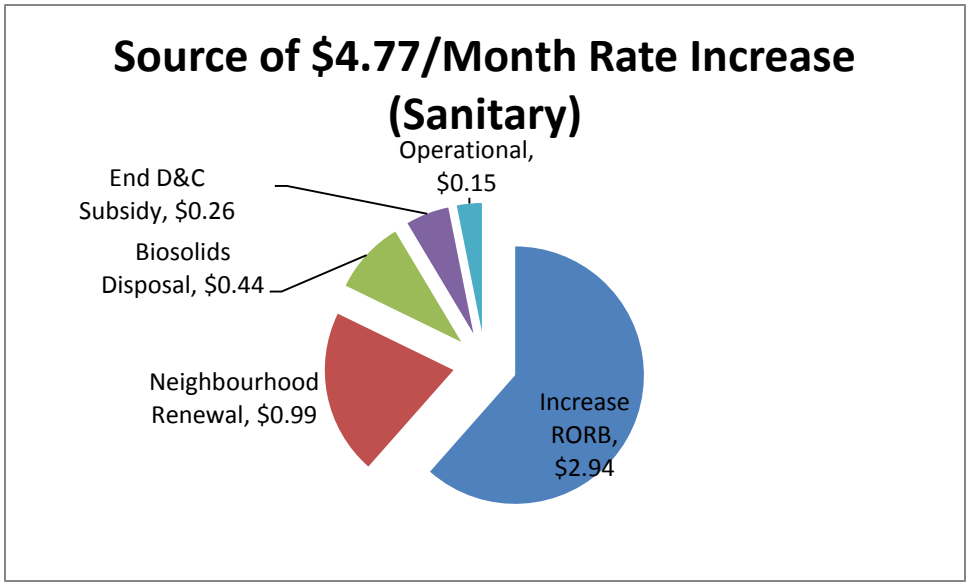
The 2012 Rates Report includes a request for rate increase as follows:

	2011	2012	Change
Sanitary Utility:			
Monthly Fixed Rate	$3.59	$4.83	$1.24
Monthly Variable Rate < 10,000m^3	0.69	0.92	0.23
Monthly Variable Rate > 10,000m^3	0.53	0.71	0.18
Stormwater Utility:			
Monthly Rate per m^2	$0.021426	$0.026375	$0.00495

Impacts on Typical Residential Customer	2011 Typical Monthly Fee	Proposed 2012 Typical Monthly Fee	Requested Monthly Increase	Annual Increase
Sanitary Drainage	$15.38	$20.15	$4.77	$57.24
Stormwater Drainage	$ 6.34	$ 7.80	$1.46	$17.52

4.2.1 Sanitary

Focussing on Single Family Residential, where the rate increase is projected to be $4.77/month, the sources of the rate increase are given as follows



The Utility Advisor notes the same attention to the utility fiscal policy in this forecast to increase Return on Rate Base (RORB). In the case of Sanitary, the proposal is to move to a 4% RORB in 2012, 4% being the minimum expected RORB in the policy. Unlike the other utilities, the equity component of ratebase is very close to target, and is kept at that target over the forecast period. Of the $2.94 monthly increase associated with this cost component, $0.44 results from the application of the Local Access Fee to the increased earnings of the utility.

The next largest component of the rate increase is the impact of the Neighbourhood renewal policy ($0.99). This increase results from the advancement of capital facilities necessary to coordinate drainage upgrades and life extension with the roadway improvements mandate by Council. There appears to be very little that utility management can do to mitigate this increase.

The next cost increase category is the proposal to increase the amount of biosolids disposal, and a proposed 3 year plan to move to full cost recovery of the cost of disposal. The Utility Advisor supports this implementation plan.

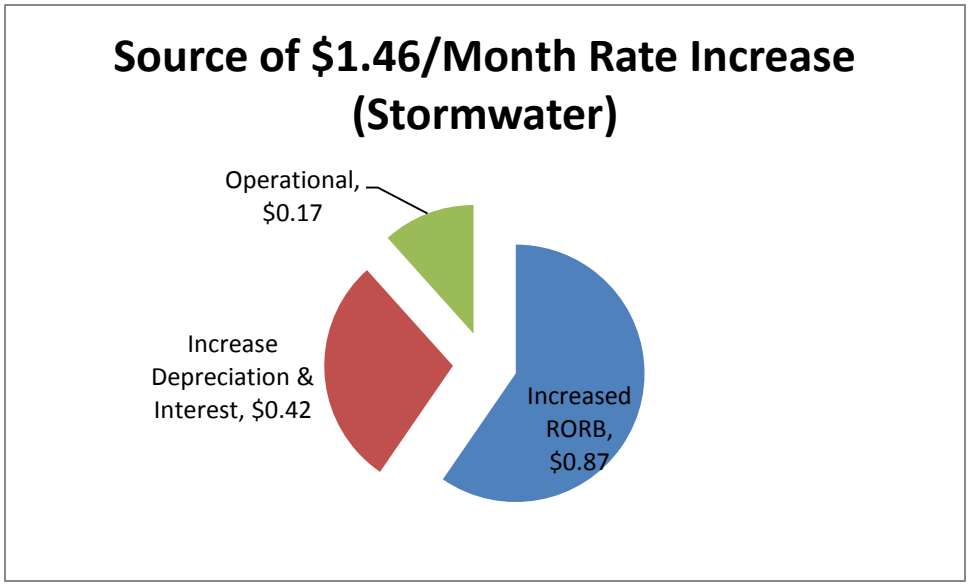
The next category is the result of Council direction to end the Design and Contribution subsidy of Sanitary rates ($0.26). The phase-in of this proposal began last year. The Utility Advisor agrees that it is appropriate to use the revenue from Design and Construction activities to reduce property tax rates instead of utility rates.

The final increase is in the area of operational requirements ($0.15). A $0.15 increase over the 2011 base rate of $15.38/ month in 2011 represents a percentage increase of just under 1.0%, which is quite modest.

The utility advisor did perform a review of each component which makes up the proposed operational requirements of $0.15/month, and found no forecasts which did not appear reasonable, or for which reasonable explanations were missing.

4.2.2 Stormwater

Focussing on Single Family Residential, where the rate increase is projected to be $1.46/month, the sources of the rate increase are given as follows



Stormwater is proposing to move to a Return on Ratebase (RORB) of 6.5% in 2012, reaching 7.0% in 2013 and future years. Target equity ratio of 40% will be reached by 2020. This approach is in keeping with the utility financial policy.

In addition to the Neigbourhood Renewal Program impacts discussed within section 4.2.1 for Sanitary, Stormwater also has experienced increased capital investment due to the Flood Prevention Program. There is very little if anything that utility management can do to impact the forecast increase in this category ($0.42).

The final area of increase is related to operational increases ($0.17). A $0.17 increase over a 2011 base rate of $6.34/month represents a rate increase of 2.7%. While this is a larger increase than the other utilities, it is still fairly reasonable.

The utility advisor did perform a review of each component which makes up the proposed operational requirements of $0.17/month, and found no forecasts which did not appear reasonable, or for which reasonable explanations were missing.

4.0 CONCLUSION

The rate increases proposed are justified by the material provided in the rate submissions. Mitigation of the proposed rate increases would impact on the progression of these utilities to adherence with their approved fiscal policies.

Appendix A

Information Requests and Responses Received

UA-1-Waste

Topic: **Cost of Debt**

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing Section 3 (Methodology and Key Assumptions), page 6

Background:

Cost of debt is presented as follows:

- 10 year term (4.85%, 5.05%, 5.25%)
- 15 year term (5.15%, 5.35%, 5.55%)
- 25 year term (5.45%, 5.65%, 5.85%)

Requests:

a) The source of this forecast is not provided. Please provide the basis on which this assumption was developed.

The forecast was provided corporately to all departments based upon discussion with representatives from the Alberta Capital Financing Authority, the City's debt issuer.

b) Why are there three percentage rates given for each term?

For each 10, 15, and 25 year term, Corporate provided their forecast for the interest rates to be used for each of 2012, 2013, and 2014. The 2014 estimate is carried forward as the rate for the remaining 7 years (2015-2021).

c) Please confirm that the cost of debt presented in the 2011 rate filings were:

- 10 year term – 4.45%
- 15 year term – 4.77%
- 25 year term – 5.05%

The 2011 debt is assumed to be borrowed at 4.45% on a 10-year term, 4.77% on a 15-year term, and 5.05% on a 25-year term. The 2012 rate filing reflects these rates as well. Borrowings in 2012 are included at the higher rates of 4.85%; 5.15%; and 5.45% respectively.

UA-2-Waste

Topic: **Depreciation - Finance**

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing Section 5 (Rate Requests and Factors Influencing Rate Requirement), page 8

Background:

The statement is made that first year depreciation is 50%.

Requests:

Please confirm that this statement means that first year depreciation is set at 50% of full year depreciation, instead of meaning that first year depreciation is 50% of book value.

Your interpretation is accurate. The statement is intended to refer to the accounting ½ year rule application to depreciation expense in year of acquisition. For example, the 2012 rate filing included vehicle acquisitions of $8.1 million (actual acquisition plus in-service), broken down into the following categories:

Category	*Vehicle Additions*	*2012 Depreciation on Additions*	*Future Years*
5 years	*$ 404,947*	*$ 40,495*	*$ 80,989*
8 years	*5,669,255*	*354,328*	*708,657*
12 years	*2,024,734*	*84,364*	*168,728*

UA-3-Waste

Topic: **Use of Retained Earnings**

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing Section 5 (Rate Requests and Factors Influencing Rate Requirement), page 8

Background:

The table describes the use of retained earnings in the past to mitigate rate increases.

Requests:

a) While $19 million was set aside in 2008 for the purposes of mitigating rate increases, it appears that only $17.146 million was used for that purpose. Please explain the difference.

In 2008, the Implementation Plan for the closure of the Clover Bar Landfill forecasted a $19 million requirement to smooth out the rate impacts over a 3-year period. The Plan was for the following:

Year	*Budget Draw from Retained Earnings*	*Actual Draw from Retained Earnings*
2009	*$10,520*	*$ 5,246*
2010	*6,493*	*8,500*
2011	*3,400*	*2,348 (forecast)*
2012	*0*	*0*
Total	*$20,413*	*$16,094*

The reduced Draw from Retained Earnings has resulted in a faster improvement of the Debt to Net Assets Ratio, bringing it from a 96% level in 2009, to 90% in 2010, and a forecasted 87% in 2011.

b) Could the remaining $1.854 million be used to mitigate the impact of the 2012 rate increase?

Assuming that the 2013 Rates are not increased to recover the $1.854 million that was not collected through the 2012 Rates, the Financial Indicators would change as follows:

	As Submitted		*Revised*	
	2012	*2013*	*2012*	*2013*
Return on Rate Base	*0.0%*	*0.7%*	*(0.7%)*	*0.1%*
Cash Balance	*$14,002*	*$10,782*	*$12,148*	*$7,075*
Cash Required for Capital in Following Year	*$ 8,482*	*$ 9,623*	*$ 8,482*	*$9,623*

There would be insufficient Cash available to equity finance the planned $9,623 of capital investment, requiring an increase to the proportion being financed through debt. As a result, instead of a slow declining trend of the Debt to Net Assets Ratio to reach 64% (target of 60%) in 10 years time, this would be further delayed.

UA-4-Waste

Topic: **Use of Retained Earnings**

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing Section 6 (Financial Indicators), page 10

Background:

The table provides a 10 year forecast demonstrating how the Waste Utility gradually improves the debt to net assets ratio toward the target of 60% by gradually increasing return on rate base.

Requests:

Please provide a continuity table which reconciles how the earnings from each year are used to finance the equity portion of future year capital expenditures and decrease the debt to net assets ratio.

a) If not provided as part of the answer to a) above, please provide a continuity table which provides the derivation of uncommitted cash in each year.

Application of Cash from Earnings - Waste Management

	Reference	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Net Income	Schedule 6.0	0	2,075	4,677	10,644	11,013	14,924	19,198	23,581	27,971	33,357
Depreciation	Schedule 9.0	16,805	18,086	19,123	19,786	21,604	22,661	22,189	21,917	23,125	23,582
Equity repayment from Fleet Services		3,807	3,672	4,809	2,830	2,616	1,661	798	247	-	-
Payment of Enerkem Grant		(2,854)	-	-	-	-	-	-	-	-	-
Draw from Post Closure Liability	Schedule 7.0	(510)	(527)	(456)	(541)	(556)	(571)	(586)	(602)	(618)	(635)
Net Cash Flow - Operations		**17,248**	**23,306**	**28,153**	**32,719**	**34,677**	**38,675**	**41,599**	**45,143**	**50,478**	**56,304**
Capital Financed with Equity	Schedule 6.0	(8,758)	(8,482)	(9,623)	(7,195)	(7,184)	(8,291)	(12,968)	(7,255)	(9,228)	(5,718)
Repayment of Debt	Schedule 11.4	(13,772)	(15,453)	(16,972)	(18,616)	(20,382)	(21,828)	(22,325)	(20,834)	(20,594)	(21,340)
Net change in AUC (Prior to current yr)		415	(2,590)	2,680							
Net Cash Flow - Financing/Investing		**(22,114)**	**(26,525)**	**(23,915)**	**(25,811)**	**(27,566)**	**(30,119)**	**(35,293)**	**(28,089)**	**(29,822)**	**(27,057)**
Increase (Decrease) in Cash Balance		(4,866)	(3,219)	4,238	6,908	7,111	8,556	6,306	17,054	20,656	29,247
Opening Cash Balance	Schedule 6.0	18,868	14,002	10,782	15,021	21,928	29,039	37,595	43,901	60,955	81,611
Ending Cash Balance		**14,002**	**10,782**	**15,021**	**21,928**	**29,039**	**37,595**	**43,901**	**60,955**	**81,611**	**110,858**

Calculation of Debt to Net Assets Ratio - Waste Management

	Reference	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Opening Debt	Schedule 11.3	**219,718**	**235,147**	**235,308**	**231,927**	**232,418**	**229,842**	**219,367**	**208,700**	**205,920**	**197,144**
Add: New Debt Borrowing		29,201	15,615	13,591	19,108	17,805	11,353	11,658	18,055	11,818	9,774
Repayment of Debt	Schedule 11.4	13,772	15,453	16,972	18,616	20,382	21,828	22,325	20,834	20,594	21,340
Net Change on Debt		**15,429**	**162**	**(3,382)**	**491**	**(2,577)**	**(10,475)**	**(10,667)**	**(2,780)**	**(8,776)**	**(11,566)**
Closing Debt		**235,147**	**235,308**	**231,927**	**232,418**	**229,842**	**219,367**	**208,700**	**205,920**	**197,144**	**185,578**
Opening Net Assets	Schedule 11.1	**253,569**	**275,137**	**283,737**	**285,147**	**291,664**	**295,049**	**292,032**	**294,469**	**297,860**	**295,781**
Capital - Debt Financed		29,201	15,615	13,591	19,108	17,805	11,353	11,658	18,055	11,818	9,774
Capital - Equity Financed	Schedule 6.0	8,758	8,482	9,623	7,195	7,184	8,291	12,968	7,255	9,228	5,718
Net Capital Expenditures		**37,958**	**24,097**	**23,213**	**26,303**	**24,989**	**19,643**	**24,626**	**25,309**	**21,046**	**15,491**
Net change in AUC (Prior to current yr)		415	2,590	(2,680)	-	-	-	-	-	-	-
Less: Depreciation	Schedule 9.0	16,805	18,086	19,123	19,786	21,604	22,661	22,189	21,917	23,125	23,582
Net Change in Net Assets		**21,568**	**8,601**	**1,410**	**6,517**	**3,386**	**(3,017)**	**2,437**	**3,392**	**(2,079)**	**(8,091)**
Closing Net Assets	Schedule 11.1	**275,137**	**283,737**	**285,147**	**291,664**	**295,049**	**292,032**	**294,469**	**297,860**	**295,781**	**287,690**
Debt to Net Assets Ratio		**85%**	**83%**	**81%**	**80%**	**78%**	**75%**	**71%**	**69%**	**66%**	**64%**

b) If not provided as part of the answer to a) above, please provide a continuity table which provides the derivation of uncommitted cash in each year.

The responses in a) above reconcile to the reported cash balance.

UA-5-Waste

Topic: Forecast Uncertainties - Finance

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing Section 7 (Utility Summary Schedule), page 11

Background:

"The Proposed 2012 Budget contains a couple of key uncertainties. All unionized staff have been without a contract since January 2011 and while negotiations are ongoing, it is not clear as to whether or not a negotiated agreement will be reached prior to the deliberation of the 2012 budget. In addition, the major collection contract is also up for renewal, the results of which will not be known until late fall."

Requests:

a) Please confirm that reasonable management forecasts of the impacts of these uncertainties have been included in the forecast revenue requirements for Waste, albeit in such a manner as to retain confidentiality.

Management forecasts of these impacts have been outlined in the confidential memo provided with the original submission on all outstanding negotiations and external contract renewals.

b) Is there a process for adjusting the Waste 2012 revenue requirement (and rates) during the course of 2012 if the actual settlements and renewals are significantly different from those forecast?

Historically, this has not been contemplated. City Council, through Bylaw, will set the 2012 rates when the Utility Budget is approved, likely in early December. The Utility Committee may recommend to City Council during the 2012 calendar year for such a change; however, this is not likely because of the work involved and the potential confusion to customers if a rate change is processed part way through a year. A rate change outside of the annual budget process has not been done in recent memory.

c) If the actual settlements and renewals are significantly different from those forecast, and no adjustment is made to the Waste 2012 revenue requirement (and rates) during 2012, please confirm that the difference between forecast and actual costs will show up in Net Income.

Yes, the difference would show up in Net Income and is managed through Retained Earnings. The updated forecast is then used for the following year's rate filing. The City has not used "rate riders" or added the shortfall in future filings.

UA-6-Waste

Topic: **Overtime – Operations/Finance**

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing Section 8.1 (Personnel Costs), page 14

Background:

"The Proposed 2012 Budget for Overtime has been adjusted to take into consideration the 2010 actual results. Overtime is used where there are unplanned peak requirements that are most effectively managed through the use of existing staff and for planned activities that produces the overall lowest cost of a service"

Requests:

a) Why were 2010 actual results used as a basis for this forecast, rather than 2011 forecast amounts?

The 2010 actual results were used as they better represent the average level of work required without significantly reducing vehicle life cycle due to double shifting. Continued double shifting will put significant financial pressure on the Utility to replace vehicles earlier than planned. Collection vehicles are costly to replace, on average $270,000 each.

b) Has a trade-off analysis been performed to see if there might be a cost reduction in overtime greater than the cost of hiring full or part time staff to avoid overtime?

c) If the answer to b) above is yes, please provide the analysis.

The preceding questions are addressed in the following discussion.

Operational experience has shown that the distribution of overtime throughout peak periods is inconsistent by week, month and year. The Utility develops its annual costs for collection operations based on a core of permanent employees supplemented by seasonal temporary employees to accommodate the planned seasonal volumes. Overtime is utilized to manage exceptional volumes that may occur during spring, rainy periods or for other factors that may influence a temporary increase in volume. Each FTEs for curbside collection requires a collection vehicle (one person drives and collects) and would require increasing the fleet size. The manner of planning collection resources, on which the 2012 Utility's budget is based, is a proven, cost-effective and standard practice in the waste management industry.

For further information, reducing overtime for collection operations by increasing FTEs would result in a larger and seasonally under utilized fleet or conversely a double-shifted fleet reducing the lifecycle and increasing the replacement rate of the vehicles. Double shifting also requires doubling the supervisory overhead and collection is less efficient due to traffic congestion in the late afternoon and early evenings.

UA-7-Waste

Topic: **Eco Station Material Processing – Operations/Finance**

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing Section 8.2 (External Costs), page 15 Line 3

Background:

The explanation for a 5.7% increase in this forecast is: "Contracted collection and processing of material, including hazardous material collected at the three Eco Stations."

Requests:

Please provide a more comprehensive explanation.

The 5.7% cost increase is comprised of the following:

- *Inflation of 2.7% in the rates for contracted waste removal services.*
- *The projected cost impact of 3.0% for increased volumes for contracted waste removal resulting from projected 2012 growth in the number of Eco Station users.*

UA-8-Waste

Topic: **Non-Rate Revenue – Operations/Finance**

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing Section 10.1 (Breakdown of Non-Rate Revenue), page 21

Background:

The Utility Advisor would like a better understanding of some aspects of non-rate revenue.

Requests:

a) In Line 1 the explanation is: "Non-residential and enhanced collections – revenues generated from providing waste services to non-regulated customers and extra services to regulated customers in the multi-family sector." Please identify the nature and amount of cross-subsidization between regulated and non-regulated customers.

The Waste Management Utility completed a Cost of Services Study in June 2011 and the information was presented to the Utility Committee. The Utility plans to proceed with the Rate Design Study over 2012 to address the cross-subsidization between customer classes, low volume generator, and other related concerns which may arise.

The nature of the subsidization relates to variable costs of services provided to the Commercial Customer Class being fully recovered, but not its portion of the overhead costs (page 44 of COSS). Part of the reasons for this is that the Waste Management Utility has historically viewed its mandate as the provision of collection, processing, and disposal services for residential customers. The acceptance of commercial waste at the Landfill was considered to be incidental revenues that were used to offset the rate requirement from residential customers.

The availability of landfills within the region created a market such that the City's Clover Bar Landfill was a price taker in terms of tipping fees. The privately owned landfill in West Edmonton is expected to close in 2012, which could create other pricing opportunities to the City.

b) On a forecast basis, when is the cross-subsidization between regulated and non-regulated customers expected to cease?

Tipping Fee is the most significant service accessed by non-regulated customers. For the 2012 Rate Filing, these fees associated are being increased at a greater proportion than other Non-Rate Revenues. The goal is to address the cross-subsidization issue through the Rate Design Study, to be recommended for implementation in 2013.

Administration has applied the Cost of Services Study model to the 2012 Rate Filing on a proportionate basis to approximate the change in the Cost of Service Results. Below is a summary of this calculation.

	2010 COSS Study		*2011 Forecast*		*2012 Filing*	
($000's)	*Total Revenues*	*Recovery Ratio*	*Total Revenues*	*Recovery Ratio*	*Total Revenues*	*Recovery Ratio*
Single Family	*$ 71,855*		*$ 77,136*		*$ 82,420*	
Multi Family	*37,347*		*40,462*		*43,611*	
Subtotal	*$109,202*	*103%*	*$117,598*	*102%*	*$126,031*	*101%*
Commercial	*8,455*	*69%*	*10,467*	*78%*	*11,481*	*80%*
Total	*$117,657*		*$128,065*		*$137,512*	

c) In Line 3, Grants, please confirm that the revenue shown on this table is offset be corresponding expenses elsewhere in the filing, and identify where that offsetting expense can be found.

Grant revenue relates to the Provincial support provided for the Enerkem Alberta Biofuel's Facility and the Advanced Energy Research Facility.

UA-9-Waste

Topic: **Capital Financing - Finance**

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing 12.0 Proposed 2012-2014 Capital Budget and 2015-2021 Plan, page 29

Background:

"The Northeast Eco Station (to be called Kennedale Eco Station on commissioning) is to be financed through self liquidating debt over a 25-year term."

Requests:

The Utility Advisor understood that all new capital facilities will be financed through a combination of retained earnings and debt, with the intent of gradually achieving a debt to net assets ratio of 60%. This statement suggests a deviation from the expected financing approach. Please explain.

Waste Management Utility is adhering to the overall policy aimed at achieving a Debt to Net Assets Ratio of 60% over the long term. The Utility is entering into the 2011 year with a Debt to Net Assets Ratio of 90%. The forecast by the end of the year is 87% while City Council has established a target of 60% through the adoption of the Utility Fiscal Policy.

The following table summarizes the need to rely on debt financing of capital investments as a result of the significant capital investments needed due to the closure of the Clover Bar Landfill and the unavailability of Cash to change the existing financing mix.

Year	*Total Capital (in 000's)*	*Debt Financed (in 000's)*	*% Financed by Debt*	*Debt to Net Assets Ratio*
2009	*$55,475*	*$49,295*	*89%*	*96%*
2010	*33,282*	*15,602*	*47%*	*90%*

2011(forecast)	*66,450*	*55,190*	*83%*	*87%*
2012 (proposed)	*37,958*	*27,401*	*72%*	*85%*
2013 (proposed)	*24,097*	*15,615*	*64%*	*83%*
2014 (proposed)	*23,213*	*13,591*	*59%*	*81%*

As shown in Section 6.0 (page 10) of the rate filing, the forecasted Cash position at the end of 2011 is $18.9 million, falling to $10.8 million by 2013 under the current rate filing. The 2014 capital investment to be financed by equity (41%) is $9.6 million, which will essentially use up the cash availability for the Utility before slowly improving in the following year.

To rationalize the financing mix towards the 60% target, the Utility aims to use debt to finance capital investments that are more related to infrastructure (e.g. Eco Station, IPTF, etc.) while equity is used to the extent possible to finance replacement capital (e.g. waste containers, vehicles, etc.).

UA-10-Waste

Topic: **Billing Services**

Reference:

City of Edmonton Waste Management Utility 2012 Utility Rate Filing 14.0 Related Parties Transaction, page 38

Background:

Billing Services provided by EPCOR Inc. are projected to increase by 4.5%.

Requests:

a) What is the status of the agreement with EPCOR Inc. to provide billing services to Water?

The billing services contract with EPCOR Inc. expires the end of 2011. While negotiations are ongoing, no agreement beyond 2011 has yet been reached.

b) What portion of the 4.5% increase is due to increased numbers of customers, and what portion is due to an increase in the cost per bill?

The $199,000 (or 4.5%) is broken down as follows:

- *Allowance for rate increase – $84,000 (2%)*
- *Customer growth at the projected new rate - $67,000 (1.7% growth rate)*
- *Allowance for bad debt at same delinquent rate, but based upon higher total rate revenue - $48,000*

c) Does Waste (in conjunction with other parties) have any plans to review the competitiveness of the EPCOR Inc. costs to provide billing services? If so, when might that work be available?

A report on the review of EPCOR Inc. competitiveness was prepared and provided to the Transportation and Public Works Committee on November 16, 2010 with the following motion being carried:

> "That an agreement with EPCOR Energy Alberta Inc. for utility billing and customer care services for the Sanitary Drainage, Land Drainage and Waste Management Utilities for a term of two years, as outlined in the November 16, 2010, Asset Management and Public Works Department report 2010PW5714rev, be approved."

The report has been attached for information.

The next detailed review will be planned for 2013 in conjunction with Drainage Services.

UA-1-SAN/STM

Topic: **Use of Retained Earnings - Finance**

Reference:

City of Edmonton Drainage Services Utilities 2012 Utility Rate Filing Section 6 (Financial Indicators), pages 15-16

Background:

These tables provide 10 year forecasts demonstrating how the Drainage Utilities gradually improve the debt to net assets ratio toward the target of 60% by increasing return on rate base in 2012 and holding the returns (4% for SAN and 7% for STM) over the remaining period of the forecast.

Requests:

a) Please provide a continuity table for each of SAN and STM which reconciles how the earnings from each year are used to finance the equity portion of future year capital expenditures and decrease the debt to net assets ratio.

Application of Cash from Earnings - Sanitary Drainage

	Reference	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Net Income	Section 6.1	19,045	19,921	21,550	23,767	25,837	28,102	30,379	32,484	34,896	37,360
Add: Depreciation	Section 7.1	10,354	11,285	12,225	11,930	12,948	13,973	14,979	16,108	17,436	18,770
Net Cash Flow - Operations		**29,399**	**31,206**	**33,775**	**35,697**	**38,785**	**42,075**	**45,357**	**48,592**	**52,333**	**56,130**
Capital Financed with Equity	Section 6.1	(7,298)	(6,519)	(15,183)	(23,190)	(21,348)	(17,253)	(18,029)	(20,621)	(24,487)	(22,782)
Repayment of Debt	Section 7.7.2	(11,102)	(12,131)	(13,634)	(14,395)	(15,603)	(16,540)	(17,340)	(17,732)	(19,307)	(20,932)
Issuance of Dividend		(714)	-	-	-	-	-	-	-	-	-
Net Cash Flow - Financing/Investing		**(19,114)**	**(18,650)**	**(28,817)**	**(37,586)**	**(36,952)**	**(33,793)**	**(35,369)**	**(38,353)**	**(43,794)**	**(43,714)**
Increase (Decrease) in Cash Balance		10,285	12,556	4,958	(1,889)	1,834	8,281	9,988	10,240	8,539	12,416
Opening Cash Balance	Section 6.1	2,245	12,530	25,086	30,043	28,154	29,988	38,270	48,258	58,498	67,037
Ending Cash Balance	Section 6.1	**12,530**	**25,086**	**30,044**	**28,154**	**29,988**	**38,269**	**48,259**	**58,498**	**67,037**	**79,453**

Calculation of Debt to Net Assets Ratio - Sanitary Drainage

	Reference	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Opening Debt	Section 7.7.1	**251,904**	**281,462**	**316,848**	**342,175**	**381,676**	**418,046**	**445,661**	**478,308**	**514,484**	**554,237**
Add: New Debt Borrowing	Section 7.7.1	40,660	47,517	38,962	53,896	51,974	44,153	49,989	53,908	59,060	59,155
Repayment of Debt	Section 7.7.2	11,102	12,131	13,634	14,395	15,603	16,540	17,340	17,732	19,307	20,932
Net Change on Debt		**29,558**	**35,386**	**25,328**	**39,501**	**36,371**	**27,613**	**32,649**	**36,176**	**39,753**	**38,223**
Closing Debt		**281,462**	**316,848**	**342,176**	**381,676**	**418,046**	**445,660**	**478,309**	**514,484**	**554,237**	**592,460**
Opening Net Assets	Section 7.6.1	**450,165**	**487,768**	**530,520**	**572,440**	**637,596**	**697,970**	**745,404**	**798,443**	**856,863**	**922,974**
Capital - Debt Financed	Section 7.7.1	40,660	47,517	38,962	53,896	51,974	44,153	49,989	53,908	59,060	59,155
Capital - Equity Financed	Section 6.1	7,298	6,519	15,183	23,190	21,348	17,253	18,029	20,621	24,487	22,782
Net Capital Expenditures		**47,958**	**54,036**	**54,145**	**77,086**	**73,322**	**61,406**	**68,018**	**74,529**	**83,546**	**81,937**
Less: Depreciation	Section 7.1	10,354	11,285	12,225	11,930	12,948	13,973	14,979	16,108	17,436	18,770
Net Change in Net Assets		**37,604**	**42,751**	**41,920**	**65,156**	**60,374**	**47,434**	**53,039**	**58,420**	**66,110**	**63,167**
Closing Net Assets		**487,768**	**530,520**	**572,440**	**637,596**	**697,970**	**745,404**	**798,443**	**856,863**	**922,974**	**986,140**
Debt to Net Assets Ratio		**58%**	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**	**60%**

Note: the New Debt Borrowing in Section 7.7.1 of $40,362 is the net amount of debt outstanding at the end of 2012, after principal repayment of $297 shown separately in Section 7.7.2 (page 35).

Application of Cash from Earnings - Stormwater Drainage

	Reference	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Net Income	Section 6.2	12,601	15,732	19,160	22,943	26,871	30,421	33,779	37,602	41,872	46,029
Add: Depreciation	Section 8.1	3,845	4,424	5,288	6,136	7,098	7,976	8,880	9,922	11,147	12,214
Net Cash Flow - Operations		**16,446**	**20,156**	**24,448**	**29,079**	**33,968**	**38,398**	**42,659**	**47,524**	**53,019**	**58,243**
Capital Financed with Equity	Section 6.2	(8,819)	(16,569)	(15,694)	(17,776)	(16,725)	(42,995)	(30,214)	(23,960)	(30,822)	(23,104)
Repayment of Debt	Section 8.6.2	(3,387)	(4,250)	(5,148)	(6,052)	(6,976)	(7,653)	(8,310)	(9,335)	(10,603)	(11,935)
Net Cash Flow - Financing/Investing		**(12,206)**	**(20,819)**	**(20,842)**	**(23,829)**	**(23,701)**	**(50,649)**	**(38,524)**	**(33,296)**	**(41,425)**	**(35,040)**
Increase (Decrease) in Cash Balance		4,241	(663)	3,606	5,251	10,267	(12,251)	4,135	14,228	11,594	23,204
Opening Cash Balance	Section 6.2	21,385	25,625	24,962	28,568	33,819	44,086	31,835	35,971	50,199	61,793
Ending Cash Balance		**25,625**	**24,962**	**28,568**	**33,819**	**44,086**	**31,835**	**35,971**	**50,199**	**61,793**	**84,997**

Calculation of Debt to Net Assets Ratio - Stormwater Drainage

	Reference	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Opening Debt	Section 8.6.1	**107,121**	**140,693**	**171,197**	**206,089**	**245,363**	**283,306**	**287,116**	**306,590**	**342,716**	**374,265**
Add: New Debt Borrowing	Section 8.6.1	36,959	34,755	40,040	45,326	44,919	11,463	27,784	45,461	42,152	45,386
Repayment of Debt	Section 8.6.2	3,387	4,250	5,148	6,052	6,976	7,653	8,310	9,335	10,603	11,935
Net Change on Debt		**33,572**	**30,504**	**34,892**	**39,274**	**37,943**	**3,810**	**19,474**	**36,126**	**31,549**	**33,451**
Closing Debt		**140,693**	**171,197**	**206,089**	**245,363**	**283,306**	**287,116**	**306,590**	**342,716**	**374,265**	**407,716**
Opening Net Assets	Section 8.5.1	**156,474**	**198,407**	**245,306**	**295,752**	**352,719**	**407,265**	**453,747**	**502,864**	**562,364**	**624,191**
Capital - Debt Financed	Section 8.6.1	36,959	34,755	40,040	45,326	44,919	11,463	27,784	45,461	42,152	45,386
Capital - Equity Financed	Section 6.2	8,819	16,569	15,694	17,776	16,725	42,995	30,214	23,960	30,822	23,104
Net Capital Expenditures		**45,777**	**51,324**	**55,734**	**63,102**	**61,644**	**54,458**	**57,998**	**69,421**	**72,974**	**68,491**
Less: Depreciation	Section 8.1	3,845	4,424	5,288	6,136	7,098	7,976	8,880	9,922	11,147	12,214
Net Change in Net Assets		**41,932**	**46,899**	**50,446**	**56,966**	**54,546**	**46,482**	**49,118**	**59,499**	**61,827**	**56,277**
Closing Net Assets		**198,407**	**245,306**	**295,752**	**352,719**	**407,265**	**453,747**	**502,864**	**562,364**	**624,191**	**680,468**
Debt to Net Assets Ratio		**71%**	**70%**	**70%**	**70%**	**70%**	**63%**	**61%**	**61%**	**60%**	**60%**

Note: Similar to Sanitary Drainage, the New Debt Borrowing in Section 8.6.1 of $36,959 is the net amount of debt outstanding at the end of 2012, after principal repayment of $271, which is part of the $980 repayment of new borrowing shown separately in Section 8.6.2 (page 51).

b) If not provided as part of the answer to a) above, please provide a continuity table which provides the derivation of uncommitted cash in each year.

The responses in a) above reconcile to the reported cash balance.