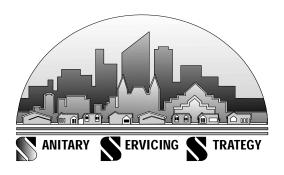
THE CITY OF EDMONTON SANITARY SERVICING STRATEGY FUND



2004 ANNUAL REPORT

April, 2005

Prepared by:
City of Edmonton
Asset Management and Public Works
Drainage Services

MESSAGE FROM THE MANAGEMENT COMMITTEE

This is the sixth annual report of the Sanitary Servicing Strategy Fund (SSSF). Activities in 2004 included revenue collection, completion of the updating of the SSSF Financial Model, preliminary design for West Edmonton Sanitary Sewer (WESS) Stages W1 & W12, detailed and preliminary design for South Edmonton Sanitary Sewer (SESS) Stages SW2 & SW3-SW5 respectively as well as preparation of the concept plan for North Edmonton Sanitary Trunk (NEST) stages NL2 & NL3. The two committees of the SSSF, the Management Committee and the Operational Committee, met several times during the year to review the financial status of the fund and to consider and approve proposals for future construction.

At the end of 2004, the Sanitary Sewer Strategy Fund had a closing balance of \$42.5 million with respective revenues and expenditures of \$14.3 million and \$1.9 million. Due to the surprisingly strong showing in the local housing market in 2004, revenues came in ahead of projections by approximately \$2.5 million. On the other hand, expenditures were lower than that budgeted by approximately \$10.2 million, mainly due to longer time taken to finalize the design for WESS Stage W12 and to acquire land for SESS Stage SW2. Considering the steady revenue expected and the current positive balance, the SSSF is in a very solid financial position to meet the sanitary needs of developments in the next two decades.

Our focus in 2005 will be on commencing the construction of WESS Stage W1, WESS Stage W12 & SESS Stage SW2, finalizing the details on design of SESS Stages W3-W5, completing the conceptual planning of NEST Stages NL2 & NL3 as well as updating the construction program for the next 5 years.

Yours truly,

John Hodgson, Ph.D., P. Eng.

Chairman, Management Committee

TABLE OF CONTENTS

			<u>Page</u>
Mess	age fr	om the Management Committee	j
Table	e of Co	ontents	ii
1.0	PLA	NNING & DESIGN ACTIVITIES IN 2004	1
2.0	MAN	NAGEMENT AND OPERATIONAL COMMITTEES	3
3.0	FIVE	YEAR CONSTRUCTION PLAN	6
4.0	FUN	ID BALANCE	
	.1	Twenty Year Projection	8
	.2	Five Year Projection_	9
	.3	Statement of Fund Activities and Balance	11

1.0 PLANNING & DESIGN ACTIVITIES IN 2004

South Edmonton Sanitary Sewer (SESS), Stages SW2-SW5

Negotiations to acquire land for the working shaft for SESS Stage SW2 were successfully completed in December The projected high development rates in the Ellerslie and Heritage Valley East areas are pushing for the completion of SW2 by 2006. Furthermore, City Council approved the Windermere ASP in May, thus accelerating the need to review the timing and alternatives of extending the servicing point further to the west. In view of these demands, a contract was awarded to ISL/UMA/Focus in August to undertake the review of the concept plan as well as the preliminary design of Stages SW3-SW5. Concurrently, Drainage Design & Construction Section proceeded with the detailed design of SW2. Negotiations to acquire land for the working shaft were successfully completed in December and City tunneling crews are gearing up to start construction works for SW2 in the spring of 2005.

At the same time, land owners in the Windermere area have expressed desires to have sanitary servicing available by early 2007 to coincide with their development schedule. Consequently, review of costs and benefits of various staging alternatives were initiated in September. With the expectation that the Neighbourhood Structure Plan for the first phase of development in Windermere will be circulated for comments in early 2005, a recommendation on the most cost effective way to provide long term and short term sanitary servicing to Windermere is being developed concurrently for discussions and approval.

West Edmonton Sanitary Sewer (WESS), Stage W1

WESS stage W1 project will comprise of the staged construction of a pump station, two forcemains and a gravity sewer Focus Corporation Ltd. was appointed in April to prepare detailed design of WESS (Stage W1) from 199 Street to 170 Street to serve developments in the North Lewis Farms and Winterburn areas. The previous Concept Plan has been reviewed to incorporate the latest details available. Various staging and design options were then investigated to see which one has the best value for money. After weighing the options against relevant criteria, the option to proceed with the staged construction of a pump station, two staged 500mm diameter forcemains and a 900mm diameter

gravity sewer was recommended and subsequently approved by the SSSF Management Committee. Construction works are planned to be tendered in April 2005 for completion in the spring of 2006.

West Edmonton Sanitary Sewer (WESS), Stages W12

Additional works had been identified during preliminary design of WESS Stage W12

Preliminary design was completed in October resulting in some revisions to the conceptual design. The proposal now is to build the siphon across the River using an Earth Pressure Balance Tunneling Machine. Also additional works downstream of the river crossing had been identified. All these changes resulted in the postponement of the construction start date. The consultant, AEAL, will finalize the detailed design by the fall of 2005. Construction works are now expected to begin in late fall of 2005.

North Edmonton Sanitary Trunk (NEST), Stages NL2 & NL3

A consultant was appointed in October to prepare the concept plan for NEST Stages NL2 & NL3 The latest Residential Land Servicing Forecasts indicates that a significant number of single family lots will be required in the next five years in the Pilot Sound and Lake District areas to cater for the projected population growth there. This suggests that extension of the NEST system is becoming crucial in the near future. In view of this forecast, Requests for Proposal for a Concept Plan for NL2 and NL3 were issued in September. AEAL was subsequently awarded the contract and commenced work in October. The current plan is to complete the Concept Plan by the summer of 2005.

SSSF Cashflow Model Update

The SSSF Cashflow Model was updated in August

In order to ensure that the financial projections made by the SSSF Financial Model are as realistic as possible, Applications Management Consulting Limited was given the task in August to update the Model to reflect the latest revisions to the population projection figures as well as changes to the construction schedule approved at previous SSSF Management Committee meetings. The updated Base Case shows a positive balance throughout the 75 year duration of the Program. The Base Case still includes the 15% increases in the SSTC and EA rates at the years 2010, 2015 & 2020.

Major accomplishments by the Management Committee in 2004 were:

- Approved commencement of detailed design for W1
- Approved commencement of detailed design for SW2
- Approved commencement of preliminary design for SW3-SW5
- Approved commencement of concept plan preparation for NL2 & NL3
- Approved revisions to SSSF Financial Model Base Plan
- Reviewed SSSF governance structure
- Endorsed recommendation for rate increase in 2005

2.0 MANAGEMENT AND OPERATIONAL COMMITTEES

The role of the **SSSF Management Committee** is to make decisions regarding revenues and expenditures that best meet the long-range plan of all the stakeholders. The Committee is composed of five members (three from the City and two from the Urban Development Institute):

Chair: Director of Drainage Planning – John Hodgson

Members: Director of Drainage Design and Construction – Siri Fernando

Director of Development Coordination – Wayne Cameron

Chair of UDI Drainage Committee – Bob Gomes

Chairman of UDI Executive Committee - Peter Cavanagh

Siri Fernando became a member of the Management Committee in April after taking over the position of Director of Drainage Design and Construction from K.C. Er.

The Management Committee met four times in 2004, jointly with the SSSF Operational Committee in 3 of the 4 occasions. Below are the major accomplishments for the year:

- Approved recommendation to proceed with the detailed design of a staged pump station with 2 staged forcemains and a gravity sewer for WESS Stage W1.
- Approved commencement of detailed design for SESS Stage SW2.
- Approved commencement of preliminary design for SESS Stages SW3-SW5
- Approved recommendation to commence preparation of concept plan for NEST Stages NL2 & NL3.
- Supported funding for the design and construction of the interim pump station and forcemain west of Whitemud Creek for connection to SESS.

- Approved recommendation to revise SSSF Financial Model Base Plan to show construction completion of SA1 in 2010, SA6 in 2021 and NC2 in 2032.
- Reviewed SSSF governance structure in light of current arrangement of having joint meetings between the Management Committee and Operational Committee.
- Endorsed recommended rate increase of 4.75% to take effect on January 1, 2005.

The **SSSF Operational Committee** provides recommendations to the Management Committee regarding the timing and capacity requirements for new trunk construction, and flags relevant issues for consideration by the Management Committee. The Committee is composed of 7 members (five from the City and two from UDI):

Major accomplishments by the Operational Committee in 2004 included finalizing of design details, schedules and cashflow projections for W1, W12, SW2-SW5 as well as recommending commencement of concept plan preparation for NL2 & NL3

Chair: Senior Engineer (Sanitary System) – Paul Hoffart Members: Program Manager (Expansion) – James Tan

Planning and Development Representative – Orest Gowda Drainage Financial Services Representative – Dennis Yakubow

Member of UDI Committee – Ken Sadownyk Member of UDI Committee – Blaine Usenik Senior Cost Assessment Engineer - Francis Wu

James Tan became a member of the Operational Committee in September after taking over the position of Program Manager (Expansion) from Siri Fernando. Also, Dennis Yakubow replaced Lyle Windsor as a member of the Operational Committee in September after Lyle's departure from Drainage Services.

The Operational Committee met four times in 2004 (3 times in joint sessions with the SSSF Management Committee). Major accomplishments for the year included:

- Recommended the adoption of a staged pump station with 2 staged forcemains and a gravity sewer for WESS Stage W1.
- Recommended the commencement of detailed design for SESS Stage SW2.

- Recommended the commencement of preliminary design for SESS Stages SW2-SW5.
- Recommended the use of an interim pump station to provide sanitary servicing for the initial stages of development in Windermere
- Recommended the commencement of concept plan preparation for NEST Stages NL2 & NL3.
- Recommended the revision of SSSF Financial Model Base Plan to show construction completion of SA1 in 2010, SA6 in 2021 and NC2 in 2032.

3.0 FIVE YEAR CONSTRUCTION PLAN

The proposed major sanitary trunk construction projects for the next five years have been determined by The City of Edmonton Drainage Services with approval of the SSSF Management Committee. This construction plan is developed to support orderly development throughout the City of Edmonton in a cost effective manner, using latest population and employment projections available to the City. It also strives to meet the important objective of maintaining a positive balance for the Sanitary Servicing Strategy Fund. Locations of the planned construction projects are shown on Figure 1.

2005 / 2006 – West Edmonton Sanitary Sewer (WESS) - Stage W1

The detailed design for WESS Stage W1 is scheduled to be completed in April 2005. As soon as the detailed design is completed, public tenders will be prepared. With an estimated construction duration of about 12 months, the project can be completed in 2006. This will coincide with the time table for developing additional lands in the Lewis Farms area. The estimated construction cost is \$8.57 million.

2005 / 2007 – South Edmonton Sanitary Sewer (SESS) - Stage SW2

With the south-west leg of Anthony Henday Drive (between Whitemud Drive and Calgary Trail) scheduled for completion in 2006/2007, the pace of new developments in the south side of the City is expected to accelerate in the next few years. Considering that the storage capacity of SW1 is likely to be exhausted by the year 2006 based on current projected development rate of new subdivisions in the Ellerslie and East Heritage Valley areas, construction of SW2 is required to commence in 2005. The SW2 project will involve the construction of a shaft at 127 Street and Ellerslie Road and approximately 1.6 km of a 2340mm diameter tunnel along the south edge of Ellerslie Road from 127 Street to 111 Street. Construction period is expected to last for 18 months.

Construction works for WESS Stage W1 is planned to be tendered in April 2005 for completion in the spring of 2006

City tunneling crews are gearing up to start construction works for SW2 in the spring of 2005

2005 / 2007 - South Edmonton Sanitary Sewer (SESS) - Stage SW3-SW5

Installation of an interim sanitary system is a cost effective way of providing sanitary servicing to the initial phases of development in the Windermere neighbourhood In order to provide sanitary servicing to the initial phases of development in the Windermere neighbourhood, a sanitary system will have to be installed across the Whitemud Creek to connect to the western terminal point of the SESS tunnel in the next few years. A significant amount of manhours had been spent to determine the most cost effective way of extending SESS westwards to handle the relatively low flow expected during the next decade. Although a final scheme has not yet been approved, the most favourable alternative considered so far is to construct Stage SW3 to its final size all the way to the west side of Whitemud Creek and to install an interim pump station and a forcemain connecting it to the proposed subdivisions. This will allow sanitary servicing to be provided during the early years of development in Windermere while deferring the huge expenditures in building the SW4 and SW5 tunnels as late as storage capacity allows. If this alternative is adopted, construction of this portion of SESS can start in 2005 once all necessary approvals and easements are secured.

2005 / 2008 – West Edmonton Sanitary Sewer (WESS) - Stage W12

The construction start date for WESS Stage W12 has been postponed to the fall of 2005 as a result of major changes identified during the detailed design stage

Construction of WESS Stage W12 was previously scheduled to commence in 2004. However during detailed design, several major changes from the concept design were found to be required. This resulted in the delay of the construction start date. The latest plan is to build the 2500mm diameter inverted siphon across North Saskatchewan River using an earth pressure balance tunneling machine and precast bolted segmental liner. The slope of the siphon has also changed from the north-south direction to the south-north direction. Construction works are now scheduled to commence in October 2005 for completion in spring 2008. The total length of the tunnel is approximately 1,225 metres.

4.0 FUND BALANCE

4.1 TWENTY YEAR PROJECTION

The SSSF Cashflow Model was updated in 2004 to include latest available data on construction costs and population projections. The latest projection shows that the fund balance (in 2004 dollars) will stay in the black throughout the 75 year period. Figure 2 shows the cashflow projection up to the year 2024.

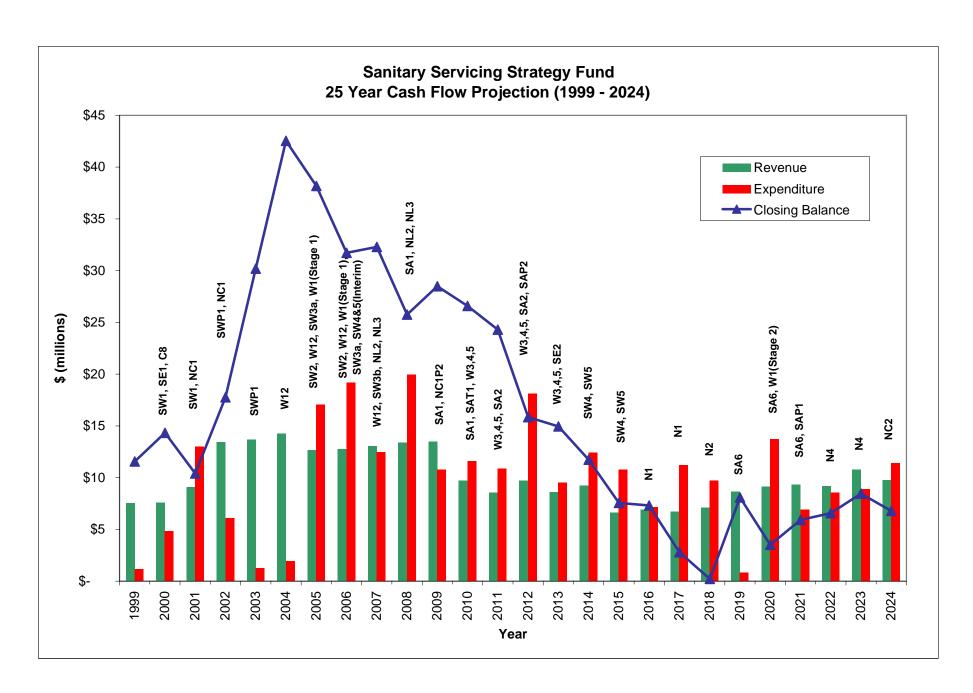
The following revisions to the construction schedule had been approved by the SSSF Management Committee during 2004:

	Previously Identified	Revised
StageConstruct	tion Year	Construction Year
W12	2003 / 2005	2005 / 2008
W1 (Stage 1)	2004 / 2007	2005 / 2006
W1 (Stage 2)	2004 / 2007	2020
W1 (Stage 3)	2004 / 2007	2038
SA1	2016 / 2021	2008 / 2010
SA6	2007 / 2009	2019 / 2021
NC2	2009 / 2010	2031 / 2032

Previously proposed 15% rate increases in 2010, 2015 and 2020 are retained in the updated SSSF Cashflow Model

The following general assumptions have been adopted in the updated model:

- a) Population projections were based on the 'Edmonton Population and Employment Forecast Allocation Study (2000-2025)'.
- b) Previously proposed 15% rate increases in 2010, 2015 and 2020 are retained in addition to the annual inflationary increases.
- c) Annual interest rate gradually increases from 2.5% to 5%.
- d) Annual borrowing rate gradually increases from 4.5% to 7%.



e) Annual increases in the SSSF rates and construction costs gradually vary from 2.5% to 3%.

The Management Committee will continue to monitor the fund balance in the future to determine if the previously proposed 15% rate increases in 2010, 2015 and 2020 are still necessary to achieve a positive balance at the end of the Program.

4.2 FIVE YEAR PROJECTION

Table 1 shows the Five Year projection for the Sanitary Sewer Strategy Fund (SSSF). This projection is based on the following data:

Receipts

- Opening Balance for 2004 The actual SSSF balance as of December 31, 2003.
- Receipts and Disbursements for 2004 These are based on actual 2004 amounts (See Table 2)
- Interest Accrual (2004 2009) The 2004 numbers are based on actual amounts. 2005-2009 amounts are based on an assumed rate of return of 2.5% for 2005 and 3% for the years 2006 to 2009.
- Utility Contribution This amount represents contributions from the Sanitary
 Utility for future diversion of sanitary flows from serviced City lands to the new trunk
 system constructed under the SSSF. These lands are located in Mill Woods, parts
 of the Meadows and in Castle Downs. The amount is calculated based on an
 estimate of the Sanitary Sewer Trunk Charge these lands would have to pay.
 Based on current projections, the Sanitary Utility will make these contributions to
 the SSSF until 2014.
- Sanitary Sewer Trunk Charge The SSTC is collected when an application is made for a Development Permit or sanitary service connection. This charge

The Sanitary Utility currently contributes \$2.6 million per year to the SSSF

SANITARY SERVICING STRATEGY FUND - 5 YEAR PROJECTION

2004 (Actual)		004 (Actual)	2005		2006		2007		2008		2009
Opening Balance	\$	30,188,075	\$	42,544,582	\$	38,184,695	\$	31,715,187	\$	32,296,180	\$ 25,759,549
Interest		799,699		944,271		959,808		942,420		1,063,833	1,063,869
Utility Contribution		2,600,000		2,600,000		2,600,000		2,600,000		2,600,000	2,600,000
Sanitary Sewer Trunk Charge		6,746,196		5,171,794		5,376,062		5,106,416		5,333,551	5,941,652
Expansion Assessment		4,128,356		3,959,048		3,798,372		4,391,210		4,407,370	3,891,030
Total Receipts		14,274,251		12,675,113		12,734,242		13,040,046		13,404,754	13,496,551
Construction Costs		(1,917,744)		(17,015,000)		(19,183,750)		(12,439,053)		(19,921,385)	(10,738,344)
Over Expenditure Paybacks				(20,000)		(20,000)		(20,000)		(20,000)	(20,000)
Total Disbursements		(1,917,744)		(17,035,000)		(19,203,750)		(12,459,053)		(19,941,385)	(10,758,344)
Closing Reserve Balance	\$	42,544,582	\$	38,184,695	\$	31,715,187	\$	32,296,180	\$	25,759,549	\$ 28,497,756

Tentative Construction Programme

	Total					
	2005 - 2009	2005	2006	2007	2008	2009
SW2	10,680,000	4,500,000	6,180,000	-	-	-
W12	5,524,400	4,515,000	1,009,400	-	-	-
SW3a	7,635,000	3,000,000	4,635,000	-	-	-
W1 (Stage 1)	8,677,100	5,000,000	3,677,100	-	-	-
SW4 & 5 (Interim)	3,090,000	=	3,090,000	-	-	-
W12P	2,714,050	=	592,250	2,121,800	-	-
SW3b/SWP3	2,121,800	-	-	2,121,800	-	-
NL2	6,951,635	=	=	546,364	6,405,271	-
NL3	12,049,828	-	-	7,649,089	4,400,739	-
NL2P1	1,092,727	=	=	-	1,092,727	-
NL3P1	1,307,841	-	-	-	1,307,841	-
SA1	15,718,877	-	-	-	6,714,807	9,004,070
NC1P2	1,734,274	=	=	-	-	1,734,274
Total	\$ 79,297,532	\$ 17,015,000	\$ 19,183,750	\$ 12,439,053	\$ 19,921,385	\$ 10,738,344

The Sanitary Sewer Trunk Charge was increased by 2.89% for 2004 and will increase by another 4.75%

effective 1 January 2005

applies to all new development and redevelopment in the City. The following are the SSTC rates for 2004 and 2005:

Type of development	2004	2005
Single-family/Duplex Residential	\$803/dwelling	\$841/dwelling
Multi-family Residential	\$573/dwelling	\$600/dwelling
Commercial, Industrial, Institutional	\$4,011/ha	\$4,202/ha

Estimated SSTC revenue from 2005 to 2009 is based on projected development rates within the City.

• Expansion Assessment (EA) – The EA is an area-based assessment that is collected at the time of subdivision, development permit application or sanitary service connection application. The EA applies to those areas of the City that did not have an approved Neighborhood Structure Plan (NSP) before January 1, 1998. The 2004 and 2005 rates for EA are as follows:

The Expansion Assessment is collected from the contributing areas as shown on Figure 1

Contributing Area	2004	2005
North Edmonton Sanitary Trunk (NEST)	\$11,460/ha	\$12,004/ha
South Edmonton Sanitary Sewer (SESS)	\$11,460/ha	\$12,004/ha
Terwillegar and University Farms (TUFS)	\$11,460/ha	\$12,004/ha
West Edmonton Sanitary Sewer (WESS)	\$14,325/ha	\$15,005/ha

 Estimated Construction Costs – The 2004 amounts are based on actual construction costs incurred. The timing of construction is a critical factor for the fund balance.

Estimated construction costs for the period from 2005 to 2009 are derived from the tentative construction programme listed in Table 1.

Over Expenditure Paybacks are payments made to the City for front-ending two sanitary trunks.

• Over Expenditure Payback – The over-expenditure (OE) payback is payable to the City for the construction of two sanitary trunk lines: the N.W. Annexation Area South Sanitary Trunk and the Clareview Interceptor. The City front-ended the construction costs for these two projects. As development occurs within the sewer benefiting areas, the Expansion Assessment is collected from the developments and is paid back to the City. The projected Over Expenditure Paybacks are based on anticipated developments within the benefiting areas.

4.3 STATEMENT OF FUND ACTIVITIES AND BALANCE

The Statement of Fund Activities and Balance for 2004 is shown on Table 2. Figure 3 shows each revenue component as a percentage of the total revenues.

REVENUES

Total revenues were up 4% from 2003.

Total revenues for 2004 were \$14,274,251, which is a 4% increase over the 2003 revenues.

SSTC revenue was up by 15% for single-family & duplex developments but was down by 9% for multi-family developments.

• Sanitary Sewer Trunk Charge (SSTC) – For 2004, SSTC revenues totaled \$6,746,196, which equates to a 4% increase over the 2003 SSTC revenues. Revenues of \$3,635,944 from single-family and duplex residential developments were the biggest component of the amounts received. Based on the \$803 per dwelling rate in 2004, this represents approximately 4,528 combined single-family and duplex housing starts. This amounts to an 12% increase compared to the estimated 4,059 starts in 2003.

The next largest component of SSTC income came from multi-family developments. The \$2,617,408 collected represents approximately 4,568 units being charged the \$573 per unit rate in 2004. Multi-family unit starts have shrunk by 11% compared with that in 2003.

The remaining \$492,845 of SSTC revenue came from commercial, industrial, and institutional developments, representing approximately 123 hectares of assessed

development. This is up 3% from the 119 hectares assessed in 2003.

- Expansion Assessment (EA) For 2004, the total EA collected was \$4,128,356, up 5% when compared with 2003. This reverses the downward trend experienced in 2003 and echoes the increase in single family / duplex residential developments in 2004.
- Utility Contribution Total Utility contribution in 2004 was \$2,600,000.
- Interest Earned Total interest earned for 2004 was \$799,699, up from \$667,069 earned in 2003. This is primarily the result of having a larger amount of fund balance in the account for a longer period during the year. In light of the projected healthy balance for the next 5 years, the SSSF Management Committee has started looking into various investment options for the fund balance in order to secure a relatively higher return with minimum risks.

EXPENDITURE

The largest expenditure item in 2004 was \$802,960 for the detailed design and site investigations for WESS (W12). At the same time, \$406,764 and \$ 318,281 were spent on the design of SESS (SW2-SW5) and WESS (W1) respectively. Other expenses included \$176,232 for the updating of the SSSF Financial Model.

The total expenditure actually incurred in 2004 was significantly lowered than that budgeted due to the delay in the start of construction for WESS (W12).

Expansion Assessment revenues were up by 5%.

STATEMENT OF FUND ACTIVITIES & BALANCE

Sanitary Service Strategy Fund				
for the period ending December 31, 2004	2003	2004	2004	2004
	Actual	Actual	Budget	Variance
REVENUES				
Sanitary sewer trunk charge - single/duplex	3,166,028	3,635,944	2,700,000	935,944
Sanitary sewer trunk charge - multi family	2,861,327	2,617,408	2,320,000	297,408
Sanitary sewer trunk charge - commercial/industrial/institutional	463,233	492,845	380,000	112,845
Expansion assessment	3,931,542	4,128,356	2,975,000	1,153,356
	10,422,130	10,874,552	8,375,000	2,499,552
Utility system contribution	2,600,000	2,600,000	2,600,000	-
Interest earned	667,069	799,699	807,050	(7,351)
Total Revenues	13,689,199	14,274,251	11,782,050	2,492,201
EXPENDITURES				
SESS - SW1	144,183	50,127	100,000	(49,873)
SESS - SW2-SW5		406,764	2,000,000	(1,593,236)
Clareview Sanitary Trunk - C8	835			-
NEST - NC1	30,737	14,361		14,361
WESS - W1	60,609	318,281	300,000	18,281
WESS - W2-W12 Concept Plan	284,939	30,557		30,557
WESS - W12	118,224	802,960	9,300,000	(8,497,040)
SESS - SW2-SW7 Concept Plan	400,146			-
SSSF Financial Model Update	128,423	176,232	200,000	(23,768)
Over Expenditure Payback and Misc. Expenses	91,972	118,462	200,000	(81,538)
Total Expenditures	1,260,068	1,917,744	12,100,000	(10,182,256)
Excess of Revenue over Expenditures	12,429,131	12,356,507	(317,950)	12,674,457
Opening Balance	17,758,944	30,188,075	30,188,075	
Closing Balance	\$ 30,188,075	\$ 42,544,582	\$ 29,870,125	5 12,674,457

SSSF Revenues for 2004 (\$14.27 million)

