

THE CITY OF EDMONTON
SANITARY SERVICING STRATEGY FUND



2008 ANNUAL REPORT

June 2009

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

Sanitary Servicing Strategy Fund
2008 Annual Report

MESSAGE FROM THE MANAGEMENT COMMITTEE

This is the tenth annual report of the Sanitary Servicing Strategy Fund (SSSF). Activities in 2008 included revenue collection, construction of South Edmonton Sanitary Sewer (SESS) Stages SE3 and SW2/SW3, West Edmonton Sanitary Sewer (WESS) Stages W1 as well as North Edmonton Sanitary Trunk (NEST) Stages NL2/NL3/N1. In addition, work began on the detailed design of South Edmonton Sanitary Sewer (SESS) Stage SA1b. The SSSF Management Committee and Operational Committee met jointly four times to review and approve design and construction schedules, monitor construction progress, and review the financial status of the Fund. Since the program started in 1999, a total of 19 km of tunnels and pipes had been put into the ground which supported about thirty-three thousand single family lots in addition to other multi-family residential, commercial and industrial developments.

In 2008, the SSSF Fund recorded revenues of \$10.2 million and expenditures of \$20.7 million, for a closing balance of \$25.2 million, which was down \$10.5 million compared to the \$35.7 million balance at the end of 2007. With the economy drastically slowing down towards the end of 2008, revenues were significantly lower than that collected in the previous year. On the other hand, expenditures for 2008 were relatively high as work progressed to complete many of the projects started in 2007. While revenues in the next few years are expected to be lower than those collected in recent years, the SSSF Fund is still in a solid financial position to complete all committed projects over the next five years.

Our focus in 2009 will be to complete the construction of WESS Stage W1 and SESS Pump Station upgrade, continue construction of NEST Stages NL2/NL3/N1, finalize facility plan for SESS Stages SA7-SA11 and commence the construction of SESS Stage SA1b. We will continue to re-assess all future SSSF projects to ensure that construction plans will accommodate the latest growth projections in all areas of the City as well as to ensure sustainability of the Fund.



James Tan, P. Eng.
Chair, SSSF Management Committee

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1.0 PLANNING & CONSTRUCTION ACTIVITIES IN 2008

The following is a summary of the planning and construction activities completed by the Sanitary Servicing Strategy Fund (SSSF) in 2008. Figures 1(a) to 1(c) show some of the construction activities undertaken in 2008.

South Edmonton Sanitary Sewer (SESS), Stage SE3

Construction of SESS Stage SE3 was completed in the fall of 2008

Stage SE3 is part of the SESS trunk which is required for the sanitary servicing of Ellerslie Neighborhood Three. In the fall of 2008, construction works were all completed with the CCC inspection done at the end of October. Actual construction cost for the project is \$1.22 Million, which is below the estimate previously approved by the SSSF Management Committee.

West Edmonton Sanitary Sewer (WESS) – Stage W1

WESS Stage W1 is about 38% complete with all shaft works completed.

Construction of Stage W1 started as early as spring of 2006. Using micro-tunneling method, the contractor installed the sewer across Anthony Henday Drive and along the busy 100 Avenue from 199 Street to 170 Street. The total project cost is estimated at \$29 Million. In 2008, about 38% (613 meters out of 1600 meters) of construction work had been completed while all shaft works were done.

South Edmonton Sanitary Sewer (SESS) – Stages SW2 and SW3

About 96% of construction works for SESS Stages SW2 and SW3 are complete.

SESS Stages SW2 & SW3 are designed to accept flow from the new development areas south of Ellerslie Road from 111 Street to 170 Street. About 96% (3422 meters out of 3572 meters tunnel) had been completed in

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2008 with the shaft work at 142 Street fully completed as well. The tunnel from 111 Street to the west of Whitemud Creek as well as the interim Windermere Pump Station are now in service. Total expenditure incurred so far is about \$2.8 Million higher than that previously approved due to cost escalation, poor ground condition and change in work methodology.

South Edmonton Sanitary Sewer (SESS) – Stage SA1b

With the expansion of the developments in the area south of Ellerslie Road east of 66 Street, Stage SA1b of SESS is required to replace the temporary connection to the SESS Pump Station. In 2008, detailed design for the tunnel was completed while the construction of the access pit for this stage was 75% complete. Tunneling work is expected to start in late January 2009.

Detailed tunnel design for SESS Stage SA1b was completed and 75% of access pit was done in 2008.

West Edmonton Sanitary Sewer (WESS), Stage W13

WESS Stage W13 involves the installation of a new trunk sanitary sewer along 150 Street between 99 Avenue and 90 Avenue to handle flows from new developments in South Lewis Farms and the Grange areas. The concept design and hydraulic review were completed in 2008. A consultant was hired to conduct the preliminary and detailed design works. Currently the construction timing is being reviewed as part of the overall SSSF Program Review. Site work is not expected to be started until the recommendations of the SSSF Program Review are approved.

Preliminary and detailed design for WESS Stage W13 commenced in 2008.

North Edmonton Sanitary Trunk (NEST), Stages NL2/NL3/N1

Stages NL2/NL3/N1 of NEST basically provide sanitary servicing to areas bounded by 153 Avenue, 82 Street, the Restricted Development Area (RDA) and Manning Freeway. In 2008, 1275 meters of tunneling work between Manning Freeway and 66 Street were done.

1275 meters long tunnel for NEST Stages NL2/NL3/N1 were completed in 2008.



Figure 1 (a)
WESS W1: Micro-tunneling



Figure 1 (b)
WESS W1: Preparation for Dewatering



Figure 1 (c)
NL2/NL3/N1: Installation of Concrete Segments

2.0 MANAGEMENT AND OPERATIONAL COMMITTEES

The primary 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.

Chair: Director of Drainage Planning – James Tan

Members: Director of Drainage Design and Construction – Siri Fernando

Director of Planning and Policy – Willard Hughes

Chair of UDI Drainage Committee – Peter Cavanagh

UDI Representative – Bob Gomes/Wade Zwicker

General Supervisor Infrastructure & Business Planning – Francis Wu (Secretary and Non-Voting Member)

Some major decisions made by the SSSF Management Committee in 2008 were:

- *Approved recommendation to grant funding to the Big Lake Sewer (W14) construction.*
- *Approved in principle the 50% SSSF share in the construction and engineering costs of SA1d.*
- *Approved recommendation to collect EA at earliest development application stage.*
- *Approved recommendation to construct SESS Stage SE3.*
- *Increased SSSF rates by 5.75% in 2009.*

Bob Gomes stepped down as the UDI Representative in August after serving the SSSF Management Committee since its inauguration. His vacancy was subsequently filled by Wade Zwicker.

The Management Committee met a total of four times in 2008, with all meetings jointly attended by the SSSF Operational Committee members. Some of the major decisions made are listed below:

- Approved recommendation to grant funding (up to \$6.6 Million) from SSSF for the construction of Big Lake Sanitary Sewer (W14) in 2010.
- Approved in principle recommendation for SSSF to share 50% of the construction and engineering costs of SA1d.
- Approved recommendation to collect EA at the earliest stage of development application.
- Approved the additional funding for SESS Stages SE2 and new funding for Stage SE3.
- Approved recommendation to proceed with the construction of SESS Stage SE3.
- Increase SSSF rates by 5.75% effective January 1, 2009.

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The **SSSF Operational Committee** provides recommendations to the SSSF Management Committee regarding the timing and capacity requirements for new trunk construction, and flags relevant issues for discussions by the Management Committee.

Chair: General Supervisor of Strategic Planning – Albert Kwan
Members: Program Manager – Arbind Mainali
Director of Development Co-ordination – Orest Gowda
Drainage Financial Planning Coordinator – Bonnie Bryks
UDI Representative – Ken Sadownyk
UDI Representative – Blaine Usenik/George Cantalini
Senior Engineer – Fernando Sacluti (Secretary)

Major activities undertaken by the SSSF Operational Committee in 2008 included:

- *WESS W14 Project constructability review.*
- *Change order review & sensitivity analysis on impacts to SSSF of WESS W1 claim.*
- *Servicing options for Maple Ridge/SE Industrial Area*
- *Updating of revenue projections.*
- *Recommendation to increase SSSF Rates in 2009.*

Blaine Usenik stepped down as the UDI Representative in August after serving the SSSF Operational Committee since its was created in 1999. His vacancy was filled by George Cantalini. Also, Paul Hoffart left the SSSF Operational Committee in August after being transferred to the Wastewater Treatment Section. His duties within the Committee were taken over by Fernando Sacluti.

The Operational Committee met five times in 2008, four in joint sessions with the SSSF Management Committee and one as a distinct committee.

Major accomplishments for the year included:

- Continued review of project constructability for WESS Stage W14
- Conducted change order review and sensitivity analysis on the impacts to SSSF of the claim received from the WESS Stage W1 contractor.
- Prepared draft servicing options for Maple Ridge/SE Industrial Area.
- Recommended additional funding for SESS Stages SE2 & new funding for SE3.
- Updated SSSF revenue projections based on latest population projection.
- Recommended increasing SSSF rates by 5.75% in 2009 to support long-term financial stability of the Fund.

3.0 FIVE YEAR CONSTRUCTION PLAN

The following paragraphs outline the proposed major sanitary trunk construction program for the next five years (2009-2013). This proposed program 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. The locations of the construction projects are shown in Figure 2 at the end of this section.

2009 West Edmonton Sanitary Sewer (WESS) – Stage W1

Construction of WESS Stage W1, from 199 Street to 170 Street, started in the spring 2006. Most of the pipes have been installed and are already in service. The outstanding construction works are expected to be completed by mid-2009.

Stage W1 of WESS is scheduled for final completion in mid-2009.

2009 – South Edmonton Sanitary Sewer (SESS) Pump Station (SW1P1)

SESS Pump Station Upgrade is aimed at increasing the existing pumping capacity of the pump station to handle additional flow from new developments south of Ellerslie Road. Pump installation work is scheduled for completion by April 2009 with an estimated cost of \$500,000.

SW1P1 is expected to be completed by April 2009.

2009 to 2011 – North Edmonton Sanitary Trunk (NEST) – NL2/NL3/N1

Construction of the 3.7 km NEST Stages NL2/NL3/N1 began in late 2007 at the downstream shaft near Manning Freeway and 153 Avenue. Construction in 2009 will continue in a westerly direction with the goal of providing sanitary servicing for the Schonsee and North Sawle neighborhoods at 66 Street by mid-2009. The remaining tunneling works west of 66 Street will be completed by late 2011.

NL2/NL3/N1 stages will provide sanitary servicing for Schonsee and North Sawle neighborhoods.

Stage SA1b of SESS will provide sanitary servicing to the Ellerslie East neighborhoods.

Off-site construction for WESS W14 is planned to start in 2010.

Construction of SE4a will be co-ordinated with the pavement construction of 91 St between 25 Ave SE and 30 Ave SE.

Construction start of Stage W13 is tentatively scheduled for 2012.

SA10 will provide sanitary servicing for Maple Ridge, Southeast Industrial and Pylypow developments.

2009 to 2011 - South Edmonton Sanitary Sewer (SESS) – Stage SA1b

With the continued rapid expansion of the East Ellerslie area, SESS SA1b was identified as an urgent project required for permanent sanitary servicing of the area. Detailed design for SESS Stage SA1b was completed in 2008, with construction scheduled for completion by fall of 2011.

2010 – West Edmonton Sanitary Sewer (WESS) – Stage W14

Off-site construction works are scheduled to commence during the spring of 2010. Latest estimate for the project is \$6.6 Million.

2010 – South Edmonton Sanitary Sewer (SESS) – SE4a

The first portion of SESS Stage SE4 to be built is the north-south portion within the future 91 Street right of way. This 490 meter portion of SE4 will provide sanitary servicing to the nearby Intermodal Yard as well as the residential subdivisions east of 91 Street. The construction work will need to be co-ordinated with the pavement construction of the section of 91 Street between 25 Avenue SE and 30 Avenue SE. The latest estimate of the construction cost for SE4a is \$1 Million.

2012 to 2013 – West Edmonton Sanitary Sewer (WESS) – Stage W13

Detailed design of WESS W13 will be completed in 2009. Construction start is tentatively scheduled for 2012 but is subject to the recommendations of the SSSF Program Review.

2013 – South Edmonton Sanitary Sewer (SESS) – SA10

This section of SESS will be constructed along 34 Street just south of Sherwood Park Freeway. It will be used to provide sanitary servicing for existing and future developments in the Maple Ridge, Southeast Industrial, and Pylypow areas. Construction works are currently planned to commence in 2013.

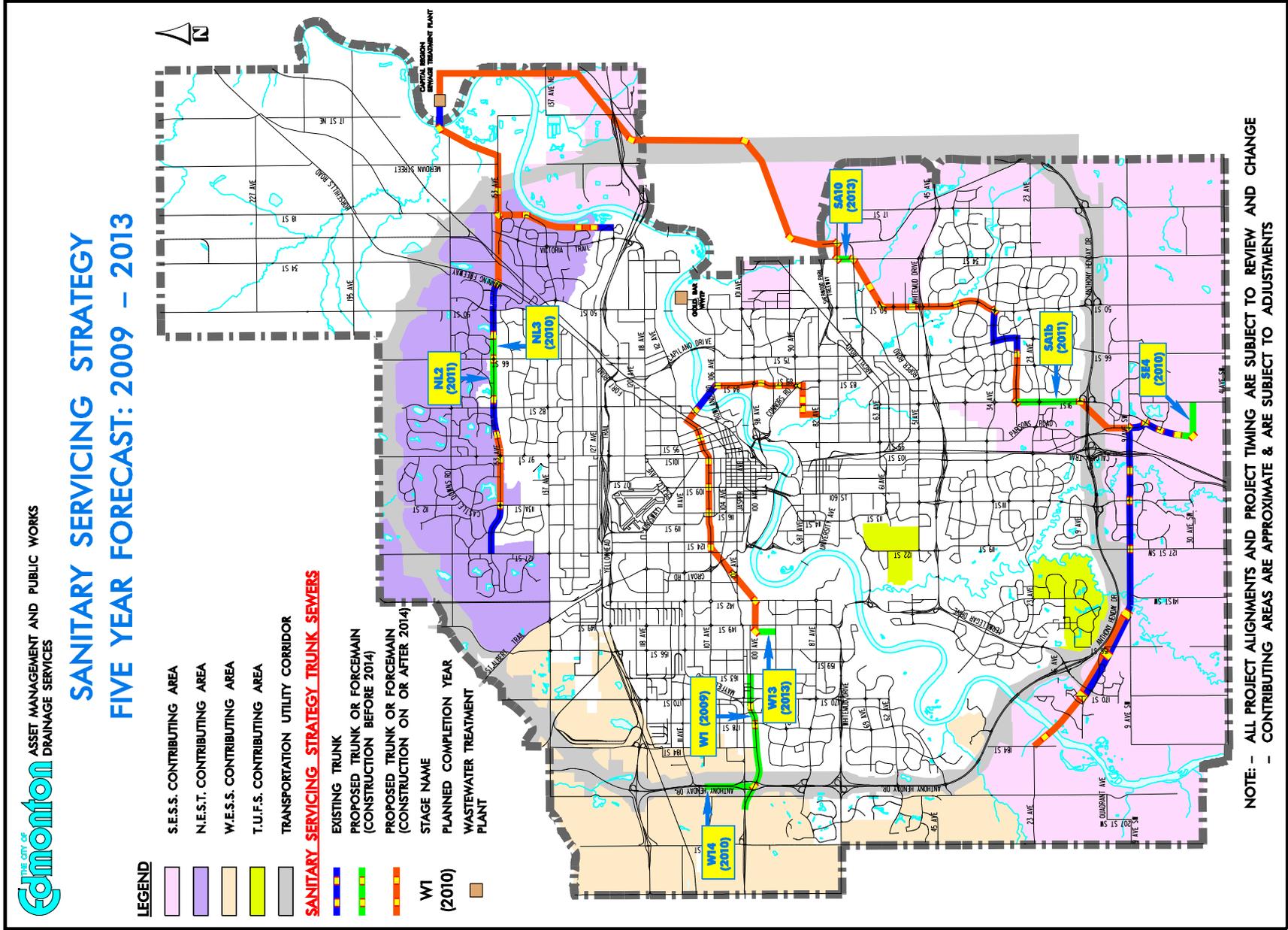


Figure 2

4.0 FUND BALANCE

4.1 TWENTY FIVE YEAR HISTORY & PROJECTION

The next 15 years shows a positive fund balance but there are funding challenges during the next 5 years.

The SSSF Financial Model was updated in 2008 to reflect the changing economic situation, particularly the construction cost inflation and near-term revenue projections. In addition, some construction schedules were adjusted to reflect the current construction schedules. The latest projection shows that the fund balance will be significantly lower than those recorded in previous years but should remain positive at least throughout the next 15 years. Figure 3 shows the twenty five year cash flow history and projections (1999 to 2024).

The following general assumptions have been adopted in the current version of the Model:

- a) Population projections were based on the latest Edmonton census data from spring 2006, then adjusted based on actual yearly increases.
- b) Annual inflation rate for construction costs is revised to 1% for 2009.
- c) Annual interest rate is assumed to be 2%-3% during the next 5 years

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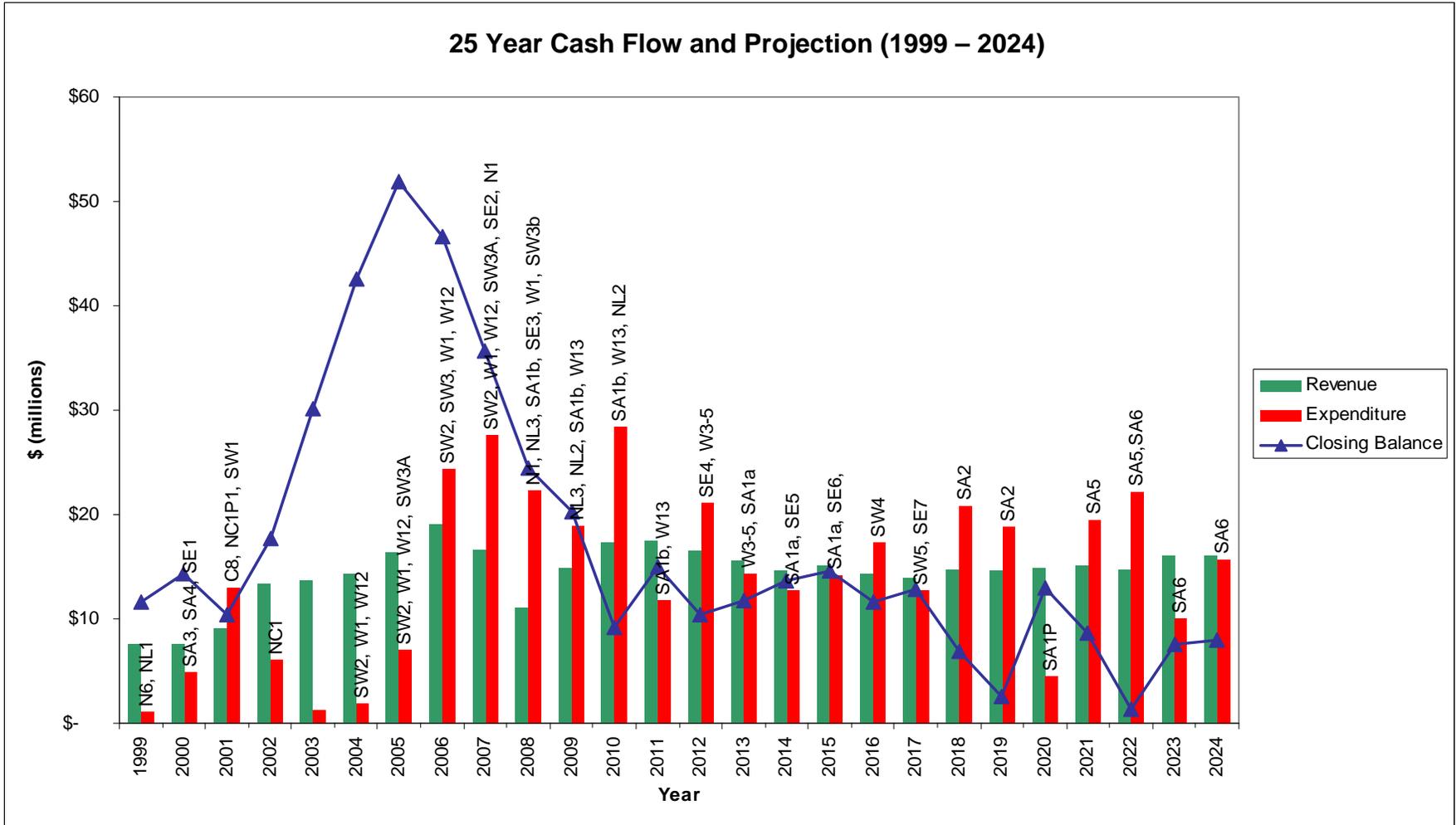


Figure 3

4.2 FIVE YEAR PROJECTION

Table 1 shows the five year revenues and expenditures projections for the Sanitary Servicing Strategy Fund based on the latest information available.

REVENUES

Opening Balance for 2008 – The SSSF cash balance as of December 31, 2007.

Revenues and Expenditures for 2008 – These are based on actual values recorded.

Interest (2009-2013) – An assumed rate of return of 3.5% per annum based on the estimated mid-year balance was used.

Utility Contribution – This amount represents contributions from the Sanitary Utility for diversion of sanitary flows from serviced City lands to the new trunk system constructed under the SSSF. These lands are located in Mill Woods and in Castle Downs. The amount is calculated based on an estimate of the SSTC these lands would have to pay. Based on results of the lot counts conducted in 2000, the Sanitary Utility would make annual contributions of \$2.6 million to the SSSF until 2013. In March 2006, City Council approved the recommendation to change the Utility Contribution amount to \$1.3 million for 17 more years commencing on January 1, 2007.

The assumed rate of return for fund investment during the next 5 years has been lowered to 3.5%.

The Sanitary Sewer Trunk Charge has been increased by 5.75% from 2008 for the year 2009.

Sanitary Sewer Trunk Charge – The SSTC is collected when an application is made for a Development Permit or sanitary service connection. This charge applies to all new and re-developments in the City. Rates for 2009 were increased by 5.75% from 2008. The following are the SSTC rates for 2008 and 2009:

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<u>Type of development</u>	<u>2008</u>	<u>2009</u>
Single-family/Duplex Residential	\$1,016/dwelling	\$1,074/dwelling
Multi-family Residential	\$725/dwelling	\$767/dwelling
Commercial, Industrial, Institutional	\$5,078/ha	\$5,370/ha

Estimated SSTC revenues from 2009 to 2013 are based on the assumption that residential development activity will slow down in 2009 and 2010 and begin to gradually rebound in subsequent years.

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, 1999.

The 2009 EA rates were increased by 5.75% from 2008. The 2008 and 2009 rates for EA are as follows:

<u>Contributing Area</u>	<u>2008</u>	<u>2009</u>
North Edmonton Sanitary Trunk (NEST)	\$14,505/ha	\$15,339/ha
South Edmonton Sanitary Sewer (SESS)	\$14,505/ha	\$15,339/ha
Terwillegar and University Farms (TUFS)	\$14,505/ha	\$15,339/ha
West Edmonton Sanitary Sewer (WESS)	\$18,131/ha	\$19,174/ha

Contributions from Expansion Assessment are expected to drop significantly in 2009 and 2010 and begin to slowly rebound in 2011.

EXPENDITURES

Estimated Construction Costs – Construction cost estimates for the 2009 to 2013 timeframe were developed at the detailed design stage except for WESS W13, WESS W3 to 5 and SESS SE4, which are based on concept level designs. The timing of construction is critical for the fund balance.

The Expansion Assessment is collected from the contributing areas shown in Figure 2.

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SANITARY SERVICING STRATEGY FUND - 5 YEAR PROJECTION

	2008 (Actual)	2009	2010	2011	2012	2013
Opening Balance	\$ 35,703,378	\$ 25,204,494	\$ 17,498,652	\$ 7,682,096	\$ 10,830,345	\$ 13,698,711
Interest	1,156,343	406,016	607,704	540,286	654,550	879,503
Utility Contribution	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000
Sanitary Sewer Trunk Charge	3,787,329	3,050,726	4,184,172	4,934,041	6,091,133	6,405,299
Expansion Assessment	3,990,371	3,459,416	4,875,941	5,506,735	6,006,057	6,366,350
Total Receipts	10,234,043	8,216,158	10,967,818	12,281,062	14,051,740	14,951,151
Estimated Construction Costs	(20,423,005)	(14,922,000)	(19,784,375)	(8,132,813)	(10,873,969)	(14,135,942)
Other Estimated Expenditures	(309,922)	(1,000,000)	(1,000,000)	(1,000,000)	(309,406)	(323,877)
Total Disbursements	(20,732,927)	(15,922,000)	(20,784,375)	(9,132,813)	(11,183,375)	(14,459,819)
Closing Reserve Balance	\$ 25,204,494	\$ 17,498,652	\$ 7,682,096	\$10,830,345	\$ 13,698,711	\$14,190,042

Proposed Construction Program

	Total 2009 - 2013	2009	2010	2011	2012	2013
W1	\$ 2,180,000	\$ 2,180,000	\$ -	\$ -	\$ -	\$ -
SW3B	2,300,000	2,300,000	-	-	-	-
SA1b	19,579,688	5,500,000	8,200,000	5,879,688	-	-
NL3	4,442,000	4,442,000	-	-	-	-
W13	12,608,164	500,000	-	-	8,699,175	3,408,989
SE4A	1,332,500	-	1,332,500	-	-	-
W14	6,150,000	-	6,150,000	-	-	-
NL2	6,355,000	-	4,101,875	2,253,125	-	-
SA1P1 (SESS Pump Station)	2,174,794	-	-	-	2,174,794	-
SA10	10,726,953	-	-	-	-	10,726,953
Total	\$67,849,098	\$14,922,000	\$19,784,375	\$ 8,132,813	\$10,873,969	\$14,135,942

Table 1

4.3 STATEMENT OF FUND ACTIVITIES AND BALANCE

The Statement of Fund Activities and Balance for 2008 are shown on Table 2, while Figure 4 shows each revenue component as a percentage of the total revenues. Figure 5 shows the historical SSSF revenue breakdown and Figure 6 shows the historical SSSF expenditures.

Total revenues for 2008 was only 57% of that collected in 2007.

Revenue from multi-family units was again higher than single-family & duplex units in 2008.

SSTC collected from commercial, industrial and institutional development was up by 12%.

Expansion Assessment revenues were down by 45%, reflecting the slow down in land development activities..

REVENUES

Total revenues for 2008 were \$10.23 million which is much lower than the amount of \$17.84 million collected in 2007.

- ♦ **Sanitary Sewer Trunk Charge (SSTC)** – For 2008, SSTC revenues totaled \$3.8 million, a significant drop from the 2007 SSTC revenues of \$7.6 Million. For the second year in a row, multi-family developments contribute more than the single-family/duplex developments, with the respective revenue being \$1.5 Million versus \$1.2 Million. This is similar to the situation in 2007 when the multi-family contribution was \$3.4 Million versus single-family/duplex contribution of \$3.3 Million. The remaining SSTC revenue, \$1.1 Million, came from commercial, industrial, and institutional sector, up from the \$1.0 Million of 2007.
- ♦ **Expansion Assessment (EA)** - For 2008, the total EA collected was \$4.0 Million, down significantly from the \$7.3 Million collected in 2007.
- ♦ **Utility Contribution** – Total Utility contribution in 2008 remained the same at \$1.3 Million.
- ♦ **Interest Earned** – Total interest earned during 2008 was \$1.2 Million compared to \$1.6 Million in 2007. This was due to the lower interest rate as well as the lower cash balance in 2008.

EXPENDITURES

The largest expenditure item in 2008 was \$7.0 Million for the construction of NEST NL2/NL3/N1. Another \$5.0 Million was spent on the construction of WESS W1, \$4.3 Million on SESS SW2-3, and \$2.9 Million for SESS SA1b.

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STATEMENT OF FUND ACTIVITIES & BALANCE

*Sanitary Servicing Strategy Fund
For the Period Ending December 31, 2008*

	2007 Actual	2008 Actual	2008 Budget	2008 Variance
REVENUES				
Sanitary sewer trunk charge - single/duplex revenue	\$ 3,281,138	\$ 1,211,864	\$ 2,000,000	\$ (788,136)
Sanitary sewer trunk charge - multi family revenue	3,382,377	1,490,522	2,000,000	(509,478)
Sanitary sewer trunk charge - commercial/industrial/institutional revenue	965,237	1,084,943	1,000,000	84,943
Expansion assessment	7,302,072	3,990,371	2,700,000	1,290,371
	14,930,824	7,777,700	7,700,000	77,700
Utility system contribution	1,300,000	1,300,000	1,300,000	0
Interest earned	1,610,583	1,156,343	1,000,000	156,343
<i>Total Revenues</i>	<i>17,841,407</i>	<i>10,234,043</i>	<i>10,000,000</i>	<i>234,043</i>
EXPENDITURES				
WESS - W1	7,767,335	5,066,517	7,000,000	(1,933,483)
WESS - W12	2,561,000	-	-	-
SESS - SW2-SW5	10,008,227	4,287,302	2,000,000	2,287,302
SESS SA Stage 1	309,919	2,893,252	1,558,000	1,335,252
SESS SE Stage 2	3,179,941	-	-	-
SESS SE Stage 3	-	1,195,176	4,000,000	(2,804,824)
NEST Stage NL2 & NL3	3,590,135	6,980,758	6,000,000	980,758
NEST - Conceptual Design	-	-	-	-
SESS - Conceptual Design	22,414	42,244	227,000	(184,756)
WESS - Conceptual Design	-	30,325	632,000	(601,675)
Miscellaneous	118,125	93	-	93
Conceptual Costs	-	237,260	-	237,260
<i>Total Expenditures</i>	<i>27,557,095</i>	<i>20,732,927</i>	<i>21,417,000</i>	<i>(684,073)</i>
Excess of Revenues over Expenditures	(9,715,688)	(10,498,884)	(11,417,000)	918,116
Opening Balance	45,419,065	35,703,378	35,703,378	
Closing Balance	\$ 35,703,378	\$ 25,204,494	\$ 24,286,378	\$ 918,116

Table 2

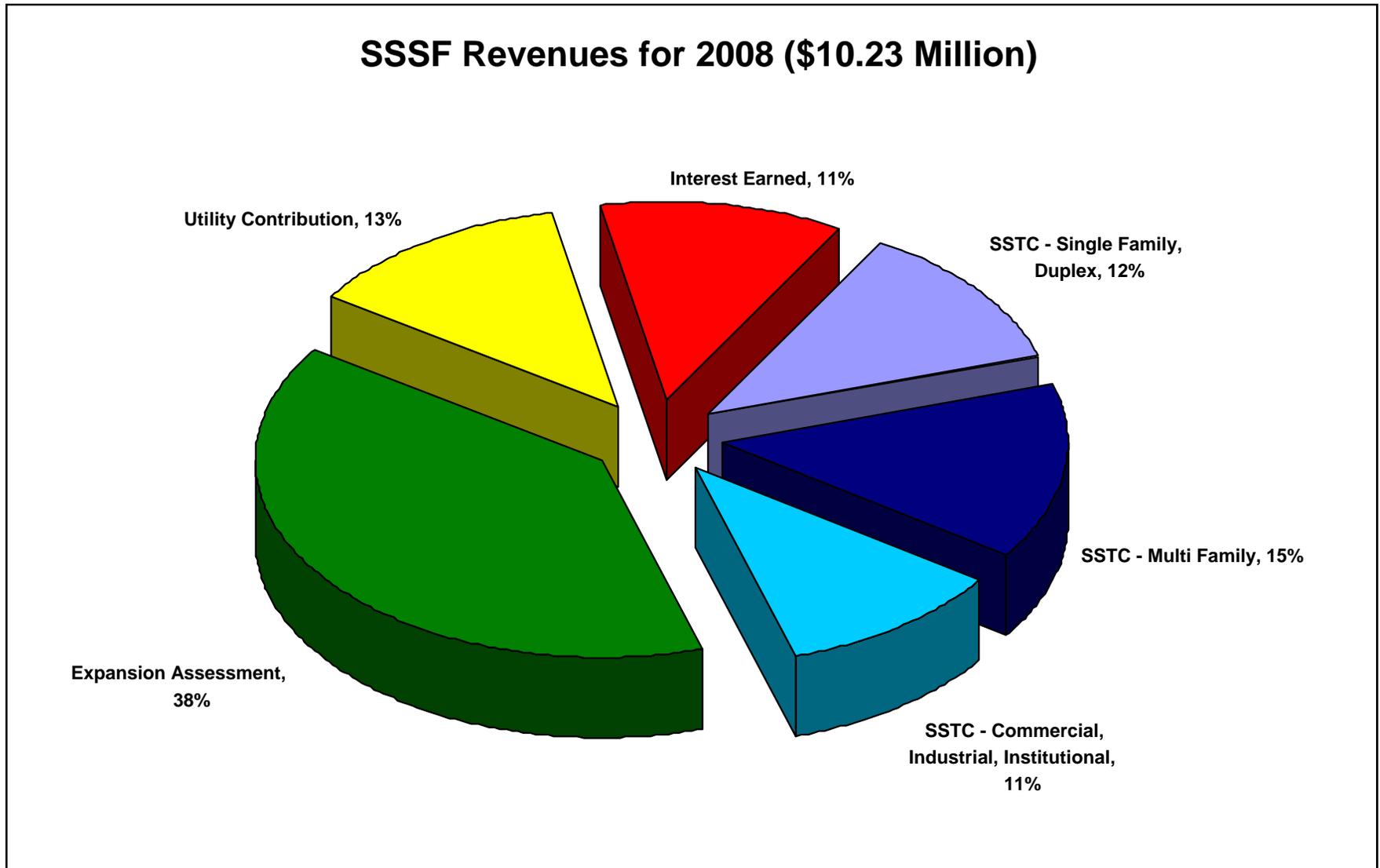


Figure 4

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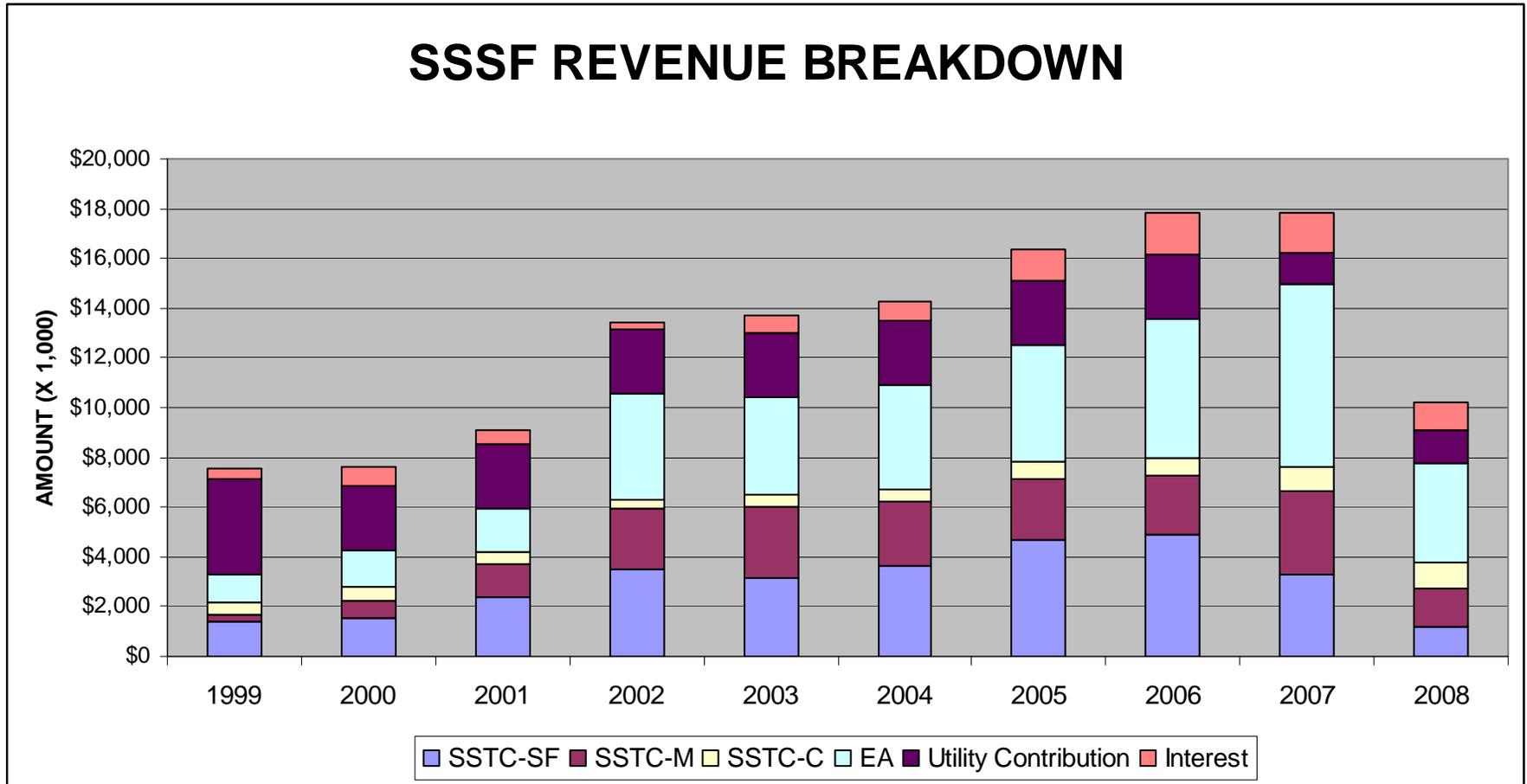


Figure 5

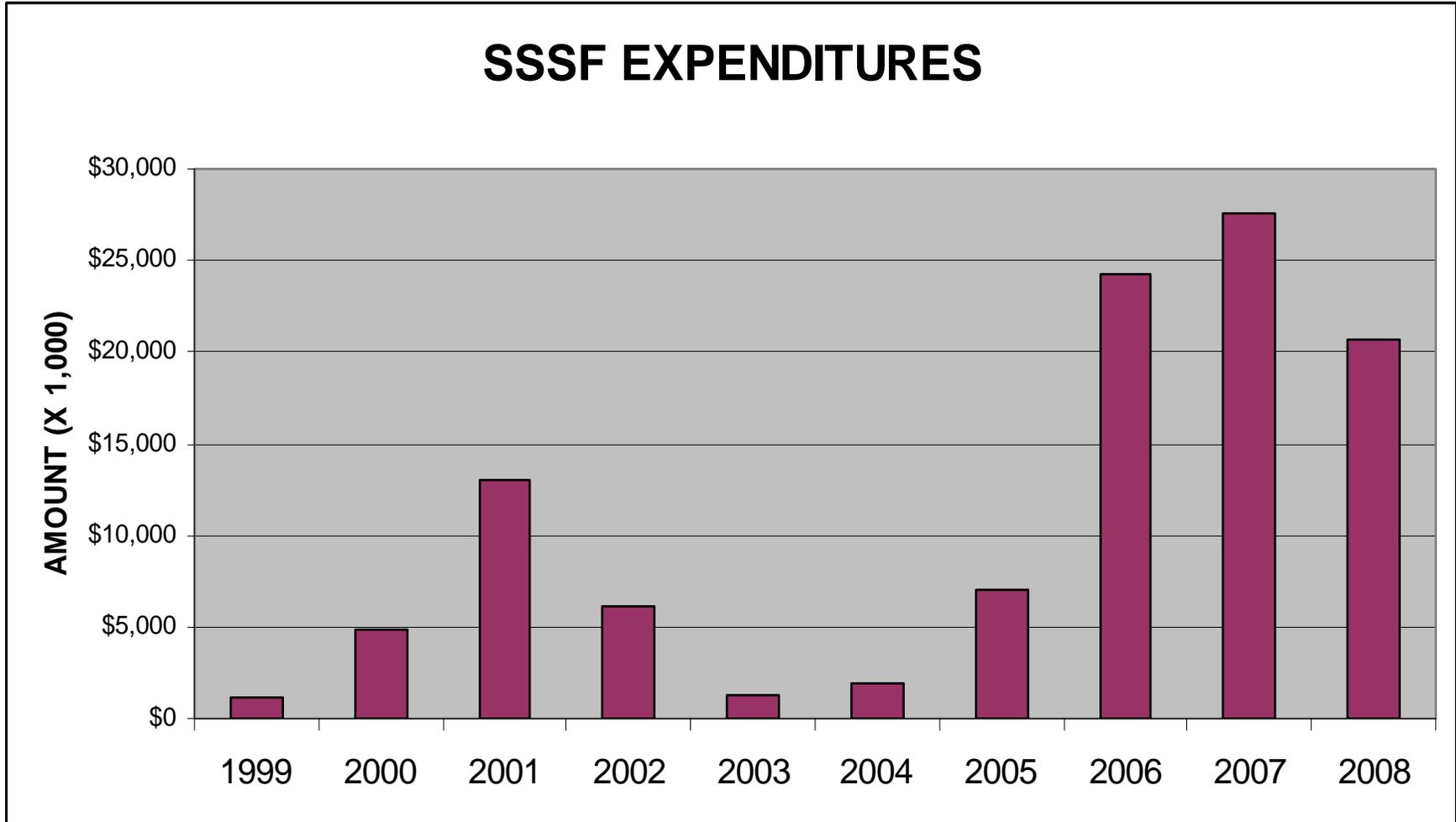


Figure 6