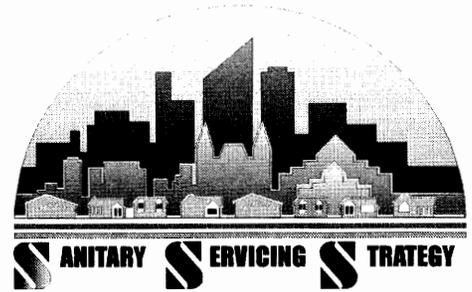


John Hodgson

THE CITY OF EDMONTON
SANITARY SERVICING STRATEGY FUND



1999 ANNUAL REPORT

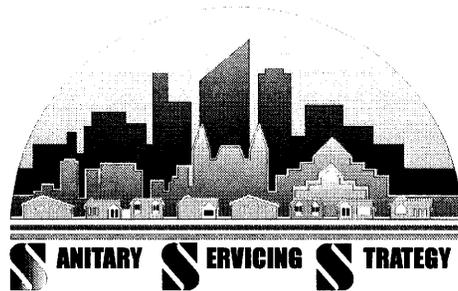
March, 2000

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

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John Hodgson

THE CITY OF EDMONTON
SANITARY SERVICING STRATEGY FUND



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Sanitary Servicing Strategy Fund
Annual Report

MESSAGE FROM THE MANAGEMENT COMMITTEE

This is the first annual report of the Sanitary Servicing Strategy Fund. Activities in 1999 included revenue collection, and the planning and designing of the initial projects. Two committees, the SSSF Management Committee and the SSSF Operational Committee have been meeting regularly to set up the Fund and refine project plans and schedules. Additional meetings were held within the City and with other customers to develop many of the operating principles for the Fund.

In 1999, the Sanitary Sewer Strategy Fund has done well in revenue collection. With a closing balance of over \$11.5 million, we are in a good position to implement the first project, SW1, in 2000. We enter the new millennium with SW1 and SE1 about to start construction at a combined cost of approximately \$12.8 million. These projects will have a positive effect on development in south Edmonton.

Our attention in 2000 will be on planning and design work for north Edmonton. In addition, projects are planned for the west end of the City in the future. These projects will be dealt with in more detail as the scope and schedule of the necessary works are defined further.

Establishing the financial initiatives over the last few years and the SSSF have required significant commitments by many organizational groups and individuals in both the public and private sector. I would like to thank those who have been part of this. There are more challenges ahead as construction activities come to the forefront. Through successful implementation of the Sanitary Servicing Strategy Fund projects, we will be able to address sewerage transmission needs in Edmonton during the 21st Century.

Yours truly,



John Hodgson, Ph.D., P. Eng.
Chairman, Management Committee

Sanitary Servicing Strategy Fund
Annual Report

TABLE OF CONTENTS

	<u>Page</u>
Message from the Management Committee.....	i
Table of Contents.....	ii
1.0 THE SANITARY SERVICING STRATEGY.....	1
2.0 MANAGEMENT AND OPERATIONAL COMMITTEES	2
3.0 FIVE YEAR CONSTRUCTION PLAN.....	4
4.0 FUND BALANCE	
.1 Twenty Year Projection.....	6
.2 Five Year Projection	7
.3 Statement of Equity.....	10

1.0 THE SANITARY SERVICING STRATEGY

Background

The Sanitary Servicing Strategy is a long-range servicing plan that will facilitate both development in new areas and redevelopment within the existing city. The strategy was approved by City Council on June 28, 1998. Revenue collection began on January 1, 1999 to provide a mechanism for financing construction of major sanitary trunk sewers in the City of Edmonton.

The Sanitary Servicing Strategy will facilitate development in new areas and redevelopment within the existing city

Sanitary Servicing Strategy Fund

For most development in the City, the cost of constructing sanitary trunk sewers is front-ended by the developer. These costs are then recovered using the Permanent Area Contribution (PAC) system. This system will remain in place as a means of financing on-site and off-site sewers servicing local areas.

The SSSF does not replace the PAC's

The high cost of constructing major sanitary trunk sewers, combined with their larger servicing areas (minimum 1400 ha) meant that another system for financing sewer construction was required. To remove the burden of front-ending large construction costs from the developer (and the City), the Sanitary Sewer Strategy Fund (SSSF) was created. Revenue for this fund flows from three sources:

Major new trunk construction is supported by Developers, Home Builders and the Utility

- Expansion Assessment (payable upon subdivision approval)
- Sanitary Sewer Trunk Charge (payable upon Development Permit approval)
- City of Edmonton (through the sanitary sewer utility contributions)

The SSSF will operate with a positive balance

One basic operating principle of the SSSF is that the revenues will be collected ahead of the expenditure. Thus, the fund will then be able to finance the construction of major sanitary sewer trunks while remaining in a positive balance.

2.0 MANAGEMENT AND OPERATIONAL COMMITTEES

The **Management Committee's** primary role is to meet the construction needs of the development community while maintaining the long-term viability of the Fund. 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 – K.C. Er
Director of Development Coordination – Wayne Cameron
Chair of UDI Drainage Committee – Bob Gomes
Member of UDI Executive Committee – Jim Brown

Major accomplishments by the Management Committee in 1999 were:

- *Lot inventory Reconciliation*
- *SW1 construction approval*
- *SE1 construction approval*
- *C8 construction approval*

Support for this committee is provided by the Cost Assessment Engineer (Paul Hoffart). The Management Committee met nine times in 1999, to make decisions regarding revenue income and expenditures, as well as project initiation. Below are the major accomplishments for the year:

- Completed the lot inventory reconciliation to developers who had paid into the North Edmonton Sewer Trunk (NEST) area.
- Approved the length, size, cost and schedule of the first stage of construction of the South Edmonton Sanitary Sewer SW1. This tunnel, 2500 m long and 2340 mm in diameter will be built along Ellerslie Road from 91 Street to 111 Street.
- Approved the construction of SE1 for the year 2000.
- Approved the construction of C8 for the year 2000.

Sanitary Servicing Strategy Fund
Annual Report

The Operational Committee examines technical issues to support project implementation

The **Operational Committee's** primary role is to provide recommendations to the Management Committee regarding the timing and capacity requirements for new trunk construction. In addition, the Operational Committee supports project implementation by examining design and construction issues. The committee also flags future projects for initiation and relevant issues for Management Committee consideration. The Committee is composed of 7 members (five from the City and two from UDI):

Chair: Senior Engineer, Strategic Planning – Sid Lodewyk
Members: Program Manager, Design and Construction – Siri Fernando
Planning and Development Representative – Orest Gowda
Drainage Financial Services – Dennis Yakubow
Member of UDI Committee – Ken Sadownyk
Member of UDI Committee – Blaine Usenik
Cost Assessment Engineer – Paul Hoffart

Major Accomplishments for the year include:

Major accomplishments included the final recommendations on the size and length of SW1.

- Final recommendations on size and length for SW1.
- Finalizing allowable expenditures for the Sanitary Sewer Strategy Fund.
- Recommendation to construct C8.
- Recommendation to construct SE1
- Recommendation to begin detailed design of NC1.
- Recommendation to establish the routing of SA1/SA2.

3.0 FIVE YEAR CONSTRUCTION PLAN

The City of Edmonton Drainage Services has determined the construction schedule for Sanitary Trunks based on the projected populations in the 1999 Transportation Master Plan. The schedule presented for the works was developed to cost-effectively support development throughout the City of Edmonton. The locations of the construction projects are shown on Figure 1.

2000/2001 – South Edmonton Sanitary Sewer Stage SW1

The first construction project to be financed by the SSS Fund is the South Edmonton Sanitary Sewer Stage SW1. Construction began in February, 2000 with the sinking of the shaft for the drop structure at 104 Street and Ellerslie Road. From there, two Tunnel Boring Machines (TBM) will be utilized for the construction of the 2.5 km, 2340 mm diameter tunnel. Tunneling will begin in late May, with an estimated completion date of December. Construction will then begin on the 3600 mm diameter, 40 m deep pump station and forcemain connection to the South East Regional Trunk Sewer (SERTS). Completion date is set for June of 2001.

The tunneling and shaft construction will be completed by the City's Design and Construction Branch, the pump station will be constructed by a private contractor. The completion of SW1 and pump station will service lands in East Heritage Valley. Estimated cost of construction based on preliminary design is \$11.7 million.

2000 – South Edmonton Sanitary Sewer Stage SE1

This line will service lands in the Ellerslie Neighborhood. Construction of this 1200 mm open-cut sewer is scheduled for the summer of 2000. The line will tie into the proposed pumpstation at Parson's Road and 97 Street and extend 650 m southeast along Parson's Road to 91 Street. A private contractor will complete the construction. Based on the concept plan, the total cost is estimated at \$1.1 million.

SW1 is the first construction project to be funded by the Sanitary Sewer Strategy fund, and will open up lands in East Heritage Valley.

SE1 will support development activities in Ellerslie

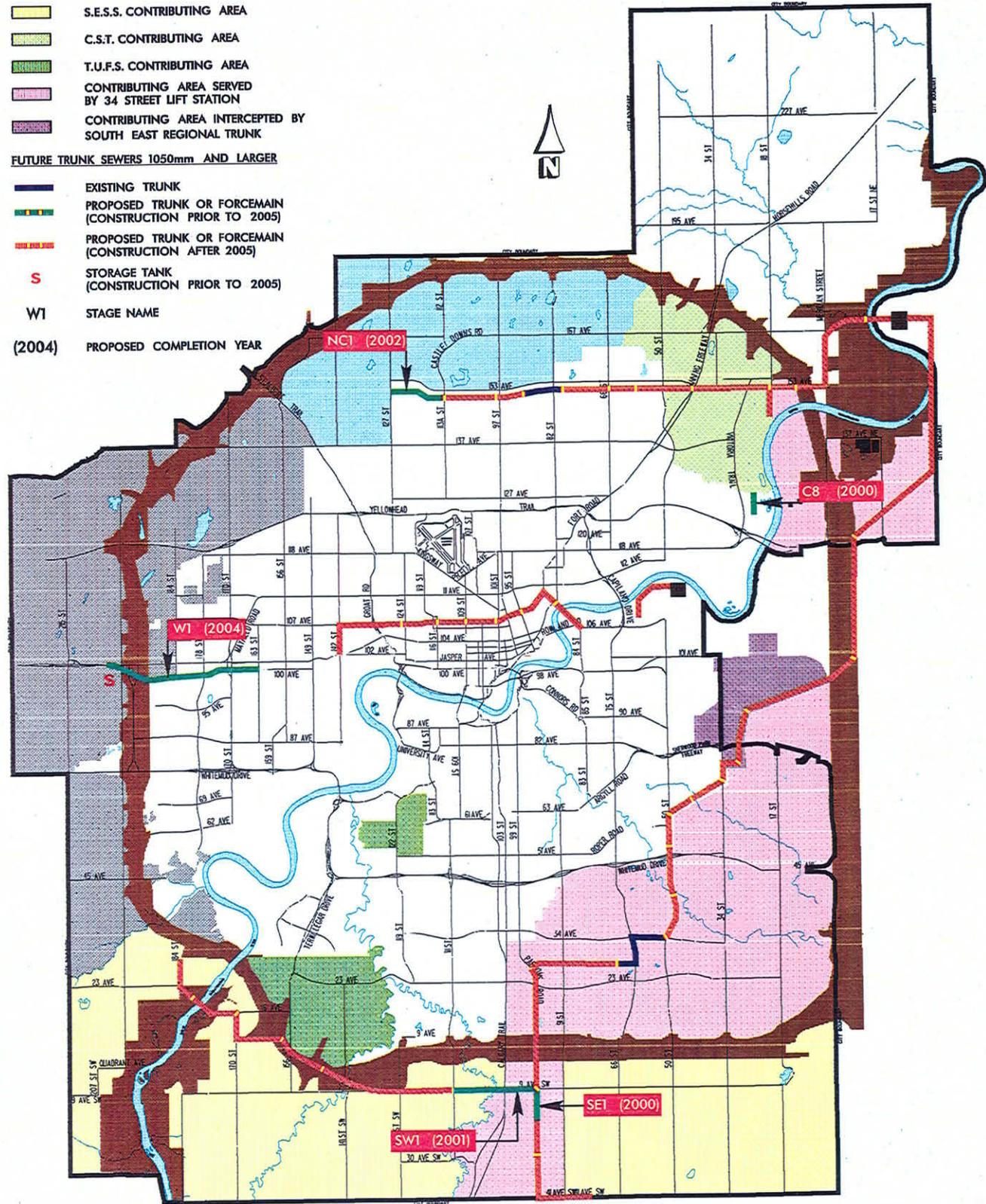
SANITARY SERVICING STRATEGY FIVE YEAR FORECAST: 2000 - 2004

LEGEND

- R.D.A. RESTRICTED DEVELOPMENT AREA
- N.E.S.T. CONTRIBUTING AREA
- W.E.S.S. CONTRIBUTING AREA
- S.E.S.S. CONTRIBUTING AREA
- C.S.T. CONTRIBUTING AREA
- T.U.F.S. CONTRIBUTING AREA
- CONTRIBUTING AREA SERVED BY 34 STREET LIFT STATION
- CONTRIBUTING AREA INTERCEPTED BY SOUTH EAST REGIONAL TRUNK

FUTURE TRUNK SEWERS 1050mm AND LARGER

- EXISTING TRUNK
- PROPOSED TRUNK OR FORCEMAIN (CONSTRUCTION PRIOR TO 2005)
- PROPOSED TRUNK OR FORCEMAIN (CONSTRUCTION AFTER 2005)
- STORAGE TANK (CONSTRUCTION PRIOR TO 2005)
- W1** STAGE NAME
- (2004)** PROPOSED COMPLETION YEAR



NOTE: ALL PROJECT ALIGNMENTS AND PROJECT TIMING ARE SUBJECT TO REVIEW AND CHANGE

FIGURE 1

C8 will divert flows from South Clareview away from the corroded and overused Clareview trunk.

2000 – Clareview Sanitary Trunk Stage C8

Currently, sanitary flows from the Clareview, Casselman, and Pilot Sound neighborhoods are carried to the Capital Region Sewage Treatment Plant via a 900 mm trunk. This trunk line, which runs along the north bank of the Saskatchewan River, is corroded in sections and exceeds its capacity during large rainfall events. The proposed C8 construction will divert dry and wet weather flows from South Clareview, thus reducing the risk and consequence of failure of the existing 900 mm trunk. The freed capacity will allow continued development in these neighborhoods. By constructing this pipe now, much more expensive projects are delayed for up to 20 years. The construction will proceed in the summer of 2000. Total cost, based on detailed design, is estimated at \$1.0 million.

NC1 will allow continued development in the Palisades and the Castle Downs Extension.

2001/2002 – North Edmonton Sanitary Trunk Stage NC1

This 2340 mm tunnel will start at 127 Street and proceed east approximately 1500 m along 153 Avenue. A pumpstation will be built at the downstream end and a forcemain installed in the tunnel, sending the flows back to 127 Street. Design work commenced in 1999; construction will commence in 2001 with a fall 2002 completion date. Total cost based on a completed facility plan is estimated at \$8.8 million

W1 will open lands in North Lewis Estates and the Winterburn Industrial area.

2003/2004 – West Edmonton Sanitary Sewer Stage W1

This first stage of WESS will consist of a storage tank, pumpstation and forcemain. The storage tank and pumpstation will be located west of the existing Anthony Henday Drive. The forcemain will cross the Transportation Utility Corridor and proceed eastward to 165 Street, tying into the existing 1900 mm diameter major trunk sewer. This project will service lands in the North Lewis Farms and Winterburn Industrial areas. The estimated total cost, based on concept design, is \$7.3 million.

4.0 FUND BALANCE

4.1 TWENTY YEAR PROJECTION

The Twenty Year cash flow projection for the SSSF will be the main factor in any decision to raise the SSTC and EA rates

Figure 2 shows the Twenty Year projection for the SSSF. This projection is a valuable tool in assisting the Management and Operational Committees in setting policy for rate increases and project approvals. There are a number of assumptions built into this model:

- a) An annual 2% increase in the rates to account for construction cost increases.
- b) An *additional* increase of 15% in each of the years 2005, 2010, 2015, and 2020.
- c) A 2% increase in construction costs.
- d) An annual growth rate of 1.5%.
- e) A 4.5% annual interest rate.

These assumptions reflect the fund concepts approved by City Council in 1998. It should be noted that the above assumptions will be reevaluated each year as new data is gathered regarding past performance and future trends. The Management Committee will likely be recommending annual increases to match inflation in future years. However, the Committee is concerned about the large increases every 5 years and will pursue strategies to reduce the impact of these on our customers.

Construction Projects – The timing of when to build the various construction projects and the estimated construction costs are based on a number of studies completed by Drainage Services and consultants. These studies examined the projected development growth combined with the existing downstream capacity to arrive at estimates of the storage and conveyance requirements. Construction costs will be updated from time to time as new information arises from each project's progress, from concept, to design, to construction.

Sanitary Servicing Strategy Fund 20 Year Cash Flow Projection

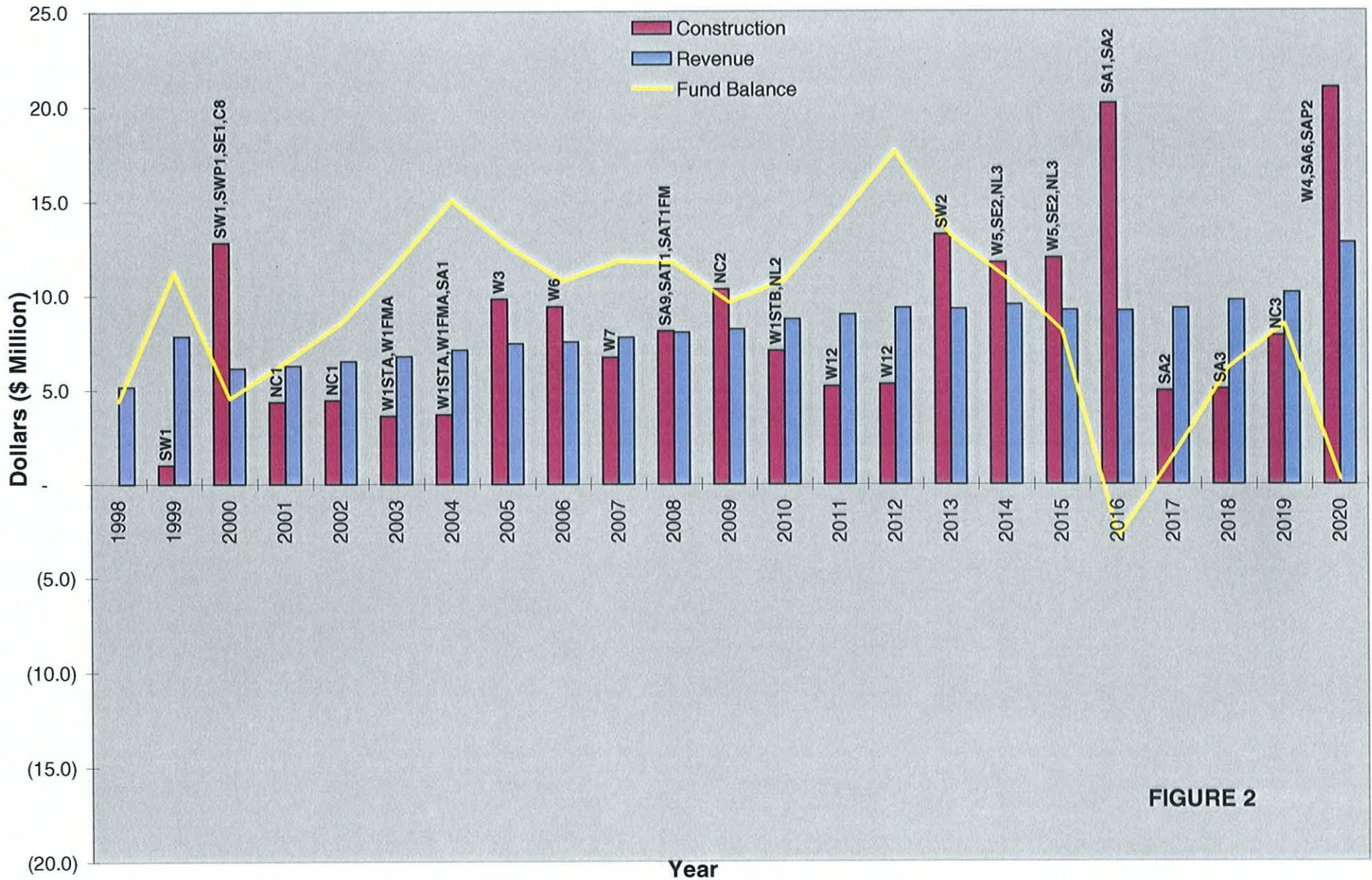


FIGURE 2

4.2 FIVE YEAR PROJECTION

Table 1 shows the Five Year projection for the Sanitary Sewer Strategy Fund. This projection is based on the following assumptions:

REVENUES

On January 1, 1999, the opening balance for the SSSF was \$5.1 million.

Opening Balance for 1999 – The amount transferred on January 1, 1999, out of the NEST and SESS funds, the North East Regional Plant Connection fund. The 1999 Celanese Canada payment is shown as a separate item. The NEST fund was originally established in 1994 to finance the construction of trunk sewers in north Edmonton. On January 1, 1999, the SSSF assumed responsibility to finance the construction of major trunk sewers in the NEST basin.

Receipts and Disbursements for 1999 – These are based on actual values.

Interest Accrual (2000 – 2004) – Assumes an annual rate of return of 4.75% based on the estimated mid-year balance.

The Sanitary Utility is initially providing \$2.6 million per year to the SSSF.

Utility Contribution – The Sanitary Utility will contribute an amount representing the existing serviced City land that will be reconnected to the new trunk system. This land is in Mill Woods, and parts the Meadows and Castle Downs. The actual amount is to be based on the SSTC assessed on an estimate of the number of lots in these areas. The City Utility payments for this assessment will occur from 1999 through 2014.

Expansion Assessment – The EA is an area-based cost that is collected at the time of Servicing Agreement. The EA applies only to those areas of the City that did not have an approved Neighborhood Structure Plan (NSP) before January 1, 1999. The 1999 rates for EA are as follows:

TABLE 1 - SANITARY SEWER STRATEGY FUND - 5 YEAR PROJECTION

Feb. 16, 2000

	1999	2000	2001	2002	2003	2004
Opening Balance	\$ 5,151,095	\$ 11,565,489	\$ 6,377,124	\$ 7,054,378	\$ 9,659,722	\$ 13,463,622
Interest Accruals	391,622	411,635	307,254	385,344	533,900	722,000
Celanese Canada	1,298,530	0	0	0	0	0
Utility System Contribution	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000	2,600,000
Sanitary Sewer Trunk Charge	2,168,023	2,500,000	2,750,000	2,900,000	3,080,000	3,268,626
Expansion Assessment	1,098,734	1,300,000	1,350,000	1,400,000	1,450,000	1,500,000
Total Receipts	7,556,909	6,811,635	7,007,254	7,285,344	7,663,900	8,090,626
NEST Lot Inventory Reconciliation	(839,769)	0	0	0	0	0
Estimated Construction Costs	(302,746)	(11,800,000)	(6,120,000)	(4,460,000)	(3,630,000)	(3,700,000)
OE Payback	0	(200,000)	(210,000)	(220,000)	(230,000)	(240,000)
Total Disbursements	(1,142,515)	(12,000,000)	(6,330,000)	(4,680,000)	(3,860,000)	(3,940,000)
Closing Reserve Balance	\$ 11,565,489	\$ 6,377,124	\$ 7,054,378	\$ 9,659,722	\$ 13,463,622	\$ 17,614,248

Estimated Construction Costs

Total Cost		1999	2000	2001	2002	2003	2004
SW1	\$11,700,000	\$ 250,000	\$ 9,700,000	\$ 1,750,000			
SE1	\$ 1,100,000		\$ 1,100,000				
C8	\$ 1,000,000		\$ 1,000,000				
NC1	\$ 8,830,000			\$ 4,370,000	\$ 4,460,000		
W1	\$ 7,330,000					\$ 3,630,000	3,700,000

Sanitary Servicing Strategy Fund
Annual Report

The Expansion Assessment is collected from the four basins shown on figure 1

North Edmonton Sanitary Trunk (NEST) - \$10,000
West Edmonton Sanitary Sewer (WESS) - \$12,500
Terwillegar and University Farms (TUFS) - \$10,000
South Edmonton Sanitary Sewer (SESS) - \$10,000

Sanitary Sewer Trunk Charge – The SSTC is collected at the Development Permit stage. This charge applies to all new development and redevelopment in the City. For 1999, the SSTC rates were as follows:

The Sanitary Sewer Trunk Charge applies to all new development and redevelopment in the City.

Residential Single-family dwelling:	\$700
Residential Multi-family dwelling:	\$500/unit
Commercial, Industrial, Institutional:	\$3,500/ha

Estimation for future SSTC revenue is based on projected growth rates in the City. In the case of the SSTC, an estimate of the inner City redevelopment was added to the estimates for newly developed areas of the City.

DISBURSEMENTS:

The Lot Inventory Reconciliation was a one time payback to developers in NEST.

Lot Inventory Reconciliation – From 1994 to 1998, developers in the NEST basin made sanitary PAC payments to the NEST fund ranging from \$17,900 to \$20,500 per hectare. On January 1, 1999, the \$10,000/ha Expansion Assessment replaced the NEST payment. However, there were over 1100 lots, along with some commercial property in the NEST basin that did not have Building Permits as of January 1, 1999. With the collection of the \$700/lot SSTC, the SSSF would have been double-collecting from these developments. Thus the lot inventory reconciliation returned \$700/lot to the developers who had paid into NEST prior to January 1, 1999. The total amount returned was \$839,769.

Sanitary Servicing Strategy Fund
Annual Report

Estimated Construction Costs – Construction costs for SW1 and C8 are based on preliminary design while SE1, NC1 and W1 are based on conceptual designs. The timing of construction is a critical factor for the fund balance. The timing shown for the construction schedule is based on projected development needs and the estimated length of construction. SW1, NC1, and W1 for example will be paid out over a number of years.

Over-expenditure Payback is yearly payments made to existing sanitary front-ending projects.

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. As development occurs in these basins, Expansion Assessment revenues paid to SSSF will be used to pay off these two accounts. The estimates are based on projected development .

4.3 STATEMENT OF EQUITY FOR 1999

The Statement of Equity for 1999 is shown in Table 2

REVENUES

The largest contribution to SSTC was from single family residential at \$1.38 million in 1999.

Sanitary Sewer Trunk Charge (SSTC) – For 1999, the total SSTC collected was \$2,168,023. The majority of the income, \$1,380,345 was collected from the \$700/dwelling charged to a single family residence. This represents 1,972 new single family housing starts in the City of Edmonton for 1999. Other SSTC income included \$500/unit from the multi-family applications, totaling \$294,200. SSTC from commercial/industrial/institutional development was \$493,478 representing 141 ha of land at the 1999 rate of \$3500/ha.

Celanese Canada contributed a one-time payment nearly \$1.3 million to Expansion Assessment.

Expansion Assessment (EA) - For 1999, the total EA collected was \$2,397,264. Of this total, \$1,298,530 was a one time payment from Celanese Canada. The remaining \$1,098,734 was from new development in both the NEST areas and SESS areas, mainly single family residential development. At \$10,000/ha, this represents 110 ha of development in the two basins. There was no development in the WESS basins that contributed to the SSSF in 1999.

Utility Contribution – Total Utility contribution in 1999 was \$2,600,000.

Interest Earned – Total interest earned for 1999 was \$391,622.

Total revenues for 1999 were \$7,556,909

EXPENDITURES

The only expenditures beyond the \$839,769 NEST rebate to developers was \$288,329 for consulting services relating to the detailed design of SW1.

TABLE 2 - 1999 STATEMENT OF EQUITY

Drainage Services			
Statement of Revenues and Expenditures			
Sanitary Sewer Strategy Fund			
For the period of January to December 1999			
	December	November	December
	Year to Date	Year to Date	Actual
REVENUES			
Sanitary sewer trunk charge - single/duplex revenue	1,380,345	1,296,500	\$ 83,845
Sanitary sewer trunk charge - multi family revenue	294,200	218,500	\$ 75,700
Sanitary sewer trunk charge - commercial/industrial/institutional revenue	493,478	346,671	\$ 146,807
Celanese Final Payment	1,298,530	1,298,530	\$ -
Expansion assessment	1,098,734	894,904	\$ 203,830
	<u>4,565,287</u>	<u>4,055,105</u>	\$ 510,182
Utility system contribution	2,600,000	2,431,000	\$ 169,000
Interest earned	391,622	344,253	\$ 47,369
Total Revenues	<u>7,556,909</u>	<u>6,830,358</u>	\$ 726,551
			\$ -
EXPENDITURES			
Direct costs:			\$ -
Study costs	0	0	\$ -
Contract construction	0	0	\$ -
Constructed by Drainage, Design and Construction	288,329	261,254	\$ 27,075
			\$ -
Overhead costs:			\$ -
Direct overhead	0	0	\$ -
Administration - 5%	14,417	13,063	\$ 1,354
	<u>302,746</u>	<u>274,317</u>	\$ 28,429
Rebate to Developers (NEST)	839,769	839,769	\$ -
Total Expenditures	<u>1,142,515</u>	<u>1,114,086</u>	\$ 28,429
			\$ -
Excess of Revenues over Expenditures	<u>6,414,394</u>	<u>5,716,272</u>	\$ 698,122

Drainage Services		
Statement of Equity		
Sanitary Sewer Strategy Fund		
As at December 31, 1999		
	December	November
Balance - January 1	5,151,094	5,151,094
Excess of revenues over expenditures	6,414,394	5,716,272
Balance - December 31, 1999	<u>11,565,488</u>	<u>10,867,366</u>