

SERVICE CONNECTION FAILURE ASSISTANCE FUND

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Overview

The Service Connection Failure Assistance Fund (SCFA) was set up as a type of insurance coverage for residents who have a problem with their water and sewer service.

Water and sewer service connection failures are generally due to freezing water lines. The cost of carrying out emergency repairs, especially in winter weather conditions, can exceed \$10,000. The SCFA fund also applies to sewer service connection failures, and helps cover the costs associated with fixing sewer connections.

Council established the SCFA program to provide municipal service customers with affordable insurance to cover repair costs.

The majority of customers participate in the program which, in the event of a failure, covers repair costs above \$1,000 and up to a maximum of \$25,000. The property owner pays the first \$1,000 (the deductible) and all costs exceeding \$25,000. The premium, currently set at \$10.00 per equivalent residential unit per month, is collected through a levy on the City water bill.

The program applies to failure of water or sewer services that occur between the building foundation and the City main. To qualify for the program a customer must have:

- a properly installed, operated and maintained freeze protection system
- water and sewer service connections in accordance with the applicable by-laws and codes

The costs that are covered under the program are those associated with the excavation, water and sewer repair or replacement, backfilling, placement of topsoil on the customer's property, pavement and sidewalk repair on City roadways.

Standard Water and Sewer Service Connection

In 1984 the City adopted the two-line circulation system as its standard water service connection, which proved to be the most cost-effective freeze protection system available. The system consists of two insulated copper lines connected by a small pump located in a heated area inside the premises, which continuously circulates water back to the City main to prevent freezing. Some downtown blocks also utilize a two-line water system, but with an orifice system rather than a circulating pump. The orifice system works on the pressure differential of supply and return lines.

Prior to 1984 a variety of freeze protection systems were being installed. These were typically single lines with bleeders, heat tape, or the Aquaflow system to provide freeze protection.

The problems with the freeze protection systems associated with single line services are:

- Bleeders waste a huge volume of treated water and add to the volume of sewage that must be pumped to the sewage lagoon. This wasted water can affect the volumes stipulated under the City's mandated water licence.
- Heat tape has a relatively short lifespan and leads to frequent freeze-up problems.
- The Aquaflow system is noisy and, as the system pumps water into the City's potable water system, it is not tamper-proof.

As the City continues to reconstruct streets and services in older sections, service connections are upgraded to the current standard. Water and sewer service connections that are repaired under the SCFA are upgraded to the current standard, as well.

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2014 Highlights

Highlights of the Service Connection Failure Assistance Fund for 2014 include the:

- Anticipated repair of 120 services by Public Works & Engineering staff, with 100 done to date. Ten of these required complete upgrades due to sewer failure that needed immediate attention
- In an average year, the number of repairs is estimated to be 60 to 70; however, these numbers have been increasing each year. During periods of prolonged power outages, it remains difficult to attribute service connection breaks to these events. It is assumed that the combination of lengthy power outages and the City's aging infrastructure, are both contributing to the increased number of breaks

2015/2016/2017 Goals

The goals of the Service Connection Failure Assistance Program include:

- Continue to be responsive to the residents of Yellowknife by minimizing the amount of time that they are without essential services
- Provide a reliable supply of high quality, potable water to Yellowknife citizens, and efficiently and responsibly dispose of waste water, as mandated under the *Cities, Towns and Villages Act*
- Maintain piped water and sewer systems in good functional condition
- Continue to eliminate water losses and wastage on mains and services
- Continue upgrading the City water and sewer systems, improving service to residents and reducing maintenance requirements and cost
- Hire qualified people to maintain a high standard of repair and maintenance of all City assets
- Conduct regular upgrading of supervisory staff through courses and conferences to learn about new technology and explore how it could benefit the City
- Increase public awareness and familiarity with the water system by providing educational materials on the SCFA program and "what to do" during power outages

- Improve public communications with social media, City website, and other media outlets to ensure that the City is reaching the majority of residents through as many means as possible

2015/2016/2017 Objectives

The objectives of the Service Connection Failure Assistance Program include:

- Continue to reduce the number of single-line water services and services having bleeders, heat trace and Aquaflow units by upgrading to current standards through capital improvement projects, as resources and budgets permit
- Provide the community with potable water that meets or exceeds the Canadian Drinking Water Quality Guidelines, the requirements of our Water License, and territorial/federal environmental and public health regulations, as established by the Mackenzie Valley Land and Water Board and the *Public Health Act*
- Eliminate water main and service losses through annual leak detection and repair, eliminate bleeders, improve system efficiencies and reduce operation and maintenance cost
- Continue to track repair costs and data to accurately portray the status of the fund



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The Service Connection Failure Assistance Fund provides for the repair and maintenance of the water supply and sewage lines from the City mains to the customer's building and provides assistance to customers.

	2013 Actual (\$000's)	2014 Budget (\$000's)	2014 Forecast (\$000's)	2015 Budget (\$000's)	2016 Budget (\$000's)	2017 Budget (\$000's)	Note
Revenue							
Insurance Premium	1,152	1,153	1,153	1,156	1,159	1,161	(1)
Insurance Deductible	49	60	60	60	60	60	
	<u>1,201</u>	<u>1,213</u>	<u>1,213</u>	<u>1,216</u>	<u>1,219</u>	<u>1,221</u>	
Expenditures							
Contracted Services	954	874	874	870	865	861	
Materials	116	55	55	56	58	59	
Labour/ Equipment	132	284	284	290	296	302	(2)
	<u>1,201</u>	<u>1,213</u>	<u>1,213</u>	<u>1,216</u>	<u>1,219</u>	<u>1,221</u>	
Net Revenue (Expenditures)	-	-	-	-	-	-	
Interfund Transfers							
(To) From Capital Fund	-	-	-	-	-	-	
Change in Fund Balance	-	-	-	-	-	-	
Opening Balance	-	-	-	-	-	-	
Closing Balance	-	-	-	-	-	-	

Notes:

- (1) See the following schedule of the Service Connection Failure Assistance Program premiums and deductibles.
(2) Labour and equipment are the internal charges from the Water and Sewer Fund.

Budgeted revenue is based on the following:

	Rate	Number/ Volume	2015 Budgeted \$
Premiums Per Equivalent Residential Unit	\$10.00	9,636	1,156,300
Deductible-(Average # of Monthly Charges)	\$1,000.00	5.00	60,000
Total Revenue			<u>1,216,300</u>

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Service Connection Failure Assistance Performance Measures

	Projected 2013	Actual 2013	Projected 2014	Forecasted 2015	Forecasted 2016	Forecasted 2017	Notes
Workload Indicators							
No. of services repaired/replaced under SCFAF:							
Public Works (in-house)	75	69	85	50	50	50	
Contracted Out	10	9	35	10	10	10	
Total	85	78	120	60	60	60	
Effectiveness Measures							
Average cost to repair/replace service with dual circulating water service under SCFAF	\$9,000	\$14,600	\$15,000	\$15,400	\$15,800	\$16,200	(1) & (2)

Notes:

- (1) Pavement and sidewalk repairs are now included in the cost of performing a SCFA repair.
- (2) Average cost of service replacement/repair subject to inflation of material cost.

