

M A N I T O B A                    )     Order No. 83/07  
  )  
THE PUBLIC UTILITIES BOARD ACT   )     June 28, 2007

BEFORE: Susan Proven, P.H.Ec., Acting Chair  
          Graham Lane, CA, Chairman

THE TOWN OF SNOW LAKE  
REVISED WATER AND SEWER RATES  
EFFECTIVE JULY 1, 2007

**Executive Summary**

By this Order, the Public Utilities Board (Board) approves the Town of Snow Lake's (Town) application for revised utility rates effective July 1, 2007. Existing and revised rates follow:

	\$/cubic metre			
	Existing		Revised	
<u>Metered Customers</u>	Water	Sewer	Water	Sewer
First 100 cubic metres	\$0.35	\$0.46	\$1.27	\$0.93
Next 350 cubic metres	\$0.23	\$0.46	\$1.16	\$0.93
Over 450 cubic metre	\$0.13	\$0.46	\$1.06	\$0.93
Residential Minimum	\$18.51		\$44.76	
Quarterly Bill (5/8" meter)				
Quarterly Service Charge	\$7.50		\$14.75	
<u>Unmetered Customers</u>				
Quarterly (Flat Fee)	\$80.70		\$307.90	

Metered residential customers will note a 142% increase in their minimum quarterly bills, actual bills for most will increase by a larger percentage; those customers remaining unmetered will incur a 281% increase.

Given a concern that the rate increases, high as they are, will not prove sufficient to allow needed infrastructure upgrades, the Board also approves two discretionary rate increases of up to 5% each. These additional increases, to be effective April 1, 2008 and 2009 upon Town approval, are subject to certain undertakings of the Town being filed with the Board by March 1, 2008 and 2009, respectively.

In approving the rate application, the Board also accepts the Town's proposal to reduce the discounts provided to large volume

users, while requiring the Town to consider, for its next rate application, either:

- a) further reductions to the volume discounts; and/or
- b) collapsing the rate schedule to fewer steps; or
- c) proposing a single step, i.e. all volume billed at the same rate.

The previous rate amendments took place in 1995. Twelve years of inflation, a new water treatment plant, increased provincial water and sewage standards, and accompanying higher operating costs together with identified major infrastructure upgrading requirements support the increases.

### **Application**

On April 19, 2007, the Town applied to the Board for revised water and sewer rates as set out in By-law No. 865/07. In 2004, the Board expressed concern about the adequacy of the Town's utility rates.

A rate review was considered at that time, but deferred pending the installation of the new water treatment plant, now in place. The replacement plant was expected to materially increase utility operating costs, and affect the magnitude of the rate increases required.

Following Notice of Hearing, a public hearing was held on June 19, 2007 in the Community Hall in the Town. The Notice advised

as to the Town's proposal and the By-law, which were made available for public inspection. The Town's Chief Administrative Officer, an engineering consultant and approximately 35 ratepayers attended the hearing, which was conducted by Board Member Proven on a hear and report basis. Quorum for this Order resulted from a subsequent review and acceptance of Ms. Proven's findings by the Board's Chairman.

Supporting information for the proceeding included utility financial statements for 2006, their 2007 budget, a water and sewer rate study prepared by the Town's engineering consultant - Genivar, and the Town's responses to pre-asked questions of the Board.

The Town's engineering consultant reported that in preparing the rate study he had considered the historical costs of the utility, recent expenditures trends, economic conditions in the community and the new regulatory environment for the operation of water and sewer utilities. The consultant advised that the Town's rate proposal reflected many factors, including the impact of the recent mine closure and concomitant reduced rate revenue, an assumed stable population, capital repairs needs, the deficits that would have to be recovered and increasing costs associated with the new treatment plant.

The Town's consultant also advised that the Town's rate proposal had been based on the Town's actual revenue and expenditures over the last two years, taking into account the new water

treatment plant. The consultant further advised that the proposed rates were expected to provide adequate utility revenue for the next five years.

Projected operating costs of the utility were reported as follows:

	2007	2008	2009	2010	2011
Administration	\$22,000	\$22,220	\$22,442	\$22,667	\$22,893
Water Production	\$143,000	\$144,430	\$145,874	\$147,333	\$148,806
Water Distribution	\$16,500	\$16,665	\$16,832	\$17,000	\$17,170
Sewerage	\$103,200	\$104,232	\$105,274	\$106,327	\$107,390
Subtotal	\$284,700	\$287,547	\$290,422	\$293,327	\$296,259
<b>Contingencies/Reserve Fund</b>					
Water Production	\$5,000	\$5,000	\$5,000	\$5,000	<b>\$5,000</b>
Water Distribution	\$15,000	\$15,000	\$15,000	\$15,000	<b>\$15,000</b>
Sewerage	\$15,000	\$15,000	\$15,000	\$15,000	<b>\$15,000</b>
Utility Reserve Fund	\$50,000	\$50,000	\$50,000	\$50,000	<b>\$50,000</b>
Subtotal	\$85,000	\$85,000	\$85,000	\$85,000	\$85,000
<b>Less: Offset Revenue</b>					
Hydrant Rentals	(\$6,450)	(\$6,450)	(\$6,450)	(\$6,450)	<b>(\$6,450)</b>
<b>Total</b>	\$363,250	\$366,097	\$368,972	\$371,877	<b>\$374,809</b>

The Town advised that it based the proposed contingency provision on past utility operating experience. As well, the Town advised that, to assist in funding a new wastewater plant, it proposed to collect \$50,000 annually for reserves through increased rates. Currently, the Town reported having no reserve fund and no annual contingency provision.

Of late, the following utility deficits were incurred:

2007 - \$199,154 - projected  
2006 - \$57,870 - actual  
2005 - \$11,629 - actual

The Town previously advised the Board as to the reasons for the 2006 deficit, those being:

1. A mine closure (one of the Town's largest employers) resulted in substantially reduced utility revenue -- the mine had consumed 27% of water produced;
2. A substantial increase in unpaid accounts -- a 20% delinquency rate;
3. A new water treatment plant, with substantially higher operating costs than the former system.

Prior to the installation of the new water treatment plant, the Town reported that, except for the occasional small utility operating deficit, the utility had been self-supporting. However, the Town also indicated that the old plant was unable to meet the Town's need for safe drinking water. The Town reported that with the new plant, while the quality of the water has improved, the improvement has come at a significant cost (e.g. electricity and chemical costs were reported to be markedly higher).

The Town advised it intended to recover the 2006 and 2007 deficits through higher rates, the recovery projected to require three full years following rate increases. As well, any unused contingency allowances and Utility reserve balances to develop

from the date of a rate increase could also contribute to recovering the pre-increase deficits.

Given the Board approved its proposed rates, the Town projected the following net operating results for the utility to 2011:

	2007	2008	2009	2010	2011
Total Revenues	\$ 336,671	\$388,272	\$388,272	\$388,272	\$388,272
Total Expenditures	(\$346,072)	(\$385,483)	(\$378,993)	(\$381,933)	(\$384,902)
<b>Surplus/(Deficit)</b>	<b>(\$9,401)</b>	<b>\$2,789</b>	<b>\$9,279</b>	<b>\$6,339</b>	<b>\$3,370</b>

The Town advised that metering and billing on the basis of metered consumption was the key to customer fairness and adequate cost recovery. Presently, the Town has 368 installed meters with remote reading capability. There was reported to be approximately 20 residences either without meters or with meters that are inoperable. Commercial and institutional customers are metered and billed at metered rates.

Residential meters that are in place have not been used for billing purposes to this date due to the cost of meter reading, although the majority of the meters were indicated to be in satisfactory working condition.

While most residential customers have meters, the Town advised that billing would be based on metered consumption only effective July 1, 2007, following Board approval, if granted, of the Town's rate proposal. To this date, residential customers have been billed at a quarterly flat rate of \$80.70. For residential customers without a meter, flat rate billing will

continue, though, upon Board approval, at a new quarterly rate of \$307.90.

The flat fee has and will assume average quarterly consumption of 135 cubic meters (29,700 gallons) of water. The volume associated with the quarterly flat fee was derived from average consumption statistics for unmetered customers.

Once meter readings are used for billing for all customers, the quarterly flat fee will no longer be applicable, and minimum quarterly bills based on meter sizes plus commodity charges for volumes above 13.64 cubic meters (3,000 gallons) of quarterly consumption will be employed. For residential customers, the minimum quarterly bill would be \$44.76. While a substantial reduction from the proposed \$307.90 flat fee most residential customers are expected to consume more than 3,000 gallons of water each quarter.

The Town has a three-step rate schedule, which it proposed to maintain but, with the discounts provided for higher volumes reduced significantly. The Town proposed a 14% discount for high volume users, at the third step, rather than the 63% discount previously provided.

Current commodity rates were based on the estimated volume of water consumption. For "sewer and water" customers, the minimum quarterly charge was \$18.51, which included a service charge and a water and sewer charge based on meter size and associated maximum water consumption allowance. The Town has been charging



most of its customers a quarterly "flat rate" fee of \$80.70: for larger users, the Town charges based on metered volume if readings are taken, (less an agreed-to volume if the customer has a bleeder valve).

The Town advised that several commercial and institutional customers have received considerable savings through the schedule discounts; these have included the hotel, laundromat, school and hospital.

The Town reported that, while having taken steps to reduce municipal water consumption, it had yet to promote conservation to its customers.

With respect to the allocation of shared expenses between the Town's General Fund and the utility, the Town reported that it had not allocated salaries of the public work crews to the utility for such items as sewer and water line repairs. The operator's salary and 20% of the relief operator's salary were reported as being allocated between the water and sewage salary expense account.

The Town advised that this policy reflected past practice, because of the Town's experience with deficit funding, and that it had not been altered because the proposed increase in rates was already substantial without taking this into account.

With respect to increasing provincial standards, the Town

reported having an operator in the final stage of being certified at Level 2, that being the required certification to operate the utility. As well, the Town indicated giving consideration to hiring and training an assistant operator, so as to cover for the operator's holidays and other absences.

With respect to hydrant charges, the Town reported that its utility charges the General Fund \$75.00 per hydrant, and proposed to increase the charge to \$150.00.

The Town reported that there were some customers from beyond the Town's boundaries, but that no surcharges are presently assessed. As well, the Town reported that sewage from the cabin subdivisions outside the Town's limits is being dumped into the Town's system, without a charge being levied by the Town.

Finally, while there are no bulk water users, the Town reported that some customers were hauling sewage to the lagoon without any charge being levied. The Town indicated that it was considering the introduction of a charge.

### Capital Projects

The Town has reached its borrowing capacity for major capital expenditures. As a result, the Town plans, through rates, to build a reserve fund to help pay for much needed infrastructure upgrades.

The engineering consultant advised that the Town's future capital planning may require a review of the level of contributions that should be obtained from the mining industry. And, the Town reported that until the engineering assessment of the sewage treatment facility is complete, the Town does not plan on making application for senior government grants.

The Town reported receiving an Order under *The Environment Act* that requires an engineering assessment of the sewage treatment plant. Problems were associated with compliance with discharge requirements and the sludge disposal pit. The estimated capital cost of upgrading the sewer plant was estimated at \$1.5 million, which, if proceeded with, may be funded through the issuance of Town debentures.

The Town also reported that the water distribution and sewage collection systems were in need of upgrading. The Town indicated that funding for such projects would also have to arise through increased rates, or the Utility reserve (also funded through rates).

The Town estimated that to replace all 6,800 meters, as well as the aging cast iron water mains would involve \$6.0 million, excluding costs associated with road repairs that would result from sewer line replacement.

As the Town's current capital plan does not include funding for line replacement, further rate increases were projected for the future, despite the rate shock attendant with the current application.

Given the anticipated future capital costs of the utility, the Town indicated it would be prudent to:

- establish an annual reserve provision in rates of at least \$200,000, rather than the \$50,000 contribution included in the application, and
- review utility rates again in either 2008 or 2009.

#### Hearing Discussion

The proposed approach led to considerable ratepayer discussion at the hearing. Some customers sought clarification, others applauded the Town's decision to use meters to further water conservation. Several customers opined that the existing quarterly flat fee wrongly encouraged unnecessary use of water.

One presently unmetered customer sought quick installation of a meter, so as to avoid the proposed, and much higher, quarterly flat fee. One landlord expressed the hope that once meters are

employed, the Town will no longer bill each apartment the quarterly flat fee.

One of the ratepayers attending the hearing supported the Town's proposal to replace water lines and suggested that replacement would prove better than "patchwork" repairs. Much of the cast iron water lines have been buried with tailings from the mine, the latter now found to be quite corrosive.

Since there are now new owners of the mine, some hope was expressed that the closed mine will reopen, providing the return of a high volume user. The mine was reported to have been a large user of Town water, though water for processing was obtained from another source.

#### Errors, Corrected

Errors were detected in the Town's original filing, and the Town confirmed that the initial proposal for the flat quarterly water rate, that being \$227.50, was incorrect and should have been \$307.90, as supported by the rate study's calculations. Also, the charge per hydrant should be \$150.00, not the \$100 cited in the initial application. These errors are corrected in this Order.

## **Background**

The Town is situated on the north shore of Snow Lake, midway between Thompson, The Pas and Flin Flon, in north-central Manitoba, 685 km north of Winnipeg.

Snow Lake offers modern accommodations, camping facilities and wilderness opportunities; however, mining, which has been the mainstay of the community, has pulled back. There were two main companies operating in the area: Hudbay Mining and the New Britannia Mine. Both area mines ceased mining operations since the last rate study was conducted, that of 1995. The community has experienced the negative economic implications of the closures, and these extend to less utility revenue.

The Town owns and operates a new water treatment plant (constructed in 2005), a water distribution system, and a sewage collection and disposal system.

The distribution system consists primarily of cast iron pipe with newer sections employing PVC. The system serves a reported 43 fire hydrants. Sewage is collected and transported by means of gravity collection mains and five lift stations to a mechanical sewage treatment plant. The sewage treatment plant is in need of replacement within the next 5-7 years.

The original capital cost of the utility is approximately \$10.5 million; replacement cost would be considerably higher.

The Town currently has 388 customers, of which 20 are unmetered; most meters are  $\frac{3}{4}$  inch in size.

The Town had relied on the high quality of water in the adjacent lake as the water source. Originally, the only treatment was pre-oxidation to help with organics, followed by chlorination for disinfection. Over time, as provincial drinking water guidelines advanced, the Town was required to meet new regulations with a limited treatment process.

In 2005, the Town began construction on a new water treatment plant with funding assistance from the Manitoba Water Services Board. The project was completed in early 2006. The new plant has improved the quality of the water, though at significant additional operational costs.

The estimated volume of water produced has been based on meter records of water leaving the water treatment plant for distribution. The volume of water consumed by the Town residents represents an estimate since to date, there has been insufficient metering data.

Although most homes and businesses are metered, the Town is challenged to operate the metering equipment and related software as well as find and compensate staff to read the meters. The estimate of the water consumed in the rate study was based on the metered volume of water produced, less an

estimate of unaccounted for water.

Numerous factors contribute to the level of unaccounted for water; these include leaking pipes, water main breaks, meter inaccuracies/malfunctions, hydrant/sewer flushing, fire fighting, and bleeder taps. The quantity of "unaccounted for water" is estimated to be approximately 11%. While this is high for a community of Snow Lake's size, it is understandable considering the number of water main breaks and heavy usage of bleeder taps.

A large portion of unaccounted for water has resulted from an extensive system of bleeder valves in the distribution system, as well as an increasing number of water main breaks. The distribution system has many dead ends that require bleeder valves to promote flow; the bleeder valves are also used to maintain flow in some sewer lines that are prone to icing up in the winter.

In recent years many residential homes have had their bleeder taps replaced with "Aqua-flo" units (these units re-circulate water back into the distribution system after it has been slightly warmed inside the homes). However, the Town still uses some bleeder taps when there is frost (seven months of the year). The volume of water flowing through these bleeder taps is unknown.

Based on a review of the plant's metering data, it is estimated



that the bleeder taps return approximately 50 cubic meters per day to the sewer system. Assuming that the bleeder taps are operated eight months of the year, the annual volume of lost water from bleeder taps is 12,000 cubic meters.

The Town's water main breaks are largely due to excessive corrosion of the distribution pipes (the backfill material was contaminated with mine waste, promoting accelerated corrosion along the cast iron mains). The Town wants to implement a replacement program, but at this time cannot afford to do so.

The sewer system consists of gravity sewer lines with five lift stations. The sewer system has incurred operation and maintenance costs of the same high magnitude as the water distribution system.

Because the system has lift stations, the operating costs are dependent upon the amount of water used. Costs for power and maintenance of the pumps are two significant expenditures. Additional costs for flushing the sewer lines and maintaining the wastewater plant are largely independent of the volume of sewage collected.

The Town's wastewater is directed to a mechanical wastewater treatment plant. The plant was constructed over 30 years ago and is basically an up-flow clarifier. Age has rendered the mechanical treatment process ineffective. The community's wastewater currently receives only chlorination for treatment

before being discharged to the Lake.

In the past, due to the high number of bleeder valves, the dilution was so great that the plant's effluent met the water quality requirements. Today, with the installation of the Aquaflo units and the new water plant (treated water costs are higher now), the dilution factor has reduced to a point where the effluent quality cannot meet the water quality requirements. The Town is anticipating a major replacement of their wastewater treatment plant.

While provincial drinking water standards are being met, effluent discharge standards have not been, at least on a regular basis. With respect to nutrient removal, the Town has yet to be engaged in discussion with the Province.

### **Board Findings**

The Board was pleased to see a number of the Town's customers appear at the hearing. Such attendance provides a needed perspective that assists Board consideration.

While dismayed by the magnitude of the rate increases required, the Board will approve the revised rates proposed by the Town subject to the corrections to the rate schedule and hydrant charge noted above. And, because of the evident need for reserve building ahead of further needed infrastructure projects, the Board will also provide the Town with

discretionary authority to implement two, up to 5% rate increases effective April 1, 2008 and 2009.

The Board agrees with the Town that the rate increases are well above the level at which rate shock is present. If it were not for the evident need now present, the Board would have required a phase-in of the higher rates. A phase-in is not possible in this case because even further increases are indicated and warranted.

Municipal utilities are obliged by law to operate in a safe and prudent manner and on a breakeven basis. While the proposed rates include a provision for contingencies and for reserve building, along with reasonable provisions for inflation for the next five years, the Board still has concerns.

Uncertainty remains about the operating costs of the treatment plant, as well as with respect to the aging infrastructure. There is a reasonable risk that repairs will be required that will exceed the contingency provision reflected in the revised rates.

Further, there is uncertainty related to consumption levels that will be billed with the use of the meters, and even more uncertainty as to the prospects of future revenue related to the mining industry.

So, while the rate increase is significant, the rates may not be

able to support a breakeven position should uncertainties lead to costs and a worsening of the utility's financial position.

There is much infrastructure renewal work to be done and the Town's capital plan includes no provision for repairs. A new wastewater treatment plant is clearly required, unless the existing plant is to be subjected to a significant upgrading. Current estimations of the investment required for the wastewater plant alone amount to \$1.5 million.

The Town has indicated that, given the infrastructure upgrades that are required, and the fact that its borrowing is capped, the \$50,000 annual provision in rates for reserves should be more in the range of \$200,000. As matters now stand, the Board is inclined to agree.

But, until current uncertainties are more resolved, and given the magnitude of the rate increases now provided, the Board will await the completion of the engineering assessment before considering further rate increases, other than the two discretionary increases provided for herein.

As matters now stand, with the borrowing capacity fully utilized and the annual reserve contribution to be only \$50,000, senior government grants will be required to allow the wastewater plant to be rebuilt and main replacement to commence. The Board urges the Town to make its concerns known to government.

The Board will require, by March 1 in each of the next three years, the filing of the prior year-end financial statements, the budget for the forthcoming year, and, assuming discretionary rate increase authority is used, a statement supporting the implementation.

In short, the Board is very uncertain as to whether the new firm and discretionary rates will allow for the recovery of the 2006 and 2007 deficits. However, it accepts the Town's decision to recover this deficit from future rates. The Board will expect the Town will apply for approval of the actual deficit after the end of 2007, at which time the plan to recover the deficit will be reviewed.

The Board is pleased that the Town will employ its installed meters, with readings to be reflected in September billings. The Board encourages the Town to extend metering to include all of its customers; the flat charges will be quite high with the changes approved herein.

The Board notes that because of the need to operate bleeder valves, customer meter readings for billing purposes should be adjusted to exclude lost water. The Board expects that such adjustments will be based on sound estimates and be fair and equitable to all customers.

Fortunately, for the individuals on fixed incomes or those using lower volumes of water, the minimum quarterly bills will provide

some relief to the large increases now granted, and with comparison to the flat fee for unmetered consumption.

Concerning the haulers of sewage to the Town's lagoon, the Board expects the Town to propose tipping fees for lagoon use, and to seek the Board's approval for same. As to customers outside the Town's boundaries, the tipping fees should include a margin to represent an allocation of the capital cost of the system.

Finally, the Board is pleased to note the reduction in the discount provided by the step rates. This change is consistent with conservation objectives. The Board expects that when the next rate study is filed, further reduction in discounts or the reduction in the number of rate steps will be considered.

**IT IS THEREFORE ORDERED THAT:**

1. By-law No. 865/07 and rates thereunder BE AND ARE HEREBY APPROVED effective July 1, 2007 subject to an increase in the hydrant charge to \$150.00 per hydrant.
2. The Town of Snow Lake be provided two discretionary rate increases of up to 5% each, to be effective April 1, 2008 and 2009, subject to the following:
  - i) The Town of Snow Lake filing its year end financial statements for the utility for 2007 and 2008 no later than March 1, 2008 and 2009, respectively;

- ii) The Town of Snow Lake file a statement as to the need for the discretionary rate increases by March 1, 2008 and 2009, respectively;
- 3. The Town of Snow Lake develop a tipping fee for septage haulers, with a surcharge for customers from outside its boundaries, and file same for approval by the Board.

Fees payable upon this Order - \$750.00.

THE PUBLIC UTILITIES BOARD

"GRAHAM LANE, CA"

Chairman

"Gerry Gaudreau, CMA"

Secretary

Certified a true copy of  
Order No. 83/07 issued by The  
Public Utilities Board

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Secretary