Office of Utilities Regulation

Can-Cara Development Limited

Review of Sewerage Rates

Determination Notice

OFFICE OF UTILITIES REGULATION

December 23, 2005

DOCUMENT TITLE AND APPROVAL PAGE

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DOCUMENT TITLE: Can-Cara Development Limited – Review of Sewerage Rates, Determination Notice

1. PURPOSE OF DOCUMENT

Outlines the Office's determination on the connection fees per lot to be paid by developers and the monthly sewerage rates that customers will be charged for the provision of sewerage services.

RECORD OF REVISIONS

Revision Number	Description	Date

APPROVAL

This document is approved by the Office of Utilities Regulation and becomes effective on **December 23, 2005**.

On behalf of the Office:

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J Paul Morgan
Director General

December 23, 2005
Date

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Executive Summary[1]

Can-Cara Development Company was issued with a sewerage service provider licence by the Minister of Water and Housing (MWH) on the recommendation of the Office in September 2003. Subsequently Can-Cara applied for rates to be charged to developers for connection to its system and customers for collection, conveyance, treatment and disposal of wastewater. The developers will be charged a connection rate per lot and customers will be charged monthly rates for the provision of sewerage services. The treatment plant will ultimately consist of four anaerobic ponds and will be able to treat 5.8mgd of sewage to serve some 20,000 households. The first phase provides for the construction of one string of ponds, intake and outlet works, force and gravity mains and lift stations capable of treating 1.08 million gallons per day (mgd).

In its proposal dated 16th November 2004, Can-Cara proposed a connection fee of $57,330 to which the Office, on 25th January 2005, issued a "no objection" to the proposed rate. A public hearing was held for the sewerage rates at which questions were raised about the quality of service, the longevity of the business and the level of cooperation from developers.

After taking into consideration the issues raised at the public hearing, the Office has determined that the billing structure will be two-tiered. It will have a fixed component, known as the service charge and a variable component which is calculated at 100% of water consumption. The Office has determined the service charge to be $150 and the variable charge will be as outlined in Table 1.

Table 1: Office determined rates and charges

Consumption Bands (gallons)	**Office determined rates ($/1000 gallon)**
0-3000	130
Next 3,000	180
Next 6,000	300
Over 12,000	500
Service charge	**150**

Both connection fee and sewerage rates are to be reviewed after a period of three (3) years[2]. The connection fees shall increase annually at a rate equivalent to the average of one year Treasury bill rates for the previous twelve months[3]. This rate is compounded

[1] The Office issued a draft determination to Can-Cara on 1st December 2005 for its comments and received response on 15th December 2005. A copy of Can-Cara's response is available on OUR's website at www.our.org.jm.

[2] Notwithstanding, the Office may review the rates and charges before the end of the 3 year period if it deems it necessary.

[3] The applicable rates will be that as published by the Bank of Jamaica.

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each year. The volumetric sewerage rates will be linked to an indexation mechanism based on the actual cost structure when the first audited accounts are submitted to the Office.

The Quality of Service standards are set out in the Licence each of which will be strictly monitored as this form a part of the tariff conditions and therefore compliance with them is a requirement of this tariff determination.

The Office is aware that Can-Cara is to submit an application for water tariffs. The sewerage rates which are the subject of this Determination may be adjusted to reflect the impact of any common costs when the water tariffs are being considered.

Introduction

Can-Cara Development Limited applied for a water and sewerage service provider licence on September 2003. The Office processed both applications and the Minister subsequently approved the granting of a sewerage service provider licence[4] on 16th June 2004.

The service area of the wastewater treatment plant spans the Western Spanish Town region in St. Catherine, which includes several housing developments. They are Spanish Village, Innswood Village, Ardenne Park, Sugar Corporation of Jamaica Housing development, White Water Meadows II and Magil Palms. The total number of lots from these schemes is 3,134.

The licence has duration of 20 years and includes several conditions pertaining to expected operational conduct, reporting requirements and delivery of service.

Pursuant to Section 18 of the *Can-Cara Sewerage Services Licence, 2004,* Can-Cara is required to submit an application to the Office outlining the rates it proposes to charge customers in the service area.

Can-Cara's Proposal

The company submitted an application on the 3rd August 2004 outlining connection fees and sewerage rates it intends to charge developers and customers respectively. According to the submission, the sewage plant to be constructed will consist of four (4) facultative ponds with an overall design capacity of 5.8 million gallons per day (mgd). Each pond will be able to accommodate 5000 houses.

In the said application, a connection fee of $69,000 per lot and sewerage rates, based on water consumption, were proposed. The Office considered the application incomplete, and communicated such to the company. Can-Cara resubmitted the application in November 2004 and in the new application adjusted the connection fee downward to $57,330. This fee would be paid by the housing developers to connect each lot to the treatment plant.

Can-Cara proposed two-tiered sewerage rates with fixed and variable components. A service charge of $170 will constitute the fixed portion of monthly bills. The variable charge is a direct function of the amount of water consumed and the rates will increase as the consumption increases (see table 2 for proposed rates).

Can-Cara subsequently advised the Office in July 2005 that it wished to separate the determination of its sewerage charges from the water charges as the former service was in an advanced state and would come into operation earlier than the water supply service in some areas. The Office agreed that Can-Cara had a right to have the rates for the sewerage services considered in advance of the water services but advised that when the

[4] Water service provider licence subsequently issued by the Minister 29th April 2005.

rates for the water services is to be considered the combined operation would have to be taken into account

Can-Cara Proposed rates

Can-Cara submitted several proposals for sewerage rates. This is understandable given that the business is not only a "start up", but the licensee also has had no prior experience with the requirements of and procedures for filing a tariff application. The final submission made on 27th September 2005 is shown in Table 2 below.

Table 2: Can Cara's proposed sewerage rates

Consumption Bands (gallons)	Can-Cara proposed rates ($)
0-1000	148.42
Next 1000	180.00
Next 1000	210.56
Next 1000	245.50
Next 1000	269.20
Next 1000	304.20
Next 1000	331.80
Next 1000	358.00
Next 1000	381.00
Next 3000	399.83
Next 3000	425.00
Next 4000	464.35
Service charge	170.00

Can-Cara also assumed an annual increase of 6% in consumption rates for blocks less than 6000 gallons and a 4% increase for bands greater than 6000 gallons. These assumptions are incorporated into the projection of revenue along with the expectation that yearly receivables will be 15% of billable revenues.

Proposed Capital expenditure

In support of these rates Can-Cara indicates that it will undertake capital expenditure on sewage conveyance and treatment facilities as indicated in Table 3 below

Table 3: Can-Cara CAPEX proposal

Fixed asset	Value ($)
Construction	179,000,000
Land	80,000,000
Rods	1,400,000
Other capital	8,000,000
Site office	5,000,000
Computers	1,200,000
Furniture/fixture	500,000
Total	**275,100,000**

This capital outlay will be financed by debt of $180 Million and equity of $44.5 million. It is proposed that cash flow from connection charges will assist in defraying capital expenditure and provide working capital. This connection fee is payable by developers for each household connected to the sewerage facilities.

Proposed Operational expenditure
Can-Cara proposes that its year 1 expenditure will be as outlined in Table 4.

Table 4: Can-Cara proposed OPEX

Item	Amount ($)
Legal and statutory	3,000,000
O&M contract	10,680,000
Salaries and related expense	27,400,000
Health etc.	435,000
Statutory	3,014,000
Accommodation exp	1,000,000
Other administrative cost	5,700,000
Transaction costs	192,518
Interest	21,600,000
Financial fees	5,400,000
Depreciation	12,596,667
Total expenses	**91,018,185**

Demand schedule
Can-Cara intends to expand its customer base as new housing developments in its service area are completed. There is also scope for providing service to existing communities without a centralized waste water treatment facilities and accepting inflows from other operators with non-functional treatment facilities. The proposed rate of addition of new customers is shown in Table 5 and the projected monthly consumption profile of these customers is outlined in Table 6.

Table 5: Customer additions to system

No. of customers		
Year	**Additional**	**Cumulative**
1	1350	1350
2	1500	2850
3	700	3550
4	500	4050
5	300	4350
6	300	4650
7	300	4950
8	50	5000
Total	5000	

Table 6: Projected Monthly Consumption Usage profile

Consumption bands	%age of customers falling within each band
0-1000	100
next 1000	100
next 1000	88
next 1000	70
next 1000	55
next 1000	20
next 1000	12
next 1000	10
next 1000	5
Next 3000	2
Next 3000	1
Next 4000	0.1
Over 20,000	0

Can-Cara also stated that it was important that they conclude negotiations with the housing developers and as such requested that the Office conduct the review of and decide on the connection fees before addressing the sewerage rates.

The Office's Initial Response

The Office issued a preliminary response to the application on November 25th 2004 in which it raised several concerns pertaining to the application, and commented specifically on the revenue, depreciation, financial charges, consumption pattern and tariff structure and connection fees. Also, given that sewage rates would be linked to water consumption, the Office requested that a comprehensive costing structure, inclusive of revenue projections for water business be submitted to ensure that the company would be neither over nor under compensated.

The Office gave a 'no objection', on 25th January 2005, to the connection fee of $57,330 pending a full review of its projected water and sewerage services cost. Can-Cara agreed to provide information on its combined water and sewerage services for this review. Can-Cara later informed the Office that it wished to make separate application for sewage and water and would submit a water tariff proposal in the future.

The Office advised Can-Cara that in accordance with its statutory duty of giving stakeholders an opportunity to be heard it would be holding a public hearing on the application at which Can Cara would make a presentation on its application to interested parties and stakeholders.

Public Consultation

The Office convened a public hearing in St. Catherine on September 27th 2005. Representatives from the National Housing Trust, St. Catherine Parish Council, White Water Citizens Association and Dynamic Environment Management Limited were in attendance. While the number of attendees was less than expected useful contributions were made from those present. The following summarizes the issues raised at the hearing:

1. *Quality of service*

   (a)What measures are to be put in place to ensure that Can-Cara is able to offer good quality service over a number of years?

   (b)What facilities will be available for customers to make bill payments and how will the company accommodate customers who work in Kingston?

   <u>Response</u> – No response was given for part a. However, in relation to part b, Can Cara responded that its head office will have a collections department and in addition it will enter into arrangements with collection agencies such as Paymaster and Bill Express to accept payments.

2. *Expansion Plan*

   Persons wanted to know about Can-Cara intended expansion plan to sewer all of Spanish Town and how they will maintain the sewage treatment facility and if there are provisions for odor prevention/control mechanisms.

   <u>Response</u> – Can-Cara responded that the provision of sewerage infrastructure for the entire Spanish Town was part of its long term plan but it would make the investment on a phased basis. With regard to odor, Can Cara said that NEPA has

several regulations pertaining to wastewater treatment and odor control, and if they operate within the ambit of these regulations, then odor will not be a problem.

3. *Sewerage Rates*
   In relation to sewage rates persons enquired about how the rates would be determined, if they will be of the same format as the NWC's, that is - built-in periodic price adjustment component and who will be responsible for setting them.
   Response – Can-Cara stated that the OUR will set the rates but it does not intend to have an indexed linked rate at the outset.

4. *Relationship with Competitors*
   The representatives also enquired about the relationship between Can-Cara and its present and future competitors. Specifically, will developers be forced to connect to Can-Cara's wastewater system? Are present developers aware of the terms and conditions of Can-Cara's licence and will NWC, for example, begin to compete with Can-Cara to get customers?
   Response – Can-Cara responded that it considered its licence to be an exclusive one and, as such, there can be no other competitors within the area specified in the licence. Additionally, housing developers are aware of their presence and with the exception of one, there is a mutual understanding that developers of housing lots will be connected to Can-Cara wastewater system. The Can-Cara representatives also stated that they did not consider NWC to be a competitor.

5. *Going Concern*
   When members of the public enquired about the going concern of the business, Can-Cara responded that it was in the process of acquiring insurance for its business but assured those in attendance that given the huge amount of capital investment in immobile infrastructure, it would be in Can-Cara's best interest to ensure that the business remains viable so that it can earn a return on its investment.

6. *Performance Benchmark*
   There were also concerns raised about how Can-Cara's performance will be benchmarked and the penalties that will be applied if effluent standards are breached.
   Response - The Office advised that the Can-Cara's licence stipulates the terms and conditions of operation, which included several performance criteria and also that the National Environment Protection Agency (NEPA) had stringent regulations pertaining to breach of any effluent standards.

The Office's Evaluation of the Submission

Capital costs

The company states that the project will cost $275.1M which will be financed with debt of $180M and equity of $44.5M. The working capital of the company is projected to be $71M. The debt will be sourced at an interest rate of 12% to be repaid over a 10 year period with a one year moratorium on the principal.

Due to the inherent uncertainty in the projections as it relates to cost of the building of the plant, the Office will require the company to submit audited financial statements for the first two years of operation after which it will be in a position to determine the actual costs. However, investigations by the Office reveal that it is typical for systems of this type (facultative ponds) to have capital costs ranging from $120 to $240 per gallon per day (gpd). At 1.08 gpd Can Cara's estimated project cost of $275 million lies within this range

Interest costs

In determining the interest cost, the Office has used the 12% as included in the application but has adjusted the financing charge, which was proposed as 3% of the loan amount by Can-Cara to 2%. Can-Cara did not specifically identify the fees (and percentage of loan amount) that are associated with the handling of the loan but did state that that half of the project cost will be guaranteed by the United States Development Agency (USAID). With this guarantee, the Office is of the view that the finance fees associated with the structuring and guaranteeing of the loan, will not be as high as for an unsecured loan. With a commitment fee with this type of loan of about 1%, the Office is of the view that the remaining cost of securing the loan will be an additional 1%.

Cost of Equity

Cost of equity is normally estimated using either the capital asset pricing model (CAPM) or a dividend discount model (DDM)[5] model. Unlike the cost of debt, cost of equity is normally more difficult to estimate as you have to determine what the investors expected returns are. Given that the company is new and is privately owned, there is no stream of dividends or market value to be used to estimate the cost of equity. As such, estimating the cost of equity using CAPM[6] approach is more feasible. The general formula for CAPM is:

$R_e = R_f + \beta*(R_m - R_f)$

[5] With this model, future dividend payments, the current value of the company and the company's growth rate are estimated. This is then used in formula $R_e = D_1/P + g$ to get the cost of equity.

[6] There are variants of the basic CAPM model: extended CAPM and international CAPM. These models are normally used for integrated capital markets and incorporate additional risk variables such as currency risk and sovereign risk.

The risk free rate is the yield on government issued bonds, β is the covariance between the market risk and the risk of the project, and R_m is the return on the market. The risk free rate can be obtained from the government long term bond issue, however, the market index and the risk is more difficult to estimate.

Ideally, the local stock market index comprising of water and sewerage companies of similar size and capital structure should be used as the market index. However, no such data is available for Jamaica, as the small water companies are privately owned, and the largest provider of water and sewerage services is a government owned company, which is not listed on the stock exchange. Another proxy that could be used is a composite of blue chip stocks (Jamaica Select Index) however, given the lack of depth in the local stock market index; a more efficient market proxy would have to be used. The US market, using the SP&500 companies was used as a proxy for the market return[7]. The calculated return will therefore reflect what a global investor would require to invest in water and sewerage services in Jamaica.

Because of the nature of water and sewerage infrastructure, the market is not effectively competitive, in fact, in most areas; the companies are de facto monopolies. As such, their risk would not be as high as a more competitive utility sector such as telecommunications and electricity. Recent studies by the Office have shown that the market risk for electricity is 0.87 and telecommunications is 0.83. Given that these companies are riskier, the Office does not expect that the risk for a water and sewerage service provider is greater than 0.87. Given that the only difference between all other utility sectors and the water sector is the risk, the Office thinks that it is reasonable to use the cost of equity in both sectors as a benchmark and reduce it to reflect the lower risk in the sewerage sector. The real cost of equity for telecommunications and electricity sectors are 15.85% and 14.85% respectively. The Office also determined in 2003 that the real cost of equity for NWC was 13.84%. Whilst Can-Cara will be less risky than the two (2) other sectors, it will be more risky than NWC, as NWC's operations is subsidized by the government. Given this analysis, the Office thinks a cost of equity of 14.6% is reasonable.

Return on equity

Pursuant to Schedule 3 of the Can-Cara's Sewage Service Provider Licence, the Office is obliged to set rates that will provide the company with a reasonable opportunity to make reasonable return on capital employed.

Office has considered industry specific trends and information submitted by the company to determine the most appropriate cost of equity to be allowed. The suitable rate of return

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The Office has conducted cost of capital studies for both telecommunications and electricity sectors and in both cases, the US S&P 500 market index were used. Therefore, the Office deemed it appropriate to use this methodology for the water and sewerage sector.

does not include avoidable business risks[8] as the Office is of the view that Can-Cara would implement the necessary measures to mitigate these.

There are two ways of dealing with required return on capital. A weighted average cost of capital (WACC) can be determined and applied to total capital of the company, or interest charges can be included in the operating cost and the company only receives a return on equity. In its submission, Can-Cara stated that it has used a WACC of 15%[9].

The Office has opted to include the interest charges in the calculation of operating costs and has determined the cost of equity to be used as the return on capital. The Office has determined that the real cost of equity is 14.6%. With an equity value of $44.5M, **the pre-tax return on equity is determined to be $9.7M.**

Operating costs

Can-Cara estimates its operating cost to be $78.42M in the first year of operation. Of this amount $27.4M is accounted for by salaries and $10.6M for operation and maintenance costs.

The organizational chart submitted with the rate application indicates that Can Cara plans to have a staff complement of 24 with an associated cost of $27.4M. However, at the public meeting, Can Cara stated that it does not intend to have a large staff complement but will use some of its head office (involved in housing development) resources. At most it expects to have four (4) employees comprising of 2 field agents, which will do, *inter alia*, site inspection and collection, 1 cashier and a manager. It will enter into arrangements with existing bill collection agencies to accept payments from its customers. Notwithstanding this, the Office has reviewed the organizational chart to determine a reasonable staff complement to provide efficient service to 1,350 customers. The Office has determined that 15 is a more appropriate number. This would consist of:

1. Managing director,
2. Administrative assistant
3. Office manager
4. Clerk
5. Messenger
6. Office helper
7. Senior engineer
8. Two (2) Plant operators,
9. Two (2) Labourers
10. Accountant
11. Accounting clerk
12. Two (2) meter readers.

[8] Business risks may include inadequate treatment and disposal of effluent resulting in contamination of aquifers, fines imposed by NEPA for non-compliance with regulation and failure to adequately secure assets of business.

[9] This is derived from cost of debt of 12% and cost of equity of 27%. The ratio of debt to equity is 80:20.

Consequently, the provision for salaries has been revised to $15.45M to reflect the reduced numbers of employees. This may increase as the business expands.

Operation and maintenance expense includes utility and security services, effluent quality monitoring and reporting and consulting services to deal with external reporting requirements. The Office has allowed this amount, but thinks it may be more cost effective to outsource this activity.

As indicated earlier, the Office has included interest expense in the calculation of operating cost, instead of including a cost of debt component in determining the cost of capital. The associated interest expense on 12% loan is projected to be $21.06M in the first year. The additional financing charges of $3.6M was also included in determining the total operating cost. **Total operating cost used by the Office to determine the rates is $63.17M**. This is less than the $78.42M[10] projected by Can-Cara. Table 7 details the major expenses category showing Can-Cara's proposal and the Office's projections.

Table 7: Summary of Can-Cara Expenses

Category	Can-Cara proposal ($M)	Office projection ($M)
Operation and maintenance	10.68	10.68
Salaries and related expense	27.4	15.45
Interest expense	21.6	21.06
Financial fees	5.4	3.6
Administrative expense	5.7	5.7
Other[11]	7.64	6.68
Total operating cost	**78.42**	**63.17**

Depreciation

The depreciation charge included in Can-Cara's submission is $12.6M. The Office has reviewed the asset values submitted and the expected useful lives of each and has made an adjustment to asset category "other capital"[12]. Can-Cara estimates a useful life of 3 years but the Office is of the view that 5 years is a more reasonable time period since this category consists mainly of motor vehicles and is the standard accounting treatment of

[10] This amount excludes depreciation of $12.6M.
[11] This includes regulatory fees. Can-Cara did not make any provisions for this in its projection.
[12] This category of asset includes other office equipment such as motor vehicles.

this kind of asset across all sectors. This results in a downward adjustment in depreciation charge to $11.4M.

Taxes

There is no explicit provision for taxes, as the return on equity has been adjusted to incorporate corporate taxes.

Revenue Requirement

The revenue requirement is determined from the summation of operating expenditure (OPEX), depreciation, return on investment (ROI) and taxes.
The revenue requirement as determined by the Office is $84.27M. (See table 8)

Table 8: Revenue Requirement

Category	Amount ($M)
Operating costs	63.17
Depreciation	11.4
Taxes	0
Return on equity	9.7
Revenue Requirement	**84.27**

Office Decisions

At the public hearing, Can-Cara stated that it considered its licence exclusive and as such would expect a secure stream of revenue from its service area. The Office has deliberated on the issue of exclusivity versus monopoly service within a policy and legal framework of encouraging competition especially in the peculiar context of the nature of sewerage services and the all important issue of environmental protection.

In this regard, the Office has decided that it will not, until further notice consider any further applications for licences to provide sewerage treatment and disposal services in the service area where there is an existing licenced service provider[13]. This is so because unlike other utility services sewerage does not easily afford the flexibility to attract customers outside of the defined service area. This is particularly applicable to arrangements for treatment and disposal services. Furthermore, the Office is of the view that there is a need to examine development areas and to make provisions for optimally sized treatment facilities to serve these areas as there can be no merit to nor can it be efficient or environmentally friendly for a policy to be adopted which allows the proliferation of sewerage treatment plant around the island.

[13] See Office Decision Arising from Hearing into Dynamics Environment Licence Application: A Determination, October 2005, Document No: WAT2005/01.

Connection fee

The Office has determined that the **connection fee of $57,330** is reasonable and will remain in effect for the first 3 years. Connection fees shall be paid in accordance with the total lots expected to be added each year as outlined in Table 5. Can-Cara's operation is at risk if the schedule is not kept and has to bear the cost of the infrastructure until connections are made. The Office has therefore determined that interest rate equivalent to the average of the one year Treasury bill rates shall be applied annually to the base connections fee of $57,330. The base connection fee is to be reset each year to incorporate the interest charge of the previous year.

Can-Cara is required to keep separate accounts which should clearly identify the amount of revenues it collects from developers, the costs associated with correcting defects in sewerage network, if any, and the capital costs of the conveyance and treatment plant. The company is required to submit this information to the Office for the first 2 years of operation, upon which the Office will review and make a determination at that time whether there should be any adjustment in the connection fee.

Based on Can-Cara's proposal, the system[14] is designed to treat 5.8mgd and will be built in four modules. The proposal for the first module is construction of capacity to treat 1.08mgd. The benchmarked capital cost for pond systems capable of treating between 0.1 – 1mgd is within the range of $120-$240 per gallon per day (gpd)[15] which results in total cost ranging from $174,000,000 to $348,000,000[16]. The capital cost estimated by Can-Cara of $275,100,000 is within this range so the Office views the determined connection fee to be reasonable.

In the proposed charge, a risk fund, calculated at 5% of the connection fee was included to mitigate the risk that the collection network taken over from developer is of the required standard. This will remain in place for three years, which will give Can-Cara sufficient time to collect information on the facilities. At the end of the three year period the Office will review the risk fund and will make appropriate adjustments in the tariff to reflect the actual operational status of the business.

Sewerage Rates and Charges

Given the initial low customer demand the Office has to make a judgment on how to apportion the fixed and variable costs of the operation. Ideally, the cost causality principle should be applied and the fixed cost and variable cost appropriately distributed. As such, the fixed charge should be determined by the number of customers and variable

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14 Can-Cara treatment system will comprise of a series of facultative ponds.

15 See http://oas.org/osde/publications/unit/oea59e.htm

16 Result is obtained by converting US$2-US$4/gpd to Jamaican dollars using the exchange rate of US$1: J$60. This capital cost ($120-$240) is applied to total sewage treated in one pond ((5.48mgd divided by 4) to get total cost.

charge by the consumption. The fixed component of the cost is primarily depreciation, but when this cost is applied to the initial customer base of 1,350, the service charge will be onerous. The Office has therefore decided that at this initial stage of the business it is preferable to have a lower service charge and a higher variable charge for the recovery of the total operating costs of the business. As the business matures and as more customers are added this relationship will be reassessed at subsequent tariff reviews. At this stage **the Office has set the service charge at $150.** The volumetric rates that are determined are sufficient to cover the shortfall between the fixed and variable operating cost.

In the determination of the volumetric rates, the Office has assumed that sewerage services will be billed at 100% of water consumed. Can-Cara proposed a 12 consumption band rate category with rates increasing as the blocks of consumption increase. The Office is of the view that the number of consumption blocks is too large, given that the majority of the consumption is projected to fall between 0-6000 gallons. The Office has a received a vast number of complaints from consumers regarding their inability to understand the computation of the charges on their bills. The Office is of the opinion that while it may be necessary to send pricing signals to the consumer, having numerous rate bands in an attempt to reflect the cost curve is counter-productive.

The Office has determined the rates in accordance with a 4 block structure, with rates increasing for each 3000 gallons of consumption up to 12,000 gallons, after which, a uniform rate is charged for any consumption over 12000 gallons. The lower band is the lifeline rate and the top rate is designed to discourage excessive consumption.

Can-Cara has stated that it wants the rates to be fixed for 2 years before applying to the Office for any review. Given that the Office requires 2 years of audited financial information from the company, it is more practical to set the rates for 3 years. As a pre-condition to undertaking the next price review, Can-Cara is required to submit audited financial statements and operating information to the Office for the first 2 years of operation.

When the audited accounts for the first year is submitted, the Office will review the actual operating costs in the first year, and develop an indexation mechanism to reflect the movements in costs. This is necessary to preserve the real revenues of the company. The sewerage rates will be linked to this index.

The sewerage rates as determined by the Office are outlined in Table 9.