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Office of Utilities Regulation

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**National Water Commission  
Tariff Review**

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**Comments on Responses to  
Determination Notice**

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**OFFICE OF UTILITIES REGULATION**

**DOCUMENT TITLE AND APPROVAL PAGE**

**DOCUMENT NUMBER:** Wat 2003/02

1. **DOCUMENT TITLE:** National Water Commission Tariff Review – Comments on Responses to Determination Notice

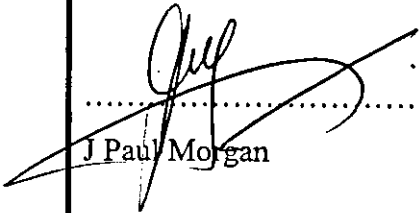
**2. PURPOSE OF DOCUMENT**

This document outlines the comments and responses and requests for clarification from NWC and the general public to the Office's decision on the rates to be charged by the NWC for water and sewerage services and confirms the Determination Notice dated 2<sup>nd</sup> December 2003.

**APPROVAL**

This document is approved by the Office of Utilities Regulation and becomes effective as of the date of the signature attached hereunder.

On behalf of the Office:

  
..... ) Director General  
J Paul Morgan )

22 Dec 2003  
.....  
Date

**Office of Utilities Regulation**  
**Final Determination**  
**National Water Commission - Review of Rates**

## **1.0 Introduction**

The Office issued an initial Determination on water and sewerage rates charged by the National Water Commission (NWC) on December 2<sup>nd</sup> 2003. This determination was made public on December 3<sup>rd</sup>. In its Determination, the Office concluded that the NWC would require an upward adjustment in the effective tariff (as at August 2003) of 26.36% to meet its revenue requirements. The Office also determined that the sewage rates should continue to be calculated at 100% of water charges.

The Office also afforded the NWC as well as the public, until December 15<sup>th</sup>, to file applications for reconsideration of the decisions set out in the Determination and outlined the particularities on which such applications would be considered, these being:

- Matters relating to errors of fact
- New factors which have impacted on the operations of the NWC since the tariff application was made and which the Office could not have reasonably taken into consideration.

## **2.0 Office's Comments on Responses received on December 15<sup>th</sup>**

The Office received a response from the NWC as well as several from members of the public. These responses did not, strictly speaking, constitute an application for reconsideration as they did not satisfy the two criteria as set out above. In fact, they were merely responses to the Determination Notice. The public's objections were in relation to the rate increase generally and to the calculation of sewage charge as 100% of water charges, whilst the NWC sought to petition for further increases in the costs that were determined by the Office. Although there were no applications for reconsideration, the Office will attempt to treat with the responses received in order to provide clarity to the issues under consideration and to clarify some of the issues that have been raised by the respondents. Additionally, it will respond to some of the comments that have been raised by the NWC. The Office will firstly address the NWC's comments, seriatim, and then address the concerns raised by the other respondents. In the succeeding sections, the commentary under "NWC's Comments" represents the views as presented by the NWC.

## **3.0 NWC's General Comments**

NWC was unable to respond adequately concerning a number of issues as information, assumptions and the model used to derive the tariff determination was not supplied. NWC has had difficulty getting information from our Regulator re the model used, assumptions used in the tariff determination for NWC. This is

surprising considering that NWC has been open with the OUR from the beginning of the tariff review process supplying the OUR with the necessary information and involving the OUR in our major decisions – TOR for tariff review, selection of consultants for tariff review.

### **Office's Response**

The NWC had requested a copy of the model developed and used by the Office to derive the rates. The Office had indicated to the NWC that it would be inappropriate to release such details at that time, as the model being worked with contained preliminary results of the tariff determination. The Office is of the opinion that the determination notice contains sufficient details to assist the NWC in understanding the basis on which the tariffs have been calculated.

In any event, the Office did not use a long run incremental cost model similar to that submitted by the NWC in developing the tariffs for the following reasons:

1. A long run incremental cost model requires assumptions about the level of operating costs and consensus on the capital investment programmes to be undertaken in a given time horizon. To support its application the NWC submitted a budget, a tariff model developed by Price Waterhouse Coopers as well as an NWC modification of that model. The assumptions about costs and capital programmes vary in the submissions thus indicating that there was at best a level of uncertainty by the NWC about the investment programme or at worst it represented a wish list of projects that were compiled for the various submissions.
2. Setting tariffs at the long run marginal cost can result in over or under recovery of costs depending on whether marginal cost is rising or falling. If it is assumed that in Jamaica the un-served or under served population reside in the more mountainous regions then the long run marginal cost would likely to be above average cost and thus if tariffs are set at list level there would be an over-recovery of revenues.

### **3.1 NWC's comments - Tariff Rates**

*The effective rates charged by the NWC (i.e. the base rate adjusted by the Price Adjustment Mechanism) will be increased by 26.36% effective January 1, 2004*

The OUR in the calculation of the Effective Rates used the Price adjustment Mechanism (PAM) of 48% as at August 2003 which resulted in rates as follows:

<b>OUR Determined Service Charge</b>			
<b>Meter Size</b>	<b>Base Service Charge</b>	<b>Effective Charge</b>	<b>OUR New Rates</b>
	\$	\$	\$
5/8 inch/15mm	101.65	150.44	190.1
3/4 inch/20mm	2087.65	308.8	390.2
1 inch/25mm	272.86	403.8	510.28
1 1/4 inch/30mm	513.61	760.14	960.52
1 1/2 inch/40mm	513.61	760.14	960.52
2 inch/50mm	727.61	1076.86	1360.72
3 inch/75mm	1321.48	1955.79	2471.34
4 inch/100mm	2134.69	3159.34	3992.14
6 inch/150 mm	3252.86	4814.23	6083.26

<b>OUR Determined Water Rates</b>			
<b>Residential</b>	<b>Existing Rate</b>	<b>Effective Rate</b>	<b>OUR New rate</b>
	\$	\$	\$
0 - 3000 gallons	57.96	85.78	108.39
3000 - 6000 gallons	102.18	151.22	191.08
6000 - 9000 gallons	110.32	163.27	206.31
9000 - 12000 gallons	140.81	208.39	263.33
12000 - 20000 gallons	175.37	259.54	327.96
> 20000 gallons	225.73	334.08	422.14
Commercial	217.33	321.64	406.43
Condominium	108.81	159.55	201.61
Primary School	86.94	128.67	162.58

By definition the Effective Rate is the Gazetted Rates (1+ PAM). The current PAM is 59.19%. This would yield rates as follows:

<b>OUR Determined Service Charge</b>			
<b>Meter Size</b>	<b>Base Service Charge</b>	<b>Effective Charge</b>	<b>OUR New Rates</b>
	\$	\$	\$
5/8 inch/15mm	101.65	161.82	204.47
3/4 inch/20mm	208.65	332.15	419.70
1 inch/25mm	272.86	434.37	548.86
1 1/4 inch/30mm	513.61	817.62	1,033.14
1 1/2 inch/40mm	513.61	817.62	1,033.14
2 inch/50mm	727.61	1,158.28	1,463.61
3 inch/75mm	1321.48	2,103.66	2,658.19
4 inch/100mm	2134.69	3,398.21	4,293.98
6 inch/150 mm	3252.86	5,178.23	6,543.21

<b>OUR Determined Water Rates</b>			
<b>Residential</b>	<b>Existing Rate</b>	<b>Effective Rate</b>	<b>OUR New rate</b>
	\$	\$	\$
0 - 3000 gallons	57.96	92.27	116.59
3000 - 6000 gallons	102.18	162.66	205.54
6000 - 9000 gallons	110.32	175.62	221.91
9000 - 12000 gallons	140.81	224.16	283.24
12000 - 20000 gallons	175.37	279.17	352.76
> 20000 gallons	225.73	359.34	454.06
Commercial	217.33	345.97	437.16
Condominium	108.81	173.21	218.87
Primary School	86.94	138.40	174.88

The NWC is of the view that the Effective Rate will be calculated on the PAM existing at the time of implementation. PAM is the inflationary component of the rate structure and as such any movement does not translate in a real increase. If the Effective Rate is calculated at a PAM of 48% then the real increase will be approximately 15.17%. This is below the Revenue Requirement as determined by the OUR. A point to note is that a change in PAM is driven by a change in the costs, which is offset by the change in revenue through which this change is recovered. In other words, using a PAM of 48% means the revenues are calculated at an effective rate of 48% PAM while the costs are calculated at the latest PAM which is at 59.19% in December 2003. Therefore the revenues would be unable to cover the shortfall.

### **Office's Response**

The Office has used the PAM rates included in the NWC tariff application to determine the effective rates. The NWC is now stating that the PAM rate is 59% as at December 2003. The Office, does not agree with the Commission's view that a PAM of 48%, used in the tariff determination, will result in an under recovery of revenues. The Office has determined the operating and capital costs for the NWC for the 2003/04 financial year (the Test year) as modified by events known and measurable that will occur up to twelve months from the date of the application. This revenue requirement for the Test year was derived from a combination of actual year to date costs, budgeted projections for the rest of the year and, where appropriate, adjustments for new programmes outlined in the application. The projections and adjustments have inflation factored in. The result therefore represents the targeted amount of revenues for which the base tariffs were structured to produce. For the purpose of comparison only, the 48% PAM was used to project the revenues under the existing rate structure. The difference between this revenue projection and the revenue requirement determined the effective increase. If a PAM rate of 59% had been used to make the projection under the current rates, with the same revenue requirement, the effective increase to cover the shortfall would be less. Therefore, in January 2004, when the new rates become effective, the increase will be 15.17% or 11.19% lower than the 26.36% announced.

The Office considers the approach used to be an entirely reasonable attempt to adjust for cost changes in that –

1. The test year that is normally used, for tariff review, is that for which the most recently audited financial statements are available in order to have independent verification of costs that are submitted. The most recently audited financial statements submitted by the NWC were for the year 2001/02. Given the inflationary environment, the Office chose to adopt the more potentially unreliable interim statements for 2003/04.
2. Reasonable adjustments have been made to accommodate improvements in the maintenance regime.

### 3.2 NWC comments - PAM Weights

*The value of the weights of PAM is to be revised (revised weights contained in table below).*

Index	2003 Weights
Foreign Exchange	0.175
CPI	0.605
Electricity	0.220
Total	1.000

*The local Inflation component consists largely of employee costs the impact of which is usually experienced annually.*

*The electricity and foreign exchange components are to be applied as monthly adjustments to the customers' bill.*

The NWC understanding is that the monthly PAM will be calculated as follows:

$$\frac{\text{Current Exchange Rate minus Base Exchange Rate}}{\text{Base Exchange Rate}} \times 100 \times \text{Exchange Rate Weight}$$

**Plus**

$$\frac{\text{Current Electricity Rate minus Base Electricity Rate}}{\text{Base Electricity Rate}} \times 100 \times \text{Electricity Rate Weight}$$

**Plus**

$$\frac{\text{Current Consumer Price Index minus Base Consumer Price Index}}{\text{Base Consumer Price Index}} \times 100 \times \text{CPI Weight}$$

Where the CPI weight will be zero.

The NWC has interpreted this to mean that the CPI component is not recovered on a monthly basis. The reason for this calculation is that employee costs is the largest inflation component and this impact is felt only once per year.

The NWC acknowledges that Employee Costs constitute a large portion of this cost, the weight of the PAM attributed to that component is 60% whilst Employee Cost is less than 50% of total costs. A major change in employee costs occurs once per year, however there are other costs which are affected by inflation monthly and these should be recovered through PAM on a monthly basis. Below is Table with the cost breakdown by components of PAM:

### OPERATING COST COMPONENTS

	Year 2001/2	Year 2002/3	Year 2004 October YTD
Foreign	12%	11%	9%
Electricity	18%	20%	19%
Local	25%	23%	29%
Salaries	45%	46%	43%
Total	100%	100%	100%

### Office's Response

With an incentive pricing regime or Price Cap, the new paradigm under which the NWC is now being regulated, prices are normally adjusted annually and at that time an efficiency factor is deducted. The Office has recognized that there is great volatility in the movements of the electricity charges, due to oil price changes, and the exchange rate. Consequently, the Office decided that these two PAM components should move on a monthly basis rather than have a yearly adjustment. However, the CPI movement will be reflected in the PAM on a yearly basis as there has to be room in the price index to offset the X factor at the end of the year.

It is not clear how NWC has treated the depreciation charge arising from revaluation but from the table submitted it appears that it is included in the Local category. Due to the overwhelming foreign input required in the construction of plants the OUR has placed this item in the foreign category.

The Office is determined to constrain the NWC in such a way as to force it to adapt to a path of performing efficiently otherwise, it will repeat the cycle that occurred after the 1999 interim tariff review.



### 3.3 NWC's Comments - Efficiency Factor

*PAM shall be calculated annually and an efficiency gain of 3.5% subtracted*

We do not believe an efficiency gain of 3.5% is reasonable for NWC. An efficiency gain of 2% yearly due to UFW reduction has been applied. A 2% reduction in UFW does not translate into a 2% in overall change in costs as production and distribution costs, comprising 25% of total costs, would be affected. Other components of efficiency gains are 1% on production and Distribution and 0.5% on Indirect Costs. These gains do not translate in a total efficiency gain of 1.5%, since these costs constitute only a fraction of the total costs of the Commission. Production and distribution costs represents 25% of total operating costs hence a 1% reduction should translate to a 0.25% reduction in total operating costs. Indirect cost represent 35% of total operating costs, hence a 0.5% reduction should translate to a reduction of 0.175% in total operating costs.

#### EFFICIENCY GAIN CALCULATION

Component	Yearly Efficiency Gain	Fraction of total cost	Efficiency Gain Contribution
UFW	2%	0.25	0.5%
Production & Distribution	1%	0.25	0.25%
Indirect Costs	0.5%	0.35	0.175%
Total			0.925%

We are therefore proposing an efficiency gain of less than or equal to 0.5% be applied yearly as the foreign inflation has not been accounted for in the foreign exchange component of PAM.

#### Office's Response

The NWC has proffered that a 2% reduction in UFW does not translate into a 2% increase in revenues. A reduction in UFW can translate in either a reduction in costs or an increase in revenues depending on the type of losses. Assuming a 40:60 billing to production ratio and if all of the reduction in UFW results in an increase in billing, a 2% reduction in UFW would increase billing to 42% or a 5% increase in revenues. Although non-technical losses (illegal connection, meter bypass, etc.) is the least costly to reduce, the Office is of the opinion that not all of the reduction will translate into increased revenues. It is for this reason that the Office has decided that a 2% improvement in efficiency is appropriate.

The additional 1.5% increase in efficiency gains assume benefits from not only production and distribution but also from the second year of the restructuring exercise, improved efficiency in electricity use as well as benefits from other aspect of the Commission's operations. The Office is of the opinion that this is a very conservative estimate of the level of efficiency gains that can be achieved.

The Office has noted the NWC's stated position that the efficiency gains should be less because the PAM does not take account of foreign inflation. The weight for the foreign exchange component of the PAM is primarily determined by the depreciation charges. The NWC has revalued its assets, and although this new valuation has not been reflected on its books, the Office has decided to use this value as the regulatory asset base. The Office has also indicated that the NWC should continue to revalue its assets so as to reflect their true costs. However, the Office is of the view that it would be imprudent to allow for a foreign inflation component in the PAM for assets that are not yet actually on the NWC's books. Additionally, a decision will have to be made on the proportion of the foreign exchange weight that is affected by foreign inflation. It has therefore not taken this into consideration in this rate determination. At the next rate review, providing that there is sufficient information, and that the assets are reflected in the books and represent their true cost, the Office will consider this component.

### 3.4 NWC's Comments - The present Tariff Structure will remain until the next Rate Review

The NWC in its application requested that new consumption bands be phased in over a two-year period. The NWC is now requesting that the following consumption bands be implemented as soon as possible. The consumption bands proposed are:

0 – 1,000 gallons
1,000 – 6,000 gallons
6,000 – 9,000 gallons
9,000 – 12,000 gallons
12,000 – 20,000 gallons
20,000+

The Internationally accepted amount of water used by a typical household for health and sanitation purposes is 1000 gallons per month (life-line rate). The NWC will offer this amount at a highly subsidized rate. It is believed that selling water at a subsidized rate above this amount will not encourage conservation of use. Charging a higher rate will result in consumers adhering to water conservation measures. Also 17% of the Commission's customers fall within the 0 – 1,000 gallons consumption band while 75% falls within the 1,000-6,000 gallons consumption band.

We believe it is important to send the right signal and this change should be made as soon as possible.

#### Office's Response

Firstly, the Office is of the view that it would be in the NWC's best interest to collect sufficient information, over a prolonged period, for the various rate categories and related consumption levels before it makes a determination on appropriate consumption bands. Secondly, the information that has been presented

in the “response” is new, in that it was not included in the tariff application submission. Additionally, the Office has noted that although the NWC has made this new proposal, the data provided is incomplete, is not adequately reasoned, and no charges are proposed for this rate structure. The Office, therefore, is still of the view that the existing rate structure should remain for the 3 year tariff period and will be reviewed only after that time. In the meantime, the NWC should collect the requisite data and commence the process of analysis and dialogue with the Office to ensure that at the next review the proposal can be considered.

### **3.5 NWC - Proposal for Other Rate Reviews**

#### **Bulk Water Purchase**

Where the NWC purchases bulk water (both raw and potable), it is requesting that all costs relating to the purchase be passed through on to consumers.

#### **Office’s Response**

The Office has included the cost for purchase of water in the operating costs. If, however, the conditions should change significantly, e.g. a major bulk water provider operation under a BOOT arrangement being introduced, the Office would be disposed to give the matter consideration at that time.

### **3.6 NWC’s comments - Operating Expenses**

#### **3.6.1 Redundancy Costs**

NWC states that the Restructuring will be completed over a two-year period and that the annual saving after the process is completed is expected to be \$300M. It also states that the cost for restructuring is approximately \$500M (based on consultants’ estimates). The expenditure to date is \$170M. The NWC is required to prorate the redundancy cost over a four-year period which is \$125M based on the updated costs.

#### **Office’s Response**

The Office is unsure of the NWC’s position on the restructuring exercise. The NWC in its operating budget had projected that there would be a net benefit of \$392.4M from the restructuring exercise. The Office was later informed that these projections were ambitious and subsequently revalued amount were submitted. The latter information showed that the annual net benefit from the exercise would be \$163.78M. This is the amount that was used in determining the employee costs. The data provided to the OUR suggests that the eventual annual savings will be over \$600 million. This suggests that the \$300 million now being suggested is the annual savings from the first phase only.

#### **3.6.2 NWC’s comments - Pension Costs**

The NWC states that the OUR has made a provision of \$243M for current employees and pension liabilities arising from restructuring. The NWC feels that no urgency has been placed on past pension liabilities by the OUR. It concludes that there is however an urgency to fund past pension liabilities as they have to be

made available on demand to pensioners who are owed and as such, NWC must put \$1B in place now to cover its liabilities.

### **Office's Response**

The Office reiterates its position as outlined in the determination notice that:

*"..... there is no urgent need to finance the pension liability of the NWC. The requirement of the IAS standard is simply to reflect the outstanding liability on the NWC's books and initially this will only affect the Balance Sheet. This liability will be offset by the massive increase in the value of the fixed assets of the NWC. Overall, the net asset base of the Commission will not be impacted negatively. NWC can continue to make provisions for and pay its pension obligations as they fall due out of its recurring budget".*

The provision of \$243 Million that was made is adequate to cover these payments.

#### **3.6.3 NWC's Comments -Depreciation**

OUR has determined that a depreciation expense of \$1.042B would be allowed for the three-year period of the determination. No provision has been made however for depreciation due to additions to the asset base over the three-year period of the tariff determination. NWC proposes that a portion of the amount allowed for capital projects be used as provision to cover asset additions. With revalued assets, depreciation expense would be \$1.083B.

### **Office's Response**

Depreciation of new assets is not included in initial rate bases and is not calculated on assets that are in the process of construction. The Office maintains its position. In any event, on a forward looking basis and assuming that assets that are added represent prudent investments these will yield either increased revenues or reduced costs which should offset the effect of incremental increases in depreciation charges due to new assets.

#### **3.6.4 NWC's Comments -Electricity Charges**

Electricity charges for year end 2004 were determined by applying an 18% increase to the 2002/3 year end charges. Would the OUR supply NWC with the basis for an 18% increase because electricity costs on average have increased by 30% in 2003/4 compared with 2002/3.

### **Office's Response**

The statement above is taken out of context. The Office applied a factor of 2 to the September year to date electricity charges to determine the total cost for this item for the 2003/04 financial year. This amount (\$1,228.54M) is an 18% increase over the previous amount of \$1040.8M. It should be noted that electricity price changes in subsequent years will be recovered through the PAM.

### **3.6.5 NWC's Comments -Repairs & Maintenance**

In its tariff proposal to the OUR, NWC outlined that repairs and maintenance costs be increased by 50%, from \$695.35M to \$1,035M in order to bring NWC's assets to an adequate maintenance level (about 3 to 4% of the asset base). NWC considers the amount allocated for repairs and maintenance - \$751.327M - to be inadequate to meet its efficiency targets. At current levels of maintenance, assets will fall into disrepair.

#### **Office's response**

The NWC submitted three different sets of information to the OUR. Each contained different amounts for each of the operating and capital cost items. The submissions indicate that the NWC is uncertain as to for the basis for its request. The NWC has not provided any justification, in terms of a defined maintenance programme, to support a level of expenditure of 3-4% of asset base.

### **3.6.6 NWC's Comments - Professional Services**

The amount of \$114.2M provision for professional services is not sufficient to cover expected costs next year. We think this cost should be around \$200M.

#### **Office's Response**

This suggestion does not contain adequate information for a proper response to be provided. The amount provided of \$114.2M provided by the Office is exactly that which was requested in the tariff application.

### **3.7 NWC's Comments - Capital Expenditure**

We do not understand how this has been factored into the tariff and are requesting clarification.

#### **Office's Response**

Future capital expenditures are not included in the determination of rates. Capital related costs, such as interest or financing charges, depreciation and a reasonable return on asset base are included. Depreciation charges of \$1.042M, interest charges of \$120.28M and return on equity base of \$600M is included in the determination of the tariffs. The Office has taken this position due to the level of uncertainty in the capital programme and the benefits to be derived from the projects.

### **3.7.1 NWC's Comments - Capital Works -Water**

An appropriate figure for water supply projects would be \$500M.

### **3.7.2 NWC's Comments – Capital Works -Water Rehabilitation**

NWC has provided information on the impact of planned improvement works on the unaccounted for water, quality of service and environmental standards contrary to the statement made. The allocation of \$280M is not adequate to meet the

planned spending as outlined in the committed capital projects submission in the Tariff Model. An allocation of \$600M would be adequate.

### **3.7.3 NWC's comments – Capital Works -Wastewater**

OUR is requested to clarify the amount allocated for sewage rehabilitation. In this section, it is stated that \$424M is allocated for sewage rehabilitation whilst in Table 7, \$478M is quoted. NWC does have a program to provide sewage treatment plants in the short term. Within the next six to eight years, NWC plans to spend \$1.2B on sewage treatment projects OUR has allocated \$424M for funding of sewerage rehabilitation works including a provision for rehabilitating the Harbour View Plant. NWC should be given the flexibility to choose its projects based on need and Government policy.

### **3.7.4 NWC's Comments – Capital Works -Corporate**

- NWC has provided information on the impact of planned improvement works on the unaccounted for water, quality of service and environmental standards.
- According to the Capital Budget, NWC plans to spend \$92.8M in 2003/4 on Corporate Projects while the Tariff Model specifies \$632.8M. The tariff model has the updated information and should be used.
- Not all projects in the Corporate Projects list were capitalized and a provision for expensed projects was made in the model.
- The costs associated in preparing the tariff review should be prorated over 3 rather than 4 years as the period of the benefit – the new tariff – covers 3 years.
- The provision for upgrade and management of the motor vehicle fleet in the amount of \$29M yearly operating cost should be included as NWC will either manage its motor vehicle fleet or outsource it.

### **Office's Response**

As a matter of principle the Office will not make provisions in the rate base for the NWC to finance its capital projects. The NWC should source these funds and then over time such recovery for interest charges and depreciation made in the tariffs. The tariff model submitted by the NWC is based on a long run marginal costing (LRMC) model which includes all the possible projects, prudent or imprudent, that the NWC wants to undertake over a 26 year period. The rate base is not determined on an LRMC cost basis, as such, the project "wish list" included in the model would not influence the base year rates.

The provision for wastewater rehabilitation in the tariff is \$478M. With a planned programme of \$1.2B over a 6 to 8 year period the NWC is proposing expenditures of at most \$200M per year. The Office has made provisions of \$478M per year.

The Office reiterates its position that the NWC must, as a priority, reconstruct the Harbour View Sewage Treatment Plant.

### **3.8 NWC's Comments - Return on Capital**

In calculating the return on capital, the OUR has only taken into account the cost of equity. The cost of debt is important in the calculation. NWC has borrowed \$250M to finance the cost of the restructuring exercise and has an additional \$150M for insurance purposes.

#### **Office's Response**

There are two ways of including debt charges in the rate base. It can be incorporated by the inclusion of financing costs in operating expenditures or by determining a cost of debt in the weighted average cost of capital<sup>1</sup> (WACC). The Office has included the interest charges of \$120.28M in the operating costs; as such no cost of debt is included in the return on capital calculations. If a cost of debt was determined and applied to the rate base, it would result in double counting.

### **3.9 NWC's Comments - Revenue Requirements**

Revenue Requirement is calculated based on a one year snapshot using the current year 2003/04 as the 'test year', this methodology does not recognize any shortfall or extraordinary costs in the remaining two years of the proposed tariff. NWC needs details and justification for calculation of the revenue requirements.

#### **Office' Response**

The concept of a Test year is to normalize costs and revenues such that a company can cover its expenses and make a return. It starts from a basis of fairly certain costs and sales and adjustments are made for things known and measurable that will affect operations. In the final analysis the Test year cost and revenues may not reflect the actual outturn for the particular year.

Tariffs should not be set at the level of a one time extraordinary expense to avoid wind falls in subsequent years therefore the expense item may be prorated to match the benefits. Where events occur that are outside the control of the entity then application can be made for a special treatment. See also the Offices response on item 3.1 -Tariff rates.

### **3.10 NWC's comments- Compensation for Breach of Guaranteed Standard**

The NWC is required to pay customers four times the service charge for breach of Guaranteed Standard. The NWC has always aimed to provide service of the highest quality to customers but it is our view that this penalty is harsh. Currently the JPS pays a flat rate with increased compensation for non-compliance each period not exceeding a maximum of four periods. The compensation required by

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<sup>1</sup> This rate would be deemed the reasonable return on capital and is then applied to the rate base to determine normal profit.

the NWC is a one shot payment with no window for improvement – see Table below. NWC is proposing that the breach for Guaranteed Standards be equivalent to the service charge or a similar (JPS) compensation scale should be developed for the NWC. This compensation should only be granted to customers whose accounts are in good standing with the Commission.

**Table: Comparative Compensation for Breaching One of Guaranteed Standards**

	<b>Proposed for NWC</b>	<b>JPS</b>
Domestic	About \$800.00	\$150 up to \$750 for a maximum of four Periods (\$150 charge per period)
Commercial	About \$2,200.00	\$750 up to \$3,750 for a maximum of four (1-inch connection) periods. (\$750 charge per period)

### **Office’s Response**

The Office is of the view that the NWC has been ineffective, deliberately so, in publicizing the guaranteed and overall standards. Further, the NWC has been unable to develop a system that will allow it to generate sufficient reports on its performance in relation to these standards. In addition, the snapshot report that was submitted in support of the tariff review application indicates that the NWC has not been compliant with some of the standards and that no payments have been made with regards to these breaches. In light of this the Office’s preferred option for automatic payments for breaches and therefore lower levels of compensatory payments, is not practical. The NWC has commented that the new compensatory payments are too high when compared with JPS. The Office is firm, in the view that these compensatory payments are avoidable costs and as long as service is provided at an acceptable quality there should be no claims made against the Commission. The Office will, as a matter of policy, increase the compensatory payments made to customers for breaches in circumstances where customers are required to initiate the process by making a claim, and will apply this principle to other utility companies.

### **3.11 NWC’s comments - Inputs, Assumptions and Calculations of the OUR**

The NWC is requesting that the OUR provides all assumptions and calculations used in the assessment of the current Tariff Determination. The NWC at this point is unable to comment on vital issues put forward by the OUR because of the limited information provided by the OUR re the derivation of such items. NWC will comment on these when the information requested is provided, before the date set for final Tariff Determination – December 22, 2003.



## Office's Response

The determination notice contains the calculations and assumptions used. The NWC has not stated what particular assumption or calculation is lacking.

### 3.12 NWC's Comments on Performance benchmarks

NWC Performance Benchmarks and Standards (OUR)				
	Benchmark/Standard	OUR Requirement	NWC Proposal	Comments
1	Receivables	Net receivables at 25% of revenues.	Receivables will be kept below 30% of revenues.	
		Bad debt provision at 8% of revenues.	Bad debt provision at 10% of revenues.	
2	Employee Costs	Employee costs at 35% of revenues within two years.	Employee costs at 35% of revenues within two years and less than 30% of revenues within 5 years.	
3	Asset Revaluation	Formal revaluation of assets and inventory every 5 years.	Same	
		Develop indexation mechanism to update asset values annually in the intervening years.		
4	Unaccounted for Water (UFW)	Reduce UFW to 55% by end of fiscal year 2004/5 and thereafter by at least 2% points per year.	UFW would be decreased to 40% in the Kingston Metropolitan Area (KMA) and Port Antonio over a five year period	May take time for projects and measures to take effect in the KMA. Funding has not been identified for other areas.
5	Billing and Collection	Collection rate at 92% of billed revenues. Reduce bad debt provision to 8%.	Average collection rate shall be at least 90% of billing.	We find it very difficult to achieve 90% even with focused collection strategies.
6	Billing related complaints	Billing-related complaints at no more than 5% of bills printed.	Same	

7	Meter reading	Meters should be read at least every other month. 97% of meters be read in each billing cycle.	The period between successive meter readings be a maximum of three months.	NWC may choose to read meters every other month.
8	Inactive Accounts	All disconnected accounts that have not been legitimately reconnected should be revisited within 90 days of being disconnected to ensure that these customers are not illegally reconnected.	Same	
9	Functioning Meters	85% of accounts with functioning meters. Provision for meter replacement has been made by way of the depreciation charge.	NWC proposes the following targets: 75% YR 1: 80% YR2: 85% YR 3.	
10	Water Quality	99% compliance with IJAM standards.	Water quality will show a minimum of 95% compliance with the standards set by the Ministry of Health.	Rain and adverse weather conditions may affect the water quality.
11	Wastewater Quality	Agree with NEPA a timeframe to bring wastewater treatment plants into compliance. Specific provisions of \$422.8M for the funding of the rehabilitation program has been made.	Agree with NEPA a timeframe to bring wastewater treatment plants into compliance.	NWC to agree on a schedule with NEPA and OUR.
12	Reporting Requirements	Full compliance with the reporting requirements. Reports are to be submitted within 45 days of the end of the relevant period.	Best efforts shall be used to meet all reasonable reporting requirements of the OUR.	

## **Office's Response to Performance Benchmarks**

The Office is of the opinion that the performance standards are adequate and will impel the NWC to a path of efficiency. It should however be reiterated that the target of 92% collection rate assumes that the government makes good on its debts. Presently the average collection rate is 89%. With the provisions made for various corporate programmes, the Office expects an improvement of at least 1% over the existing rate. This, in addition to the 2% provision for collections from the government, results in a 92% collection rate.

## **4.0 Office's Response to other comments from the public**

The Office is encouraged that members of the public have submitted responses to the Determination notice. Although these submissions do not satisfy the conditions for reconsideration, the Office will respond to some of the general concerns raised. It considers these submissions a step in the right direction and hopes that at the next rate review, it will receive increased interest from the public in the form of reasoned submissions not only at the public hearings but also in writing. These inputs are essential if the Office is to be able to reasonably hear and take the views of consumers into account.

However, the Office is mandated by law to balance the interest of both consumers and service providers and in so doing it has a duty to enable an environment to secure for consumers economical and reliable service. Based on the Office's analysis there is a shortfall in revenues to cover the operating and capital costs to enable the NWC to provide acceptable quality of service to its customers. If this shortfall is not recovered through the existing rate base, then the level of service will continue to deteriorate.

The Public has raised concerns about the method of charging for sewerage services as 100% of the billed water charge. The issues involved are

1. Whether linking the sewage rate to water consumption is equitable, and
2. If it is linked, what is the appropriate percentage

In some jurisdictions sewage rates are linked to the value of the property, frontage or area of property. These methods do not adhere to the principle of cost causation and therefore raises the question of equity.

The assumption that appears to have found most favour internationally is that there is a relationship between water consumption and wastewater returned and therefore the regime for linking the sewerage charge to the water consumption has developed as being more equitable than property assessment. In jurisdictions that link sewage rates to water charges the percentage applied is often above 100 as the treatment

and safe disposal of waste water is often more expensive than the provision of the same quantity of water.

The Office cannot, at the present time, make a reasoned decision on whether to change, or modify the current regime for fixing the sewerage charge. With the new rates, it is estimated that revenues from sewerage operations will be \$1.267M. The Office believes that this level of revenues will support the NWC's sewerage business. The Office has for years sought to have the NWC separate its accounts for the two business units – water and sewerage – in order that the costs for each can be identified precisely. The Office will insist that as a condition for consideration of the next tariff review the accounts must have been effectively separated for at least one audit period prior to the submission of the application. In the mean time, the Office has no basis on which to change the sewage tariff regime. Suffice it to say, if sewage rates are calculated at less than 100% of water charges, then the water charge will have to be increased to offset the shortfall in revenues.

The importance of central sewerage systems as the means for waste and wastewater disposal, particularly in urban and environmentally challenged areas should not be an issue. That the provision of these systems should be treated as a public good and therefore the full costs should not be borne by the user of the service only is a principle to which the Office subscribes and it is for this reason that the Office has the view that, in the case of sewerage systems, the full cost of capital development should not be met by the NWC. The operating costs however should be paid for in full by the beneficiary of the service. The most effective way of minimizing this cost is to ensure that the optimum numbers of users are connected to the systems. It is for this reason that the Office encourages the NWC to pursue its strategy for connecting customers to the new systems in Montego Bay, Ocho Rios and Negril aggressively but also to treat as priority the expansion of the network to coincide with the expected in-service date of the Urban Development Corporation (UDC) sponsored development of the new treatment facility for the Kingston Metropolitan Area at Soapberry.

The submissions have also raised concerns about the level of inefficiency at the NWC. The Office sympathizes with the many views, and even anger, that has been expressed about the NWC's inefficiency, particularly as evidenced by its seeming ineptitude in dealing with leaks. This issue has received detailed attention but the view has been formed that the NWC, by and large, has been constrained in its ability to focus on issues such as the repair of leaks because, certainly in the last period, it's resources have been concentrated in the build out of the system to provide water supplies to unserved areas. It clearly was not generating the resources necessary to enable it to deal with its operating priorities. In this tariff Determination, the Office has set certain efficiency and performance targets and has allowed a tariff that will generate the financial resources to enable the NWC to support the activity required to achieve those targets. In order to secure the continued attention of the NWC to meeting these targets the Office will not only continue its practice of issuing to the NWC a regulatory framework which will

incorporate the performance benchmarks included in the Determination Notice but it will also publish quarterly reports on the Commission's financial and operating performance. The Office intends to use all the powers at its disposal under the OUR Act to ensure that the NWC complies with the Regulatory Framework.

### **Final Determination**

Having reviewed the submissions that have been made in response to the Determination on the NWC's tariff, the Office is of the view that it has not been presented with information or data of material significance to cause a change in its position since the publication of the initial Determination on December 2<sup>nd</sup> 2003. The Determination therefore is as set out below.

#### **These new rates will become effective January 1, 2004.**

1. The effective rates charged by NWC (i.e. the base rate adjusted by the Price Adjustment Mechanism, PAM, of 48% as at August 2003) shall be increased by 26.36% effective January 1, 2004
2. Sewage rates will remain at 100% of billed water charges.
3. The present structure of the rates will remain until the next rate review.
4. The value of the weights of the components of PAM are revised as shown in Table 1.4.
5. The electricity and foreign exchange components of PAM shall be applied as a monthly adjustment to the bills.
6. PAM shall be calculated annually and an efficiency gain of 3.5% subtracted
7. A new Base rate will be set annually equal to Old Base rate  $\times (1 + \text{PAM} - 3.5\%)$ .
8. Effective April 1, 2004, the penalty for breach of a Guaranteed Standard shall be four times the gazetted service charge. The procedure where customers will have to claim for compensation in respect of breaches under the guaranteed standards scheme remains in force.
9. This tariff regime will remain in effect for three years.

It should be noted that a profit of approximately \$600 million has been allowed as sufficient to let NWC cover its operating expenses and undertake essential rehabilitation programmes and contribute to capital expansion.

The Office has also set a number of performance targets for the Commission. It is expected that if these targets are met the NWC will be able to realize efficiency gains exceeding the targeted 3.5% per annum. These targets are outlined as follows:

1. Net receivables are to be reduced to 25% of revenues by year-end 2004/05.
2. The collections rate is set at 92% of billed revenues correspondingly bad debt provision is reduced to 8%;
3. Employee cost is to be reduced below 35% of revenues within two years given the expected organizational restructuring programmes;
4. NWC is to ensure that its books reflect this new valuation of assets. The Office has given the NWC a time frame of one year in which to do so;
5. Unaccounted for water (UFW) is to be reduced by at least two (2) percentage points per year and it is expected that within one year of this determination, UFW should be at most 55%;
6. Billing related complaints should be at no more than 5% of total bills printed;
7. Meters should be read at least every other month and 97% of meters must be read in each billing cycle;
8. All disconnected accounts that have not been legitimately reconnected should be revisited within 90 days of being disconnected to ensure that these customers are not illegally reconnected and outstanding balances should be pursued to the full extent of the law;
9. The NWC will maintain the level of at least 85% of accounts with functioning meters;
10. The NWC should achieve at least 99% compliance with the IJAM water quality standards as outlined in 2002-03 regulatory framework;
11. NWC will conclude discussions and reach agreement with the National Environment and Planning Agency (NEPA) in relation to the timeframe to bring its plants into compliance with effluent standards for sewage treatment. As this agreement may have consequential implications for capital expenditure and therefore an impact on tariffs, the Office would wish to be a party to any memorandum of understanding agreed to by the parties. The Office would expect these agreements to be concluded by the end of September 2004;
12. The Office expects full compliance with its reporting requirements and has decided that it will use all its powers under the OUR Act to secure compliance. Additionally, the reports are to be submitted within 45 days of the end of the relevant period;

13. The Guaranteed and Overall Standards as outlined in Chapter 4 of the Determination Notice dated December 2, 2003 remains in force, except that WGS-10 (Meter Reading) has been amended to be consistent with the target set at paragraph 7 above.

### New Rates

The new rates to be charged by the NWC effective January 1, 2004 are shown below. The effective rates are the Gazetted rate adjusted by PAM. Since these are the rates that customers currently face, comparisons should be made between these rates and the new rates.

**Table 1.0: OUR-determined Service Charge**

Meter size	Base service charge	Effective* charge (\$)	NWC proposed (\$)	New rates (\$)
5/8 inch/15mm	101.65	150.44	214	190.10
3/4 inch/20mm	208.65	308.8	438	390.20
1 inch/25mm	272.86	403.8	573	510.28
1 1/4 inch/30mm	513.61	760.14	1079	960.52
1 1/2 inch/40mm	513.61	760.14	1079	960.52
2 inch/50mm	727.61	1076.86	1529	1360.72
3 inch/75mm	1321.48	1955.79	2777	2471.34
4 inch/100mm	2134.69	3159.34	4486	3992.14
6 inch/150mm	3252.86	4814.23	6836	6083.26

\*- This includes PAM of 48%.

**Table 1.2: OUR-determined Water Rates (Litres)**

	Per 1000 litres	Existing base rate (\$)	Effective rate (\$)	NWC proposed rate (\$)	New Rates (\$)
<b>Residential</b>	0 to 14	12.75	18.87	26.79	23.83
	14 to 27	22.48	33.27	47.24	42.02
	27 to 41	24.27	35.92	51	45.37
	41 to 55	30.97	45.84	65.09	57.91
	55 to 91	38.58	57.10	81.08	72.12
	>91	49.65	73.48	104.34	92.83
<b>Commercial</b>	per 1000	47.81	70.76	100.48	89.37
<b>Condominium</b>	per 1000	23.71	35.09	49.83	44.33
<b>Primary school</b>	per 1000	19.12	28.30	40.19	35.75

**Table 1.3: OUR Determined Water Rates (Imperial gallons)**

	Per 1000 Gls.	Existing Base Rate (\$)	Effective Rate (\$)	NWC Proposed Rate (\$)	New Rates (\$)
<b>Residential</b>	0 to 3	57.96	85.78	122	108.39
	3 to 6	102.18	151.22	215	191.08
	6 to 9	110.32	163.27	232	206.31
	9 to 12	140.81	208.39	296	263.33
	12 to 20	175.37	259.54	369	327.96
	>20	225.73	334.08	474	422.14
<b>Commercial</b>	per 1000	217.33	321.64	457	406.43
<b>Condominium</b>	per 1000	107.81	159.55	227	201.61
<b>Primary school</b>	per 1000	86.94	128.67	182.71	162.58

**Table 1.4 – PAM Weights**

Index	1999 Weights	2003 Weights
Foreign exchange	0.174	0.175
CPI	0.618	0.605
Electricity	0.208	0.220
<b>Total</b>	<b>1.0</b>	<b>1.0</b>