DECISION **NSUARB-W-HRWC-R-10**
2010 NSUARB 244

NOVA SCOTIA UTILITY AND REVIEW BOARD

IN THE MATTER OF THE *PUBLIC UTILITIES ACT*

- and -

IN THE MATTER OF AN APPLICATION by **HALIFAX REGIONAL WATER COMMISSION** for Approval of a Schedule of Rates and Charges and Schedules of Rules and Regulations for the Provision of Water, Public and Private Fire Protection, Wastewater and Stormwater Services

BEFORE:	Peter W. Gurnham, Q.C., Chair Kulvinder S. Dhillon, P. Eng., Member Murray E. Doehler, CA, P. Eng., Member
COUNSEL:	**HALIFAX REGIONAL WATER COMMISSION** John MacPherson, Q.C.
	CONSUMER ADVOCATE William Mahody, LL.B.
	INVESTMENT PROPERTY OWNERS ASSOCIATION OF NOVA SCOTIA et. al. (LARGE USERS GROUP) Robert G. Grant, Q.C. Maggie Stewart, LL.B.
	FRIENDS OF HALIFAX COMMON Peggy Cameron
	SIERRA CLUB CANADA, ATLANTIC CANADA CHAPTER Marie Claire Brisbois
BOARD COUNSEL:	S. Bruce Outhouse, Q.C.
HEARING DATES:	September 13 – 17, 2010
POST-HEARING SUBMISSIONS:	November 10, 2010
REBUTTAL SUBMISSIONS:	November 17, 2010

Document: 184878

DECISION DATE: **December 17, 2010**

DECISION: **Decision is summarized in paragraphs 276 to 292 inclusive.**

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I INTRODUCTION

[1] This is a decision of the Nova Scotia Utility and Review Board (the "Board") in respect of an Application by Halifax Regional Water Commission ("HRWC" or the "Utility",) for approval of a Schedule of Rates and Charges and Schedules of Rules and Regulations for the Supply of Water, Wastewater and Stormwater Services.

[2] The hearing was held September 13 to 17, 2010. John MacPherson, Q.C., represented HRWC at the hearing. Carl Yates, General Manager; Blaine Rooney, Manager of Finance and Customer Service and Secretary-Treasurer; John Sheppard, Manager of Environmental Services; and Bill Gates, Gerry Isenor and Michael Loudon, consultants retained by HRWC, all gave evidence at the hearing.

[3] William Mahody represented the Consumer Advocate ("CA") and put forward as an expert witness, Harold J. Smith. Robert Grant, Q.C. and Maggie Stewart represented the Investment Property Owners of Nova Scotia, Crombie Developments, Sobeys Group Inc., Killam Properties Inc., Dalhousie University, St. Mary's University, Mount Saint Vincent University, and Shannex Inc. (which is not a formal intervenor), collectively known as the Large Users Group ("LUG"). The LUG called Jason Mumm and Mark Drazen as expert witnesses. The Friends of the Halifax Common was represented by Peggy Cameron and Andrew Murphy.

[4] Board Counsel, Bruce Outhouse, Q.C., put forward as expert witnesses James Goldstein, Donna Ramas and Mel Whalen.

[5] There were six letters of comment received. No member of the public had requested to speak.

[6] The Application is for an increase in water, wastewater and stormwater rates, and for changes in various charges and changes in some of the Rules and Regulations. The rates for water and wastewater/stormwater applied for are based on a new Cost of Service Study ("COSS").

[7] The Board, after circulating a Preliminary Issues List for comment, sent out a Final Issues List of the following ten items:

1. Two Year Business Plan 2010/11 and 2011/12;
2. Operating costs for the test years;
3. Projected demand/consumption for the test years;
4. Capital expenditures, financing, debt policy, and depreciation;
5. Return on rate base and dividend payments to Halifax Regional Municipality;
6. Cost of Service Study;
7. Proposed Schedule of Rates and Charges for water, wastewater and stormwater service;
8. Proposed Schedule of Rules and Regulations for water, wastewater and stormwater service;
9. Procedure for the acceptance of Private Community Water Systems;
10. Capital Cost Contribution Charge for Wentworth/Bedford South and Portland Hills Estate.

[8] The increases/decreases applied for, depending on customer class, ranged from 24.2% to -9.4% in 2010/11 and 16.3% to 5.2% in 2011/12.

II BACKGROUND

[9] With the transfer of the wastewater and stormwater operations from the Halifax Regional Municipality ("HRM") in 2007, HRWC became the first regulated water, wastewater and stormwater utility in Canada. The current rate structure for water is based on a traditional utility model. In the case of wastewater and stormwater, HRM did not operate in a regulated environment and therefore, the rate structure needs to be revised.

[10] In its May 1, 2006 water rate decision [2006 NSUARB 38], the Board directed HRWC to investigate certain cost of service issues including a study of the impact of consumption patterns on various customer classes. In its January 23, 2008 wastewater and stormwater decision [2008 NSUARB 8], the Board ordered HRWC to file a COSS for the wastewater and stormwater components of its operations. That study was originally to be filed no later than November 1, 2008. HRWC requested various extensions to the filing deadline and the COSS was filed in the spring of 2010.

[11] The Board had expected in this Decision to significantly advance cost of service and rate design issues but, because of the very poor quality of the material filed by HRWC, resolution of those issues must, regrettably, be further delayed.

III QUALITY OF THE APPLICATION

[12] The following is a summary of the major revisions made by HRWC to the original Application of March 25, 2010 (Exhibit H-1), during the course of the proceedings:

- An amended Schedule "A" (Proposed) Schedule of Rates and Charges for Water, Wastewater and Stormwater Services (Exhibit H-2) was filed with the Board on April 26, 2010, to correspond with the rates as calculated and

contained in the rate studies of the Application. The Schedule "A" contained in the Application (Appendix 10) contained rates which were based upon an earlier version of the rate study.

- In its responses to some of the Information Requests from the various parties filed with the Board on July 12, 2010 (Exhibits H-3 to H-10), HRWC noted changes to the Application, including revisions to figures used to determine the proposed rates, as well as changes to the Schedule of Rules and Regulations. In some cases revised Worksheets in the rate studies of the Application were provided in the response to the Information Request.

- In a letter dated August 17, 2010 (Exhibit H-36), the Board requested that HRWC file amended appendices to the Application, related to the responses to the Information Requests, which included a cross-reference to the Information Request which brought about the revision. The revised appendices, including revised rate studies for each of water (Appendix 7), wastewater (Appendix 8) and stormwater (Appendix 9), and a revised Schedule of Rates and Charges (Appendix 10) were filed on September 7, 2010 (the week prior to the hearing) (Exhibit H-25). Each of the revised rate studies included a new line item in the 2009/10 budget, 'adjustment for actual year end' in the amounts of $2,101,591 (water), $1,185,794 (wastewater) and $316,000 (stormwater).

- In a letter to the Board dated September 10, 2010, HRWC advised that upon reviewing the submissions of the various parties, it was withdrawing its requested change to the Extra Strength Surcharge (Exhibit H-31).

- After it was noted by the Board at the commencement of the public hearing that the revised filing of September 7, 2010 (Exhibit H-25) was deficient in supplying cross-references to explain the changes made to the rate studies, HRWC filed revised rate studies (Appendices 7, 8 and 9, Exhibit H-42) on the second day of the public hearing, September 14, 2010, which included the references, as well as further revisions to the figures.

- In response to Undertaking U-1, filed with the Board on October 21, 2010, HRWC provided further explanations for the revisions made to the revised filing received September 14, 2010 (Exhibit H-42).

- In response to Undertaking U-5, filed with the Board on October 21, 2010 (several weeks after the hearing), HRWC provided revised rate studies for water, wastewater and stormwater (Appendices 7, 8, and 9) in a format which is used for its accounting and reporting. In some cases, the actual figures for past years were revised and there were amendments to the projected figures which resulted in an adjustment to rates. A revised Schedule "A" (Proposed) Schedule of Rates and Charges for Water, Wastewater and Stormwater Services was filed.

- In response to Undertaking U-11, HRWC corrected an error in the calculation of the allocation of common costs for wastewater and stormwater. This revision resulted in the allocation to wastewater increasing from approximately 61% to 83%, while the allocation to stormwater decreased from approximately 39% to 17%. The revised filings provided in response to Undertaking U-5 included this correction.

[13] The number of revisions included amendments to both projections and historical financial data, as well as the lack of requested detailed information, resulted in the parties questioning the reliability of the data supporting the Application, and the viability of the Application itself. The direct evidence of Mr. Smith, on behalf of the CA stated:

> Q. Did the original filing contain the information necessary to draw conclusions about the methodologies used to calculate the various proposed rates and charges?
>
> A. In my opinion it did not. The original filing was hard to follow and was unclear as to the methodologies used to calculate rates and charges and provided very little justification for many of the decisions made with respect to the allocation of costs and rate design. The fact that such a large number of information requests were submitted by the various parties to this case is demonstrative of the inadequacy of the original filing.
>
> Q. Did HRWC's responses to information requests provide the information necessary to draw conclusions regarding the validity and appropriateness of their proposed rates and charges?
>
> A. In some cases yes, but in many cases HRWC either refused to respond to legitimate requests for information or their response did not provide the information that was requested.
>
> [Exhibit H-14, p. 3]

[14] Mr. Smith further confirmed, during the hearing, that he was not able to quantify the rate impacts of his suggestions because of the inadequacy of the record with respect to HRWC's filings (Transcript p. 569).

[15] The CA asked the following question:

> MR. MAHODY: We're aware of the amount of information that has been filed and re-filed, in some cases re-re-filed by the Utility in relation to this matter, but what I'm asking you is given your knowledge of the criticism that has come from interveners regarding the adequacy of support that has been offered, do you have a general comment on behalf of

your utility regarding whether improvements are required as to the nature of the information you supplied to this Board in an application such as this?

[Transcript p. 29]

[16] Mr. Yates responded:

MR. YATES: Well, I think the information that we have produced has been adequate, but we have to recognize that not everybody's got the same level of knowledge when they approach the application....

[Transcript pp. 29-30]

[17] In his opening statement, Mr. Mumm, on behalf of the LUG commented:

MR. MUMM: ... In the 32 pages of exhibits and calculations [related to revenue requirement], there is really no line by line evaluation of operating a [sic] capital costs to show this Review Board what level of cost has been incurred in the past with any description of the known and measureable changes that Halifax [Water] expects to experience between the last known audit period and the three future periods that include two test years shown in the application.

Yes, I'll agree that the numbers are there in those 32 pages, that's clear, but what isn't there there's a reasonable explanation as to why those numbers are there and why they are there at the levels shown....

[Transcript p. 974]

...In my view, Halifax Water has not met the basic requirement that its claimed costs are necessary, reasonable and prudently incurred to provide for the acquisition of an operation of access [sic] used and useful to serve its customers.

Because the application begins with a questionable determination of the revenue requirements, the allocation of those requirements and the determination of the rates have to also be questionable, and in addition to the elevated level of the allocated costs the resulting rates there are other problems that they recommend need to be addressed....

[Transcript p. 978]

[18] Mr. Drazen, on behalf of the LUG, in his opening statement commented on the areas of uncertainty which usually do not arise in rate applications noting:

MR. DRAZEN: ... test year numbers have been changing, typically with respect to new investments and as that flows through to things like return this complicates any analysis that we have....

[Transcript p. 1036]

[19] Upon receipt of the revisions to the Application, filed September 14, 2010 (Exhibit H-42), Mr. Grant, also on behalf of the LUG, stated:

> MR. GRANT: ... I don't want to editorialize but there have been a lot of moving parts in this application and it's been a bit of a challenge to understand the basis of the application and we'll be wishing to make submissions at the closing of the hearing as to how the Board ought to deal with that in its final determination.
>
> [Transcript p. 239]

[20] Ms. Ramas, Board Counsel Consultant, noted in her opening summary:

> MS. RAMAS: ... There was a limited availability of the details that go into the operating budget that form the basis of operating expenditures and the revenue requirement, so I had to perform my analysis within the information that was made available....
>
> [Transcript p. 810]

[21] On cross-examination by Mr. Mahody on the availability of data needed to conduct an analysis of the Application, Ms. Ramas replied:

> MS. RAMAS: To say the least, it was frustrating the level of data that was provided in support of particularly the operating expenditures contained in the rate studies.
>
> I can recall maybe three other cases out of well over a hundred that I've participated in that were that lower level of detail, say regarding what's included in the revenue requirement request was provided. It's typical that I would receive a lot more information....
>
> [Transcript p. 843]

[22] The issue of actual, past financial data changing throughout the Application process was discussed:

> MR. OUTHOUSE: ...Can you explain to me why for an actual completed year those numbers change?
>
> MR. ROONEY: I can't tell you at this moment about the process. I mean the information was given - - I'd say the information in the revised filing was taken out of our financial statements. The information was given to the rate consultants and they factored it in their original schedule...
>
> THE CHAIR: This goes to Mr. Grant's point this morning. We're having an awful time figuring out exactly what these numbers really are. Mr. Outhouse, I'm sure, is going to question you and I'm sure the Board panel members are but I just preface all your answers by saying we're awfully confused.
>
> [Transcript p. 291]
>
> . . .

MR. OUTHOUSE: ...Now we're talking about actual numbers for 2009-2010. And the response simply says those numbers aren't readily available. And it talks about the process that has to be gone through to transition them and so on. And we've heard reference to this already.

Is this problem being worked on currently so that when you ask for some now several month - old actual that they can't be produced and made comparable to a Board filing.

MR. ROONEY: Yes.

MR. OUTHOUSE: And what's being done, Mr. Rooney?

MR. ROONEY: Well, I mean, the problem – what we're going to try and do, obviously, is number one, we're going to - - in future we're going to put our business plans or put our test years into SAP.

We're going to try and eliminate the interdepartmental transfers we have. And ultimately, we're going to see what is involved in getting the financial information to report up into the Board format through SAP....

[Transcript pp. 343-344]

[23] The following exchange between Board Counsel and HRWC is both instructive and worrisome:

MR. OUTHOUSE: Now, when you're – if you still have the Worksheet B-1 attached to the September 3rd filing, you'll see that under the 2009-2010 column there's a new entry that didn't appear on any of the others, and it's called Adjustment for Actual Year End. It's up about five lines from the bottom. You see that?

And it shows an adjustment of $2,010,591. Does anybody know what that is?

MR. ISENOR: Yes. We didn't have the time to rework all of the individual budget items. We have the year end financial statements. So what we did was put an entry in to balance the bottom line with the financial statements.

MR. OUTHOUSE: So it's a plugged figure?

MR. ISENOR: It's a balancing figure to make the bottom line agree with the financial statements.

MR. OUTHOUSE: So in other words, it's a figure which you can't explain.

MR. ISENOR: No. We would have to go back and rework the individual numbers.

[Transcript pp. 306-307]

. . .

MR. OUTHOUSE: And why was that again?

MR. ROONEY: To maintain the request for the -- the rates as they were, but to also to phase in depreciation more quickly by phasing in depreciation more quickly on the existing and assets so we can generate some capital funding or funding for capital programs.

MR. OUTHOUSE: So I guess this notion that you changed the numbers to maintain the rate request means the numbers aren't driving the rate request. The rate request is something you've got in your head and you adjust these figures. When you have to change depreciation then you changed forgiveness by enough to maintain your requested rate increase.

You had an overall objective to maintain that rate increase, I guess, regardless what was happening with depreciation?

MR. ROONEY: I wouldn't say it that way. I think that the overall objectives were to generate sufficient funds to meet the expenses of the utility, including the Harbour Solutions Plants and to start the process of generating capital funds for maintenance of infrastructure.

I mean, we could have factored it all in, could have put the depreciation all in, in one year. That was deemed to have too much of an effect on the rates.

[Transcript pp. 322-323]

[24] These concerns with the Application were reiterated in the post-hearing submissions of both the LUG and the CA. In particular, the submission of the LUG, dated November 10, 2010, stated:

> It is not surprising, then, that this application was significantly more complicated than previous HRWC rate applications. However, it was noted by many involved in the hearing, including the Chair and a number of the experts who gave evidence, that the evidentiary record was at best confusing and at worst contradictory and incomplete.
>
> Not only are the financial projections of the Revenue Requirement and Cost of Service Study lacking in details, the reported actuals for previous years of operation were not settled at the time of the hearing. Clearly, it is very difficult to determine the financial requirements for the future of HRWC if we cannot accurately know where, financially speaking, the Utility has been.
>
> Moreover, it is noted that that the proposed rate schedules for the Utility's services changed several times during the course of this application including immediately prior to the start of the hearings (September 13, 2010) and then again post-hearing via the Utility's responses to undertakings (October 19, 2010).
>
> These multiple filings significantly increase the time and effort that intervenors must dedicate to reviewing and analyzing the Water Commission's submissions and to assessing their position under each iteration of the proposed rates. Certainly, the Board will appreciate that it is difficult to respond to the "moving target" that the Utility has presented in this rate application.
>
> [LUG Post-Hearing Submission p. 1]

> A fair and efficient regulatory process requires the Utility to file a well documented and comprehensive rate application that is prepared to defend and which stands up to reasonable levels of scrutiny. The present application does not meet this minimum standard. It is instead a series of evolving applications. In these circumstances, the Board and intervenors are placed in the difficult position of evaluating implications of a large number of adjustments which are necessary. We submit the deficiencies in the record and the application necessarily drive the Board to set rates on an interim short term basis with cautious incremental changes and directions to HRWC to return next year with a rate application reflecting properly the learnings from the current application.
>
> [LUG Post-Hearing Submission, p. 8]

[25] The Board acknowledges that HRWC's Application to set rates for water, wastewater and stormwater services is a significant task, involving a level of complexity which has not been undertaken in previous HRWC applications. However, this is not an excuse for the poor quality of the evidence filed in support of the Application, which the Board finds to be unacceptable.

[26] The Board has been put in the position of issuing a "do no harm" decision. The Board's approach has been to try and determine a revenue requirement that will allow HRWC to operate until it is in a position to file a properly documented and reliable application. The Board will provide rates for a 15 month test period ending March 31, 2012 (the "test period"). Unfortunately, important and necessary cost of service and rate design decisions will be deferred because, without reliable data, the Board cannot be sure of their impact. In addition, to the extent the increases estimated by the Board, and allowed in this Decision, prove insufficient, the fault rests with HRWC.

[27] HRWC should understand that if the Board receives a future rate application with deficiencies of similar magnitude it will simply be rejected.

IV EXPENDITURES AND REVENUE

1. General Observations

[28] The numerous revisions have made it difficult to perform an appropriate analysis on the total revenue requirements for all three services. Part of the reason for this was explained by Mr. Rooney in response to the difficulty Ms. Ramas was having in obtaining detailed information. He stated:

> MR. ROONEY: ... I think it's also fair to say that, you know, our budgeting process is not quite standardized, it's very departmentalized. In other words, each department ...
>
> ...I mean one spreadsheet she asked for we gave her, had over 4,000 lines in it. If I were to give -- I can give her every budget spreadsheet but she would get about, you know, probably six or 7,000 individual line items with every G/L account that we have.
>
> ...
>
> And, you know, if you look at our budgeting process, particularly on the -- particularly on the water side which we have a history, a long -- and history, it's been pretty -- it's been a pretty good process and we've never, at any hearing, been asked for this level of detail.
>
> So this was, I mean, a bit of a surprise to us.
>
> [Transcript, pp. 34-35]

[29] The link between the information as produced by HRWC's accounting system and that used by its Consultants to determine rates was explained:

> MR. ROONEY: ... The general information is not available. It has to be exported from SAP over to our consultants in Excel format and then they have to rework it into the Board's format. ...
>
> [Transcript, p. 39]

[30] The latest actual results, as used in the Application, were to the year ended March 31, 2009. The actual results for the year ended March 31, 2010, were not available at the time of filing the Application, but were made available during the hearing. Mr. Rooney stated:

MR. ROONEY: ... our year end is usually finalized around the end of May, first of June.

[Transcript, p. 41]

[31] The amounts used in the rate study did not always agree with the actual results. In fact, they were not cross-checked:

MR. ISENOR: I can only explain that the information that we used in the original filing was out of the SAP system and that we didn't -- and in hindsight it was obviously not a good thing -- we didn't cross it over to the financial statements.

So the SAP system does have some variances in it that they have to reconcile when they do their financial statements, and the information I used was not from the financial statements, it was from the SAP system.

[Transcript, p. 294]

[32] With the many revised filings of the rate studies there were variances in the actual results. This was explored at the hearing with Mr. Rooney as follows:

THE CHAIR: ... But how we can have a $2 million variance in an actual number that -- and I just don't understand how that can happen for the year that ended March 31st, 2009.

MR. ROONEY: Well, obviously one of them is the wrong number.

MR. DOEHLER: So what you're telling me is how you're allocating some of the details expenses and how they're aggregated. Is that what you're talking about? So you're changing how you're aggregating the numbers. The problem is I guess we have is an SAP system which doesn't tie in to the data that we are now going to rely upon for determining rates, and that could be inconsistent from year to year from future applications, so you won't have that consistency.

This is the part you're talking about trying to address with the SAP system.

MR. ROONEY: Right. Well, if we happen to change it, it's certainly not going to be consistent going forward until we get it changed.

[Transcript, pp. 304-305]

[33] The lack of consistency in reporting actual results and possible incompatibility with the amounts used in the rate studies occasioned several requests that HRWC review and recast, if necessary, the projections. The final request was to

determine the actual results for the year ended March 31, 2010 using the same allocations as used in the rate study. HRWC stated:

> 1. A full, complete and accurate set of information was provided to the Board in the Undertakings filed on October 26, 2010 and, in particular, Undertaking U-5. Considerable time and effort went into the development of the material found in U-5 to ensure that the Board had an accurate information base to assist it in rendering its decision, as well to develop a template for the submission of information in future proceedings. The efforts undertaken in the preparation of U-5 will provide a platform on which a consistent information base can be provided in the future.
>
> The Intervenors were provided with this information on October 26, 2010 and, at their request, received an extension of the dates for the filing of Post-Hearing Submissions. The Intervenors had several weeks to analyze this material prior to filing their Submissions. HRWC notes that neither the Consumer Advocate and LUG indicate that they have been prejudiced in respect of their Submissions because of the information contained in U-5.
>
> [HRWC Rebuttal submission, p. 1]

[34] Neither the Intervenors nor the Board have had an opportunity to question HRWC on Undertaking U-5.

[35] An illustration of the differences in the many filings is summarized in Table 1 looking at the revenue required from customers (Worksheets B-2, WWB-2, and SWB-2) for the three services comparing the original Application to those as provided in Undertaking U-5:

Table 1

	2009/10	2010/11	2011/12
Water	$	$	$
Application (2009/10 estimated)	40,271,722	39,562,596	49,187,777
Undertaking U-5 (2009/10 actual)	37,573,408	40,391,900	39,565,593
Wastewater			
Application (2009/10 estimated)	39,569,479	43,903,601	52,726,817
Undertaking U-5 (2009/10 actual)	34,195,019	44,815,712	54,364,190
Stormwater			
Application (2009/10 estimated)	8,458,461	10,153,773	11,220,545
Undertaking U-5 (2009/10 actual)	7,051,502	8,880,286	9,965,290

[36] The CA provided a recommendation that could help, in the future, give Intervenors better information:

> Another item that could be done is in the initial operating plans that were provided, if the company could provide more detail cost breakout of what's included in those budgets. Really we only had a bunch of line items and dollar amounts and little description of how that was built up. Further detail in the initial filing would be extremely helpful because then you could narrow the focus of your IRs to see really what additional data is needed instead of just having to do large blanket requests for the budget information. You could focus more easily. That would be another recommendation.
>
> [CA Post-Hearing Submission, p. 6]

[37] HRWC commented upon future filings as follows:

> ... If a rate application is filed in 2011, HRWC will have had time to have its budgeting and accounting system configured in such a way that information can be provided to the Board in a format which is consistent with the format of the material filed in Undertaking U-5. HRWC will also have a year of cost history of operating the HHSP facilities and will have better and more detailed cost information in regard to the Eastern Passage Wastewater Treatment Facility expansion as well as the administrative services building at Cowie Hill. These costs, which will be incurred after the currently proposed test period, will be included in any future rate application.
>
> [HRWC Post-Hearing Submission, p. 44]

[38] The Board finds that the information in Undertaking U-5 is the most reliable to use in analyzing HRWC's revenue requirements. The adjustments include the correction of errors and revisions agreed to by HRWC, in particular, for the Green Municipal Investment Fund ("GMIF") interest difference and the reduced extra-strength surcharge revenue.

2. Water Services – Revenue Requirements

a) Return on Rate Base and Dividends

[39] HRWC, in its Application, proposed a grant in lieu of taxes/dividend to HRM in the amount of $3.7 million for each of the 2010/11 and 2011/12 test years for water assets. No such payment is proposed for wastewater and stormwater assets in the test years.

[40] The Board received a request from HRWC on March 22, 2010 for approval of payments to HRM for a grant in lieu of taxes/dividend in accordance with an agreement between HRM and HRWC. The Board advised HRWC on March 31, 2010 that this request should be part of its rate Application.

[41] HRWC elaborated on this request:

> As noted in Mr. Yates' correspondence of March 22, 2010 (Exhibit H-19), the dividend proposed in this instance is consistent with that previously approved by the Board as it relates to the HRWC water system. HRWC requests that the water dividend be approved as requested.
>
> The HRWC/HRM Dividend Agreement also contains provisions for the payment of a dividend based on the wastewater and stormwater system assets. HRWC notes that this dividend will not be payable until the fiscal years 2012/2013 and therefore falls outside the "test" period. However, to provide certainty for planning on a go-forward basis, HRWC requests that the HRWC/HRM Dividend Agreement in respect of a wastewater and stormwater dividend be approved by the Board.
>
> [HRWC Post-Hearing Submission, p. 26]

[42] Concerns were raised by the Board in regard to this aspect of the HRWC/HRM Dividend Agreement (Transcript, pages 447 to 452). In particular, a question was raised as to the appropriateness of such a payment to HRM in light of the provisions of Section 22 of the *Halifax Regional Water Commission Act*:

> 22 Notwithstanding the Assessment Act or the Municipal Government Act, property that is owned or utilized by the Commission for the purpose of providing wastewater or stormwater service is not liable to real property or business occupancy taxation or any other municipal rate or tax.

[43] HRWC stated:

> HRWC provides the following comments for the Board's consideration in respect of the applicability of this provision to the HRWC/HRM Dividend Agreement. Section 22 references the Assessment Act and the Municipal Government Act. However, HRM is currently not subject to the Municipal Government Act but rather is governed by Halifax Regional Municipality Charter, S.N.S. 208, c. 39, which states in Section 92:
>
> > "92 (1) For greater certainty, the Council may levy commercial and business occupancy taxes against the property and assets of the Halifax

> Regional Water Commission situated within the geographical boundaries of the Municipality.
>
> (2) Notwithstanding subsection (1) and the Assessment Act, the Municipality may enter into agreements with the Halifax Regional Water Commission providing for the payment of grants in lieu of commercial and business occupancy rates and taxes against the property and assets of the Halifax Regional Water Commission within the geographical boundaries of the Municipality in such amounts annually as shall be agreed upon between the Council and the Halifax Regional Water Commission. 2008, c. 39, s. 92."

HRWC also notes that the HRWC/HRM Dividend Agreement provides for the payment of a dividend as opposed to a grant in lieu of taxes as it relates to HRWC's wastewater and stormwater assets. Article 4 of the Agreement states:

> "The dividends payable pursuant to paragraphs 2 and 3(a) of this agreement are grants made in lieu of commercial and business occupancy rates and taxes against **HRWC's property and assets relating to the water system** within the geographic boundaries of the HRM." (emphasis added)
>
> [HRWC Post-Hearing Submission, p. 27]

[44] Board Counsel explored the issue of a grant in lieu of taxes/dividend relating to wastewater and stormwater with HRWC during the hearing:

> MR. OUTHOUSE: ... You filed a revised dividend agreement, a new dividend agreement, and under the dividend agreement there is to be a dividend paid with respect to the wastewater and stormwater system; correct?
>
> MR. YATES: Yes, in the -- I guess the next year beyond the two test years.
>
> MR. OUTHOUSE: Okay. And it sort of starts within the test years, does it not?
>
> MR. YATES: Not for wastewater.
>
> MR. OUTHOUSE: And that forgiveness is because of the deficit in the system currently?
>
> MR. YATES: Yes, it's a recognition that we're transitioning to address the infrastructure deficit, a recognition of the condition.
>
> MR. OUTHOUSE: You've indicated already that there's a major expenditure at Eastern Passage with respect to that treatment facility; correct?
>
> MR. YATES: Yes.
>
> MR. OUTHOUSE: And you indicated in your evidence earlier today that that system has been non-compliant for five or six years, at least?
>
> MR. YATES: Yes.

MR. OUTHOUSE: And you haven't given us a number but I suggest to you that it's measured, probably $100 million or so, in that order of magnitude, to use your phrase, with respect to bringing that plant into compliance; is that so?

MR. YATES: Order of magnitude and right now we think it's in the order of 55 to 60 million.

MR. OUTHOUSE: Fifty-five (55) to 60.

MR. YATES: Sixty million dollars ($60 million).

MR. OUTHOUSE: So someone gives you an asset which is non-compliant with the law, you have to spend 55 to 60 million to bring it into compliance with the law. Why would you ever pay them a dividend for transferring such assets to you?

MR. YATES: There's still a recognition of services that we obtain as a utility from them. We certainly obviously negotiated this and discussed this with them and obviously realized a deferral of a dividend for two years and then a lower rate of return for subsequent years as well.

MR. OUTHOUSE: But the driving force, as I understand it, behind this application, for what -- at least in percentage terms is a massive increase, and not one-time increase but going forward into the future, is tied to the deficit in the wastewater infrastructure; right?

MR. YATES: That is correct.

MR. OUTHOUSE: And that's the asset on which you propose to pay a dividend to HRM?

MR. YATES: On a future basis, yes.

MR. OUTHOUSE: So this responsibility for refurbishing and making good that infrastructure deficit has been thrust on the utility by HRM and you're proposing to pay HRM a dividend for that?

MR. YATES: On the rate base that we acquire in the future as well. So it's important to recognize as well that the rate base that we're referring to is not from donated assets, it is from our rate base as we now accumulate it and bring it forward.

MR. OUTHOUSE: Which is, for the most part, going to be paid for by customers through greatly increased rates on a pay-as-you-go basis; right?

MR. YATES: In a big way, yes.

MR. OUTHOUSE: No equity, no substantial equity on the part of HRWC or HRM for sure.

MR. YATES: Yeah, it's recognized as much as a grant in lieu of taxes but also recognized that we will be using the services of the utility -- of the municipality.

MR. OUTHOUSE: So the effect of the transfer, from HRM's point of view, is that it unloaded a massive capital responsibility, looming capital responsibility ---

MR. YATES: I can't ---

MR. OUTHOUSE: --- and in return gets paid for doing so?

[Transcript, pp. 374-378]

[45] The LUG suggested that the payment by HRWC to HRM is not based on a legal or logical basis:

> There is no legal or logical basis for the dividend. The scheme developed between HRM and HRWC has shifted the considerable financial burdens associated with the wastewater and storm water systems from Municipal taxpayers to the Utility ratepayers: a distinction that the HRWC application does not take into account.
>
> [LUG Post-Hearing Submission, p. 26]

[46] The LUG stated:

> 3. Dividend on Wastewater and Storm Water System
>
> The Utility insists that it is appropriate to pay a dividend to HRM for the recently transferred wastewater and stormwater systems. We repeat our earlier submission that this proposed dividend cannot be justified and should not be permitted.
>
> On HRWC's evidence, there is very little equity in the system; HRM has transferred to it assets which come with significant liabilities. HRWC has represented they need significant and costly remediation which will result in unprecedented rate increases to HRWC customers. While the Utility has not fully quantified the costs associated with repairing and upgrading the wastewater and storm water systems, there is no justification for further increasing rates to pay a dividend to HRM.
>
> It is further noted that while the payment is framed as a dividend, it is not calculated on the basis of the value of the assets, but rather as a percentage of the rate base attributed to the wastewater and storm water systems. Of course, a dividend based on the value of the asset is not possible because the value of these assets are currently unknown.
>
> A dividend that is not and cannot be assessed based on the value of the transferred asset is not, then, a dividend, but a tax by a different name. In fact, throughout the HRWC materials the terms "dividend" and "grant in lieu of tax" are used interchangeably.
>
> Section 22 of the *Halifax Regional Water Commission Act* specifically exempts properties owned or used by the Utility for wastewater and storm water service from "real property or business occupancy taxation or any other municipal rate or tax." It is submitted that the dividend clearly constitutes a "municipal rate" and should not be allowed.
>
> [LUG Reply Submission, pp. 2-3]

[47] HRWC argued that, based on legislation, it is permitted to make this payment:

> ... While the legislative history of the various relevant statutes, including the repeal of certain portions of the *Municipal Government Act*, the enactment of *Halifax Regional Municipality Charter* ("HRM Charter") and a revised *Halifax Regional Water Commission Act* ("HRWC Act"), introduce an element of complexity to the legal structure governing the payment of a dividend for wastewater and stormwater assets, HRWC submits that the

current legislative structure as found in the HRM Charter and the HRWC Act permit the payment of such a dividend.

[HRWC Rebuttal Submission, p. 10]

Findings

[48] Under the *Public Utilities Act*, R.S.N.S., c. 380, s. 1, as amended, (the "*PUA*", the "*Act*") a utility is entitled to earn an annual return, as approved by the Board:

> **Amount utility entitled to earn annually**
>
> **s.45 (1)** Every public utility shall be entitled to earn annually such return as the Board deems just and reasonable on the rate base as fixed and determined by the Board for each type or kind of service furnished, rendered or supplied by such public utility, provided, however, that where the Board by order requires a public utility to set aside annually any sum for or towards an amortization fund or other special reserve in respect of any service furnished, rendered or supplied, and does not in such order or in a subsequent order authorize such sum or any part thereof to be charged as an operating expense in connection with such service, such sum or part thereof shall be deducted from the amount which otherwise under this Section such public utility would be entitled to earn in respect of such service, and the net earnings from such service shall be reduced accordingly.
>
> **(2)** Such return shall be in addition to such expenses as the Board may allow as reasonable and prudent and properly chargeable to operating account, and to all just allowances made by the Board according to this Act and the rules and regulations of the Board.

[49] In the past the Board has approved payments by HRWC to HRM for a grant in lieu of taxes/dividend for the water system. However, the current request includes similar payments, starting in fiscal year 2012/13, for wastewater and stormwater systems, recently transferred to the Utility by HRM.

[50] As noted in the Decision, the condition of the wastewater and stormwater infrastructure is poor and appears to be non-compliant with the regulations. HRWC, in its Application, proposed to spend millions of dollars to rectify the infrastructure deficit.

[51] The LUG noted:

> HRM has transferred an asset that shifted $100 million in debt to HRWC. This asset requires an estimated $60 million to bring it into compliance with environmental regulations. Nevertheless, HRWC has agreed to pay the Municipality an annual dividend of an estimated $3.75 million (Response to U-9) in relation to the assets (the true value of which is unknown to both the HRWC and HRM).
>
> [LUG Closing Submission, p. 23]

[52] The Board has considered HRWC's request and is satisfied with the proposed grant in lieu of taxes/dividend for the water system. It is hereby approved.

[53] The proposed wastewater and stormwater grant in lieu of taxes/dividend is a different issue. The condition of the recently transferred infrastructure to HRWC is such that it requires very significant expenditures to bring it to an acceptable standard and meet the appropriate regulations. If HRM had maintained the infrastructure in a reasonable condition before transfer to HRWC, customers of the Utility would not be paying these huge bills now. Under the proposed arrangement, customers are paying millions of dollars for the infrastructure deficit and are also being asked for a dividend, which to the Board seems unreasonable.

[54] In the Board's opinion, any grant in lieu of taxes/dividend by HRWC to HRM for wastewater and stormwater infrastructure is not justified at this time given the condition of the assets in question. HRWC's request for a grant in lieu of taxes/dividend payment for wastewater and stormwater infrastructure is not approved. Prior to any future request, the Board suggests HRWC and HRM seek clarification of the legislation.

b) Requirements Other than for New Capital

[55] In the Application the following was stated about the water services rates:

> The rate structure for water and fire protection services has been more than sufficient to meet the operating, non-operating and capital requirements of water services. This can be explained by a combination of factors. The actual operating expenditures have been less than projected in the 2005 rate application. This reduction was a combination of lower than projected expenditures, some efficiency gains resulting in lower expenditures

> and weather related distribution maintenance being lower than projected. The resulting savings have been used to finance the capital budget in excess of what was provided for through depreciation charges.
>
> [Exhibit H-1, p. 7]

[56] In further explanation of the savings, Mr. Rooney stated:

> MR. ROONEY: ...The single largest item under expenditure in water for -- I think it was in the 09/10 as it turned out, was the mild winter. We had a very, very mild winter and we didn't have the number of water main breaks, there wasn't the frost penetration that there usually is.
>
> [Transcript, p. 39]

[57] In the testimony of Ms. Ramas she had, even after the subsequent filings of the revised revenue requirements, concerns about the chemical costs, electricity costs, debt servicing costs and a general over provision ("cushion") in the budgets. Regarding chemical costs she said:

> MS. RAMAS: ... But, in actuality in this year, the company's been able to tender a 21 percent price reduction, so I've recommended adjustments to factor in that price reduction, and then to carry that forward into the second year but then allow an estimated 4 percent increase going into that second year.
>
> [Transcript, p. 812]

[58] Board Counsel questioned HRWC about the chemical costs:

> MR. OUTHOUSE: But we do know that price wise, in putting your initial figures forward, you were wrong by instead of a 4 percent increase, there's a 21 percent decrease for the first test year.
>
> MR. YATES: I should tell you that those chemical prices actually can actually change during this fiscal year. ...
>
> [Transcript, p. 331]

[59] Regarding electricity, she stated:

> MS. RAMAS: ... I have no basis to dispute that projected 10 percent increase they have for 2011-2012 period. However, that 2011-2012 period is built up somewhat from the 2010-'11 period and we know that the electric price that's factored in to the 2010-2011 period was over-projected. It was actually a 2 percent price reduction instead of a 5 percent increase.
>
> [Transcript, p. 829]

[60] HRWC, in its rebuttal evidence (Exhibit H-24) commented on the recent application by Nova Scotia Power Inc. ("NSPI") for significant rate increases. This was explored with Ms. Ramas by counsel for HRWC:

> MR. MacPHERSON: Only the folks at the front of the room will know that.
>
> And you'd agree that that is an unknown, but it certainly would appear that there's going to be an increase.
>
> MS. RAMAS: Yeah, next year, it is likely. Based on the limited amount of knowledge I have on that, it appears as though there will be an increase.
>
> [Transcript p. 828]

[61] As for the cushion she stated:

> MS. RAMAS: Again, as I indicated earlier, I think in setting rates you should try to determine what the actual expenditures are going to be and what costs you need to collect from customers.
>
> I don't think in setting rates you should include the expenditures you think you're going to incur and then an additional cushion on top of that. ...
>
> [Transcript, p. 850]

[62] In commenting upon the cushion:

> MR. ROONEY: ... I mean, we are -- you know, I guess we do budget for a cushion. We budget for more than an average winter weather-related stuff. That's been our history in the water in the last number of years.
>
> [Transcript, pp. 337-338]

[63] The Board questioned HRWC about the pension expense which showed a large increase, and whether or not this expense could be extended beyond one year. Mr. Rooney responded:

> MR. DHILLON: ... So my question is this, that this is cumulative deficiency in the pension fund. Why are we all covering up by end of next year instead of extending it beyond that so that the rates can be moderate?
>
> MR. ROONEY: It is projected that that is the minimum required funding under the Nova Scotia Pension and Benefit Act based on a January 1st, 2011 actuary review that will have to be taken place on January 1st, 2011.

> In other words, there are anticipated legislated funding rules of deficit, so that $2.5 million it's in last year is to fund that year's deficit. It's not -- it is -- it's a deficit that can be funded over 25 years and will be in place until ---
>
> [Transcript, pp. 461-462]

[64] The CA questioned Ms. Ramas about overall cost control:

> MR. MAHODY: ... I'm wondering, based on what you've been able to review, whether you're able to offer an opinion as to whether HRWC is wisely and frugally spending ratepayer money.
>
> MS. RAMAS: Not with the limited data I've been provided. It does look like they've been able to, at least in the water operations where they have more experience, control their costs. They're not -- they're staying at a fairly consistent level.
>
> [Transcript, pp. 848-849]

[65] An analysis of Undertaking U-2, which starts with the March 31, 2010, audited results, shows the water service showing an annual revenue in excess of expenditures for the year of $2,946,000. This resulted in an accumulated surplus for water service of $13,530,022.

c) New Capital and Funding

[66] HRWC in its rebuttal evidence reiterated the funding need for water system capital. It stated:

> ... While it is true that the water services have provided better than projected operating results since the last water rate application in 2005/06, these excess funds have been or are designated to fund capital expenditures instead of using long term debt. The following table details the funding of capital expenditures for water services for the years 2005/06 to 2009/10 from the financial statements and the projected amount for 2010/11 based on the operating and capital budget. While there is still a projected surplus at the end of 2010/11, the projected capital budget in 2011/12, along with the costs of the proposed office and administration building will necessitate the borrowing of long term debt as detailed in the following table. As a result of the revised schedule, the capital spending, depreciation and associated debt servicing for the administration building has been removed from the rate schedules for the test years.
>
> [Exhibit H-24, p. 16]

[67] Table 2, extracted from Exhibit H-24, p. 17, for the test years 2010/11, and 2011/12 indicates capital funding requirements:

Table 2

	Projected 2010/11 $	Projected 2011/12 $
Surplus for the year	1,046,639	0
Depreciation	6,525,438	6,750,000
New long term debt	5,000,000	7,570,000
Available funding	12,572,077	14,320,000
Capital spending	(16,551,807)	(11,800,000)
Reduction in Borrowings	0	(5,000,000)
Funding required from surplus	(3,979,730)	(2,480,000)
Surplus at end of year after above	3,794,612	1,314,612

d) Conclusions on Water System Revenue Requirements

[68] The Board finds that a reduction could be made to the water service revenue requirements for chemicals, pension and the cushion. The Board accepts the electricity costs as filed. The Board notes that the projections, using current rates (Worksheet B-1 of Undertaking U-5) show, essentially, break-even results for 2010/11, and a loss of $1,230,593 in 2011/12. Reasonable adjustment to the revenue requirements for chemicals, pension and the cushion would effectively eliminate this loss.

[69] With the 15 month test period, and the availability of an accumulated surplus, the Board finds that HRWC does not need any additional capital out of revenue to fund the water system.

[70] The Board notes that the projections in Undertaking U-5 include a provision for a "dividend", to which the Board has agreed in paragraph [52] above.

[71] Accordingly the Board finds that the present rates, in total, for water service, for the 15 month test period, are sufficient. The Board does not approve changes in water rates based upon changing revenue requirements.

3. Wastewater and Stormwater – Revenue Requirements

a) Requirements Other than for New Capital

[72] The issues about the revenue requirements for wastewater and stormwater can be placed in one of the three categories: expense allocations; depreciation and debt service costs; and the accuracy of the total operational expense requirement.

i) Expense Allocations

[73] The expense allocations had two parts: the allocation between the water budget and the combined wastewater and stormwater budgets, and the allocation between the wastewater and stormwater budgets. As expressed by Mr. Smith in his opening comment:

> MR. SMITH: … HRWC should re-examine its allocation of costs between the wastewater and stormwater utilities …
>
> [Transcript, p. 519]

[74] Mr. Whalen commented upon the wastewater cost allocations:

> MR. WHALEN: Yes, and I didn't really do a cost of service for the wastewater. So I didn't do any allocations at all for wastewater because there was not enough information to do that.
>
> [Transcript, p. 1219]

[75] The CA, when questioning the HRWC panel about the cost allocations, made the following observation:

> MR. MAHODY: ... Mr. Smith has outlined here some direct costs and done a calculation to try to come up with a percentage split, because frankly, based on the IR responses in the rebuttal testimony we were unable to determine what the rationale was for the percentage split that Halifax Water was advocating.
>
> [Transcript, p. 593]

[76] The changing nature of the quantum of cost allocations was observed in the responses to the Undertakings. HRWC stated:

> The allocation of common costs for wastewater and stormwater based on direct costs for the test years is detailed below. In a review of the calculation for the Undertaking, it was determined that only the direct costs of wastewater and stormwater collection were included in the calculation and not the cost of wastewater treatment.
>
> [Undertaking U-11, p. 77]

[77] The Board accepts as reasonable the expense allocation from the water services budget. The inability to test the validity of the expense allocations between the wastewater and stormwater systems, as evidenced above, forces the Board to examine the revenue requirement for the two of them combined.

ii) Depreciation and Debt Servicing

[78] There was a fair amount of evidence led by all the consultants as to the amount and appropriateness of the depreciation expense for wastewater and stormwater. Mr. Mumm stated:

> MR. MUMM: ... I think where I take exception is how that depreciation is being determined and what value is being used for it and that would lead to one of the reasons why I believe the revenue requirements are overstated, particularly for wastewater.
>
> [Transcript, p. 990]

[79] The requirement and use of depreciation funds was explained by Mr. Rooney as follows:

> MR. ROONEY: I mean, really it comes down to a need for funds and cash. I mean, somebody paid for those assets. The fact that they're in the state they're in probably means they didn't pay enough for those assets over the year.

> It's one way -- by depreciating, it's one way we can generate capital; capital for -- our funds for capital.
>
> [Transcript, p. 453]

[80] The Board questioned exactly what these funds were used for:

> MR. DOEHLER: --- So maybe we just do away with the term depreciation and just call it capital [out of] revenue. Call it what it is.
>
> MR. ROONEY: Call it what it is.
>
> [Transcript, p. 426]

[81] There were also questions about the amount of debt services charges required by these two systems over the next two years. The requirement for debt service charges had been reduced in the revised rate study which was provided as Exhibit H-42. As observed by Ms. Ramas:

> MS. RAMAS: ... However, since that time in the company's new rate studies provided in Exhibit H-42 and as identified somewhat in the company's testimony that was provided in H-24, the company has actually removed more of the debt cost than what I had removed. The only exception I think still needs to be removed from the company's current version of the rate study's H-42 would be the amount of debt for stormwater operations that the company has incorporated for 2010 and 2011.
>
> [Transcript, p. 814]

[82] Mr. Grant questioned HRWC about the future need for debt. With a revised filing showing little new debt required in the next two years, he asked why the change occurred. Mr. Rooney responded as follows:

> MR. ROONEY: However, if those projects are approved there will be fairly significant increases in long-term debt.
>
> MR. GRANT: And those projects, you mean which projects?
>
> MR. ROONEY: The office building and the Eastern Passage treatment plant.
>
> MR. GRANT: Okay. And that was the $41 million of additional long-term debt that was shown on the earlier schedule?
>
> MR. ROONEY: Yes.
>
> [Transcript, pp. 87-88]

[83] Even with the revised rate study, Ms. Ramas continued to state her concerns about the balance of debt requirements:

> MS. RAMAS: ... I'm just not sure, long-term particular, with the wastewater operations, that's going to give you the right level and right balance between debt usages.
>
> [Transcript, p. 865]

[84] As a result of this uncertainty as to the actual amount of depreciation and the need for new debt servicing over the test period, the Board finds that these amounts should be disregarded in determining the revenue requirements for wastewater and stormwater. Instead, the Board will substitute a capital out of revenue requirement to meet the known and expected capital expenditures for wastewater and stormwater for the test period.

iii) Total Operating Revenue Requirements

[85] In order to determine the operating revenue requirements for wastewater and stormwater, the Board has extracted, in Table 3 below, the expenditure and revenue information from worksheets WWB-2 and SWB-2 of Undertaking U-5:

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Table 3

Wastewater System	2009/10 Actual $	2010/11 Budget $	2011/12 Budget $
Wastewater Collection	9,281,922	8,771,945	8,938,368
Wastewater Treatment	10,089,543	17,984,799	18,621,937
Engineering and Information Services	803,502	2,337,172	2,498,303
Environmental Services	1,256,181	1,153,060	1,243,709
Customer Service	1,452,318	1,411,944	1,444,036
Administration and Pension	1,729,948	1,728,286	2,490,068
Debt Charges – Principal	7,551,111	7,322,733	7,061,254
Debt Charges – Interest	5,311,183	5,013,506	4,702,192
Bond Discount	4,070	9,766	9,766
Provincial Funding – Harbour Solutions	(2,000,000)	(2,000,000)	(2,000,000)
GMIF Interest Difference	(125,590)	0	0
Interest and other income	(131,550)	(10,000)	(10,000)
Aerotech Sludge Tipping Fees	(828,000)	(800,000)	(800,000)
Overstrength Surcharge	74,563	(350,000)	(350,000)
Late Payment Fees	(122,370)	(125,794)	(140,389)
Contract Revenue	(449,314)	(446,000)	(465,000)
Other Miscellaneous Customer Fees	(7,203)	(90,183)	(103,900)
Other – Miscellaneous	0	(12,500)	(12,500)
	34,339,628	41,898,434	43,127,844
Stormwater System			
Collection	4,130,650	5,632,085	5,763,140
Engineering and Information Services	1,651,546	486,523	516,423
Environmental Services	0	587,303	656,483
Customer Service	0	293,920	298,496
Administration and Pension	0	359,773	514,720
Debt Charges – Principal	745,175	722,638	696,834
Debt Charges – Interest	524,130	494,794	464,032
Late Payment Fees	0	(26,478)	(31,191)
Other Miscellaneous Customer Fees	0	(73,633)	(75,700)
	7,051,504	8,476,925	8,803,237
Total Revenue Requirement	**41,391,132**	**50,375,359**	**51,931,081**

[86] The wastewater treatment expense has increased as a result of the takeover, in June, 2010 of the three Halifax Harbour Solutions Treatment Plants ("HHSTP"). In comparing the budget, which was originally for a full year of operations in 2010/11, to actual, Mr. Rooney stated:

> MR. ROONEY: ... the two largest increases that are proposed that result in the increase is the operation of the Halifax Harbour Solutions Plant ... those three plants cost somewhere's in the vicinity of $12 million a year to operate. We don't know for sure yet because we haven't operated them for a full year yet, but so far the three or four months they've been on, they've been right on budget.
>
> [Transcript, p. 56]

[87] Mr. Yates also commented upon the increased number of full-time equivalent staff required to operate the new plants and some of the new information systems required by regulation:

> MR. YATES: Yes. There's certainly several key positions that we had to fill subsequent to that time. Probably the most predominant one would be with wastewater treatment operations as each plant is being brought online. For operation, we had to staff it so that was a key piece. We also had to hire additional utility technicians who operate our SCADA instrumentation systems that support those type of activities, and also a significant amount of engineering information and project engineering technicians to continue with the capital program and also our environmental services group was certainly getting staffed to recognize its role it was going to play in terms of overall compliance, monitoring, sampling and reporting, so several major expansions necessary for that staffing to correlate to.
>
> [Transcript, pp. 432-433]

[88] Mr. Rooney provided information as to the existing debt servicing costs in the overall revenue requirements:

> MR. ROONEY: ... March 31st of 2010, we recorded that portion of the assets that were transferred and recognized 100 percent of the debt.
>
> [Transcript, p. 395]

[89] When questioned about these operating costs Ms. Ramas had the following comments:

> MS. RAMAS: Yeah. I would think pretty quickly with an operating plant the company should have a handle on what the costs are. You know, they'll -- those plants are fully staffed. People are working at those plants so that should give them a -- fairly quickly give them a reasonable projection of whether or not what they projected is a reasonable amount.
>
> MR. DOEHLER: So therefore the fact that they do, over in June 2010, they have a couple of months now full operation should be enough to them to get them to project forward as to what -- fairly accurately, would it be?
>
> MS. RAMAS: Fairly accurately. ...
>
> [Transcript, pp. 868-869]

[90] The largest increase in the total wastewater revenue requirement is for treatment. As explained, this was for a full year of operations of the three sewage treatment plants. Of the treatment cost components, chemical expense ($4,002,670 in 2010/11) was challenged. Ms. Ramas, in her evidence, stated:

> The wastewater operating expenditures for wastewater treatment – chemical expense included in the Wastewater Rate Study should be reduced by $962,180 in Test Year 2010/2011 and $1,148,328 in Test Year 2011/2012. The calculations of these adjustments are provided in Appendix DR-3, Schedule 3, attached to this testimony.
>
> [Exhibit H-12, p. 15]

[91] HRWC cross-examined Ms. Ramas about the reduction in the chemical expense budget:

> MR. MacPHERSON: Did you do any market analysis on chemical prices?
>
> MS. RAMAS: No, I did not.
>
> MR. MacPHERSON: Did you contact any suppliers in terms of getting an outlook as to what prices might be in the 2011-2012 year?
>
> MS. RAMAS: No, I did not, and I do acknowledge that they fluctuate, as was testified by the Commission witness.
>
> MR. MacPHERSON: Right, and you didn't do any examination of usage?
>
> MS. RAMAS: No, again the amount of usage that the company incorporated in the two year plans I've accepted. I didn't have a lot of detail in the build up of how the company projected its costs, and absent any level of detail provided I had to go under the assumption that their usage projections were reasonable.
>
> [Transcript, p. 820]

[92] HRWC, in its post-hearing submission, argued there is no evidence to support a reduction in the chemical costs budget. They did not provide any analysis of quantities and prices to either support its request for an 8.7% increase in 2011/12, or to disprove Ms. Ramas's statements.

[93] Undertaking U-2 provided an analysis of the components of the wastewater/stormwater surplus. Table 4 is an extract from this analysis:

Table 4

	$
Excess of revenue over expenditures, March 31, 2008	4,623,876
Year ended March 31, 2009	3,866,355
Year ended March 31, 2010	1,582,000
Sub-total	10,072.231
Less Accrued Revenue booked March 31, 2008	6,112,129
Balance	3,960,102

b) New Capital and Funding

[94] As stated by HRWC, funding for capital projects is required in order to correct the infrastructure deficit for wastewater and stormwater, a fact not disputed by any of the parties. The sources of funding for capital, as stated by HRWC, are:

> ... It is the view of HRWC that depreciation, or equivalent funds realized from capital out of revenue, are absolutely essential to ensure that the renewal of its wastewater and stormwater assets proceed on an expeditious basis.
>
> [HRWC Post-Hearing Submission, p. 7]

[95] The greater need for this source of funding for capital projects as opposed to other third party funders, is stated in the Application:

> ... Many of these funding sources are coming to an end by March 31, 2010, including $8.7M in funding from HRM through the Gas Tax program and water dividend rebate. These funds were previously allocated to wastewater capital projects for a three-year period and forwarded to Halifax Water as part of the Transfer Agreement negotiated with HRM. This funding source will need to be replaced in some form to allow a basic level of investment in wastewater infrastructure.
>
> [Exhibit H-1, Appendix 5, p. 9]

[96] Table 5 extracts the capital requirements to be funded from revenue as presented in Undertaking U-5, Worksheets WWB-3 and SWB-3:

Table 5

	2010/11	2011/12
Wastewater	$	$
Capital Additions	11,927,410	10,310,000
External Funding		
"Availability" Charges	(1,755,000)	--
Long-Term debt	(3,672,410)	---
	6,500,000	10,310,000
Stormwater		
Capital Additions	1,288,000	2,480,000
External Funding		
"Availability" Charge	(195,000)	(270,000
Long-Term debt	(758,000)	(1,210,001)
	335,000	1,000,000
Requested funding from revenue	6,835,000	11,310,000

[97] The LUG, in its closing submission, analyzed the total of recent capital projects:

> In 2009/10, there were 26 projects that involve substantive work, budgeted for over $100,000 that closed. The total budgeted capital spending for these projects was $11,112,296 the total actual spending was $10,216,579 for a difference of $895,717 or 8% of the original budget. The Utility over-budgeted by nearly $1 million on its capital spending on major projects (over $100,000) in the most recent financial year.
>
> [LUG Post-Hearing Submission, p. 6]

[98] It recommended that the capital budget be reduced by 8% from that requested in this Application.

[99] HRWC responded:

> HRWC submits that any such reduction is inappropriate. As noted in the LUG Submission at p. 6, Exhibit H-37 provides a "snapshot" at a point in time. Given the nature of construction projects of this magnitude, a different "snapshot" taken at a different time might well show a negative variance of the same amount. It would therefore be inappropriate for the Board to base a reduction of the magnitude suggested by LUG on the basis of this inconclusive evidence.
>
> [HRWC Rebuttal Submission, pp. 6-7]

[100] Mr. Rooney commented upon one aspect of the wastewater/stormwater capital budget:

> MR. ROONEY: ... The application proposes an availability charge and the funds generated -- proposed funds generated from the availability charge in 2010/11 are factored into the funding of capital programs because it's proposed, that's what it would be used for, is a capital charge.
>
> [Transcript, pp. 85-86]

Findings

[101] The Board finds that the accumulation of a surplus since the turnover of the wastewater and stormwater assets to HRWC is indicative of a conservative approach to budgeting. As such, the operating budgets as presented in this Application likely have a cushion.

[102] The Board also notes that the HHSTPs have only been operated for part of the year (starting June, 2010) by HRWC, whereas the budget is for a full year.

[103] The Board finds, from the evidence on chemical costs, the partial operating year, and the cushion, that the revenue requirements for wastewater and stormwater, on the balance of probabilities, are overstated. As a conservative proxy for this over-statement, the Board will use Ms. Ramas's suggested reduction for chemical costs. The calculation is as follows:

	2010/11	**2011/12**
Total operating revenue requirement per Table 3	$50,375,359	$51,931,081
Less: Over-statement Adjustment	962,180	1,148,328
	$49,413,179	$50,782,753

[104] As the test period spans the budget years 2010/11 and 2011/12, a weighted average of the above two operating revenue requirements will form the basis for rate determination for wastewater and stormwater.

25% of $49,413,179		=	$12,353,295
100% of $50,782,753		=	50,782,753
			$63,136,048
Multiplied by	12		
	15	=	$50,508,838

[105] The Board finds that HRWC, in the future, will have a large capital requirement in order to overcome the infrastructure deficit in the wastewater and stormwater systems. The majority of funding for these capital requirements will come from ratepayers, either through capital out of revenue or debt repayments. The balance between the two sources will be one of the outcomes of the completion of future studies as described elsewhere in this Decision.

[106] Without the benefit of the studies, the Board finds an allocation of capital requirements between capital out of revenue and debt is arbitrary. As well, the determination of the amount of capital out of revenue for any one year is arbitrary; however, the Board recognizes that some is needed for the test period and it is not insignificant.

[107] The Board notes that part of the capital is to be funded from the "Availability Charge". This charge, as discussed later in this Decision, is not approved at this time; however, the present development charges are to remain for the test period. These present charges, as calculated by HRWC in Undertaking U-14, generate more revenue than proposed, and hence should be sufficient to meet the budgeted amount for the "Availability Charge" for the test period.

[108] In compliance with the *Act*, capital out of revenue has two sources: funded depreciation expense and capital out of revenue ("Infrastructure Replacement"). In this Application, the determination of the amount of necessary funding was complicated by the calculation of depreciation, especially for "donated" assets. In the circumstances of this Application, the Board will make a determination of a total capital out of revenue

budget, but will not divide the amount between depreciation and Infrastructure Replacement.

[109] It is noted that part of the 2010/11 capital out of revenue is to be funded from all of the accumulated surplus. This reduces the need to fund part of the requirements from rates. The average of the two budget years' capital out of revenue, less the surplus, from Table 5, is $7,122,500 [($6,835,000 + $11,310,000 - $3,900,000)/2].

[110] The Board finds that $7,122,500 should be added to the revenue requirements.

c) Conclusions on Wastewater and Stormwater Revenue Requirements

[111] As the Board has found in paragraph [54], a dividend is not approved for the wastewater and stormwater systems, even if one had been requested for the test period.

[112] The Board finds that the total revenue requirements for the combined wastewater and stormwater systems are:

Operating Revenue Requirement	$50,508,838
Capital Out of Revenue Requirement	$ 7,122,500
Total revenue required from rates	$57,631,338

V COST OF SERVICE STUDY

1. General Observations

[113] The COSS filed by HRWC recommended that separate rate structures be developed for each of the three services of water, wastewater and stormwater. It concluded that there are only minor changes required in the rate structure for water

service; however, the current rate structure for wastewater/stormwater was described as 'not fair and equitable' and required a realignment of rates among customer classes.

[114] HRWC noted that the existing water rates were developed prior to the transfer of the wastewater/stormwater assets to HRWC. The Application stated that as a result of the transfer, water service's share of common costs, including customer service, engineering, information services, environmental service and administrative and general has decreased, as these costs are spread over the customer base of the three services. These common costs are allocated between water and wastewater/stormwater based upon the customer base. There was no opposition from the Intervenors. The result was an approximately 51% allocation to water and 49% allocation to wastewater/stormwater.

[115] The allocation of these costs between wastewater and stormwater was based on a percentage of the direct operating costs of these two services. While there was no opposition to the methodology of allocating the costs between wastewater and stormwater, there was some discussion as to the calculations used to arrive at the approximately 60/40 split to wastewater/stormwater in the Application. In particular, Mr. Smith noted that although HRWC had clarified that the engineering and environmental services were not included in the calculation of direct costs, he found the allocation should be in the order of 80/20 between wastewater/stormwater. In response to Undertaking U-11, HRWC noted that the calculation in the Application did not include the direct costs of wastewater treatment in error. The revised calculations resulted in an allocation of approximately 83/17 to wastewater/stormwater. The amended rate studies filed as a part of the response to Undertaking U-5 included this revision.

[116] The COSS provided a further allocation of costs between wastewater and stormwater services with respect to combined sewers that collect both wastewater and stormwater, which is conveyed to the wastewater plants for treatment. HRWC stated that the wastewater system is designed to handle four times the dry weather flow and that stormwater collected up to this level is treated in the wastewater treatment facilities, while all remaining stormwater, above this capacity, is not treated. The apportionment of costs is based upon the projected annual volume of wastewater compared to the projected annual volume of stormwater in a representative area served by combined sewers. The result of this analysis is a 60/40 apportionment of flow to wastewater/stormwater.

[117] The CA questioned the allocation of the flow of combined sewers between wastewater and stormwater, in particular with respect to the allocation of wastewater treatment costs to stormwater service, which is not included in the Application. In cross-examination of Mr. Smith, Mr. MacPherson questioned whether it would be difficult to allocate such costs to wastewater and stormwater, based upon the amount of rainfall on the streets of HRM, and noted that HRWC's approach is that once stormwater enters the wastewater system, it becomes wastewater. Based upon this, Mr. Smith questioned the need for a separate stormwater charge, but upon further questioning agreed that infrastructure is necessary to convey stormwater and therefore, the costs need to be recovered.

[118] The Cost of Service Demand Analysis within the COSS listed five major conclusions:

> 1. It is concluded that Halifax [Water] does not have max day demand characteristics which are sufficiently differentiated by customer class to support the adoption of multi-block rates related to this cost component.

2. It is concluded that there is insufficient max hour differentiation by customer class to be a factor in allocating costs for rate setting purposes.

3. It is concluded that there is not sufficient system demand peaks or large customer uniformity of demand to warrant consideration of Declining Block Rates (DBR).

4. It is concluded that consideration of Increasing Block Rates (IBR) is not warranted on a cost of service basis for Halifax.

5. From a cost of service perspective and considering the results of the demand analysis, it is concluded that the current single block rate approach is the most appropriate and that there are no cost-based factors which would suggest that multi-block rates would be fairer.

In summary it is concluded that there is no technical reason to adopt a volumetric rate structure format different than the current single-block rate which applies equally to all customer classes.

[Exhibit H-1, Appendix 2, p. 8]

[119] In his evidence (Exhibit H-13), Mr. Whalen concluded that HRWC had not used any of the data from the Cost of Service Demand Analysis Report in its COSS. He further noted that HRWC's Revenue/Cost ("R/C") ratios of 1.0 are, by definition, not meaningful because, if any charge is adjusted, the associated costs are adjusted as well. Board Counsel suggested to Mr. Loudon that of the five conclusions listed, all are rate design issues with the exception of number 2, which is a cost of service conclusion. Mr. Loudon responded:

> MR. LOUDON: I'm saying that the demand ratios or whatever are similar across all classes of customer, and inherent in that would be a single-block rate.
>
> [Transcript p. 700]

[120] The COSS recommended that the current base and commodity structure for water rates should be retained. The water rate study contained in the Application apportions the water service costs among base, customer, delivery and production categories. The methodology used is generally consistent with the previous rate

application and the Water Utility Accounting and Reporting Handbook ("Accounting Handbook"). With respect to the allocation of depreciation expense, which the Accounting Handbook suggests be allocated at 40% to 100% to base charge, HRWC explained that its' 100% allocation to base charge was used in the previous rate study (IR-99c, Exhibit H-9). The COSS further noted that:

> Depreciation should be distributed between base and commodity charge using percentages similar to those used for the distribution of the return on rate base [50% base, 50% production]. Halifax Water should consider phasing in this change;
>
> [Exhibit H-1, Appendix 1, p. 114]

[121] The water rate study allocated the base charge to the various meter sizes based upon capacity ratios. HRWC explained that the capacity ratios are taken from the Accounting Handbook for meter sizes up to 8" and that it proposes to revise the capacity ratio for the 10" meter, historically capped at 100, to 150, based upon its actual capacity using cross sectional area. (IR-141, Exhibit H-9). The capacity ratio for the 5/8" meter (residential) in HRWC was historically set at 0.75, as opposed to 1.0 which is suggested in the Accounting Handbook, in anticipation that the meters would be changed to ½", an event that never occurred. The Application proposed to amend the capacity ratio to 1.0. These revisions have the effect of shifting a greater portion of the recovery of the base charges to these two meter sizes.

[122] The water rate study allocated the production and delivery charges, based upon the projected volume of consumption, to a single block consumption rate.

[123] Mr. Whalen recalculated the water rates based upon the data contained in the Demand Analysis Report and using the AWWA Base Extra Capacity (BEC) cost of service method. Based upon an analysis of R/C ratios, he concluded that HRWC should

continue to use its cost of service, but that the allocations for depreciation and return on rate base should be based upon plant in service, similar to the allocation of fire protection, which he stated is a primary driver of these costs. Using this methodology, 8% of both depreciation and return on rate base would be allocated to base charge and 92% allocated to production and delivery.

[124] Mr. Smith agreed with Mr. Whalen's recommendation. He explained that the revision would result in smaller fixed charges (base) and larger variable charges (consumption), which would lead to more volatility in revenues. In response to Mr. Mahody's examination with respect to revising the allocations, Mr. Isenor stated:

> MR. ISENOR: ...The fact is that there were a number of items coming out of the cost-of-service study that needed to be reallocated, a fair large number of items, and with that there was some concern about changing too much too fast and it was felt that this was consistent with previous practice, therefore, it wasn't necessary for us to leap on that one right away, as we felt - - in some of the other areas we felt that there wasn't a need to move on it.
>
> . . .
>
> MR. ISENOR: Personally I believe there is a need to reconsider that whole thing and the utility will make their own decisions, not me, but I think that's something that needs to be looked at. The question is how much do you do, how fast.
>
> [Transcript p. 604]

[125] Mr. Loudon took issue with the methodology used by Mr. Whalen in his recalculation of rates. However, it was later confirmed by HRWC that the only outstanding issue with respect to Mr. Whalen's conclusions is the timing of the implementation of revising the allocation of return on rate base and depreciation (Transcript p. 713).

[126] Mr. Isenor said that the allocation based upon fire protection (plant in service), as suggested by Mr. Whalen, may not be appropriate and that HRWC may need to look at an alternative approval.

[127] The LUG does not support the reallocation of depreciation and return on rate base, as it will increase the volume charge, placing a larger burden of cost recovery on those with the greatest use of water.

[128] The position of the LUG is that HRWC should recognize economies of scale through methods such as declining block rates and a component of the distribution system in the customer costs. In his evidence, Mr. Mumm stated that in his opinion the proposed uniform rate structure is better than an inclining block rate, but he noted:

> ...Declining blocks are actually very closely aligned with cost-of-service principles because this type of rate structure acknowledges the fact that for a given capacity – and its related cost - the average cost per unit declines as more total units are produced and sold. Thus, a large user's rate can approach marginal cost, a point that is lower than average cost reflected in a uniform rate structure. Declining block rates are also good rate structures in situations, like that of HRWC, where there is just one rate schedule applicable to all customers.
>
> [Exhibit H-16, pp 16-17]

[129] Mr. Drazen's evidence discussed the cost of service concept of "intensity" of the distribution main, or the length of main relative to the volume of water delivered:

> ...A single large user (hospital or apartment house) may have the same volume of usage as a neighborhood of several hundred single family residential customers. However, to serve the residential customers will require more length of mains than required for the single large customer. In other words, the metres of main per cubic metre of water delivered is greater for the residential customers than for the large customer, as illustrated in this diagram:
>
> This means that the amount of mains, and therefore the cost (both investment and operations) per cubic metre delivered will be lower for the large customer.
> The same is true for wastewater collection mains.
>
> The concept is long established and well accepted in cost studies for electric and gas service. It is usually called the "customer component" of the distribution system.
>
> [Exhibit H- 17, pp. 9-10]

[130] The COSS noted that the current wastewater rates, based upon a volumetric charge per cubic metre of water used, were developed by HRM in an unregulated environment and are "open to re-evaluation". After discussing a number of options, including fixed charge only, volumetric charge only, two-part rates and adding a surcharge to the water bill, the conclusion of the COSS was that the wastewater rates be revised to include a base charge and a volumetric charge. The base charge is based upon the water meter sizes and the same capacity ratios as used in the proposed water rates. The volumetric charge is based upon water consumption.

[131] The wastewater rate study allocated costs to the categories of customer, base (base) and delivery and production (discharge) in a manner similar to the water rate study. In his evidence, (Exhibit H-13), Mr. Whalen did not recalculate the cost of service for wastewater in the same detail as for water service since, in his opinion, "...wastewater is largely a mirror image of water service". (Exhibit H-3, page 14). He noted that plant in service data for the wastewater system was not provided, and concluded:

> I recommend that HRWC retain its current cost of service but adjust the allocation of Depreciation and RORB [Return on Rate Base] to reflect Plant in Service. Until Plant in Service data is available for the wastewater system, I recommend using the same allocations as in the water cost of service.
>
> [Exhibit H-13, p. 16]

[132] The LUG expressed concern with a number of areas of the proposed rates for wastewater. Mr. Mumm commented on the lack of information available with respect to the wastewater system, in particular a listing of plant in service, which made it difficult to conduct a thorough analysis. He disagreed with Mr. Whalen's evidence that the wastewater system is a "mirror" of the water system. He further stated that he did not

believe that scaling up the base charges using water meter capacity ratios is appropriate, noting that the costs associated with the meters are recovered from the water rates:

> I believe that I can generally conclude that the proposed Base Charges are higher than they probably should be, and that the Wastewater Effluent Charges are somewhat lower.
>
> [Exhibit H-16, p. 18]

[133] Mr. Drazen suggested his analysis of the "intensity" of the distribution system for watermains, should also apply to wastewater collection mains which are allocated 100% to discharge in the wastewater rate study. He stated:

> MR. DRAZEN: ... what I think you should do at the same time is recognize that part of the system of mains should be considered a customer component and finally part of the distribution system cost - - transmission distribution cost for water or the collection system cost for wastewater ought to be put in the customer column.
>
> [Transcript p. 1077]

[134] Mr. Grant further explored the concept of assigning a component of the collection system costs to the customer function with Mr. Whalen. He referred to The Water Environment Federation 2004 Manual of Practice Number 27 'Financing Charges for Wastewater Systems'(Exhibit H-60), which reads, in part:

> ... The 10 percent of collection system costs assigned to the customer function reflects an allowance for the relative size of the system and low density of development's impact on collection system costs. Also, the utility is assumed to use a minimum collection main size for cleaning purposes. Such sizing, is independent of wastewater volumes carried by the mains.
>
> [Exhibit H-60, p. 113]

[135] In response to Mr. Grant's inquiry as to why he did not consider allocating a portion of the collection system costs as customer costs, Mr. Whalen stated:

> MR. WHALEN: ... On the water side there is some reasonable data in terms of plant and service and some reasonable breakdown of cost, and I was able to apply the base extra

> capacity method. Some of the split on the distribution between customer and demand is accounted for there....
>
> ...When I recommend that the Commission change their allocation, it was to allow the Commission to keep the method that they currently have because it gives some results that are comparable to the base extra capacity method.
>
> So the Commission that it could go to the base extra capacity method or was there a way that they could stay with what they had.
>
> What you just showed me here was talking about wastewater, and in the Commission's application on the wastewater side, there's no data on plant or - - so there was no data that you could develop to say how should you allocate depreciation and return on rate base.
>
> My thinking is reflected in my evidence that the wastewater and the water systems are roughly a mirror image of each other and that if you - - if it made sense to do this on the water, it probably makes sense to do it on the wastewater in lack of anything else.
>
> We're still at a very, very high level. Going to a more refined level is not something that I would disagree with in theory, but in practice I think it would need to be, at some point down the road, if at all, because it requires as well perhaps a whole new definition of what customer classes are so that you have your single family residential in the class, you have your multi-resident in a class. You have commercials in a class or broken in some way like that.
>
> That brings us other questions because not all of those have the same meter size.
>
> I'm not saying that these questions cannot be accommodated, but it was at that high level that I'm still operating. I'm not at all disagreeing that there could be refinements.
>
> [Transcript pp 1168-1170]

[136] Currently there are no separate stormwater charges, as they are included within the existing wastewater volumetric charge. A stormwater charge, based upon impervious area, was approved by the Board in its decision on the Airport/Aerotech system [2008 NSUARB 149]. The COSS recommended that the stormwater charge be developed based upon the average impervious area of three water meter size groupings (⅝", ¾" to 1½" and 2" and larger). These are interim rates until the data base is developed to measure actual impervious areas on lots served by meters larger than ⅝", upon which to base rates. In cases where customers only receive stormwater service, HRWC indicated that they will have to be identified and a method established to

collect stormwater charges. HRWC anticipated that it will be 2012 before changes are implemented so as to bill such customers for stormwater service.

[137] Although it cannot be implemented now, the COSS stated that it may be possible to have a dual rate system for stormwater service in the future, with one rate for those customers served by curb and gutter (buried pipes) and another rate for those customers served by ditches.

[138] Mr. Whalen supported HRWC's approach to determining the stormwater charge, noting that it takes into consideration cost causality, as the customer's impervious area is the main determinant of stormwater flow. He further recommended that consideration be given to setting rates for stormwater service provided by open ditches at a percentage of the proposed rates. In response to Mr. MacPherson's questions as to the basis of the percentage, Mr. Whalen agreed that the data is not available to determine the magnitude of the percentage. In its post-hearing submission, HRWC stated that, in its opinion, it is not appropriate to set different stormwater rates based upon whether the service is provided through open ditches or buried pipes:

> It is HRWC's position that those served by an open ditch are not, in fact receiving a different level of service than those with piped stormwater. The intent and purpose of the stormwater system is to move stormwater away from private property. Given any particular situation, an open ditch may serve this purpose as well as a piped system.
>
> [HRWC Post-Hearing Submission, p. 36]

[139] Mr. Mumm agreed with HRWC's basis of developing the stormwater charge based upon the impervious area served. However, he stated that the method of collecting the charge, based upon water meter size is inappropriate. He suggested that the charge be collected through property taxes, which are related to the total acreage of land which, in his opinion, is an improvement over the proposed rate. When questioned

by Mr. MacPherson, Mr. Mumm agreed that the collection of the charge through property taxes may not be valid in this case, as the Board does not have the authority to impose property taxes.

[140] The COSS indicated that HRWC does not propose to implement any exceptions for customers who have installed stormwater retention devices or who discharge into large natural bodies of water, a practice which occurs in some jurisdictions. When questioned by Mr. Grant as to whether he agreed in principle that where there is a stormwater retention device in place that benefits HRWC, there should be a reduction in stormwater charges, Mr. Isenor stated:

> MR. ISENOR: I do agree with you.
>
> And as my colleague just pointed out to me, you know, as we do the - - hopefully the next rate application and we have actual impervious areas to deal with, we can accommodate that, as we had spoke of here.
>
> [Transcript p. 649]

[141] Mr. Grant further questioned Mr. Isenor with respect to the lack of a proposed exception for customers who discharge directly into a large natural body of water, such as Halifax Harbour. Mr. Isenor noted:

> MR. ISENOR: No, we looked at that in a lot of detail trying to figure out quite what the stormwater charge was to pay for. We reached the conclusion that it was to pay for overall stormwater management throughout the system....
>
> [Transcript p. 650]

[142] The Application does not propose to charge HRM a stormwater charge based upon the impervious area of streets. When questioned by Mr. Grant as to why HRM should not to be charged, Mr. Isenor stated:

> MR. ISENOR: ... The streets were excluded as a stormwater charge item, primarily because the streets are part of the stormwater conveyance system...
>
> [Transcript p. 641]

[143] He added that a review of the practice in other areas did not find one that charges the municipality for runoff from streets.

[144] In response to Undertaking U-12, HRWC indicated that it estimated if the stormwater charge is levied to HRM based upon the impervious area of streets, the revenue received would be between $3.3 million to $3.7 million.

[145] In its post-hearing submission the LUG requested that the proposed stormwater rates be modified to allow for a credit or reduction to customers who can demonstrate that their usage of the stormwater is less than average; and to require that HRM pay a stormwater charge related to the public road surface; and that the rates be recalculated, based upon the reduced revenue requirement, if HRM is charged the stormwater charge.

[146] Throughout its evidence, HRWC stated that it has used the Accounting Handbook as a guide for the allocations used in the rate studies. Both Mr. Mumm's and Mr. Drazen's evidence referred to HRWC's reliance on the Accounting Handbook. In particular Mr. Mumm stated:

> ...It was clear to me that the specific guidelines on these pages, which specify the allocation of revenue requirements, are provided for use in cases where a utility lacks the evidence to support its own cost allocation and supporting calculations. HRWC has provided enough empirical evidence to properly allocate costs using generally accepted practices, and those practices are not inconsistent with the guidelines prescribed in the Handbook.....
>
> [Exhibit H-16, p. 15]

[147] The Board noted that the development of the Accounting Handbook was primarily for smaller systems which do not have the ability to analyze costs in the same manner as HRWC and that HRWC should use it as a guide and not as an absolute.

[148] Mr. Grant questioned HRWC with respect to the concept of R/C ratios, which were used by Mr. Whalen in his analysis of the rate studies. Mr. Loudon and Mr. Isenor both noted that it is not a concept that they are familiar with in the regulation of water. Mr. Grant asked Mr. Whalen for his views on HRWC's response:

> MR. WHALEN: I was surprised. Having said that the AWWA manual talks about cost of service and talks about rate design, but I don't remember seeing any discussion about revenue/cost ratios but the whole purpose of doing a cost of service of course is to properly allocate your costs, and if you have revenues - - you need to compare the revenues to the costs and say am I recovering the costs.
>
> [Transcript p. 1145]

[149] In its post-hearing submission, the LUG concluded:

> The ineffectiveness of the Cost of Service Study and the artificially controlled R/C ratio both indicate that the Board does not have proper evidence of the actual cost of service to users groups and, further, cannot confidently prevent subsidization between customers;
>
> [LUG Post-Hearing Submission, p. 17]

[150] The need for further information to prepare a future COSS for HRWC was discussed:

> MR. GRANT: So given that you've recommended that plant in service data be developed and provided, would you acknowledge that the cost-of-service study for the Halifax Water Commission for its - - both for its water utility and for its wastewater utility is an evolving project?
>
> MR. WHALEN: Yes, I would agree.
>
> [Transcript p. 1175]
>
> ....
>
> MR. DOEHLER: ... I'm seeing from your evidence other than an adjustment of the depreciation return on rate base for water, the rate design generally is the rate cost - - I forgot what the inputs are, they're in the requirements - - but the cost of service and rate design is generally okay. There's enough information for us to make a determination. They're just - - it sounds like the wastewater and stormwaters is where we have a lack of information.
>
> Is that what you're saying of [or] have I jumped too far?
>
> MR. WHALEN: I certainly feel more confident about the numbers on the water side because the data that underlines the costing is there; there's data on assets and so on.

> On the wastewater side you don't have that basic data to even do a cost of service. I think moving, adjusting the depreciation and return on rate base percentages within the current method is probably okay on an interim step and at this point I didn't really see anything that would drive me to say that a base charge and one commodity charge would not be appropriate. That could change, you know, depending on some further work.
>
> [Transcript pp. 1212-1213]

Findings

[151] As noted earlier in this Decision, the Board has concluded that it simply does not have a sufficiently reliable record to make significant changes to the cost of service in this hearing. The Board is unable to determine, with any confidence, the impact of any changes it may make. While some of the suggested changes, such as Mr. Whalen's reallocation of return on rate base and depreciation, may seem directionally correct, the Board would prefer to have a record of evidence in which it has greater confidence before it makes such a change.

[152] In its electricity mandate the Board has found it useful to divorce cost of service from a rate proceeding and have a stand-alone cost of service hearing. In the Board's judgment that should happen with respect to HRWC. Ideally such a proceeding would be concluded prior to the next rate case. However, there is no point in having a cost of service hearing with the same confused evidentiary record that existed in this proceeding. Therefore, the Board requests Board Staff and Board Counsel to sit down with HRWC (and perhaps other stakeholders) to investigate and report to the Board on a realistic timetable for proceeding with an efficient and useful cost of service hearing. That is not to say that the Board is dismissing all of the work done by Mr. Loudon and by Mr. Whalen; that work may well form a good basis for future cost of service discussions.

[153] In addition, the Board makes the following observations:

- With respect to water rates the Board generally agrees with HRWC that the current base and commodity structure should be maintained as it has served the water utility well.
- With respect to multiple block rates the Board, without making a finding, observes the evidence of Mr. Loudon in support of a single block rate structure is quite persuasive and Mr. Whalen agrees with this approach.

[154] The Board noted that the LUG, particularly as it relates to depreciation, criticized HRWC's reliance on the Board's Accounting Handbook. The Board believes that HRWC can hardly be faulted for attempting to follow an Accounting Handbook that was put in place by the Board to give guidance to utilities. However, it is fair to say, as noted in paragraph [147] that the Accounting Handbook was primarily developed for small systems in the province, of which there are more than 50, who simply do not have the ability to analyze costs in the same way as HRWC.

[155] The Board, given the enormous financing challenge faced by HRWC, is open to suggestions with respect to an efficient capital structure and rate design in future, whether or not it complies with the Accounting Handbook. The suggestions must, however, comply with the *PUA*.

[156] With respect to those customers served by ditches, the Board finds there is merit to having a different rate for those served by a ditch and a buried pipe. HRWC acknowledged that as data is developed it may be possible to have a dual stormwater rate, one for those served by buried pipe and one for those served by open ditches.

[157] The Board agrees with HRWC that the stormwater charge should not be charged to HRM based on the area of impervious streets. The Board is concerned that this approach could lead to a charge back to HRWC by HRM for the use of the streets and ditches which would provide no benefit to HRWC.

2. Projected Demand/Consumption

[158] In the Application HRWC projected the water consumption for the test years. The main assumption used in the projection was:

> ... With the exception of unmetered customers all consumption volumes are projected to decrease by 1% per year for each of the test years. This projected decline in consumption is based on the historical decrease in customer consumption.
>
> [Exhibit H-1, Appendix 7, p. 32]

[159] Even though a decline was built into the projection, the total consumption is expected to increase by ½ of 1% per year. The decline per customer is expected to be offset by new customers.

[160] In response to Board IR-24 (Exhibit H-10) HRWC compared the actual annual water consumption to the consumption projected in the 2005 rate application. For all the years up to and including 2009/10, the actual consumption was less than projected. The annual difference varied between 0.9% to 4.12%. As well, the actual consumption over the five years, in total, declined by 5.7%. In the 2005 rate application the consumption by customer was also expected to decline by 1% per year.

[161] Mr. Whalen considered whether increasing any volumetric charge could result in a bigger reduction in consumption. He stated:

> It could. All customer consumption is currently dropping by about 1% per year, and this change could increase that. However, that may be appropriate, particularly on the wastewater side where capital may be influenced by water flows.
>
> [Exhibit H-13, p. 12]

Findings

[162] Based on historical evidence, it appears that the projected consumption figures, which include a 1% decline plus increases related to new customers, are optimistic. With the potential for a large volumetric charge to properly fund the wastewater and stormwater system, the actual consumption may decrease more rapidly than has been seen historically. The Board does not make a finding as to projected consumption at this time. For the purposes of determining rates for the test period, the Board will use, as a base, the 2009/10 estimated annual consumption of 38,764,614 cubic metres.

3. Rate Design for Purposes of this Application

a) For Water Rates

[163] The Board has already determined the rates do not have to be changed so as to meet the water system revenue requirement.

[164] The Board notes that in the rate design for water service, HRWC intends to re-allocate the revenue requirements for the base charge using the correct weighting ratios for meter sizes. The Board accepts this change and orders HRWC, in a compliance filing, to amend the rates to reflect this change. HRWC should use the projected 2011/12 meter size equivalencies and the consumption at paragraph [162], in determining the changes.

b) For Wastewater and Stormwater Rates

[165] The 2009/10 rates for wastewater and stormwater, combined, is a volumetric rate (no base charge) of $1.1690 per m^3 ($0.8404 Environmental Protection Charge plus $0.3286 Wastewater and Stormwater Charge). This generated total

revenue of $42,828,737 ($38,615,107 + $4,213,630)[1]. This covered all operating expenses and yielded a surplus of $1,582,000. If the same volumetric rate design is used, then the per cubic metre rate must be increased by 35% [($57,631,338/$42,828,737) – 1].

[166] The Board notes the rate design concept proposed in this Application is a split of the wastewater revenue requirements between a base and a volumetric charge. For stormwater it is, eventually, to be based on impervious area, but for now it uses meter sizes of up to 2", as a proxy. The meter sizes for stormwater are weighted by an assumed average lot size.

[167] The rate design in the Application, using the results as calculated in Undertaking U-5, adjusts the revenues for wastewater and stormwater from between -9% and 83%. The largest increase is for the residential ⅝" meter service. If the present volumetric rate structure was used all ratepayers would experience increases of 35% for wastewater and stormwater.

[168] The Board accepts a division of the cost of the wastewater service between a base and a volumetric charge. The quantum for each cannot be readily determined from the COSS as filed. In the interim, for this test period only, the Board will accept the same volumetric charge as now used ($1.1690 per m^3) with the remainder to come from a base charge. The Board does not condone this practice for future filings, but must use it out of necessity to determine a rate which will provide HRWC with appropriate funding.

[1] From Undertaking U-5, Worksheets WWB-1 and SWB-1.

[169] Table 6 is the Board's calculated estimates, based on the imperfect data as presented, of the increase the average customer will see in the total water, wastewater and stormwater billings.

Table 6

Meter Size	Estimated Increase
5/8"	27%
3/4"	10%
1"	8%
1½"	8%
2"	5%
3"	4%
4"	2%
6"	2%
8"	4%
10"	19%

[170] HRWC is ordered to complete a compliance filing using the projected 2011/12 meter size equivalences and the consumption at paragraph [162], in determining the rates.

VI SCHEDULE OF RATES AND CHARGES

1. Miscellaneous Charges

[171] In addition to the rates for water, wastewater and stormwater service, discussed above, the Application proposed a number of miscellaneous charges in a combined Schedule of Rates and Charges for Water, Wastewater and Stormwater Service. HRWC provided a summary of the proposed changes and additions (IR-174, Exhibit H-10). Prior to the commencement of the public hearing, HRWC filed a letter to the Board dated September 10, 2010, withdrawing the proposed change to Rate 21 Extra Strength Surcharge, noting:

> HRWC has determined that the amendments requested, in their current form, may have a significant impact on the one customer currently subject to this charge and the customer has not been notified of the impact of this change.
>
> [Exhibit H-31]

[172] The methodology used to calculate the proposed public fire protection rate (Rate 2) is generally consistent with the previous water rate application. HRWC explained that the proposed public fire protection charge is lower than the currently approved rate:

> The fire protection rate is impacted by the proposed sprinkler and private fire hydrant charge as it reduces the revenue requirements from both fire protection and from customer charges. The revised allocation of assets (see IR-38) also impacts on this as percentage of some assets allocated to fire protection is proposed to decrease based on the assets used.
>
> [Exhibit H-10, IR-116b]

[173] HRWC filed corrected rates with respect to Rate 7 'Designated Bulk Fill Station' in response to a Board Information Request (IR-176, Exhibit H-10). In response to Undertaking U-15 the charge for an additional card (annual permit fee) was reduced from $70 set out in the Application to $20.

[174] During cross-examination, Mr. Whalen agreed that the approach used by HRWC to determine a number of the miscellaneous charges is reasonable. In his direct evidence (Exhibit H-13), he suggested that the proposed charges for each of: Rate 8 'Re-Establishing Service', from $30 to $55; Rate 13 'Collection of Overdue Bills', from $15 to $35; and Rate 19 'Inspection of New Building Service Connections', from $30 to $90 for pipes less than 2" diameter and $165 for larger pipes, be phased-in. He further discussed proposed Rate 9 'Connection/Disconnection of Service', Rate 10 'New Water, Wastewater or Stormwater Account' and Rate 11 'Water Meter Installation':

> Currently these three services are part of the same charge, although only a charge for setting up a new account and a charge for installing a meter are specified. It is proposed to break that charge into three components, which I support conceptually. However, it appears that the charge for a new customer would now increase from $50 ($25 to set up an account and $25 to install a meter) to $125 ($55 to connect, $25 to set up an account and $45 to install a meter), so I would suggest phasing these charges in. In addition, it should be clarified that there is no overlap of costs associated with connection and meter installation.
>
> [Exhibit H-13, pp. 19, 20]

[175] HRWC indicated that no changes are proposed to the existing Capital Cost Contribution Charge (Rate 23). However, it was noted that the charge should refer to water, wastewater and stormwater. As the public fire protection charge is not being changed, no revision is needed to the notes to the capital cost formula (IR-180(d), Exhibit H-10).

[176] The Application proposes to amend the rebate associated with the wastewater charge (Rate 24). HRWC explained:

> The change to Rate 24 Rebate will give the customer exemption for the full amount of the effluent charge for water that does not enter the wastewater system if more than ½ of the discharge applies, but there will be no rebate of the proposed base charge. The rebate now applies [now] to only 1/3 of the discharge if more than ½ is not discharged.
>
> [Exhibit H-10, IR-181]

Findings

[177] The revisions to the revenue requirement discussed above have the effect of amending a number of the charges contained in the Schedule of Rates and Charges. All charges which are referenced in the second test year are not approved. The present public fire protection charge will continue. In addition, the Bulk Water Consumption Rate (Rate 12), which is based upon the water utility expenses, is approved as it currently exists. The revised $20 charge for additional cards is approved.

[178] Rate 21 'Extra Strength Surcharge' is approved as existing, with the understanding that, based upon a review of the calculation, HRWC may propose a revised rate in the future. Rate 23 'Capital Cost Contribution Charge' as revised, to include water, wastewater and stormwater, is approved. Rate 24 'Rebate' is approved as proposed.

[179] Although it has been suggested that a number of the proposed miscellaneous charges be phased-in, given that only one test year is approved and the dollar amounts proposed are not significant, the Board approves the remainder of the miscellaneous charges, as proposed in the Application.

2. Building Fire Protection Systems (Private Fire Protection Charge)

[180] HRWC's Application proposes to change the private fire protection charges currently approved by the Board. HRWC stated its reason for the change as follows:

> These systems provide enhanced benefit to customers through unmetered connections to the water system. They involve separate connections to the water system which are in addition to the metered service, and are often much larger than the metered service. Private fire systems that are connected to a metered supply do not receive a separate bill for the fire protection system as the cost for the service is included in the existing base charge and commodity rate for the metered connection.
>
> The flow in these systems is not metered and customers are not billed based on quantity of water used. When activated, they are in addition to the public fire hydrants and place added demands on the water system. Currently the charges for this service are based on historical charges which do not appear to have a connection to the cost of providing the service. To overcome this it is recommended that the charges for private fire systems be developed and based on the relative capacity of the water service provided or the size as represented by service lateral size. The relationship between pipe size and its capacity was reviewed, based on recommendations by the American Water Works Association. This review indicated that the allocation by pipe size could be done two ways, one based on the basic relationship between pipe diameter and cross sectional area (area is related to the square of the diameter i.e. power of 2.0) and one which also factors in pipe characteristics (capacity is equal to the diameter to a power of 2.63). For ease of understanding, the relationships are calculated so that a 1-inch pipe (25-mm) has a factor of 1 and the other sizes are calculated relative to this using the power relationship. The Factors based on the two methods are as shown in Exhibit 9:...
>
> [Exhibit H-1, Appendix 1, pp. 19-20]

[181] The current charges for the private fire protection are as follows:

> Each building having a fire protection system installed shall pay annually for the service as follows:
>
> | | |
> |---|---|
> | Domestic accounts having a service of 2 inches or less in diameter | $45.00 |
> | Each building serviced by a primary pipe of 6 inches or less in diameter | $162.00 |
> | Each building serviced by a primary pipe of 8 inches or over in diameter | $208.00 |
>
> [Exhibit H-1, p. 19]

[182] HRWC considered three alternatives to calculate private fire protection charges: allocating the calculated cost of fire protection between public and private fire protection; using the cost calculated for public fire protection as the basis to calculate the private fire protection charges; and using the calculated base charge for water service to calculate the private fire protection charges (Exhibit H-1, Appendix 1, p. 20).

[183] HRWC requested approval of private fire protection charges based on the second alternative for reasons noted below:

> It is recommended that Alternative 2 be used for calculating the cost for private fire protection charges. Alternative 3 is not recommended since it results in excess revenue recovery. Alternatives 1 and 2 have the advantage of using the same cost allocation factors as used for the public fire protection calculation. Alternative 2 is recommended over Alternative 1 since it preserves the recovery of the public fire protection costs from property taxes and treats the private fire protection as a separate and distinct service that is provided in addition to the public fire protection charge.
>
> [Exhibit H-1, p. 23]

[184] Based on the above, HRWC's proposed private fire protection charges are as follows:

Description	Diameter MM	Diameter Inches	Annual Private Fire Protection Charge	Quarterly Private Fire Protection Charge	Monthly Private Fire Protection Charge
Sprinkler Lines	50	2 or less	$131.00	$32.75	$10.92
Sprinkler Lines	75	3	$229.00	$57.25	$19.08
Sprinkler Lines	100	4	$515.00	$128.75	$42.92
Private Hydrants	150	6	$915.00	$228.75	$76.25
Sprinkler Lines	150	6	$915.00	$228.75	$76.25
Sprinkler Lines	200	8	$2,058.00	$514.50	$171.50
Sprinkler Lines	250	10	$3,659.00	$914.75	$304.92

[Exhibit H-2, Appendix 10, p. 8]

[185] Mr. Smith described the calculation of the public and private fire protection charges in his pre-filed evidence:

> The calculation of public and private fire protection charges provided in Addendum A of Appendix 10 of HRWC's original filing demonstrates this. First, the first table in Appendix 10 shows the "Estimated Fire protection cost as per Rate Study". While the $8,000,000 amount shown on this table is not equal to the $8,171,310 amount allocated to fire protection charges shown on Worksheet C-I, I have assumed that the $8 million figure is an approximation used for the purposes of calculating rates. From this $8 million amount HRWC subtracts the costs associated with maintaining public fire hydrants and the annual depreciation on the actual fire hydrants to arrive at an amount of $6,946,009. This amount is then divided by the number of fire hydrants in the system to arrive at the cost per hydrant of $915.
>
> This $915 amount is then used as the charge for a private fire hydrant and the charge for a 150 mm private fire system connection. Charges for private fire connections of other sizes are then developed by applying connection capacity factors to the charge for the 150 mm connection as shown on the second table on page 14 of Appendix 10. Also shown on this table is the determination that private fire connection charges will generate approximately $3.3 million in addition to the estimated $8 million in public fire protection revenue for total fire protection revenue of $11.3 million, an amount that is $3.3 million above the stated estimated fire protection costs.
>
> [Exhibit H-14, p. 13]

[186] Mr. Smith suggested that the more reasonable approach to calculate these charges is:

> ...It is my opinion that a methodology similar to that referred to as "Alternative 1" in the Cost of Service Study, would result in a more equitable recovery of fire protection costs. Under this approach, total fire protection revenue requirements, less hydrant maintenance and hydrant depreciation costs, would be divided by the total number of equivalent 150 mm connections represented by all of the private fire connections and the public hydrants to arrive at a cost per 150 mm equivalent meter. This unit cost would serve as the private fire protection charge for private hydrants and 150 mm connections

and the charges for the remaining connection sizes would be calculated by applying the appropriate capacity factors.

The total fire protection charge assessed to the municipality would be determined by multiplying the unit cost for a 150 mm connection by the total number of public hydrants and then adding the cost of hydrant maintenance and hydrant depreciation.

Q. Would this approach result in lower fire protection revenues?

A. Yes it should, which in turn would reduce the magnitude of the offset to total revenue requirements thereby requiring retail water rates to increase to make up the difference, but the recovery of costs would be more equitable than HRWC's current proposal.

[Exhibit H-14, p. 14]

[187] Mr. Mumm noted that the private fire protection charges appear to be arbitrary:

...No. The private fire protection charges appear to be calculated independently of the cost-of-service allocation and appear as arbitrary rates that are set to increase dramatically in the 2010/11 test year, and even more dramatically in the 2011/12 test year. The private fire protection rates should have been determined as part of the cost-of-service allocation and are, in fact, a component of the total fire protection capacity costs of the water system. That means that the total cost of fire protection as determined in the cost-of-service, should be shared between the public and private fire protection classes. There are several ways to allocate the fire protection costs between the two categories, but the easiest way is to split them based on the number of equivalent fire services.

[Exhibit H-16, p. 14]

[188] Mr. Mumm also noted that HRWC's proposal shifts revenue requirements from general customers to private fire protection users:

Q. How do the private fire protection charges affect the rates proposed in the HRWC filing?

A. They serve to shift revenue requirements that would otherwise be allocated to all system customers to a smaller group of customers who happen to own private fire suppression systems. In other words, the total of all charges paid by customers with private fire protection systems is higher - much higher - than it would be had the costs of fire protection been properly allocated.

[Exhibit H-16, p. 15]

[189] HRWC in its response to an IR from the LUG explained the basis on which the private fire protection charges have been calculated:

Building Fire Protection systems provide enhanced benefit to customers through unmetered connections to the water system. They involve separate connections to the water system which are in addition to the metered service, and are often much larger than the metered service. Private fire systems that are connected to a metered supply do not receive a separate bill for the fire protection system as the cost for the service is included in the existing base charge and commodity rate for the metered connection.

When activated, private fire protection systems are in addition to the public fire hydrants and place added demands on the water system. Currently the charges for this service are based on historical charges which do not appear to have a connection to the cost of providing the service. To overcome this it is recommended that the charges for private fire systems be developed based on the size of the service lateral.

[Exhibit H-9, IR-47 LUG]

[190] In its submission, the LUG stated:

Amongst the other rate changes and increases that comprise the HRWC 2010 rate application, the private fire service rate increases have been nearly ignored. With the revised, October 19, rates, the proposed rates result in increases over existing rates of between 40% and 1651%. The average rate increase for private fire services is 556%. Today a customer with an 8" sprinkler line pays an annual charge of $218; if the HRWC 2010 rates are approved, this amount will increase more than eight-fold to $2,146.89. This is rate shock, to say the least, and we submit that the Board cannot abide such a drastic increase on the Utility's ratepayers.

The private fire rates are used as a means to charge customers, usually industrial, commercial and multi-family building owners, for dedicated, non-metered access to the water system for the purpose of serving the building's sprinkler or fire hydrant needs. The new rates create a different annual levy for each size of lateral between 2" and 10"; the current rate is for 2" and under ($50.00),6" and under ($170.00) and greater than 6" ($218.00).

The size of the lateral connection is not equal to the size of the connection to the sprinkler-itself; this much was illustrated by the photograph submitted as H-38. In this picture, it is clear that the pipe connecting the sprinkler system to the lateral is much smaller than the lateral. Hypothetically, it is possible that a 3" lateral would serve just as well as a 6" lateral in this building. Under the previous rates, both a 3" and 6" connection would generate an annual fee of $170.00. Under the proposed rates the 3" and 6" laterals would be levied at $229.00 and $915.00, respectively.

Given that the size of the lateral now has a significant effect on the fire protection charge, it is important to determine whether the lateral size is truly indicative of the potential water draw from sprinkler use. Given that the size of the lateral now has a significant effect on the fire protection charge, it is important to determine whether the lateral size is truly indicative of the potential water draw from sprinkler use. Ratepayers should be allowed to qualify for rates based upon their sprinkler system diameter rather than the lateral size so that rates truly reflect potential water drawn. This would assist in aligning rates with cost causation and fairness principles

We also submit that the Board should consider reducing rate shock for customers who have private fire protection systems by restricting the fire protection rate increases to not more than 10% in the next year.

[LUG Closing Submission, p. 33]

[191] HRWC suggested changes to the proposed private fire protection charges included in its Application:

> HRWC has given consideration to the method of implementation of this charge should it be approved by the Board. HRWC proposes that the charge be levied as follows:
>
> 1. Where fire lines are master-metered, no Public or Private Fire Protection Charge will be levied.
>
> 2. (a) The Private Fire Protection Charge will be based on the size of the incoming pipe where it passes through the wall of the building if there are no connections for private hydrants or other fire protection systems prior to entry into the building.
>
> (b) In those circumstances where the private protection consists of both sprinkler connections and private hydrants, the Private Fire Protection Charge will be based on the size of the pipe before the first connection point and each connection to the public distribution system.
>
> If the implementation of this charge on the basis noted above requires revisions to the requested Schedule of Rates and Charges, HRWC requests that those changes be approved as necessary.
>
> The LUG also asserts that the Private Fire Protection Charge would constitute "rate shock". In that regard, it is noted that this is the first occasion on which HRWC has provided a cost of service based determination of the Private Fire Protection Charge. In that situation, comparing the current rate to the rate proposed is not a comparison of "apples to apples" and hence, it is inappropriate to consider a concept such as "rate shock" in determining whether the proposed rate should be approved.
>
> [HRWC Rebuttal Submission, p. 12]

Findings

[192] HRWC proposed a substantial increase to the private fire protection charges based on a new method of allocating the total public fire protection charge between public and private users. The total public fire protection charge in the revenue requirements is still being calculated using an historical method. Basically, the additional amount proposed to be collected from the private fire protection charges would have reduced the public fire protection charge.

[193] HRWC has stated that the private fire protection systems provide additional benefits and these connections are not metered and are not billed for either water usage or the potential demand on the system.

[194] The LUG argued that charging customers, based on the size of the lateral connection, is not a fair method as discussed during the hearing and shown in Exhibit H-38. It also stated that, hypothetically, a three inch lateral could serve as well as a six inch lateral for a building. Since the size of the lateral did not relate to the fire protection charge, developers had not paid much attention to the size of the lateral. It also suggested that HRWC should examine whether the size of the lateral truly represents the water usage by the sprinkler system in the building.

[195] Based on the questions raised about the method used by HRWC to calculate the private fire protection charges and the size of the proposed increases, the Board is not convinced that the proposed rates are reasonable. The Intervenors have also raised the issue of rate shock given the size of proposed rate increases.

[196] The Board does not approve the proposed new methodology of calculating private fire protection charges. The charges which are currently included in the Utility's Schedule of Rates and Charges shall continue to apply.

3. Availability (Buy-In) Charge

[197] HRWC, in its Application, proposed a new charge which will replace a number of current charges which contribute to the expansion of the infrastructure. HRWC explained:

> This is a new charge which would apply when new customers who are serviced by water, wastewater and/or stormwater systems. The charge is based on the fact that the new

customer immediately gains access to a system which has been capitalized and operated by those previously connected to the system. It is felt that the new customer should pay an availability (buy-in) charge/fee which is based on his gaining access to a mature operating system.

This charge is similar to the charges identified in AWWA Manual M1 – Principles of Water Rates, Fees, and Charges - Chapter 28, System Development Charges and in the Water Environment Federation (WEF) Manual of Practice No. 27 – Financing and Charges for Wastewater Systems – Chapter 10, System Development Charges. The AWWA Manual outlines two methods of calculating the charge referred to as the equity method and the incremental cost method and states:

> *"The equity method is based on the principle of achieving capital equity between new and existing customers. Sometimes referred to as the system Buy-in method, this approach attempts to assess new customers a fee to approximate the equity or debt-free investment position of current customers. The financial goal is to achieve a level of equity from new customers by collecting a System Development Charge representative of the average equity attributable to existing customers."*

The buy-in approach in the WEF manual states:

> *"Under this approach, new customers are required to "buy-in" to existing system facilities, generally at a rate that reflects the prior investment of existing customers per unit of total capacity (capacity buy-in). A buy-in type approach is fairly easy to administer and is most appropriate where current system facilities have adequate capacity to serve both existing and future customers, the forecast of future system investment is minimal, and where existing facilities are not scheduled for replacement in the near future (AWWA, 2000)."*

[Exhibit H-1, Appendix 1, p. 68]

[198] HRWC calculated the proposed charge based on water meter sizes for water, wastewater and stormwater infrastructure and concluded that:

> It is recognized that this charge may lead customers to request a meter size that [are] too small to meet their needs in an effort to reduce the availability charge. To impose impartiality on meter sizing, it is suggested that Halifax Water continue it[s] practice of checking all new meters sizes based on AWWA Manual no. 22 – "Sizing Water Service Lines and Meters." This provides a proven, water industry-developed approach to meter sizing based on customer characteristics.
>
> [Exhibit H-1, Appendix 1, p. 71]

[199] The question of double counting between the capital cost contribution ("CCC") charge and the Availability Charge was explained by HRWC:

> 6.9.2.2 Capital Cost Contribution Charge

This is an existing charge that should be retained and based on the existing Capital Cost Contribution Charge. The method of calculating the existing charge was developed by Halifax Water and it is recommended that the method of calculation be continued (see Appendix C).

6.9.2.3 Double Charging Issue

It must be clear what each of the charges covers and that there is no duplication of charges. By segregating infrastructure charges into local facilities and major facilities, then subdividing these into system components, it is clear what infrastructure each charge covers.

The following addresses the issue of potential double charging:

- Local Facilities – Historically local facilities have been paid by new customers. This practice is continued with the recommended approach to Development Agreements, service connection, frontage and upsizing policies all focusing on customers paying their costs for local servicing. The local costs are excluded from the Availability Charge since it is based on asset valuation net of contributed assets – that is excluding local costs paid by new customers.

- Major Facilities – The combination of the Availability (Buy-in) Charge and the Capital Contribution Charge means that new customers buy into the cost of providing existing major facilities plus paying the cost of any additional major facilities needed for their servicing. The cost of providing facilities for future growth would be paid out of revenues generated using these cost recovery policies. As a result it is recommended that the current Sewer Redevelopment Charge, Trunk Sewer Charge and the Future Capacity Charge be eliminated.

Thus the recommended capital cost recovery package has been crafted to ensure new customers bear the cost of their servicing while avoiding the possibility of double charging.

[Exhibit H-1, Appendix 1, p. 71]

[200] Ms. Ramas commented on the Availability Charge and noted the impact on revenue requirements due to this charge:

...

In response to Question IR-108 LUG, HRWC indicates that the proposed capital recovery charge associated with its proposed Availability Fee is not included in the revenue requirement because they would be "...collected specifically for capital infrastructure and are placed in reserve accounts until allocated to a specific project upon Board approval." However, it is my understanding based on Mr. Whalen's testimony that the availability charge is proposed to result in new customers contributing to the equity that existing customers have built up in the system. If this is the case, then if an availability charge is allowed, it should be used to reduce the amount of revenue requirement to be collected from customers as it would be compensating existing customers for their "equity" in the system.

[Exhibit H-12. pp. 22-23]

[201] Mr. Whalen did not support the Availability Charge:

> ... In my view it is not cost based, it is unnecessary and it is unfair. It should not be approved.
>
> It is not cost based because the current revenue requirements of the utility are not a function of the equity that is built up in the system. Additionally, new costs may not be incurred when new customers are added, and if they are, they likely are not a function of the current equity in the system.
>
> [Exhibit H-13, p. 22]

[202] HRWC, in its post-hearing submission, further elaborated on the proposed Availability Charge:

> HRWC, in its Cost of Service Study, undertook a detailed examination of the charges currently being levied by HRWC and available alternatives to those charges. HRWC then developed the Availability Charge which, although applied by American utilities, is not currently utilized elsewhere in Canada.
>
> Witnesses for HRWC have characterized this charge as being an 'equity' based as opposed to 'cost of service' based. Mr. Isenor addressed the concept of "equity" in the system during his testimony (Transcript pages 630 to 631):
>
> > "MR. ISENOR: That's true. I will point out what I said to you at the beginning that we relied on that in part. It's because the buy and [sic] charge we're proposing is based on the equity in the system.
> >
> > We're not proposing a buy [in] charge that's based on future capacity. We're proposing a buy [in] charge based on the equity that the current investors, the current customers in the system, have already invested in the utility."
> >
> > [HRWC Post-Hearing Submission, pp. 44-45]

[203] Board Counsel explored this issue with HRWC during the hearing:

> MR. OUTHOUSE: They allege that there's a double dipping taking place with this charge in the areas which are in approved development areas.
>
> Is that -- is he wrong about that?
>
> MR. ISENOR: We reviewed that at length as a group when we were doing the cost-of-service study, and we would disagree with them, respectfully.
>
> MR. OUTHOUSE: So you think that they've got that wrong?
>
> MR. ISENOR: We do, yes, because the capital cost contribution charge is to pay for the infrastructure within a set development area, and it's such that the cost to the overall users of that development area are cost neutral.

It doesn't have anything to do with the fact that Pockwock is a mature system and is out there and has a value or that they're hooking in to Mill Cove, which in turn has no debt and has a value and is capable of treating their wastewater.

MR. OUTHOUSE: You would agree with me, Mr. Isenor, that this charge, this so-called availability charge, is simply a way of raising capital to fund future capital expenditures; correct?

MR. ISENOR: It is a mechanism to do that, yes.

...

MR. LOUDON: I just -- the availability charge which we're applying for here in many other places right across Canada which -- many other places across Canada, they have development charges, some sort of a different charge based on different calculations.

But the bottom line is that a new -- not new customers -- new property, newly served property, the utility has tried to raise money to offset future costs.

Some of them are calculated in different ways, like a development charge is calculated based on growth-related costs, so there's different ways of calculating it. But there's some form of charge.

...

MR. OUTHOUSE: And if it's simply a method of financing capital, there's debt financing, there's depreciation, there's user pay rates, which is what you favour. You have all of those in place currently, and yet you want to finance capital through this so-called equity charge to be fair among existing customers.

Is that really the thrust of it, or is it simply a money grab?

MR. ISENOR: No, it's not a money grab. The idea that we worked on was that a new building, when you built that new house that you're going to buy is -- you know, gets -- the morning it's hooked up to the system gets the full benefit of all of the paid-in equity net of any by it's -- you know, gets the morning -- it's hooked up to the system -- gets the full benefit of all of the aid in equity net of any donations or anything else that the other customers as a system have already put there, okay. And that property has a value that relates to that, whether -- you know whether you say it's an extra charge or not, but the property does have a value that relates to the fact that it's a fully serviced and on a mature system -- on a system that's functioning well.

MR. OUTHOUSE: This doesn't go to reduce any existing customer's rate? You think in the future it would reduce capital costs which other existing customers might be called upon to pay?

MR. ISENOR: That's exactly right, that ---

[Transcript, pp. 680-686]

[204] The LUG noted:

As a means of diversifying and increasing revenues, the Utility has proposed to replace existing municipal charges related to connecting new homes to the sewer system with a flat "availability charge" for both water and waste water. Such a charge, also known as a

> "buy-in charge" is not unknown in the industry, but it is generally suggested that such [as] charge is only appropriate where, inter alia, the facilities can adequately serve existing and new customers and the assets are not scheduled for significant repairs or replacements in the new future. Basically, it is a charge that reflects that existing customers have brought the utility to a plateau and that new customers should compensate existing ratepayers for their investment into the system.
>
> An availability charge is not appropriate for the Water Commission at this time. The Utility does not meet the criteria for adopting a buy-in charge, the charge, as currently configured, does not accomplish the stated goals of the levy: to achieve equity between old and new customers, and, overall, the charge has the effect of penalizing people who wish to avail themselves of the HRWC's services, which, in a time of decreasing consumption-related revenues, is counter-intuitive and against the interests of both HRWC and its ratepayers who wish to achieve better utilitization of the assets and lower unit costs.
>
> [LUG Closing Submission, p. 28]

[205] The proposed charge is to be levied on new buildings which connect to HRWC's systems. The LUG raised an issue with the calculation:

> The equity approach to the availability charge is particularly problematic because the rate would apply to all new buildings without regard for whether the building owner was previously a customer. In effect, a person who has paid into the system for years as a home-owner would be charged the proposed Availability Charge if they buy a new house, while a person who has never been a customer of the Utility would not be charged if they purchase a home that was already connected to the water and/or wastewater systems. In this respect, the entire construct of the Availability Charge is illogical and does not achieve equity between old and new customers to the Water Commission.
>
> [LUG Closing Submission, p. 30]

[206] The Board received a letter dated September 15, 2010 from Clayton Developments Limited of Halifax, which raised concerns with the proposed Availability Charge. The developer noted the conflict between the proposed charge and one of the current charges and requested that:

> ...
>
> Currently, areas of HRM that are covered by an existing or proposed CCC Charge are exempted from Sewer Redevelopment Charges (SRC's). The proposed Availability or Buy-in Charge appears to consolidate a number of existing hook-up/infrastructure fees (including SRC's) into one charge to be applied in all serviced areas of the HRM, including areas covered by an existing or proposed CCC Charge. If this is indeed the case, the new charge will result in a potential double charging for certain wastewater infrastructure.
>
> This letter seeks:

- Clarification of proposed Availability (Buy-in) Charge as it relates to existing operating policies for both Halifax Regional Municipality and the Halifax Regional Water Commission concerning the application of Capital Contribution Charges.
- If warranted, modification to the proposed Availability Charge in areas covered by an existing or proposed CCC Charge for the purpose of ensuring that the portion of the new charge relating to the Sewer Redevelopment Charge does not apply.
- Direction from the Board to Halifax Regional Water Commission that additional consultation be undertaken with property owners covered by an existing or proposed Capital Cost Contribution Charge before formal adoption of the proposed Availability (Buy-in) Charge as set forth [if] Section 6.9.2.1 of the Halifax Water Cost of Service Study.

[Exhibit H-45, p. 1]

Findings

[207] The Board understands that the Utility currently has a CCC which provides for the recovery of costs required to provide oversize systems within the "Charged Area". This cost is generally shared among the developers of the charged area, but in some cases the Utility is also part of this sharing arrangement.

[208] The wastewater and stormwater systems have various charges depending upon the area in which the new customers are connecting. The revenues generated from these charges are infrastructure specific and can only be used for that purpose. These revenues are used to fund, in part, upgrades to the infrastructure and provide additional capacity, the need for which has been created, over time, by the addition of new developments.

[209] The Intervenors have questioned the appropriateness of the Availability Charge based on the principle that it is not cost based. They are also of the view that there is some duplication between the new charge and the CCC charge.

[210] The Board has reviewed the CCC charge and it appears that the two charges are different and there is no duplication. The CCC charge is for a specific

charged area and is intended to make the expense of oversizing cost neutral among the various developers. The existing charges are for the infrastructure which may need upgrading now, or in the future, which is outside the specific charged area. The need for this upgrading appears to be created by the addition of new development over time within the catchment area of the system. This also includes upgrading which could occur within developments already subject to a CCC charge.

[211] Currently, there is no charge for water service connection which is proposed to be included in the new Availability Charge. In addition, as the Board understands it, the water system does not appear to have any capacity issues.

[212] The wastewater and stormwater systems have a large infrastructure deficit due to their condition and capacity. Before transfer, HRM had various capital charges for new development, revenues from which were used to share in the cost of upgrading and enhancing capacity of the infrastructure. These charges were based on either the land usage, or size of the new building's area.

[213] The Availability Charge, as proposed, is to replace the revenues which would have been created by the current charges. A response to Undertaking U-14 shows a comparison of charges for a single family home and small residential development under the two rate structures. For a single family home, the charges are generally the same; however, for a 20 unit building the charges decrease substantially under the proposed rate structure.

[214] HRWC has proposed the Availability Charge based on equity in the system. The Board is not certain whether this is the correct approach. However, the Board is concerned that there is an incremental impact of developments on the current

capacity of the wastewater and stormwater systems, which will require the Utility to provide upgrading and provide additional capacity in the future. The timing of this would vary from site to site depending upon the unused capacity currently available in these systems and the intensity of development.

[215] The Board also understands the Utility is facing a huge challenge to eliminate its infrastructure deficit and loss of these revenues will impact on its plans.

[216] Later in this Decision, the Board has directed the Utility to study its long term infrastructure needs. The Board is of the view that before any decision is made, the Utility should review its financing options with and without the Availability Charge and its impact on the Utility's ability to provide services.

[217] Clayton Developments Limited has raised the issue of the sewer redevelopment charge, which the current developers do not pay in the CCC charged areas. It has also suggested further consultation between HRWC and developers before the Board makes its decision on this issue.

[218] The Board agrees that approval of an Availability Charge as proposed needs further consultation with the development industry. Therefore, the Board does not approve the Availability Charge at this time and directs the Utility to: carry out a consultation with stakeholders; do a more rigorous analysis; and include its results in the next rate hearing.

[219] As noted earlier the Board has concerns with the current capital wastewater and stormwater charges as calculated and collected by the Utility. However, given the circumstances, all current charges should continue until the next rate case.

VII SCHEDULE OF RULES AND REGULATIONS

1. Overview

[220] The Application proposes to replace the existing three separate Schedules of Rules and Regulations for the Supply of Water and Water Services, Wastewater Service and Stormwater Service with a combined Schedule of Rules and Regulations for Water, Wastewater and Stormwater Services. HRWC provided a summary of the proposed changes (IR-182, Exhibit H-10), noting that many of the new definitions included with respect to wastewater service relate to the Canadian Council of Ministers of the Environment (the "CCME") strategy.

[221] In an Order dated April 15, 2010, the Board approved a revision to Regulation 19 'Water Service Cross Connection Control & Backflow Prevention' of the Schedule of Rules and Regulations for the Supply of Water and Water Services. The revision, which was the result of a complaint filed against HRWC, included the addition of sections to Regulation 19b, which sets out HRWC's practice of applying the CSA Manual in the assessment of risk of contamination, and provides that customer objections to the requirement of installing a backflow prevention device be given due consideration by HRWC prior to reaching a final conclusion. Although omitted in the proposed Schedule of Rules and Regulations contained in the Application, HRWC confirmed that the proposed Regulation 19 should include the revision as set out in the Board Order, noted above (IR-185, Exhibit H-10).

[222] HRWC explained that the proposed change to Regulation 26 'Service to Water, Wastewater and Stormwater Building Service Connections' is to make the customer responsible for the cost to supply and lay the service pipes from the main in the street to the street line. It was further explained that the proposed revision makes

the water service connection provision consistent with those of the current wastewater and stormwater service connections. It is estimated that the revision will result in an increased cost of approximately $475 to the average customer (IR-43, Exhibit H-10).

[223] Mr. Grant further questioned HRWC with respect to proposed Regulation 26, in particular the clause stating:

> ...In the event that the Commission, in its sole discretion, determines that the existing service pipe(s) is/are not suitable, the owner shall comply with the requirements of the Commission with respect to the appropriate type and size of water service pipes to be utilized. All such service pipes shall be installed at the owner's expense, from the main line to the premises...

[224] Specifically, he referred to shopping center complexes where free-standing buildings in the parking lot area are each required to have a separate lateral, a practice which was confirmed by Mr. Yates. Mr. Isenor explained that if the shopping centre had a master meter and added laterals after the meter, the customer would be responsible for the maintenance of the lines on its private property (on the customer side of the meter), including the costs of any leakage. Mr. Rooney added that HRWC would have no difficulty with such an arrangement because, from HRWC's perspective, there would be one customer of record.

[225] The cross-reference in Regulation 37b 'Wastewater Service Reporting Requirements' was indentified incorrectly as Section 36 and was corrected as Section 37a in the response to the Information Request (IR-192, Exhibit H-10).

[226] There was further discussion with respect to proposed revisions to Regulation 55 'Acceptance of Private Community Water Systems' which will be dealt with as a separate issue below.

Findings

[227] The issue of separate service laterals in the context of Regulation 26 'Service to Water, Wastewater and Stormwater Building Service Connections' was not discussed in the post-hearing submission or the rebuttal submission of the LUG. It appears from the discussion at the hearing that the concerns of the LUG were addressed. The Board further notes that the revisions with respect to the cost responsibility of water lateral placement, which provides consistency with the practice with respect to wastewater and stormwater services, is also consistent with the recently approved practices of several other water utilities in the Province.

[228] Accordingly, the Board approves the Schedule of Rules and Regulations with the amendments noted above to Regulation 19 'Water Service Cross Connection Control & Backflow Prevention' with respect to adding the sections approved in the Board Order dated April 15, 2010, and the cross reference in Regulation 37b 'Wastewater Service Reporting Requirements'.

VIII OTHER MATTERS

1. Acceptance of Private Community Water Systems

[229] In a letter to the Board dated April 7, 2010, HRWC requested Board approval of a revision to the existing policy associated with Regulation 55 "Acceptance of Private Community Water Systems" (Exhibit H-20). The proposed revision is an addition to the current "Procedure For Acceptance of Private Community Water Systems":

> The rate structure for newly accepted small community water systems will be based on full cost recovery with a cap at 2.5 times the actual urban core rates in effect.

[230] HRWC proposed that the existing small water systems, which had been accepted in the past, would be grandfathered from this approach and remain at the urban core rate.

[231] In a letter to HRWC dated April 15, 2010, the Board indicated that the matter would be considered as a part of the rate application process.

[232] HRWC explained the basis for the 2.5 times cap of urban rates:

> The basis for the proposed 2.5 times cap stems from extensive research undertaken in Ontario by the Water Strategy Expert panel in their publication, "Watertight: the case for change in Ontario's water and wastewater sector". The Panel concluded that some small systems may have costs so high across their small customer base that they cannot reasonably be recovered through rates, and that a 2.5 times cap would be practical.
>
> [Exhibit H-10, IR-194biii)]

[233] HRWC indicated that, based on its experience, its opinion is that any system with less than 30 customers and a complex treatment process could exceed the 2.5 times cap, noting that since 1996, no more than one in five small systems would fall in this category. It further noted that there is currently only one small system that it is aware of which has expressed an interest in being accepted by HRWC.

[234] Mr. Grant questioned HRWC's obligation to rescue failed water systems, given that it will result in subsidization by existing customers, an unjustifiable concept on a cost of service basis. Mr. Yates agreed with the comment, noting that the revision to the policy had been proposed on a socio-economic basis.

[235] HRWC's post-hearing submission addressed the Board's question as to its ability to approve cap rates under the provisions of the *PUA*. With reference to s. 67 (1) of the *PUA* "Equal rates and charges for similar services", HRWC explained that any

potential new "satellite" systems would not be operated under "substantially similar circumstances" to the urban core.

[236] The post-hearing submission further stated that the proposed rate cap represents a compromise between the other alternatives of charging urban core rates to the private system, which will result in further subsidization, or treating each system as separate, each with different, specific cost based rates, resulting in a significant regulatory and administrative burden.

Findings

[237] One of the principles of utility charges and rate design is that when a new service is added, it should be revenue neutral to the existing customers of the Utility. The issue of a water utility's ability to serve new customers, with no subsidization from existing customers, is one which has come to the Board in the past from a number of water utilities.

[238] This particular policy deals with "satellite systems" with no physical connection to the urban core, and while the principles of cost neutrality remain the same, the operations and service may not be "substantially similar" to the urban core.

[239] The Board understands HRWC's position that in many cases, without the proposed cap, the necessary rates to operate these private systems based upon a cost recovery basis, would be excessive. The Board is concerned that potentially, with the proposed cap in place, there may be a great number of private systems which could come forward to be rescued by HRWC, at the expense of the existing customers. However, the Board notes that the policy has a number of provisions in place prior to HRWC considering acceptance of a private system, including the necessity that the

system be upgraded to meet a number of standards, with the present owner responsible for the costs of the upgrades. In addition, the regulation states that the acceptance by HRWC of such systems must be approved by the Board.

[240] The Board accepts the proposed addition of the rate cap to the current policy, with the understanding that Board approval is required before any private system is accepted. Such requests will be reviewed by the Board on a case by case basis, taking into consideration all of the relevant factors.

2. Specific Wastewater Capital Cost Contribution Charges

[241] In a letter to the Board dated June 2, 2010, HRWC requested a Board Order approving the wastewater CCC rates and methodology for collection in the Wentworth, Bedford South and Portland Hills Master Plan Areas (Exhibit H-18). It was noted in the letter that both rates are contained in Section 7b 'Wastewater and Stormwater Capital Cost Contribution Charge' of HRWC's current Schedule of Rates and Charges for Wastewater and Stormwater Service, as a result of the merger in 2007 when HRWC assumed responsibility for collecting the charges from HRM. The Application proposes to remove these charges from the Schedule of Rates and Charges. This proposal will make the treatment of the wastewater CCC charge consistent with how the Board has approved water CCC charges in the past.

[242] In a letter to HRWC dated August 4, 2010, the Board indicated that although the proposal does not affect the present rates, to ensure continuity of the administrative process, it would be appropriate to consider the matter as a part of the rate Application.

[243] The issue was not discussed further during the hearing, other than the Board noting that it represents an administrative issue.

Findings

[244] As noted above, the request for a Board Order approving the two specific CCC charges for wastewater, with the removal of the charges from the Schedule of Rates can be viewed as an administrative matter, to provide consistency with the provisions for water. There was no opposition to or comments on the matter during the Application process.

[245] Accordingly, the Board approves the removal of these rates from the Schedule of Rates and Charges, as proposed, and will issue an Order related to these specific CCC charges.

3. Salaries

[246] The Board notes an alarming increase in salaries for senior executives of HRWC in the period 2007 to 2009. The salary of the General Manager increased by 39.32% over that two year time period. Other senior executives saw increases in the 20% range. This is at a time when inflation is in the range of 1% and customers are being asked for increases over two years approaching, in some cases, 40%. The Board will carefully monitor this.

[247] It may be argued that the Board of Directors of HRWC are free to pay whatever high salaries they wish, nevertheless it is open to the Board to allow only a reasonable portion of that salary to be recovered from ratepayers as is the case in other utilities the Board regulates.

IX FUTURE FILINGS

1. Integrated Resource Plan

[248] Board Counsel witness James Goldstein recommended that HRWC undertake an integrated resource planning ("IRP") process. He stated as follows:

> A. I recommend the Board order HRWC to initiate a two-phase planning process. The first phase would identify the most appropriate approach for the Commission's long-term integrated planning. The second phase would implement the identified process and produce a long-term plan. These are further described below.
>
> [Exhibit H-11, p. 24]

[249] Mr. Goldstein reviewed the order of magnitude of capital investment that HRWC, based on its own business plan, may have to undertake over the course of the next 20 to 30 years:

> The estimated cost of implementing the system rehabilitation plan (for stormwater, wastewater, and water), plus CCME compliance is on the order of $2.5 to $3.5 billion dollars over the next 30 years. This represents roughly $1.5 billion for ongoing infrastructure rehabilitation and repair plus $1 to $2 billion for CCME compliance. For illustrative purposes, if these capital expenditures were spread evenly over the 30-year period, the annual capital infrastructure investment would be $83 - $117 million per year.
>
> 15 Q. HOW DOES THIS LEVEL OF OVERALL CAPITAL INVESTMENT COMPARE WITH HRWC'S CURRENT ASSET BASE?
>
> A. The total investment of $2.5 to $3.5 billion over the 30 year period represents an investment of 4.3 – 6.1 times the total current HRWC assets, which were $578 million as of March 31, 2009 (see Appendix 3 of the application, HRWC Financial Statements, March 31, 2009).
>
> Q. IF THESE CAPITAL EXPENDITURES WERE SPREAD EVENLY OVER THE 30-YEAR PERIOD, HOW WOULD THE ANNUAL LEVEL OF INVESTMENT COMPARE WITH THE LEVEL OF CAPITAL INVESTMENT PROPOSED IN THE CURRENT FILING FOR 2010/11 AND 2011/12?
>
> The annual capital budgets proposed for the test years are $24.2 million and $24.6 million, respectively. This equals about 36% of the $66.7 million ongoing annual capital investment requirements as estimated in HRWC's Projected Annual Capital Investment Plan (Appendix G of the Two Year Business Plan).
>
> If HRWC's updated estimates for CCME compliance of $1 to $2 billion are used, the test years' annual capital budgets of around $24 million represent approximately 19-29% of total annual capital investment requirements of $83 - $117 million.

[Exhibit H-11, pp. 15-16]

[250] It goes without saying that it is critically important that proper planning take place with respect to HRWC's infrastructure challenges.

[251] In that regard, Mr. Goldstein stated:

> A. My key conclusions regarding HRWC's planning challenges are as follows:
>
> 1. As a combined water, wastewater and stormwater utility, HRWC faces a broader and more complex planning environment, but one that offers opportunities for a more systematic and integrated approach.
>
> 2. HRWC faces capital infrastructure investment requirements on the order of $2.5 to $3.5 billion over the next 30 years to rehabilitate its systems and comply with new CCME regulations.
>
> 3. HRWC planning for system rehabilitation and CCME compliance is at a preliminary stage.
>
> 4. Significant uncertainty remains with respect to the magnitude and timing of the investment needs for CCME compliance.
>
> 5. This level of investment will require future planning and management activities beyond the level of HRWC's historic practice or that reflected in the test years of the current application.

[Exhibit H-11, pp. 17-18]

[252] Mr. Goldstein went on to describe the benefits of an IRP:

> A. An integrated long-term plan will serve several purposes:
>
> - First, the plan will provide the framework for HRWC to comprehensively evaluate alternative planning scenarios for its water, wastewater and stormwater services in an integrated fashion and identify the most efficient means of achieving its service goals while meeting all environmental requirements.
> - Second, it will provide long-term direction for HRWC and be a platform for comprehensively assessing alternative generic facility and programmatic investment options.
> - Third, it will serve as an umbrella under which more detailed, facility- or program-specific capital investment analyses can take place.
> - Fourth, the plan will explicitly identify and plan for the management of risks facing HRWC.

- Fifth, the plan will provide the Board with the information and context it needs to make fully informed decisions about proposed future capital investments, revenue requirements and rates.

[Exhibit H-11, pp. 24-25]

[253] Mr. Goldstein recommended that HRWC should lead the IRP process in collaboration with Board Staff and consultants, with input from stakeholders.

[254] This is similar to the manner in which an IRP was undertaken by NSPI. In fact, Mr. Goldstein is familiar with that process and recommended the NSPI approach for HRWC.

[255] HRWC agreed with Mr. Goldstein that an IRP process should be undertaken. However, HRWC submitted that the commencement of the IRP should be deferred until the final version of the CCME regulations is available.

[256] Mr. Goldstein noted that uncertainties are common in most planning exercises and went on to say, "They do not, however, negate the need or usefulness of doing long term planning. In fact, long term planning helps clarify what the key uncertainties are and explore the potential impacts of alternative plans vis-à-vis the uncertainties". (Exhibit H-11, p. 22)

Findings

[257] The Board is of the view that HRWC is in immediate need of a rigorous IRP process. The Board does not agree that such a process needs to await final regulations associated with the CCME strategy.

[258] The Board intends to engage the services of Mr. Goldstein to act, along with Board Staff, in overseeing the preparation of the IRP. That process is to begin forthwith.

2. Debt Funding Plan

[259] As noted, HRWC has to raise a significant amount of capital over the course of the next 30 years. The Board of Directors of HRWC has adopted a debt policy as part of its business plan which provides the following:

- Long term debt should not be issued for a term longer than the useful life of the asset being funded;
- There is a cap placed on the amount of long term debt based on a 30/70 ratio of debt to equity.

[260] The cap is divided between large capital projects such as treatment plants, transmission and trunk mains, and ongoing capital renewal of water distribution and sewer collection infrastructure that require capital expenditures. A sublimit has been established for each group and that group cannot access any unused cap from the other.

[261] HRWC conceded that this was a very conservative approach to debt and that in the past the Utility has operated on a "pay as you go" philosophy incurring debt for only infrequent capital spending.

[262] Mr. Rooney, who appears to be the principal author of the debt policy, discussed it in cross-examination by Board Counsel.

> Mr. OUTHOUSE: Now, what studies, if any, were done to determine the appropriateness of the 30/70 equity/debt split as an efficient capital structure?
>
> MR. ROONEY: I did a discussion paper. We didn't do any -- I didn't do any studies. I did consult with HRM. I reviewed their debt policy. I had consultations with Mark Gilbert, who's a professor at the Dalhousie School of Business, but former CEO of the Municipal Finance Corporation, on, you know, what an appropriate level -- we had discussions on what an appropriate level of debt should be, debt to equity funding, and also the cap part of it.
>
> [Transcript pp. 346-347]

. . .

MR. OUTHOUSE: And in this wealth of documents I confess, I haven't read the discussion paper, Mr. Rooney, but I understood from your previous answer that it does not consist of a long-term capital expenditure program and the rate impacts of having a 30/70 split equity of the debt?

MR. ROONEY: It does not consider that, no. It didn't ---

MR. OUTHOUSE: And no such study has been done?

MR. ROONEY: That's correct.

MR. OUTHOUSE: So the bottom line is we're not in a position to say what the rate impacts will be of that policy given the long-term capital expenditure plan of HRWC?

MR. ROONEY: Right and I guess that's probably not determinable until that long-term capital program is determined.

MR. OUTHOUSE: Did you do any survey of other water utilities across North America to see what their debt equity split was?

MR. ROONEY: I did not.

MR. OUTHOUSE: Would it surprise you to find that the norm would be 50/50 or in fact weighted even more heavily to debt?

MR. ROONEY: It might surprise me. I think it depends to some extent on the age and the type of utility it is.

I mean, the one quoted by one of the intervenors was Edmonton Drainage which I assume is a stormwater utility and assume they would have sort of a lot of one-time capital items and then pretty well maintenance after that.

It depends, you know, those are the factors around, you know, what it would be, a lot of water utilities I think are part of cities so ---

MR. OUTHOUSE: You would agree with me, would you not, that knowing the rate impacts of a policy would be an important factor to take into consideration?

MR. ROONEY: Yes.

[Transcript pp. 351-352]

[263] The debt policy also limits payments to 35% of operating revenue for water, wastewater, and stormwater services. In further cross-examination by Mr.

Outhouse, Mr. Rooney agreed that the cap at 35% of operating revenues was merely intuitive and there were no studies to support it. He called it "an intuitive number".

[264] Mr. Drazen, on behalf of the LUG, suggested that the debt portion of HRWC's capital structure should be between 50% and 65%. He indicated that most utilities rely on debt because it is less expensive than funding with retained earnings.

[265] Mr. Drazen explained that while HRWC said that over time using debt results in higher rates, that is only half of the picture. He conceded that eventually rates are higher with debt but in total the customers are better off because of the initial savings they realized when a utility uses debt that offsets the higher costs over time.

[266] Mr. Drazen noted that HRWC wants to use debt only for major projects and use retained earnings to pay for ongoing infrastructure and rehabilitation.

[267] He explained, however, from a financial standpoint there is really no distinction between the two, both require financing and the ultimate question is "what overall financing is least expensive or most efficient". He went on to say:

> MR. DRAZEN: ... My recommendation is that the Board make a preliminary decision regarding the use of debt.
>
> For the next case Halifax Water and other parties can prepare studies based on a long-range, 15 to 20 years forecast with Cap Ex as a requirement to refine the approach.
>
> [Transcript p. 1040]

[268] The LUG expanded on this in their closing submission.

> We submit that a higher debt to equity ratio is an important means by which to relieve the current generation of ratepayers from bearing the full burden of the projected HRWC capital projects and major maintenance. It is a more efficient and cost effective means of financing the significant capital expenditures that the Utility will face in the coming years. The Board should require HRWC to submit a separate complete study which examines debt policies of other utilities, its longer term (5-10 year) capital needs, the policies of other utilities and options which result in both an efficient funding mechanism and one which is fair to present and future ratepayers.

> To set a Board debt policy, the Board requires a detailed capital program that extends beyond the test years. It needs to consider paying for a high proportion of the capital needs out of current revenue will result in intergenerational inequities. It needs, as well, better evidence of the extent to which senior levels of government are prepared to support municipal infrastructure requirements. Much of the current infrastructure was built with a one-third contribution from the Provincial Government and a one-third contribution from the Federal Government (Blaine Rooney, Transcript page 133).
>
> We submit that the Board should not approve the proposed debt policy and should not set rates based upon this policy for the test year. In the next year, the debt should be conservatively set at 50-65% of the capital costs following Mr. Drazen's recommendation (H-17, page 6).
>
> The Board should require HRWC to submit a separate complete study which examines debt policies of other utilities, its longer term (5-10 year), capital needs, and options which would result in both an efficient funding mechanism and one which is fair to present and future ratepayers.
>
> [LUG Closing Submission, p. 21]

Findings

[269] The Board is not prepared to approve HRWC's debt policy. The Board does not accept that the 30/70 debt to equity ratio is an efficient one. The Board agrees with Mr. Drazen that the question to be answered is "what overall financing is least expensive or most efficient?" The Board is concerned that in developing its debt policy HRWC:

- did no study;
- did not investigate the rate impact of its debt policy;
- did not survey any other utilities in North America;
- was unaware that the norm for debt equity ratios is 50/50 or even higher.

[270] Mr. Drazen indicated that the range of splits for typical utilities range from 65/35 debt to equity to 50/50 debt to equity. To test this he produced, in his evidence, a "cash needs" model to determine the effect of a debt policy on rate increases.

[271] The Board approved capital structure for NSPI (an investor owned utility) is a 60/40 debt to equity ratio.

[272] It is clear that if this Utility is required to raise funds exceeding $1 billion over the course of the next 20 to 30 years, it needs a comprehensive debt policy with an efficient capital structure. The Board orders HRWC to undertake a complete study which examines an efficient capital structure, policies of other utilities, its longer term capital needs, and options which would result in an efficient funding mechanism which is fair to present and future ratepayers. The terms of the reference for the study and the timeline are to be submitted to the Board within 60 days of the Compliance Order for approval by the Board.

[273] In the meantime, for future ratemaking purposes, until the study is completed and approved, the Board will assume a debt to equity ratio of 50/50.

3. Cost of Service

[274] As noted earlier in this Decision, the Board has instituted a process leading to a cost of service hearing in the future.

X COMPLIANCE ORDER

[275] The Board, in this Decision, is departing from its usual practice of calculating the Schedule of Rates and Schedule of Rules and Regulations. The Board directs HRWC to do so based on the findings in this Decision and file a compliance filing for Board approval as soon as practically possible. An Order will be issued at the time of approval of the compliance filing.

XI SUMMARY OF FINDINGS AND DIRECTIVES

[276] For the reasons outlined above, the Board does not accept the revenue requirements as presented by HRWC in its Application for the provision of each of water, wastewater and stormwater services. The Board acknowledges that HRWC's Application to set rates for water, wastewater and stormwater service is a significant task, involving a level of complexity which has not been undertaken in previous HRWC applications. However, there were numerous changes and revisions to the Application, with final revenue tables not being filed until almost a month after the hearing. The Board has been put in a position of issuing a "do no harm" decision because of the poor quality of evidence filed in support of the Application. The Board's approach in this decision has been to try and determine a revenue requirement that will allow HRWC to operate until it can come back to the Board with a properly documented and reliable application. Unfortunately, this means important and necessary cost of service and rate design decisions will be deferred because, without reliable data, the Board cannot be sure of their impact. HRWC should understand that if the Board receives a future rate application with deficiencies of similar magnitude it will simply be rejected.

[277] For water service, the Board approves the revenue requirement upon which the current rates are based. The Board approves the proposed revisions to the capacity ratios for each of the ⅝" and 10" meter sizes, which results in an adjustment to the current rates for water service. The public fire protection charge is retained as it currently exists.

[278] The Board does not approve a separate wastewater and stormwater charge as proposed. The Board approves a combined wastewater/stormwater charge,

based upon the revised total revenue requirements for wastewater and stormwater service. The approved rate consists of the current volumetric charge for wastewater/stormwater service, with the remainder of the revenue requirement for the combined service allocated to base charges, using the same capacity ratios as approved for the water system.

[279] The Board approves the proposed grant in lieu of taxes/dividend for the water system. The Board denies the proposed grant in lieu of taxes/dividend for the wastewater and stormwater systems.

[280] The Board finds that a stand-alone cost of service proceeding should be conducted prior to HRWC's next rate application. Board staff and Board Counsel should meet with HRWC (and perhaps other stakeholders) to investigate a realistic timetable for such a proceeding.

[281] The Board does not accept the Application's projected consumption figures. For the purposes of determining rates for the test period, January 1, 2011 to March 31, 2012, the 2009/10 estimated annual consumption of 38,764,614 cubic metres is to be used.

[282] The Board approves the miscellaneous charges as proposed, with the exceptions noted in this Decision. The Bulk Water Consumption Rate and the Extra Strength Surcharge are retained as they currently exist.

[283] The Board does not approve the proposed new methodology of calculating private fire protection charges (Building Fire Protection Systems). The private fire protection charges are retained as they currently exist.

[284] The Board does not approve the proposed Availability Charge at this time. HRWC is directed to: carry out a consultation with stakeholders; do a more rigorous analysis; and include its results in the next rate hearing. All current capital charges that the Availability Charge was proposed to replace should continue.

[285] The Board approves the Schedule of Rules and Regulations, with amendments to Regulation 19 'Water Service Cross Connection Control & Backflow Connection' and Regulation 37b 'Wastewater Service Reporting Requirements', as discussed in the Decision.

[286] The Board approves the proposed addition of the rate cap to the "Procedure For Acceptance of Private Community Water Systems".

[287] The Board approves HRWC's request with respect to the removal of the Wastewater Capital Cost Contribution Charges from the Schedule of Rates and Charges.

[288] The Board directs that the process for the preparation of an IRP for HRWC begin forthwith.

[289] The Board does not approve HRWC's debt policy. The Board directs HRWC to undertake a complete study which examines: an efficient capital structure; policies of other utilities; its longer term capital needs; and opinions which would result in an efficient funding mechanism which is fair to present and future ratepayers. The terms of reference for the study and the timeline are to be submitted to the Board within 60 days of the Compliance Order for approval by the Board. In the meantime, for future ratemaking purposes until the study is completed and approved, the Board will assume a debt equity ratio of 50/50.

[290] The Board directs HRWC to file a revised Schedule of Rates and Charges and Schedule of Rules and Regulations, based upon the findings of this Decision, as a compliance filing, for Board approval.

[291] Based upon the Board's directives and the revised test period, the rate increase for an average residential customer, for the supply of water, wastewater and stormwater services is approximately 27%. The rate increases for all other metered customers are between 2% and 19% (see Table 6 at paragraph [169]). These figures can be compared to those proposed in HRWC's original Application of an estimated 41% increase for an average residential customer; between -5% to 43% adjustment in rates for all other metered sizes.

[292] Final Board approval of the rates will be ordered as part of the compliance filing.

DATED at Halifax, Nova Scotia, this 17th day of December, 2010.

Peter W. Gurnham

Kulvinder S. Dhillon

Murray E. Doehler