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Report to the Utility Services Committee
from David Benham, Divisional Manager, Utility Services and
Murray Kennedy, Strategy and Asset Manager

The Water Group Long Term Financial Strategy

1. Purpose

To provide information to assist in the development of the Council's Long Term Financial Strategy in relation to future water levies.

2. Introduction

Over the last 25 years a large part of the wholesale water supply system has been rebuilt or enhanced. This supplemented the Kaitoke scheme constructed in the 1950s. The result is a relatively modern water supply infrastructure. Accordingly, given the long life of many of the assets, capital expenditure will be in a cyclic trough during the next 20 years.

Funds were borrowed to construct many of the assets and, as at June 1999, The Water Group's long-term debt stood at \$65.72 M, a reduction of \$4.22 M over the previous financial year. An issue to be considered is the wholesale water charges over the next few years and the rate at which debt should be reduced. This is sometimes referred to as the "intergenerational equity" issue.

This report considers the various factors that impact on operational costs and future capital expenditure. A financial model has been prepared which includes these variables and allows several scenarios to be explored. The results from running the model included a number of combinations of future debt levels and wholesale water charges.

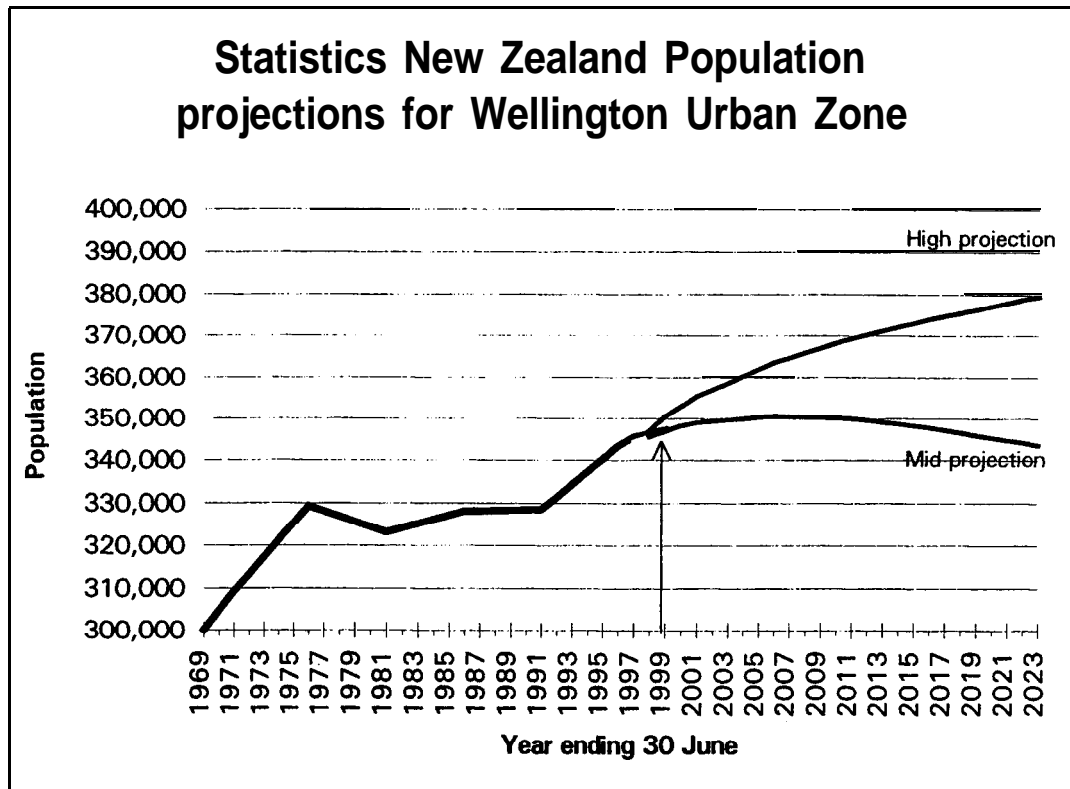
3. Assumptions

A number of assumptions were made in order to run the model. Like any model, if the variables over time are different from the assumptions; then the model results

are likely to be incorrect. A number of key assumptions have been changed to provide a range of scenarios.

3.1 Changes in Population

The last population census was in 1996 and the next is in 2001. Current population of the four cities is therefore an estimate. Population changes over the next 20 years will be driven by economic security, amongst other factors. Two scenarios are shown in the graph below.



The mid-projection growth will not create a water supply problem in the next 20 years as the population peaks in about 2005 and gradually decreases. For modelling purposes the high growth-projection has been chosen. While this approach may be conservative, planning will proceed for developing a new water source, but if the growth does not eventuate, then the construction of a new source can be deferred.

3.2 Consumption Forecasts

Consumption has been separated into four types for forecasting purposes:

- Residential use
- Commercial use
- Industrial use
- System losses and unaccounted for water (metering error)

Only commercial and industrial users are metered to any significant extent by the

four cities. Information on average residential use has been obtained from an ongoing consumption monitoring survey. Household use is predicted to fall slightly over the next 20 years in line with the trend to smaller households. Conversely, the amount consumed per person in each household is expected to rise in accordance with population projections. Industrial use has been forecast to fall along a slow recovery/recession cycle. This analysis suggests that the average daily demand would surpass the estimated sustainable yield in 2020. The sustainable yield from the year 2000 onwards will be lower than it was in the 1990s because of the restrictions in the Council's Freshwater Plan. For the year ended March 1999 the average daily demand was 153 ML.

3.3 Raw Water Availability

Raw water availability is governed by resource consents and structure limitations to take the water from the aquifer and rivers.

The resource consent for the aquifer source allows a daily annual average take of 80.5 ML/d. Subject to an aquifer test in March 2001, this will increase to 85 ML/d. Resource consents for the Hutt and Wainuiomata/Orongorongo Rivers have to be renewed by October 2001. It is assumed that the water available from the rivers will be the maximum allowable under the Council's Freshwater Plan.

3.4 Risk of Shortfall

Population projections with their associated demand, and the raw water availability constraints, are analysed in The Water Group's Sustainable Yield Model. This indicates that, with a high population growth scenario and a 90 percent confidence level, sufficient raw water is available from existing sources until the year 2020. This is based on a 2 percent risk of shortfall event. An "event" is defined as a year that contains at least one shortfall day.

Customers have been consulted about the 2 percent shortfall risk. As at November 1999 two customers have accepted the level of risk and two are still considering the issue.

However, the main driver for development of a new source will be an increase in population.

Results from the Hutt aquifer pump test and the allocation from the surface water consent process could impact on the shortfall risk. This would either bring forward the development of a new source or push the development past the planning period of 2020. Either way there is some uncertainty with this aspect until the raw water availability issues are resolved within the next 18 months.

Details are shown in Attachments 1 and 2.

3.5 Development of a New Water Source

Many investigations have been carried out into future water sources over the years. Reports prepared in 1980 by Mandeno Chitty and Bell, Consulting Engineers, were

very comprehensive. The more viable options from these reports and recent information was reviewed by Beca Steven, Consulting Engineers, in 1999. In addition, Water Group staff calculated the capital cost of universal metering. A summary of the capital cost of the options is:

Option	Estimated Capital Cost \$ (M)
1. Akatarawa river intake and water treatment plant (20 ML/d)	15.3
2. Hutt intake near Te Marua pumping station (up to 200 ML/d)	2.9
3. Upper Hutt aquifer development and treatment plant (20 ML/d)	13.9
4.(a) Wainuiomata river storage – Dam 3 (90 days at 20 ML/d)	48.6
4.M Wainuiomata river storage – Dam 2 (90 days at 20 ML/d)	66.1
5. Hutt recharge to the Waiwhetu aquifer (20 ML/d)	
(1) Assuming no treatment, with raw water injection	3.3
(2) Assuming water treatment is required prior to artificial recharge	15.5
6. Universal metering, assume demand reduced 20%, i.e., 30 ML/d (including replacement meters after 15 years)	42.9

A brief explanation of each project and the advantages/disadvantages is included in Attachment 3. Options 2 or 5(1) are currently preferred to provide additional water.

Provision has been made for \$4 M to develop a new source in the years 2017 to 2020 on the basis of this information and on population projections. It is expected that no further major development would be required until 2030.

3.6 Quality and Operational Standards

At present *the New Zealand Drinking- Water Standards* set a maximum turbidity for treated water at the treatment plants of 0.5 NTU or a change of no more than 0.2 NTU in 10 minutes. It is possible that within the 20 year planning period the maximum turbidity requirement may reduce to 0.1 NTU. Optimisation work at the Wainuiomata Water Treatment Plant is working towards this requirement and it should be achieved during 2000. Treated water from the Te Marua Water Treatment Plant already complies. Turbidity measures are not relevant at the Waterloo Water Treatment Plant as it is a secure groundwater source.

Supernatant water from the surface water treatment and waste water recovery plants is currently returned to the raw water stream entering the plant. The Environmental Protection Agency in America is proposing to set a standard for this water by August 2000. In due course this standard may be reflected in New Zealand requirements. An outcome could be further processing requiring additional expenditure. No allowance has been made for this in the capital works programme.

3.7 Grading of Treatment Plants

Grading of water treatment plants is an ongoing process with higher standards

expected over a period of time. The Regional Council's policy is to achieve an A or A1 grading for treatment plants, where practical to do so. Apart from the supernatant issue mentioned in the last section, it is expected the proposed capital works funds will be adequate to achieve this. Te Marua Water Treatment Plant is already graded A.

3.8 Inflation and Interest Rates

Values in the financial model are expressed in real dollars of today (i.e., not inflation adjusted). Changes in interest rates may not be linked to changes in inflation rates. For this reason three scenarios are considered with different interest rates.

3.9 Operational Costs

Direct and indirect expenditure has reduced by \$4 M per annum *over the* last two years. This, in part, has allowed a reduction in wholesale water charges of 4 percent (\$1 M) for 1999/2000 in addition to accelerated debt repayment. While further reductions in some facets of the operational costs are expected, for example, chemicals, costs in some other areas are expected to rise. Electrical energy costs increased by 17 percent from 1 October 1999 though network charges did not change. Once the surface water rights are renewed the minimum flow over the Kaitoke weir will increase. This results in greater pumping costs to use water from the two storage lakes in summer.

On balance, it has been assumed that increased efficiencies in some areas will slightly exceed increased costs in other areas. For this reason direct operating costs are reduced 0.5 percent a year over the planning period.

3.10 Capital Expenditure

Expenditure for 2000/01 is in the final stages of confirmation. Projects in subsequent years are subject to further detailed analysis. From 2008/9 onwards an amount is allowed for unspecified works in order to take the total expenditure to \$4.5 M. This total is lower than depreciation and slightly lower than capital expenditure over the last few years. It reflects that many parts of the system are less than 25 years old and have relatively long lives.

4. Asset Valuation

Rolle Hillier Parker Ltd, Registered Valuers, revalued fixed assets in November 1999. Their valuation was at a component level of some 6,000 individual assets. Land associated with the treatment plans and distribution network has also been revalued. The Audit Office has been consulted about the value of some of the more intangible assets, such as water rights that are valid for up to 35 years. The value of the assets increased from \$192 M to \$256 M. Attachment 4 provides details of the valuation.

5. Depreciation

Depreciation values are arrived at by taking the current value of an asset and reducing its value on a straight line basis over the remaining life of the asset. In some circumstances technical obsolescence, rather than physical deterioration, may dictate the remaining asset life. Where this is the case all components are assigned a life that does not exceed the obsolescence date. Depreciation for the new assets is calculated from the planned cost. For the unspecified works an average life is assumed for depreciation purposes.

Annual depreciation for the fixed assets, as a result of the revaluation, will be \$4.729 M in the current year. This is being reconciled with the depreciation schedule for the year ended 30 June 1999. It is expected the reconciliation will show an increase in the depreciation for the fixed assets of approximately \$0.5 M a year. However, even with the increased depreciation, there will still be a net surplus. This means the expenditure funding requirements of the *Local Government Amendment Act (No. 3) 1996* are complied with (i.e., depreciation is fully funded by the levy).

6. Debt Management

Significant modernisation of the facilities has taken place in the last 15 years and this has obviously not come without cost. The result in absolute terms is relatively high debt, \$66 M as at June 1999. The recently completed asset revaluation exercise has placed a value of \$256 M on our water supply network.

Issues When Considering Appropriate Levels of Debt

The question then is *What should our debt levels be over the medium-term?* Without doubt, in any sector the level of debt is a judgement call but in the local authority environment a number of factors need to be considered. These include:

(1) *Intergenerational Equity*

Generally, this principle derives from the fact that infrastructural assets, like most in water supply, have a long life and hence, where possible, the costs of such assets should be shared across the generations that benefit from them. This is entirely consistent with Council's treasury management and funding policies. Debt has traditionally been seen as having the benefit of spreading those asset costs by applying interest and principal repayment across a period of time. This Council has adopted a 30 year debt repayment term for the water supply assets that are loan funded. This then determines the debt repayment programme across the years. It could be argued that this life has been set rather conservatively and arbitrarily, and may not in fact reflect the life of the asset, i.e., the life may be longer. However, on the other side of the coin, 30 years is at the upper end of debt life in local government generally.

(2) *Future Debt Requirements*

As outlined in section 3.5, our next significant amount of capital expenditure is not expected until approximately 2026. Our best estimates are that this would be in the order of \$15 M. This, of course, will depend on what happens to the demand for water over the next 25 years. If demand increases, the expenditure will be required earlier. If demand diminishes, it may never be required. The timeframe for bringing a new source, such as the Upper Hutt aquifer, on stream would be something like 3-5 years.

If at all possible, it would be preferable to have repaid all debt some years before a major new debt loading is required so as to reduce the impact of servicing the new debt. This also more fairly spreads the burden across the generations.

The question, of course, is *When will the new source be required?*

(3) *Funding Annual Capital Expenditure Requirements*

Generally, outside the provision for a new source of water, enhancement of the system, annual capital expenditure should be met by annual depreciation charges. As outlined in other sections, our annual capital requirements can be met by depreciation. We also put into a reserve each year \$885,000 to cover capital expenditure that is of a refurbishment nature.

(4) *Interest Rate Risk*

Clearly, the higher the level of debt carried the higher exposure to interest cost increases if interest rates rise. Other things being equal, if interest rates rise, then the higher the debt, the larger the levy increase required to meet increased interest costs. Alternatively, the debt repayment period could be extended and therefore not require a levy increase. Hence the higher the debt, the higher the interest rate risk in absolute terms.

Notwithstanding the above, this Council's treasury management is such that any increases in external interest rates would not affect The Water Group's interest costs for at least a year. Beyond then the impact would begin to be felt progressively.

(5) *Treasury Management Policy*

The Council recently reconsidered its Treasury Management Policy and the following ratios pertaining to water supply were approved:

- Net debt to levy not to exceed 300 percent
- Net financial costs to levy not to exceed 40 percent

As part of this process, the Council's treasury advisor, Bancorp, reviewed and confirmed that those benchmark ratios were consistent with the Council's overall external borrowing limits (see Attachment 5).

In addition to the internal borrowing limits, the Council has set internal "targets" for each of its departments with significant borrowing. The rationale for two separate ratio levels is to differentiate between maximum borrowing limits that set borrowing caps (these may be difficult to justify in a purely commercial sense) and target ratios, that establish more commercially focused borrowing goals, which have been set as guidance for management on an ongoing basis for the long-term.

Bancorp states:

We support this approach as enhancing one of the primary reasons for section 3.8 [the internal borrowing limits] - that of establishing internal management guidelines (rather than caps).

Attachment 6 details Bancorp's view and rationale for the borrowing targets for water supply of:

- Net debt to levy not to exceed 220 percent
- Net financial costs to levy not to exceed 20 percent

Attachment 7 translates that into a target debt level of \$53 m based on the current level of water levy. This then compares with a current debt level of \$66 m, some \$13 m higher than the target.

The question then is *How quickly should we attempt to reach the target level of \$53 M?*

(6) *Efficiency and Interest Savings*

Over the last three years significant savings have been generated by operational improvements and a lower interest rate environment. This Council has maintained a policy of applying additional surpluses achieved to debt reduction. This has meant water surpluses have been used to reduce water related debt. This has had a further compounding effect in providing additional interest savings. This has enabled the levy to be held steady for three years from 1996/7 and reduced by 4 percent (\$1 M) in the 1999/0 year. It would be fair to say that our budgeting has been conservative in that we have not adjusted budgeted costs downwards until the savings have been achieved. However, as the attached table in Attachment 8 shows, our budgets for this year and 2000/1 and beyond reflect the lower cost structure of the operation.

Once again, the question is *How much of the savings achieved is applied to debt reduction and how much to levy reduction?*

7. **Financial Model**

7.1 **Description**

The financial model allows the following variables to be considered:

- Operational expenses
- Depreciation
- Interest payments
- Debt
- Capital expenses
- Wholesale water levy

The model allows two output variables to be evaluated, debt level, and wholesale water levy.

7.2 **Scenarios**

Average interest on borrowings is currently 8.5 percent. Three interest rate scenarios are status quo, increasing this to 9.5 and 10.5 percent from two years out.

Wholesale water supply levy was reduced 4 percent in 1999/2000. Levy scenarios are: status quo (1999/0 levy), 2, 4 and 6 percent levy reductions.

Output from the model is a series of graphs showing the impact on wholesale water debt for varying interest rates and wholesale levies. These are included as Attachment 9.

8. **Future Wholesale Water Charges : Discussion**

When making the judgement on next year's levy, and future levies, the above factors should be taken into account. Your personal point of view, and to an extent your view of what the future holds, will determine whether you favour accelerated debt repayment or levy reduction now, or a combination of both. Adjustments can obviously be made each year as circumstances change.

Making a trade-off between the levy and the debt repayments can be reviewed against a number of drivers, including:

- Provision of a quality water supply in accordance with changing standards
- Providing the required quantity of water to meet future demand
- Stability in the levy so that any changes between years is minor
- Ensuring there is no deferred maintenance
- Funding future capital works

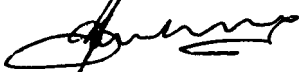
- Providing for intergenerational equity
- Prudent interest rate risk management
- Compliance with the Local Government Amendment Act (No. 3) 1996 with regarding to fully funding depreciation

Taking into account the above, the undersigned officers are of the view that a future levy reduction of up to 4 percent on the current level is sustainable. When the Council sets the proposed levy for 2000/1 in March 2000, further information will be available as to how we are tracking in this financial year. Further, when the levy is finally set in June 2000, the operating performance for the current year will be able to be forecast with confidence.

9. Recommendations

- (1) *That the report be received and the information noted*
- (2) *That the report be sent to our four customers for comment prior to Council finalising its proposed Long Term Financial Strategy in March 2000.*
- (3) *That the four customers be asked to comment on future water levies and debt levels having regard to the report, in particular the drivers in section 8.*

Report prepared by:

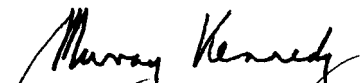


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Divisional Manager, Utility Service

Approved for submission:



GREG SCHOLLUM
Chief Financial Officer



MURRAY KENNEDY
Strategy and Asset Manager

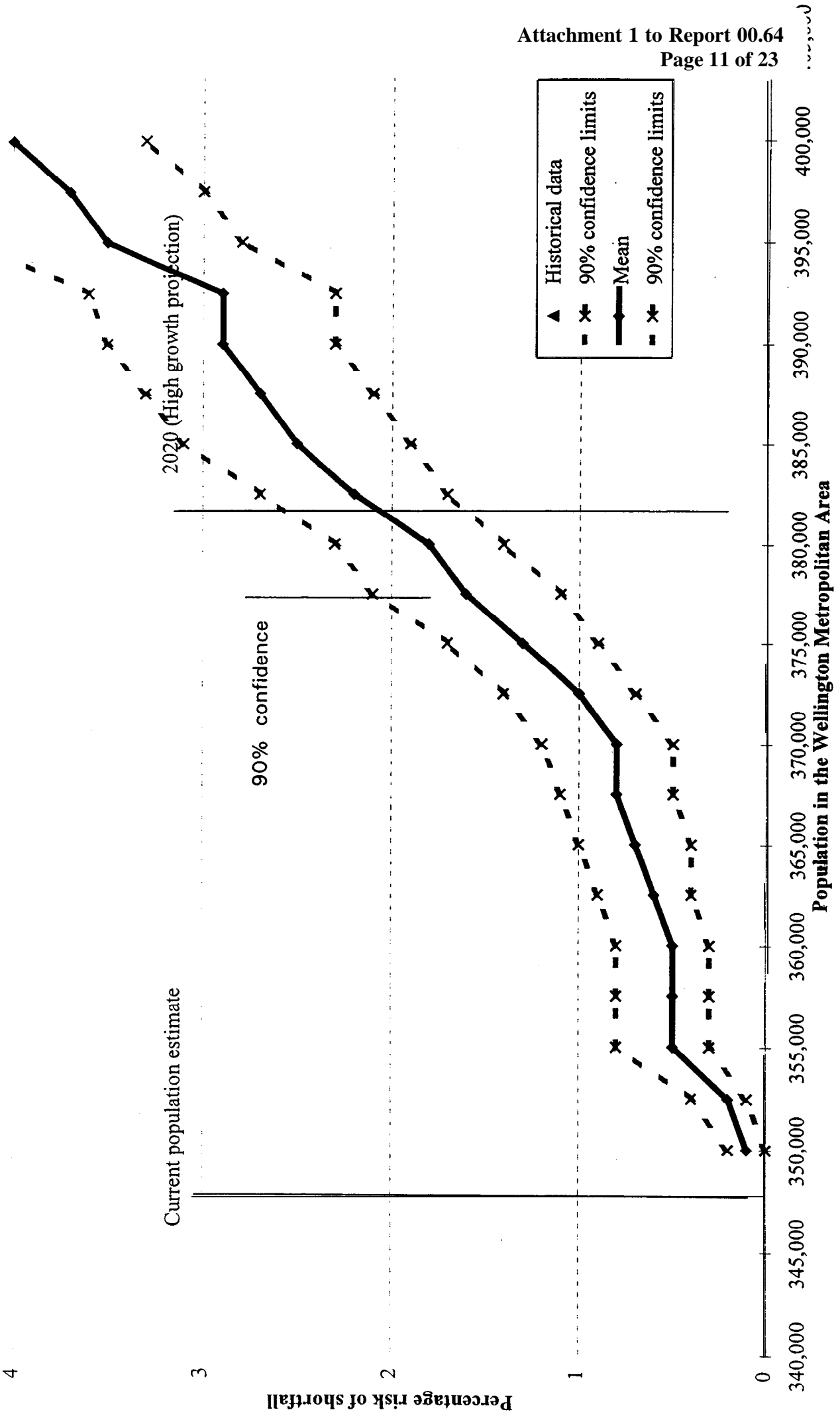


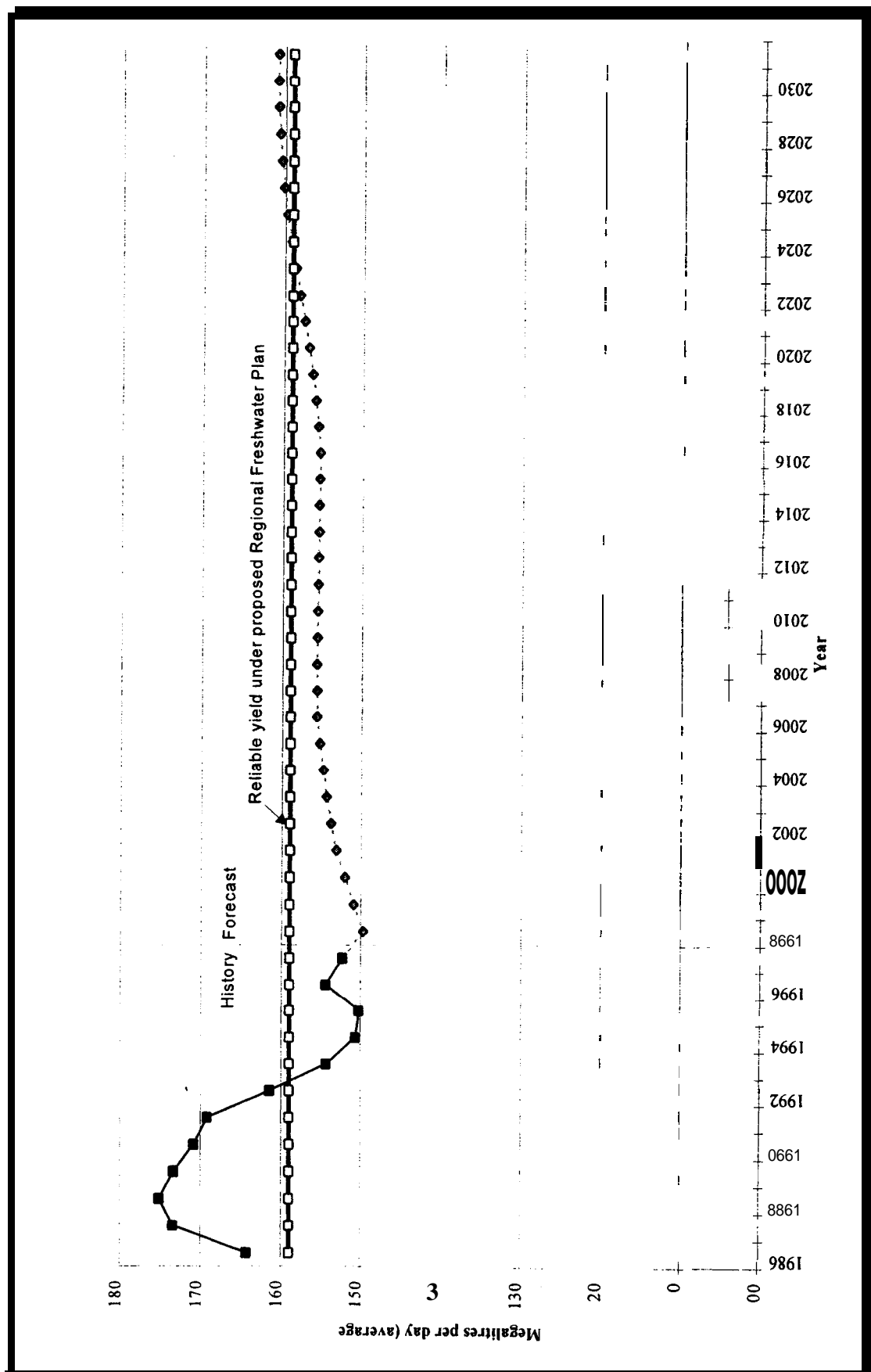
HOWARD STONE
General Manager

Attachments : 9

Risk of shortfall

(2000 2yr replicates, 120MLD capacity at Te Marua, and proposed Freshwater Plan)





Option	Capital Cost \$M	Comments
1. Akatarawa River intake and water treatment plant 20 ML/d	15.3M	A reliable source of water. Catchment area farmland, forest and some roads.
2. Hutt River intake near Te Marua Pumping Station 200 ML/d	2.9 M	The scheme would pump water into the storage lakes for use at the water treatment plant when required. Water quality is not as good as the water taken at the Kaitoke intake. This is partly negated by holding in the lakes. The lowest cost scheme.
3. Upper Hutt aquifer development and treatment plant 20 ML/d	13.9	Water is currently taken from this aquifer for industrial purposes. Good quality water but treatment is required as the aquifer is not secure.
4.(a) Wainuiomata River storage dam 3 (90 days at 20 ML/d)	48.6M	Further developments on existing catchment.
4.(b) Wainuiomata River storage dam 2 (90 days at 20 ML/d)	66.1M	Alternative site to 4a , on another part of the Wainuiomata river. Both sites within Water Group land boundaries.
5. Hutt River recharge to the Waiwhetu aquifer 20 ML/d	3.3M	Assumes no treatment prior to injection. Hydraulics of the recharge area are not fully understood at present. This information is expected to be available within two years.
6. Universal metering. Assume demand reduces 20 percent, i.e., 30 ML/d	42.9M	Cost allows for meters to all properties in the four cities currently not metered and for replacement meters after 15 years.

November 1999 Valuation: Summary

Infrastructure Assets	Replacement Value (\$ M)	Net Current Value (\$ M)	Book Value 30/6/99 (\$ M)
Te Marua Treatment Plant	66.85	49.39	
Te Marua Lakes	63.27	57.14	
Wainuiomata Treatment Plant	53.85	36.06	
Waterloo Treatment Plant	11.11	7.10	
Gear Island Treatment Plant	3.81	2.64	
Distribution Pipelines and Valves	136.83	74.53	
Reservoirs	8.16	5.98	
Distribution Miscellaneous Assets, including Tunnels	19.21	14.24	
Pumping Stations	9.62	5.88	
Total Infrastructure Assets	372.71	252.95	
Land	2.71	2.71	
Grand Total	375.42	255.66	182.15

Schedule of Asset lives

Asset Type	life
Bridges	60
Buildings	80
Electrical control equipment	15 - 25
Instrumentation	15 - 25
Pipelines - asbestos cement	50
Pipelines - cast iron, concrete lined	130
Pipelines - concrete	60
Pipelines - ductile iron, concrete lined	100
Pipelines - steel bitumen lined	50
Pipelines - steel concrete lined	90
Pipelines - unlined cast iron	100
Pumping and treatment equipment	15 - 25
Reservoirs - concrete	80
Roads - sealed	40
Storage Lakes	150
Structures - reinforced concrete	80
Treatment Plants (as a whole)	50
Tunnels	150
Valves	40

Note: Where appropriate, assets have been assigned individual lives.

3.8 Internal Debt Management

Attachment 1 to Report 00.64

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Internal Debt Management

The treasury **function** is responsible for administering the Council's internal debt **portfolio**. Loans are set up within the internal debt portfolio based on planned **loan** funded capital expenditure (or operating expenditure in the case of forestry), **and** allocated to the department requiring the loan funding. The following **operational** parameters apply to the management of the Council's internal debt portfolio:

- Capital expenditure details and other internal borrowing requirements are extracted by the Financial Analyst at month end.
- A notional internal loan is set up for all new capital expenditure and other internal borrowing requirements and allocated in the internal portfolio to the department incurring the expenditure.
- Interest is charged by treasury to departments on month-end loan balances at an agreed rate.
- The interest rate is based on the Council's expected weighted average cost of funds, and takes into account factors such as the Council's long term cost of **funds**, anticipated cost of new debt over the next eighteen months, recovery of treasury's operational costs, pricing to reflect the different communities of interest, and a small buffer which provides for certainty in the charging rate and avoids **frequent** adjustments. The internal rate is reviewed **annually** and is capped for the next financial year. Where the actual weighted average cost of debt moves to be lower than the budget, an adjustment is made to departmental debt servicing costs (this adjustment is processed at year end).

Treasury uses the internal debt **portfolio** as an input into determining its external debt requirements. Where possible, the Council's reserves are used to reduce external debt, effectively reducing the Council's net interest cost.

Internal Borrowing Limits

Internal borrowing limits are set to monitor the level of debt utilised by departments and business units. The ratios are consistent with the Council's external borrowing limits outlined in Section 3.2 and consistent with the principle of prudent financial management.

The following limits are monitored monthly by the TMG:

Activity	Ratio	Limit
Regional Water Supply	Net Debt to Levy	300%
Regional Water Supply	Net Financial Costs to Levy	40%
Flood Protection Western Region	Net Debt to Rates	400%
Flood Protection Western Region	Net Financial Costs to Rates	50%

Activity	Ratio	Limit
Flood Protection Wairarapa Region	Net Debt to Rates	80%
Flood Protection Wairarapa Region	Net Financial Costs to Rates	10%
Regional Parks	Net Debt to Rates	50%
Regional Parks	Net Financial Costs to Rates	10%
Corporate Properties	Net Finc Costs to Revenue	50%
Corporate Properties	Debt to Inv's & Cap assets	75%
Forestry	Net Debt to Market Value	60%

In addition, the TMG monitors internal debt targets for each area where there is significant internal debt.

Internal Debt Targets have been established in addition to internal debt limits in order to provide guidance on the long term sustainable debt levels within each area of Council's activity. (N.B. compliance will be monitored primarily against the internal debt limits rather than the internal debt targets.)

The **Internal** Debt Targets are as follows:

Activity	Ratio	Limit
Regional Water Supply	Net Debt to Levy	220%
Regional Water Supply	Net Financial Costs to Levy	20%
Flood Protection Western Region	Net Debt to Rates	250%
Flood Protection Western Region	Net Financial Costs to Rates	25%
Flood Protection Wairarapa Region	Net Debt to Rates	80%
Flood Protection Wairarapa Region	Net Financial Costs to Rates	10%
Regional Parks	Net Debt to Rates	50%
Regional Parks	Net Financial Costs to Rates	10%
Corporate Properties	Net Finc Costs to Revenue	30%
Corporate Properties	Debt to Inv's & Cap assets	45%
Forestry	Net Debt to Market Value	35%

DRAFT 4 August 1999

4. INTERNAL DEBT MANAGEMENT - continued

4.4 "Regional Water Supply - Net Debt to levy 300%; Net Financial Costs to Levy 40%"**4.4.1 Effectiveness of Measurement Mechanisms**

The Regional Water Supply internal borrowing ratios are a quasi-interest coverage ratio and a quasi-gearing ratio of a similar nature to those used in Section 3.2 and our comments on the effectiveness of these measures (i.e. that standard commercial ratios would not be appropriate) outlined in the previous section hold.

4.4.2 Appropriateness of Internal Borrowing limits

Based on actual figures for 1998, the Net Financial Costs to Levy ratio implies an EBITD interest coverage ratio limit of 1.5 times (actual was 2.1 times). This is not unrealistic for an infrastructure asset, particularly given WRC's ability to rate/levy, but we regard it as at the top end on a long term sustainable basis. Based on current interest rates the Net Debt to Levy ratio represents a much tighter constraint and, all other things being equal, appears conservative.

Regional Water Supply is a highly capital intensive department (with the single largest debt requirement of WRC's departments/business units) and a revenue stream of which over 80% is derived from a discrete water supply levy (which is imposed directly on the four city councils based on usage). Based on this, we believe the trigger thresholds imposed, which exceed the WRC 'average' as defined by the borrowing limits set in Section 3.2, are justified.

4.4.3 Suggested Internal Borrowing Targets

Our approach to establishing appropriate internal borrowing targets for Regional Water Supply has been to benchmark the department against other utilities on the basis that WRC will require each of its departments to reflect its own credit risk. This has been facilitated by utilising data taken from S&P for infrastructure investors. The following table is an extract from a S&P Infrastructure Report entitled 'Rating Methodology for Global Power Utilities'.

4. INTERNAL DEBT MANAGEMENT - continued

	FINANCIAL RATIO MEDIANS					
	FUNDS FROM OPERATIONS INTEREST COVERAGE (X)		FUNDS FROM OPERATIONS TO TOTAL DEBT (%)		TOTAL DEBT TO TOTAL CAPITAL (%)	
	A	BBB	A	BBB	A	BBB
Transmission and distribution companies	3.25	2	15	10	55	65
Generators	6.75	4.25	42	27	35	45
Vertically integrated companies	4.25	2.75	27	18	45	56

Note:

Financial ratio medians are the average of ratios derived from Standard & Poor's financial projections for companies rated both publicly and confidentially.

In the absence of industry average information for other utility sectors, we have assumed that power utilities represent a proxy for Regional Water Supply, Flood Protection and Regional Parks which share many similar characteristics. For WRC's investment in Regional Water Supply we have assumed that "vertically integrated companies", meaning those with both generation and distribution capacity, best reflect the characteristics of Regional Water Supply operations.

The S&P average ratios are for 'BBB' and 'A' rated entities. WRC currently has a AA- rating which it wishes to maintain, therefore, we would expect it to target ratios that are slightly more conservative than those shown in the 'A' category. Nevertheless, we feel that water supply is very low risk, particularly given the monopoly supplier position (and rating ability) of WRC and this therefore supports more aggressive ratios. If these effects offset each other and Regional Water Supply targets the average S&P ratios for an 'A' rated company then this implies a Free Funds from Operations to Net Debt ratio of 27% and Free Funds from Operations to Financial Costs ratio of 4.25 times¹⁶. Backsolving to reach these levels (see Appendix VI - Implied Internal Borrowing Targets), the trigger thresholds set on the implied internal borrowing targets would be Net Debt to Levy 201% - 204% and Net Financial Costs to Levy 13%.

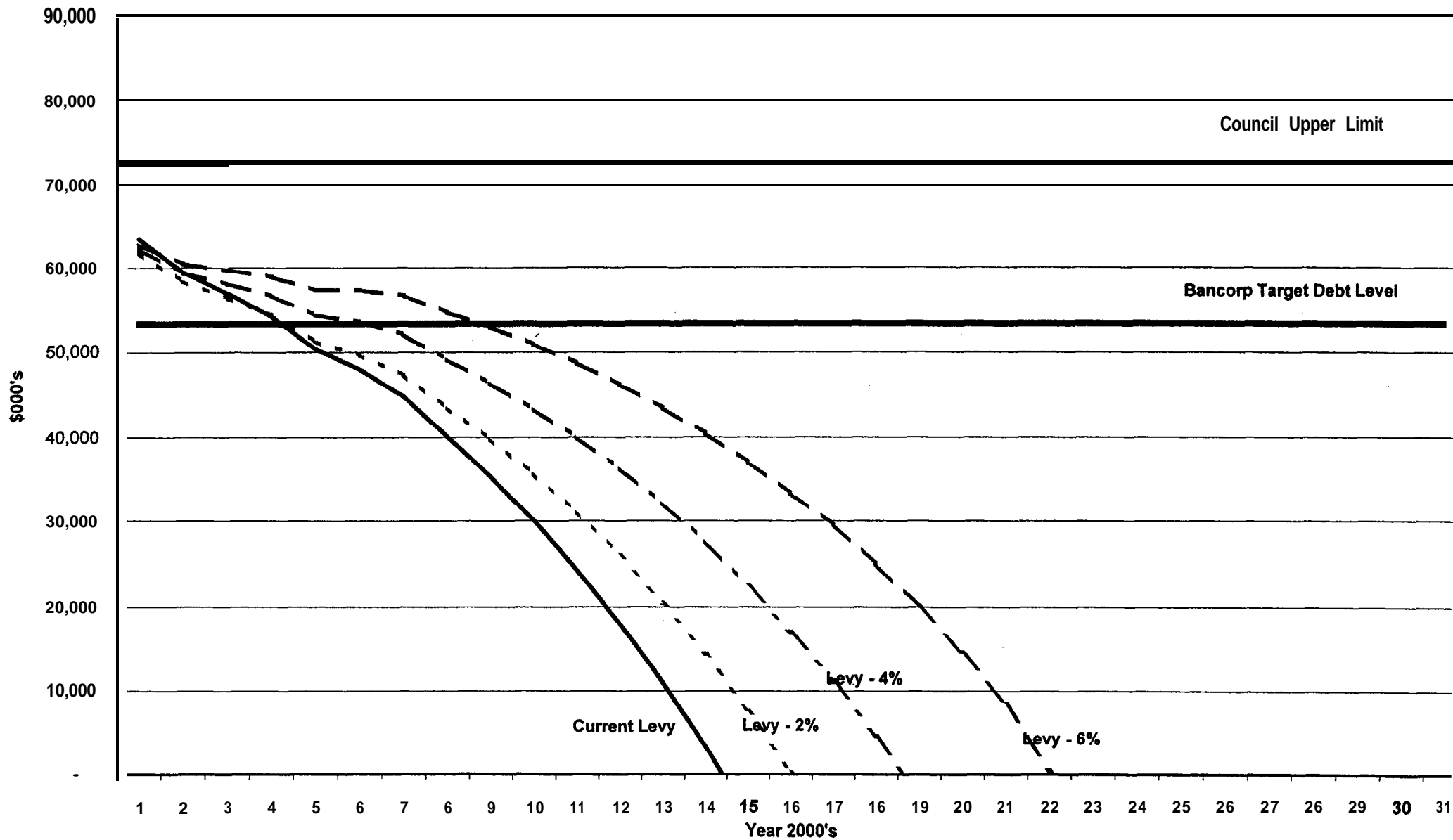
Based on this analysis our view is that the appropriate internal borrowing targets for Regional Water Supply are approximately 220% for the Net Debt to Levy ratio and, given the need for some flexibility in the quasi-interest coverage ratio (the calculations have been based on existing, historically low interest rates), around 20% for the Net Financial Costs to Levy ratio.

¹⁶ We have not used the Total Debt to Total Capital ratio to derive implied internal borrowing targets given difficulties in determining capital allocations for the various departments/business units.

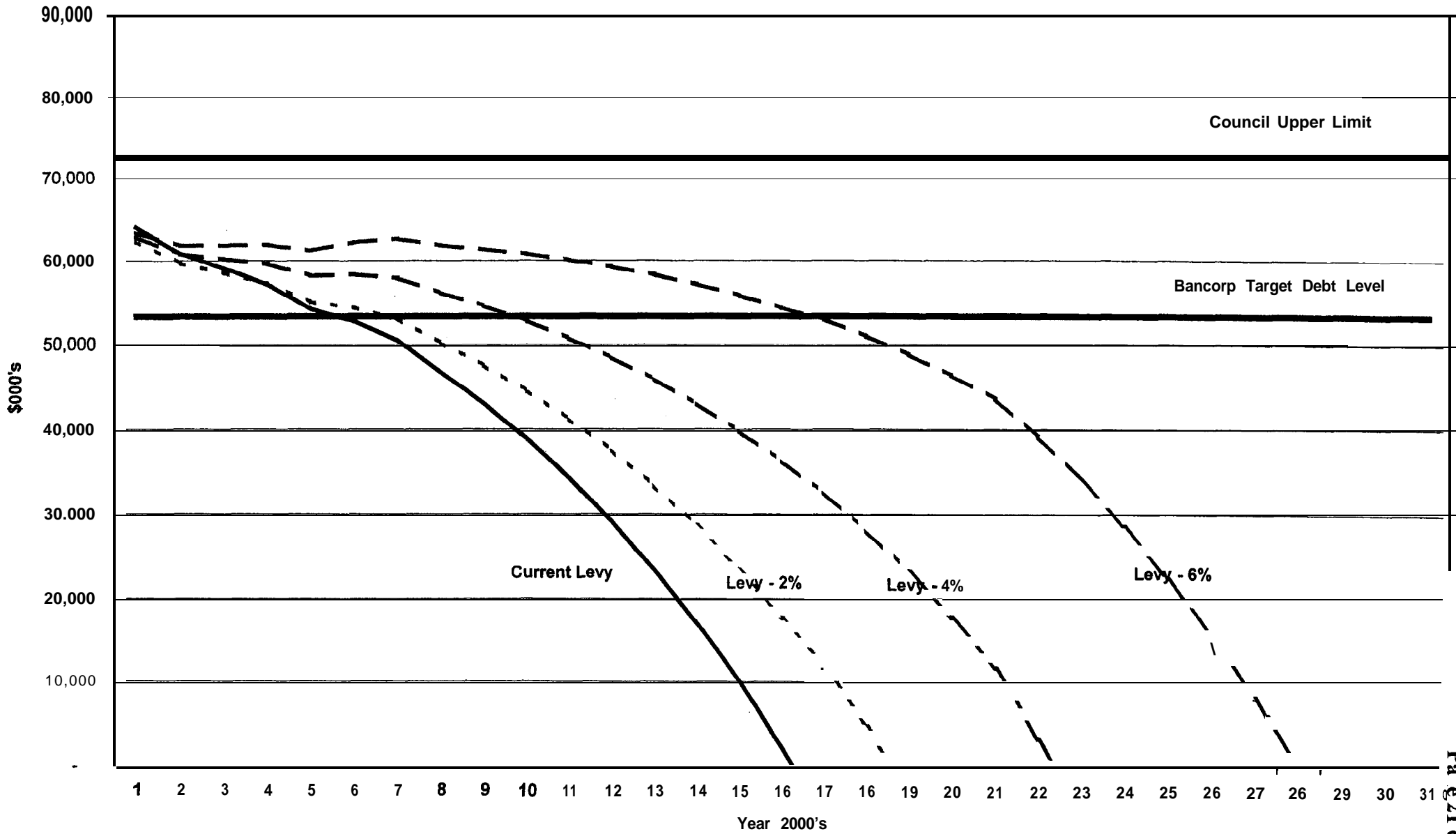
WELLINGTON REGIONAL COUNCIL

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<i>Limit</i>	Actual	Actual	Budget	man	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
SECTION 3.8 BORROWING LIMITS											
REGIONAL WATER SUPPLY											
Existing Position											
Net Debt	72,620	72,079	66,981	65,104	64,651	63,192	61,615	57,770	52,554	50,280	47,827
Levy	25,213	25,218	25,218	24,210	24,210	24,210	24,210	24,210	24,210	24,210	24,210
EBITD (Funds from Operations)	n/a	n/a	13,912	13,133	13,212	13,268	13,319	13,333	13,250	13,216	13,274
Net Financial Costs	8,242	7,187	6,870	5,900	5,800	5,735	5,580	5,356	4,945	4,633	4,441
Depreciation	n/a	n/a	-4,423	-4,567	-4,658	-4,727	-4,722	-4,806	-4,757	-4,620	-4,751
Operating surplus	n/a	n/a	2,618	2,666	2,754	2,806	3,017	3,171	3,548	3,963	4,082
Funds from Operations/Total Debt	27%	n/a	n/a	21%	20%	21%	22%	23%	25%	26%	28%
Funds from Operations/interest	4.25	n/a	n/a	2.03	2.23	2.28	2.31	2.39	2.49	2.68	2.99
Net Debt / Levy	300%	288%	286%	266%	269%	267%	261%	255%	239%	217%	208%
Net Financial Costs / Levy	40%	33%	28%	27%	24%	24%	24%	23%	22%	20%	19%
Adjusted Position											
Adjusted Net Debt	n/a	n/a	51,525	48,642	48,932	49,140	49,328	49,381	49,075	44,949	49,164
Adjusted Interest	n/a	n/a	3,273	3,090	3,109	3,122	3,134	3,137	3,118	3,110	3,123
Funds from Operations/Total Debt	27%	n/a	n/a	27%	27%	27%	27%	27%	27%	27%	27%
Funds from Operations/interest	4.25	n/a	n/a	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Net Debt / Levy	300%	n/a	n/a	204%	201%	202%	203%	204%	204%	203%	202%
Net Financial Costs / Levy	40%	n/a	n/a	13%	13%	13%	13%	13%	13%	13%	13%
Adjusted Target Position											
Adjusted Net Debt	n/a	n/a	55,480	53,262	53,262	53,262	53,262	53,262	53,262	53,262	53,262
Adjusted Interest	n/a	n/a	5,044	4,042	4,842	4,842	4,842	4,842	4,842	4,842	4,042
Funds from Operations/Total Debt	27%	n/a	n/a	25%	25%	25%	25%	25%	25%	25%	25%
Funds from Operations/interest	4.25	n/a	n/a	2.76	2.71	2.73	2.74	2.75	2.75	2.74	2.74
Net Debt / Levy	220%	n/a	n/a	220%	220%	220%	220%	220%	220%	220%	220%
Net Financial Costs / Levy	20%	n/a	n/a	20%	20%	20%	20%	20%	20%	20%	20%

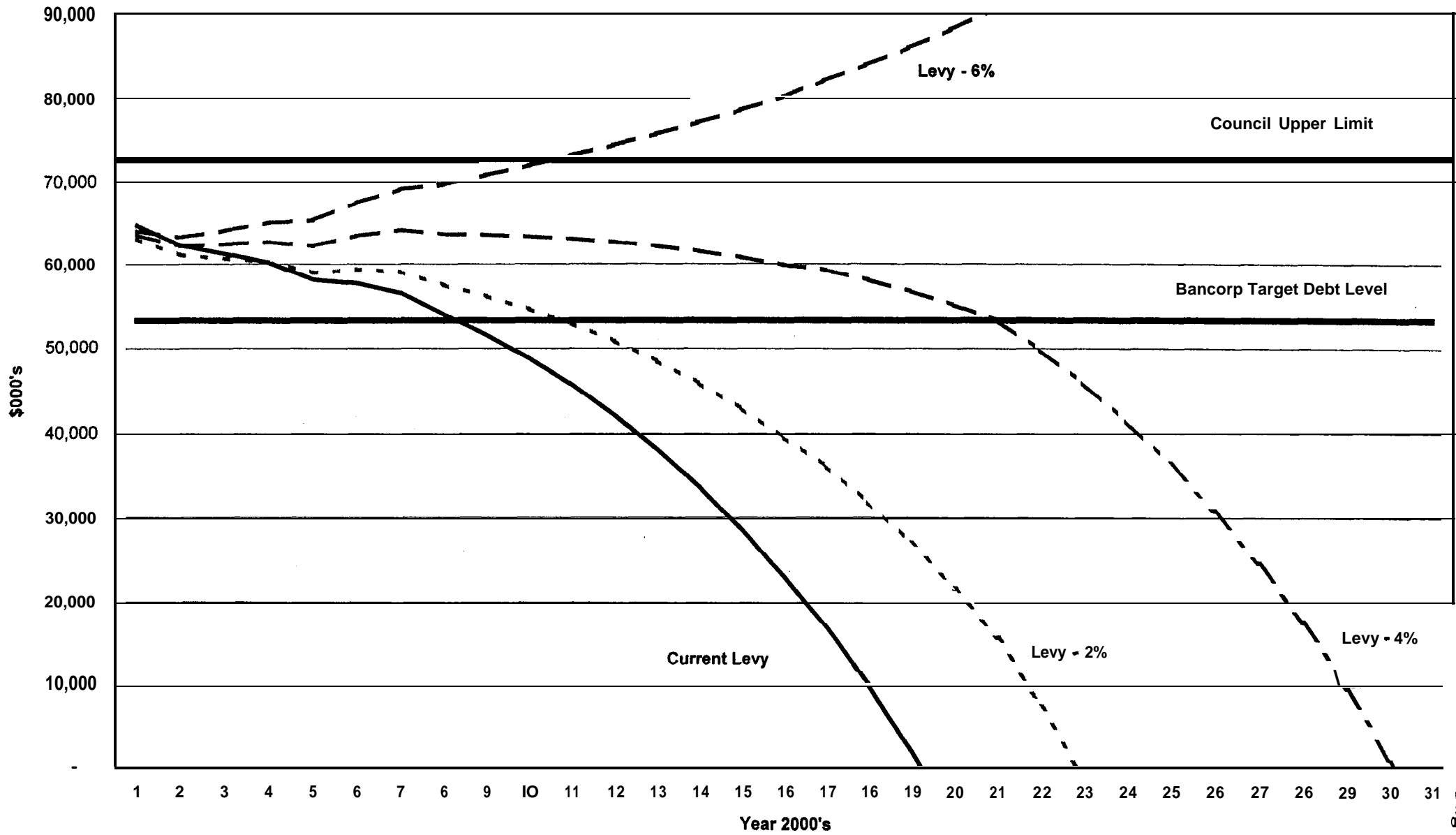
Debt Scenarios at interest rate of 8.50%
Showing effect of decrease in water rates on debt repayment



Debt Scenarios at interest rate of 9.50%
Showing effect of decrease in water rates on debt repayment



Debt Scenarios at interest rate of 10.50%
Showing effect of decrease in water rates on debt repayment



Water Supply
Actual Results 1997 - 1999
Provisional Budgets 2000 - 2001

	Actual 1997 \$000	Actual 1998 \$000	Actual 1999 \$000	Revised Budget 2000 \$000	Preliminary Budget 2001 \$000
Revenue					
Levy	25,213	25,218	25,218	24,210	24,210
Internal revenue	2,027	1,642	743	739	739
Other revenue	1,400	675	1,442	1,102	1,102
	<u>28,840</u>	<u>27,636</u>	<u>27,403</u>	<u>26,061</u>	<u>26,051</u>
Expenditure					
Personnel Costs	4,422	3,851	3,357	3,698	3,698
Contractor & Consultants Costs	1,554	2,240	1,901	2,265	2,308
internal Consultants Costs	1,182	1,164	577	921	837
Interest Costs	8,243	6,909	6,171	5,769 *	5,658 .
Depreciation	4,028	4,193	4,335	5,063 **	5,166 **
Movement Doubtful Debt		78	(17)		
WRC Overhead Charge	741	750	616	731	731
Other Operating expenditure	6,441	4,612	5,427	5,325	5,325
	<u>28,811</u>	<u>23,797</u>	<u>22,367</u>	<u>23,772</u>	<u>23,723</u>
Write Down Assets			1,590		
Stock Adjustments			(1,110)		
Interest Buyback			450		
	<u>28,611</u>	<u>23,797</u>	<u>23,297</u>	<u>23,772</u>	<u>23,723</u>
Surplus	<u><u>\$ 2,029</u></u>	<u><u>\$ 3,738</u></u>	<u><u>\$ 4,106</u></u>	<u><u>\$ 2,279</u></u>	<u><u>\$ 2,328</u></u>

* Changes have been shown for Stock buy back that have not been reflected in Budget

** Depreciation Expense has been provisionally increased by \$500,000

Other budgeted numbers have not as yet been reviewed. These will be reviewed in February 2000 during the normal budget process